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3.

# MEĐUNARODNI ZNANSTVENI SIMPOZIJ GOSPODARSTVO ISTOČNE HRVATSKE - VIZIJA I RAZVOJ

3<sup>rd</sup>

# INTERNATIONAL SCIENTIFIC SYMPOSIUM ECONOMY OF EASTERN CROATIA - VISION AND GROWTH

ISSN 1848-9559



9 771848 955005

Osijek, 2014.



SVEUČILIŠTE J. J.  
STROSSMAYERA  
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HRVATSKA  
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Zavod za  
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Pokrovitelj: / Under the auspices of:

**MINISTARSTVO GOSPODARSTVA RH**

**MINISTRY OF ECONOMY  
OF REPUBLIC OF CROATIA**

U Osijeku, 22.- 24. svibnja 2014.  
Osijek, 22<sup>nd</sup> - 24<sup>th</sup> May 2014

*Nakladnici / Publishers*  
Sveučilište Josipa Jurja Strossmayera u Osijeku  
Ekonomski fakultet u Osijeku

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*Prijevod / Translation and reader*  
Igor Barišić, prof.  
Vedran Mesarić, mag.iur.

*Tisak / Print*  
Studio HS internet d.o.o., Osijek

Ranija izdanja Zbornika radova publicirana pod naslovom *Gospodarstvo istočne Hrvatske – jučer, danas, sutra.* / Previous editions of the Proceedings published under the title *Economy of eastern Croatia – yesterday, today, tomorrow.*

*Dosadašnji zbornici radova indeksirani: / Proceedings indexed in:*



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EconPapers

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ISSN 1848-9559

**3. MEĐUNARODNI ZNANSTVENI SIMPOZIJ  
GOSPODARSTVO ISTOČNE HRVATSKE – VIZIJA I RAZVOJ**

**3<sup>rd</sup> INTERNATIONAL SCIENTIFIC SYMPOSIUM  
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## **Predgovor**

Treći međunarodni znanstveni simpozij održava se u novim okolnostima s obzirom na članstvo Republike Hrvatske u Europskoj uniji. Kao 28. članici EU predstoje nam značajne promjene u pogledu razvoja gospodarstva, posebno na mogućnosti povezivanja, umrežavanja i svih oblika suradnje kako u gospodarskom, tako i u kulturnom, sportskom, znanstvenom i inom području.

S obzirom na ljudski i prirodni potencijal, prometne koridore koji prolaze kroz ove prostore i nove svjetske trendove očekujemo radove koji će dati novu viziju razvoja kako bližeg tako i daljnjeg okruženja, te zajedničke aktivnosti i međusektorska povezivanja, partnerstva, transfere tehnologije, korištenje prekogranične suradnje, radove koji obrađuju socijalnu koheziju i održivi gospodarski rast.

Ako samo jedan od prezentiranih radova bude uočen od strane potencijalnih investitora, postoji opravdanje za organiziranje i trajanje Simpozija u kontinuitetu.

Naša nastojanja da se aktiviraju znanstvenici, stručnjaci, istraživači i vizionari biti će opravdana ako se otvore novi proizvodni pogoni, pokrenu nove turističke destinacije s obzirom na Dunav, Dravu i Savu, kao europske poveznice, te pronade rješenja za konačno zbrinjavanje otpada i očuvanje okoliša (zemljišta, šuma i voda), zaživi ekonomska energetska učinkovitost, smanji nezaposlenost na minimum i spriječi odljev stanovništva.

Kao Ekonomski fakultet osjećamo potrebu i obvezu pripomoći kako domaćim tako i stranim investitorima u pronalasku novih rješenja i vizija za razvoj kako za ulaganja vlastitog kapitala, tako i za mogućnosti korištenja strukturnih fondova i Kohezijskog fonda EU.

Prof. dr. sc. Anka Mašek Tonković



## Foreword

The 3<sup>rd</sup> International Scientific Symposium will be held in new circumstances regarding the European Union membership status of the Republic of Croatia. As the 28<sup>th</sup> member of the EU we expect significant changes in terms of economic development, in particular the connectivity, networking and all forms of cooperation in both economic as well as cultural, sports, scientific and related area.

Given the human and natural resources, transport corridors passing through these areas and new global trends we expect papers that will give a new vision of development of closer and further environment, and shared activities and inter-sector connections, partnerships, technology transfer, use of cross-border cooperation, papers that deal with social cohesion and sustainable economic growth.

If only one of the presented papers happens to be perceived by potential investors, it would be a justification for organizing the Symposium in continuity.

Our efforts to activate the scientists, experts, researchers and visionaries will be justified if new production facilities open up, new tourist destinations start, due to the Danube, Sava and Drava as European connections, a solution for the final disposal of waste and the preservation of the environment is found (land, forests and water), an economic energy efficiency comes to life, unemployment reduces to a minimum and the outflow of population is prevented.

As the Faculty of Economics we feel the need and obligation to assist both domestic and foreign investors in finding new solutions and visions for development in order to invest their own capital, and the ability to use the Structural Funds and Cohesion Fund of the EU.

Anka Mašek Tonković, PhD



## Einführung

Das Dritte Internationale Wissenschaftliche Symposium wird in diesem Jahr unter neuen Umständen abgehalten, da Kroatien jetzt ein Mitglied der EU ist. Als 28. Mitgliedsland der EU stehen wir vor großen Änderungen im Bezug auf die Entwicklung unserer Wirtschaft, vor allem was die Möglichkeiten der Verbindungen, Vernetzungen und anderen Zusammentypen betrifft – in Wirtschaft aber auch in Kultur, Sport, Wissenschaft und anderen Bereichen.

Basierend auf die Menschliche- und Naturpotenzial dieser Region, sowie existierende Verkehrslinien und neue Tendenzen in der Welt, erwarten wir Arbeiten die eine neue Vision der Entwicklung unserer Umgebung geben werden, sowie gemeinsame Tätigkeiten und Intersektorale Vernetzungen, Partnerschaften, Technologietransfers, Nutzung von grenzüberschreitender Mitarbeit, Arbeiten die sich mit Sozialkohesion und nachhaltiger Entwicklung beschäftigen werden.

Wenn nur eine der publizierten Arbeiten von potenziellen Investoren erkannt würde, wäre es eine Bestätigung für weitere Organisation und Dauer dieses Symposiums.

Unseres Anstreben, Wissenschaftler, Experte, Forscher und Visionäre zu aktivieren, wird erfolgreich falls neue Betriebe gestartet werden, falls neue Orte für Tourismus – gebunden mit Donau, Drau und Sava als europäische Verkehrslinien - eröffnet werden, falls dauerhafte Lösung für Abfallbeseitigung und Umweltschutz (Land, Wald und Wasser) gefunden werden, falls Energieeffizienz in Kraft eintreten werde – diese Projekte könnten die Arbeitslosigkeit verringern und Emigration der Bevölkerung verhindern.

Als Fakultät für Wirtschaftswissenschaften, denken wir dass es unsere Obligation ist, heimischen und ausländischen Investoren zu helfen, neue Lösungen und Entwicklungsvisionen zu finden – für Eigeninvestierung sowie für Verwendung der EU-Fonds.

Prof. dr. sc. Anka Mašek Tonković



## Tematska područja / Topics

1. Istočna Hrvatska – atraktivna regija za globalne investicije / Eastern Croatia - an attractive region for global investments
2. Ljudski kapital u funkciji razvoja regije / Human capital in a function of the development of the region
3. Novi trendovi u razvoju gospodarstva / New trends in economic development
4. Ekologija – zaštita prirode i okoliša / Ecology & Environmental protection
5. Povijesna nasljeđa, sakralni objekti i arheološka istraživanja u funkciji razvoja gospodarstva / Historical heritage, sacral buildings and archaeological research in terms of economic development
6. Financijske institucije / Financial institutions
7. Društveno odgovorno poduzetništvo / Social responsible entrepreneurship







**Istočna Hrvatska  
- atraktivna  
regija za globalne  
investicije**

**Eastern Croatia  
- an attractive  
region for global  
investments**

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**TOURISM AND COMMERCE AS DEVELOPMENT DRIVERS OF  
EASTERN CROATIA**

**TURIZAM I TRGOVINA U FUNKCIJI RAZVOJA ISTOČNE  
HRVATSKE**

**ABSTRACT**

*The economic development of the Republic of Croatia is currently at a standstill as a result of the global economic crisis. Although the effects of the crisis are most visible in the financial sector, it is essentially a structural crisis and the result of the transition from industrial economy to the new information age. Under the influence of globalization on the one hand and the development and application of the ICT on the other hand, the Western World has experienced a major decline in employment opportunities. Consequently, the consumption potential of the population dropped, causing economic stagnation. Today, primarily due to relatively expensive labour, this part of the world is practically unsuitable for any kind of agricultural and industrial production because it is not profitable. In pursuit of low farm product prices characteristic of modern times, almost entire agricultural production is sustained on mass production and the redirection of resources through the system of incentives and subsidies. The industrial production has not fared much better. It does not come as a surprise then that many industries are trying to survive through assistance system similar to the one used for agriculture. Shipbuilding and automotive industry in some countries are good examples of this. In the current situation, neither agriculture, nor large parts of the industrial production are able to survive without government intervention and assistance from profitable sectors. If we take into account that in order to be competitive in the global market, besides having quality products it is necessary to have an adequate quantity of products and competitive prices, a legitimate question arises as to whether the*

*Western World has industrial products that are able to meet these criteria. If it does not, or if it does not have them in sufficient quantities, it is necessary to identify parts of the economic system that are cost-effective and provide for the survival of modern society. The economic situation in the Republic of Croatia, in particular in eastern Croatia, is much more difficult. It is obvious that, in terms of agricultural and industrial production, eastern Croatia is not competitive in the global market so the question arises as to which economic sectors can provide for economic development.*

**Keywords:** *information age, marketing, trade, tourism, knowledge, economic development of eastern Croatia.*

## SAŽETAK

*U Republici je Hrvatskoj, prisutna je stagnacija u gospodarskom razviku koja je, načelno gledano, posljedica globalne ekonomske krize. Iako se ta kriza evidentno manifestira u finansijskom sektoru, ona u svojoj biti predstavlja strukturnu krizu i posljedica je tranzicije svijeta iz industrijskog u novo informacijsko doba. Naime, pod utjecajem globalizacije s jedne i razvika i aplikacije ICT-a s druge strane, na području tzv. zapadne civilizacije došlo je do značajnog smanjenja broja radnih mjesta, a to je rezultiralo smanjenjem potrošačkog potencijala stanovništva što je direktno utjecalo na gospodarsku stagnaciju. U današnjim uvjetima, primarno zbog relativno skupe radne snage, u ovom dijelu svijeta gotovo da se ništa iz domene poljoprivredne i industrijske proizvodnje „neisplati proizvoditi“. Kada je u pitanju poljoprivredna proizvodnja, zbog načelne suvremene težnje za niskom cijenom poljoprivrednih proizvoda, gotovo se kompletna poljoprivredna proizvodnja održava „živom“ na masovnoj proizvodnji, te na sustavu prelijevanja sredstava kroz sustav poticaja i potpora. No, niti industrijska proizvodnja nije u značajno boljem položaju, stoga ne čudi da se mnoge industrije pokušavaju održati na životu kroz sličan sustav pomoći kakvu ima poljoprivreda. Primjer za to je u nekim zemljama brodogradnja, autoindustrija i slično. Prema tome niti poljoprivreda, niti veliki dijelovi industrijske proizvodnje, u današnjim uvjetima nisu u stanju opstati bez intervencije države i pomoći rentabilnih dijelova društva. Ako se uzme u obzir da je u pravilu za nastup u globalnoj tržišnoj utakmici, osim kvalitetnog proizvoda potrebno imati odgovarajuću količinu, te konkurentnu cijenu, postavlja se realno pitanje ima li zapadna civilizacija industrijske proizvode koji su u stanju zadovoljiti ove postavljene kriterije. Ako nema, ili nema u dovoljnom obujmu, potrebno je prepoznati one dijelove gospodarskog sustava koji su u današnjim uvjetima rentabilni i omogućavaju opstanak suvremenog društva. Situacija s Republikom Hrvatskom, posebice s gospodarstvom njezina istočnog dijela, značajno je teža. Očigledno je kako u okvirima poljoprivredne i industrijske proizvodnje istočna Hrvatska nema globalnu konkurentnost, stoga se nameće pitanje koji su to gospodarski potencijali koji mogu pružiti ekonomski razvitak.*

**Gljučne riječi:** *Informacijsko doba, marketing, trgovina, turizam, znanje, gospodarski razvitak istočne Hrvatske.*

## 1. Introduction

Since the World War II, few countries in Europe have experienced so many significant changes as the Republic of Croatia, going through both social and economic transformations. Literally, in the period from the World War II until now, the Republic of Croatia has gone through various social transformations—from fascist dictatorship, over etatism and socialism similar to the one in the former Soviet Union, followed by experimental and unique self-

management and socialism, to subsequent re-establishment of pluralism and democracy. During that period the population of Croatia literally lived in various forms of dictatorship. In addition, when the country left the Socialist Federative Republic of Yugoslavia, this led to the Homeland War, bringing devastation to the Croatian territory. Economy has experienced even more significant transformations, starting with the capitalist economy that was present at the end of the World War II, which was forcibly transformed into a socialist form of the planned economy equivalent to the one in the former Soviet Union at that time, by means of ownership expropriation by the state. The conflict between the leadership of the former state and the former Soviet Union and inefficiency of etatism and planned socialism also contributed to changes in the economy as well as partial solution to the situation among the republics constituting the former state that are now independent countries acknowledged after the break-up of that state. State ownership was replaced with the so-called social ownership and strict forms of the planned economy were replaced with the so-called consensus economy, where market mechanisms nevertheless played a significant role. This form of economy survived until the beginning of the great transition in the 1990-ies that took place in the countries of the former Eastern block, spreading also to the former Yugoslavia, both in political and economic sense. All these events that took place in the period of only fifty years have had strong effects not only on the awareness of the people of the Republic of Croatia, but also on business culture, ethics and, consequently, ways of doing business in the period during and after social and economic transition.

The fact that the economy of the former state was self-reliant and lacked any serious competition resulted in poor competitiveness of the Croatian society at a global level. Consequently, the Croatian economy was unable to survive in the market against the more competitive foreign products. After gaining independence, the Republic of Croatia opened its borders to free trade, resulting in a large number of cheap products literally finishing the domestic uncompetitive production. However, regarding industrial products, the Republic of Croatia was not the only one facing problems with foreign, more competitive products. Industrially developed countries were facing the same problem, as a new industrial giant emerged at that time. China as well as other countries in the Far East started marketing large quantities of cheap industrial products, owing to extremely cheap labour force, but also to illegal industrial production, illegal copying of global brands, and similar activities. Such products were particularly difficult to resist in a country that was "hungry" for products and where the population's purchasing power was very low. Strong import lobby and uncompetitive industrial production inherited from the period of the federal state were the key drivers to the downfall of the industrial production in the Republic of Croatia. Considering the circumstances, the attempts to encourage consumption of home-produced goods through the appeal to the public to "buy Croatian products" was almost symbolic or futile. In addition, the Homeland War affected industrial production, particularly in terms of the fact that large part of the Croatian territory was occupied and devastated during the occupation. The unoccupied parts of Croatia also suffered during the war as they were exposed to immediate war danger, suffered from isolation as some of the roads went through the occupied area, and some of the skilled labour force was lost as people were involved in defending the country. Further, privatisation that took place during the war presented another source of problems, as companies were bought by people who were not interested in maintaining production, but in turning assets into money. The policy implemented by the Croatian governments at that time was often inconsistent and did not provide support to either entrepreneurs or workers. The governments were often focused on finding ways to increase government spending on investments, often in unfeasible and socially questionable projects. Consequently, the state became the key investor, but also a key generator of insolvency, primarily focused on finding

ways to force tax payers to meet their obligations toward the state, whereas the state did not meet its obligations toward economic operators, or it did so with a considerable delay. The constant insolvency of the state was occasionally solved by selling off family silver, i.e. those economic operators that were a profitable part of the society. There is a lot of irony in the sale of Croatian banks that had been previously restored to financial health with taxpayers' money. In addition to the above described main causes of economic deterioration of the Republic of Croatia, there were also others, such as theft, abuse of power, elitism, incompetence, negative selection, corruption, etc.

Stereotypes are among the greatest problems and obstacles to the development of the Republic of Croatia, as they are uncritically accepted by both local and global levels of the government. Considering the scope of the stereotypes, this research is focused on Eastern Croatia and stereotypes referring to development, which are present in this part of the Republic of Croatia. These primarily include stereotypes referring to investments in agriculture and industry, followed by demonisation of trade and neglecting of tourism, which are supposed to be the potential development drivers in Eastern Croatia. Problems are caused by the attitude toward knowledge. Knowledge is a key factor of the modern age that the world is currently entering into - the so-called information age, or, more precisely, the knowledge age. The Croatian society will soon have to go through another transition. Therefore, unless it becomes aware of the transformation of the global society from physical into virtual forms of business, it is not very likely that both the Croatian society in general and Eastern Croatia will be able to find their way out of the omnipresent crisis.

## **2. Research methodology**

Modern science describes the transition into the 21<sup>st</sup> century as the moment of leaving the industrial age and entering the new information age. Information age or knowledge age is the age characterised by a decreasing proportion of physical business, and an increasing proportion of virtual business. Although the modern consumer is a centaur, i.e. partially living in the physical world and partially acting in the virtual world, the fact is that such a consumer will not continue to exist for long, as there are new generations of young people who are growing up with the modern information and communication technology, and who will grow from mixed consumers into mainly virtual consumers. Consequently, anyone who is thinking about the future through a prism of the modern times is certainly making false conclusions and has no chance of surviving in the modern virtual business conditions that have changed. What makes virtual business different are global competition 24 hours a day, 365 days a year, and the use of virtual money. Physical borders as well as today's world in its current form are losing their purpose. Therefore the modern world, i.e. the world that will arrive very soon and will not spare any oases of the physical world, is the world that the modern man has to adapt to. Preparations for entering this world demand high levels of knowledge in a society and give priority to those business forms that require most innovative and creative approaches to work, because, as experience has shown so far, a modern computer-driven robot is able to replace a man efficiently in all reproductive jobs. It can be said that in the future a machine will probably be able to play a Chopin's Etude better than a man, but the real question is whether and when a machine will be able to compose such an Etude. Being taught a lesson, developed economies are making preparations for the transition into a new virtual age and are making significant efforts in transforming their own strategies from the industrial point of view to the view embedding the principles of knowledge society. Unfortunately, monitoring the political and macroeconomic scene in the Republic of Croatia, it is clear that the mind of politicians and macroeconomists supporting the political elite correspond to the past times, to the

industrial age. This transition that the Republic of Croatia will have to make soon has not been recognised yet, and this can be detrimental to the survival of the Croatian economy in the long run. It should be pointed out that the situation in Eastern Croatia is even worse, as this part of Croatia is globally recognised as a region of agricultural production, which is generally unprofitable, i.e. it cannot survive without state intervention in the form of premiums, subventions, subsidies, and even protection levies. A good rational view of the development of the Croatian society, including Eastern Croatia, requires looking ahead to the future and choosing a core business. This should then be used as a base for application of marketing principles in business, branding Croatia in the global market and, ultimately, making specific development plans to invest in the activities accompanying the core business, thus setting the entrepreneurial spirit in the Republic of Croatia free. Expecting that something will be solved by creating a good environment for entrepreneurs without strategic planning and state intervention is a utopia. As the Republic of Croatia is recognised as a tourist country at the global level, tourism should be one of the key factors of success of the Republic of Croatia in the global market. However, considering the potential of the Republic of Croatia and the quantities that can be produced, without developing own strategic offer in a virtual environment, i.e. without organising Croatian producers in a trade cluster, it is hard to expect that Croatian products will find their place in the global virtual environment created by the Internet today. Accordingly, the following hypothesis can be set:

*Tourism and trade can and should be the development drivers of Eastern Croatia.*

The aim of the research is to show that tourism and trade can be the development drivers of Eastern Croatia. The research results should therefore be presented as a descriptive model for the development of Eastern Croatia, based on the prerequisite that tourism and trade can be the drivers of economic development.

To provide the most authentic and reliable conclusions and knowledge, a greater number of scientific methods were used for the purpose of scientific research. The scientific methods used in the research include induction and deduction, analysis and synthesis, abstraction and concretisation, observation, generalisation and specialisation, causal inference, classification, comparison, systematic approach, historical method, methods of proof and contradiction, descriptive modelling, compilation and empirical method. However, the most important method applied in the research is the method of thought experiment. The starting point in the paper is deductive and logical method of researching the relevant foreign and Croatian literature about the experience of other economies related to the principles of economic development.

The method used in this paper is the method of thought experiment, as the descriptive concept model that will be presented in this paper cannot be tested in the real-world conditions. Generally, this method is mostly used by theoretical physicists for analysis and testing of those physical models that cannot be verified in the real-world conditions. Due to the predetermined length of the paper, only the final research results will be presented here.

### **3. Research results**

As it was already pointed out in the introductory part and later in the paper, the entire world, including the Republic of Croatia, is facing another large transition, the transition from the physical world with physical forms dominating the business world to the so-called virtual world. This transition will mark the beginning of a great new era in the development of the human society, known as the information age or the knowledge age. Considering the

importance of the social changes brought about by the information and communication technology, i.e. considering the general social significance of the new era, this new era can be also called the information society, i.e. the knowledge society. This “information society is a society where the creation, distribution, use, integration and manipulation of information is a significant economic, political, and cultural activity. This type of society is characterised by the central position of the information technology in the field of production, economy and society as a whole. The information society is considered to be a successor to the industrial society. Closely related concepts are post-industrial society, post-fordism, knowledge society, telematic society, information revolution and network society. Information and communication technology brings changes to the way of life of individuals and social community.” (“Informacijsko društvo”, n.d.) Starting from this definition, it is clear that the new society transforms not only the forms of communication, but it also transforms the overall social habits. Even the encyclopaedia that was used in the process of defining the term information society belongs to the concept of the so-called Web 2.0, i.e. the concept marked by creation of virtual communities in the virtual Internet environment. Such communities change human habits to a great extent, and the number of people who are replacing physical forms of social interaction with virtual forms through various forms of social networks is growing. These networks allow for a very wide outreach and immediate interaction among people who are in different places, both on this planet and in the Universe, limited only by the range of communication systems. Therefore, this technology has enabled significant changes in the system of human activities. A predecessor to the social networking in the virtual environment was the so-called Web 1.0, i.e. “the Presentation Web”, where the content creator was at the same time the content owner, allowing only one-way communication, from content creator to content consumer. Social networks have changed this and today’s communication is two-way communication. As virtual content is becoming increasingly dominant over physical content, in the near future it can be expected that up to 80% of products will be consumed in the virtual form. For this reason it is understandable that the virtual environment is a significant driver, both in terms of creation of the new content and its exchange and distribution. In addition to exchanging the virtual content in the virtual environment, the so-called electronic market is created in the virtual environment. According to its basic principles of functioning, it corresponds to the physical market. Electronic market is the place where electronic trade takes place, and this trade is often identified with electronic business. The reasons that the terms e-Commerce and e-Business are confused are given by Tepeš. “It is generally accepted that the terms “e-Business” and “e-Commerce” have the same meaning. Such a belief arises from the premise that any business ultimately leads to buying or selling. E-Commerce is about selling and buying products through the Internet, but e-Business is much more than that.” (Tepeš, 2008, 25)

Panijan gives the following definition of the term e-Business: “E-Business is a modern form of organising business, involving intensive application of information and, in particular, Internet technology when performing the key or core business activities.” (Panijan, n.d.) A simpler, but complete definition of e-Business is given by the Financial agency (Fina), and it says that “e-Business is a simple way of communicating among business partners through electronic means of communication.” (“Elektroničko poslovanje - e-poslovanje”, n.d.)

In the structural sense, electronic business can be defined by the following formula: (Strauss, El-Ansary, Frost, n.d.)

$$eB = eC + BI + CRM + SCM + ERP$$



where abbreviations mean the following:

- eB e-Business;
- eC e-Commerce  $\approx$  trading through the Internet;
- BI - Business Intelligence;
- CRM - Customer Relationship Management;
- SCM - Supply Chain Management;
- ERP - Enterprise Resources Planning Systems.

Therefore, electronic commerce is one of the development drivers of any community, including the development potential of Eastern Croatia. As an inseparable part of e-Business, e-Commerce produces evolution of the concepts related to e-Business, which were presented by the formula above. All the mentioned concepts are based on knowledge. Therefore, the development of electronic commerce, i.e. e-Business should ultimately produce an evolution of knowledge in the society, and knowledge is the capital base of the modern age. Accordingly, today when education is of secondary importance, it would be crucial for the development of the Republic of Croatia, particularly its eastern part, to make efforts to build and retain human potential that would ensure the application of the concept of e-Commerce and of the transition from physical to electronic business, i.e. from physical to virtual society.

Nevertheless, physical commerce can and should be a development driver not only for Eastern Croatia, but for the entire Republic of Croatia. However, commerce in today's form actually makes Croatia poorer, because that form of commerce, particularly in the field of industrial products, mostly consists of imported products, and target customer group are the people of the Republic of Croatia. The situation should be changed in the way that wholesale trade as well as retail trade becomes primarily oriented toward the Croatian product and foreign consumers of the Croatian product. In terms of e-Commerce, there are no significant obstacles for the realisation of this concept, as the entire Internet is actually a virtual international market. The problem primarily lies in the possibility of selling Croatian products to foreign consumers through a retail trade system. Apart from exceptions referring to the expansion of the Croatian retail trade chains to the surrounding area of the former Yugoslavia, there are few examples of Croatian products being marketed in a foreign market through physical retail trade. However, it would be wrong to say that there are no possibilities in this area, as tourism is a specific social phenomenon acting as a foreign market in the home territory.

In addition to commerce and e-commerce in particular, and according to the above assumption, tourism should be another development driver for both the entire Croatia and Eastern Croatia. According to the World Tourism Organisation (WTO), tourism is "a group of activities when people travel to and stay in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes..." (Marušić, 2012, 2) Whereas commerce in Croatia could be primarily seen as a means of transition from the physical into the virtual environment, tourism could be seen as a physical form of social activities with special form of activities, because, as already stated, it creates the foreign market in the home territory. Tourism is primarily a social phenomenon and it provides benefits to the service and catering industry in the first place, but also to other activities in the function of tourism. However, Croatian tourism has some weaknesses. These include orientation on the coastal area and limitation to two to maximum five months a year, due to the specific character of summer tourism. Unlike the coastal area, tourism in the continental Croatia can be pursued year-round, aiming at a different consumer niche and being primarily oriented toward cultural and gastronomic offer.

As elaborated above, relying on agricultural production as a component of strategic development and on industrial production in today's circumstances makes no sense. Since society is focused on cheap food, agriculture is by definition supported through subsidies, and most of the industry is uncompetitive, so the question is what can be used as the development driver of the Republic of Croatia, in particular in its eastern part. Agricultural products cannot be competitive in the global market, as they lack proper branding, have inadequate prices and cannot be produced in sufficient quantities. However, marketing agricultural products through the catering industry benefiting from tourism is something quite different. As a rule, if offered adequate experience (through adequate promotional activities), a visitor is willing to pay a higher price for autochthonous cuisine. If tourism is used as a strategic backbone, agricultural production can be kept alive as an accompanying industry based on the core business - tourism. The same applies to industrial activities. Another significant accompanying activity involves services that require a high level of knowledge, provided that these services are offered at prices that would be acceptable to a foreign guest. This primarily refers to the potential of the Croatian health care, as it is known that the Croatian health care system provides high quality services at prices that are lower than the prices in the developed countries. Another goal would be thus achieved - improved job offer would encourage highly qualified labour force to stay in Croatia. Now the trend is opposite - after expensive education provided for free and paid by the state, highly qualified labour force leaves the country without repaying the cost of their education to the society.

As already stated, in addition to tourism, trade should be another integrator and driver of the economic recovery of the Republic of Croatia. However, to be able to market products in the world market, the Republic of Croatia should first provide sufficient quantities of goods. For example, most retail trade chains in the world are not interested in high quality Croatian wines due to limited quantities of produced goods. The reason for this can be found in the absence of strategic determinants in agricultural production, because it is primarily focused on grains, whose prices are commonly lower in the world market. On the other hand, there is high production diversity and products are produced in small quantities that are insufficient to create a more serious offer in the foreign market. In such cases trade should be used as a factor of cohesion for integration of producers in clusters, to ensure this basic requirement of the global market faced by the Croatian producers of agricultural products. In that sense, while accepting the necessity for the transition of trade to the virtual environment, the Croatian trade should be integrated in the virtual environment and a master brand should be created by presenting the Republic of Croatia as a kind of a corporation, to present Croatia in the virtual environment under this master brand. Creation of such a brand would require a systematic approach and establishment of corporate business principles for economic operators in the Republic of Croatia. The role of the corporation's leadership would be to define the vision and mission of joint businesses, organise joint marketing and joint research of foreign markets, coordinate efforts in systematic branding of the Croatian autochthonous products and production planning, ensure joint presentation in foreign markets and protection of common interests of all economic operators involved in the joint venture. Although some of this work should be carried out by the Croatian Chamber of Economy and the Croatian Tourist Board, these organisations have lost their significance and reputation in the business environment due to the manner in which they used to obtain funding and hire people in the past. The solution would then be to establish a profit-oriented organisation that would be able to coordinate economic activities, particularly the export-oriented ones, at least in the eastern part of the Republic of Croatia.

Such a system would result in the creation of the Croatian trade cluster in both physical and virtual environment, which would provide Croatian producers with access to the world's physical and virtual market. Croatian producers should seek their place in the potential offered by modern concepts, primarily in production for a known buyer, i.e. custom-made products. For this purpose a global integrated information system should be developed, oriented towards customer relationship management (a global CRM system) and used for the benefit of all producers in the Croatian territory. As the Republic of Croatia is currently unaware of new trends, it would be beneficial if at least Eastern Croatia recognises the importance of defining the "core business" and integrating all business factors to ensure economic development. Otherwise there are small chances that the global investment policy that is currently proclaimed in the Republic of Croatia will have any significant effects on economic development.

#### **4. Conclusion**

Until the 1970-ies, Eastern Croatia was seen as a promised land, compared to the rest of the Republic of Croatia. Development potential was based on agricultural production and processing industry, but also on industrial production which was technologically more advanced at that time than in other parts of the Republic of Croatia as well as the entire former Yugoslavia. However, many crises that affected the former Yugoslavia and development of tourism have significantly changed this and since the 1970-ies Eastern Croatia has been constantly lagging behind in economic development. The Homeland War that directly affected this part of Croatia, privatisation that was mainly unsuccessful, and lack of competitiveness in foreign markets resulting from the self-reliance of the former state, have all led to the situation that Eastern Croatia is today one of the most undeveloped areas of the Republic of Croatia. Attempts to develop small entrepreneurship in this area in the period after the war at the end of the last and the beginning of this century failed to produce any significant result. Therefore, agriculture continues to be a significant backbone in the economy of Eastern Croatia. However, today's agriculture, which is based on incentives, subventions, premiums and other forms of government protection cannot be a key factor of economic development. Therefore, new key factors have to be found.

In that sense, as emphasized during the presentation of research results, the general strategic backbone of economic development ("core business") should be established and used to create attractors that will be the foundation and the backbone for the development of strategic business activities. In that sense tourism in the physical world and trade in both the physical and the virtual world can be used as basic attractors and drivers of economic development, primarily in Eastern Croatia, but also in other parts of the Republic of Croatia. Certainly, these are not the only attractors in the entire territory of the Republic of Croatia, but in Eastern Croatia they are the dominant factors of development. Therefore, the usual theses about reindustrialisation of Eastern Croatia should be abandoned as soon as possible and focus should be shifted to those areas that can become drivers of economic development.

Due to the predetermined space for presentation of the research results in this paper, the focus was set on the analysis of dominant issues of economic development and conditions in the eastern part of the Republic of Croatia, attempting to provide reasons for such a situation. In addition, business conditions that are expected to occur in the near future were considered and used for identification of the strategic backbones of both the virtual and physical economic development of Eastern Croatia in the form of trade and tourism. Further research efforts of the authors will be focused on the transformation of this conceptual descriptive model of

development potentials of Eastern Croatia, with tourism and trade as development drivers, into a specific structural model that will be used to identify business activities and parts of the economy that could be successfully developed in such conditions.

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**ESTABLISHING A CONSORTIUM - WAY FOR SUCCESSFUL  
IMPLEMENTATION OF INVESTMENTS PROJECTS  
- AN EXAMPLE OF THE INFRASTRUCTURAL PROJECT  
"SLAVONIAN NETWORKS" –**

**OSNIVANJE KONZORCIJA – PUT ZA USPJEŠNU PROVEDBU  
INVESTICIJSKIH PROJEKATA - PRIMJER INFRASTRUKTURNOG  
PROJEKTA „SLAVONSKA MREŽA“ -**

**ABSTRACT**

*Joining of entrepreneurs in the process of doing business in the modern economy is the (Latin) 'Conditio sine qua non'. The economic practice has created a variety of business association forms that quality of cooperation can have multiple levels - from informal cooperation to segmental or total business integration. Joint approach to suppliers or customers, or work together to find solutions of legal, economic or technical matters most common triggers are thinking about merging businesses. Unfortunately, business joining in Croatia is not at the European level. This is a question of trust in other participants as well as trust in the institutions of society and state. Social cohesion is today the most important problem in Croatia uncompetitive and weak operating results of our businesses. Because our clusters - either in industry, agriculture and other sectors of entrepreneurship - have very few members and their competitiveness on the EU market, but also on the Croatian market, is very low than similar associations in other countries. In this paper is developed a model of the business association in the consortium on example of the infrastructure project "Slavonian networks" - the development of broadband networks to Internet in the area of five counties in the region of Slavonia and Baranja.*

**Key words:** Association, Consortium, Entrepreneurs, Legal frame, Social cohesion

**SAŽETAK**

*Udruživanje poduzetnika u procesu poslovanja u suvremenoj privredi je (lat.) conditio sine qua non). Privredna praksa je stvorila niz oblika poslovnog udruživanja koje po kvaliteti suradnje mogu imati više razina – od neformalne suradnje do segmentarne ili potpune*

*poslovne integracije. Zajednički nastup prema dobavljačima ili kupcima, ili zajednički rad na iznalaženju rješenja za pravna, ekonomska ili tehnička pitanja najčešći su pokretači razmišljanja o udruživanju poslovnih subjekata. Nažalost, poslovno povezivanje u Hrvatskoj nije na razini europskih poslovnih dostignuća. Poteškoće poslovnog udruživanja nisu u nas - u najvećem broju slučajeva - rezultat problema ostvarivanja poslovnog interesa nego, prije svega, je to pitanje društvene mentalne matrice, odnosno pitanje socijalne kohezije, odnosno to je pitanje povjerenja u druge sudionike kao i povjerenja u institucije društva i države. Socijalna kohezija je danas u Hrvatskoj najvažniji problem nekonkurentnosti i slabih poslovnih rezultata naših poduzetnika. Zato i naši klasteri - bilo u industriji, poljoprivredi i drugim sektorima poduzetništva - imaju vrlo malo članova i njihova konkurentnost na EU tržištu, ali i na hrvatskom tržištu, je vrlo niska spram sličnih asocijacija u drugim zemljama. U ovom radu razradit će se model poslovnog udruživanja u konzorcij na primjeru infrastrukturnog projekta „Slavonska mreža“ – razvoj mreže širokopoljarnog pristupa Internetu na području pet županija regije Slavonija i Baranja.*

**Ključne riječi:** Konzorcij, Poduzetnici, Socijalna kohezija, Udruživanje

## **1. Introduction**

The difficulties of the business association is not in Croatia, in most cases, result of the problem of achieving business interests, but it is primarily a question of mental matrix of society, i.e. question of social cohesion. Because - economic calculations and simulation of business processes easily demonstrate ability to accomplish the interests of all potential participants in business association. But the question of trust in other participants as well as trust in the institutions of society and state is a fundamental obstacle. [6] [8] [9] In this way, the relationship between social - term capital and status in society; (Putnam, 1993). Measure the potential association that connects economic efficiency and social and cultural capital and civic culture; it is operationalized by two dimensions, which are key issues for the intensity of association and level of mutual trust. [15] The result was dad measurements (Štulhofer, 1998) reflect the image that characterizes the transitional society: mergers are not represented in the correct proportions and the level of trust, both to each other and great- harder institutions, low. [16] Therefore, it is important to cultivate a proper awareness, as well as access to the information through formal and informal documented. [3]

Social cohesion is today the most important problem in Croatia uncompetitive and weak operating results of our businesses. Because our clusters - either in industry, agriculture and other sectors of entrepreneurship - have very few members and their competitiveness on the EU market, but also on the Croatian market, is very low against similar associations in other countries. [8] [10] Joint performance by the investor or suppliers, or work together to find solutions to the legal, economic or technical issues are the most common triggers of thinking about merging businesses. Economic practice has created a variety of forms of business association of which is one of the first stages in the development of business cooperation organizational form called the Consortium. [3] Heterogeneous groups are able to best utilize the skills and contributions of each member and creatively solve problems, because the participating employees of different skills, providing an interdisciplinary approach to the problem (cf. Giddens, 2007). [4]

## 1.1. The consortium - meaning and scope of the term

The consortium is a form of contractual connection (association), typically companies, for joint realization of investment projects. The consortium agreement governs the rights and obligations of members: the division of work, periods of performance, the share of costs, decision-making in the consortium, liability for failure to work, recourse and other members of the consortium may designate someone among themselves as the leading and authorize him to represent consortium in relation to third parties, but in relation to the investor they generally act as solidary creditors or solidary debtors. A consortium may be temporary (appropriate for the achievement of just one particular job) or permanent (due to multiple joint involvements of members in collective investment undertakings). According able accession of new members, the consortium can be opened and closed. By joining the consortium is not formed a legal entity, given that, pursuant to Article 637 , paragraph 2 of the Law of Obligations, partnership community of persons and goods without legal personality. In this context it is important to note that, if the contract expressly provided otherwise, the consortium of the provisions of the partnership contract. With a consortium, the forms are partnerships and joint ventures as well as clusters. [5] The basic principles of the consortium are: a common goal, this voluntary approach, law-making, management and supervision, investment capital, participation in profit and loss, limited solidarity.

## 2. The fundamental framework of establishing a consortium

The basic framework of the establishment of the consortium is:

- a) Process of negotiating and establishing the basic principles of cooperation,
- b) Documents for the establishment of a consortium,
- c) Organizational and management structure of the consortium.

### 2.1. The process of negotiation

Establishment of consortium must began with negotiations who is very important, because in the beginning is need to ask a basic principles of collaboration and determine a strategy based on goals which are then easily define documents for consortium establishment and its organizational and management structure. Public and clear rules and principles prerequisite are for the functioning of the consortium; this means that there must be a good regulatory framework and will of all parties to strictly comply at working with the rules. Therefore it is important that from the very beginning of the process of negotiation involving all potential consortium members and to take a position on the draft of all documents - keeping in mind the common goal of future cooperation.

### 2.2. A documents for establishment of a consortium

The basic documents for the establishment of the consortium are: a letter of intent, agreement on the establishment of a consortium, the consortium enactments and strategic plan.

**The Letter of Intent** is the result of international business practices and this form of business is not regulated by law. Classification and grouping of typical contents were carried out in the legal literature on the basis of the state of business practice; possible contents of the letter of intent are:

- a) Identification of the objectives that the party seeking to achieve agreement, the time sequence and schedule the negotiation position of the negotiations and those who participate in them;

- b) Issues on which agreement has been reached and the issues on which there are different attitudes;
- c) Establishing mutual obligations that have been reached;
- d) Predict the content of future agreements as well as the manifestation of willingness to enter into it, but depending on the fulfilment of certain conditions or the occurrence of certain events.

Basically, a letter of intent shall have any legal effect the contract or the fulfilment of the obligations of the contract. If a letter of intent contains some obligations in the event of non-performance by there is a possibility of damage compensation on the basis of general civil liability for damages. [5]

**The consortium agreement** is an autonomous commercial law that is created in the business practices of cooperation on the joint performance of large investment projects, etc. The contracting parties are generally companies, and the goal of the contract may be the realization of the cooperation program, project implementation, etc. It is a framework contract whose fulfilment may be conditional conclusion and fulfilment of other contracts; however, the obligations of such contract shall not be transferable to a third party. It is important to emphasize that the consortium agreement is not created a new legal entity. The contract must be fully and clearly described and the way of fulfilling the obligations of the contracting parties, professional and technical division of tasks, content and method of achieving the agreed cooperation. For the fulfilment of the obligations arising (if it comes to an investment project, for example) counterparty suit jointly and severally - if the creditor is otherwise agreed.

**The General Acts of consortium** are: the statute, regulations, rules, etc. This document regulates the structure of consortium on the basis of accepted legal status of the consortium, governing structure, responsibilities and scope of work, the governing body of the consortium and the criteria for membership in the consortium. What will bylaws adopted member of the consortium depends on the size of the business venture, the number of members and other elements.

**The strategic plan** is an essential element of connecting members in the consortium; it is a long-term program of development business ventures that are based on predefined common goal, which is the purpose of their association in the consortium.

### 2.3. Organizational and management consortium structure

The organizational and management structure of the consortium depends on the size of the business venture, the number of members and other elements. Thus, for example, a consortium of a large investment project with a number of members of the consortium have the Assembly, the Executive Committee, the expert committees on specific issues and/or permanent expert groups. Smaller consortia structure to its organizational structure to its specifics.

### 3. Establishing the consortium "Slavonian network"

Establishment of the consortium "Slavonian network" has a number of specific features that deserve special attention because:

- a) It is a large infrastructure investment project in the public interest and
- b) Make it institutional entities in the public sector together with the operators of market orientation.



### 3.1. The "Slavonian network"

Faculty of Electrical Engineering is the end of 2012<sup>th</sup> launched the project "SLAVONIAN NET-WORK" - development of broadband access in five counties of Slavonia and Baranja, in the framework of the strategy is the development of broadband in the Republic of Croatia 2012<sup>th</sup>-2015<sup>th</sup> years [13]

The number and density of connections of broadband Internet users in Croatia is significantly below of the EU member states, and in five counties in the Slavonia region of the values (except for the city of Osijek) below of Croatia's average. This state of affairs in modern conditions preventing social and economic development, effective functioning of the public administration and the inclusion of the region in modern communication and faster development of modern telecommunication services within the country and the EU. The basic elements of this project are: [1] [10]

- **Objective:** Provide access to SPI in 75% of towns in five counties Slibo within two years. Mr.

- **End-users** of the project results are:

1. Population in five counties on Slavonia region,
2. Public services in five counties of the region (health, education, social welfare, administration ...)
3. Economy in five counties of the region.

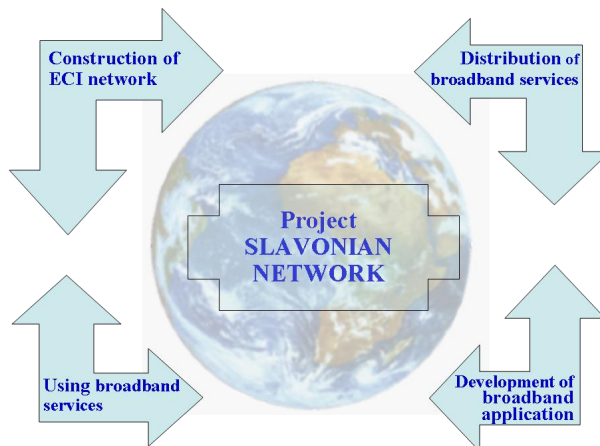
- **Assessment** of the economic benefits of the Project;

- a) the efficient functioning of the public administration,
- b) Better business results of business entities,
- c) Better quality and higher standard of living and
- d) Development of new businesses based on broadband access.

Ultimately - according to estimates by the European institutions in the implementation of the project at broadband-pillar contributes to the increase in GDP of 0.7%. [12]

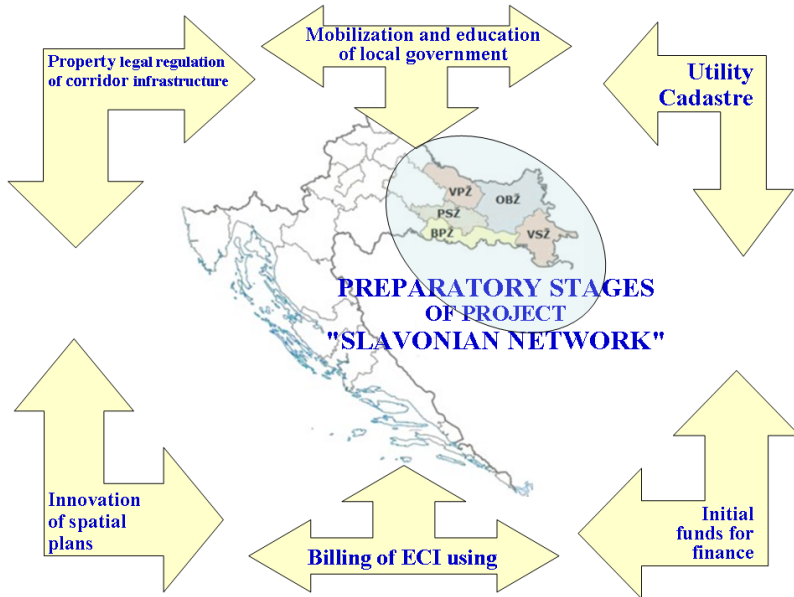
The project is composed of four segments as shown in Figure 1, and the project activities are conducted in multiple simultaneous interdependent phases - as shown in Fig. 2 and 3;

Figure 1  
Sector's structure and interdependence of goals of the project "Slavonian network"



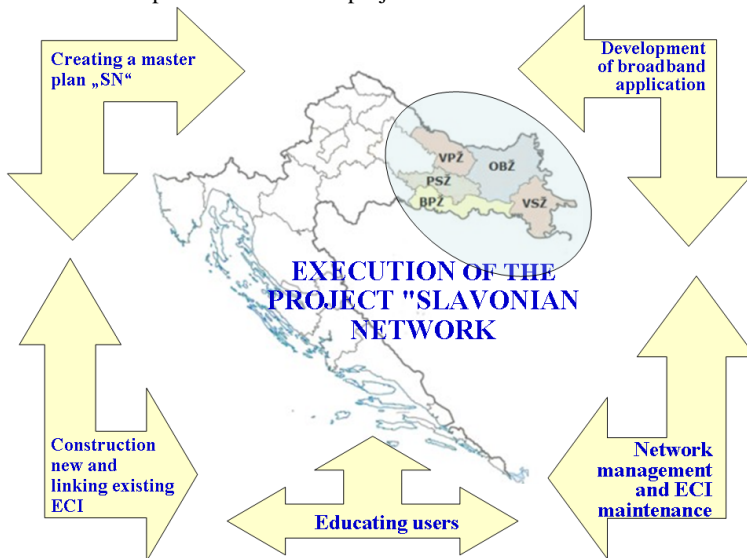
Source: authors

Figure 2  
Preparatory stages of the project "Slavonian network"



Source: authors

Figure 3  
Implementation of the project "Slavonian network"



Source: authors

It should be emphasized that this is about:

- 1) Important issue of technological connection RH European communication flows,
- 2) Complex technological process of development of broadband services,
- 3) Significant investment project,
- 4) Demanding job of determining the state of the local government (LGU), and
- 5) Important elements of spatial plans of LGUs.

The development of telecommunications and broadband internet developed European countries have implemented over the past decade in significantly better organized society, its regulated legal state and a better economic situation than it is now in Croatia - which in a few years should overcome this technological gap.

### 3.2. Consortium "Slavonian network"

According to the conceptual study "Slavonian network" to manage implementation of this complex project provides for the establishment of a consortium that would harmonize the procedures and coordinate the implementation of the key stages of the project. The members of the consortium would be: five Slavonian counties; (Brod, Požega, Osijek, Virovitica and Vukovar county.), Faculty of Electrical Engineering; "Panon" Institute for Strategic Studies in Osijek and other interested telecommunications operators (Fig. 4);

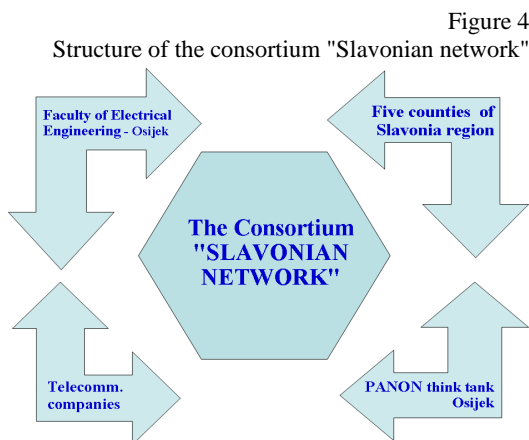


Figure 4

Structure of the consortium "Slavonian network"

In contemporary conditions approval (and development) of new technologies is a complex process with a number of stages and entities must respect the interdependencies and operation environment. [7] Described the complexity of the project "Slavonian network" will cause a range of business issues that will need to be urgently addressed during project implementation. Here we draw attention to the structure of these problems, which - according to our estimation of the - has the following sectors' representation (Fig. 5);

Source: authors

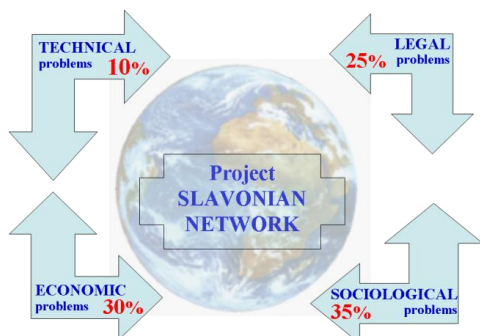


Figure 5

The structure of the business problems they will encounter project "Slavonian network"

Source: authors

Therefore, on the aim of the realisation project "Slavonian networks" - require the integration of all social, political, technical and financial resources in the region. Advantages of a joint approach towards investors and suppliers as well as working together to find solutions to the legal, economic or technical issues are the benefits that have been identified are already at the stage of project application to the tender of the Ministry for Regional Development.

Starting from above determinants is structured process that begins with the founding of the consortium signing a letter of intent. In this document (on 3 pages) determined the subject of co-operation and the reason for the establishment of a consortium, briefly described the launch of the project and activities, pointed to the importance of the project for the development of the region and emphasized the complexity of the project. Also - is determined by the duration of the project and expressed will of the parties to establish a consortium.

It was suggested that the signatory institutions founding a letter of intent Assembly of the consortium that will manage the project, coordinate and implement strategic objectives, within its jurisdiction, all other activities necessary to implement the project. The detailed structure of the consortium, as well as the rights and obligations of the consortium members - said in a letter of intent - will be regulated by agreement on the establishment of the consortium between the signatories of this document. In the end, it was emphasized that these institutions and facilities to the establishment of the consortium - as far as possible - to implement in good faith the necessary urgent measures in order to realize the preparatory phase of the project "Slavonian network".

Preparations for the establishment of the consortium are in the process so that by the end of May this year, the consortium will be formally established.

#### **4. Conclusion**

The concept of the consortium as a business association represents a significant opportunity for association of business entities in the implementation of investment projects. Pooling for business purposes in the Republic of Croatia is not in the level of other EU member states; to us it still draws a transitional issue of social cohesion, that confidence in other businesses as well as confidence in the institutions of society and government.

This paper presents the basic elements of the establishment of the consortium and briefly describes the essential elements of the "Slavonian networks" - the development of a network of broadband Internet access in five county of Slavonia and Baranja. On these grounds, set up the concept of the establishment the consortium "Slavonian network" which is in the process of establishment.

For the establishment of the consortium are three major determinants:

- a) Process of negotiating and establishing the basic principles of the consortium,
- b) Preparation and signing of documents for the establishment of a consortium,
- c) Define the organizational and management structure of the consortium.

The concept of the establishment of the consortium "Slavonian network " is more specific because, in terms of: (a) associating regional authorities, institutions from the public sector and market-oriented businesses to (b) a large investment project of (c) the public interest for the development of telecommunications infrastructure to (d) of the area of five counties in the region of Slavonia and Baranja.

It was suggested that institutions have signed a letter of intent on the implementation of the project and on the establishment of the consortium "Slavonian network". The Assembly of consortium will manage the entire project or coordinated strategic objectives and core activities, within the remit of each of the parties to the project implementation.

This will create the institutional prerequisites for the successful implementation of large infrastructure projects in the region of Slavonia and Baranja, i.e. will enrich the practice of business associations in Croatia - which can be an example for similar business association.

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## **MODELS OF INVESTMENT IN FIBER OPTIC NETWORKS AND IMPLEMENTATION OF THE "SLAVONIAN NETWORK" PROJECT**

### **MODELI INVESTIRANJA U SVJETLOVODNU MREŽU I REALIZACIJA PROJEKTA „SLAVONSKA MREŽA“ -**

#### **ABSTRACT**

*The construction of fiber optic networks in telecommunications (broadband) in modern conditions is very important infrastructure project whose importance for the economy and society as a whole can be measured with the importance that had investments in the construction of railways or electrification in the nineteenth century. The Republic of Croatia in terms of coverage of its territory and population broadband access to the tail of the list of EU countries and must very rapidly overcome this lag to avoid further behind in economic and social development. Construction of optical network is financially and organizationally complex infrastructure project that is can not be financed as a private entrepreneurial investment. This paper: - discuss about the models of investment in optical network using examples of EU countries, - given a frame of structure on construction costs, - make an overview of incentives and forms of financing optical networks. Finally, proposal of model financing the construction of fiber optic network in the five counties of region within the project "Slavonia network" is given.*

**Key words:** *Broadband, Infrastructure, Investment, Model of financing*

#### **SAŽETAK**

*Uvođenje svjetlovodne mreže u telekomunikacije (širokopolasni pristup Internetu) je u suvremenim uvjetima vrlo važan infrastrukturni projekt čija se važnost za gospodarstvo i društvo u cjelini može mjeriti sa značajem koji su imale investicije u izgradnju željeznica ili elektrifikacija u XIX. stoljeću. Republika Hrvatska u pogledu pokrivenosti svojeg teritorija i stanovništva širokopolasnim pristupom na začelju liste EU zemalja i mora vrlo ubrzano prevladati ovo zaostajanje kako ne bi još više zaostala u gospodarskom i društvenom razvoju. Izgradnja svjetlovodne mreže je financijski i organizacijski složen projekt koji se ne može financirati kao privatna poduzetnička investicija. U ovom radu se razmatraju modeli investiranja u širokopolasni pristup na primjerima EU zemalja, daje se okvirna struktura troškova izgradnje te pregled poticajnih mjera i oblika financiranja izgradnje ove mreže. Na*

*kraju, predlaže se model financiranja izgradnje svjetlovodne mreže na području pet županija istočne Hrvatske u okviru projekta „Slavonska mreža“.*

***Ključne riječi:** Infrastruktura, Investicije, Modeli financiranja, Širokopojasni pristup*

## **1. The construction of the fibre optic network - civilisation challenge**

The construction of fibre optic networks in telecommunications (broadband) in modern conditions is very important infrastructure project whose importance for the economy and society as a whole can be measured with the importance which had investments in railway construction or electri-fication in the nineteenth. century. [5] [8] [16] The Republic of Croatia concerning the broadband coverage of its territory and population at the tail of the list of EU countries and must very rapidly overcome this lag to avoid further behind in economic and social development. [2] [3] [13] In the region of Slavonia and Baranja is important to emphasize that according broadband coverage to population (third quarter 2013) on the list of Croatian counties, three counties - Brod, Požega and Virovitica – are in last place, Vukovar County is on 14 and Osijek on 7 place - as sufficient warning to needs of the seriousness action. [2] [3] [13] [14]

### **1.1. Categorization of availability to broadband**

The availability of broadband to households certain areas are categorized with three colors:

- a) The white areas include areas where broadband access is not available, or where there is no adequate broadband infrastructure.
- b) The gray areas are those in which only one operator offers broadband services, or services offered multiple operators with insufficient level of competition, which has resulted in inadequate supply of broadband services to end users in terms of quality and price of services.
- c) The black areas include areas where at least two operators offering broadband services, with a satisfactory level of competition, and the quality and price of services for end users.

This categorization of colors for areas of broadband services is implemented in two levels:

- a) Basic (traditional) broadband access based on copper conductors that enable data transmission up to 10 Mbit/s;
- b) NGA (broadband network of new generation) based on optical fibers that allow higher speeds up to 10 Gbit/s.

### **1.2. Developmental effects of broadband**

Developmental effects of the broadband infrastructure are positive and can be classified into four main sectors: (a) education, (b) health and social care, (c) employment and economic development, and (d) energy and transport - which has already discussed in the papers [2] [3] [11] [13] [16], and here is a graphical presentation of the impact of the communications sector to economic growth.

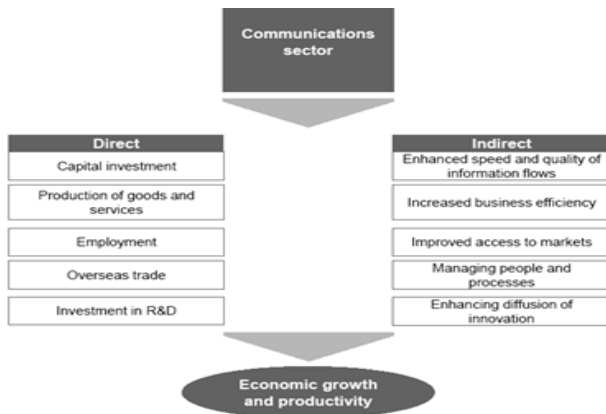


Figure 1  
The impact of the communication sector on the growth and productivity of the economy [8]

### 1.3. Models of the development of broadband infrastructure

The construction of broadband network is an infrastructure project that by its nature can not be financed only as a private entrepreneurial investment. EU strategic document Digital Agenda [5] committed to equal broadband access to population as a whole in the whole EU. In sparsely populated (rural) areas of profitability of such investments are not motivated by telecomm companies (private companies) to invest in these areas. For these reasons, opened a series EU funds and approved giving state aid to build broadband infrastructure (under special conditions - in order not to distort the rules of free competition). Building broadband infrastructure in the EU is carried out intensively for ten years and has developed several models: (a) business, (b) market and (c) investments, which are determined by: (1) competitive services, (2) public relations of local governments and private companies (operators) and (3) the investment share, responsibility for the construction and management of infrastructure, and (4) acquiring and retaining ownership of the built infrastructure. This complex problem of broadband building aggravated by a series of possible models using telecomm technologies; each of these has advantages and disadvantages. Therefore, it is important to be familiar with all the essential elements in the process of planning the construction of broadband.

### 1.4. Telecommunications network

Telecommunications network can be ground or air (on pillars). According to the type of material, guides can be copper or optical (glass fibers), for inaccessible areas using radio and satellite links.

Fiber optic networks are functionally divided into main and distribution. The main optical network consisting of fiber optic cables that connects of central office service provider (operators) to distribution node which can be in the street cabinet or already built in buildings. Distribution network consisting of a distribution node and optic cable to buildings, as well as vertical and horizontal fiber optic installations inside buildings to apartments or offices.

### 1.5. Access to the network

Access to the network is achieved by various technologies based on copper or fiber-optic conductors, or a combination thereof - with the use of different models of technological transfer



receipt and distribution of the signal. Here is a brief account of the basic models of access to the teleco-mmunications network that distributed network applications and services. It should be noted that for all the models shown there is no relevant practice - built networks in many regions and cities of Denmark, Finland, France, Italy, Lithuania , the Netherlands, Germany, Polish, Slovenia, Sweden , Great Britain and other European countries in the last five years. [1] [8] [17]

**Fiber to the home (FTTH)** involves laying a fiber-optic cable all the way from the central office/ local exchange (or suitable local access node, such as a public sector building) to the home. FTTH is the technology with the highest capacity, and therefore provides the highest degree of future proofing. However, due to the long distances involved in deploying a connection all the way to the home, the deployment costs of FTTH can be very high. To date, commercial deployments of FTTH have been limited due to this high cost. There are two main options for FTTH architecture: GPON and point to point (P2P).<sup>1</sup>

**Fiber to the cabinet (FTTC)** involves laying fiber from the central office (or local exchange) to a street cabinet or basement of an apartment block. Because the fiber is only laid for some portion of the distance to the home, significant cost savings can be realized relative to FTTH. However, as the copper network is used for the last part of the connection to the home, the speeds available on an FTTC network are also significantly lower than with FTTH (around 80% in terms of the cost to connect a home). As with FTTH technologies, the cost is strongly affected by the ability to reuse existing infrastructure.

**Terrestrial wireless technologies** provide a link between the home and the nearest network node without the need for a physical wireline connection. Terrestrial wireless networks are comple-mentary to fixed networks, and can be advantageous in areas where the installation of a wireline network is difficult and/or expensive (e.g. in mountainous terrain). However, because several users access the network via the same last-mile link (i.e. the wireless link), the contention<sup>32</sup> for services can be much higher than on wireline networks, and the realized speed may be much lower than the maximum speed quoted by the service provider. In order to ensure an end user receives an assured level of service more base stations will have to be added, which will increase costs. It should also be noted that demand for high-speed rates from a large number of users on a wireless network tend to require additional investment in the fixed infrastructure that supports the wireless network.

**DSL (copper-based) broadband technologies;** basic broadband services are most often delivered over the existing copper network, using DSL technology. DSL technology has the advantage that it makes use of the existing access infrastructure and is therefore relatively cheap to deploy. However, the nature of the technology means that download speeds are heavily affected by the distance between the local exchange (central office) and the home, and in many cases are limited to below around 10Mbit/s.

**The backhaul and core network** are essential for the effective resolution of broadband services over large distances (e.g. between cities and surrounding villages) because of its economical way of covering a large number of end users in a large area. However, the development of backhaul/core network must rely on the existing access network. Traffic originating from a large number of end users is drawn through the pile and supporting the core network, and hence the selection of fiber optic cable common choice because of high transport capacity. [8]

## 1.6. Sources of financing the construction of broadband infrastructure

Building broadband infrastructure in major cities and urban agglomerations provides fast return on investment in investment (a few years) so that the telecommunications companies (private enterprise) finance this construction will continue to finance - according to market

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<sup>1</sup> GPON = Gigabit Passive Optical Network, P2P = point-to-point; Read about it at: [1] [8] [17]

criteria. For other areas - smaller towns and rural areas - have been developed models subsidized the construction of broadband infrastructure, and their sources can be divided into three basic groups:

**a) Public funds** - covering all budgetary resources at the national level, the county level and local level (cities and municipalities), as well as all the funds are invested by the company in the public domain. Public funds are considered and resources from the EU Structural Funds (the European Regional Development Fund and European Social Fund) and the Cohesion Fund of the EU. EU funds can be co-financed construction projects broadband infrastructure to 85 %, while other funds from the national budget sources.

**b) Private funds** - include the private operators in the electronic communications and , possibly , means end users who may be involved in co-financing the construction of broadband infrastructure - usually the final segment of the access network .

**c) Institutional investors** - institutional investors believe the banks and investment funds, including pension funds. Since their primary interest is the realization of economic benefits, institutional investors appear as co-investors construction projects broadband infrastructure only in densely populated areas (usually black areas) where there are sustainable business models.

State aid (public funds) is justified in white and mostly gray areas, while the black areas are not jus-tified. The share of aid in the financing of projects, increasing to more sparsely populated areas (usu-ally white areas) and reaching 100 %. In contrast, the share of private funds operators increased by more densely populated areas (gray and black areas), while decreasing the share of public funds to fi-nance projects. The black areas of public funds may be invested under normal market conditions (when not state aid) together with the means of private operators and institutional investors. [11]

**2. Investment models in optical network**

Projects construction of broadband infrastructure can be derived through a number of investment models, which are defined by: relations of public authorities and private enterprises (operators) in the project. These relationships include investment shares responsibility for building and managing a network and acquiring and retaining ownership of the built infrastructure. [1]

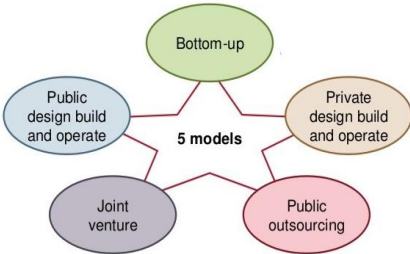


Figure 2  
Models of investment in broadband network [1]

In practice, the most commonly used investment following models:

**Bottom up model** (a model community) includes a group of end users in the local community who are organized jointly owned and democratically controlled group that is able to monitor the contract to build a local network. Public sector here is limited to providing support - as the guarantor of the loan and/or facilitates access to publicly-owned infrastructure such as ECI.

**Private DBO model** includes cases in which private operators, customer support, entitles the construction and management of infrastructure, with the permanent retention of ownership of such a good infrastructure. This model does not require significant involvement of public authorities in the implementation of projects. It is protection of the public interest is limited; since the infrastructure is built with incentives remain the property of the private operators.<sup>2</sup>

<sup>2</sup> DBO is an abbreviation of the word: Design, Build and Operate that mark important stages of EKI construction.

**Public outsourcing** is similar to private DBO model with the difference that the infrastructure built public incentives - after the contract expires on external services - remains in the public domain. Under this model, a single contract is awarded to all aspects of the construction and operation of the network. The main feature of this model is that the network launched the private sector, but public sector retains ownership and control of a network.

**Joint venture** is based on a contract which is owned network is divided between public and private sectors. Construction and operational functions are likely to be undertaken by the private sector. The model implies a joint venture investment by local authorities and private operators, possibly with the financial participation of institutional investors; in this way it is possible to balance the public interest (coverage of broadband infrastructure) and the interests of private investors (the realization of economic profit).

**Public DBO model** includes all cases in which the implementation of the construction of broad-band infrastructure under the control of public authorities (without any help from the private sector) where the ownership of the built infrastructure remains permanently in the public domain. Model of Public DBO requires significant involvement of administrative and technical capacity of local governments, but allows long-term preservation of the public interest. The operating company in the public sector can act on the entire network, or may perform services to the wholesale and retail private operators leave the service.

Public DBO model is appropriate in cases where the application of any other models allow granting excessive benefits individual operator, such as cases of construction of basic infrastructure, and building economically unsustainable infrastructure (e.g. links to villages in sparsely populated areas). On the other hand, private DBO model is appropriate in the case of private operators already have the basic infrastructure (e.g. PAIR access network or radio network) and the application of state aid as possible to improve the infrastructure in the public interest. Model joint venture rule applies in areas where there are sustainable business models of broadband construction, whereby local authorities' participation in the project facilitate private operators investing in infrastructure (application model joint venture is generally not regarded as State aid). Also, within a single project, it is possible to combine multiple investment models (e.g. construction ECI model public DBO rights and abandonment of infrastructure management by the private operator model of external services). More recently (in late 2013) opened the possibilities of applying the model of public-private partnership (PPP).

## **2.1. Other elements for assessment of the possible development of network infrastructure**

There are a number of other factors that are important for the governing body to consider the projects of development of network infrastructure.

**Technical expertise;** technical experts should be involved in the process of planning the development of fiber optic infrastructure. And here there are numerous examples of good practice; the project Midtsoenderjylland municipalities in Denmark have its fiber optic master plan have formed the basis of the master plan of the Center for Network Planning at Aalborg University, which was available for free. This is the master plan for the region save about 25 % of the cost compared to what was previously planned. But there are also negative experiences - especially when expertise is not used efficiently: this is a project in France - the network operator must install more wireless transmitters from objectively necessary. [8]

**Obsolescence of network technologies;** technological obsolescence of network technology is a common problem in telecommunications, because in this rapidly developing technology sector - so that realized investment when the network becomes operational, is outdated and must implement system upgrades. For example, when it comes to the choice of the network between copper and fiber-optic technology implemented some projects already implemented

system upgrades. When it comes to the choice of optical technology (FTTC vs. FTTH) difficult (without research) to know what is the appropriate solution, because the operators in developed markets have adopted different strategies; for example (U.S.A.) - the company Verizon is pursuing FTTH strategy and AT&T decided to FTTC. [17]

State measures to encourage the construction of broadband infrastructure may involve state aid, in accordance with the general rules on state aid at EU level. The same rules are elaborated in more detail following the current practice in EU countries and formalized within the Guidelines on state aid related to the rapid development of broadband networks, which are transmitted through the eponymous decision in the Croatian legal system. Government grants are generally justified if the positive effects of the aid, which in the context of broadband implies the availability of infrastructure across the entire national territory, dominate the negative effects related to the potential distortion of competition, or the giving of the benefits of private operators, the grant. [11]

Public broadband investment should be structured so as to reduce the barriers for end - users it and service providers - that is, to ensure that services are available and that the population uses them. For service providers, it is important to define the operational areas of adequate size, if they are too small areas it can impose a huge burden provider, on the other hand, large areas of low density may impede the operator sustainable business.

In conclusion it should be emphasized that there is no model that fits every situation, and management - the local authorities must take into account all the advantages and disadvantages of each model in order to realistically assess the situation. Therefore it is essential for local government and regional administrations cooperate with: (a) professional teams who are familiar with the issues of broadband development (b) the potential private partners at an early stage of the planning process in order to realistically determine parameters for different models of investment.

## **2.2. Construction of broadband infrastructure in Croatia**

Company "Lator" (Zagreb) for the Ministry of Transport is made proposal study "Programs construction of broadband infrastructure in Croatia" [11] in accordance with the objectives of the national development strategies of the broadband. Programs that include government grants are designated as PDP (1-5), where the program PDP1 further divided into two subprograms (PDP1a and PDP1b, the white or gray areas). The study proposes the implementation of the program in Croatia through three phases:

- a) Phase I - covered by the access and aggregation network in traditional white areas (programs PDP1a, PDP2 and PDP3);
- b) Phase II - included in the aggregate network in traditional gray areas (program PDP1b);
- c) Phase III - includes access network in the traditional gray and black areas (PDP4, PDP5 and P6).

Table 1 (in attachment) gives an overview of the proposed incentive construction of broadband infrastructure.

The study was performed and classification of color regions in Croatia with regard to traditional and NGA broadband. Black areas generally include settlements with more than 2,000 inhabitants, while the white areas usually settlements with fewer than 200 inhabitants. In terms of NGA broadband majority Croatian NGA is white, with the exception of the four largest cities (Zagreb, Split, Rijeka and Osijek) and municipalities Bistra (pilot project T\_HT) which are categorized as NGA gray. [11]

### 3. Development of broadband access in Slavonia and Baranja

Faculty of Electrical Engineering is the end of 2012. launched the project "Slavonian network - development of broadband access in five counties of Slavonia and Baranja, in the framework of the Strategy for the development of broadband in the Republic of Croatia 2012<sup>th</sup> - 2015<sup>th</sup> years in the previous period realized a number of preparatory study [2] [3] [12] [13] and preliminary design "Slavonian network" (worth € 20 million) was accepted in the competition of the Ministry of transport, Croatia,<sup>3</sup> [14]

Results of said study - with special reference to the situation in the region of Slavonia and Baranja - are shown in Tables 2 and 3 and graphs 3 - 4;

**Table 2 White, gray and black areas of basic broadband**

Areas	Croatia		Slavonia and Baranja	
	N <sup>o</sup> inhabitants	%	N <sup>o</sup> inhabitants	%
White	92.115	2,2	23.685	2,94
Grey	1.842.414	43,1	452.420	56,24
Black	2.338.249	54,7	328.404	40,82
<b>Total</b>	<b>4.272.778</b>	<b>100</b>	<b>804.509</b>	<b>100</b>

Source: [4] [11] and authors' calculations

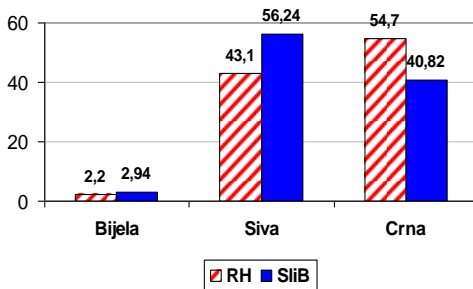


Figure 3  
White, gray and black areas of basic broadband

**Table 3 White, gray and black areas of the NGA broadband**

Areas	Croatia		Slavonia and Baranja	
	N <sup>o</sup> inhabitants	%	N <sup>o</sup> inhabitants	%
White	3.202.702	74,96	720.112	89,61
Grey	1.070.076	25,04	83.496	10,39
Black	0	0,00	0	0,00
<b>Total</b>	<b>4.272.778</b>	<b>100</b>	<b>804.509</b>	<b>100</b>

Source: [4] [11] and authors' calculations

<sup>3</sup> The project is highly ranked (in the first third) between 50 RC projects for EU funds.

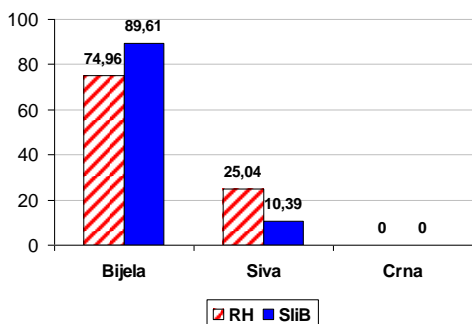


Figure 4  
White, gray and black areas  
of the NGA broadband

#### 4. Conclusion

The construction of fiber optic networks in telecommunications (broadband) in modern conditions is very important infrastructure project whose importance for the economy and society as a whole can be measured with the importance which had investments in railway construction and electrification of the XIX century. The Republic of Croatia in terms of coverage of its territory and population of broadband access to the tail of the list of EU countries and has rapidly overcome this lag to avoid further behind in economic and social development.

Coverage of the territory and population in the five counties of the region Slavonia, in turn, the Croatian frames (except the city of Osijek) below average RH - which seriously warns of the need to take urgent and professional activities to develop capacity-building broadband programs in this area.

Our consideration of the essential elements of broadband development and investment models in the optical network using examples of EU countries has pointed to the complexity of the project broadband development and the importance of involving professional teams in project planning construction of broadband.

Therefore, to the governing bodies of regional and local authorities in the region Slavonia and Baranja we propose:

- a) Urgent implementation of the preparatory phase of the project "Slavonian network",
- b) Launch education of officials and local government bodies on the project "Slavonian network",
- c) Initiation of proceedings for a complex application cadastre (infrastructure) lines,.
- d) Initiation of proceedings to prepare a master plan for the project "Slavonian network".

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Table 1 - Overview of incentive measures for construction of broadband infrastructure

	PDP1	PDP2	PDP3	PDP4	PDP5	P6
<b>Target areas</b>	PDP1a White - settlement > 50 inh PDP1b Siva pod.	White areas settlement < 50 inh.	White areas settlement > 50 inh.	Grey areas	Black areas settlement 2.000 - 50.000 inh.	Black areas cities < 50.000 inh.
<b>Population (% RH)</b>	PDP1a 81.000 (1,9%) PDP1b 1.840.000 (43,1%)	81.000 (1,9%)	11.000 (0,3%)	1.840.000 (43,1%)	1.050.000 (24,4%)	1.300.000 (30,3%)
<b>Part of the network</b>	Aggregation links	Access network	Access & aggregat. network	Access network	Access network	Access network
<b>Broadband level</b>	Fast (possible subsequent upgrade to ultrafast)	Fast (acceptable basic with obligation upgrades)	Basic	Fast	Ultrafast (friendly fast with obligation to update)	Ultrafast (friendly fast with obligation to update)
<b>Possible Invest. models</b>	Public DBO	Private DBO	Private DBO	Private DBO	Outsourcing Private DBO Public DBO	Joint venture
<b>Sources of funding</b>	Public (State and/or regional budgets, EU funds)	Public (State and/or regional budgets, EU funds) Private (Operator direct user of support to program)	Public (State and/or regional budgets, EU funds) Private (Operator direct user of support to program)	Public (State and/or regional budgets, EU funds) Private (Operator direct user of support to program)	Public (local and/or regional budgets, EU funds) Institutional (banks as creditors) Private (Operator user of support or partner)	Public (local budgets, EU funds) Institutional (invest.funds, banks) Private (operator as partner)
<b>Business model</b>	Wholesale	Wholesale Retail	Vertical integrated	Wholesale Retail	Wholesale (exclusively) Retail	Wholesale Retail
<b>Funding required (mil. kn)</b>	PDP1a 441 PDP1b 4,167	71	252	1,067	3,647	2,361
<b>Share of public funds</b>	to 100%	to 70%	to 100%	to 55%	to 35%	to 30%

Izvor: [11]



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## **IMPORTANCE OF INDIGENOUS RURAL PRODUCTS FOR BRANDING OF AGRO-TOURISM DESTINATION**

### **ZNAČAJ AUTOHTONIH RURALNIH PROIZVODA ZA BRENDIRANJE AGROTURISTIČKE DESTINACIJE**

#### **ABSTRACT**

*Attractive tourist destination is one that, through the creation of unique and competitive identity, positions well in the domestic and international market as a preferred destination for tourism, trade and investment. That branding, as a marketing and management process gives a particular product, service or organization a unique identity and thus it provides a way to be clearly and positively identified, and as such different and more recognizable from the competition. Also, some indigenous rural products can significantly contribute to building of recognition and thus improve the competitive position of the individual tourist destinations from which they originate.*

*Therefore, the purpose of this paper is to analyze the extent to which agrotourism economies are using local products to attract modern tourism consumers and for branding of a destination. In order to obtain relevant data, an empirical study will be carried out in Slavonia, Baranja and Srijem which will determine the importance and specificity of indigenous rural products of the region, as means of attracting tourist consumers in certain rural areas, as well as a significant tool for the creation of competitive advantage in the increasingly saturated tourism market. Furthermore, it shall be determined to what extent agrotourism economies present these products during their marketing activities.*

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*For the purposes of this paper a research type case study will be made (exploratory case study) which will include agrotourism economies from the rural area of Slavonia, Baranja and Srijem. Data will be collected by using the method of survey, semi-structured interviews, work on documents and the qualitative analysis of the data collected by use of description and comparative methods, methods of analysis, synthesis, specialization and generalization will be used as well.*

*Obtained findings will enable the definition of the main guidelines for the improvement of marketing activities of Slavonia, Baranja and Srijem as an agrotourism destination with an emphasis on its branding, particularly by the use of its indigenous rural tourism products. Results of the research will also contribute to a more efficient way of branding agrotourism economies and whole region as a unique agrotourism destination.*

**Keywords:** *branding, agrotourism destination, indigenous rural tourism products, Slavonia, Baranja and Srijem*

### **SAŽETAK**

*Atraktivna turistička destinacija je ona koja se, kroz stvaranje jedinstvenog i konkurentnog identiteta, kvalitetno pozicionira na domaćem i inozemnom tržištu kao poželjna destinacija za turizam, trgovinu i investicije. Upravo branding, kao marketinški i menadžerski proces daje pojedinom proizvodu, usluzi, organizaciji jedinstveni identitet i na taj mu način omogućuje da bude jasno i pozitivno identificiran i kao takav različit i prepoznatljiviji od konkurencije. Također, pojedini autohtoni ruralni proizvodi mogu značajno pridonijeti u izgradnji prepoznatljivosti, a samim time i unaprjeđenju konkurentne pozicije pojedine turističke destinacije iz koje pojeću.*

*Stoga je svrha ovoga rada analizirati u kojoj mjeri agroturistička gospodarstva koriste autohtone proizvode za privlačenje suvremenih turističkih potrošača i za potrebe brendiranja destinacije. S ciljem dobivanja relevantnih podataka, provesti će se empirijsko istraživanje na području Slavonije, Baranje i Srijema kojim će se utvrditi važnost i specifičnost autohtonih ruralnih proizvoda navedenog područja, kao sredstva privlačenja turističkih potrošača u određeno ruralno područje, ali i značajnog oruđa za stvaranje konkurentskih prednosti na sve zasićenijem turističkom tržištu. Nadalje, utvrditi će se u kojoj mjeri agroturistička gospodarstva ističu upravo te proizvode prilikom svojih marketinških aktivnosti.*

*Za potrebe ovoga rada biti će izrađena studija slučaja istraživačkog tipa (exploratory case study) koja će obuhvatiti agroturistička gospodarstva s ruralnog područja Slavonije, Baranje i Srijema. Podaci će se prikupiti korištenjem metode anketiranja, polustrukturiranog intervjua i rada na dokumentaciji, a tijekom kvalitativne analize prikupljenih podataka, uz korištenje metode deskripcije i komparativne metode, koristiti će se metode analize, sinteze, specijalizacije i generalizacije.*

*Dobivene spoznaje omogućiti će definiranje glavnih smjernica za unapređivanje marketinških aktivnosti Slavonije, Baranje i Srijema kao agroturističke destinacije s naglaskom na njezino brendiranje, posebice korištenjem njezinih autohtonih ruralnih turističkih proizvoda. Rezultati istraživanja ujedno će doprinijeti učinkovitijem načinu brendiranja agroturističkih gospodarstva, ali i cijele regije kao jedinstvene agroturističke destinacije.*

**Ključne riječi:** *brendiranje, agroturistička destinacija, autohtoni ruralni turističkih proizvodi, Slavonija, Baranja i Srijem.*

## 1. Introduction

Globalisation is a megatrend of modern tourist market. Global economy trends have unified local, regional and nacional markets into the global one, erasing countries borders and uniqueness. The same trends, combined with the undeniable marketing fluctuations and competitive pressures, have imposed new rules of game, conduct of behaviour and doing business, erasing the cultural and social differences. It could be said that tourism is an originator, stimulus and initiator of globalisation, primary because of the tourists travelling and lodging outside their domicile and the bonding and integration of tourists, tourists workers and local population.

Changes caused by the globalisation processes modify the way of behaviour of tourist consumers, but also directly effect the tourist activities providers. This means that the most popular tourist destinations today are the ones that provide tourists with different activities which emphasize local traditions and adapt to the interests and needs of constantly increasing tourists demands. Indigenous, originality and difference of a certain tourist region enables its tourists destinations to maintain their marketing competitiveness, founded on the principles of sustainable development (Pavlič, 2004, 226). Those not willing to adapt to the new changes will have significantly higher investments in promotion of their quality and other advantages, because the modern tourist accommodations offer must have, beside the economical attraction, also the abundance of offered activities, providing a guest with opportunities to learn about local culture and to improve his health and well-being, thus benefiting his individuality, psychic and physical development and social adaptation (Jadrešić, 2001).

Vrtiprah (2006) states that the changes in behaviour of tourist consumers, brought by influence of globalisation processes, can be seen in new additional desires and modified previous perceptions of the tourist product quality. Tourists more and more tend to seek specific forms of tourist offer, becoming more demanding, travelling more frequently but for a shorter period, being well-informed, unpredictable, seeking an individual approach to customer, quality of service and richer experiences. Considering that the tourist demand became global, its increasing mobility caused higher concordance of tourist consumers preferences, creating a certain global life-style, with similarities in preferences to types of tourist products, which leads to a trend of increased standardization and homogeneity of a tourist market (Vanhove 2005, prema Čavlek 2011). This directly effects the tourist market, which shows the emergence of standardized products and tendency toward branding of products, thus aiming to satisfy tourists demands and comply to the trend of relatively high loyalty to product brand which tourists show, placing their preferences toward pleasant surroundings, vacation experiences and high-quality service rather than the location of tourist destination itself. Branding in particular, through its marketing and management processes, shapes the unique identity of a certain product, service or organisation, thus giving it a clear and positive identification, rendering it distinctive and distinguishable among its competitors. Branding is a process of creation of a destination identity by promoting its characteristics, particularly its authenticity.

Considering that the indigenous food products are fundamental part of culture and tradition of a certain area, they can significantly contribute in building that area recognition, thus improving the competitive position of the tourist destination from which they originate. The region of Slavonia, Baranja and Srijem, having a vast quantity of indigenous products, certainly has a lot of potential for creating a tourist brand which will secure the international

recognition, attract the foreign investments and skilled work force and contribute to the tourist and economical development.

## 2. Theoretical considerations

The rural area offer is considerably heterogeneous, with individual rural tourist economies having broadly different levels of development, equipment and ability to provide tourist services, in most cases unsufficiently attractive to specific tourist market segment. Therefore, a singular rural homestead or rural-tourism enterprise project does not have sufficient marketing strenght, which demands the necessity of development of the rural agrotourism destination. Theory of tourism states that the definition of „a tourist destination“ primary means „a geographical space which differs from the tourist permanent residence, which provides tourist activities and consumption of tourist products, therefore it can be defined as 'a location of tourist consumption“ (Čavlek, 2011, 391). A tourist destination is considered to be wide, integrated space, which builds its tourist identity on the concept of experience-giving cumulative attractions combined with the additional tourist infrastructure inside singular tourist area. A tourist destination is shaped according to tourists' wishes, preferances, interests and needs.“ (Vukonić, Čavlek, 2001, 389). Therefore, its purpose is to form and organize larger space as a tourist area, thus providing better utilization of space, rising the quality of tourist resources, providing more complex offer by combining several different tourist attractions, and giving opportunities to create recognizable identity on the tourist market. According to Demonja and Ružić (2010), the basic factors of tourist destination are:

- attractiveness (nature beauty and climate, cultural and social distinctions, attitude toward tourists, infrastructure, price levels, shopping opportunities, capacities for sport, recreation, education and similar). Such area must have offer which will satisfy the needs of visitors of different market segments, according to their age, sex, social or professional status
- quality of nature, and
- accessibility

Considering this, agrotourism destination can be viewed as an complex of mutually connected elements which combine attractions, activities, vacation specifics, supporting services, availability and distribution of tour packages (Hajdaš Dončić and Štefanec, 2006). Demonja and Ružić (2010) state that defining agrotourism destination should follow this criteria:

- it is a unit of space functional for tourism, having all tourist and other necessary characteristics,
- it is a complex, unified tourist product placed on market to attract customers, and
- it is a place of intensive tourist gathering, caused by different benefits which it provides to them, which form a foundation of its tourist attractiveness.

When evaluating a destination, particular importance is placed on its attractiveness, which stems from achieving a certain level of quality, manifesting in attractiveness of its individual tourist resources. Hajdaš Dončić and Štefanec (2006) list the basic variables which form the destination attractiveness, being the main elements of tourist product and effecting the agrotourism destination development. Such elements are (Hajdaš Dončić and Štefanec, 2006, 30-31):

- elements of accommodations offer: comfort of accommodations, qualities of services and food, provided facility infrastructure, surrounding landscape quality;
- elements of destination's tourist product;
- ecological elements: climate, beauty of nature and vistas, architectural accord and cleanliness (balconies, windows, gardens);
- social and cultural elements: hospitability and knowledge of foreign languages of locals;
- elements of offer: quality of tourist objects outside of accommodation facility, convenience of different offers (excursions and such);
- infrastructural objects: accessibility by road, quality of communication networks, quality of local public transport;
- promotional elements: quality of signs giving directions to attractions, availability of informations, quality of information desks;
- informations system: connection to all destination network nodes.

Agrotourism destination with the strong, recognisable, authentic and mutually connected attractions, products and services will have more market success than the one which presents unconnected and dispersed products and services. Increasing competitiveness among destinations conditions the development policy toward the tourist destination approach, which establishes an attractive, diverse and integral product, recognised in the international market and strong enough to attract potential tourist demand. Modern conditions demand that the sustainable market advantage of tourist destination must be based on uniqueness and authenticity of its resources and attractions, ecological preservice and positive attitude towards the quality of environment, quality and specifics of tourist infrastructure and superstructure, quality of human resources, creative and innovative solutions in marketing and destination promotion system, the different interactions of all of this elements (Kunst in Čorak, 2010), and creating the destination brand which will distinguish a certain destination among its competitors.

According to Kotler and Keller (2008, 443), a brand is mark, name, term, sign, symbol, design, shape, or a combination of all of the above, which purpose is to identify goods or services of one company (manufacturer, distributor, seller) or group, and to differentiate it from its competitors, while branding is defined as continuous process of creating a strong brand, meaning that it is a marketing and management process which gives unique identity to a certain product, service or organisation, thus providing it with the clear and positive identity, more distinctive and distinguishable than its competitors (Bolfek, 2012, 365).

Considering the fact that the indigenous food products make a vital part of regional culture and tradition, they can greatly contribute to recognition building and be one of the key factor in the regional destination brand. In the era of increasing globalisation, competitive struggle for market share more and more reveals values of two types of products: ecological (organic) and indigenous.

(Bukvić and associates, 2007, 17). Therefore this paper will accentuate the role of indigenous products in the process of destination brand creation, on the example of Slavonia, Baranja and Srijem region.

### 3. Research methodology

Having the gathering of relevant data as a main goal, and considering the relevant characteristics of a case study<sup>6</sup> as a qualitative research method, an exploratory case study was selected as the most appropriate for this paper theme. Case study had a goal of researching how much agrotourism economies use indigenous products for purpose of attracting modern tourists consumers and destination branding.

According to the defined goal, the basic research questions were:

1. Which are the basic indigenous rural products of Slavonia, Baranja and Srijem region?
2. How much the destination management (County tourist bureaus) in Slavonia, Baranja and Srijem region use indigenous rural products for tourist destination branding?
3. How much are the indigenous rural products present in the gastronomic offer of the agrotourism economies.

The research was conducted during the period from February 20<sup>th</sup> till March 26<sup>th</sup> 2014. The research pattern scope included 15% of the agrotourism economies<sup>7</sup> and six of County tourist bureaus in Slavonia, Baranja and Srijem region. The data was collected by methods of polling, deep-probing interviews and documentation research, while the qualitative analysis of the collected data included methods of description and comparison, as well as methods of analysis, syntesis, specialization and generalization.

### 4. Research results and conclusions

Modern tourist demands place more and more emphasis on the original or indigenous products in gastronomy and oenology. Conducted research shows that all of the surveyed agrotourism economies (15%) in Slavonia, Baranja and Srijem region promote significance and value of indigneous croatian traditional products. Among the most famous croatian traditional products with controlled origin, owners of homestead economies particulary held in esteem Slavonian kulen sausage and Slavonian home-made slivovich brandy. They also mentioned various meals prepared by original recipes, such as: chobanac (shephard's soup), carp baked on a stick and fish paprikash stew. Besides that, it should be mentioned that their tourist offers include their own home-made agrocultural products. Listing their products, they have mainly mentioned original red paprika powder (both hot and sweet variants), honey, fruit

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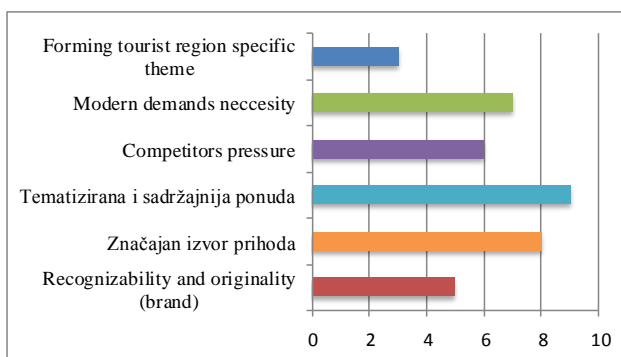
<sup>6</sup> Qualitative „working research“ case study usually consists of researching the questions about one or more cases inside a given system (Creswell, 2007), while the study subject can be an individual, group, organisation, local community, whole culture or any system considered to be separate entity (Halmi, 2005), possessing the information and characteristics relevant to the study theme (Tkalac Verčić and associates, 2010). Case study directs significant attention to the individual participants, having the goal to understand their point of view regarding the case (Cohen, Manion, Morrison, 2007), and using the qualitative methodology methods during the data analysis. Therefore, case study enables a researcher to obtain precise and wholesome information about one or more cases, thus being an empirical research which observes a phenomena inside its context (Creswell, 2007), requiring an approach in which researcher has a goal of detail understanding of one or comparison of several researched cases, using the different sources and information-gathering methods. Yin (2007) distinguishes three basic types of case studies: explanatory, exploratory and descriptive.

<sup>7</sup> Establishment of number of registered tourism rural family economies (homesteads) was done by consulting the database of registered agrotourism economies in the Republic of Croatia. Since that processed data regarding the real number of registered rural tourism economies for 2013. does not exist, balanced indicator have been data considering 2007., processed and published in 2008. According to that data, Slavonia, Baranja and Srijem region had 58 registered rural tourism economies, while Istria county region had 64.

liqueurs and brandies, and preserved meat products such as kulinova seka sausage, pork rinds and others.

Further research results, shown in *picture 1.*, show that the main reason of implementing the indigenous tourist products in the rural tourist economy homestead offer is to expand the offer and to give it a „local theme“. 88,8% of participants stated that the indigenous products greatly contributed to their income from tourism. Slightly less percentage of 77,7% stated that implementation of indigenous gastronomy and oenology products suits the modern tourist demands and attracts tourist to a particular region. Realizing that the traditional indigenous products have a diversification effect on the tourist map of the European Union, 66,7% of participants stated this as a main reason for including the traditional gastronomical products of Slavonian region into their tourist offer. Finally, according to the research results, it is conclusive that the economies owners think that implementation of the traditional gastronomy ensures originality and recognisability of both their own and regional tourist offer.

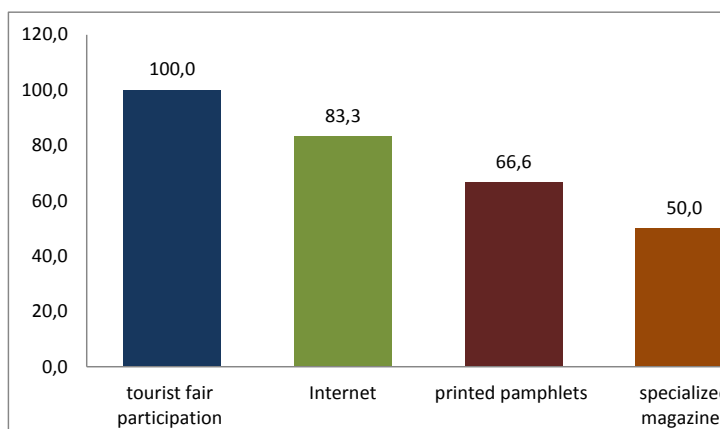
Picture 1 Main reasons for implementing indigenous products in agrotourism offer in the agrotourism economies owners perceptions



Source: Author according to the research data

Further analysis of research data, gathered by polling the employees of County tourism bureaus in Slavonia, Baranja and Srijem region, represented the scope of the marketing activities which tourism bureaus use in the promotion of indigneous products present in agrotourism offer. Concluding results show that all of participants have in some way actively promoted the indigneous products of their region. All of them (100%) stated that one of the best promotional methods for the indigneous rural products is participation in a tourist promotion fair, which yields its high results by having an advantage of direct contact with the potential customers at the fair stall. Also, 83,3% of participants use Internet for most promotional activities, for reason of its mass promotional effect. Beside Internet, 66,6% of participants also use printed promotional pamphlets. 50% of participants also use a paid advertisement in the specialized tourist magazines (*picture 2.*) Stanojević (2011.) states that the recent researches by companies Arbitron and Edison's research, conducted under the joint research project called „Infinite Dial“, shown that the Internet has become highly important to the general public, and that the people are more willing to give up television than Internet. Therefore it is important that the destination management organizations fully utilize all the opportunities that Internet provides when promoting the indigneous products, aiming for the best agrotourism destination branding by using its well-known individual traditional indigneous products.

Picture 2 Media presence in promotion of the indigeneous rural products



Source: Author according to the research data

## 5. Summary

In the increasingly more demanding tourist market, agrotourism economies should place their hopes in the traditional indigeneous products, which improve their offers and raise their profits. Even more important is that agrotourism economies work together with the relevant local and government destination management organisations, trying to diversify their offer and create an unique image, or brand, which will set them apart among „the sea“ of similar destinations.

Research conducted for this paper demonstrates that the agrotourism economies in Slavonia, Baranja and Srijem region recognize the importance of indigeneous gastronomy and oenology. That has a particular merit today, when the modern demand conditions make all other destinations, regardless of their relative distance, potential competitors. This has a serious repercussions on business conduct and eventual profits. Although the agrotourism economies owners haven't yet fully recognized the importance of branding and possibility to improve their brand using the indigeneous products, they still understand that using the indigeneous croatian products can help them in „beating“ the competitors and improving their offer.

Research conducted in the County tourism bureaus shows awareness and using the opportunities given by the indigeneous products promotion. It is used to strenghten the unique identity, giving it as clear and precise distinction as possible, thus presenting the destination differently and more recognizable than its competitors. But, regardless to the fact that the tourism bureaus managers recognized the Internet and other medias as the most effective promotional tools, it is also important to work on co-operation with all co-creators of the regional agrotourism offer, and to use tourist visitors themselves as creators and promoters of agrotourism destination brand.

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## **ROLE OF RELIGION IN THE IMPROVEMENT OF THE ECONOMY**

### **ULOGA RELIGIJE U UNAPREĐENJU GOSPODARSTVA**

#### **ABSTRACT**

*In this scientific work which is called "Role of religion in the improvement of the economy" in the center of discussion will be the elements that shows a clear connection between economic elements with religion and the interdependence of these two areas in reality for who many people's might say that they have nothing in common . The first part presents just such a reference and this is work that is imminent to man. Working in the Social Doctrine of the Church is a reality inherent to the man as a master, producer and a manager, what makes human being similar to the God. Thus properly managing comes in direct dependence on natural law and transcendental reality that is inherent to religion. In the second part of this paper we will discuss the issue of representation of the Christian principles of waste man entrusted givens. From everyday experience we conclude that sometimes economic activities are not in accordance with natural law making occurs hunger for profit and other phenomena that do not lead to the progress of society or to the common good. In the third and last part of the article , we will try to reflect and bring at least part of the reality in which as a result of transgressing the fundamental moral principles and natural law reveal to the naturally irresponsible management.*

*The main purpose is to warn mankind to the causal relationship between energy and technological progress coupled with irresponsible management of resources leads to damaging the biosphere and disturbing picture of reality that is alarming, to the pressing need for change.*

**Keywords:** religion, economic improvement, Social Doctrine, Church, changes

#### **SAŽETAK**

*U ovom radu koji nosi naslov „Uloga religije u unaprjeđenju gospodarstva“ u središtu razmatranja biti će elementi koji pokazuju jasnu povezanost gospodarskih elemenata s religijom i međuovisnosti ovih dvaju područja i stvarnosti za koje će mnogi na prvi pogled reći da nemaju ništa zajedničko. Prvi dio rada donosi upravo takvu jednu poveznicu a to je rad koji je imanentan čovjeku. Rad u Socijalnom nauku Crkve jest stvarnost svojstvena čovjeku kao gospodararu ip roizvođaču ali I upravitelju po čemu je čovjek sličan Bogu. Samim time ispravno gospodarenje dolazi u direktnu ovisnost o naravnim zakonima I transcendentalnom stvarnošću koja je svojstvena religiji. U drugome dijelu ovoga rada obrađivati će se problematika zastupljenosti kršćanskih principa gospodarenja čovjeku povjerenih datosti. Činjenica je da činjenično stanje često nije u skladu s naravnim zakonom zbog čega se javlja glad za profitom I slični fenomeni koji ne vode prema napretku društva niti prema općem dobru. U trećem, ujedno I posljednjem dijelu rada, pokušat ćemo*

*promišljati I barem dijelom donijeti stvarnosti u kojima se kao posljedica nepoštivanja temeljnih moralnih principa I nepoštivanja naravnih zakona očituje neodgovorno upravljanje odnosno gospodarenje.*

*Cilj rada je upozoriti čovječanstvo, na uzročnopsljedičnu vezu između energetske-tehnološkog napretka koji u kombinaciji s neodgovornim upravljanjem resursima dovodi do oštećenja biosfere I zabrinjavajuće slike stvarnosti koja je alarmantna, na nužnu potrebu za promjenom.*

***Ključne riječi:*** religija, unapređenje gospodarstva, socijalna nauka, crkva, promjene

## **1. Relation between the economy and religion**

### **1.1. Introductory deliberation**

We are witnesses that the relation of the economy and religion is sometimes labeled as utopian speech. The consequence of such deliberation is channeling the metaphysical and fideistic category that has nothing in common with the objective reality. Scientific discipline named Social Doctrine of the Church touches and handles with whole issue of relationship of the man as a being that is rooted in materiality with which it comes into contact, and that allows him to survive, but it also shows that "objectively" is not as it is displayed. Looking at religion in this context, we conclude that it does not have to be divinized (although someone find that characteristic) because theology does not only access to the work as a subject. Seen from a religious point of view, the main purpose of the economy stems from man's relation to the world of material goods, which has two main features. The first feature refers to the attitude of man to rule the world of material goods. Man was created together with all other created realities. Nevertheless, the man is distinguished from the overall reality on the spiritual level that surpasses other beings. Just because of that human being has a *donum naturale* over all creation that was given to him by God, and is expressed in Scripture: "replenish the earth and subdue it" (Gen 1, 28). Despite the right given to the human to waste the entire created reality, he was forbidden to become susceptible to the seductive pursuits of pleasure, desire to possess the will and power "because everything in the world—the lust of the flesh, the lust of the eyes, and the pride of life—comes not from the Father but from the world." (1 Jn 2, 16). In the context of management speech the most significant danger lies in danger of power over the cosmic forces, and so over the peoples. Therefore, it is necessary that a person who performs the power control over nature to use those entrusted powers and resources to manage in God-fearing and conscientious way. God has entrusted earthly goods to the whole human family which means that they can not belong only to certain nation, organization or individual. Therefore, properly handling with the entrusted resources implies an awareness of each person, which should be pronounced in an emergency when everything is to be shared. Another feature of the economy is knowledge of man to material goods conditional on a person's physical dimension of existence of which we are directed to material goods and services, and not just for basic maintenance of our existence or our kind (food, clothing, apartment), but also for the development of a sublime cultural goods. Man's dependence on material from a Christian perspective should be focused on pursuit of universal humanity development, without forgetting the principles and values of the spirit in front of God. The significance of man's dependence on material goods in today's society is even more pronounced because of development of the human civilization for the normal functioning needs more and more material goods. Two mentioned characteristics of the economy clearly reflect his knowledge and succinct understanding of the economic problems

of society in which the church operates. Despite the substantiality and clarity of understanding the economy from a Christian but also a number of other perspectives, economic understanding of today is more related to the accumulation of goods and services, then with the development and realization of a harmonious and joyful life which clearly reflects the kind of gap and disconnect between the economy and religion." While the economy and morality, each from its side of view, serving its own principles, it would still be wrong to claim that the economic and moral order are separated by each other's side, that one order would not have been dependent on other. "

## **1.2. Work as a reference between the economy and religion**

If we exclude the speech of the characteristics of religion from a Christian perspective, which are presented within of the Social Doctrine of the Church, we cannot ignore the effect and work that is fundamental to the economy and religion, and to a man as a subject of action in all life aspects ." Work cannot keep religious meaning if it loses the human sense." "Work is imminent to a man". Consequently, it is necessary to place work again in the cosmic and the human function which was given him from God the Creator, without sticking to work just outward moral correction. The management makes man similar to God. But that obliges him to understand the management of things as a call to "divine behavior". Circumstances today connect Christians to recognize the vision in new dimension that were forgotten by their ancestors, and that was indeed the biblical vision of nature. This vision reflects on the best way the thought of medieval philosophers telling that the divine behavior of man is manifested in greater cohesion man with nature, emphasizing the role of *Artifex*, assessing the substance not only in the human body, but also in his incumbency to act in the universe in an effort that his "changes" and " trends " reveal those forces of celestial bodies that affect the secrets of the human spirit and freedom over and over again. Work should fraternize man and the world. In the Book of Genesis is pointed out that the man is a master of the universe by his vocation and according to the design of God. Man is, furthermore, a contributor of the creation and blacksmith of his own evolution through the discovery, Processing and spiritualization of nature what commits him exactly to "divine behavior" which includes responsibility and community awareness. The communal consciousness doesn't manifest itself only in the awareness that the individual work product isn't its own proprietorship, but in contribution that irresponsible activities prevents the normal functioning of future generations. Nowadays the purpose of work isn't only to provide us our daily bread, but also to create a kind of social energy, which would continually serve to the whole humanity. The worker is in addition to their troubles, difficulties and bitterness well aware of that. In the small enterprises internalizing of that attitude that the product is something common more easy to achieve. This awareness is much harder achievable by the multiple owners of some international companies that are focused only on profit. The main purpose of production shouldn't be only an elementary profits because produce today means to reach beyond the primary intent to realize the aspirations of individual and collective promotion of economy and service needs.

The work becomes a civilizing factor if it becomes the main driver of "association" because that is exactly how humanity overcomes a decisive point in their common journey. If we observe the economy through the prism of *Homo Artifex* he is an employee who overcome the fixture and who is being designated as the master. According to this characteristic, the value of a man is transcended which automatically enters the sphere of the divine-religious character.

### 1.3. Interpretation of work in Social Doctrine of the Church

Working as a conscious activity is privilege for human, while the same activity of animal is instinctive action, so we can talk about the "work" of animals and machines only figuratively, if a man takes an animal or a machine in his hand, and manage them. The orientation on a seriously perceived value, which is not situated in the very experience of committing, but it achieve or realize something transitive - objective, which means going beyond just doing it separates work from play, sport or some other form of entertainment. Therefore, the work can be defined as "conscious, seriously, on the object oriented use of spiritual or physical abilities of man because of the purposeful creation of value, which serve the fulfillment of man's sense according to God's will, as well as human society, and finally to the glory of God." Work in which economic terms have been equated with interest is not at all one-sided and cannot be viewed solely through a necessity. On the contrary, the Church's social doctrine would say that the work has seven different senses. From everyday experience, we conclude that self-preservation is not possible without the work, preservation of species as well as development of cultural life which is stated in Scripture: " But we urge you, brethren, to excel still more, and to make it your ambition to lead a quiet life and attend to your own business and work with your hands, just as we commanded you, so that you will behave properly toward outsiders and not be in any need." (1 Thessalonians 4:11). According to work which leads to man's self-development work is the way how human being becomes more human. As the image of God, man is determined to deal with himself. God didn't initially create all the technological inventions and achievements because he rather allow the man during the work to reveal the principles and realities that are approaching him to their Creator. Furthermore, the work can be seen as a shaping and undergoing the world, but also as a profession and serving. This dimension of the work which is usually neglected manifests itself in the management of economic resources in a way that a man is placed in the role of creator and absolute master of reality instead of being aware that he only managed resources entrusted by the Creator. Next dimension observe work as a penance. Many people aren't familiar with this dimension. An old Russian proverb says that "the work does not makes man richer, but humpback spine" which clearly indicates the hardship of work. About this aspect of the work clearly speaks Pope Leo XIII. in encyclical *Rerum Novarum* saying that "no man in the state of innocence would not be idle, and that peoples who are offering a life without pain and suffering offered utopia from what are arising an even greater evil than those we have today." Working as redemption is hard to understand. But that helps us in the New Testament passage that says: "Now I rejoice in what I am suffering for you, and I fill up in my flesh what is still lacking in regard to Christ's afflictions, for the sake of his body, which is the church." (Col 1:24) . Work as worship of God and spread the true freedom of God's children is the last sense of work which in this context we observe as a task that God has given us but also as a participation in his creative work that is associated with salvation. "The Church does not offer its own model of social life; she rather remains open to a certain pluralism projects and working hypothesis, charismas and papers given by the Holy Spirit to fulfill the tasks of mankind in work, economy, politics and culture." Eventually we can conclude that instructions of the operation and management are contained in the Social Doctrine of the Church receive special meaning in accordance with the specific features of work that must be done in each of these areas Consequently, we have a very important criterion for activities and social progress-the openness to the gifts of the Holy Spirit.

## **2. Christian principles of management in relation to the now day facts**

### **2.1. The hunger for profit - a reflection of the actuality**

In recent times, on the place of free trade came the economic dominance; unbridled greed have inherited the struggle for supremacy, and the whole economy has become too adamant, relentless and cruel. From this had stemmed, that the welfare of the state government have served to the interests of the rich. According to that, accumulated wealth started to manage human being. Throughout the history economic situation has been changed. Especially in recent times there have been strong economic crisis that prevented the functioning of the entire state apparatus. During the time when some countries experienced a crisis, other ones, much more powerful and "wiser", without respecting the dignity of workers have exhausted their land, destroying thereby their vegetation violating natural law. Unfortunately, this trend continues today. Nowadays, when our national economy very often change itself, it is crucial to warn everyone to a very important commandment of social justice, which explicitly requires that economic development always join and adapt to a social development, and so that from the increased wealth of the country, without distinction, all estates of the citizens enjoy equal benefits .

### **2.2. The presence of Christian values in today's economy**

Globalization has turned the world into a global village , the flow of information occurs within " the now" , humanity is increasingly confused in front of a wall and do not know what awaits them behind . Quick exchange of information, goods and capital from one to the other end of the world at first glance seems to be useful but also hides a great danger that calls into question the fundamental values of humanity. Such an environment where the government reflects the relativity and ambiguity of information, goods, resources, crisis generally applicable and objective conclusions, exudes insecurity and distrust. Technological achievements and science are questioning how long we should go what puts a man in the position to question himself logically about the reality in which he operate. Consequently, globalization brings breakdown of permanent value, and the loss of long-term purposes that were previously giving hope and perspective, enriching the rich peoples at the expense of the poor. There are two basic conditions we must assume when we talk about globalization, the environmental stability and protection of human dignity. Even Christianity isn't negatively directed toward news that brings global development; it does not manage to implement its principles in contemporary society. It is obviously seen in the economy in which is dominated the law of the market, stronger and profitability. Christian as an alternative to all of this, offers love, peace, justice, solidarity, and ultimately hope in the Christian God . The aforementioned words expressed the alternative is essentially formed an attitude that manifests itself in the proper management and economic activity. Despite all this, "Christians who actively participate in the modern economic and social development, who fight for justice and love to make them believe that they can contribute much to the welfare of humanity and world peace."The aforementioned words expressed alternative that essentially form an attitude that manifests itself in the proper management and economic activity. Despite all this, "Christians who actively participate in the modern economic and social development and have struggled for justice and love should be confident that they can contribute to the welfare of humanity and world peace."

### **3. Realities in which irresponsible (non-Christian) management manifest itself**

#### **3.1. Socially vulnerable on the labor market**

Many people agree that the human management in purely economic sense begins by the discovery of America, which was conditioned with significant progress marked by the development of maps, compasses, and ships. After the discovery, a large number of Europeans was going in huge waves of emigration in the newly discovered land. Particularly significant was the emigration of Spanish and Portuguese conquistadors in South America. Just with the conquistadors was started observing person as the mechanisms and instrumentality through which an individual comes to their material desires. A very clear example of vulnerability in the labor market was the work of black peoples who were brought in 17th century on the cotton fields in the southern part of the United States because indigenous people become unable to perform the demands placed upon them. The natives were killed and blacks were massively exploited, and when they become useful tool cruel landlords would liquidated them. This state of affairs continued in the 19th century even in the period of industrial revolution when the working time was up to 16 hours, and even that was not enough to ensure worker's normal living conditions. Therefore, they have begun to emerge communist that included the abolition of private property and equitable distribution of goods. In this context it is important to highlight Marx's Communist Manifesto that was published in 1848. But such an organization which has assumed the dictatorship of the proletariat did not offer the desired effects. Because of that nowadays we have capitalism as a form of modern economic planning. Capitalism has returned private ownership that is limited only with state benefits. Even it sounds quite brilliant it has a negative side too. With this arrangement the emphasis is again returned to the hunger for money, thirst for power and authority, so equality as well as common good cannot find its fulfillment in society. The fact is that any form of regulation cannot offer the absolute realization of the common good because it is in the domain of each individual, not the organization of the national economy. "The management of mineral, plant and animal treasures of the world, which the Creator gave to man, cannot be separated from respect to moral obligations, including obligations to future generations. (KKC 2456)" "Man himself is a creator, center, and purpose of the whole economic and social life. The decisive point of the social issues is that goods created by God for all of us really gets to the every single person, by the justice and with the help of love (KKC 2459) .

#### **3.2. Irresponsible management of resources**

(In) correctness of management resources is closely related to environmental issues. Ecological situation today is truly alarming. "Progress of energy and technological development has led to an overload of the biosphere with harmful substances, and we're now seriously threatened by climate change caused by damage to the ozone coating. Discussions on the limitation of climate gas emissions are increasingly frequent. Certain, but not enough progress is made . " World income differences necessarily lead to such , an extremely unequal distribution of the state of pollution – Accordingly to already excessively pollution there are some consequences: Creating prosperity of rich countries is in its present form and at today's prices possible primarily because most of the people around the world do not cause so much pollution " Rich people have partly built their status thanks to the fact they have the option of free spending other people's raw materials (oil, wood , coal , forests , agricultural land ) will sound unbelievable , but it seems that poverty in many countries is a prerequisite for life in rich abundance . This reality is especially obvious in the pollution research which asserts that" one resident of the United States produced an average of 20 times more pollutants than it was

allowed. European, ten, Japan's five, inhabitants of Bangladesh and India are below the average. "When it comes to globalization and the economy, it is inevitably to mention the influence of multinational corporations because their annual incomes are often significantly higher than the state budget or even the GDP of the entire country. The public is frequently exposed to negative violation examples of human rights and dignity, such as the exploitation of workers and natural resources of underdeveloped countries, unfair competition in less developed countries at the expense of the host, the impoverishment of underdeveloped countries and causing disturbance. The impoverishment of countries and resources of some countries by multinational companies is especially displayed by the illegal deforestation in Asia and South America (Brazil area, etc.), insertion of hormones in freshwater areas for better growth of fish , releasing of waste water enriched with arsenic from industrial plants, pollution of agricultural surfaces using a variety of protective agents (pesticides , herbicides , fungicides , limacides, insecticides ) , using large amounts of fertilizer ( especially nitrogen in the wetter time of year ) that pollute the underground and surface waters . In conclusion, the responsible management of resources is essentially concerned to religion because it violates natural law.

#### **4. Conclusion**

The speech about the relationship between the economy and religion is not an empty speech or speech without a reference. Despite the public perception, it would be wrong to state that their influence is always negative. Proper management is directly linked to the respect for natural law as the language of theology. Consequently, the proper and correct management that can be observed in the elimination of certain barriers for potential investments and new working places that are in the interest of the state, local communities and individuals. By coinciding of interests we get a positive example how desired profit of some company makes certain benefits and wraps up in which you want to invest money. If with all the above, we include respect for workers' rights and allowing a fair paidwe are on the best way approaching towards the true meaning of the word solidarity that John Paul II. Compares with virtue and argues that it is not a feeling of vague compassion or shallow distress because of the misfortunes of so many people close to you and distant. On the contrary, it is a firm and persevering determination to commit oneself to the common good; it is for the good of all and everyone, because we are really responsible for all around us. Therefore, it is necessary to achieve on the global level a high degree of social justice, which is the only correct way to accomplish balance in the world and avoiding the danger of further destruction. To effectuate this, we must work in accordance to preserve human dignity and environmental stability, as well as basic conditions for ensuring solidarity and acceptance. The function of the media in these processes is necessary. It is their duty to spread true, accurate and useful information because just objective picture of reality is possible to make an objective and correct judgment. We have a long and arduous road to accomplishment, but if we are aware that God is the only guarantee of a better future for all of us, we cannot and we must not give up on him.

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## **COMPARATIVE ANALYSIS OF ENTREPRENEURSHIP DEVELOPMENT IN EASTERN REGION AND OTHER REGIONS OF CROATIA**

### **KOMPARATIVNA ANALIZA RAZVOJA PODUZETNIŠTVA ISTOČNE HRVATSKE I OSTALIH REGIJA HRVATSKE**

#### **ABSTRACT**

*Entrepreneurship development, especially regarding small and medium-sized enterprises, is the backbone of development in Croatia. Conducted research indicates that eastern Croatia, on average, is the least competitive and requires a significant investment to reach the other regions, especially in the development of entrepreneurship, business infrastructure and investment incentives. The paper aims to show the importance of entrepreneurship for the development of eastern Croatia compared to other counties and regions, the number, structure, composition and business activities of entrepreneurs, relevant financial statements, particularly the structure of assets and liabilities in the balance sheet, financial results i.e. revenues, profits, loss, investment in fixed assets, and the main indicators of financial analysis specifically indicators of labour productivity, business efficiency and profitability of eastern Croatian enterprises. To this end the results of relevant research institutions have been analysed, as well as scientific and technical literature, policy documents and reports. Based on the analysis of available data, synthesis and deduction and in particular classification and comparison with other regions and counties, a conclusion about the position and importance of entrepreneurship for the development of eastern Croatia has been drawn. The research results indicate a low proportion of eastern Croatian entrepreneurs in the overall financial results of Croatian entrepreneurs and a heterogeneous structure of their financial results. Whereas Osijek-Baranja county plays a vital role in the development of entrepreneurship, other counties of eastern Croatia are entrepreneurially underdeveloped. The results highlight the problems of entrepreneurship development, particularly lengthy*

*procedures of starting businesses, protecting investors, liquidity and insolvency problems, availability of external sources of financing and associated credit terms, underdevelopment of capital markets and other forms of financing. The importance of small and medium-sized enterprises in the development of eastern Croatia has been emphasized. The analysed area comprises eastern Croatian counties: Osijek-Baranja, Vukovar-Syrmia, Virovitica-Podravina, Brod-Posavina and Požega-Slavonia.*

**Key words:** *Entrepreneurship, Financial Results, Insolvency, Development, Eastern Croatia*

## SAŽETAK

*Razvoj poduzetništva, posebno malih i srednjih poduzeća čine okosnicu razvoja Republike Hrvatske. Provedena istraživanja ukazuju da je istočna Hrvatska u prosjeku najmanje konkurentna i potrebno joj je najviše ulaganja kako bi dosegla konkurentsku razinu ostalih regija, posebice u razvijenosti poduzetništva, poslovnoj infrastrukturi i poticanju ulaganja. Rad ima za cilj prikazati značaj poduzetništva za razvoj istočne Hrvatske u odnosu na ostale županije i regije Hrvatske, strukturu, veličinu, sastav i zaposlenost poduzetnika, relevantne financijske izvještaje posebno strukturu aktive i pasive bilance, ostvarene financijske rezultate odnosno prihode, dobit, gubitak, investicije u dugotrajnu imovinu, te glavne pokazatelje financijske analize posebno pokazatelje produktivnosti rada, ekonomičnosti poslovanja i profitabilnosti poduzeća istočne Hrvatske. U svrhu istraživanja analiziraju se rezultati provedenih istraživanja relevantnih institucija, znanstvena i stručna literatura, strateški dokumenti i izvješća. Na temelju provedene analize dostupnih podataka, sintezom i dedukcijom te posebno klasifikacijom i komparacijom s ostalim regijama i županijama donose se konkretni zaključci o položaju poduzetništva u odnosu na ostale regije kao i značaj poduzetništva za razvoj istočne Hrvatske. Rezultati istraživanja ukazuju na nizak udio poduzetnika istočne Hrvatske u ukupnim financijskim rezultatima poduzetnika Hrvatske, raznolikost strukturu financijskih rezultata poduzetnika odnosno s jedne strane naglašenu ulogu Osječko-baranjske županije u razvoju poduzetništva, a s druge strane poduzetničku nerazvijenost ostalih županija istočne Hrvatske. Rezultati ističu probleme razvoja poduzetništva posebno dugotrajne procedure otvaranja poduzeća, zaštite investitora, probleme nelikvidnosti i insolventnosti, dostupnosti eksternih izvora financiranja i s time povezanih kreditnih uvjeta, nerazvijenosti tržištakapitala i ostalih oblika financiranja. Naglašava se značaj malih i srednjih poduzeća u razvoju istočne Hrvatske. Promatrano područje čine županije: Osječko-baranjska, Vukovarsko-srijemska, Virovitičko-podravska, Brodsko-posavska i Požeško-slavonska županija.*

**Ključne riječi:** *Poduzetništvo, Financijski rezultati, Nelikvidnost, Razvoj, Istočna Hrvatska*

### 1. Introduction

According to the latest data by the Ministry of Finance of the Republic of Croatia (2013, 8) the negative trends in the Croatian economy, which started in 2009, are still present. This has had an impact on the entrepreneurial competitiveness of eastern Croatia and an uneven development of entrepreneurship compared to other regions of Croatia. The aim of this paper is to research and present the importance of entrepreneurship in the development of eastern Croatia in comparison with other regions of Croatia i.e. analyse the common characteristics of entrepreneurship in eastern Croatia and other regions and financial performance of entrepreneurs in eastern Croatia and other regions based on the financial reports: the structure of assets and liabilities, revenues, profit and loss, consolidated financial statement, investment

in fixed assets and key financial indicators. This research has been based on secondary data sources, particularly on research papers and reports by relevant government institutions. Specific conclusions have been drawn by means of synthesis and deduction and classification and comparison with other regions and counties in particular about the position of entrepreneurship as compared to other regions and the importance of entrepreneurship for the development of eastern Croatia. The analysed area comprises eastern Croatian counties: Vukovar-Syrmia, Osijek-Baranja, Virovitica-Podravina, Brod-Posavina and Požega-Slavonia.

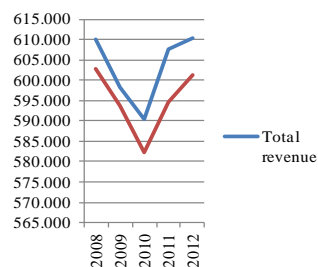
## 2. Main characteristics of entrepreneurship in Croatia

According to the data by the Financial Agency ([FINA], 2013a, 7) there were 97,254 active entrepreneurs liable to pay profit tax in 2012. They employed 829,874 employees in total (based on hours of labour). For a longer period of time there has been an uneven pattern of dispersion of a small number of entrepreneurs in some counties in contrast to a high concentration of entrepreneurs in a few counties. However, the actual entrepreneurial activity is done in the wider area than the business administrative centre. The greatest number of entrepreneurs has been registered in the town of Zagreb which together with the Zagreb county accounts for 39% of all Croatian entrepreneurs. The placement of employees follows the number and concentration of entrepreneurs (FINA, 2013b, 6).

Data by FINA (2013a, 7) indicate that in 2012 total revenue of HRK 610.4 bn by the Croatian entrepreneurs liable to pay profit tax was higher than total expenditure which amounted to HRK 601.2 bn. In the period of recession from 2008 to 2012 (Table/Graph 1), entrepreneurs achieved a very low overall business efficiency (but higher than 1), which is the prerequisite for successful business operations.

Table/Graph 1 Revenue, expenditure and efficiency of overall business operations by Croatian entrepreneurs from 2008 to 2012.

in HRK m					
Description	2008	2009	2010	2011	2012
Total revenue	610.147	598.187	590.499	607.709	610.376
Total expenditure	602.979	593.810	582.228	594.637	601.183
Overall business efficiency	1,01	1,01	1,01	1,02	1,02

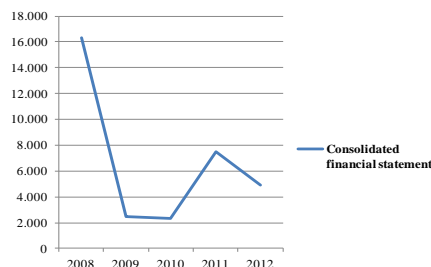


Source: FINA (2013a,7)

The analysis of the revenue structure shows that business revenues account for approximately 97% of total revenue which indicates that entrepreneurs are mostly active in their core business. There has been little fluctuation in the business revenues in the last couple of years and they have been mostly generated on the domestic market (about 77%) where the competition is weaker, while other business revenues have been generated on the international market (about 17%), as well as from countertrade, subsidies and other revenues. Business expenditure accounts for 92% to 96% of total expenditure, the rest is financial expenses and contingencies expenditure. Since 2002 there has been an increase in financial expenses (from 3.5% to 4.2%) which means growth in financing interest rates and other financial expenses i.e. wider use of third party's financing sources and decrease in own sources of financing (FINA, 2013a, 9). In accordance with the structure and amount of revenue and expenditure Table 2 shows the financial results of Croatian entrepreneurs.

Table/Graph 2 Profit, loss and consolidated financial statement in HRK m in Croatian entrepreneurs from 2008 to 2012

Description	2008	2009	2010	2011	2012
Profit	33.292	24.788	27.709	31.599	34.053
Loss	16.978	22.349	25.393	24.135	29.112
Consolidated financial statement	16.314	2.439	2.316	7.464	4.941

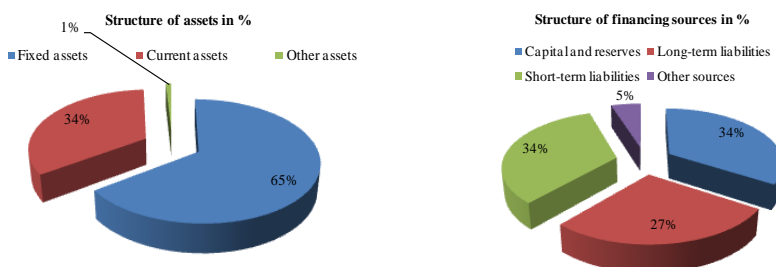


Source: FINA (2013a,9)

Since the beginning of recession there has been a dramatic fall in the consolidated financial statement and a rise in 2011. It is significant that the business results are concentrated on a relatively small number of entrepreneurs.

Analysing the balance sheet structure (Graph 3a and 3b) in Croatian entrepreneurs whose total assets in 2012 were HRK 1.062bn we come to a conclusion that the structure of assets is relatively unfavourable due to too big a share of fixed assets. The same is true for the structure of liabilities, which is also relatively unfavourable, because third party's financing sources prevail (long-term and short-term liabilities) as compared to own sources (capital and reserves). The optimal ratio of third party and own financing sources is 50:50.

Graph 3a and 3b Balance sheet structure in Croatian entrepreneurs in 2012



Source: FINA (2013a,11)

Success of a business is best demonstrated by static financial indicators which express the relationships between two or more items on financial statements. According to the basic ratios for productivity, efficiency and profitability for 2012 the effectiveness of Croatian entrepreneurs was extremely low (Table 3). Due to a substantial growth of expenditure as compared to revenue, the level of revenue and profit per employee is decreasing as well as overall efficiency. Moreover, the profitability ratios show a low profit margin, return on assets and return on equity.

Table 3 Basic ratios for effectiveness of Croatian entrepreneurs in 2012

Description	2012
Productivity of labour –total revenue per employee in HRK	735.504
Productivity of labour– profit (+) or loss (-) for the period per employee in HRK	5.954
Total business efficiency in %	101,53
Net return on sales in %	0,81
Net return on assets in %, (ROA)	0,47
Return on equity in %, (ROE)	1,32

Source: FINA (2013a,12)

### 3. Characteristics of entrepreneurship in eastern Croatia

Since 2013 a new statistical classification of territorial units of Croatia has been implemented with the changes at the level NUTS 2<sup>8</sup>. The former division into three regions North-western Croatia, Central Croatia and Eastern Croatia (Pannonia) and Adriatic Croatia has been changed into two statistical regions Continental and Adriatic. Specifically, Pannonian Croatia and North-westernregion are combined into Continental region<sup>9</sup> (Ministry of Regional Development and EU Funds, 2012).

In this analysis we have concentrated on the eastern part of Continental Croatia and analysed the following counties: Osijek-Baranja, Vukovar-Syrmia, Virovitica-Podravina, Brod-Posavina and Požega-Slavonia.

#### 3.1. Comparison of main characteristics of entrepreneurs in eastern Croatia with other Croatian regions

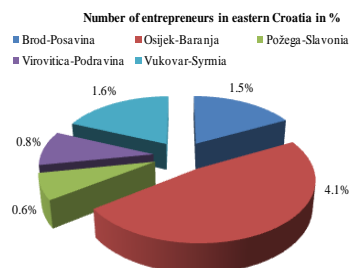
According to the latest data by FINA (2013b, 7) there are 8,351 entrepreneurs in eastern Croatia, which accounts for only 8,6% of all Croatian entrepreneurs and is a considerably smaller number than in the rest of Continental Croatia with 52% and Adriatic Croatia with 39%. The percentages of the number of the employed are almost the same. In comparison with the previous year there has been a significant decrease in the number of the employed, following an overall downward trend in Croatia. Osijek-Baranja county and its town Osijek as a regional, administrative and business centre stand out with the number of entrepreneurs and employees.

<sup>8</sup> The Republic of Croatia is covered by the NUTS standard (for French Nomenclature des unites territorialesstatistiques) at three levels: the first level NUTS-1 covers the whole Croatia, the second level NUTS-2 covers Croatia divided into regions, and the third level covers counties. .NUTS-2 stands for division into regions in relation to the criteria by EUROSTAT for the area of the whole European Union (EU) and candidate countries. It is instrumental in the European Union's efficient monitoring of the way Structural Funds are used.

<sup>9</sup>The main reason for this division is the opportunity to obtain funding with a smaller proportion of self-financing, wider range of developmental priorities and highest non-repayable funds. The newly-established region has a much larger area and due to the incorporation of the underdeveloped territory of eastern Croatia is entitled to additional incentives for regional development from the EU Structural Funds under the most favourable conditions. However, combining of the regions has opened a number of questions regarding financial and administrative efficiency of the local and regional government in these regions (Bošnjak and Tolušić, 2012, 79).

Table/Graph 4 Number of entrepreneurs and employees in eastern Croatia and other regions, 2012

	County/Region	Number of entrepreneurs		Number of employees		
		Number	Share in %	Number	Share in %	Index 2012/2011
Analysed counties	Brod-Posavina	1.427	1,5	15.336	1,8	103,8
	Osijek-Baranja	3.994	4,1	39.352	4,7	99,0
	Požega-Slavonia	614	0,6	7.464	0,9	98,5
	Virovitica-Podravina	793	0,8	7.173	0,9	96,5
	Vukovar-Syrmia	1.523	1,6	16.544	2,0	98,8
	Total eastern Croatia	8.351	8,6	85.869	10,3	
	Rest Continental Croatia	50.968	52,3	518.245	62,4	
	Adriatic Croatia	37.935	38,9	225.760	27,2	
	Total Republic of Croatia	97.254	100,0	829.874	100,0	100,9



Source: calculation of the author based on the data by FINA (2013b,7)

### 3.2. Comparative analysis of financial performance by entrepreneurs of eastern Croatia and other Croatian regions

Financial reports on profit made by entrepreneurs of eastern Croatia in 2012 indicate that the entrepreneurs from that region generate the lowest revenue and profit of all Croatian regions, only HRK 9.6bn or 8% of the total revenue in Croatia and HRK 1.6bn or 4.6% of total profit made by successful entrepreneurs. They account for HRK 3.3bn or 11% of total loss of all businesses that made a loss. Consolidated data show a negative financial result-net loss of HRK1.7bn made by the entrepreneurs in eastern Croatia whereas the entrepreneurs in the rest of Continental Croatia made a total consolidated net profit of HRK 2.7bn (with the town of Zagreb in the first place). Adriatic Croatia made a total net profit of HRK 3.9bn. The situation differs across Croatian counties. Most counties of eastern Croatia sustained a consolidated net loss, except in Virovitica-Podravina county where the entrepreneurs had a positive consolidated financial result of HRK 76m. Osijek-Baranja county has the biggest share in the analysed financial figures with the overall consolidated net loss of HRK 1.2bn. The lowest revenue and profit are generated in Požega-Slavonia county (0.5% of revenue and 0.3% of profit of all Croatian entrepreneurs who achieved positive financial results). Considering the total number of entrepreneurs in a county, in all the analysed counties the number of entrepreneurs who make a profit exceeds the ones who make a loss (FINA, 2013b, 8).

Table 5 Total revenue, profit and loss, consolidated financial statement in the entrepreneurs of eastern Croatia and other regions, 2012 figures in HRK m, shares in %

	County/Region	Total revenue		Profit of the period		Loss of the period		Consolidated net financial statement
		Figure	Share	Figure	Share	Figure	Share	
Analysed counties	Brod-Posavina	7.713	1,3	267	0,8	384	1,3	-118
	Osijek-Baranja	24.263	4,0	694	2,0	1.983	6,8	-1.289
	Požega-Slavonia	3.222	0,5	98	0,3	120	0,4	-22
	Virovitica-Podravina	4.360	0,7	237	0,7	161	0,6	76
	Vukovar-Syrmia	9.622	1,6	276	0,8	655	2,2	-379
	Total eastern Croatia	49.180	8,1	1.572	4,6	3.303	11,3	-1.732
	Rest of Continental Croatia	432.564	70,7	20.554	60,4	17.833	61,4	2.721
	Adriatic Croatia	128.634	21,2	11.926	35,0	7.975	27,4	3.951
	Total Republic of Croatia	610.376	100,0	34.053	100,0	29.112	100,0	4.941

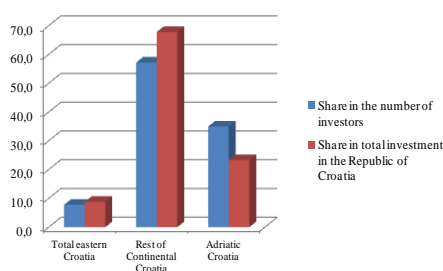
Source: calculation of the author based on the data by FINA (2013b,8)

The latest data on investment, which are the prerequisite for employment, growth of production activities, achieving added value, and the development of entrepreneurs, local and

regional self-government units as well as the whole region, are consistent with the quoted data on business efficiency. The number of investors and the amount of investment in eastern Croatia is the lowest of all Croatian regions (Table 6/Graph 5). Overall there is a little under 8% of all investors in Croatia who invested in production facilities approximately HRK 3bn or 9% of all investment by comparison to the rest of Continental Croatia where there are 57% of investors who invested HRK 22.6bn accounting for about 68% of all investments. In Adriatic Croatia there are 35% of investors i.e. HRK 7.8bn worth of investments or 23% of all investment. Among the counties of eastern Croatia the most prominent is Osijek-Baranjacounty with the greatest number of investors making investment of HRK 1.6bn in 2012. Entrepreneurs in Požeĝa-Slavonia county made the lowest investment in all of Croatia (FINA, 2013b, 9).

Table 6/Graph 5 Investment by entrepreneurs in fixed assets in 2012 in eastern Croatia and other regions

	County/Region	Entrepreneurs Investors		Investments	
		Number of entrepreneurs investors	Share in the number of investors	Amount of investment in HRK m	Share in total investment in the Republic of Croatia
Analysed counties	Brod-Posavina	291	1,5	440	1,3
	Osijek-Baranja	738	3,7	1.664	5,0
	Požeĝa-Slavonia	103	0,5	168	0,5
	Virovitica-Podravina	143	0,7	282	0,8
	Vukovar-Syrmia	288	1,4	411	1,2
	Total eastern Croatia	1.563	7,8	2.965	8,8
Rest of Continental Croatia		11.361	57,2	22.610	67,8
	Adriatic Croatia	6.946	35,0	7.778	23,3
	Total Republic of Croatia	19.870	100,0	33.353	100,0



Source: calculation of the author based on the data by FINA (2013b,9)

The analysis of the structure of assets and liabilities in the entrepreneurs of eastern Croatia (Table 7) shows an unfavourable asset structure due to the big share of fixed assets, which can damage the solvency of the business and threaten the financial stability. The same is true for the entrepreneurs of the rest of Continental Croatia as well as Adriatic Croatia. The unfavourable structure of assets is accompanied by the unfavourable structure of capital and liabilities which directly affects the financial stability because the entrepreneurs are dependent on external expensive sources of financing. The total assets of entrepreneurs of eastern Croatia account for 6.56% of the total assets of Croatian entrepreneurs, an extremely small share compared to other regions. The greatest share of assets of entrepreneurs in eastern Croatia have the entrepreneurs from Osijek-Baranja county, as expected.

Table 7 Structure of assets and liabilities in entrepreneurs of eastern Croatia at the end of 2012

Eastern Croatia-counties	Assets and liabilities in HRK m on 31.12.2012	Structure of assets			Structure of liabilities			
		Fixed	Current	Other	Capital and reserves	Long-term liabilities	Short-term liabilities	Other sources
		(% in county assets)			(% in total sources of the county)			
Brod-Posavina	8.885	50,1	49,5	0,4	19,8	22,2	48,3	9,6
Osijek-Baranja	35.589	59,8	39,6	0,6	21,0	27,7	45,6	5,7
Požeĝa- Slavonia	4.560	45,9	45,8	8,3	17,6	21,5	56,8	4,2
Virovitica-Podravina	6.278	55,5	44,1	0,4	33,6	20,6	39,8	6
Vukovar-Syrmia	14.396	57,2	42,2	0,6	33,3	17,5	44,1	5,1
Total Eastern Croatia	69.708							
Total Republic of Croatia	1.062.413	65,1	34	0,9	34,0	27,5	33,5	5

Source: FINA (2013b,12-13)



Poor business results of entrepreneurs in eastern Croatia are reflected in the financial ratios of productivity, efficiency and profitability<sup>10</sup>. The growth of expenditure over revenue led to negative financial results reflected in the negative ratios of productivity and profitability in most counties of eastern Croatia and the efficiency of all business activity is below 1 (Table 8).

Table 8 Ratios of productivity, efficiency and profitability in entrepreneurs of eastern Croatia in 2012

Eastern Croatia-counties	Total revenue per employee in HRK 000	Net loss of the period per employee in HRK	Efficiency of the business in %	Net profit margin in %	Net profitability of assets in %	Profitability of own capital in %
Brod-Posavina	503	-7.677	99,04	-1,53	-1,33	-6,27
Osijek-Baranja	617	-32752	95,3	-5,3	-3,6	-16,7
Požega-Slavonia	432	-2885	99,7	-0,7	-0,5	-2,7
Virovitica-Podravina	608	10.659	102,2	1,8	1,2	3,5
Vukovar-Syrmia	582	-22.883	96,5	-3,9	-2,6	-7,7

Source: FINA (2013b,14)

#### 4. Restrictions on the development of entrepreneurship in eastern Croatia

According to the above ratios eastern Croatia lags behind in the entrepreneurship development compared to the other regions and territories of the Republic of Croatia, especially the rest of the areas of Continental Croatia. Small and medium-size enterprises account for 99.7% of entrepreneurship in Croatia with a 55% share in generating added value and present a potential in opening new jobs and developmental economic activities. According to the data of Ministry for Entrepreneurship and Crafts small-scale enterprises account for 36% in eastern Croatia, which is an exceptionally small share compared to other regions (Ministry of Entrepreneurship and Crafts [MINPO], 2013, 39).

The conducted international research<sup>11</sup> places Croatia under the average EU-27 regarding entrepreneurship and points out the barriers to the development of entrepreneurship in Croatia including the analysed counties which have been present for a longer period of time (SMEs and Entrepreneurship Policy Center, [CEPOR], 2012, 20):

- Administrative barriers (lengthy and expensive procedures for start-up and liquidation of businesses)
- Inefficient judiciary
- Lengthy procedures for registration of property
- Lack of focus on entrepreneurial education
- Underdevelopment of informal financing for starting a business

<sup>10</sup> Productivity ratios: total revenue per employee or consolidated result (profit of the period subtracted by the loss of the period) per employee; Ratios of total efficiency: total revenues in relation to total expenditure; Profitability ratios: net profit in relation to total revenue (net profit margin) or total assets (net profitability of assets or rate of return on assets) or own capital (profitability of own capital).

<sup>11</sup> There are four main international research organisations which conduct indexing and assessment of results in entrepreneurship using scales: Doing Business – World Bank Report, Global Enabling Trade Report by WEF (World Economic Forum), GEM (Global Entrepreneurship Monitor) Global Report by GEM Consortium and EU SBA FactSheets reports supported by DG Enterprise and Industry (Directorate-General for Enterprise and Industry). In these reports standard definitions and indicators are used which enable the authors to rank the countries using scales.

The tenth report Doing Business by the World Bank lists the results of 185 countries regarding the number of administrative barriers. Table 9 shows Croatia's rankings by each research topic and improvement since 2010 (MINPO, 2013,46).

Table 9 Data for Croatia, 2010-2013, World Bank Research

Topics	2013	2012	2011	2010
	rank			
Starting a Business	80.	67.	56.	101.
Dealing with Construction Permits	143.	143.	132.	144.
Regisring Property	104.	102.	110.	109.
Getting credit	40.	48.	65.	61.
Protecting Investors	139.	133.	132.	132.
Paying Taxes	42.	32.	42.	39.
Trading Across Borders	105.	100.	98.	96.
Enforcing Contracts	52.	48.	47.	45.
Resolving Insolvency	97.	94.	89.	82.
Overall rank	84.	80.	84.	103.

Source: MINPO (2013,46) based on World Bank research Doing Business 2010-2013

Croatia's lowest rankings are in the topics of starting a business (lengthy procedures), protecting investors, paying taxes and trading across borders. Negative trends are also present in resolving insolvency where Croatia ranked lower due to the problems that businesses have with timely payment of outstanding and assumed liabilities.

The main sources of financing the development of entrepreneurship in the sector of small and medium-sized enterprises in Croatia, including the analysed counties, are: banking sector, credit unions, venture capital funds, informal forms of financing (business angels) and Government incentive programmes and subsidised credit lines. The results of GEM research from 2002 to 2011 indicate that the access to financial support was in all those years more of a barrier than an incentive. Small and medium-sized enterprises are more oriented to traditional sources of financing (bank loans) since there is a limited supply of the non-traditional sources of financing (venture capital funds and business angels) on the Croatian financial market (CEPOR, 2012, 30). Regarding financing conditions the most pronounced limitations are: lack of loan guarantees, inadequate range of banking products and services, required loan documentation, rate of interest and shortage of information on available financial products.

## 5. Conclusion

The analysis of entrepreneurship development in eastern Croatia compared to other regions (other areas of Continental Croatia and Adriatic Croatia) indicates that the entrepreneurship in eastern Croatia is the least developed and is characterised by:

- the smallest number of entrepreneurs and their employees
- the lowest revenue, and due to the growth of expenditure negative consolidated financial results which are worse than in other regions
- the smallest number of investors and the lowest level of investment in fixed assets of all Croatian regions

- unfavourable structure of the balance sheet in entrepreneurs: there is a big share of fixed assets in the asset structure; there is an unfavourable relation of capital and liabilities in the liability structure
- overall unfavourable financial ratios of productivity, efficiency and profitability, which are much worse than in other regions
- a low share of small and medium-sized enterprises in the total number of enterprises as compared to other regions
- as in the rest of Croatia the concentration of entrepreneurial activity is the highest in the county administrative centres
- in the development of entrepreneurship of eastern Croatia and analysed counties, Osijek-Baranja county and the town of Osijek play the most prominent role

The research has shown that the same limitations are present in the development of entrepreneurship in eastern Croatia as in the rest of Croatia. They are most evident in the lengthy procedures for starting businesses, protection of investors, problems of illiquidity and insolvency, availability of external sources of financing and associated credit conditions, inadequate offer on the financial market and other forms of financing. Improvement should be made in these segments and the development of entrepreneurship in eastern Croatia should be additionally stimulated by appropriate government incentives and instruments of providing these incentives as well as obtaining EU funding for co-financing of different developmental projects.

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## **VUKOVAR FILM FESTIVAL – CAPACITY FOR ECONOMIC AND TOURISM DEVELOPMENT OF THE REGION**

### **VUKOVAR FILM FESTIVAL – POTENCIJALI ZA RAZVOJ GOSPODARSTVA I TURIZMA REGIJE**

#### **ABSTRACT**

*The goal is to explain the capacity of Vukovar Film Festival for economic and tourism development in the region, with entailed growth of cultural offer at local and national level. We witness large number of European festivals organized because of cultural, and economic reasons. The VFF, as a Danube region festival, has several distinct advantages – firstly, charisma of war tragedies allows the city to intrigue the region of the Danube countries in the way in which Sarajevo does with his festival at European and even global level. Geographically, Vukovar is located in the heart of the Danube region, and this region, despite the large number of festivals, does not have any significant Danube oriented film festival. To finance such a project the funds from Croatia are not sufficient. This paper includes comparative strengths and weaknesses of the festival and methods for placing the festival at the level it deserves. Such a project would allow branding the city in the international community and better utilization of tourism potential. By getting on the international film map, VFF could help use Eastern Croatian picturesque locations for international productions.*

**Key words:** *Vukovar, film festival, Danube, economy, tourism*

#### **SAŽETAK**

*Cilj je ovoga rada objasniti potencijale VFF-a za razvoj gospodarstva i turizma regije, uz samopodrazumijevajuće jačanje kulturne ponude na lokalnoj i nacionalnoj razini. Svjedoci*

*smo velikog broja europskih festivala koji se organiziraju iz kulturoloških, ali i gospodarskih razloga, a VFF kao festival podunavskih zemalja ima nekoliko izrazitih prednosti – najprije, karizma ratne tragedije omogućava gradu da regiju podunavskih zemalja (Njemačka, Austrija, Slovačka, Mađarska, Srbija, Rumunjska, Bugarska, Ukrajina) zaintrigira na način na koji je Sarajevo sa svojim festivalom to učinilo na europskoj, pa i svjetskoj razini. Geografski gledano, Vukovar se nalazi u samom središtu podunavske regije, a ciljana regija unatoč velikom broju festivala (s izuzetkom Berlina koji se nalazi izvan nje) nema nijedan koji ulazi na listu festivala A-kategorije.*

*Za financiranje ovakvog projekta ne mogu biti dostatna sredstva iz Hrvatske. U radu će biti obuhvaćen model na koji je način povezivanje s kulturnim centrima zemalja podunavske regije i posebno, te korištenjem EU fondova, festival moguće podići na primjereni razinu. Takav projekt pridonio bi brandiranju grada u međunarodnoj zajednici, boljem iskorištavanju turističkih potencijala, a jačim upisivanjem na međunarodnu filmsku kartu VFF bi (uz Hrvatski audiovizualni centar) mogao biti i generator iskorištavanja živopisnih lokacija Istočne Hrvatske za međunarodne koprodukcije.*

**Ključni pojmovi:** Vukovar, filmski festival, Dunav, gospodarstvo, turizam

## 1. Introduction

Events are an important motivator of tourism, and figure prominently in the development and marketing plans of most destinations. (Getz, 2007, 403). Film festivals, as other festivals of art, are a culture phenomenon that can have a very significant economic influence. That is evident from the fact that the official list of Croatian Audio-Visual Centre (HAVC) registers 54 film festivals in Croatia<sup>12</sup>. In this heavy competition it is particularly important, especially for events which strive for the international context, to create a unique and distinctive features that connect the image of the festival with local/regional characteristics that may ultimately result in increased interest in tourism offer, and thus strengthen the overall economy.

Given the specific characteristics of the region, Vukovar Film Festival as a festival of the Danube countries has a greater potential for bigger breakthrough and development than most other film festivals in Croatia, which, on the other hand, do not have so many opportunities to distinct themselves from the local communities. At the same time, it is affected badly by the socio-political relations, and by the failure to recognize its potential, primarily by the local community, both regional and national, and thus the festival remains without adequate support for international expansion.

## 2. Film Festivals

According to Film Encyclopedia, a film festival is a periodic or occasional film event organized primarily in order to show films. One of the important functions of the festival is opening the film market - selling and buying movies, financial investments in new film projects, etc. (ed. Peterlić, 1986, 385). Film festivals have a large and important role in the world of film, especially in the recent years when differentiation between Hollywood cinema and so called art films increased. At a time of Hollywood domination in commercial cinemas and multiplexes, festivals are becoming an important form of distributing and promoting art films, discovering new talent, cinematography and trends. However, besides their important

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<sup>12</sup> [www.havc.hr](http://www.havc.hr) (accessed 27 March 2014)

role in cinematography, film business, film community and their audiences, film festivals also have a great significance for their communities.

Film festivals also celebrate place: the city that hosts them, the nation and national/regional industries that often underpin them (Wong, 2011, 2). For a week or two, film festivals - through the mass media reports on the guest stars, through the raising of festival atmosphere and encouraging the competition between films, through criticism and reports on the winners - attract the attention of the wider national and international audience. Therefore, there is a large number of small, independent festivals, some of which are based solely on tourism (ed. Peterlić, 1986: 385), or which try to connect abstract "culture" and exact "economic" segments more equally.

## **2.1. Film Festivals and the influence on the economy**

Cultural processes of festivals are inseparable from economic processes and the material conditions in which they occur (Jackson, 1991, 226). They attract audiences, local residents and visitors, which requires infrastructure and services of their community. It brings advertisement, income, identity and acts invigorating and homogenizing in a community that participates in "their own" festival, in the active (organizing, volunteering) and passive mode (consuming cultural events, recreation). Festivals take place in a certain period of the year, they enter the calendar of events in the region and thus become part of the collective consciousness of the community. For example, almost every person from Pula has its own anecdote related to the Pula Film Festival, which has become a part of individual, but also common memory. In that case, we are talking about social impacts.

National governments and local authorities around the world are increasingly using cultural festivals and special events as key elements for regional development, as they provide an opportunity for the tourism promotion, commercial profits and attraction of foreign investment (Getz, 2007). For example, the city elders of Cannes, a fashionable resort on the French Mediterranean, started to host international film festival in the mid-1930s in order to extend the tourism season. Since the first festival in 1939 to this day, it has become leading in the world, with an annual budget of approximately 20 million euros.

Support for festivals and special events is thought to make a much more difference in peripheral regions and small communities (Kostupoulou, Vagionis, Kourkouridis, 2013, 175). As regional inequalities in economic and social conditions remain a high priority in regional planning, local governments tend to confront some of these problems by developing effective and appropriate event policies (Whitford u Kostupoulou, Vagionis, Kourkouridis, 2013, 175). Festivals and special events are being encouraged by public sector bodies as a positive form of community development, and thus, the need for a deeper understanding of events' contribution to regional development, place marketing and place-identity has emerged (O'Sullivan i dr. u Kostupoulou, Vagionis, Kourkouridis, 2013, 176).

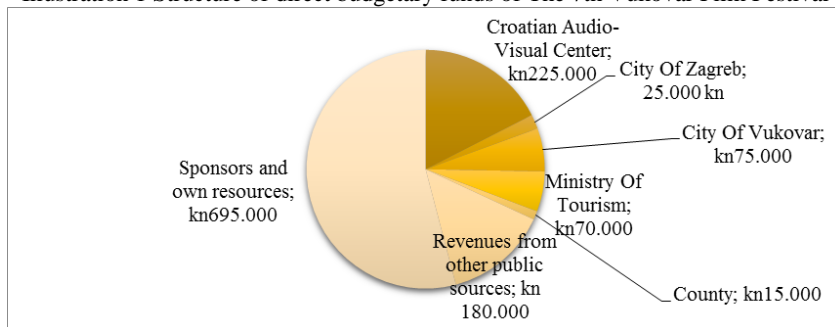
Festivals and events desiring the support or cooperation of tourism agencies, or simply looking for increased respect, tend to conduct tourism and economic impact studies to 'prove' their value in economic terms (Getz, 2007, 408). Or, even better, their strategy might be to first become a tourist attraction, then use that positioning to gain legitimacy or foster growth. In the context of stakeholder and resource dependency theory, events must secure tangible resources and political support to become sustainable, giving up a degree of independence in the process (Getz, 2007, 408).

### 3. Vukovar Film Festival (VFF)

VFF is an international competition film festival and one of the most famous and the most exposed in Croatia, next to festivals in Pula and Motovun. It is held at the end of July each year, from the 2007 and the program includes movies from countries linked by the river Danube: Germany, Austria, Czech Republic, Slovakia, Hungary, Croatia, Serbia, Bulgaria, Romania, Moldova and Ukraine. In 2013 the Festival featured 32 film titles in three main competition programs: feature film, documentary and short film, while another 55 films were shown in supporting programs that are not necessarily connected to the Danube region. Some of them are: *The World*, *Europe, open!*, *Planet partner: Earth* and others, whose names indicate that social engagement, given the history and symbolic status of Vukovar, gets special weight. Festival award is named Gold Barge and is given in all three official competitive categories. Festival director is Igor Rakonić, the owner of film distribution company called Discovery film, known for its distribution of cinematographic works from the so-called independent productions<sup>13</sup>.

The total budget of the 7th VFF's in 2013, according to organizers<sup>14</sup>, was 2.1 million kunas: of which direct costs amounted to 1,285,000 and indirect costs to 815,000 kunas which were settled by compensation.

Illustration 1 Structure of direct budgetary funds of The 7th Vukovar Film Festival



Source: Discovery Film

#### 3.1. SWOT analysis

Current status and potentials of the VFF, as well as the advantages and disadvantages compared to other similar events, are presented through SWOT analysis technique, widespread method of research in the field of cultural synergies and economic activity. SWOT analysis was named after the first letters of words:

*S – strengths*

*W – weaknesses*

*O – opportunities*

*T – threats*

The analysis, therefore, determines what strengths and weaknesses the observed project - in this case a cultural product VFF - has over the competition and what his development opportunities and threats are.

##### 3.1.1. Strengths

<sup>13</sup> Films made outside of Hollywood's major studios that dominate the box office.

<sup>14</sup> The festival director Igor Rakonić gave the data for the purposes of this paper.

Vukovar is geographically located in the very heart of the Danube region (Illustration 2), which entitles him to be named the center of the region included in the festival.

Illustration 2 Overview map of Danube region



Source: Ama Waterways

Given the recent history of war suffering and tragedy charisma, which Europe does not remember since the Second World War, Vukovar has the capacity to attract a very specific attention of the international community, as the strongest regional cultural festival yet - Sarajevo Film Festival – has already done. This is illustrated also by the evaluation of the Austrian Ministry of Education, Arts and Culture, which evaluated the VFF as medium important for tourism or cultural development of the Danube region, but highly important for the development strategy of the region<sup>15</sup>, with further explanation: „Vukovar was heavily destroyed in 1991. By analogy with Sarajevo Film Festival, Vukovar Film Festival has the potential to act as a driving force for regional development and to raise awareness of the rich cultural patrimony of the Danube region. Panel discussions, workshops and exchanges contribute to the professionalization and internationalization of the participants. Due to the above mentioned approach, it is suited to contribute to the development of civil society, social inclusion and cohesion.“

In media and advertisement terms, Vukovar, Ilok and some city sights included in the festival (Ružička House, Eltz Castle complex, Vukovar river island, Waterways Agency terrace...) had the incidence in the amount of 18,352,928 kunas via TV, radio, print and Internet during The 7th VFF (Source: MediaNet<sup>16</sup>).

The importance of the festival for the cultural life of this specific, quite divided city is extremely high. The festival has entered the consciousness of the population - regardless of the nationality, VFF is accepted as theirs. Social cohesion is one of the characteristics that this festival meets in large extent.

### 3.1.2. Weaknesses

Croatian part of the Danube is relatively short (4.5 percent of the total length of 2,850 km), but the bigger problem is the poor inclusion of the Croatian Danube region in its busiest tourist sections operated by tourism operators, which cover mostly the area of Germany, Austria and Hungary to the west, and Romania and Black Sea to the east. However, at this time, the major problem is the financial side of the festival. The current budget of 2.1 million kunas is too small to make a significant step forward in the international community. For

<sup>15</sup> Festival Director presented the document to the authors

<sup>16</sup> Agency for media analyzing MediaNet made a calculation based on media content collected by the company Presscut, and the data (with this table) was given to the authors by the festival director Igor Rakonić



example, the Sarajevo Film Festival has a budget of 1.3 million euros<sup>17</sup>. Consequently, the festival director Igor Rakonić objects to the amount of grants given to the VFF by HAVC; this remark stands, but taken into consideration that the largest festival grants go to 500,000 kunas, it is still not enough to significantly improve the financial side.

Also, the weaknesses include a wider social context within which the festival is trying to build its international image because the government failed to present the war tragedies of Vukovar and tourist attractions of the region abroad in the way Sarajevo has.

Despite the good media coverage, the festival is still primarily visited by the local population, and the total income of the 2013 Festival amounted only to 21,886 kunas. Only nine out of ninety shows were charged, and the ticket was 15 kunas. There are no exact data on consumption in the region during the festival considering the number of guests, but according to HKG information for 2012, the region had 4,000 overnight stays<sup>18</sup> during the 6th VFF. Zoran Šesto, the director of a private travel agency Danubium Tours in Vukovar, states his opinion: "There are no big groups here, or spending guests, who stay two or three days. People who do stay overnight are generally those for whom the festival provides it, for some interests and purposes."

### 3.1.3. Opportunities

VFF extensively uses tourist sites and attractions of the Vukovar region to create its appearance and visual brand. The award is named Gold Barge, and shows the film camera on a riverboat. The visuals use motifs of Vučedol Dove and less formal programs are carried out on Vukovar river island. Foreign guests are taken on tours of war locations such as Vukovar hospital, fairgrounds and other, but also to the beautiful landscapes such as Ilok wine cellars, Kopački rit, rural tourism locations and other. However, there is still room for improvement and better exploitation of the Danube specifics. For example, instead of the red carpet, it would be very original for the stars and the audience to walk on - the blue carpet. The association is, of course, to the legendary The Blue Danube Waltz by Johann Strauss, which should be more used in the audio-visual presentation and branding of the festival. More so as it is really a popular and loved composition with recognition throughout Europe and beyond.

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<sup>17</sup> Data is transferred from an interview with the director of SFF Mirsad Purivatra for magazine Screen Daily, <http://www.screendaily.com/features/one-on-one/mirsad-purivatra-sarajevo-film-festival/5059311.article> (accessed 27 March 2014)

<sup>18</sup> Source: Discovery. Data refers to the total number of stays in the county at the time of the VFF. There are no reliable statistics on the number and percentage of figures associated with the festival.

Illustration 3 A potential poster for the VFF inspired by "The Blue Danube Waltz"



*Design: Studio Grafikon in collaboration with authors<sup>19</sup>*

In terms of the program, a great potential lies in the opening of the first Vukovar CineStar multiplex, with three movie theaters and total of 415 seats, as the programs so far were held in somewhat improvised conditions. That opening and the involvement of multiplex in the Festival is very important technological progress. Multiplex is ready for the following 8th VFF and, in the words of Damir Milinić<sup>20</sup>, the executive director of Blitz-CineStar Ltd: "This festival, with which we are interested to cooperate, helped in our decision to open a multiplex here, although it was not decisive. CineStar sole interest is to help cultural townscape, what we are now managing to do by combining different content. CineStar Vukovar is not financially profitable project, but it is certainly the crowning glory of our work." So, this case also shows the stimulating influence of VFF, which is still primarily of a social importance, less economic. But, with clever program and marketing activities, it can be changed. Being that stars largely help the recognition, strength and the image of the festival, the VFF in this segment also has premises for development. This region has no great or even mediocre Hollywood stars who are interesting (and expensive), but German, Czech, Hungarian and, in

<sup>19</sup> The poster was created for the purposes of this paper

<sup>20</sup> Interpolated from talking to authors

recent times, Romanian cinematography have a very interesting film names whose arrivals would have quite a meaning in the region. For example, festival should include filmographies of some great directors who would attend the festival as well, starring Michael Haneke (Austria), Werner Herzog (Germany), Milos Forman (Czech-USA), Cristian Mungiu (Romania), István Szabó (Hungary) and others. It is also possible to organize individual or "movie waves" marathons (Czech new wave, Romanian new wave) that would result in more prominent guests at once.

At the financial level, there is the possibility of greater utilization of various EU funds. Firstly, the funds that are primarily engaged in financing film activities – eg. MEDIA – as well as better cooperation with the cultural centers of other countries that would help with the organization, guests and programs which are related to their national cinema.

Growth of the festival and a better integration into international production could help the Vukovar region and the whole of Eastern Croatia's picturesque locations to participate in international productions.

#### 3.1.4. Threats

Poor financial situation of the country and the region is a real danger that can inhibit the growth of the VFF, but there are the social circumstances too. Vukovar region has still very sensitive political sphere. Places with such social history and cultural heritage often have a political dimension, and the individual characteristics of cultural goods can be (mis)used as elements of political action (Jelinčić, 2010, 9), which was clearly shown after closing the 7th VFF: at a time the guests were leaving the city, the riots on placing the cyrillic plates had just been started. These scenes certainly do not contribute to the development of cultural events and tourist activities, as well as higher level of political criteria rather than constructive action which is, the impression is, already in force in this region. From his own experience, the director of Danubium Tours, Šesto says: "The name Vukovar itself is a great advantage because there are still guests who respond positively to commemorate Vukovar and, in some way, want to help the 'hero town' in his development (suffering, war, return, coexistence, new hope, etc.). Unfortunately, that is not utilized enough because of excessive political interference in the town, while tourism should be left for those who can meet its challenges. Due to recent events (political, issue of minorities), Vukovar is loosing this advantage, from a war victim it is becoming a place with unresolved problems, and when it comes to the nationality problems, the word travels fast. "

At this point, VFF organization largely relies on infrastructure and staff of distribution company Discovery without which, according to Igor Rakonić, "The festival would never have arisen, would never have continuous growth, would never have such a quality program and, with this kind of support from HAVC, would never reach its eighth edition." Therefore, any possible weakening of this business would have a big, if not crucial impact on the survival of the VFF.

Also, the launch of a similar festival of Danube countries, while VFF waits for more favorable conditions, could greatly reduce their chances for future development.

## 4. Conclusion

Cultural festivals are a great potential of cultural and economic (tourism) growth of the region. Vukovar Film Festival, as one of the biggest cultural events in Vukovar County has great development potential, but for now, his strength has more social (social cohesion) than economic character. A stronger breakthrough and branding in the area of the Danube countries does not seem possible with this current budget, but due to the very specific and, unfortunately, tragic war charisma, the festival has all the predispositions for it, as well as the

opportunities in the Danube region which is specified as an area of action. Therefore, a greater support of community, cultural institutions and EU funds is needed.

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## **USE OF ICT SECTOR IN ORDER TO IMPROVE AND DEVELOP COMPETITIVENESS OF EASTERN CROATIAN ECONOMY**

## **KORIŠTENJE IKT SEKTORA RADI POBOLJŠANJA I RAZVOJA KONKURENTNOSTI GOSPODARSTA ISTOČNE HRVATSKE**

### **ABSTRACT**

*The aim of this paper is to present the current state of ICT sector in eastern Croatia, and to evaluate or determine the possible future developments. More detailed will be analyzed the number of businesses, labor force participation, level of education within the sector as well as the trends that arise from them. For the purpose of the work will be analyzed eastern Croatian economy in terms of the representation of information and communication sector. Using ICT industry economic indicators show a possibly significant ICT sector influence on economic growth and productivity in eastern Croatian economy. In this paper will also be compared the size of eastern Croatian GDP with number of ICT firms, average salaries in this sector and number of broadband Internet connection. The rapid development of information and communication technologies led to significant changes in the structure of economic activity both in the world and in Croatia. A high level presence of the ICT industry sector and new technologies are characterization of economy based on innovation with a high degree of competitiveness. With Croatian entering the European Union, a new opportunity and incentive for rapid development of information and communication sector came up. In the last ten years, the number of Internet users, personal, portable and mobile computers has multiple increased and the Croatian companies in the reference period have invested significant resources in technological equipment, and thus significantly expanded infrastructure platform for the further development of the economy but the question is: is that enough for needed economic growth?*

**Key words:** *ICT sector, eastern Croatian economy, productivity, average salaries in ICT sector, GDP*

## SAŽETAK

*Cilj ovog rada je prikazati trenutno stanje ICT sektora u istočnoj Hrvatskoj , te procijeniti ili utvrditi moguća buduća zbivanja . Detaljnije će se analizirati broj poduzeća , sudjelovanje radne snage , stupanj obrazovanja u tom sektoru , kao i trendovi koji proizlaze iz njih. U svrhu ovog rada analizirat će se gospodarstvo istočne Hrvatske u smislu zastupljenosti informacijskog i komunikacijskog sektora. Korištenje ekonomskih indikatora u ICT sektoru ukazuje na mogući značajan utjecaj ICT sektora na gospodarski rast i produktivnost gospodarstvu istočne Hrvatske. U ovom radu će također biti uspoređena veličina BDP-a gospodarstva istočne Hrvatske s brojem ICT tvrtki, prosječnim plaćama u tom sektoru i brojem širokopojasne internetske veze. Brzi razvoj informacijskih i komunikacijskih tehnologija doveo je do značajnih promjena u strukturi ekonomske aktivnosti , kako u svijetu tako i u Hrvatskoj. Visokia razina prisutnosti ICT sektora i novih tehnologija su karakteristike gospodarstva koje se temelji na inovativnosti s visokim stupnjem konkurentnosti. S ulaskom Hrvatske u Europsku uniju, došla je i nova prilika i poticaj za brzi razvoj informacijskog i komunikacijskog sektora. U posljednjih deset godina ,broj korisnika interneta, osobnih, prijenosnih računala i mobilnih telefona višestruko je povećan, a hrvatske tvrtke u promatranom razdoblju su uložile značajna sredstva u tehnološku opremu, te su na taj način značajno proširile infrastrukturnu platformu za daljnji razvoj gospodarstva, ali pitanje je: je li to I dovoljno za ekonomski rast.*

**Ključne riječi:** *ICT sektor , gospodarstvo istočne Hrvatske , produktivnost , prosječne plaće u ICT sektoru , BDP*

### 1. The first-level heading

The global economy has gone through major changes in recent decades, such as lowering the cost of using information, shortening of product life cycle, because of the fast technological changes and because of the fast changing of consumers habits, accelerated internationalization and liberalization of trade and commercial, financial and cultural interaction. These structural changes to transform society in a way that society is actually becoming 'information society' or 'knowledge economy'.

All economies can be classified into three groups, and these are: the economy based on the fundamental factors, economy based on efficiency and economy based on innovation, where Croatia is currently in transition between models: economy based on efficiency and economy based on innovation. Under the innovation is not meant only on the creation of companies or products of high technology, nor is meant only to research that lead to the creation of new products, but innovation in the broad sense of the new approach to work and the way it is, just as much as it attitude toward business and manufacturing processes and final products. This new knowledge and ideas do not lead themselves creating successful innovations. Successful interaction between businesses, academic community and public administration is becoming critically important for the transformation of new knowledge and ideas to ideas for new products or improvement of existing product, economic growth and social well-being.

The growing importance of innovation and the ability of companies and institutions to innovate, has far-reaching consequences for the economic development strategy of a country. Global competition and technological developments have led to a change in the balance of

forces to international market relations and has become a crucial innovation is an important determinant of competitiveness and success factor in developed and developing countries.

In Croatia, for some time now are discussions about how to improve national competitiveness and the do we need to establish our economy on knowledge and innovation. For this improvement of competitiveness, today is used the term 'knowledge based economy ' to highlight the need to change existing social and economic development model.

## **2. Croatia Information Technology profile in 2014.**

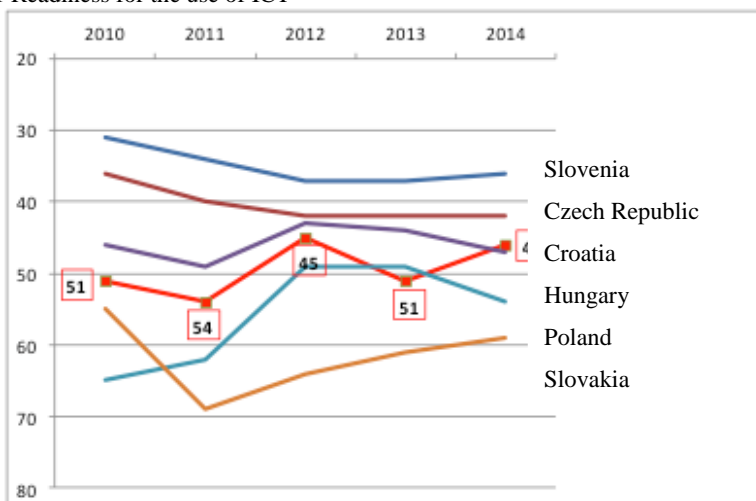
The National Competitiveness Council published the results of a new study of the World Economic Forum (WEF) on information technology, according to which Croatia competitiveness by using Information and Communication Technologies (Information and Communication Technologies - ICT) is on the 46th position.

Information Technology Report provides a comprehensive and relevant evaluation of the impact of ICT on the competitiveness of countries and standard of living. Networked readiness index evaluate the readiness of the economy in the use of ICT in relation to:

1. ICT infrastructure, the cost of approach and the existence of the necessary skills for optimal use,
2. Acceptance and use of ICT by the government, the economy and individuals,
3. Business, innovation environment and the political and regulatory framework,
4. Impact of ICT on the economy and society.

In terms of global competitiveness rankings using information and communication technologies for a number of years Croatia is about 50 th place, while 2014 years climbed to 46 out of a total 148, from which it can be concluded that the state of infrastructure investment and the level of use of new technologies to satisfactory level. But there is a huge gap between the level of use (investment in new technologies) and the innovation development degree and high-tech products and services, which points to the problems of technology transfer and their applications to market. The level of representation of innovative offers, products and services is below the EU average and is disproportionate to the level of use of new technologies and technological development infrastructure.

Graph 1 Readiness for the use of ICT



Source: <http://www.konkurentnost.hr/Default.aspx?art=527&sec=2> available: 27 March, 2014

### 3. Structure of ICT firms in Croatia and eastern Croatia

Growth in the number of legal entities in information and communication sectors according to NKD is more stronger than the average for all industries. Slavonia region (5 counties) in comparison with the rest of the Croatian ICT sector has a proportional increase with the average Croatian increase, although the structure covers only 5,6% of active legal entities for the year 2012.

The whole Slavonia accounts for 5.6% of active legal entities registered in information and communication sector at the national level while at the national level ICT sector makes only 3.9% of the overall structure of active legal entities. The number of active entities dealing with information and the communication is low and the number of structures respectively in Slavonia is only 5.6% for 2012 as the absolute amount of 0.22%. Number of active ICT companies in Slavonia makes 0.22% of all active entities in Croatia.

Table 1 Registered and active businesses in the information and communication sector by NKD in 2007<sup>th</sup> during the period 2009 - 2012 in Croatia.

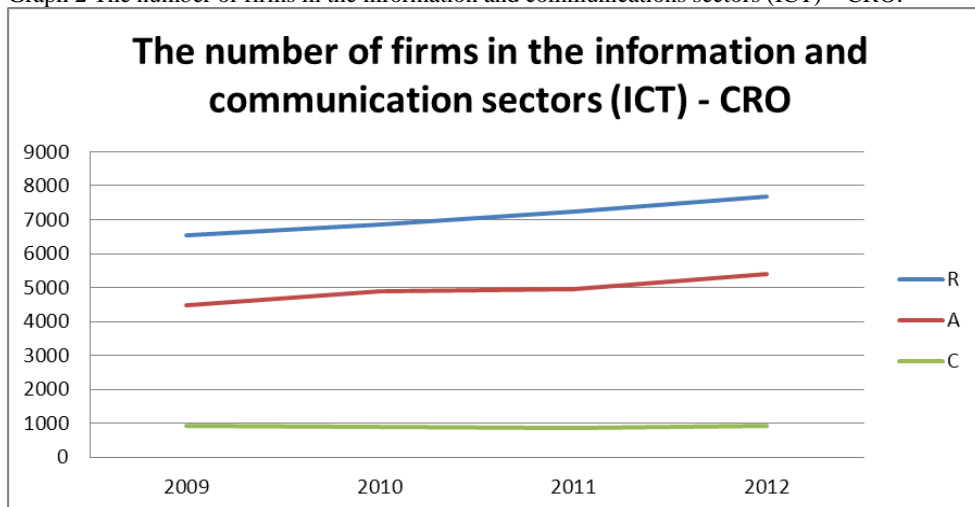
	R	A	C	Total (A+O)	% change of A
2009	6530	4474	927	5401	-
2010	6871	4886	898	5784	9,2%
2011	7254	4966	881	5847	1,6%
2012	7669	5386	918	6304	8,5%

R	registered legal entities
A	active legal entities
O	crafts and free lances

source: <http://www.dzs.hr/> available: 27 March, 2014



Graph 2 The number of firms in the information and communications sectors (ICT) – CRO.



source: made by authors

As shown in Table 1, number of ICT companies in Croatia has grown over 4 years (2009<sup>th</sup> - 2012<sup>th</sup>) and now in Croatia is present 7669 companies in this sector, which is 14.85% more than in 2009<sup>th</sup>.

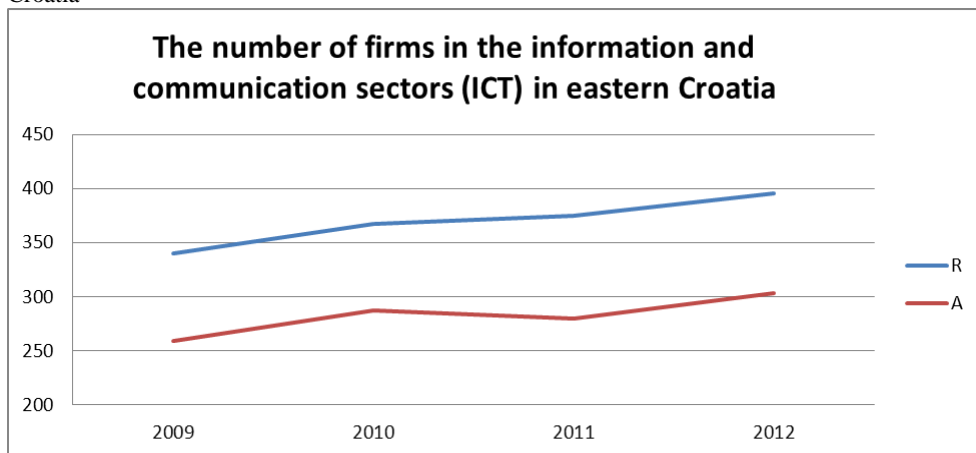
Number of companies in eastern Croatia during the same period (2009<sup>th</sup> – 2012<sup>th</sup>) has grown by 14,14%, from 340 firms to 396 firms. Compared with growth in whole Croatia, growth in eastern Croatia is slightly lower.

Table 2 Registered and active businesses in the information and communication sector by NKD in 2007<sup>th</sup> during the period 2009 - 2012 in eastern Croatia

	R	A	%A	% share in Croatia ICT
<b>2009</b>	340	259	-	5,8%
<b>2010</b>	367	287	10,8%	5,9%
<b>2011</b>	375	280	-2,4%	5,6%
<b>2012</b>	396	303	8,2%	5,6%

source: <http://www.dzs.hr/> available: 27 March, 2014

Graph 3 The number of firms in the information and communications sectors (ICT) in eastern Croatia



source: made by authors

#### 4. ICT structure

The following analysis refers to the development of ICT infrastructure. Data were collected by HAKOM (Croatian Agency for Post and Electronic Communications) at the county level. Available indicators refer exclusively to infrastructure access to broadband Internet service, but that the accessibility of the Internet one of the key elements of the development of ICT infrastructure, very well illustrates the degree of development. According HAKOM the main indicator of the development of broadband Internet access is the density of broadband connections. This indicator represents the proportion of broadband connections in the total population.

The table below shows the number and density of broadband Internet in Croatia. In table can be noticed an increase in the number of connections in the 2012th year compared to the number of connections in the 2008th year of 78.1% and an increase in connections in the 2012th year compared to the previous year to 5.87%. In the 2013<sup>th</sup> and 2014<sup>th</sup> the number of broadband internet has also increased due to the increasing use of cloud computing, because fiscalization that requires access to the Internet and the development of mobile telephony, which affects the catering facilities attract visitors by offering free internet.

Table 3 Density and number of broadband Internet in Croatia and their annual changes.

Broadband	Total		Mobile		Fixed	
	NU	D	NU	D	NU	D
2012	1216659	28,40%	326335	7,62%	890324	20,78%
2011	1149229	26,78%	287953	6,71%	861276	20,07%
2010	1132212	25,52%	328389	7,40%	803823	18,12%
2009	937198	21,13%	252238	5,69%	684960	15,44%
2008	683207	15,40%	158524	3,57%	524683	11,83%

<b>NU</b>	Number
<b>D</b>	Density
<b>Mobile</b>	Mobile broadband Internet
<b>Fixed</b>	Fixed broadband Internet
<b>Broadband</b>	Broadband Internet network

source: <http://www.hakom.hr/default.aspx?id=512>, available: 27 March, 2014

In counties in Slavonia can be seen as the highest density of connections has county of Osijek - Baranja, then county of Vukovar – Sirmium, county of Slavonski Brod – Posavina, county of Virovitica- Podravina and the lowest density has county of Požega - Slavonia. Red in table shows the annual change in the density of broadband internet with the 2011<sup>th</sup> year in the 2012<sup>th</sup> year.

The number of broadband internet in Croatia is constantly growing , although growth slowed in 2011<sup>th</sup> and 2012<sup>th</sup> due to the economic crisis. Based on the number of users, but also by the density of connections in the forefront Slavonia Osijek-Baranja and Vukovar - Sirmium but along the entire Croatian, the number of connections is much lower. For example, the density of broadband connections in the network fixed most developed Slavonia Osijek-Baranja county for 2012 was 18.81 % , while the average for Croatia in this period, 20.78 % , which is 9.48 % lower.

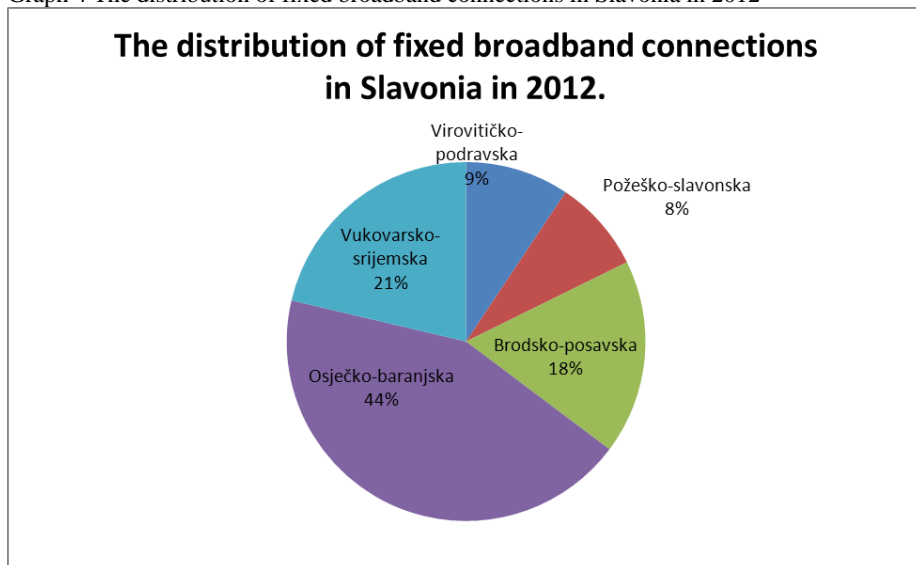
If we compare the average density by county Slavonia he is 15.57 % . What is less by 25.1 % than the national average . As for the increase in the number of fixed broadband connections for Slavonia , the biggest change is in the Brod- Posavina 5.2% while for Slavonia is 3.83 % , which is slightly higher than the average of 3.5 % . In Table 4, an increase in a particular county is marked with red color.

Table 4 Number and density of broadband Internet in the fixed network and its annual change by county Slavonia.

<i>County of</i>	<i>Virovitica-Podravina</i>		<i>Požega-Slavonia</i>		<i>Brod - Posavina</i>		<i>Osijek - Baranja</i>		<i>Vukovar - Sirmium</i>		<i>SLAVONIA</i>	
	NU	D	NU	D	NU	D	NU	D	NU	D	NU	D
<b>Broadband (fixed)</b>												
<b>2012.</b>	12385	14,60%	11018	14,12%	23170	14,61%	57383	18,81%	28176	15,70%	132132	15,57%
<b>2011.</b>	<b>4,32%</b>	13,97%	<b>2,41%</b>	13,78%	<b>5,20%</b>	13,85%	<b>3,72%</b>	18,11%	<b>3,50%</b>	15,15%	<b>3,83%</b>	14,97%

source: <http://www.hakom.hr/default.aspx?id=512>, available: 27 March, 2014

Graph 4 The distribution of fixed broadband connections in Slavonia in 2012



source: made by authors

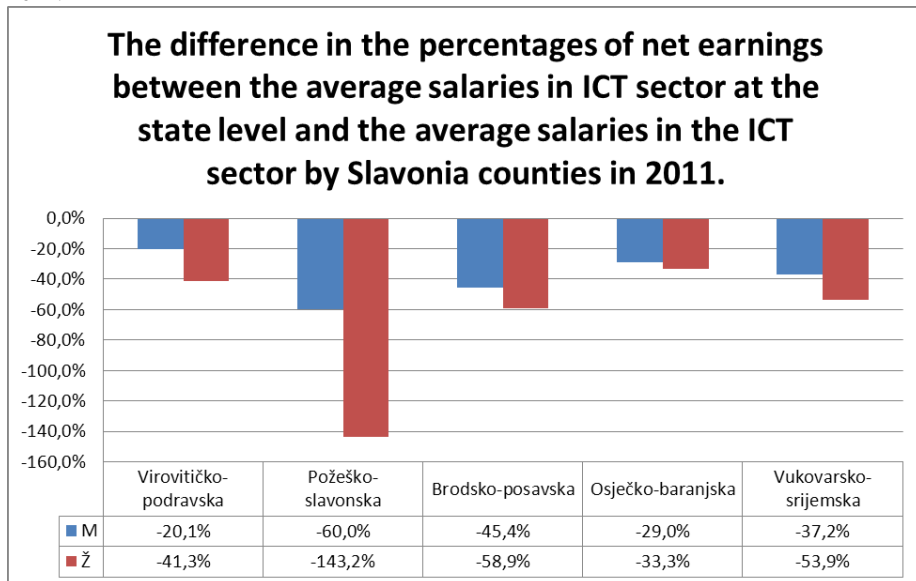
## 5. Salaries in ICT sector

Although the state-level net earnings in the ICT area larger than the average in the three Slavonian counties this is not the case and that the county of Požega -Slavonia in which men and women earned less than the average wage, while in Brod - Posavina and Vukovar - Sirmium only women earns lower wages than the average salary for a particular county.

If we compare the averages per Slavonia with the national average net wage in the ICT area where we see significant discrepancies. The maximum deviation has Pozesko - Slavonia, where women's wages were lower by as much as 143.2%, compared to the average national wage in the ICT sector, and wages for men are 60 % less. The following are counties of Brod - Posavina and Vukovar- Sirmium.

The differences become even greater when it comes to female sex workers, so that the preceding example in county of Požega -Slavonia which has gap for women salaries of -143.2 %. So not only that in the ICT sector, average salaries are significantly lower than the national level, but there is significantly deepened the differences between workers in relation to gender.

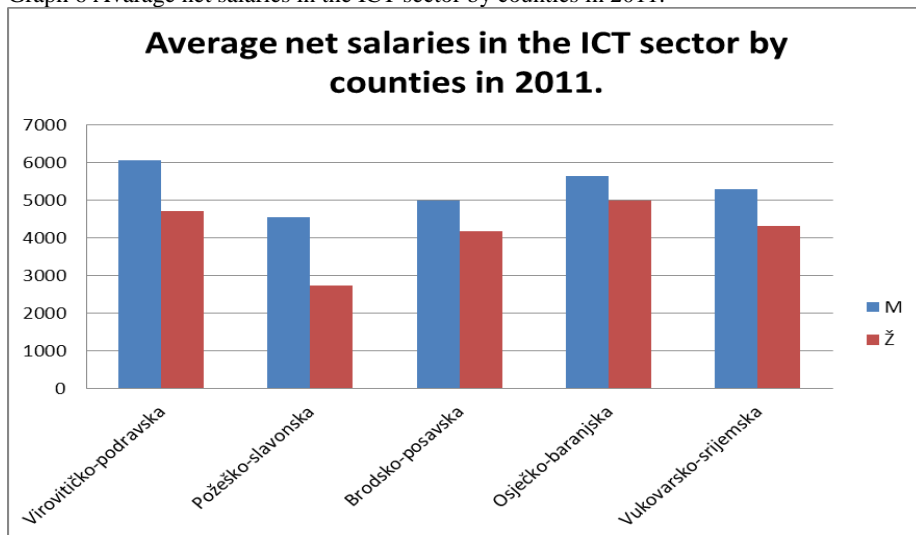
Graph 5 The difference in the percentages of net earnings between the average salaries in ICT sector at the state level and the average salaries in the ICT sector by Slavonia counties in 2011.



source: made by authors

The average net salary in ICT sector by counties is shown in the following graph:

Graph 6 Average net salaries in the ICT sector by counties in 2011.



source: made by authors

Employment in Slavonia in the ICT sector has fallen by only 1.2%, which indicates that ICT is recognized as an important part of development, therefore the employment remained stable or slightly decreased, while only in the county of Osijek - Baranja increased by 3,29%. In Osijek, the number of employees increased in part due to the project launched in early 2012., which are ICT companies merged in order to achieve the goals of increasing the attractiveness of the developer profession, programmers competitiveness and encourage entrepreneurship in the ICT sector in Osijek. So, via Osijek software city they tried to hire trained and motivated worker because the ICT industry is currently ruled by a chronic lack of trained personnel, and that project wants to change it, and it is successful as we can see by increased employment.

Unemployment in the ICT sector by counties in Slavonia is shown in the following table:

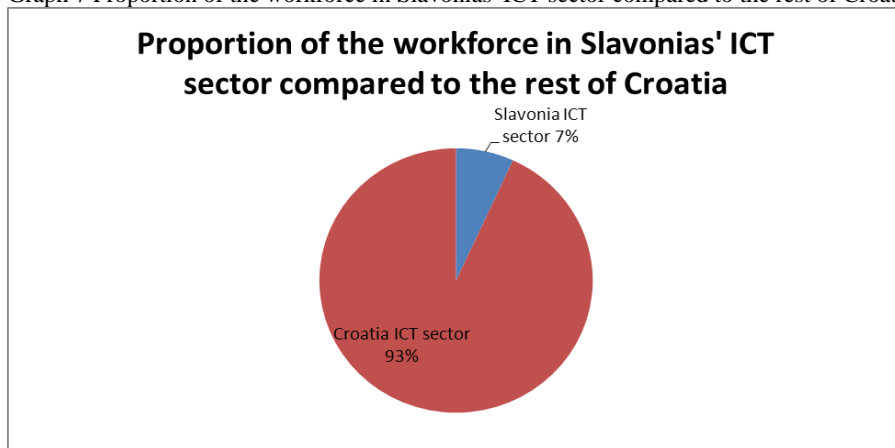
Table 5 Employment by counties in Slavonia in the ICT sector.

County of	2009	2010	2011	2012
Virovitica-Podravina	94	96	96	92
%	-	2,1%	0,0%	-4,2%
Požega-Slavonia	129	205	194	107
%	-	58,9%	-5,4%	-44,8%
Slavonski Brod-Posavina	350	323	318	316
%	-	-7,7%	-1,5%	-0,6%
Osijek-Baranja	1490	1491	1536	1539
%	-	0,1%	3,0%	0,2%
Vukovar-Sirmium	299	301	280	280
%	-	0,7%	-7,0%	0,0%
Slavonia	2362	2416	2424	2334
%	-	2,3%	0,3%	-3,7%

source: <http://www.dzs.hr/> available: 27 March, 2014

Of the total number of employees in the ICT sector in Croatia 7% are employed in the ICT sector by counties in Slavonia.

Graph 7 Proportion of the workforce in Slavonias' ICT sector compared to the rest of Croatia



source: made by authors

## 6. GDP by counties in Slavonia associated with the ICT sector

All five Slavonian counties make the 12.6% of the total Croatian GDP in 2011. year and Slavonian counties together make up 7.8% of GDP in the field of ICT, therefore, even less than the average, that is 12.6 %, which means that this sector is less developed than the Croatia average.

The largest share of the ICT sector in GDP has county of Požega-Slavonia where the ICT sector accounts for 4.2% of realized GDP, followed by the Osijek - Baranja with 4.1%.

Table 6 Share of GDP that has been made with the ICT sector in the Republic of Croatia and in Slavonia in 2011.

	Information and communication sector	Share of Croatia GDP	The share of GDP in the county that has been made with the ICT sector
<b>Republic of Croatia</b>	<b>13557</b>	<b>100</b>	
County of Virovitica-Podravina	40	0,3	1,2
County of Požega-Slavonia	13	1	4,2
County of Slavonski Brod-Posavina	116	0,9	2
County of Osijek-Baranja	651	4,8	4,1
County of Vukovar-Sirmium	115	0,8	1,6

source: Croatian Bureau of Statistics

## 7. Conclusion

In Croatia, for a long time discussing the need for changes in current economic development model in the direction of optimizing the competitiveness of the economy and better positioning in the international market. Using the terms "knowledge-based economy", "knowledge society" people wants to conceptually create a positive environment in order to implement the required changes. Changing the model of the development of society and economy based on knowledge and innovation with the aim of increasing competitiveness and innovation has been recognized, but has not been implemented in full.

Croatia by the WEF classification for 2013 is on 75th place competitiveness and is ranked in the transition state between the model economy based on efficiency and economy models to share innovations. Unfortunately, in the interval 2007-2012 competitiveness is continuously falling as Croatia closer to the model state based on efficiency rather than innovation. The weakest point of competitiveness represent an inefficient labor and goods, inefficient institutions and bureaucracy and more. It takes a lot more to do, and especially need to work on innovative capacity, better transfer of knowledge and connecting educational institutions, innovative technology centers with the economy, reducing bureaucratic barriers and increasing the efficiency of markets and commodities.

The current state of development of economic activities in the sector of information and communication eastern Croatian amounts to only 0.72 % of total GDP and 7.8 % of the GDP of the ICT sector (2011). Weighted average net salary at the county level within the ICT sector decreased by 52.2 % of the average net wage of the whole sector. The total number of employees in Slavonia represents only 7 % of the total workforce sector. All these indicators point to the lack of development of the ICT sector of eastern Croatian.

Infrastructure and technological equipment were evaluated with the best competitive position, but the infrastructure itself does not guarantee the development of innovative products and services, but still represents a necessary condition for the development of a highly competitive and innovative society. With Smarr investing, investments and the use of existing capacity and technological infrastructure, economically less developed regions such as eastern Croatia could be used to accelerate the development and progress of the economy. This is supported by the relatively low cost of labor with the national average. But it must be noted though lower labor cost advantage to investors somewhat, it is still the workforce in general very uncompetitive. Chance advantage of future intensive development of the sector of information and communication lies in greater mobility of business processes and manpower provided by the very nature of work. To start the development of the economy of eastern Croatian people need to work especially on the factors that limit the development of innovation and innovative capacity. This can be achieved solid development of the ICT sector as one of the possible future directions of regional development and successful Slavonia.

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**MANAGING URBAN AND REGIONAL DEVELOPMENT THROUGH  
EUROPEAN CAPITAL OF CULTURE PROGRAMME AND CREATIVE  
INDUSTRIES WITH APPLICATION ON THE CITY OF OSIJEK**

**EUROPSKA PRIJESTOLNICA KULTURE I KREATIVNE INDUSTRIJE  
U UPRAVLJANJU URBANIM I REGIONALNIM RAZVOJEM S  
PRIMJENOM NA GRAD OSIJEK**

**ABSTRACT**

*European Capital of Culture is a thriving cultural programme of the European Union, with benefits for the cultural life of cities and regions and also for the economic development of some of the titleholders. Development of cultural and creative sector – cultural and creative industries – is an integral part of the economic development of cities who decide to run for the European Capital of Culture title. (Cultural) tourism and the overall economy of the region are also developed directly through the project. In 2020, for the first time in history of the project, one city from the Republic of Croatia will hold the European Capital of Culture title. This is a great opportunity for Osijek as a regional center – there is a possibility of redefining and reprogramming city development strategies and the possibility of a new positioning within the European Union. The paper provides an overview of the connections of the European Capital of Culture and urban and regional development through the growth of the cultural and creative sector, and also brings a draft of a successful development strategy for Osijek and the region in the context of this programme. The purpose of the survey is to identify trends in the development of the creative sector within the European Capital of Culture, and the attempt to forecast what would be the positive effects of the programme on Osijek. It provides an overview of the possible directions of development in the city's independent candidacy, regional and macro-regional candidacy (Osijek - Eastern Croatian – Pannonian candidacy).*

**Key words:** *Osijek, urban development, regional development, cultural industries, creative industries, European Capital of Culture*

## SAŽETAK

*Europska prijestolnica kulture uspješan je kulturni program Europske unije, koji je svoje benefite osim na kulturni život gradova i regija uspješno prenio i na gospodarski razvoj pojedinih nositelja naslova. Razvoj kulturnog i kreativnog sektora, odnosno kulturnih i kreativnih industrija, sastavni je dio gospodarskog razvoja gradova koji se odluče kandidirati za naslov Europske prijestolnice kulture. Neposredno se kroz sam projekt razvija i sektor (kulturnog) turizma, ali i cjelokupno gospodarstvo regije. Po prvi put u povijesti projekta jedan od gradova s područja Republike Hrvatske biti će nositelj naslova Europske prijestolnice kulture. Ovo ujedno znači i priliku za Osijek kao regionalno središte – javlja se mogućnost redefiniranja i reprogramiranja gradskih razvojnih strategija i mogućnost novog pozicioniranja unutar Europske unije. Rad donosi pregled povezanosti programa Europske prijestolnice kulture i urbanog i regionalnog razvoja kroz rast kulturnog i kreativnog sektora, te prijedlog nacrtu uspješne strategije razvoja Osijeka i regije u kontekstu ovog programa. Svrha istraživanje jest prepoznati trendove razvoja kreativnog sektora u sklopu programa Europske prijestolnice kulture, te pokušaj prognoziranja kakve bi pozitivne učinke program mogao imati na Osijek. Donosi pregled mogućih razvojnih pravaca u samostalnoj gradskoj kandidaturi, regionalnoj i makroregionalnoj kandidaturi (Osijek – Istočna Hrvatska – Panonska Hrvatska) i model kreativnog razvoja grada kroz program Europske prijestolnice kulture.*

**Ključne riječi:** *Osijek, urbani razvoj, regionalni razvoj, kulturne industrije, kreativne industrije, Europska prijestolnica kulture*

## 1. Introduction

Since 1985 and the beginning of the European Capital of Culture (ECOC) programme (then named the European City of Culture), European citizens have witnessed an evolution from a large cultural festival into the cultural mega-event with far-reaching and permanent positive outcomes for cities (and regions) – holders of this prestigious title. Smaller and medium-sized cities from European Union and other European countries came into focus especially since the beginning of the 21st century, as cities who have used the title of Cultural Capital most successfully for generating new economic growth. The growth of the cultural and creative sector, and focus on the (cultural) tourism have been used as a good initiator of new growth in the post-industrial ECOC cities, such as Glasgow (1990), Lille (2004) And Pecs (2010). A similar scenario, with high-quality management programme, could be expected in one of the Croatian cities in 2020, with European Capital of Culture title coming to Croatia for the first time.

## 2. Urban and regional development through cultural policies

Cultural policy proved to be a good model for urban (and regional) development, and it has been successfully implemented in a number of European and world cities, with special emphasis on cultural mega-events as cultural policy development tools. Monclus & Guardia emphasize the European Capital of Culture project intended to urban branding as potentially dangerous for urban regeneration, because "... too often, Capitals of Culture have

focussed most of their efforts on funding of events and projects that form part of a year-long celebration, with too little time and investment given to the future". (2006:206) But the undeniable is the fact that the use of such large-scale events can have a positive impact on urban revitalization in all respects, whether it's about building infrastructure, rebuilding parts of the city, or long-term orientation on job creation.

In the process of creating an urban brand the European Capital of Culture project can serve as an extremely useful tool. Most authors usually emphasize the example of Glasgow (Capital of Culture in the 1990) as an example of successfully transformed the city in which the city government "... used the ECoC event as part of a longer term arts based strategy which attempted to engineer economic, social and, perhaps most importantly, image change (...) to facilitate its emergence from a conceptual steel clad cocoon as a beautiful post-industrial butterfly, a center of cultural creativity". (Binns, 2005:4)

Undoubtedly, the European Capital of Culture project contributed to the process of Glasgow's successful urban transformation, the same as Barcelona's urban transformation was helped by Olympic Games (1992), and the impact of opening the Guggenheim Museum have had on Bilbao (1997).

## **2.1. Urban cultural policy**

Culture can be accessed as a development policy for urban areas, particularly in post-industrial cities, which have not yet found a model of stopping urban decay, and a model for further development in economic and social terms.

When it comes to the process of urban regeneration, cultural policy can be used on three potential ways (Griffiths, 1995:263-265):

1. integrationist model - characterized by the culture as a way of life in the community, and consequently concentrated on ways cultural projects can support public social life and help create a sense of local identity;
2. cultural industries model - focused on the production and dissemination of cultural products; the emphasis is on the so-called commercial cultural industries, such as fashion design and audiovisual industry;
3. consumerist model - refers to a variety of art, primarily as a tool to attract visitors, tourists and business.

Using one of these models can help the cities to transform their current development models into new, more sustainable.

## **3. Creative industries**

Creative industries are virtually impossible to cover with one definition, and a few of them are outlined here. Thus, for example, UNCTAD creative industries defined as follows (UNCTAD, 2008:13):

- are the cycles of creation, production and distribution of goods and services that use creativity and intellectual capital as primary inputs;
- constitute a set of knowledge-based activities, focused on but not limited to arts, potentially generating revenues from trade and intellectual property rights;
- comprise tangible products and intangible intellectual or artistic services with creative content, economic value and market objectives;

- are at the cross-road among the artisan, services and industrial sectors; and
- constitute a new dynamic sector in world trade.

Hartley also does not offer a single and uniform definition of creative industries, however points out that they are "... companies that liquidate (creative) ideas in the consumer economy (...) use the commercialization of identity, as well as the idea of civic identity (...) mediate convergence and integration of entertainment and politics (comfort and freedom) (...) are scattered and disorganized, but still coherent effort of society to the individual talent to raise the level of the industry (...), are suppliers of goods and services for 'sector of creative identity' in society, as well as social organizers of creative industries themselves (...) they use consumers as innovators of research and development sector."(Hartley, 2007:176-177)

Lamza-Maronić et al point out that the creative industries are „...human activities that by incorporating specific skills, creativity, knowledge and technology generate products and services, i.e. contents aimed at providing information, education and entertainment, and indirectly generate employment and financial capital“. (Lamza-Maronić et. al.; 2010:134)

Single definition, or delineation of cultural and creative industries do not exist, but in the previous section, it is evident that the contours of the cultural and creative sectors could certainly be highlighted and viewed as a separate segment of the economy. Individual activities of the cultural and creative sectors (cultural and creative industries) achieved outstanding financial results globally, and they ensure economic growth in some countries. The film industry in the 20th and 21st centuries, and computer games industry at the beginning of the 21st century represent good examples of how creative industries can generate profits.

### **3.1. Europe 2020 and Creative Europe - economic growth through cultural and creative sector**

The European Strategy for smart, sustainable and inclusive growth, better known under the short name of Europe 2020, does not mention the cultural and creative industries explicitly as part of the European development times in the period until 2020, but in its very subtitle there are visible elements in which cultural and creative sectors can greatly be recognized. The Europe 2020 is based on the following three types of growth (European Commission, 2010:8):

- Smart growth – developing an economy based on knowledge and innovation.
- Sustainable growth – promoting a more resource efficient, greener and more competitive economy.
- Inclusive growth – fostering a high-employment economy delivering economic, social and territorial cohesion.

Cultural and creative industries certainly include smart, sustainability and inclusiveness, and can therefore be viewed as an invisible backbone of the new EU development strategy. In the same programming period (2014-2020) the Creative Europe, with the following objectives is implemented (Creative Europe):

- Helps the cultural and creative sectors to seize the opportunities of the ‘digital age’ and globalisation
- Enables the sectors to reach their potential so that they can contribute to the Europe 2020 goals for sustainable growth, jobs and social cohesion.

- Opens up new international opportunities, markets and audiences Builds on the success of the MEDIA and Culture programmes.

Some more developed European Union member states recorded higher figures in the creative economy sector, sub-sector or specific creative industries. For example, in the UK sector of employment in the creative economy reaches „...for 2.55 million jobs in 2012, or 1 out of every 12 jobs in the UK“, while in terms on crative industries it is „...1.68 million jobs in 2012, 5.6 per cent of the total number of jobs in the UK“. At the same time an increase in employment was recorded, which also supports the argument of sustainable growth. (DCMS, 2014:7)

#### **4. European Capital of Culture and the creative economy - the development of cultural and creative industries**

The concept of cultural and creative industries and the creative sector as one of the most prominent elements of the economic development in the 21st century can be largely linked to the implementation of the European Capital of Culture (ECoC) programme. ECoC project is a unique opportunity for the prosperity of the city and its growth and development, not only in the hospitality and tourism sector (which will greatly benefit from a yearlong cultural festival), but also for the very cultural and creative sector of the city. The well-implemented ECoC project in itself will certainly include the launch of new cultural institutions in the city (new theaters, galleries, museums, etc.), which will certainly lead to an increase in the number of newly employed in the cultural sector - experts in the field of heritage, curators, directors, actors. Increased cultural production in ECoC year will yield an increased interest in urban culture, and indirectly lead to increased cultural consumption, which may not necessarily be limited to one year. Increased interest in the culture of the home crowd, and increased cultural consumption can then generate increased employment in the cultural/creative sector, both public and private (private launch of theaters, museums, encouraging local independent artists on entrepreneurial advances, etc.). Changes in the urban landscapes are also a significant segment of ECoC project, with a series of new architectural endeavor that permanently alter the appearance of the city. It could also have positive impact on the architectural activity itself as one of the bases of the creative industries. The design activity may also benefit from ECoC project - most ECoC cities establish a specific visual identity in relation to the created logo. Advertising is another subsector with possible benefits derived from ECoC project implementation. In essence, the creative industries are the core of European Capital of Culture programme.

The Tallinn 2011 project was concentrated on the development of creative industries in the Estonian capital - in September 2009 Tallinn Creative Incubator (TCI) was established, as planned phase of growth and development of the creative industries sector. The mission of the TCI is „...is to provide a supportive environment for creative enterprises by initially providing them with incubation services. The main emphasis is to improve the business expertise of creative enterprises and to establish a soft infrastructure by developing mechanisms of inclusion, cooperation and participation and to help enterprises become international. This includes making the Creative Incubator an important influence in the creative industries sector“. (Loov Eesti; 2010)

Tallinn ECoC candidacy and Tallinn 2011 implementation greatly changed the economic orientation of the city, and the long-term development of the city turned to the creative sector. This is reflected in the following facts (Lassur et al, 2010:77-78):

- Changes have taken place within the CI sector. The paradigm of CI and actions connected to it have brought the creative people together as a stronger force in the society. This has included an increased awareness of their important role in the economic success of the state and the city. (...)
- The functions of structures and institutions have changed. On one hand the institutions have taken on a wider range of functions, on the other hand, there are multifunctional organizations emerging or that have already emerged (e.g. Cultural Cauldron). Also new structures for developing CI, such as the Tallinn Creative Incubator, have emerged.
- The emergence of CI has also influenced other policies, such as entrepreneurship policy and innovation policy; it has broadened them and made them more 'humane' – less technocratic. The policy documents refer to new co-operation patterns between economic and cultural fields (e.g. Tallinn Innovation Strategy). Culture has become one of the drivers in achieving economic success; the CI have been placed among six priority areas in the innovation strategy, etc.

Liverpool 2008 as by now one of the most successful ECoC title holders also recorded significant progress in the development of urban and regional creative sector. Information on the progress of the creative sector Liverpool are next (Impacts08; 2009:2-3):

- Over three years, between 2006 and 2008, the size of the creative industries sector in Liverpool has grown, with the total number of enterprises increasing by 10% and the total employment by 14%;
- (...) the number of enterprises within the creative industries in the sub-region has increased over five years, with 2007 representing the peak of that increase and 2008 showing a slight falling away;
- (...), it is possible to identify: growth in the overall number of workplaces (7% over the five years); a steady increase up to 2007 in the numbers of organisations in the size bands of between 1 to 5 employees and between 6 to 10 employees (with a small decline in 2008); a decrease in the average business size, although an upward trend in the growth of business sizes appears to be emerging which may be confirmed beyond 2008; that the Liverpool sub-region has a sustained base of creative industries enterprises, suggesting that the city region is considered a viable context for existing and start-up businesses.

RUHR.2010 project also had its creative dimension – the gradual replacement of the still current industrial processes (Ruhr is one of the largest industrial zones of Europe) with processes of creative industries and ultimately the creation of the creative class. AKreativeKlasse Ruhr project was launched, conceived as "...action and communication platform for creative endeavor of RuhrMetropole, and as one of the RUHR.2010 European Capital of Culture projects in the creativity field". The term creative class can be defined as "...the working people whose daily duties involve the creative process; the key is not an industry in which an individual works, but a creative output that is delivered". (KreativeKlasse Ruhr, 2010)

Analyzing the program of the three European Capitals of Culture (Pecs 2010, Turku and Tallinn 2011). Lähdesmäki established the existence of an extremely pronounced context of cultural diversity, which is reflected in cultural production. In these three cities it "...utilizes more or less the global imagery of popular culture, youth culture, street culture and contemporary art. Cultural variety is understood in the global frame, where globalised cultural phenomena form a common starting point for cultural dialogue and communication. Stressing

globalised cultural phenomena is a strategy for producing the discourse of cultural diversity which does not seek the origins or authenticity of cultural products, but underlines the production of urbanness, urban culture and creativity in addition to experiences within the culturally mixed urban community of the city". (Lähdesmäki; 2010:35)

## **5. European Capital of Culture and the Croatian cities - the potential of urban and regional development through creative industries**

The current European Capital of Culture regime ends in 2019. The following year (2020) a new ECoC regime begins, with one of the Croatian cities involved in the programme for the first time. The new designation rules will also be applied on cities involved in the programme in 2020 and beyond – most likely the state itself will designate one of the candidate cities. Tender for selection of Croatian representative is published in 2014, but it is not the first step for Croatian cities in ECoC. The speculations and unofficial nominations of potential candidate cities are actual for few years, especially since 2012. The cities which will most likely try to win the nomination are Zagreb, Split, Rijeka, Osijek, Zadar, Pula, Dubrovnik and Varaždin. In this paper, the possibilities of Osijek (in independent and regional candidacy) as the holder of the title of European Capital of Culture will be analyzed.

### **5.1. Osijek as European Capital of Culture candidate**

City of Osijek is mostly known for its baroque old town center of the Citadel (Tvrdä), which is on the UNESCO tentative list for a long time. An event dedicated to the creativity of children and young – Land without borders – puts Osijek on European and world youth cultural map. However, the remaining cultural facilities are currently not sufficiently recognized in the European context, as a result of under-representation of cultural policies in urban development strategies, and low levels of investment in culture as a direct result of the economic situation of the city –the predominating industry was destroyed in 1990-is in the war and post-war period; the other reason of underdevelopment is in the lack of search of new development strategies. Deficiencies of the current Osijek cultural and artistic offer can be corrected, and the competitiveness can be boosted through the European Capital of Culture. One of the ways is the activation of neglected industrial heritage and conversion into a cultural/creative centers (examples of Lille 2004 and Turku 2011). Also, the potential of the Osijek University can reverse the current negative trends in Osijek cultural scene. More than 20,000 students in a city with about 100,000 residents, and the existence of the Art Academy and the Cultural Studies Department are the main strengths in this field. Attendance at the Osijek Summer of Culture events is the indicator that Osijek has cultural audiences, which in turn should be further educated and focused on the consumption of new cultural events and products, with simultaneous strengthening of cultural production. Osijek's comparative advantage in the ECoC nomination run is the partnership with two cities in the region, already involved in the project of the European Capital of Culture - Pecs (2010) and Maribor (2012). Some of artists and cultural organisations from Osijek were already involved in ECoC project in these two cities, and this experiences could also be used in successful candidacy.

#### *5.1.1. Regional (Eastern Slavonian and/or Pannonian) candidacy*

Lille 2004, Luxembourg 2007, Stavanger 2008, Ruhr 2010, Maribor 2012, and Marseille and Provence 2013 show how the concept of the European Capital of Culture is gradually evolving into a concept of European regions of culture, and Osijek might consider this option



as a reality in his potential candidacy. There are two potential options for Osijek ECoC candidacy in a regional context:

- A. Eastern Slavonia candidacy (regional), which assumes the following criteria, and generate synergy benefits:
  - networking with Osijek as a coordinator for the cities and municipalities in the eastern part of the Republic of Croatia;
  - uses the existing heritage which unites the common 'umbrella of creativity', and further refines the new cultural/creative activities (events, workshops, infrastructure...);
  - the reality of this option is the synergistic effect of regional culture and the real potential lies in the common historical and cultural context of the cities and sub-regions, which still managed to generate a number of differences.
- B. Pannonian candidacy (macro-regional), which combines the culture and art of the counties located eastern of the city of Zagreb:
  - cultural resources include eight administrative counties;
  - further enhancement of the synergy effect, and also a cultural outreach of programme (larger population, or cultural audiences).

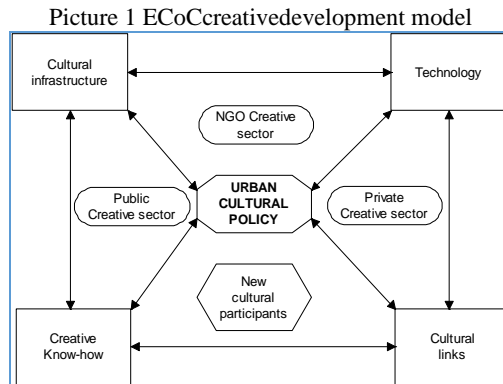
With the independent candidacy of Osijek, Eastern Slavonia candidacy is imposed as a more realistic option, while the macro-regional Pannonian Croatian candidacy is less probable because of the potential inability to deal with such a large number of units of local government financing programs around. A similar situation was observed in Marseille (2013), where some of the municipalities of Provence refused to co-finance a cultural programme and cultural projects.

## **6. Conclusion**

In terms of the uncertainty of cultural projects funding in Osijek and the whole Republic of Croatia (extremely low level of investment in culture), it is difficult to talk about the potential positive outcomes from nomination (or potential nomination) on the creative sector of the city. It should be noted that nominations for the European Capital of Culture title imply an investment in a cultural program at an average of 100 euros per capita – as the practices from title-holders since 2001 have shown. In the case of Osijek it would mean an investment of 10 million euros in the cultural programme (co-financed jointly from the city, county and state budgets, and through European co-financing, but also private sponsorship). Investments in cultural and other infrastructure are also an important part of the programme, which can largely be realized through EU structural funds. Potentially successful nomination would have the following positive effects on the cultural and creative sector Osijek: the preservation and restoration of heritage, redevelopment and reimagining of industrial heritage in the new polygons for creativity, new initiatives (public, private and civil) in the cultural and creative sector (e.g. new museums, theater initiatives, etc.), empowering the processes of creative education, strengthening the private and civil sectors through creative financing programmes and new links with European partners, implementation of cultural policies as development policies, integrating and reflecting culture as the bearer of a new urban development.

This is the only part of the potential effects, focused on the cultural and creative sector, but with proper guidance and coordination the European Capital of Culture programme can have

far-reaching positive effects – not only cultural but also economic and social. The following figure represents a model of creative development through the European Capital of Culture.



*Source: edited by authors*

Urban cultural policy in this programme is focused on the development of four key elements: cultural infrastructure, the technological advances of the cultural and creative sectors, the transfer of creative skills and cultural links. Civil, public and private creative sector can at the same time benefit through changes in urban cultural policy. As the final outcome of such model – the creation of new cultural audiences and active cultural participants – could be expected.

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## **DEVELOPING HUNTING TOURISM – A NEW PERSPECTIVE OF ACHIEVING COMPETITIVENESS OF RURAL CROATIA**

### **RAZVIJANJE LOVNOG TURIZMA-NOVA PERSPEKTIVA OSTVARENJA KONKURENTNOSTI RURALNE HRVATSKE**

#### **ABSTRACT**

*Croatia is the owner of a larger part of hunting grounds, which are under the jurisdiction of the Ministry of agriculture, forestry and water management, and are most frequently leased by various hunting societies or individuals who organize commercial hunting. In order to enable its successful positioning on the tourist market, as a destination of hunting tourism, which respects high standards of ecology and sustainability, Croatia needs to establish co-operation between the Ministry of tourism and the Ministry of agriculture, forestry and water management, and coordinate its activities with the needs of the Croatian economy, with a goal of achieving a competitive tourist product, and stronger forming of a hunting tourism brand. A proposition of standards for development of hunting tourism of Croatia is given in the paper. The purpose of the paper is to point out on unexploited resources for a quality development of hunting tourism of rural Croatia, and give guidelines for its further development. The goal of the paper is to give a presentation of characteristics of hunting tourism and its development in rural Croatia, to point out basic economic aspects of hunting tourism development, and also the limiting factors of future development of hunting tourism in rural Croatia, in order to achieve competitive advantage of this type of tourist offer in relation to the competitive tourist destinations.*

**Keywords:** *hunting tourism, sustainable development, standards, tourist offer*

#### **SAŽETAK**

*Hrvatska je vlasnik većeg dijela lovišta koja su pod jurisdikcijom ministarstva poljoprivrede, šumarstva i vodnog gospodarstva, i najčešće se iznajmljuju raznim lovačkim društvima ili individualcima koji organiziraju komercijalni lov. Kako bi se omogućilo uspješno pozicioniranje na turističkom tržištu, kao destinacije lovnog turizma, koja poštuje visoke standarde ekologije i održivosti, Hrvatska mora ostvariti suradnju između ministarstva turizma i ministarstva poljoprivrede, šumarstva i vodnog gospodarstva, i koordinirati svoje*

*aktivnosti s potrebama hrvatskog gospodarstva, s ciljem ostvarenja konkurentnog turističkog proizvoda, i snažnijeg formiranja brenda lovnog turizma. U radu se daje prijedlog standarda za razvoj lovnog turizma Hrvatske. Svrha rada je ukazati na neiskorištene resurse za kvalitetan razvoj lovnog turizma ruralne Hrvatske, i dati smjernice za njegov daljnji razvoj. Cilj rada je prikazati karakteristike lovnog turizma i njegovog razvoja u ruralnoj Hrvatskoj, ukazati na osnovne ekonomske aspekte razvoja lovnog turizma, te također ograničavajuće faktore budućeg razvoja lovnog turizma u ruralnoj Hrvatskoj, kako bi se ostvarile konkurentne prednosti ovog tipa turističke ponude u odnosu na konkurentne turističke destinacije.*

*Ključne riječi: lovni turizam, održivi razvoj, standardi, turistička ponuda*

## **1. Introduction**

Despite its long tradition, hunting and hunting tourism are not sufficiently developed in Republic of Croatia. Their development will enable Croatia's repositioning on the turbulent tourist market as a destination which promotes and implements the values of sustainable and environmentally aware tourist development, and at the same time, they will enable economic, state and social growth of rural areas. The paper consists of three parts. The first part gives the review of basic terms of hunting and hunting tourism and provides the legal frame of hunting in Croatia. In the second part, the authors give the review of perspectives of hunting tourism development in Croatia, with the use of statistical data from secondary sources. In the third part, a proposition of guidelines is given for hunting tourism development in Croatia, presented through SWOT analysis, and a proposition of possible standards for the development of hunting tourism are presented. At the end, a conclusion and used literature are listed.

## **2. Hunting tourism-definition**

Taking into consideration the fact that Croatia possesses significantly preserved environment, numerous landscape particularities, and rich flora and fauna, it can be stated that it possesses significant advantages for development of hunting tourism with an objective of enrichment of total tourist offer. Starting from the ancient times, hunters were mostly people of higher purchasing power, who wanted to enjoy the intact nature, watch and hunt animals, enjoy the gastronomic specialties prepared of the same game, and experience until then undiscovered special tourist offer which differed from the usual ones. There is an excellent possibility for combining the offers of rural and hunting tourism, considering that they were the subject of the same target group which combines ecotourism. According to data from ODRAZ, Croatia has over 91.6% (<http://www.odraz.hr/media/50356/ruralni%20razvoj%20i%20leader%20u%20hrvatskoj.pdf>, 07.01.2014.) of rural and 8.4% urban areas, which are in many cases insufficiently developed, and are under strong impact of depopulation. Precisely, these areas dispose of great natural resources (various game, rich forest areas, relief particularities, climate, etc.). For example, oak woods of Slavonia and Podravina are inhabited by deer, fallow deer, wild boars and roe bucks. Moslavina is the natural habitat of roe-buck and small game (rabbit, pheasant), while the areas by the rivers of Drava and Sava are rich areas with wading birds (wild ducks and water hens). In Međimurje and Podravina exists numerous small game, and the forests of Lika and Gorski kotar are inhabited with bears and wild boars. In southern Croatia in Biokovo and Pelješac there are chamois and muflons. Almost all areas of Croatia dispose in rich fund of game, and therefore this form of tourism represents a new possibility of development of rural areas of Croatia, and a new form of a tourist product for the areas which were until now

characterized by mass tourism. Introducing hunting tourism will enable economic and demographic prosperity of rural areas, and preservation of landscape particularities. According to the article in the National Papers, Hunter is a person who passed hunting exam and conducts basic tasks of hunting: growth, protection, hunting and use of game and its parts while respecting hunting customs and ethics (<http://narodne-novine.nn.hr/clanci/sluzbeni/290163.html> (10.01.2014.)) According to Law on Hunting, hunting is a social activity of cultivation, protection, hunting and use of game and its parts (<http://www.zakon.hr/z/422/Zakon-o-lovstvu> (10.01.2014.)). Hunting tourism represents the hunters' visitation of other counties so they could recreationally hunt game or explore new hunting territories (adaptation of Hrabovski-Tomic, 2008, 174 according to Hemmi, J. (2005): *Matkailu, Ymparisto, Luonto. Osa 2. Jyvaskyla: Gummerus, 374.*). After having analyzed previously mentioned definitions, the authors will try to define terms hunting tourism and hunter-tourist. Hunting tourism represents a special form of a selective tourist offer, based on sustainable tourism, while creating synergy between postulates of eco, rural and sport tourism, and it was developed thanks to hunters' passion for hunting outside of their own hunting grounds, for which they set aside significant funding, while enjoying the natural beauties of hunting grounds, walks in the nature, cultivation, feeding, watching and hunting game. Hunter-tourist is a person with strong ecological awareness, lover of nature, sports and wilderness. It's about a highly motivated tourist, usually with a higher purchasing power who is willing to set aside significant funds for satisfying its own needs. The area of hunting in Croatia is regulated by numerous laws and rule books, among which the most important are Law about hunting, Law about firearms, and Law about associations, while among rule books are pointed rule book about closed hunting seasons, use of firearms and ammunition, conditions and way of hunting, guard service, etc. (see more on <http://www.lsiz.hr/zakonodavstvo.php> (20.01.2014.)). A special rule book for development of hunting tourism in Croatia is missing, a book which would, in one place, determine all legal guidelines for development of this form of tourist offer. Law about hunting governs managing the hunting grounds and game. Managing includes cultivation, protection and use of game and its parts. Jobs regarding managing hunting grounds and game have an economic, tourist and recreational function, and the function of protection and preservation of biological and ecological balance of natural habitats, game and wild fauna and flora (<http://www.mps.hr/default.aspx?id=8452> (10.01.2014.)). Activities of hunting, game cultivation, etc. are performed in the area of hunting grounds. Hunting ground is a specific land area which presents a fully rounded natural unit in which exist ecological and other conditions for cultivation, preservation, hunting and use of game and its parts, and hunting grounds can be divided according to characteristics of area in: a) open hunting ground – where undisturbed daily and seasonal migration of game is enabled; b) fenced hunting ground – minimum surface 1000 ha, fenced with natural (wide watercourses, big water surfaces, sea, etc.) or artificial (fences, buildings, and similar) obstacles which prevent or significantly reduce the possibility that the game which is cultivated, protected for hunting on those grounds, leaves the area; c) hunting ground of surface bigger than 100 ha, and less than 2000 ha of its own lands, fenced with a fence or a similar building or natural obstacles which prevents the game to leave that land area (adapted from <http://www.propisi.hr/print.php?id=710>, 11.01.2014.)). For example, the cultivation grounds in the ownership of Croatian forests, as the biggest hunting holder<sup>21</sup> in Croatia are: Kunjevci where fallow deer and muflon are cultivated, Mačkovac and Kunjak where wild boars are cultivated, then Šprešhat where ordinary deer is cultivated, while in the cultivation ground

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<sup>21</sup> Hunting holder (in Croatian *Lovoovlaštenik*) is a legal or physical person (artisan who gained the right of hunting based on lease or concession, and is the owner of the hunting ground. Law about hunting NN 140/05.

Ubaš fallow deer is cultivated. Small game like rabbits and pheasants are cultivated in the cultivation ground Pesci, and in Oštrica mufon is cultivated (adapted according to <http://portal.hrsume.hr/index.php/hr/lovstvo/skrbodivljaci/uzgajalista> (14.01.2014.)). The roof institution of Croatian hunting is Croatian hunting society which operates over county hunting societies and the hunting society of the city of Zagreb, and in its membership includes over fifty five thousand hunters. The task of this society is that, through its activities, takes care about protection of nature, preservation, cultivation and proper game hunting, and it represents Croatian hunting in homeland and abroad (<http://www.lovac.info/lovacki-portal-lovac-home/linkovi/lovacki-savezi.html> 16.02.2014). Croatia can also include in its offer the promotion and exhibition of its six indigenous dog breeds: Dalmatian dog, Istrian longhaired and shorthaired Hound, Posavac Hound, Croatian Sheepdog, Tornjak, acknowledged by Croatian Kennel Club (adapted according to <http://www.hks.hr/web/index.php?str=3> (24.01.2014.)).

### **3. Characteristics and current state of hunting tourism offer in Croatia**

Looking back in the ancient history, a human - hunter and a collector is determined. Living in nature, the man survived thanks to his hunting skills and utilities he created himself. From then, until the modern times in which people live today, the rules of survival have significantly changed. But, the need for hunting has prevailed as a form of passion, and it didn't lose its important determinants (<http://www.lovacki-psi.net/hr/linkovi/3-kinologija-i-lovstvo/3-hrvatski-lovaki-savez.html>. 16.09.2014.). It started to develop in Europe between the two World Wars, especially in Czech Republic, Slovakia and Hungary. In that period, in Croatia it started to develop first in the Varaždin area and in Podravina, although the beginnings of hunting tourism should be searched in farther history of Croatia, for example, in Malinska in the island of Krk, where the first hotel built was named "K lovcu" or "Towards the Huntsman". The hotel was built in 1880, during the time when the island was visited by numerous wealthy Hungarian and Austrian aristocrats, among who was also the heir to the thrown Rudolf of Habsburg. They engaged in hunting of snipes and other game (Turk & Turk, 2002, 361-386). In Central Croatia and Slavonia, deer, roe deer, wild boars, martens, foxes, rabbits, pheasants, wild geese and wild ducks are hunted. In Gorski kotar and Lika there is a possibility of bear overhunting, and in Dalmatia Chamois and Mufons. Hunters from Italy traditionally arrive to hunt all sorts of small game, while Austrians come more frequently to hunt wild boars. More and more hunters arrive from Spain, and prefer individual organization and individual hunt of big game, while more numerous Czech hunters arrive in larger organized groups (adapted according to <http://www.poduzetnistvo.org/news/lovstvo-kaovelika-turisticka-prilika> (10.01.2014.)). Croatia lacks richer and more diverse offer of hunting tourism facilities, in order to improve its current structure of hunters consumption who, with around 60.000 domestic hunters, come to hunt for trophies, but spend very little on other facilities (around 90% of them hunt for small game, and only 10% hunt big and trophy game). Not only a better organization and promotion of Croatia on the world hunting tourism market is necessary, but also better conditions for hunting tourism development, because the hunter is a guest who spends up to three times more than a regular tourist. Foreign hunters in Croatia give up to 70% of their spent money for game kill, while only 30% spend on tourist services and facilities. In the world the ratios are reverse, respectively, hunter's accommodation, restaurant and extra-board services bring around 70% of income, and pure hunting represents only 30% of total profit. Hunting societies in Europe gather over 7.3 million of hunters, and average consumption of hunter in the European Union amounts around 1.500,00 Euro, respectively around 10.000 Euro per year per hunter, while the total consumption of hunters in Europe is estimated on 10 billion of Euro. Around 30% of European hunters goes to

hunting areas outside their parent country which represents an excellent potential for development of Croatian Hunting Tourism. It is being estimated that hunting in Europe employs around 100.000 employees or approximately 1 worker on 65 hunters (adapted according to: <http://www.poduzetnistvo.org/news/lovstvo-kao-velika-turisticka-prilika> (10.01.2014.)). Particularity of hunting tourism is in the fact that it represents a form of sports-recreational tourist offer, but also possesses the characteristics of ecotourism. Its development would be significant in seaside areas due to overcoming of seasonality, respectively prolonging tourist season and providing enrichment of tourist offer, while in the continental part, along with the development of rural and ecotourism, it would present an excellent mix of products and services which would enable more significant employment and economic growth of parts of Croatia which were destroyed due to Homeland war, and which still, after 20 years haven't recuperated from the war consequences. The advantage of hunting tourism is in its essence thanks to which it cannot be considered a mass phenomenon, but it is characterized by exclusivity. Offer of this form of tourism is organized on individual or group basis, and it is particularly attractive to tourists of higher purchasing power, so its development is of greater interest for service carriers as well. Along with previously mentioned characteristics, hunting tourism is also determined by geo-traffic relations of hunting tourism destination with the outbound tourist market, safety, ecological preservation, that hunting is a recognized and legally determined category (that it is legal and socially acceptable), and that besides hunting the destination also offers additional offer (accommodation, restaurant facilities, entertainment). Previously mentioned points to necessity of ensuring legal assumption for an active implementation of all postulates of sustainable development of hunting tourism, which will represent an upgrade of tourist offer in rural parts of Croatia, in a way that hunting quotas are determined in the hunting grounds which are going to be held exclusively for tourists, and that standards of offer and necessary knowledge are determined for tourists who participate in hunting. For successful promotion and placing a product of hunting tourism on the tourist market, it is necessary to ensure mutual connection between the offer and demand through creating a promotion mix of hunting tourism. Certainly, the product of hunting tourism must offer value for money and take into consideration needs of a contemporary tourist-hunter. The next table presents the list of hunting grounds in the Republic of Croatia by counties.



Table 1 Hunting grounds in Croatia, by counties

Rank	County of	Number of hunting grounds	Share of hunting grounds by counties in %
1	Osijek-Baranja	108	10
2	Zagreb	83	7,69
2	Split-Dalmatia	83	7,69
3	Karlovac	76	7,04
4	Vukovar-Srijem	73	6,77
5	Sisak-Moslavina	66	6,12
6	Lika-Senj	62	5,75
6	Bjelovar-Bilogora	62	5,75
7	Primorje-Gorski kotar	57	5,28
8	Zadar	55	5,1
9	Istra	46	4,26
10	Požega-Slavonia	43	3,99
11	Brod-Posavina	40	3,71
12	Šibenik-Knin	38	3,52
13	Virovitica-Podravina	34	3,15
14	Varaždin	32	2,96
15	Krapina-Zagorje	31	2,87
15	Dubrovnik-Neretva	31	2,87
16	Međimurje	21	1,95
17	Koprivnica-Križevci	14	1,3
18	The city of Zagreb	12	1,11
18	The rest	12	1,11
	<b>Croatia total</b>	1079	100

Source: Central hunting record of Republic of Croatia, [https://lovistarh.mps.hr/lovstvo\\_javnost/Lovista.aspx](https://lovistarh.mps.hr/lovstvo_javnost/Lovista.aspx) (07.01.2014.)

Data presented in the previous table point to the fact that the biggest number of hunting grounds is situated in the county of Osijek-Baranja (108), following County of Zagreb and Split Dalmatia with 83 hunting grounds. According to Central hunting record of Republic of Croatia, the country has 1079 hunting grounds, out of which the majority, around 540, is owned by the Republic of Croatia, hunting surface 2.191.296 Ha. State hunting grounds are under the jurisdiction of the Ministry of agriculture and Ministry of tourism, or county offices for economy; most frequently they are leased to various hunting societies, companies or individuals who organize commercial hunting (<http://www.mvep.hr/hr/o-hrvatskoj/turizam/lovni-turizam>, 20.01.2014.)). The following table presents the number of hunters in the Republic of Croatia in the period 2007-2011.

Table 2 Number of hunters in the Republic of Croatia from 2007 till 2011

HUNTERS	YEAR					INDEX			
	2007	2008	2009	2010	2011	2007/2008	2008/2009	2009/2010	2010/2011
Members of HLS*	54.763	55.203	56.689	56.927	61.179	100,8	102,69	100,42	107,47
Prentices	1.221	846	1.181	839	950	69,29	139,6	71,04	113,23
Hunters Total	55.984	56.049	57.870	57.766	62.129	100,12	103,25	99,82	107,55

Source: [http://www.dzs.hr/Hrv\\_Eng/publication/2012/01-02-01\\_01\\_2012.htm](http://www.dzs.hr/Hrv_Eng/publication/2012/01-02-01_01_2012.htm) (12.02.2014).

\*HLS – Hrvatski lovački savez or Croatian Hunting Alliance

Data from the previous table point out to a moderate growth of members of Croatian hunting alliances in the period between 2007-2010, while a more significant growth was recorded in the year 2011 (+ 4.252 members in year 2011 in relation to 2010, respectively, 7,05%). The data for the number of apprentices point to significant oscillations, noting that in 2011 there

was a growth of hunter apprentices (+111) in comparison to 2010, however, the amount is still unsatisfactory if we take into consideration the fact that in 2009 there were 1.181 apprentices. Monitoring the total number of hunters in the Republic of Croatia, it can be concluded that there has been a moderate increase in their number. In 2007, every hunting ground in Croatia hosted approximately 7 hunters-tourists. The prices of game kill and services of hunting are known in advance and fixed, and it can't happen that after the kill, when the game falls, the hunter bargains and arranges with the master of hunt about the payment. The deficiency is in the fact that prices in hunting tourism of Croatia are not different from those in the neighboring countries, so for a higher arrival of foreign hunters, it is necessary to simplify in the greatest measure possible, the border procedure, especially regarding carrying the game out of the country. (Adapted according to: <http://www.poduzetnistvo.org/news/lovstvo-kao-velika-turisticka-prilika> (10.01.2014.)).

When it comes to foreign hunters who visit Croatian hunting grounds, it is noted that their number and interest for hunting in Croatia is growing, and last year almost 6.500 foreign permits for hunting were issued (according to: <http://www.kigo.hr/tekst/1962.html> (14.01.2014.)). For example, precisely due to foreign guests-hunters, the inland of Istria has a greater possibility of hunting tourism development. Namely, in the area of Motovun woods, Truffles mushrooms, which are extremely appreciated in gastronomy, are tracked, and they are considered as an aphrodisiac. Due to that reason, already a high number of foreign guests-hunters (mostly from the neighboring Italy) arrive regularly to hunt in these areas. Interconnection of health tourism in the valley of the river Mirna, rural offer in acropolis resorts in the inland of Istria, and hunting offer, will enable total improvement of economic and tourist development of that area. Istria is also the habitat of Croatian indigenous Istrian longhaired and shorthaired Hound, and within the offer, congresses about the breed can be organized, educations, workshops for tourists, tourist-hunters, local population and similar. Stronger and stronger competition of neighbors, eastern countries such as Hungary, Bulgaria, Romania, Czech Republic and Slovakia (according to: <http://www.poduzetnistvo.org/news/lovstvo-kao-velika-turisticka-prilika> (10.01.2014.)), which have recognized the pattern which enables the hunting to turn into a highly profitable industry, points that it is necessary to give special attention to the branding of hunting tourism offer as soon as possible. Namely, the possibilities of offer in hunting tourism are numerous, as well as possibilities of financial effects, i.e. tourists are charged: hunting, game kill, missing the game, photo-safaris, tours of hunting grounds, while the offer can be enriched through dog exhibitions, organization of congresses about hunting, gastronomic manifestations of hunting cuisine. If an interdisciplinary approach towards strengthening and creating an offer of hunting tourism is ensured, as well as removing the weakest links of offer, it can be expected that in the future the number of foreign tourists-hunters will significantly increase. In 2008 the Ministry of tourism supported the development of hunting tourism through the program "Zelena brazda" which is intended for encouraging the development of special forms of tourism in the continent, among which is hunting tourism as well. So, in the frame of that program, in the period 2008-2010, the Ministry of tourism extracted around 1.4 million of KN for completion, building, equipping and improvement of hunting-tourist capacities, and creating conditions for development of hunting tourism in Croatia (adapted according to: <http://www.kigo.hr/tekst/1962.html> (14.01.2014.)). Advantages of Croatia lie in its excellent geo-traffic position, vicinity of outbound markets, climate conditions, rich fund of game, various relief, hydrography, etc. Following is the review of game kill in the Republic of Croatia in the period 2007-2011.

Table 3 Review of game kill for the period 2007-2011 in Croatia

SORT OF GAME	GAME SHOTS					INDEX			
	2007	2008	2009	2010	2011	2007/2008	2008/2009	2009/2010	2010/2011
Deer (all sorts)	2.738	2.139	2.520	2.916	3.394	78,12	117,81	115,71	116,39
Roe deer	11.175	11.689	11.388	11.284	13.373	104,6	97,42	99,09	118,51
Wild Boar	17.527	18.679	18.243	18.409	21.871	106,57	97,67	100,91	118,81
Rabbit	10.000	21.000	21.000	22.000	24.000	210	100	104,76	109,09
Pheasant	70.000	84.000	54.000	68.000	58.000	120	64,29	125,93	85,29
Wading birds (various)	19.000	15.000	21.000	23.000	19.000	78,95	140	109,52	82,61
Other feathered game	75.000	100.000	111.000	108.000	116.000	133,33	111	97,3	107,41
<b>Total</b>	<b>205.440</b>	<b>252.507</b>	<b>239.151</b>	<b>253.609</b>	<b>255.638</b>	<b>122,91</b>	<b>94,71</b>	<b>106,05</b>	<b>100,8</b>

Source: [http://www.dzs.hr/Hrv\\_Eng/publication/2012/01-02.01\\_01\\_2012.htm](http://www.dzs.hr/Hrv_Eng/publication/2012/01-02.01_01_2012.htm) (25.01.2014.)

In year 2011, 3.394 deers were shot, which represents growth of 16.39% in relation to the previous year. Regarding the roe-deer, 13.373 of them were shot, or 18.51% more than the previous year. The highest growth of shootings of wild boars was noted (21.871, or 18.81%) in relation to the previous year. At the same time, a decrease of killing of pheasants and wading birds was recorded. While planning the quota for game kill, it has to be taken into account to disable overhunting the game, and in the highest possible measure to secure their natural habitats. Briefly, it is necessary to ensure sustainable hunting.

#### 4. Strategic guidelines of hunting tourism development in rural areas of Croatia

In order for hunting tourism to develop successfully on hunting grounds, it is necessary to ensure enabling of successful integration of postulates of hunting-tourist offer, which will be achieved through inclusion of highly valuable human resources which possess high level of knowledge about hunting, organization, planning, marketing and management of tourist development of (hunting) destination. Besides previously mentioned facts, it necessary to ensure financial support (the ministry of agriculture, ministry of tourism, Croatian Bank for reconstruction and development – HBOR, cohesion funds of EU, Croatian hunting associations, etc.) for improvement of production, cultivation and protection of game, as well as indemnification of the third party from possible damages caused by game (i.e. wild boars as indigenous animals in the islands of Cres and Krk – which are inhabited in the mentioned areas for hunting). Also during the project implementation, it is necessary to create and financially ensure investments in optimization of material-technical infrastructure, this means equipping hunting-cultivating hunting-technical buildings, buildings for processing and preservation of game meat, buildings for accommodation of hunting dogs, buildings for weapons testing, purchasing means of transport for use in the hunting grounds, purchasing the adequate hunting weapons, ammunition, equipment etc.

Table 4 SWOT analysis of hunting tourism of Republic of Croatia

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none"> <li>- Preserved eco-system</li> <li>- Richness of game fund</li> <li>- Vicinity of outbound markets</li> <li>- Traffic connection</li> <li>- Non-existence of specialized tourist agencies</li> <li>- Non-existence of self-financing system of promotion abroad</li> </ul>	<ul style="list-style-type: none"> <li>- Membership in the European Union</li> <li>- EU Cohesion funds</li> <li>- Strong engagement of inspection in protection from poaching</li> <li>- Offering services of additional value</li> <li>- Educating members of hunting alliances about tourism</li> <li>- Creating and introducing hunting tourism as a course of study at the faculties</li> <li>- Connection of the offer of health, rural, and hunting tourism in a cluster.</li> </ul>
WEAKNESSES	THREATS
<ul style="list-style-type: none"> <li>- Hunting tourism is not recognized as a potential for development of rural areas of Croatia</li> <li>- Non-existence of sufficient quantity of formal education about hunting and hunting tourism</li> <li>- Insufficient funds for development of hunting tourism</li> <li>- Insufficiently controlled urbanization</li> <li>- Lack of awareness of hunting alliances about possibility of development of hunting tourist offer in rural areas</li> <li>- Strong competition of foreign countries</li> <li>- Lack of interest of the local community for development of tourist offer of hunting tourism</li> </ul>	<ul style="list-style-type: none"> <li>- Strengthening of competition of the neighboring countries</li> <li>- Societies for animal protection</li> <li>- Pollution</li> <li>- Overhunting of protected game</li> <li>- Disrespect of closed seasons</li> <li>- Uncontrolled and unorganized overhunting</li> <li>- Excessive urbanization</li> <li>- Loss of game habitats</li> <li>- Poaching</li> </ul>

Source: Authors' analysis

Profitability of introduction of hunting tourism offer into the offer of a tourist destination through, i.e. offer of accommodation in small (family) hotels (smaller dimensions up to 10 rooms, and it can be built in the areas of hunting grounds, if landscape and natural particularities, or animal habitats are not endangered) is visible in the fact of numerous sources of income in hunting tourism, which come from: leasing hunting grounds (if it exists), fees for entering the hunting grounds, fees for dogs, fee for game kill, wounding and misses, repurchase of game meat, funds paid for services regarding hunting, services of masters of hunt, use of hunting dogs, use of vehicles, services of guides and interpreters, insurance, consumption of hunters outside the hunting grounds (accommodation, food services, additional services) and others, as well as connecting in clusters with other forms of tourist offer (health tourism-stay of guests hunters in wellness oasis with the stay in nature-hunting, rural tourism-stay of tourists-guests in tourist country farms, and surrounding hunting grounds with the hunter-host, congress tourism-organization of scientific-professional conferences about hunting, game, dogs, etc.). Also, hunting tourism represents the most significant source of revenue of hunting societies and organizations which are involved in it. Selling trophies, organizing dog exhibitions etc. can enable permanent sustainability of income of offer carrier of hunting tourism. Besides hotels, it is possible to enable tourist offer in traditional hunting houses as well, which almost every hunting society has in its ownership, by the same principle of standard and quality of offer. It is important to point out that here it is about the tourists of higher purchasing power who tend towards sports activities (climbing, walking, cycling) have a permit for carrying firearms, possess passion towards hunting and experiences in nature, and show the need for socialization. For attracting that target group of guests it is necessary to create a marketing strategy, and undertake adequate promotion activities which will ensure that hunters-tourists, which make the demand for hunting tourist arrangements offered by specialized tourist agencies, in a way that they organize, advertise and sell hunting tourist

arrangements, and mediate between the demand and organizers of the hunt (in this case, the hotel) hunting holder who possesses the right for organization of hunting activities, get high quality of services by adequate price. Following is the price list for group hunt on wild boards, and conditions. According to the data of Croatian woods, the highest amounts for game kill amount bear and wild boar (4.000 KN per head), following is a deer (2.500 KN per head), muflon and chamois (2.000 KN per head), fallow deer (1.500 KN per head), wild boar (1.000 KN per head), while roe bucks amounts moderate 700 KN per head (adapted according to <http://portal.hrsume.hr/index.php/hr/turizam/lov-i-usluge/cjenik-odstrjela-divljai-i-usluga-u-lovu/555-cjenik-odstrela-divljai-2013>, 12.02.2014.). From previously mentioned, it is visible that it is about a high-profit form of tourism, whose development should be encouraged, but with strict respect of sustainability principles, for habitats, wild animal species, and landscape particularities of the destination. Croatia should approach to stronger forming of a brand of hunting tourism, which is possible due to the fact that Croatia is the owner of a bigger part of hunting grounds. The biggest hunting holder in the Republic of Croatia are Croatian Woods, who manages hunting grounds, the surface of 297.605 Ha. Hunting grounds of Croatian woods occupy around 8% of the total hunting surface of Croatia. But, when discussing the number of big game, share of that sort in the habitats in the hunting and cultivation area of that game which are managed by Croatian woods amounts 40%. Uniqueness of hunting grounds of Croatian woods is in the fact that in the hunting grounds of Gorski kotar, Velebit and Velika Kapela live all three big European predators: big brown bear, wolf and the lynx. Regarding small game, here resides the rabbit, the pheasant, wild duck, wheat-eater, common quail, and other feathered game (adapted according to <http://portal.hrsume.hr/index.php/hr/lovstvo> (20.01.2014.)).

#### **4.1. Development of standards for hunting tourism of Croatia – hunter host**

Hunting tourism must serve as an additional stimulation to the tourism development in the rural areas of Croatia, under the condition that the tourist offer is developed according to the market needs, but in manner to respect the principles of sustainable development. Sustainable tourism has a goal to ensure that development of tourist offer which will with its presence effect the least on the environment and change of life habits of the local population, reducing negative effects to a minimum, and the usefulness (income, employment) on maximum, taking into account the future generations and their needs for development and improvement of life standards. For this purpose, it is necessary to develop an eco-standard for the offer of hunting tourism of Croatia, which will define the conditions that need to be satisfied in order to get a certificate "hunter host". Certain existing offer carriers in hunting tourism are really accomplishing that goal with minimal negative effects, while others are presenting themselves like that, but in reality are far from ecologically acceptable business. One of the ways of rewarding the tourist family farms and businesses who really accept the mentioned goals is assigning credible recognition. Recognition can be granted in a form of a certificate Hunter-host, or the mark of hunting ecotourism which respects high standards of ecology. The certificate is granted to those hotels-carriers of hunting tourism offer, who dedicate great importance to ecology and respecting the principles of sustainable development. Their activities totally satisfy certain standards, respectively basic or minimum standards, which usually go beyond the demands of legal regulations. Marks of hunting ecotourism can be assigned to a hotel as a reward for achieving significantly better results in comparison with other offer carriers in hunting tourism. Assigned certificates and marks of hunting ecotourism bring certain advantages, for example: better way of managing environment problems, improvement of the hotel's image, but also the destination, satisfying the consumers who can demand that standard, achieving competitive advantages in the global market, improving

compatibility with the current ecological laws, Law about hunting, regulations and standards, through reduction of exposure of organization to ecological responsibilities, and through increasing organizational goodwill by prevention of pollution and waste. In Croatia still do not exist defined standards in hunting tourism, which would enable competitiveness to the offer carriers on the turbulent world tourist market, therefore, basic conditions for development of hunting tourism in rural areas of Croatia mustn't be rigorous as the standards of hunting tourism in the world are. In order to, finally, realize adequate standard of hunting tourism offer, and the way of certification, in continuum a proposition of standards of hunting tourism offer of Croatia is offered.

## **4.2. Proposition of standards of hunting tourism in Croatia**

In order for the offer of hunting tourism of Croatia to reach high quality level, it is necessary to create strategic guidelines of development, which will have to be coordinated with the strategic guidelines of development of Croatian tourism, and they need to be its integral part. Previously mentioned elements will be ensured through deliberation of a high quality tourist offer, while the tourist development will be based on preservation of natural and cultural richness of the country, while respecting the principles of sustainable development, as well as the principles of the European Union project NATURA 2000 (EU ecological network) which in its basic regulations contains also the guidelines about sustainable hunting. In the year 1979 the European Union brought the decision about sustainable hunting in the directive about the protection of wild birds (Directive about bird protection (79/409 EEC) – <http://jncc.defra.gov.uk/page-1373> (10.01.2014.)). In June 2011, the European Commission acquired the new Strategy for stopping the loss of biological diversity and services of ecosystem in the European Union until the year 2020. The Strategy covers six basic goals and twenty actions. Loss of biological diversity is a big problem in the European Union in which one of the four endangered species the extinction is threatened, while 88% of fish supplies is reduced in half or significantly reduced. Total implementation of Directive about habitats, and the Directive about the birds, respectively, the program NATURA 2000, is considered one of the key mechanisms for achieving the goals of the Strategy.

Six goals covers: (adapted according to [http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1\\_EN\\_ACT\\_part1\\_v7%5B1%5D.pdf](http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1_EN_ACT_part1_v7%5B1%5D.pdf) (10.01.2014.)):

1. Complete implementation of EU legislations in the area of protection of nature (Directive about birds and Directive about the habitats);
2. Better protection of eco-system and greater use of "green infrastructure";
3. More sustainable agriculture, forestry and fishery;
4. Better managing with fish supplies;
5. Stronger control of foreign invasive species;
6. More significant contribution of the EU in stopping global loss of biological diversity.

As a European Union member, Croatia needs to promote, in its hunting tourism development, the highest level of standards of protection of wild animal species. However, as previously mentioned, currently in Croatia there are no standards of hunting tourism offer. In order to ensure standardization of the offer, and particularity of hunting tourism in relation to other selective forms of tourist offer, it is necessary to create certain conditions which the service carriers need to fulfill, so they could be engaged in hunting tourism activities, and in order to get the certificate, or a mark. Here it is necessary to point out the fact that hunting tourism is in its beginning, so here mentioned standards need to be subject to constant checking and improving, according to market demand, taking into consideration that here the hunter is the

center of interest. It can be concluded, from previous facts, that it is necessary to introduce a standard of hunting tourism which consists the elements of certificate and the mark of hunting tourism. The elements of standards which have characteristics of the certificate refer to compliance of certain conditions. It refers to the way of business which takes care of social-cultural, economic and ecological resources of the hunting areas and the surroundings. The basic condition that the offer carries need to satisfy on hunting tourism, along with satisfying previously mentioned elements of standards is to offer exclusively gastronomic specialties made of game, offer home-made beverages, and while building the accommodation capacities takes care about the dimensions of the building, which needs to be built in accordance with the local traditional building. Besides mentioned, additional points for getting the certificate will receive that business that offers additional offer, i.e. photo-safari, tours of hunting grounds, contests in preparation of dishes made of game, contests in shooting with a hunting rifle, trophy exhibition, and similar. In the following table the authors specify the proposition of conditions which necessary to satisfy in order of getting the certificate hunter-host.

Table 5 Presentation of conditions which are necessary to satisfy in order to get the certificate hunter-host

<b>a) Aspect of relations towards local community</b>
<ul style="list-style-type: none"> <li>- Acceptance of offer carriers of hunting tourism from the local community;</li> <li>- Positive influence and relation of offer carriers towards people, including health protection and security for those who work in the location or live nearby;</li> <li>- Giving advantage to the local community in giving employment, and enabling life-long learning for them;</li> <li>- Offer carrier of hunting tourism does not disrupt the rights and prosperity of the local community, and contributes to the social, cultural and economic development of the local community;</li> <li>- Offer carrier influences on the revitalization of traditional crafts/indigenous products, and encourages preservation of non-material cultural heritage.</li> </ul>
<b>b) Economic aspects</b>
<ul style="list-style-type: none"> <li>- Offer carrier respects legally prescribed regulations about the rights of their employees, and does business according to the ethical codex, and its business activity helps the economic revitalization of the local community, by using human, natural and cultural resources of the local community;</li> <li>- Through its business and activities, the offer carrier encourages inclusion of the community in nature and environment protection (especially game) while achieving economic benefits;</li> <li>- In its business it stimulates the use of renewable materials.</li> </ul>
<b>c) Ecological aspects</b>
<ul style="list-style-type: none"> <li>- Business activities of hunting tourism offer carries do not disturb bio-diversity nor eco-systems, as well as the habitats, and they do not disrupt the look of the landscape, and they stimulate revitalization and preserving indigenous sorts of plants and animals (game);</li> <li>- Offer carrier effects the least possible in wider and immediate environment, and ensures ecological waste managing, waste, wastewaters, soil, energy (in its business they use renewable energy sources- i.e. collectors);</li> <li>- Activities of offer carriers do not create noise and do not harm the air and environment quality in total;</li> <li>- In construction of facilities and landscaping exclusively natural materials were used, and the principle of originality-traditional architecture was respected;</li> <li>- It influences on preservation of bio-diversity of landscape, and performs continuous education of visitors through workshops about the significance of nature protection and its preservation, types of game in the hunting ground, educations about indigenous dog breeds, and their habits. It introduces visitors with the traditional way of life, gastronomic delicacies of the area, and similar.</li> </ul>

Source: Authors' analysis

Elements of standards that have the characteristics of hunting mark are related on rewarding those offer carriers which are marked as a certain benchmark to other businesses subjects. When all the mentioned criteria is satisfied, in order to be able to maintain the mark hunter host, the service provider must focus its business towards sustainable hunting tourism, respectively, enabling organized tours of visitors with professional interpretations, and organization of one-day trips to visit individual particularly interesting and attractive localities of the hunting ground and the surroundings, and are enabling for the visitors tours of parks

and protected parts of nature in tours with professional tour guides. Within its offer, it is necessary to enable at least two activities the visitor can do (hiking, walks, photo-safari, birds watching, painting in nature, education and workshops...) in wider and immediate environment. Offer carrier of hunting tourism is obliged to give particular attention to preservation of natural resources by presenting them to the visitor with a goal of wider knowledge and better understanding of particularities of hunting grounds and its surrounding, to encourage and promote ecological beauties, particularities of hunting grounds and surroundings, and give a positive influence on preservation of biodiversity and habitats of wild animals. By indirect education of tourists through various activities, the offer carrier is obliged to stimulate and include local community into projects of protection of nature, environment, preservation and renewing of game habitats, etc. Attention must be given to the revitalization and preservation of tradition, and through all that influence on the development of visitor's ecological awareness. The main goal of implementation of standardization is also the goal that the offer carrier of hunting tourism contributes to the economic development of a wider area by including local population in processes of production (employment, buying groceries from the local eco-producers, and similar). Set conditions for creating an eco-tourist product will enable creation of a new brand in the tourist offer which will be based on the original eco-product. All mentioned points to the need of creating this form of tourist offer in Croatia, with numerous possibilities of development of small and medium entrepreneurship in hunting tourism, which can be one of the carriers of development of rural areas. The main characteristics of program of certifying the standards of hunting tourism contain the elements which are the same in the majority of world programs of certification in the domain of tourism. Here it is about the offer carriers who are willingly deciding for a certificate, standards and criteria are clearly defined, and the grading and the review are done in certain time intervals (here the plan is to repeat the standardization every other year). Besides that, this program has its logo which is assigned to the offer carrier, it helps him in achieving market recognition, continuous improvement of the criteria, and transparency of the system. Offer carriers, whose services are carriers of hunting mark and certificate, as a confirmation of a certain standard of quality, need to use hunting mark during every presentation, and educate tourists and mediators about sustainable practice and doing business according to certain standards which enable for guest-hunter the differentiation of the offer carrier from the rest of the competition, and enable him top quality of services.

## **5. Conclusion**

While realizing hunting activities, tourist offer carriers must provide top quality services, with significant added value for hunter-guest and excellent relation of price and value. All of this is of particular importance, since it is known that the competition in hunting tourism (Hungary, Slovakia, Czech Republic, etc.) is very strong. So, it is necessary to ensure the cooperation with the providers of additional services, i.e. renters of hunting equipment, transport service performers, translations, guide, translators, cameraman, etc. Successful positioning of Croatia on the tourist market will enable its market recognition, as a preserved, ecologically aware tourist destination, with a high level of standardization of hunting tourism offer according to the principles of value for money and experience for money. Also, the development of hunting tourism will, especially for the rural areas of Croatia, enable sustainable development, economic and demographic renewal of areas, while in other parts of Croatia it will give the possibility of upgrading the existing tourist offer, serving as a promoter of elite tourism with a high level of additional value. Through connecting into clusters with the other carriers of the tourist offer (health, rural, congress tourism), significant economic value for the areas where they are situated, will be achieved. Besides through connecting with the offer carriers in



tourism, it is necessary to ensure permanent cooperation with the experts and scientists in the area of hunting, kinology, tourism, etc., all with the goal of increasing quality of offer and ensuring high ecological awareness.

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**Ljudski kapital  
u funkciji  
razvoja regije**

**Human capital  
in a function of the  
development of  
the region**

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## **RELATIONSHIP BETWEEN EDUCATION AND ECONOMIC SYSTEM: HOW TO EDUCATE, WHAT TO EDUCATE AND WHOM TO EDUCATE – EXAMPLE OF CROATIA**

### **POVEZNICA EDUKACIJSKOG SUSTAVA S EKONOMSKIM SUSTAVOM: KAKO EDUCIRATI, ŠTO EDUCIRATI I KOGA EDUCIRATI – PRIMJER HRVATSKE**

*Economic development creates the knowledge of how to produce products and services that customers will buy! Therefore, the knowledge delivered to educational system should have the greatest possible transformational (economic) value.*

#### **ABSTRACT**

*The economic system and its development is essentially connected with the educational system, because knowledge is the basis of any economic system. To achieve closer cooperation between this two systems management is necessary to meaningfully connect them. The above connection can be achieved in a way to give coherent answers to the classic questions of economic organization: what, how and for whom to produce and educate, then to elaborate the basic functional adaptation of the educational system based on the responses:*

*1) STRATEGIC ADAPTATION . This adjustment relates to the formation of economics identity and its economic compatible educational identity and strategic formal education planning ( professions and their levels with respect to the number and structure ) and defining the desired strategic quality educational outcomes. For Croatia, can be recommend the formation of economic identity in three basic areas : Mediterranean , continental Central and entrepreneurial. For strategic formal education planning is necessary to conduct screening required professions and formal educational levels (primary, secondary , tertiary , post - tertiary ) with respect to the required number and structure. Also i necessary to define the desired educational quality of personnel needed.*

*2) TACTICAL-OPERATING ADJUSTMENTS. This adjustment relates to the definition of specific tactical and operational educational outcomes at every level of the educational areas and levels of education, as well as any specific educational institutions . This refers to the specific knowledge and skills, as well as specific values, attitudes and habits, respectively*

*professional competence. Generally speaking, the knowledge needed to achieve economic development are: factual, procedural, scientific, heuristic, managing skills and effective use of information. Values, attitudes and habits that are consistent with economic development include the value of education to economic development, such as: discipline, diligence, patience, orderliness, thrift, honesty, initiative, urgency and efficiency. This adjustment includes the sound system establishment of tactical management of human resources at the national educational system, but also the operational level of each educational institution. Educational policy should be connected in a stated way with economic policy ( development strategy), and that is the way functional human capital can be formed, which will be the carrier of the future economic development, with a wide demand and supply component. Specifically meaningful national educational policy (strategy) should be associated with all other sectoral, development and economic strategy in particular.*

**Keywords:** *educational policy, economic policy, management of human resources in education, educational strategic objectives, operational objectives of education*

### SAŽETAK

*Ekonomski sustav i njegov razvoj suštinski je povezan s edukacijskim sustavom, jer znanje je osnovica svakog ekonomskog sustava. Da bi se ostvarila tješnja suradnja ova dva sustava potreban je menadžment koji će ih smisleno povezati. Navedeno povezivanje može se ostvariti tako da se prvo daju suvisli odgovori na klasična pitanja ekonomske organizacije: što, kako i za koga proizvoditi odnosno educirati, a zatim da se na osnovu dobivenih odgovora razrade temeljne funkcionalne prilagodbe edukacijskog sustava:*

- 1) STRATEGIJSKA PRILAGODBA. Ova prilagodba tiče se formiranja ekonomskog identiteta i njemu sukladnog edukacijskog identiteta odnosno strateškog planiranja formalne edukacije (profesija i njihovih razina s obzirom na broj i strukturu) te definiranja željene strategijske kvalitete edukacijskih ishoda. Za Hrvatsku se može preporučiti formiranje ekonomskog identiteta u tri osnovna područja: mediteranski, kontinentalno-srednjoeuropski i poduzetnički. Za strateško planiranje formalne edukacije potrebno je provesti projekcije potrebnih profesija i formalnih edukacijskih razina (primarno, sekundarno, tercijarno, post-tercijarno) s obzirom na potreban broj i strukturu. Također potrebno je definirati i željenu edukacijsku kvalitetu potrebnih kadrova.*
- 2) TAKTIČKO-OPERATIVNA PRILAGODBA. Ova prilagodba se odnosi na definiranje konkretnih taktičkih i operativnih obrazovnih ishoda na razini svakog obrazovnog područja odnosno razina edukacije, te svake konkretne edukacijske institucije. To se odnosi na konkretna znanja i vještina, kao i konkretnih vrijednosti, stavova i navika, dakle stručnih kompetencija. Općenito rečeno znanja potrebna za postizanje ekonomskog razvoj su: činjenična, proceduralna, znanstveno-heuristička te vještine snalaženja i efikasne upotrebe informacija. Vrijednosti, stavovi i navike koje su sukladne ekonomskom razvoju podrazumijevaju odgoj vrijednosti za ekonomski razvoj kao što su primjerice: discipliniranost, marljivost, strpljivost, urednost, štedljivost, poštenje, poduzetnost, urgentnost, inicijativnost, učinkovitost. Ova prilagodba podrazumijeva i taktičku uspostavu kvalitetnog sustava menadžmenta ljudskih resursa na razini nacionalnog edukacijskog sustava, ali i operativnu na razini svake pojedine edukacijske ustanove.*

*Edukacijska politika bi se na navedeni način povezala sa ekonomskom politikom (razvojnou strategijom), a to je način na koji se može formirati funkcionalni ljudski kapital koji će biti nositelj budućeg ekonomskog razvoja, s razvijenou potražnou i ponudbenou komponentou. Naime smislenu nacionalnu edukacijsku politiku (strategiju) treba biti povezana sa svim drugim sektorskim strategijama, a razvojno-ekonomskom strategijou napose.*

*Cilj ovog rada je prikazati kako funkcionira obrazovni sustav u Republici Hrvatskoj, koji su mu ciljevi i kako je on (ne)usklađen sa potrebama tržišta rada. Nadalje, cilj je prikazati i strategije kojima se obrazovni sustav može uskladiti sa tržištem rada, odnosno što, kako i za koga educirati, što će posljedično dovesti do kvalitetnije radne snage i veće efikasnosti u poduzećima.*

**Ključne riječi:** *edukacijska politika, ekonomska politika, menadžment ljudskih resursa u edukaciji, strategijski edukacijski ciljevi, operativni edukacijski ciljevi.*

## **1. Introduction**

The educational system is a very complex system, due to the nature of its subject (the transformation of human beings), because of its size, of the large number of formal rules, of the diversity of educational practice, of the many differences and conflicts over fundamental issues, due to the very long perspective in which his accommodation effects. It is a system that is bureaucratic and hierarchical system and has numerous connections with the outside world (the labor market, education, media, knowledge sources, families, professions, local communities and politics. It is also a system with lots of participants and their strategy (Lesourne, 1993, 17). Despite such complexity an educational system is essential to economic concerns in particular because of its important role in economic development, and therefore certainly requires specific management, thus the confrontation with the goals, the best use of existing resources, motivation, planning, processing, facilitating, controlling, success measurement, setting standards, budgeting, execution and operation (cf. Templar, 2011, xv).

In addition to the current socio-economic environment with high certainty it can be argued that the present globalization process which still increases the speed of rotation of all routes: acceleration time, speeding up the flow of information, accelerating mobility of goods, services, labor, capital, the struggle for talents, transparent process of restructuring the global economy under pressure of increased international division of labor (carriers of this pressure are the most developed of the world economy). In such conditions (turbulence) as a consistent response to the aforementioned intensive processes there is a need for rapid learning and rapid application of the learned. Therefore, knowledge and technological innovation as results of modern education argue that special attention should be given to the formal educational system. The formal education system is a fundamental component of the national innovation system (Schwarz, 2011).

Education (as a basic investment in human resources) should be understood as an investment activity with defined outcomes (refunds), which can have a number of potential positive effects on both the national and international level, but also the negative economic effects if it is not compensated for the cost of education (justify) plus economic performance. In fact, investment in education can have different economic returns to a total, aggregate education and also on the types and levels of education. Thus, some authors state that the most cost-effective investment for society in primary and vocational education, and that the most cost-effective higher level of the individual (cf. Pastuović, 1999). However, some authors say that the university employee in Croatia is the most competitive employee (cf. Pološki-Vokić &

Frajlić, 2004). Also, the cost-effectiveness of education depends on the knowledge that is claimed by the economic and other social sectors. According to Bejaković, (2004, 22) educational system should be transformed from a system governed by the offer, to the demand-driven system. Namely, if a complex and sophisticated knowledge are very little or not at all required they are actually national cost because it does not generate the expected return and can only be adequately engage the wider transnational labor market (the export of brains in the country, which they demand).

Also, if the labor market massively demand only low skills (called "living labor") then actually higher and especially long-term training is not economically justified, but is actually a national economic cost. High quality education at national and international level macroeconomic perception encourages the mobility of human resources (the question is to what extent is it desirable for a country with demographic problems such as Croatia) and to successfully communicate with the domestic and international markets of goods and services, human resources, and creates a distinctive national identity (the marketing function).<sup>22</sup>

If you would like to evaluate the size of the contribution of the formal system of education to economic development, then we must take into account the modern theory of economic development, which indicate a high degree of interdependence between investment in education, research and development, the actual rate of growth of national income and organizational well-being, called. theories of human and intellectual capital (cf. Stewart, 1997). This is corroborated by the observation that today decisive competitive struggle is not about production and sales, but in terms of human resources and that becomes so dominant. "Mental globalization" (Simon, 1998th, according Ph.D., 2000). By this is meant that economic development under dominant influence of the creative power of human brains, and they are crucial for the economic development of the human resources of a certain quality associated with production (industries) where such knowledge can capitalize and develop, and for this purpose to support it is needed to establish modern innovation system that will connect knowledge with innovative products to the market (Aralica & Bacic, 2005). Therefore, every national economy, and in this paper we will discuss the Croatian example, in the context of strengthening its economy must take into account the strategy, and objectives and instruments of educational policy to prevent the 21st century lagged behind these trends in their environment. These fundamental questions of meaning, and therefore the management of the educational system questions what, how and for whom to educate, and are derived from the basic economic questions of the what, how and for whom to produce (Samuelson & Nordhaus, 1992). More specifically, management in education also needs to answer basic questions of economic organization

- 1) What train? How to form a strategic national educational choices and accordingly answer the first question.
- 2) What are the desired educational outcomes, and how to achieve them?
- 3) Whom to educate, for that sector, profession, society/country?

Possible meaningful answers to these questions (and not exclusive) are:

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<sup>22</sup> For example, the constant presence of native scholars and professors at universities abroad and institutes strongly affirm national scientific identity. However, it's characteristics are that higher emigration and vital quality staff (human capital) demographic vacant nacional space where we can talk about the less desirable appearance - "negative selection", and accordingly to the fact that domicile engage in less high-quality human resources. The effect of lower quality human resources can be compared with the use of lower quality materials in a product which has a dominant component of the material, and then is the final product questionable quality.



1) Educate is necessary to support the national economic development, hence the educational system is important for national economic identity.<sup>23</sup>

2) The desired educational outcomes are: defined cognitive skills and values attitudes and habits (can be called and defined competencies for economic development). They can be realized in a way that you can define, plan, organize direct and control them.

3) Education is necessary for specific socio-economic sectors (not just the abstract members, for example the EU) and for the specific profession which should be a function of the specific socio-economic sectors, primarily for the needs of national economic development, and secondarily for global development( development of other companies, continents and humanity (civilization) in its entirety).<sup>24</sup>

This work is a contribution to the effort to explore and elaborate the basic elements of the adjustment of the educational system for Croatian economic development is structured into four main parts. After an introduction, in Part 2 is discussed the possible Croatian educational objectives in the context of economic development. Part 3 discusses the diagnosis of Croatian educational system with recommendations for strengthening the "weak links". Finally, the fourth part summarizes the main findings and concludes.

## **2. Croatian possible strategic educational goals in the context of economic development**

The role of the educational system should be observed with respect to the strategic economic commitment of state and society. For example, if the basic strategic orientations are trade and tourism in the economic structure, if it is not industrial production, manufacturing (creative) interest and knowledge will be less demand and then comes to a situation where it is less able to compete with knowledge, but competition remains "alive work" and sweatshops (cf. Santini, 2011., 8). For this reason, economic (industrial) stagnation consequently leads to educational stagnation, because there is less complex knowledge required to educate. The educational system should deliver good knowledge, good motivation and good training for certain professions, which should be reflected in concrete economic effects. If that is not achieved, it's means that these systems function are separated and independent from each other and management is required to connect them.

Gathering the Croatian economic identity for European abstract, waiver or dissciate of their own, consequently leads to the degradation of their own educational identity, creating not only a dependence on goods and services (called 'economic inferiority') but also the mental, educational dependence, with an ideology that is all better abroad, creating a sense of inferiority, called. 'educational, cultural, civilizational inferiority'!

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<sup>23</sup> There can be heard different opinions, such as Croatia should educate for jobs in the European Union and the world. This kind of thinking does not seem to be economically justified, because the conditions of competition prevailing in the world economy today, no rational economy does not produce something that does not favor it, but someone else. The exchange at the international level either in history or today is not philanthropic, but economic.

<sup>24</sup> This is something that can be experienced differently (cosmopolitan), respectively primarily be trained for the international division of labor, and secondarily for domicile. However, such a strategy is questionable due to the existence of national societies and states as subjects of culture and civilization. Awareness of self value can not be built on the idea of putting their own best human resources function in the development of other people's power and dependency on other people's economic, social and cultural identity, such as by defining themselves as inferior nations.

Thus, the knowledge, skills and values that are transmitted with education should be purposeful, or in a function, and one of the basic functions and role of education is certainly economic one. Therefore, education should be linked to the economic system, that would have not only social scientists, but also economic development function. Thus, the educational system is fundamentally linked to the economic system and its planning and adjustment of the socio- economic needs can not be performed regardless of the diagnosis of the condition (insights) in the economic sectors of society. When planning the educational system of a society, it is necessary to take into account two basic components. These are: a) strategic educational objectives, b) tactical-operative educational goals.

## **2.1. Strategic Croatian educational goals**

Croatia needs a long-term economic and immanent (strategic) educational planning. This should identify the desired educational outcomes (results) to be achieved in a long-term perspective (for example, 10 or more years), and links with the labor market.

More specifically, this means that it should determine the direction of education, the preferred number and structure of educated people with regard to their level (primary, secondary, tertiary, post - tertiary) and also with regard to the profession, which will besides general humanistic and democratic needs meet economic-social needs (cf. Bogdanovic & Zelenika, 2011).

The specific desired educational outcomes required by individual occupations/professions should be also defined. To achieve a balance between the needs of the economy and society of human resources and to enable educational coverage of the school population, for each level of education, it is necessary to elaborate projections of long-term development of education. This is not a simple and easy task, especially in turbulent times (cf. Kodrzycki & others 2002). As essential steps in Croatian educational strategy can be specified:

- a) The formation of Croatian economy identity and its compliant formal educational system (cf. Bogdanovic & Ateljevic, 2012);
- b) Strategic defining of croatian educational system quality.

### **2.1.1. Formation of Croatian economy and its identity Compliant formal educational system**

To answer the first problem, ie the question of what needs to be educated (this is the most difficult problem in a changing environment) should come not only from the formation of an imaginary offers educational outcomes<sup>25</sup> but also on the economic demand for the educational outcomes of the process (educational system needs to have a strong demand side) or the formation of Croatian economic identity and to form the basis of Croatian educational identity.

Because of educational system increasingly requires close connection with economic needs and economic development, Croatia could her economic identity locate for example as follows :

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<sup>25</sup> The simplest is that the educational system is organized bid (ie a self-service, and no insight into the needs). In such a system, some educational institutions offer educational services, and people are buying them, and without a clear understanding of individual and social economic benefits of such purchase. In such a system, the problems of costs and benefits at different levels of aggregation, whose share price paid by the national economy.

- 1) MEDITERRANEAN for region and coast located population along with the maritime and industrial orientation;
- 2) CONTINENTAL-CENTRAL EUROPE for the region and the population located in the continental part, with agro-industrial orientation.
- 3) BUSINESS intended for all croatian regions and population.

The first two identities (Mediterranean and continental-central) stem from the geographic, resource and historical differences (different ways of living and doing business), so that we can speak about different mentalities, which could be economically used. Entrepreneurial identity actually is universal economically, because only businesses and entrepreneurs build a welfare society by creating jobs (economic prosperity). According to the aforementioned economic identities, educational system could be customized. Dute to doing business strategies, educational system could be adapted, in accordance with the concept of comparative advantage. For example, profit agriculture continental type with larger arable land is not adequately to educate the coast dominated by debris, like extensive mountainous agriculture is not appropriate in the continental flat part (eg Slavonia). Therefore, in the coast areas should take into account the comparative advantages of the position (shipbuilding, marine, Mediterranean agriculture, building materials industry-because of abundant stone resources, water economy tourism, etc.).

Here in the Mediterranean and Central European continental area can exist common educational base, according to similar development-industrial capabilities, and there also comes to the fore third entrepreneurial identity .

For entrepreneurship development would be important to introduce Entrepreneurship and Entrepreneurship psychology<sup>26</sup> basics from the end of primary education, to begin to internalize the culture of entrepreneurship.

Entrepreneurs need maximum operational knowledge, therefore such knowledge and skills (competencies) that can be converted into a money. Specifically, for economic development, especially the development of entrepreneurship should stop looking at the educational activity formalistic and idealistic<sup>27</sup>, but in a way that the economic category only knowledge that can be transformed into money.<sup>28</sup>

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<sup>26</sup> International expert on entrepreneurship, professor. dr. Kiril Todorov from the University of St. Kliment Ohridski Sofia, Bulgaria emphasizes the need for education in the field of psychology of entrepreneurship and according to him, without foregoing, entrepreneurship in practice can work better (source: personal communication).

<sup>27</sup> Formalism in the students knowledge do not correspond with the actual necessary operational skills claimed by modern economies and entrepreneurs.

<sup>28</sup> In fact the capitalist socio - economic formation, the market economy, humanistic vision of knowledge, where knowledge is value in itself, is replaced by the vision of its ability to create money. Knowledge is what can make money, and how bigger is this possibility, the greater is its value. Following this understanding, knowledge, low and no economic value of knowledge that does not have this ability to exchange or transformation of the generally accepted valu. Of course, when buying knowledge (costs related to the acquisition of a diploma) and acquired (learning) is not always easy to determine how much it will be able to create money. It is more difficult due to the fact that there are no measurements and records (eg completion of certain studies on specific faculty , what will be the expected average wage for) in the Republic of Croatia. Therefore, neither the students do not know precisely what to study from an economic point of view, because they have no clear idea how their knowledge can later be cashed. If you do not really know what purchased knowledge obtained, then the structure of demand for educational resources can say that the purchase of knowledge (graduation) actually largely buys and hopes to be able to earn a degree and live, and it may not be rational assumption. In ancient times Socrat had

In this context, knowledge that can be quickly and easily make specified transformation is the most valuable. The second step would be to strategically plan a formal education due to the economic identity defined and there should be defined:

- 1 ) required profession with regard to the number and structure (educational level).
- 2 ) levels, levels of formal education considering the number and structure.
- 3) The value orientation or forming economic growth and development culture.<sup>29</sup>

#### 2.1.2 . Strategic defining quality Croatian educational system and educational products

The quality of education depends primarily on the holders (institutions) education at all levels (educators) whose effectiveness depends mainly on the system of management of human resources in the education system (see Chapter 4) that are fundamentally be reduced to the following :

- The process of selection of students and teachers
- Formation of professionals teachers, scientists;
- Motivating teachers (financially rewarding and socio- economic status);
- Development of teaching staff (permanent learning by forms of informal, non-formal, formal);
- Establishment of appropriate educational characteristics of pupils/students;
- Establishment of an educational system that raises, rewards and gives a clear improvement to the criteria;
- The formation of social culture that respects education, educators as highly valuable, not a marginal activity.

So, if you want quality outcomes, educational system should apply basic knowledge of human resource management in the educational system. In fact, if we accept the concept that human resources are the most important factors of economic development of a society, then the system of human resources in education is crucial for the creation of its quality.

In the context of the desired "knowledge society" inevitably arises the question of quality of educational products (experts/scientists), so this product should satisfy many important criteria, such as (holly, 2007, 96-97):

1. quality educational product would have to be ethical or moral;
2. quality educational product should be theoretically and practically usable;
3. quality educational product would have to be competitive on a national and global education market, market knowledge, market skills;
4. quality educational product would have to be compatible and complementary with the best quality products such international education;

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warned Athenian citizens to beware of buying knowledge of the Sophists, because they do not know what they are buying!

<sup>29</sup> Croatian economy and society are not only in the economic but also the prepayment crisis and how the author known about the problem, they are very modestly to discuss, much less a recent work on the subject of encouraging the culture of economic development, with the exception of some authors who recently handled securities issues in the context of economic and social development (for example: Bogdanovic, 2013; Bogdanovic, 2013b; Bogdanovic, 2012; Bogdanovic & Ateljevic, 2012; Bogdanovic, 2011).

5. quality educational product had to be at the stage of maturity lifecycle 'live ' at least five to ten years from the time that it is possible to effectively serviced (ie develop innovations, improvements, modifications...extend their life stage of maturity...);
6. quality educational product should be manufactured in the future, for the knowledge society, intelligent society, the welfare society;
7. quality educational product to be measured according to universal global standards (eg according to ISO standards);
8. quality of the educational product must be able to effectively manage;
9. quality of the educational product should and must be able to control.

For these reasons more and more in modern educational systems seek to establish, build and improve quality systems, to control processes between inputs (input values in the educational process) and outputs (the output size of the learning process), which should be systematically linked to economic system.

## **2.2. Tactical and operational Croatian educational goals**

Tactical goals of educational systems follow up the strategic relationships and they are related to establishing a system of human resource management at the system level and its management of such systems in order to operability in each component of the system.

Operating Croatian educational goals build on the strategy and at the level of each entity or educational components of the educational system (eg, elementary, middle, high school, college) should elaborate on two main sections concerning:

- a) defining learning outcomes (cognitive and psychomotor skills, as part of the cognitive competence);
- b) the definition of educational outcomes (values, attitudes and habits) as part of the affective-motivational competencies;
- c) management of human resources in the education system and institutions

### **2.2.1 . Defining educational outcomes**

According to modern educational insights, knowledge and skills are inseparable from the values (cultural basis of what is right and what is wrong with the power of motivational orientations ) and knowledge can't be developed independently of the values. Thus, the Anglo-Saxon vocabulary and introduces the word competence (competences) that combines a composite cognitive and value. Holistic education for competence (ability/skill for something) includes valuable knowledge base and knowledge base value. Education is therefore an interactive process that includes both education (acquisition of cognitive knowledge and psychomotor skills and education (acquisition of values, attitudes and habits)), (cf. Pastuović, 1999). It becomes clear that the very process of education in addition to its complexity is very diverse and requires different methods to achieve the objectives established for the acquisition of competencies. In this context, OECD researchs point out four types of knowledge that play an important role in scientific and organized economy which tends Republic of Croatia and its syntagm "knowledge society" (Ph.D., 2000, 197):

- Know what? refers to factual knowledge.

- Know why? refers to the scientific knowledge that is based on natural law as the basis of most industrial sectors that make up the starting point of technological development and technological processes.
- Know how? refers to the qualifications or ability to know something to do, or procedural knowledge.
- Know who? includes information about who knows something about something particular, and who knows how something should be done.

A good framework of educational outcomes offers Bloom's taxonomy of knowledge in addition to the type of knowledge that should be adopted (factual, conceptual, procedural, metacognitive) states and the processes underlying its adoption (memory, comprehension, application, analysis, evaluation, creation-creation) that also need to be educated (cf. [www.carnet.hr/obrazovni/spzit/pismeni/teorija/bloom](http://www.carnet.hr/obrazovni/spzit/pismeni/teorija/bloom)).

A similar but much simpler framework of educational outcomes offers traditional modular hierarchical triangle with the knowledge to be acquired (knowledge of recognition-lowest level, playback, application, and creative/creative application of knowledge-highest level). In addition to the above knowledge, which are discussed in the pedagogical and psychological literature modern economy highlights the essential/basic attitude towards practice (knowledge usable in the economy), the internationalization of education systems (target classes in English as the universal language of science and knowledge) and metacognitive skills, which means that pupils/students should learn how to teach future employees that they are willing and capable of self-study, self-education and self-organization in the concept of lifelong education (cf. Delors, 1998, Lauc, 2000, Zelenika, 2007).

In planning educational outcomes should act prudently with regard to the perceived emergence of different types of educational crises that may affect the realization of the planned educational outcomes ( Denzin, 1997 by Foxall, Goldsmith and Brown, 2007, 247) as follows:

- 1) The intellectual crisis that manifests itself as a crisis of representation, respectively models that explain reality are not suitable for specific tasks. Education in any society is the intellectual crisis (due to the requirement of economic development) if the transferred knowledge/skills poorly applicable or not applicable at all to the specific practice.
- 2) The crisis of legality, which is characterized by an unsatisfactory evaluation criteria value of the findings of scientific research. Scientific research through a crisis of legality if the criteria for assessment are set in a way that favored methodologically rigorous works precisely because of its strictness and methodological focus on one paradigm (eg, reductionist that values only research that establishes a simple cause-and- effect relationships between two variables), low-valued works of different paradigmatic forms, interdisciplinary projects or that stands out from the usual way of interpreting the results.
- 3) Practice crisis characterized by insufficient contributions of science in solving even explaining the practical problems. It highlights research approaches that are abstract, fundamental theoretical and practice poorly connected. Such practices than offset research activities clearly discourages scientists-researchers to conduct research applicable application needed to solve a specific problem, ie to improve some aspects of the current socio-economic development. Specifically research in the social sciences should be not only a basic-

fundamental, but also applied and evaluative.<sup>30</sup> Economic development should be aware of the existence of the aforementioned crises that could slow down efforts towards the implementation of an imaginary "knowledge society".<sup>31</sup>

Educational outcomes should be designed on the internalization of defined outcomes, and to avoid the educational crisis and the "disease" that can easily grasp its essence.

### 2.2.2. Education outcomes defining

Education is a term which is organized or deliberate way of affective learning values, interests, attitudes and habits so that they learn the motives, such as values and interests which willing component is getting stronger, and attitudes where strong affective component. (cf. White, C. 1999). Education today is also considered as a key factor for progress and development about what is leading EU country, Germany, talking - a key element in the education and development of modern economies is values orientation (which are actually the core of highly motivated workforce), which means that education can not be reduced to simple transmission of knowledge and functional skills, but also to mediation virtues that have significance in the context of the development of human capital, and relate to, for example: reliability, punctuality and discipline (according to Herzog Ph.D., 2000, 199). The main goal of education is turn internalization values (ie acting on emotional-motivational complex man) who have moral and ethical character. Although increasingly recognizes the importance of moral and ethical for Economic Development (Lauc, 2000, Landes, 2003), there is very little practical guidance for learning and development of moral and ethical skills while at the same time simply presupposes the possession. Also those who need to educate (parents, teachers, key social person and all those who are responsible for the upbringing of young people), don't organized learn how to raise<sup>32</sup> other people and their training is mainly based on the transfer of knowledge to teach (cognitive knowledge and psychomotor skills). Due to this perceived deficit of teachers should be trained for the transfer of content to be considered universally desirable and have economic significance.<sup>33</sup>

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<sup>30</sup> Basic (pure) research aimed at improving knowledge, and their primary purpose is to describe the existing world, not change it, so that each utility is irrelevant for the type of research. Applied research (or research policy, action/useful research) seeking to understand current social problems and provide (policy makers) well established instructions for action. Evaluation research (research or evaluation/assessment or social accounting) evaluated the outcomes of specific programs, such as the profitability of a program. The above and on research in the social sciences exceptional clarity manual explains the design of research plans and social measurements (Miller, 1991).

<sup>31</sup> For these crises a bit humorous work "Lagad Academy and its successors" with regard to Croatia scientific reality/practice by the deceased academician Ivo Perišin (2005).

<sup>32</sup> How to raise, it is difficult philosophical question, and much depends on the values that are desirable in society. If the society for survival or normal life individuals need a certain amount of immoral behavior, should people accordingly to that learn others to be like that? If the status in life largely depends on flattery boss, and you should educate young generations in the spirit of this or not? This paper does not address these aporias, but it is assumed that the core values of absolute and universal categories that should be represented timeless in all cultural contexts.

<sup>33</sup> About this here will not elaborate in detail because of the alleged author of the work reported in „Adaptation of Croatian cultural climate for economic development" (Bogdanovic, 2011) and "How to get more integrity in managerial behavior? The role of morality in learning management morale crisis condition" (Bogdanovic, 2013). It is about the internalization of economically important values such as discipline, diligence, patience, orderliness, thrift, honesty, initiative, urgency, initiative, efficiency (Landes, 2003), the fundamental values of scientific management: survival, success, health, happiness (Luksic, 1995) and basic humanities (spiritual) values: right action, truth, love, peace, non-violence (Zanko, 2005).

### 2.2.3. Human resources management in educational system and institutions

Human resources in education are key determinants of creating quality human resources in the economy and other social activities. Therefore, this area should be given to exceptional (strategic) attention. According to research Pastuović and Stancica, they came to the conclusion that there does not exist a complete care for human resources, and educational institutions do not have sufficient work in this area (Faculty, 2006, 62). In order to achieve the economic goals of human resource management, in education should be provided adequate number of educators and their respective competences, set them in the right jobs, develop and motivate. The stated aim of education should implement the following functions of management of human resources:

- Strategic management of human resources-linked economic and social educational needs with its performance. This could be the task of the Institute for Education Planning;
- Planning the required number and structure of employees in education. Apart from mere planning should be carried out and the rehabilitation of deficits, surpluses and maintenance personnel with regard to natural flows;
- Analysis of the design of jobs and places in schools. According to the work that needs to be done, to determine the positions and meaningful shape them (productivity and quality);
- Recruitment, selection and introduction of meaningful work at the position (the principle of professional orientation and affinity);
- Assessment and evaluation of impacts, motivating, rewarding performance at work. The tracking system, encouraging, evaluation criteria and achievements Compliant rewarding;
- Education and development of educators. In accordance with the needs of the economy and the ways of the community and educators to educate and develop. You should solve the question of their training, professional development and advancement;
- Create appropriate organizational climate and culture in educational institutions (creating psychosocial, material and legal conditions that will affect the motivation and incentive to refer people to the collective work). This can be considered as a measure of achievement of other functions of human resource management);
- Labor relations and status issues (level of stability, security job in education in order to promote the achievement of work commitments);
- Other functions of human resource management (protection and improvement of living and working conditions, safety and occupational health, health care, pension and disability insurance, social protection, rights, standard of care for personnel, recreational and cultural needs, a variety of services to employees (benefits)).

Achieving quality education system depends primarily on the smooth functioning of HRM in education. Investing in this key resource education should be treated without long term in order to achieve its full potential and impact.

### **3. Diagnosis of croatian educational system with recommendations of improvement of individual segments**

Planning of education for economic purposes should start from the diagnosis of the condition, or present state of competitiveness of Croatian workforce. According to research by the Institute of Public Finance (Bejaković & Lowther, 2004) labor force in Croatia does not have the necessary knowledge, skills and expertise to achieve the overall competitiveness in the production of goods and services, so competition in the EU market. Identify the shortcomings of the educational system in terms of the focus on factual knowledge, a lack of focus on



problem solving, neglected life-long education, insufficiently effective public administration and the unfavorable ratio of labor productivity and its cost in comparison with similar economies. Today, instead of merely memorizing material by the Austro-German model, people seek self-analytical and critical thinking and deduction, an innovative approach and the focus on analytical capabilities, seeking and selecting information, clarification of problems, formulating hypotheses, validation and assessment of the evidence and finding solutions (Bejaković, 2004, 3).

In short, what the educational system seeks of students is not in compliance with the industrial and social needs. Uncompetitive Croatian workforce is seen in insufficient level of social capital, the lack of trust in society (poor cultural climate for development) unsatisfactory level of innovation and entrepreneurship in society, lack of rule of law, widespread and entrenched corruption and present informal economy, relatively expensive labor force (with respect to the relationship between wages and productivity), wasteful/inefficient state, unprofessional and incompetent public administration (Bejaković, 2004, 3-4).

From the findings of empirical research competitiveness of the labor force in the Republic of Croatia the Croatian employee is in his forties, unqualified, no mobile and no further educated, which was contrary to the Croatian managers (their competitors employees are young, educated, willing to learn, hardworking, persistent, ambitious). Most competitive proved to be highly educated, with flaws as well as in vocational education: poor management skills to others, working on the computer and foreign language skills (Pološki-Vokić & Frajlić, 2004, 73).

There has been a significant increase in the youth unemployment rate (the share of economically active 15-24 year) in recent years in the EU, which accounted for nearly one fifth of total unemployment, and these trends are present in Croatia. The relative position of young people in Croatia even more exacerbated during the recession. Despite the fact that young people are better educated than previous generations, it is clear that youth unemployment in most EU countries, more than twice the average unemployment rate of the total population, and RH recorded similar trends. One of the main causes of the problem are derived from the mismatch of the education system and labor market needs. Within the EU presence in recent years, certain changes were caused by the increasing flow of people, and migration, as well as due to a number of reforms (eg. pension, health care and school and education). In Croatia, a special problem is the mismatch of higher education system and the labor market, which indicates a questionable enrollment policy in the higher education system. Therefore the link between education and the labor market in recent times has increasing interest.

The quality of Croatian education system results showed the following: In preschool education, less than one-third attend kindergartens, which is important in the context of early childhood education and future workforce. In primary and secondary education is the focus on factual knowledge and passive learning, does not allow the acquisition of high-level technical, technological and social knowledge, expertise and skills in a competitive economy. Croatian textbooks are generally unsuitable for the subjects and skills that should serve. Teachers' salaries are low, and the social status is poor. This is the first result of the relatively low investment in education (she was in Croatia at the level of 3% for education, for science 0.9% according to Jašić, 2000, and according to the Strategy for Education, Science and Technology 2013th allocations for higher education are currently among the lowest in Europe,

amounting to 0.73% of GDP<sup>34</sup>), what else is a result of the low valuation of the teaching profession in the general population.

In higher education, the programs are not well aligned with the needs of the labor market. Teachers are generally of poor quality, especially in terms of teaching methods and assessment. In the field of lifelong learning, participation rate is very low, especially in comparison with the EU countries, so employees can not adequately keep pace with technological advances or changes in the workplace (Lowther, 2004, 18-20). Also there is missing or is delayed education for entrepreneurship as well as the education of elementary knowledge about the realization of his own existence, which is particularly important in terms of the capitalist socio-economic formation characterized by cyclical and therefore intermittent unemployment. On the basis of this condition can be diagnosed provide basic (principal) recommendations for improvement:

- Croatian educational system is desirable to transform to be more demand and less supply driven (due to the problem of surpluses and shortages in staff structure);
- More educate values, attitudes and habits (education accountability) especially from preschool age in the primary system;
- The material basis of education (status educators) can be solved in a way that the same funds paid by a small number of people in the state and/or public administration, or to raise funds intended for education;
- Improve the general culture and attitudes towards the education of successful examples, information and educational programs;<sup>35</sup>
- Organise a good system of management of human resources in the education system;
- At all school levels set standards of educational outcomes, for which the responsibility should be twofold: a) to institutions (who has completed a specific program should have some clearly defined skills and knowledge as well as value orientations), b) students should be accountable for their results, and award-winning target outputs (problem-solving skills, creativity, initiative), then the system should be regulated according to relevant criteria for economic development;
- Increase coverage of preschool education, informing the public about the importance of early education;
- Croatian educational system is corrected according to the results of international tests of knowledge;
- Organise a system of management of human resources in the education system.
- Organise a new system for determining, coordinating and controlling the entry quotas to higher education institutions in Croatia. The enrollment quotas in higher education in Croatia in recent years, reflecting to a large extent a wish list of higher education institutions and not the demands of the labor market for certain profiles of highly educated professionals. The consequence of such an enrollment policy has led to the fact that several colleges enroll more students in relation to the current needs of the labor market for these profiles. Primarily it is socially-humanities, while on the other side of the faculties of natural sciences and engineering graduates are in high demand enroll a relatively small number of students from the needs of the labor market

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<sup>34</sup> A draft framework of Education, Science and Technology, p. 112 Free to Dalmatia, a part of spectrum of 23 11th 2013th, p. 11th author Professor Alexander Jakir, Dean of the Faculty of Philosophy in Split.

<sup>35</sup> For example, "Business Club" HTV and "Knowledge Capital" at the Business TV. Unfortunately the RC TV show "Business Club" and the TV business, which according to the author had good economic and business educational role are revoked.

- The introduction of the concept of flexicurity changing labor legislation , active labor market policies and social security systems, and ensuring conditions for lifelong learning. Nekonkuretnost and labor market rigidities to reduce the number of existing jobs and narrow the space for new employment. In recent years, the labor market is increasingly used the concept of flexicurity, which in simple terms means simultaneous flexibility and job security. Flexicurity model was first introduced in Denmark. This is a new concept in the labor market that combines the flexibility of the labor market and a high degree of social and income protection and protection in employment. Simply said, it is a combination of easy hiring and firing (flexibility for employers) and high benefits for the unemployed (security for workers). Flexicurity policy for each country the issue of consensus among the major stakeholders in the labor market, where the main actors of the social partners. From this standpoint, flexicurity is a result of social dialogue and therefore can be expected to have different characteristics. Flexicurity policy unites the areas of labor law, the active employment policy, social security systems and lifelong learning. These four areas of action should define the system of flexicurity to job security has changed in the security of employability. The struggle for security should be kept in the background. Security workers now depends on their knowledge and skills , so the trade union should fight to ensure the conditions for lifelong learning and appropriate social protection in today 's increasingly frequent periods of unemployment and job search.
- Attitudes and educational culture should improve constantly informing, educational programs, but also good examples of successful individuals and organizations.
- In the context of economics crisis and unemployment, which is a permanent problem of the capitalist economy, it should promote the training of elementary knowledge about the realization of his own existence, to pupils/students (and perhaps since the end of primary education, but certainly in Secondary Education) to meet with basic elements of entrepreneurship and personal finance (Bogdanovic, 2009);
- Since the purpose of educational quality desirable weigh the international dimension of the Croatian educational system is to create good preconditions to be working on the international exchange of students, students and teachers , in order to facilitate the transfer of knowledge from abroad and to become as efficient users of international (global) scientific and technological achievements<sup>36</sup>.

#### 4. Conclusion

For economic development due to increasing process of "mental globalization", formal education becomes increasingly important system, which we need to focus on strategic and tactical-operational level for increasing the desired economic effects. The answer to the basic questions of the educational system: what, how and for whom to educate can be answered:

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<sup>36</sup> However, it should be said also that in the context of developing critical thinking should not be any "blind beggars" (without critical analysis) to accept everything that comes as an idea or a solution from foreign educational milieu. The good elements of the existing system (power) is useful to retain and build on the good elements from abroad and weaknesses and deficiencies corrected. The bad can be a fashionable trend and uncritical thinking that the only courses in English quality mark, because the psychological fact just the opposite, that is, in their native language best thinking (since the depth of information processing, which is associated with early learning when the fastest learner, as long ekspozije native language, the man owns the largest aperceptivnu mass in his nervous system , and is thus physiologically predisposed to best thinking , understand and teach in that language. Therefore, education in the mother tongue can not be considered less valuable and effective, but the opposite. Only knowledge has the power to differentiate (good from bad), and ignorance is not anything different (paraphrase the late Professor. PhD. Ante Fulgosija).

- I. need to educate in the context of support for economic development, hence the educational system is important for national economic identity;
- II. The desired educational outcomes are defined cognitive skills and values attitudes and habits (defined competencies for economic development);
- III. Educate for specific socio-economic sectors (not just the abstract user) and specific professions, primarily for the purposes of the local socio-economic development, and secondarily for global development, namely the development of other companies continents and humanity (civilization) in its entirety.

Work has developed basic adjustments proposals of educational system for Croatian economic development and proposes:

a) STRATEGIC ADJUSTMENT OF EDUCATIONAL SYSTEM - refers to the formation of Croatian economic identity: Mediterranean, continental-central European identity and its compliant educational identity; strategic planning training through the Institute for educational planning and realization of quality education by organizing strategic management of human resources at the Croatian educational system.

b) TACTICAL-OPERATIVE ADJUSTMENT OF EDUCATIONAL SYSTEM - refers to the formation of human resources management in the educational system and all components of the educational system. In such a framework is particularly important to define the operational knowledge and skills for economic development as well as factual, procedural, scientific heuristic, coping skills and effective use of information, values, attitudes and habits for economic development, such as: discipline, diligence, patience, orderliness, thrift, honesty, initiative, urgency and efficiency.

In work was carried out and a basic analysis of the Croatian educational system and on the basis of this condition diagnosed and given basic (principal) recommendations for improving its overall:

- Croatian educational system is desirable to transform to be more demand and less supply driven (due to the problem of surpluses and shortages in staff structure);
- More educate values, attitudes and habits (education accountability), especially from preschool age in the primary system;
- The material basis of education (educator status) can be solved in a way that the same funds pay less people in the state and/or public administration, or to raise funds intended for education;
- Improve the general culture and attitudes towards the education of successful examples, information and educational programs;
- Organise a good system of management of human resources in the education system;
- At all school levels set standards of educational outcomes, for which the responsibility should be twofold: a) to institutions (who has completed a specific program should have some clearly defined skills and knowledge as well as value orientations), b) students should be accountable for their results, and award-winning target outputs (problem-solving skills, creativity, initiative), then the system should be regulated according to relevant criteria for economic development;
- Increase coverage of preschool education, informing the public about the importance of early education;
- Croatia should be actively involved in international tests of knowledge, and on the results make corrections. Specifically the results of the PISA international tests of students in all

categories 2013., especially in the field of mathematical literacy are ranked below average Croatia examined 65 countries around the world;

- In the context of economic crisis and unemployment, which is a permanent problem of the capitalist economy, it should promote the training of elementary knowledge about the realization of his own existence, that pupils/students (and perhaps since the end of primary education, but certainly in Secondary Education) meet with basic elements of entrepreneurship and personal finance;

- Strive for the international dimension of the Croatian educational system and create conditions to strengthen international exchange of pupils, students and teachers.

In this way could Croatian formal educational system successfully adapt to the educational field (education and training) for the economic challenges of the 21st century, with strategic and tactical operational adjustments and thus create human capital that will be a carrier of the future of the local economic development.

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**INVESTMENT INTO THE PROFESSIONAL DEVELOPMENT OF  
EMPLOYEES OF EASTERN CROATIA**

**ULAGANJE U PROFESIONALNI RAZVOJ ZAPOSLENIKA ISTOČNE  
HRVATSKE**

**ABSTRACT**

*Currently competent employees are less likely to stay equally competent when performing certain tasks over a longer period. The priority of every economic operator should be constant improvement of the employee's quality i.e. permanent education. Investing in employees improves the economic operator's market competitiveness and thus a stronger and more serious need for constant investment into growth and education of employees has been marked. If the economic operators did the contrary, they could not hope for survival based on obsolete knowledge and skills of its employees.*

*This paper outlines the role and significance of professional development of employees as one of the governing processes and functions of the human resources management. The importance of investment into professional development of employees is foremost seen in creation of superior workforce resulting in increased income of both the economic operator and the region as a whole.*

*The stated theoretic knowledge has also been tested in the research part of the paper, which shows to what extent investment into professional development of employees through various forms of training and education is present in five counties of Eastern Croatia and three counties of Central Croatia. The analyses of results derived from the research part of the paper show the need to continuously change the old paradigm of frequent lack of investment into human resources and impose a fresh view of investment into new knowledge of employees.*



**Key words:** professional development, employees, training and education, economic operators, Eastern Croatia

## SAŽETAK

*Trenutno kompetentni zaposlenici ne ostaju duže vrijeme jednako kompetentni za izvršavanje određenog posla. Prioritet svakog gospodarskog subjekta treba biti stalno unapređivanje kvalitete zaposlenika, odnosno permanentno obrazovanje, jer ulaganjem u zaposlenike gospodarski subjekt povećava svoju konkurentnost na tržištu. Kao posljedica navedenog, zapažena je sve veća i ozbiljnija potreba za stalnim ulaganjem u njihov razvoj i obrazovanje jer u suprotnom gospodarski subjekti se ne mogu nadati opstanku temeljenom na zastarjelim znanjima i vještinama samih zaposlenika.*

*Ovaj rad daje pregled uloge i značenja profesionalnog razvoja zaposlenika kao jednog od glavnog procesa i funkcije upravljanja ljudskim potencijalima. Važnost ulaganja u profesionalni razvoj zaposlenika prvenstveno se ogleda u stvaranju kvalitetnije radne snage što za rezultat ima kako povećavanje ostvarenog prihoda gospodarskog subjekta tako i regije u cjelini.*

*Navedena teoretska saznanja također su ispitana u istraživačkom dijelu rada gdje se prikazuje u kojoj mjeri je zastupljeno ulaganje u profesionalni razvoj zaposlenika kroz različite oblike obuke i obrazovanja u pet županija Istočne Hrvatske i tri županije Središnje Hrvatske. Analiza rezultata koji proizlaze iz istraživačkog dijela rada dovodi do zaključka kako je potrebno neprekidno mijenjanje stare paradigme učestalog neulaganja u ljudske potencijale te nameću potrebu za uvijek novim poimanjem ulaganja u nova znanja zaposlenika.*

**Ključne riječi:** profesionalni razvoj, zaposlenici, obuka i obrazovanje, gospodarski subjekti, Istočna Hrvatska

### 1. Introduction

The role of an individual in all social and work processes has evolved and will continue to evolve as a result of technological and other changes, and the globalization of society. In this context, human resources development and management have become increasingly important.

There is growing awareness of the importance of human resources management that has become a business philosophy, which needs to be implemented at all management levels. This new business philosophy has become the buzzword in the vocabulary of modern leaders that entails changes in terms of management and ability to attract, hold on to and motivate employees who have knowledge, willingness and ability (Vujić, 2008, 189).

Human resources management is a broad area of study researched by organisation theorists. It is based on the assumption that employees, being in a competitive business environment, need to adapt to a number of changes so as to have a successful career, and make a relevant contribution to the company's success. Obviously, the field itself as a scientific discipline influenced by economics, psychology, communication science, computer science and management, has been undergoing constant change and innovation.

In the broadest sense, human resources development can be defined as the acquisition and enhancement of knowledge, skills and abilities, as well as adoption of desirable attitudes and improvement of people's behaviour. In a narrower sense, human resources development is related to the job and organization in which people work. It is a training activity organized within an organization so as to enhance success (achievements, results) and personal development, with the aim of improving the performance of both individuals (in their current and future positions) and the entire organization.

Human resources management involves identifying workforce needs, staff selection, employment, promotion, performance evaluation, career planning, remuneration, motivation and training of workforce to perform their tasks effectively (Wehrich and Koontz, 1993, 356).

As a result, human resources management has become not only the most important business function, but also a management approach, i.e. a unique philosophy that considers people to be the most important potential and key strategic and competitive advantage (Bahtijarević-Siber, 1998, 121).

## **2. Main Processes and Functions in Human Resources Management**

Different authors propose different elements, i.e. functions of human resources management. According to Marušić (2001, 167), human resources management consists of the following functions:

- recruitment,
- professional development,
- encouraging performance improvement at work,
- staying abreast of new information in the field of human resources.

### **Recruitment**

This function involves job analysis, which consists of human resources planning, finding prospective employees, and selection.

### **Encouraging performance improvement at work**

Employee motivation is one of the most complex areas of human resources management because this process needs to be permanent, customized, just, transparent and adaptable to social changes. Just how complex the concept of motivation is can be observed in the number of motivational theories most of which have been developed through interdisciplinary approach, i.e., applying knowledge from various sciences including psychology, sociology, economics, etc. The fact that the number of courses, workshops and development programmes for managers and even business schools specialized in this area has recently been increasing is proof of the importance of that aspect of human resources management. However, it should be noted that stronger emphasis should be placed on this issue in the formal education of future managers.

### **Staying abreast of new information in the field of human resources**

This is another crucial function because successful management of human resources depends on information systems and on obtaining different kinds of information.

Timely, accurate and complete information in a business entity provides for effective operation at all hierarchical levels. Human resources management information system greatly

facilitates the execution of individual functions and sub-functions. It allows a faster flow of information required by the management and individual departments. Given the fact that information system for human resources development and utilization depends on the focus of executive and managerial activity, different information models for different purposes exist: information model to determine human resources development and utilization strategy and policy, information model for human resources planning, information model for employment purposes, etc. (www.poslovniforum.hr, 2011).

### **3. Professional Development of Employees**

In order for employees to remain competent for a certain job or role, it is necessary to invest in their continuing development and training. If they are to have the necessary skills to succeed in a competitive environment, it is important that they undergo regular training, which helps them develop their careers. Some authors are of the opinion that training and development are the essence of continuous improvement of employees' competence and organizational efficiency (Richards, Škrebliin, Kirbiš and Koričan, 2009, 525).

The benefits of investing in training and development of employees include (Pfeifer, 2006, 90):

- increased productivity
- reduced staff turnover
- an increase in employee earnings
- reduced cost of materials and equipment due to the reduced number of errors
- less monitoring and control required
- increased motivation and satisfaction of employees.

The quality of employees depends on their knowledge, willingness and ability to acquire new knowledge which is why companies should make it their priority to constantly improve the quality of their employees by providing continuing development because by investing in employees' development the company increases its competitiveness in the market (Karaman Aksentijević, Ježić and Đurić, 2008, 48).

Companies that support active development of their employees by providing them with permanent opportunities for learning and development achieve greater financial success because their employees are motivated by their own advancement, while new knowledge improves performance and operational efficiency by reducing costs, increasing innovation and creativity in the search for optimal and creative solutions to business problems (Karaman Aksentijević, Ježić and Đurić, 2008, 48).

The following are general and specific objectives of further training and development of employees (Požega, 2012, 227).

General objectives:

- enhanced competitiveness and performance at work,
- promotion to higher-ranking positions
- ensuring manager succession process
- enhanced knowledge and skills.

Specific objectives:

- reinforcement of teamwork among employees,

- effective time management,
- improved safety at work,
- higher levels of creativity and creative thinking,
- reduced costs of labour, etc.

There are different methods of employee training that can be conducted both in and outside the organization.

The following methods can be used in the workplace (Schermerhorn, 1996, 256):

- training – a process in which an experienced person provides specific technical advice to others.
- apprenticeship (on-the-job-training) – a person works as an assistant, i.e., apprentice alongside a qualified individual and learns from that person until he/she becomes fully qualified to do the job independently.
- monitoring – this includes the exchange of experience and knowledge between an experienced and a less experienced employee.
- personal example – a person displays behaviour that is expected from others.

The training is focused on the job, whereas staff development is focused on the individual and his/her potential. Staff development concerns the acquisition of new knowledge, skills and abilities that enable an individual to take on new, more complex tasks (Pfeifer, 2006, 90).

Pološki Vokić and Grizelj (2007, 863) arrived at the conclusion that organizations in Croatia failed to recognize the strategic importance of training and development, particularly those organizations from which the opposite would be expected. Their research revealed that only 17% of organizations in the sample had a special training and development department; 39% of organizations had appointed a person in charge of training and development; whereas as much as 44% of organizations had neither a person in charge of, nor a department responsible for the said tasks. In view of the obtained results, the above authors pointed to the urgent need for organizations in Croatia to make significant investments in the training and development of their employees.

#### **4. Study Methodology, Data Collection, Sampling and Statistical Analysis Methods**

This section of the paper explains the research methodology used; describes the questionnaire, the sample, and data collection methods; identifies the statistical methods used, and gives the results of the study.

The questionnaire was developed based on literature, data and questionnaires used in similar studies. The questions were designed on the basis of the questionnaire used in the 4<sup>th</sup> European Working Conditions Survey conducted in 2005 with employees and self-employed persons in Europe. The key topics related to their work and employments were investigated in the EU27 countries, Norway, Croatia, Turkey and Switzerland (Parent-Thirion, Marcias, Hurley and Vermeylen, 2007, 109).

The author's questionnaire was 15 pages long and contained closed-ended questions and a number of dichotomous questions. In this paper, only the questions considering an investment in professional development of human resources are presented. A so-called "face to face" interview, also known as "paper-and-pen" interview (PAPI) was conducted in the respondents' homes. The sampling was done using a random sample, stratified by geographic

regions and settlement categories. The sample included respondents, whose anonymity was guaranteed, from eight counties in Croatia: Vukovar-Srijem, Bjelovar-Bilogora, Brod-Posavina, Karlovac, Požega-Slavonia, Sisak-Moslavina, Virovitica-Podravina and Osijek-Baranja County. The analyzed data were presented in summary tables.

The number of sampling points was two hundred and fifty respondents with an aim to obtain a minimum sample of one hundred twenty-five sample units. One hundred and ninety-four sampling units (77.6%) were collected, which is a satisfactory sampling rate.

Table 1 Sample description

	No.	%
<b>Gender</b>	194	100
Male	105	54.1
Female	89	45.9
<b>Age group</b>	194	100
under 30 years of age	56	28.9
31-40 years of age	43	22.2
41-50 years of age	65	33.5
51-60 years of age	27	13.9
above 60 years of age	3	1.5
<b>Level of education</b>	193	100
preschool/none	0	0
lower primary	4	2.1
upper primary	10	5.2
secondary	130	67.4
post secondary	20	10.4
tertiary (polytechnic)	27	14.0
postgraduate	2	1
<b>Employment status</b>	194	100
at work as employer or employee/self-employed	190	97.9
at work (on child-care leave or other leave)	2	1
unemployed less than 12 months	1	0.5
in education (at school, university, etc.) / student	1	0.5
<b>Monthly income from main paid job</b>	177	100
below average salary in Croatia	123	69.5
above average salary in Croatia	54	30.5

Source: author's own calculations

Table 1 shows the main characteristics of the sample. The sample consisted of 194 persons, of which 105 were males (54.1%) and 89 females (45.9%). Respondents' age ranged from 18 to 63 ( $M = 39.24$ ,  $SD = 10.95$ ), with the majority in the age group up to 30 (28.9%) followed by the age group 41 to 50 (33.5%). The majority of respondents reported they had finished secondary education (67.4%), while 14% of respondents had completed tertiary education. As for their employment status, nearly all respondents reported they worked as employers or employees / were self-employed (97.9%). Most respondents' monthly income was below average salary in Croatia (69.5%).

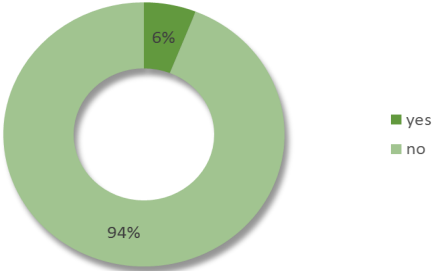
The data collected through the questionnaire were analysed using Statistical Package for the Social Sciences, version 17.0. SPSS is a software package for statistical analysis of data that incorporates almost all conventional statistical methods.

## 5. Study Results

This section of the paper presents the results of the study in terms of the extent to which companies invest in professional development of their staff through various forms of training

and development in eight counties in Eastern and Central Croatia. By answering the following questions, the respondents expressed their opinion about the opportunities they were provided for further training and development.

Graph 1 Have you undergone training paid for by yourself?



Source: author's own calculations

The results regarding training of employees are very discouraging. The respondents largely reported that they had not participated in any training, skills development programme, or similar. Graph 1 show that almost 94% of respondents did not undergo any training paid for by themselves.

Graph 2 Have you undergone a professional skills development programme?



Source: author's own calculations

To the question whether they have undergone any type of skills development programme (Graph 2), only 13.2% of respondents answered positively, while the majority said they had not undergone any type of skills development programme.

Table 2 Answers to the question “Have you undergone training paid for or provided by your employer, or by yourself if you are self-employed?”

Have you undergone training paid for or provided by your employer, or by yourself if you are self-employed?							
	n	%	Yes	No	$\chi^2$	df	sig.
<b>Level of education</b>	191	100	25.1	74.9	16.88	5	p<0.01
preschool/none	0	0	0	0			
lower primary	4	2.1	0	100			
upper primary	10	5.2	0	100			
secondary	129	67.5	20.9	79.1			
post-secondary	20	10.5	45	55			
tertiary (polytechnic)	26	13.6	46.2	53.8			
postgraduate	2	1	0	100			
<b>Income</b>	175	100	25.7	74.3	27.93	1	p<0.01
below average salary in Croatia	121	69.1	14	86			
above average salary in Croatia	54	30.9	51.9	48.1			
<b>Company type</b>	191	100	25.1	74.9	15.74	3	p<0.01
private sector	100	52.4	14	86			
public sector	79	41.4	39.2	60.8			
private-public organisation	10	5.2	20	80			
other	2	1	50	50			

Source: author's own calculations

When it comes to the question “Have you undergone training paid for or provided by your employer, or by yourself if you are self-employed?”, statistically significant differences have been found between groups depending on their level of education, income and type of company, confirmed by the significance levels shown above in Table 2.

The above results show that only a small number of employees had undergone training paid for or provided by their employer. It can therefore be concluded that this type of training is more characteristic in case of employees with higher level of education (post-secondary education: 46.2%), whose income is also above average salary in Croatia, and that they are largely employed in the public sector. This indicates that the level of investment in additional training in the private sector is inadequate.

## 6. Conclusion

Professional development of staff should be one of the main processes of the human resources management function aimed at enhancing the quality of workforce and thereby increasing the quality of business entity management as a whole.

Sadly, this research has shown that investment in the professional development of staff through various forms of training and development in Eastern and Central Croatia is very low. Only 13.2% of all respondents underwent some type of training or skills development programme provided by their employer. This may be the result of insufficient investment in new knowledge, but also the lack of interest among employees. As expected, the results show

that employees lack the initiative to undergo training on their own, since there were only 6% who were prepared to pay themselves for a development programme.

Taking into account the significance of the observed variables, i.e., level of education, income and company type, the analysis of the results suggests that employees who underwent training, regardless of whether the training was paid for by themselves or not, had a higher level of education, incomes above average salary in the Republic of Croatia, and were mainly employed in the public sector.

There is no doubt that this old paradigm of not investing in human resources should be abandoned. Possible reasons for these disappointing results include inadequate personnel policy of some business entities, lack of financial resources, lack of time, and general lack of interest among employees in personal development and self-affirmation. Only when the issue of human resources development takes centre stage, will the development of a business entity, and consequently the economy as a whole, be possible.

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## **A MODEL FOR THE TOURISM DEVELOPMENT IN OSIJEK - BARANJA COUNTY - SPORT AND RECREATION**

### **MODEL RAZVOJATURIZMA U OSJEČKO-BARANJSKOJ ŽUPANIJI - SPORT I REKREACIJA**

#### **ABSTRACT**

*Croatian tourism with the entry into the European Union is facing new challenges but also opportunities. The European Union recognized Croatia as a tourist country and on this fact we have to base our own economic potential.*

*Many countries and regions are turning to tourism and sports tourism as one of the main pillars of economic development. Croatia also working on the development of specific forms of tourism - sports tourism.*

*In this paper, we started from the assumption that sports tourism brings Osijek-Baranja County certain uses, and creates added value of the popularity of continental tourism.*

*The purpose of research is to research the possible assumption of improving tourism Osijek Baranja County on the development of sport and recreation.*

*Respecting the fact that sport and tourism are important socio-economic phenomena in the strategic development of the Croatia, the aim of this paper was to explore the possibilities of sports tourism in Osijek-Baranja County.*

*The obtained results indicate that there is scope for the development of active tourism in Osijek-Baranja County. Moreover research has proven that the future of sport tourism need to renew outdated tourist-sports offer with new features according to the wishes of potential tourists.*

*This original research paper is based on bibliographic literature, research, and offers social and economic effects of which can be seen from the footnote in the research paper.*

**Keywords:** *sport, recreation, tourism, development, Osijek-Baranja County*

#### **SAŽETAK**

*Hrvatski se turizam ulaskom u Europsku Uniju suočava s novim izazovima ali i prilikama. Naime, Europska Unija prepoznaje Hrvatsku kao turističku zemlju i baš na toj činjenici moramo temeljiti vlastiti gospodarski potencijal.*

*Mnoge zemlje i regije okreću se turizmu i sportskom turizmu kao jednom od glavnih nositelja gospodarskog razvoja. Hrvatska također radi na razvoju ovog specifičnog oblika turizma - sportskog turizma.*

*U radu smo pošli od pretpostavke kako sportski turizam donosi Osječko-Baranjskoj županiji određene koristi, te stvara dodanu vrijednost samoj popularnosti kontinentalnog turizma.*

*Svrha znanstvenog rada je istražiti pretpostavku mogućeg unaprjeđenja turizma Osječko-Baranjske županije na temelju razvoja sporta i rekreacije.*

*Uvažavajući činjenicu da su sport i turizam važne društveno ekonomske pojave u strateškom razvoju Hrvatske, cilj rada je bio istražiti mogućnosti sportskog turizma u Osječko-Baranjskoj županiji.*

*Rezultati dobiveni istraživanjem upućuju da postoji prostor za razvijanjem aktivnog turizma u Osječko-Baranjskoj županiji.. Štoviše istraživanje je dokazalo da je za budućnost sportskog turizma potrebno obnoviti zastarjelu turističko-sportsku ponudu novim sadržajima prema željama potencijalnih turista.*

*Ovaj izvorni znanstveni rad je temeljen na bibliografskoj literaturi; istraživanju ponude te društvenih i ekonomskih učinaka što se može vidjeti iz fusnota u samom znanstvenom radu.*

**Ključne riječi:** sport, rekreacija, turizam, razvoj, Osječko- Baranjska županija

## **1. Introduction**

New trends in development of tourism indicate changes in tourism trends that traditional holiday experiences are replaced with the contents and motives of active holidays . The quality of active tourism affects the development of sport and physical recreation. Due to the growing interest of tourists to spend their vacation unconventional, dynamic and exciting, sports tourism is experiencing its expansion. Sport tourism we can define as „Tourism where sport is main motivation for travel and tourist stay in tourist destination“<sup>37</sup>

Former tourism in Osijek- Baranja County was based on the evaluation of natural resources, cultural and historical attractions, transportation position and level of tourism and hospitality facilities. Unfortunately, the county has not specialized for any one form of selective tourism which would be the guideline for other forms of tourism. So currently, there are signs of development of excursion, health, educational, environmental, rural, hunting and fishing tourism. None of these forms is sufficiently represented, therefore the Osijek-Baranja county could not be characterized as a county that leads in some of these types of tourism. Through the work we will try to list some possibilities of utilization of available resources for the development of sports and recreational tourism.

The geographical position of Osijek-Baranja County has enabled the unique natural beauty and resources that are just perfect for sports and recreational tourism. The county has a continental counties climate in the Pannonian lowland. In addition to being located on the fertile soil of the Pannonian lowland between the rivers Sava, Drava and Danube, county is rich with beautiful lowlands, hills, ponds, waterways and wetlands. All of these offers plenty of opportunities for hunters, cyclists, anglers, runners, walkers, riders and even those who like to watch nature from the air - parachutin.

## **2. Outdoor activities**

Certain level of exercise should be an constitutive part of any holiday, especially because today most jobs have such a load in which the body recovery is achieved more quickly with

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<sup>37</sup> Bartoluci, M. (2003.): **Economics and sport management**, Informator, Zagreb, pp 71

an active rather than a passive way of rest . The life of modern man takes place in an environmentally unfavorable environment dominated by concrete and asphalt construction, poor air quality, noise, cramped living and working spaces. In the "outdoor" Osijek - Baranja county activities can offer the most. With clean air, forests, rivers, walking trails, pristine nature - tourists can connect to closely related forms of tourism - health, sports and recreation

The most represented outdoor activities are natural body movements like walking, running, climbing, and jumping that tourists with relatively little effort can quickly master. Therefore, tourists are motivated to participate in them as one of the benefits of outdoor activities. The table below shows the most common activities in the countryside where tourists complement their active vacation. If we examine these types of activities,we will find that the Osijek - Baranja county can offer most of the above. This paper is based at the biking, horseback riding, hunting and fishing as one of the leading types of activities in which the county should create a foundation for the development of sports and recreational tourism.

Table 1 Sports and recreational tourism in Croatia

<b>THE TYPES OF ACTIVITY THAT TAKES PLACE IN NATURE</b>	<b>POSITIVE IMPACT ON THE ANTHROPOLOGICAL STATUS</b>	<b>KINESIOLOGICAL PROGRAMS AND FACILITIES</b>
<b>CYCLIC AEROBIC ACTIVITY TYPE</b> Walking, hiking, jogging, running, hiking trekking, aplanizam, rock climbing, swimming, rowing, cycling	<b>PRIMARILY ON HEART AND RESPIRATORY SYSTEM</b> Aerobic capacity increase, stimulate metabolic processes, better general circulation, stimulation of the respiratory system, anti-stress effect on the nervous system	<b>PROGRAMS IN NATURE</b> Health preventive Team-building Touring movement Orientation in nature
<b>EXTREME SPORTS</b> Scuba diving, rock climbing, caving, paragliding, cycling	<b>NERVOUS SYSTEM STIMULATION</b> Increased adrenaline, better motor skills , strength, coordination, flexibility combined with other activities	<b>SPECIAL PROGRAMS FOR SMALL GROUP OF PARTICIPANTS</b> Combined with other activities
<b>TARGET TRAINING</b> The morning breathing exercises, exercises in water aerobics, yoga, Tai Chi, dance, corrective exercise	<b>POSITIVE EFFECTS TARGET OF EXERCISE PROGRAMS</b> Anti-stress effect , calming the nervous system , flexibility , circulation , mental satisfaction , pain reducing	<b>PREVENTION PROGRAMS TO THE GENERAL PUBLIC</b> As part of preventive health programs , wellness and spa offers
<b>SPORTS GAMES AND ACTIVITIES</b> Sports cricket, tennis, table tennis, golf, miniature golf, bowling, horseback riding, rafting, kayaking, canoeing	<b>MOTOR ABILITIES DEVELOPMENT</b> All motor skills, socialization, relaxation, pleasure	<b>ENHANCING CAPACITY</b> In all offered programs, according to opportunities and interests

*Source: Mirna Andrijašević, Possibilities for the development of selective tourism in Croatia based on sports - recreational offers.*

<http://www.uhpa.hr/docs/files/zagreb%20kif%20HUPA%20%20SPORTSKO%20REKREACIJSKI%20TURIZAM%20U%20REPUBLICI%20HRVATSKOJ2.pdf> (accessed March 2014.)

### 3. Bicycling

Cycling through nature is one of the most popular outdoor activities that tourists choose. Riding a bike through numerous marked and unmarked trails, forest paths and roads, is the best way to best discover surroundings. Slavonian lowland is actually ideal for a bicycle as a mean

of transportation, there are no serious uphill climbs, sites are relatively close to each other so there is no need to travel long distances.

City of Osijek has a combination of bike paths throughout the city, and there is an important bike trail which takes you from the city center to Kopački Rit. Construction of new bike paths could actually perform the changing purposes because many trails already exist as the Danube and Drava embankments, averages through forests and secondary rural roads. They could be considered if the bike lanes would be legalized, charted and marked the course and equipped with chemical toilets, road signs and rest areas.

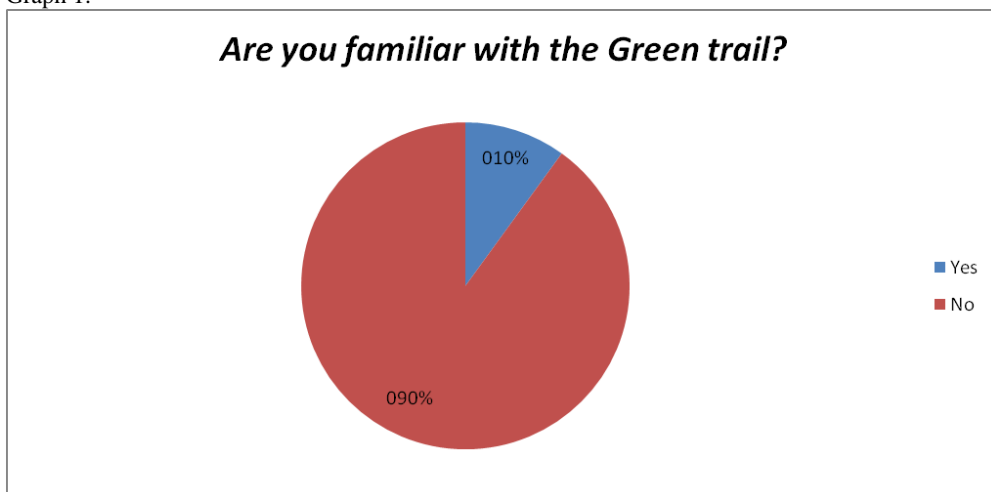
City of Osijek, with over 30 kilometers of trails, can rightly be called the leading city in the county in building bike paths and certainly other cities should take an example of Osijek. The construction of bike paths in the city of Osijek started a kind of "cycling revolution" which is the number of cyclists has increased enormously. By this positive example of promoting Osijek contributed to local governments and non-governmental organizations to insure money to build a track using the EU funds.

Foundation "Slagalica" from Osijek implemented a project worth nearly 400,000 euros, financed by the European Union under the IPA Cross-Border Programme Croatia - Hungary. The "Green - track trail that connects" connects three counties: Osijek - Baranja, Virovitica and Požega Slavonija and the two-state 120 - kilometer long bicycle trail that starts in the Hungarian village Kémes, border crossing Donji Miholjac, Orahovica, Kutjevo, Našice and ends in Latinovac.

This bike path opens up opportunities for the local population for the development of selective types of tourism such as sports and recreation, ecotourism, health tourism, etc. Green Trail is designed as a project for the development of tourism in the local economy. The amazing fact is that you can sit on the bike in Našice and get to Vienna or Prague.

We conducted a survey on a sample of 50 people from the Osijek - Baranja County and got devastating results. As many as 90 % surveyed were not familiar with the Green trail which is a part of a Greenway European network that connects a big part of Europe. This leads us to the conclusion that it should be a lot more work to promote cycling tourism in the county.

Graph 1:



Source: Jurlina, M., Vida, D., (2014.): *Survey* n= 50, unstatistical, random sample, Slavonija – Baranja county inhabitants

#### 4. Horseback riding

State stud farm in Đakovo was established 1506.<sup>38</sup>, and thus ranks among the oldest stud farm in Europe. Horses Lipizzaner breed in Ergela grown since the beginning of the 18th<sup>39</sup> century. For breeding and selecting horses used two locations - Stallion, located in the Đakovo, and Ivandvor, close to the city. But apart from breeding and selection of horses, studfarmhas the quality of which prove noted places in equestrian competitions.

State Lipizzaner stud farm Đakovo on three core activities<sup>40</sup>:

- breeding and selection of horses lipizzan
- Training of horses for sporting events, including treadmills, hand driving, driving fourwheeler
- food production on their own land, or land of 350 hectares land, hay, straw, oats

In addition to core activities, state Lipizzaner stud farm Đakovo offers tourist activities with this in mind: tourist visits to Stallion and Ivandvor, shows for tourists, themed shows, Christmas Ball Lipizzaner horses and ride Lipizzan horse-drawn carriage. Although, all of the above has the features and recreational tourism through a walk, it would be commendable if in the future offer we could see the riding school for children and adults. As part of the riding school could be realized and added value in terms of the development of health tourism (therapeutic riding).

Horseback riding is an ideal form of recreation which releases stress and raises the level of mental and physical abilities. It is important to note that this type of recreation may commence regardless of age would certainly contributed to greater numbers of tourists interested to visit to Osijek-Baranja county, and city Đakovo.

#### 5. Hunting and fishing

The natural environment of Slavonia and Baranja rich with hunting base and fish resources, plenty of river flows and Slavonian forests, as well as economic characteristics of Slavonia and Baranja region's main source of hunting and fishing tourism development. Osijek-Baranja County is among the richest fund of wildlife, fish, forests and rivers, which significantly affects the development of sports and recreational tourism. The county owns 83 hunting grounds the total hunting area of 347,685 ha managed by hunting associations and 14 state hunting grounds<sup>41</sup>. Hunting Association of Osijek-Baranja county consists of six hunting office: Baranja, Donji Miholjac, Đakovo Našice, Osijek and Valpovo.

County has a rich tradition of hunting and can offer high trophy wild animals in open hunting (deer, wild boar) and in fenced hunting grounds (mouflon, fallow deer). Formula for successful hunting is a combination of excellent hunting grounds and wildlife and the quality of accommodation and food, all of which the county can offer. When we add to that from July 1st 2013 European hunters can easily come to Croatian hunting area, we have the opportunity to increase the number of foreign fighters which so far has been between 7000-7500<sup>42</sup>. For

<sup>38</sup> Čačić, M., Baban, M., Korabi, N., Tadić, D. (2007.): **Geographical - cultural aspects of breeding**

**Lipizzaner in Croatia**, 1. Hrvatski simpozij o lipicanskoj pasmini, Đakovo, 2007., pp 1

<sup>39</sup> Čačić, M., Baban, M., Korabi, N., Tadić, D. (2007.): **Geographical - cultural aspects of breeding**

**Lipizzaner in Croatia**, 1. Hrvatski simpozij o lipicanskoj pasmini, Đakovo, 2007., pp 1

<sup>40</sup>State Lipizzaner stud farm Đakovo: **Stud farm Đakovo today**; <http://www.ergela-djakovo.hr/content/ergela-dakovo-danas> (accessed April 2014.)

<sup>41</sup> Tourist Bord of Osijek – Baranja county: **Hunting and Fishing**, <http://www.tzosbarzup.hr/en/experience/hunting-and-fishing/> (accessed March 2014.)

<sup>42</sup> Poslovni dnevnik: **Lovni turizam u EU okreće 10 mlrd. eura, Hrvatska uzima mrvice**,

comparison, in Europe is active even 7 million hunters<sup>43</sup>. The above data shows that the increase in this form of tourism definitely has. The biggest competitors are our Hungary, Czech, Slovakia, Romania and Bulgaria, which offer a range of facilities, as well as hunting grounds tour and photo safari. If this added in our service we could get possibility of an increased number of arrivals.

Increased hunters arrivals are expected when Croatia enters the Schengen zone, which will facilitate complicated signing and transfer of weapons across the border, as well as transportation of trophies and wildlife.

Special emphasis should be given on the development strategy of hunting Osijek-Baranja. Tourists hunters spend two or three times more than ordinary tourists, but foreign hunters in Croatia consume only 30% of the tourist services and 70% on hunting wildlife while abroad, the ratio is reversed. The increase in revenue per hunter tourists can be expected when the public sector recognize the potential in promoting hunting activities and when hunting societies overcome voluntarism and amateurism in terms of hunting tourism businesses. The solution surely lies in cooperation Association of Croatian Travel Agencies and Croatian Hunting Association, the standardization of services, professionalization, and the inclusion of non-hunting areas in international competition worth 10 billion euros<sup>44</sup>.

Because water is rich in all kinds of fish, fishing in the Osijek-Baranja county is prevalent in all its parts. The county has a substantial basis for the development of sport fishing tourism.

Water-resource potential of the area are:

- Lakes formed by natural or artificial means
- Rivers with tributaries and backwaters
- Old riverbeds
- Wetlands
- Sport-fishing ponds and economic ponds

Current interest of foreign tourists fishing for the Osijek-Baranja County is great. But it would be greater if there is prepared offer within the continental tourism. To foreign fishermen really started to come in Osijek-Baranja County, it is necessary to work on obtaining permission from the relevant ministries to increase fish stocks and protect it. It should be available via the media and trade shows to present the beauty and richness of the county, call them at selected places to hunt fish and offer them appropriate accommodation with traditional local cuisine.

## 6. Conclusion

“Share in the overall continental Croatian tourist trade is still negligibly small. Low share is the result of disproportionate funds reallocation, poor accommodation, low share of private investment, lack of attractive content.”<sup>45</sup>. This is typical description of continental Croatian tourism.

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<http://www.poslovni.hr/hrvatska/lovni-turizam-u-eu-okrece-10-mlrd-eura-hrvatska-uzima-mrvice-240329>  
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<sup>43</sup> The European Federation of Associations for Hunting & Conservation: **Hunters for conservation**, <http://www.face.eu/nature-conservation/hunters-for-conservation> (accessed February 2014.)

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(accessed February 2014.)

<sup>45</sup> Jurlina, M., Vida, D., (2013.): **Development level of health tourism in Osijek-Baranja County**, 2nd International Scientific Symposium Economy of Eastern Croatia – Yesterday, Today, Tomorrow, Osijek 2013.

The analysis of the various tourism resources, leads to the conclusion that the Osijek-Baranja County has exceptional advantages for the development of various forms of sport and recreation tourism. It is necessary to invest in outdated tourism objects and adapt to the modern demands of tourism demand, animate tourism professionals and small family farms in order to raise the level of offer and using economic and financial potential of this tourism niche.

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## **ANALYSIS OF HUMAN RESOURCES DEVELOPMENT OF EASTERN CROATIA AND THEIR IMPACT ON ECONOMIC GROWTH**

### **ANALIZA RAZVIJENOSTI LJUDSKIH POTENCIJALA ISTOČNE HRVATSKE I NJIHOV UTJECAJ NA GOSPODARSKI RAST**

#### **ABSTRACT**

*In Croatia, there are great differences in the development of certain regions measured by standard indicator of GDP per capita, unemployment and employment rate trends, and equipment with various components of the infrastructure. There are noticeable and significant differences in human resources development. The objective of the paper is to analyse human resources development in Eastern Croatia and to establish their impact on the economic growth of Eastern Croatian counties. This will be conducted in three steps: the subject of analysis in the first step will be global human component through quantitative and qualitative indicators (population density, average household size, level of urbanisation); indicators that directly express the degree of utilisation of human resources (employment per 100 inhabitants, employment per sectors), indicators pointing to the existence of the preconditions for the formation of high-quality human factor (coverage of relevant age groups by secondary and tertiary education, the number of pupils and university students per 100 inhabitants). In the second part of the research, the authors will use the Human Development Index (HDI) to evaluate human resources development in Osijek-Baranja County, Požega-Slavonia County, Brod-Posavina County, Vukovar-Srijem County, and Virovitica-Podravina County. With regard to content, the Human Development Index can be used as a good indicator of human resources development, and is, at the same time, the indicator of the achieved level of development of a certain country/region, because it measures life expectancy, education, and GDP per capita. In the third part of the research, quantitative methods will be used to analyse the relationship between HDI and GDP per capita of Eastern Croatian counties and some possible measures for human resources development will be proposed.*

**Key words:** human resources, economic growth, development, HDI (Human Development Index)

#### **SAŽETAK**

*U Hrvatskoj postoje velike razlike u razvijenosti pojedinih regija mjerene standardnim pokazateljem BDP-a po stanovniku, kretanjem stope nezaposlenosti i zaposlenosti te*

*opremljenosti različitim komponentama infrastrukture. Uočavaju se i značajne razlike u razvijenosti ljudskih potencijala. Cilj rada je analizirati razvijenost ljudskih potencijala istočne Hrvatske i utvrditi njihov utjecaj na gospodarski rast županija istočne Hrvatske. To će se napraviti u tri koraka: u prvom će se analizirati: globalna ljudska komponenta putem kvantitativnih i kvalitativnih pokazatelja (gustoća naseljenosti, prosječna veličina domaćinstva, stupanj urbanizacije); pokazatelja koji posredno iskazuju stupanj korištenja ljudskih potencijala (zaposlenost na 100 stanovnika, zaposlenost po sektorima); pokazatelja koji ukazuju na postojanje preduvjeta za formiranje kvalitetnog ljudskog faktora (obuhvat relevantnih dobnih skupina sekundarnim i tercijarnim obrazovanjem, broj učenika i studenata na 100 stanovnika). U drugom dijelu istraživanja autori će putem indeksa ljudske razvijenosti (HDI) ocijeniti razvijenost ljudskih potencijala u Osječko-baranjskoj, Požeško-slavonskoj, Brodsko-posavskoj, Vukovarsko-srijemskoj i Virovitičko-podravskoj županiji. S obzirom na sadržaj, indeks ljudske razvijenosti može se koristiti kao dobar pokazatelj razvijenosti ljudskih potencijala, a istodobno je i pokazatelj dostignute razine razvijenosti neke zemlje/regije jer mjeri životni vijek, obrazovanost i BDP po stanovniku. U trećem dijelu istraživanja će se kvantitativnim metodama analizirati odnos HDI-a i BDP-a po stanovniku županija istočne Hrvatske te će se navesti neke moguće mjere za razvoj ljudskih potencijala.*

**Ključne riječi:** *ljudski potencijali, gospodarski rast, razvoj, HDI (indeks ljudske razvijenosti)*

## **1. Introduction with the Literature Review**

In the scientific and technical literature covering studies about the importance and contribution of the human factor to production and development of enterprises, local and regional communities or the national economy, commonly used categories are „human capital“ and „human resources“. They are often interchanged in terms of content and are used as synonyms. Following the historical process of research and measurement of the value of investment in people and the values which people bring into the business process through labour as well as contribution they provide to the creation of a new value, it is concluded that it is necessary to make a distinction between these two categories. In the analysis of human capital, one is focused on the value of investing in people through education and health care, but also all other activities that contribute to human development. These investments represent individual and social cost and increase human abilities, knowledge and skills. In contrast, in the analysis of human resources, one analyses the contribution people provide to the creation of a new value by including their abilities, knowledge, and skills into the business process. When a person, i.e. employee, includes his or her human capital into the business process, this capital becomes the key component of human resources.

The term „human resources“ implies total mental and physical abilities at the disposal of enterprises which they can use to achieve their business goals (Bahtijarević Šiber, F., 1999). At national level, human resources can be defined as total psycho-physical energy owned by the inhabitants of a country, i.e. a society, which can be used to achieve its development goals. In the pre-working age, society has a crucial influence on the formation and development of human resources, primarily through education and health care, but also through other activities such as child care, sports, and cultural activities.

Human resources cannot be directly expressed in value; thus, their value and development are measured indirectly through human capital. The literature covers various criteria for assessment of the value and development of human resources at the macro level. W. Petty was the first person who tried to quantitatively evaluate human resources in the 17<sup>th</sup> century

England (Vinski, I., *Valorizacija ljudskog potencijala [Valuation of Human Resources], Ekonomski pregled, [Economic Review]*11-12/1977). Petty defined it as budget of total income of the population and the appropriate size of capital the earnings would bring if they were invested at a particular interest rate. Friedrich and Johann von Thunen used two methods to assess the value of human capital: capitalisation of the net value of future earnings per market interest rate and the total cost of development of a person of a certain age (Jarvis, P. H., 2000). They found that the value of human capital in Great Britain in 1891 was five times greater than the value of stocks of physical capital. M. J. Bowman advocated the opinion that human resources should be assessed as a total value of services the employees will provide in predictable working life decreased by a discount for an appropriate number of years (Bowman, M. J., 1974). In their work *Education, Labour Force and Economic Growth*, (Harbison, F., Myers, Ch., 1964), Harbison and Myers developed quantitative indicators to measure human resources development after they had found that economists neglected the study of the human factor and its significance and contribution to economic growth. They concluded that this is primarily due to the inability to determine the input-output relationship, that is indisputable in case of physical capital, because the value of this capital is directly measurable. Interest in the study of human capital was growing in the second half of the 20<sup>th</sup> century, which is primarily the merit of Nobel Prize Laureates Theodor Schultz and Gary Becker. However, it should be taken into account that this was the time when development of national economies was impossible without an increase in education of the population. Therefore, Schultz and Becker primarily engaged in investments in education which they treated as an investment in human capital, although Schultz found that there were several groups of activities and flows that affect the increase in human capital. These are improvement of health services, formal education, education in the workplace, adult education outside the company, as well as individual and family migrations due to greater employment opportunities (Mervar, A., 2003). OECD publications list three ways of measuring human capital: through the costs of education and training, through testing of competences, through the indicators of „achievements“: wages, job security, work place status.

Lately, the Human Development Index (HDI) is calculated by the OUN. With regard to the content of the HDI, it can be used as a good indicator of human resources development, and the HDI is at the same time a good indicator of the achieved level of development of a country or a region. The index was constructed at the beginning of the 1990s by Amartya Sen, Mahub ul Hak, Gustav Ranis, Meghan Desai, and it has been used ever since by the OUN and is published in the annual Human Development Report. The concept of human development in a broader sense is defined by the OUN as development of the people, development for the people and development by the people (Human Development Report, 1993). The HDI is calculated as a combined index of three indicators. These are: 1. the life span and health condition of the population measured by life expectancy, 2. knowledge and education of the population, 3. purchasing power i.e. the standard of living of the population measured by GDP per capita. The first two indicators indirectly show human resources development, while the third provides a better image of the achieved level of development of a country.

These three indicators are appropriate for indirect demonstration of human resources development at the macro level, because longer life expectancy of the population implies a better state of health, which results in better mental and physical abilities, i.e. greater vitality of the population. Purchasing power of the population indirectly expresses the degree of fulfillment of the needs, and thus satisfaction and motivation of employees. Also, it indirectly expresses, although not precise enough (because GDP per capita, and not per employee is

taken into account), labour productivity. Finally, the achieved level of education indirectly expresses the level of mastery of knowledge and skills necessary to achieve growth and development. Until 2009, all countries of the world were ranked into three groups according to the level of HDI: (0,000 - 0,499 low HDI countries; 0,500 – 0,799 medium HDI countries; 0,800 – 1,00 high HDI countries. Since 2009, the OUN classifies countries into four groups: very high HDI countries (0,9 - 1,00), high HDI countries (0,8 - 0,899), medium HDI countries (0,5 - 0,799), low HDI countries (0 - 0,499). As this is a relatively new indicator composed of multiple components, it is constantly upgraded and its contents therefore constantly change. From 2010, the World Bank introduced a new methodology for calculating the Human Development Index. According to the calculation methodology, by 2010, knowledge and education were expressed by a combined index of literacy of the population and the proportion of corresponding population groups in primary, secondary and tertiary education. Since 2010, this indicator was replaced by a new indicator that shows the level of education which presents access to knowledge and is measured by average and expected years of schooling of the population. Since 2010, new ranking criteria of the countries have been applied in terms of Human Development Index. All countries are classified into four groups; ¼ of the analysed countries is included in each of the groups. 25% of the highest-ranked countries are countries of very high human development level, other 25% of the ranked countries are high human development countries, the third 25% of the ranked countries are countries of medium human development, and the final 25% are low human development countries (Human Development Report 2011). HDI can also be used to measure development of human resources in certain regions and local communities.

The objective of the paper is to analyse the development of human resources in Eastern Croatia and to establish their impact on the economic growth of Eastern Croatian counties. This will be conducted in three steps: the subject of analysis in the first step will be global human component through quantitative and qualitative indicators (population density, average household size, level of urbanisation); indicators that directly express the degree of utilisation of human resources (employment per 100 inhabitants, employment per sectors), indicators pointing to the existence of the preconditions for the formation of high-quality human factor (coverage of relevant age groups by secondary and tertiary education, the number of students and university students per 100 inhabitants). In the second part of the research, the authors will use the Human Development Index (HDI) to evaluate human resources development in the Osijek-Baranja County, Požega-Slavonia County, Brod-Posavina County, Vukovar-Srijem County, and Virovitica-Podravina County. In the third part of the research, quantitative methods will be used to analyse the relationship between the HDI and GDP per capita of Eastern Croatian counties and some possible measures for human resources development will be proposed.

## 2. Methodology

Data by the National Bureau of Statistics are used in the paper to calculate the HDI. To ensure that all the data are transformed into an index which obtains the values from zero to one, which allows for their comparison and aggregation, the Method of Transformation of Variables is used:

$$x - index = \frac{x - \min(x)}{\max(x) - \min(x)}$$

wherein  $\min(x)$  and  $\max(x)$  are minimum and maximum values of the variable  $x$ . Given the availability of statistical data and the possibility of comparison, the HDI is calculated according to the methodology of the World Bank that was used until 2010. Furthermore,

simple linear regression is also used (Ordinary Least Squares Method, OLS). In statistics, the Least Squares Method, (OLS) is a method for estimating unknown parameters in the linear regression model. This method minimises the sum of squares of the vertical distance between the observed indicators and the collection of indicators provided by the linear approximation. The resulting estimates can be expressed by a simple formula, especially in the case of one regressor. Using the Ordinary Least Squares Method, the authors analysed the impact of changes in certain variables of the HDI on the increase in GDP per capita. The same model was also analysed by the graphical method.

### 3. Analysis of Human Resources Development in Eastern Croatia

#### 3.1. Global Human Component

According to the results of the 2001 Census, a total of 891,259 inhabitants lived in Eastern Croatia, or 20,1% of the total population of the Republic of Croatia. In 2011, 805,998 inhabitants lived in Eastern Croatia (18,81% of the total Croatian population; the Census, 2011). This means that East Slavonia recorded depopulation of 9,56% in the ten-year census period. This is a consequence of negative natural population growth and mechanical attrition. The following table presents the basic data on population, households, and population density of the counties in Eastern Croatia and in the Republic of Croatia in 2011.

Table 1 Population, number of households, proportion of urban population in total population and population density in Croatia and Eastern Croatian counties in 2011

	Population in 2011	Number of households in 2011	The average number of household members in 2011	The proportion of urban population in total population in 2011 (%)	Population density in 2011 (inh./km <sup>2</sup> )
Republic of Croatia	4284889	1519038	3,15	70,39	75,71
Virovitica-Podravina County	84836	29622	3,53	47,48	41,92
Požega-Slavonia County	78034	26408	3,76	74,90	42,81
Brod-Posavina County	158575	52056	3,36	46,27	78,12
Osijek-Baranja County	305032	110009	3,34	63,58	73,41
Vukovar-Srijem County	179521	61094	3,79	49,13	73,15

Source: Authors' analysis according to the NBS, the 2011 Census

The largest population, according to the 2011 Census, lives in Osijek-Baranja County, which also has the highest number of households. In comparison with the analysed counties, Požega-Slavonia County in 2011 had the highest proportion of urban population (74,9%), and Brod-Posavina County has the highest population density (78,12 inhabitants per km<sup>2</sup>), which represents a positive deviation in comparison with the Croatian average.

Table 2 Global human component of the Republic of Croatia and Eastern Croatian counties

	Total number of employees per 100 inhabitants, 2012	Number of employees in the secondary sector per 100 employees, 2012	Secondary school qualifications per 100 inhabitants, in 2011	Number of high school students per 100 inhabitants, in 2012	University qualifications per 100 inhabitants, in 2011	Number of university students per 100 inhabitants in 2012
Republic of	24,89	28,93	44,62	4,36	13,89	3,57

	Total number of employees per 100 inhabitants, 2012	Number of employees in the secondary sector per 100 employees, 2012	Secondary school qualifications per 100 inhabitants, in 2011	Number of high school students per 100 inhabitants, in 2012	University qualifications per 100 inhabitants, in 2011	Number of university students per 100 inhabitants in 2012
Croatia						
Virovitica-Podravina County	15,48	32,17	38,44	4,49	6,93	2,75
Požega-Slavonia County	17,30	33,74	39,41	4,98	8,33	3,57
Brod-Posavina County	15,73	39,78	42,04	4,79	7,85	3,14
Osijek-Baranja County	22,55	31,90	43,37	4,61	10,78	3,07
Vukovar-Srijem County	16,95	27,21	41,32	4,78	7,85	2,78

Source: Authors' analysis according to the NBS, the 2011 Census

Analysis of the data in Tables 1 and 2 indicates below-average level of development of the global human component in Eastern Croatian counties in comparison with the Croatian average. In fact, all the counties recorded a lag in the number of employees per 100 inhabitants in relation to the Croatian average (Virovitica-Podravina County the most – 37,81%, and Osijek-Baranja County the least – 9,4%), lag in the number of the population with secondary education per 100 inhabitants (Virovitica-Podravina County the most, 13,85%, and the Osijek-Baranja County the least – 2,8%), negative deviation of the number of university graduates per 100 inhabitants (Virovitica-Podravina County the most, 50,11%, and Osijek-Baranja County the least – 22,39%), as well as negative deviation of the number of university students per 100 inhabitants (Virovitica-Podravina County the most, 22,97%, and Brod-Posavina County the least – 14,01%, and no deviations in relation to the Croatian average – Požega-Slavonia County). All the counties recorded positive deviations in the number of high school students per 100 inhabitants (the largest positive deviation had Požega-Slavonia County, 14,22%), and positive deviations in the number of employees in the secondary sector per 100 employees (except Vukovar-Srijem County which had negative deviations in case of this indicator, too). These data indicate that the preconditions have been created for the formation of high-quality human factor in Eastern Croatia.

### 3.2. Human Development Index (HDI)

As noted above, HDI is an indicator of human resources development. HDI of Eastern Croatian counties and the Republic of Croatia for 2007 and 2011 is analysed below.

Table 3 HDI for the Republic of Croatia and Eastern Croatian counties in 2007

	Human Resources Education Index	GDP/ Pc USD	GDP Index	Life expectancy	Life exp. index	HDI	HDI deviation from the Croatian average
Republic of Croatia	0,8374	13754	0,8218	75,46	0,8410	0,8334	100,00

	Human Resources Education Index	GDP/ Pc USD	GDP Index	Life expectancy	Life exp. index	HDI	HDI deviation from the Croatian average
Virovitica-Podravina County	0,8265	9163	0,7540	73,48	0,8080	0,7962	95,53
Požega-Slavonia County	0,8252	8649	0,7444	74,79	0,8298	0,7998	95,97
Brod-Posavina County	0,8198	7222	0,7143	75,12	0,8353	0,7898	94,77
Osijek-Baranja County	0,8335	10733	0,7804	74,5	0,8250	0,8130	97,55
Vukovar-Srijem County	0,8124	7694	0,7249	75,77	0,8462	0,7945	95,33

Source: Authors' calculation

In 2007, all of the analysed counties lagged behind the average Croatian Human Development Index. The greatest lag was recorded in Brod-Posavina County, which lags behind the Croatian average by 5,23%. This is primarily due to the fact that in 2007, Brod-Posavina County had 48% less income than the Croatian average. All the counties have a lower level of education of human resources in comparison with the Croatian average, but Osijek-Baranja County lags behind the least. The county with the highest human resources development, as measured by the HDI Index, is the Osijek-Baranja County (HDI=0,8130), and, according to the OUN methodology that was used until 2010, this county is the only county that groups among the counties with high Human Development Index (other counties group among the counties with medium Human Development Index).

Table 4 HDI for the Republic of Croatia and Eastern Croatian counties in 2011

	Human Resources Education Index	GDP/ Pc USD	GDP Index	Life Expectancy	Life exp. index	HDI	HDI deviation from the Croatian average
Republic of Croatia	0,8536	14364	0,8291	78,083	0,8847	0,8558	100,00
Virovitica-Podravina County	0,8401	8811	0,7475	74,107	0,8185	0,8020	93,72
Požega-Slavonia County	0,8407	8738	0,7461	76,46	0,8577	0,8148	95,21
Brod-Posavina County	0,8396	8183	0,7352	76,853	0,8642	0,8130	95,00
Osijek-Baranja County	0,8417	11507	0,7921	75,734	0,8456	0,8264	96,57
Vukovar-Srijem County	0,8327	8650	0,7444	75,8	0,8467	0,8079	94,41

Source: Authors' calculation

Osijek-Baranja County was also in 2011 the county with the highest level of human development (HDI=0,8264); however, all the other counties also exceeded the Human Development Index of 0,800. The subject of the following analysis is the change in individual components of the Human Development Index in 2011 compared to the year 2007.

Table 5 The change in the HDI for the Republic of Croatia and Eastern Croatian counties in 2011/2007

	Human Resources Education Index	GDP/Pc USD	GDP Index	Life expectancy	Life exp. index	HDI
Republic of Croatia	101,93	104,44	100,89	103,48	105,20	102,69
Virovitica-Podravina County	101,65	96,16	99,13	100,85	101,30	100,73
Požega-Slavonia County	101,88	101,03	100,23	102,23	103,36	101,88
Brod-Posavina County	102,42	113,31	102,93	102,31	103,46	102,94
Osijek-Baranja County	100,98	107,21	101,50	101,66	102,50	101,65
Vukovar-Srijem County	102,50	112,43	102,69	100,04	100,06	101,69

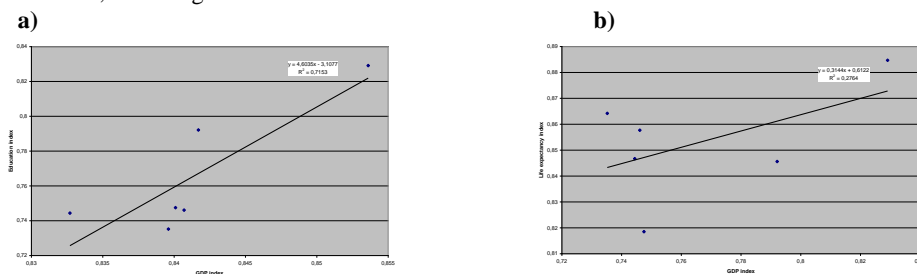
Source: Authors' calculation

The Republic of Croatia and all the Eastern Croatian counties recorded a positive change in the HDI, while the changes in the Eastern Croatian counties are of lower intensity (with the exception of Brod-Posavina County). Brod-Posavina County (13,31%) and Vukovar-Srijem County (12,43%) achieved the highest income growth per capita in 2011 in relation to 2007. In the same period, Virovitica-Podravina County (one of the analysed counties), recorded a reduction of income (3,84%). Brod-Posavina County and Vukovar-Srijem County also had the highest increase in the education of human resources (Education Index increasing by 2,42 % and 2,5%). However, the Vukovar-Srijem County recorded the smallest increase in life expectancy in 2011 in relation to 2007, and therefore, this county realised HDI growth on the level of other analysed counties. The only county which changed the HDI on the national level of HDI change is Brod-Posavina County. Therefore, it can be concluded that, although all the counties recorded HDI growth in the analysed period, this increase was insufficient for reaching the development dynamics of the most developed Croatian counties in Human Development Index.

### 3.3. Regression Analysis of the Relationship Between HDI Components

The Least Squares Method is used below to analyse the impact of HDI components on income growth.

Chart 1 The relationship between a) Income Index and Human Resources Education Index, and b) Income Index and Life Expectancy for the Republic of Croatia and Eastern Croatian counties, linear regression



Source: Authors' calculation



The charts confirm the expected positive correlation between the increase in income and the level of human resources development. It is important to note that, although there is a positive correlation in both cases a) and b), faster income growth is achieved by increasing the level of education of the population (and therefore, the correlation coefficient in Chart a) of 84,57%, which means that a strong correlation was established between the increase in the education of the population index and income growth). This means that the Republic of Croatia (and all analysed counties) should make significant investments in education in order to increase generation coverage of the population at all levels of education and extend its duration. In order to achieve this objective, it is necessary to increase allocations for science and education, to fund vocational education (which is currently being accessed in a traditional manner), and the reform of vocational education should be used to fulfill the need for specific practical knowledge and skills as well as general knowledge and skills such as interpersonal relationships and social competence, to encourage life-long learning which is currently mainly carried out through adult education policy, to use best practice from other European economies, to apply ICT in education and encourage diverse, innovative approaches to learning.

### 3. Conclusion

In recent years, the rise of the role of human resources in the development of enterprises and national economies has resulted in more frequent attempts of their reporting and measuring their impact on economic growth. HDI is increasingly used as an indicator of human development. Analysis of human resources development in Eastern Croatian counties and in the Republic of Croatia indicated that all the analysed counties in 2011 had Human Development Index greater than 0,800 (according to the classification until 2010 – high Human Development Index), and that they made progress in relation to 2007. However, human resources development in Eastern Croatia had a slower dynamics than the average human resources development in Croatia, and, in fact, these counties recorded a developmental lag. Analysis of the impact of education of human resources and life expectancy has shown that it is necessary to make further investments in human resources development through education policy.

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## **THE IMPLEMENTATION OF THE BOLOGNA PROCESS IN REPUBLIC OF CROATIA**

### **PRIMJENA BOLONJSKOG PROCESA U REPUBLICI HRVATSKOJ**

#### **ABSTRACT**

*Reform of higher education system in Croatia is almost a permanent state in the past thirty years. Whole time, there wasn't longer period in which higher education system could stabilize and develop on the basis of some generally accepted principles, with occasional corrections, adjustments and necessary modernization. Based on the fundamental principles and objectives of the Bologna Declaration, the Republic of Croatia went through restructuring and adaptation of high education system in the last decade. The implementation of Bologna process has resulted in a number of positive and negative consequences. The aim is to show the importance of the education system and the relationship between the economy and education through an analysis of the introduction of the Bologna Process in Republic of Croatia.*

**Key words:** *Bologna process, higher education, educational institutions, development*

#### **SAŽETAK**

*Reforma sustava visokog obrazovanja u Republici Hrvatskoj gotovo da je trajno stanje u posljednjih tridesetak godina. Za cijelo to vrijeme nije bilo dužega razdoblja u kojem bi se sustav visokog obrazovanja mogao stabilizirati i razvijati na temelju nekih općeprihvaćenih načela, uz povremene korekcije, prilagodbe i modernizacije nužne svakom, pa i najstabilnijem sustavu visokog obrazovanja. Temeljeći se na osnovnim načelima i ciljevima Bolonjske deklaracije, Republika Hrvatska je u posljednjem desetljeću krenula putem restrukturiranja i prilagođavanja sustava visokog obrazovanja. Primjena Bolonjskog procesa rezultirala je kako pozitivnim tako i negativnim posljedicama. Cilj rada je ukazati na važnost obrazovnog sustava i međusobnu povezanost gospodarstva i obrazovanja kroz analizu uvođenja Bolonjskog procesa u Republici Hrvatskoj.*

**Ključne riječi:** *Bolonjski proces, visoko obrazovanje, obrazovne institucije, razvoj*

#### **1. Introduction**

Foundations of European Union rest on common constitution, various community policies, budget, etc. If we want to have all the common parts harmonized and balanced, it is necessary that the accomplishment of previous goals is based on the unique and common education

system that will be in function of common goal. Precisely the last facts became the foundation for creating a European Higher Education Area - EHEA.

To achieve the goals which are equal and harmonized for all EU members should be based on the reform of the educational system. Reform of the educational system is a demanding and complex project. This project is popularly called the Bologna process. The beginning of the Bologna process does not reach far back into the past. First time the idea of creating a European area of higher education is mentioned in the Charter of European universities (called Magna charta universitatum), which was signed in 1888th in Bologna. Although creating a unified the educational environment is not so old it is extremely dynamic and is constantly adjusted and updated. The European Union is the engine that launches the Bologna process. The main goal of the Bologna process is raising quality of national educational system through mutually comparable and measurable system.

As challenges to realization of the Bologna process there is a need which aims to protect the wealth and diversity of European cultures. Besides the cultural dimension attention should be paid also to the social dimension of Bologna Process.

Exactly the social dimension states and emphasizes the importance of the presence of social aspects in the entire reform, and also adjustments of certain national education systems (Communiqué of the Conference of Ministers responsible for Higher Education in Berlin on 19 September 2003rd and Communiqué of the Conference of European Ministers Responsible for Higher Education, Bergen, 19-20 May 2005).

The importance of the social dimension, which is defined in the most important documents of the Bologna Process, lies primarily in pointing to the problems with financial burdening of students (Puzic Doolan, Dolenc, 2006., 243). We may say that the challenges of the Bologna process are to ensure:

1. Clearly readable and comparable degrees of knowledge system (Diploma Supplement)
2. System of higher education based on two cycles, undergraduate and graduate
3. European Credit Transfer System ECTS
4. Mobility
5. EU cooperation and quality assurance,
6. EU dimension of higher education
7. Lifelong learning,
8. High education and students
9. Promoting the benefits of the European higher education area.

## **2. Chronology of the Bologna Process in brief**

The fundamental document which has started the renovation of the higher education system was Sorbonne declaration (1998.). Signatories of the Sorbonne declaration were France, Italy, United Kingdom and Germany. The next declaration was signed in Bologna officially titled EHEA (European Higher Education Area) and popularly is called Bologna Declaration. The fundamental principles the Bologna Declaration are:

1. The university is an autonomous institution in the heart of society differently organized due to geographical and historical heritage; it produces, examines, evaluates and transmits culture by research and teaching. To meet the needs of the world, its research and teaching must be morally and intellectually independent of all political authorities and intellectually independent of all political authorities and economic powers.
2. Teaching and research in universities has to be inseparable in order to follow changing needs and demands of society, and scientific progress.

3. Freedom in research and training is the fundamental principle of university life, and governments and universities-as much as in their powers- must ensure respect for this fundamental requirement. Rejecting intolerance and being always open to dialogue, the university is an ideal meeting-ground for teachers capable of imparting their knowledge and develop it further by research and innovations, and students entitled,able and willing to enrich their minds with that knowledge.
4. A university is guardian of European humanistic tradition; its constant care is to attain universal knowledge; and to fulfil its vocation it transcends geographical and political frontiers, and affirms the vital need of different cultures to explore and to influence each other (Magna Charta Universitatum).

Since signing the Bologna Declaration 1999th by 29 countries, the number of members has grown day by day. Today, the total number of signatories and users of Bologna declaration is 48 countries. As shown in table 1; since the signing of the Bologna Declaration, members are in continuous increasing. By joining Russia as member of the club, the European higher education area expands from Atlantic to Pacific Ocean. Processes of creating boundaries have two aspects; «geographical» and «membership aspect».

Geographical boundaries are generally fixed until the issue of European borders was and still is an open question for discussion. Membership in the European area of higher education – EHEA, means acceptance of collectively defined regulations, principles or standards, even if members of EHEA were not involved in their creation. Since signing the Bologna Declaration, Ministerial Conferences are continuously being held. At the conferences the main subject is continually development monitoring of particular national legislations, adjustments and progress in reforms, governing reporting and upgrades done so far, accessing new members in the process, make joint decisions, and regulate matters of common goals.

Table 1 Chronology of the Bologna Process

<b>Coference</b>	<b>Number</b>	<b>Growth</b>	<b>States</b>
1998 Sorbona	04		Germany, France, United Kingdom, Italy
1999 Bologna	29	+ 25	Belgium (Flemish Community and, Bulgaria, Denmark, Estonia, Finland, Greece, Ireland, Iceland, Litva, Latvia, Luxemborg, Malta, Netherlands, Norway, Austria, Poland, Portugal, Romania, Sweden, Switzerland, Slovenia, Spain, Czech Republic, Hungary
2001 Prag	33	+ 04	Croatia, Liechtenstein, Turkey, Cyprus
2003 Berlin	42	+ 09	Albania, Andorra, BiH, Vatikan, Macedonia, Russia, Serbia, Montenegro, Council of Europe (counseling member)
2005 Bergen	47	+ 05	Armenia, Azerbaikan, Georgia, Moldova, Ukraine
Budapest/Vienna, March 2010	48	+ 1	Kazakhstan

Source: Author's view

Criteria for membership and non-membership are the essential element of the entire project organization and processes were changed several times. For Sorbonne declaration and preparation for Bologna conference there were the two groups of countries: EU member and EU candidate countries, and Members of the European Free Trade Association (EFTA). The overall number of signatories Bologna Declaration, based on these criteria, was 29.

The following conferences have been held so far:

1. Prag, May 2001
2. Berlin, September 2003
3. Bergen, May 2005
4. London, May 2007
5. Leuven and Louvain-la-Neuve, April 2009
6. Budapest-Vienna, March 2010
7. Bucharest, April 2012

Based on these criteria, the number of signatories of the Bologna Declaration was 29. The Prague conference has been expanded the criteria for membership. Full memberships have countries that have met the criteria for programs: Socrates, Leonardo da Vinci, TEMPUS-CARDS. Next stage refers to the reception of the Council of Europe as an advisory member of the follow-up group in Berlin 2003. In Bergen, the country accepted successor States of Soviet Union, members of the TEMPUS-TACIS program: Armenia, Azerbaijan, Georgia, Moldova and Ukraine. Today, the total number of members who participate and apply Bologna is forty eight. Bologna project is associated with membership of European countries. It spreads to the east and the tendency is spreading all over the world. In 2003, The Council of Europe's suggested accession to the southern coast of the Mediterranean and North African countries.

### 3. The Republic of Croatia and the Bologna Process

The Republic of Croatia has signed the Bologna Declaration at the Ministerial Conference in Prague, in year 2001. All university studies are harmonized in accordance to the rules of the Bologna Declaration in the academic year 2005/2006. The signing of the Bologna Declaration and upcoming accession Croatian accession to European Union, have set great challenges to the Croatian higher education system. Based on the fundamental principles and objectives of the Bologna Declaration, the Republic of Croatia went through restructuring and adaptation of high education system in the last decade. The reform process resulted in new European educational framework suitable for achieving European educational standards through the acceptance of cycles based study at undergraduate, graduate and postgraduate levels, with introduction of the ECTS scoring system and supplementary Study Documents, the introduction of a new system of internationally recognized diplomas, the application of quality assurance, development of national qualifications frameworks compatible with the adopted qualification framework for the European higher Education Area, improvement and program innovations, and also promoting the mobility of students, teachers, researchers and administrative staff as well as the promotion of lifelong learning system.

Table 2 Graduates from professional and university study (ISCED 5)

	Total			
	2008.	2009.	2010.	2011.
Higher education institutions	25573	30156	32378	36448
University of Applied Sciences	3447	3226	3310	4558
Schools of professional higher education	1371	1937	1768	2146
Universities	20389	24527	26662	29089

	Total			
	2008.	2009.	2010.	2011.
Professional study	5429	4742	4621	4449
University study	14960	19785	22041	24640
Art academies	366	466	638	695

Source: *Statistical Yearbook of Republic of Croatia 2012, p.479*

Table 2. represents data about students who graduated at the professional and university studies in the period 2008 -2011 year. It's evident that the number of students who have graduated is constantly increasing in all studies except professional degree study. In comparison to year 2008 year and 2011 the number of graduates has increased by 42.53% at universities, number of graduates on University of Applied Sciences has increased by 32.23%, 56.53% on Universities, in colleges has increased by 42.67% and 64.71% on university studies. The largest percentage increase is recorded at graduates of art academies for 89.99%, while the decrease in numbers of those who graduated at the professional programs comparing the year 2008 and 2011 amounts 18.05%. We could say that the average increase for all studies was 51.75% total, therefore the number of students who graduated in observed period increased by more than 50%. Reasons for increasing number of graduates should seek in increasing enrollment of students, increased number of academic programs, opening of of new universities (colleges), as well as requirement of the Bologna process in general. In the Republic of of Croatia there 10 universities, 3 of them are private and 7 are public universities (Osijek, Zagreb, Pula, Rijeka, Zadar, Split and Dubrovnik).

Table 3 Ratio of university and professional study programmes

<b>Professional programmes by type/level</b>	<b>Number</b>
Professional programme shorter than 3 years	11
Three-year or longer professional programme	164
Specialist graduate professional programme	44
<b>University courses by type/level</b>	<b>Number</b>
Undergraduate university programme	351
Integrated graduate and undergraduate university programme	45
Graduate university programme	368
Postgraduate specialist programme	174
Postgraduate university (doctoral) study programme	102

Source: <http://www.azvo.hr/index.php/hr/statistike/odnos-sveucilisnih-i-strucnih-studija> (26-03-2013)

Croatian high education, as well as its continued adjustments and improvements, has to become a priority for long-term development strategies and whole process for finding

educational excellence. It is worth to note that adjustment to requirements of the Bologna process is basic requirement of international competitiveness and successful participation in European Higher Education Area. From the academic year 2005/2006, all university studies are aligned with requirements of the Bologna Declaration.

#### **4. The debate on Bologna Process in Croatia**

Reform of higher education system in Croatia is almost a permanent state in the past thirty years. Whole time, there wasn't longer period in which higher education system could stabilize and develop on the basis of some generally accepted principles, with occasional corrections, adjustments and necessary modernization. Instead, the system of higher education in Croatia has been changed with radical moves, often strongly influenced by politics, and these changes were never preceded by any systematic analysis or and precise study or proposed models on smaller parts of the system, or any projections of possible long-term effects of certain reform actions (Havelka, 2003., 31). Also, we should point out the importance of the Ministry of Science, Education and Sports as an umbrella institution which basically manages, defines and manages the application of the Bologna requirements. It takes a continuous cooperation of educational institutions (universities, colleges) with the Ministry. This cooperation is necessary to promote and expand through the use of existing consensus in achieving the defined vision and education strategy. Furthermore, it's essential to continue working on the harmonization of existing programs, and to develop new joint study programs in order to create a new common vision and strategy. The existing education system that is supply driven, should be modify in the demand driven system, i.e. educational programs should be harmonized with the current requirements that determines on the market. Therefore, redesigned educational plans and programs should be more associated with needs of the economy. Current state of centralization of financial resources must be seriously considered and through the new curriculum development at the Universities should bring certain measures of decentralization towards decision making on the lower levels. Of great importance would be improvement of dialogue and cooperation between universities and the private sector. General awareness of some participants involved in the education system is not at desirable level. Awareness about university council's work and activities is poor: 52% are familiar with their work and conclusions, and 44% isn't. It is apparent that information system at universities is not good when half of employees are not familiar with the work. Being informed is quite important for a sense of community involvement at the level of each employee (Kristof, Pisk, Radek, 2011., 30). Programs that relate to the acquisition of competencies for teachers of preschool and school age should significantly contribute to raise of awareness about importance of education in early childhood. Also, the general awareness of the importance of previously mentioned should be more significant. Although it have passed nearly ten years since the introduction of Bologna process, it has to be stated that there are no significant studies that would provide exact indications of quality and effect of Bologna implementation on lifelong education as well as the labor market in general. Accordingly, it's necessary to continue working on pointing out the importance of educational comprehensive system through the application of Bologna ideas. The current research results indicate a great potential of Croatian universities, but also throw light on the structural problems that Croatian universities are facing with. Among most significant problems are absence of a clear and identifiable mission and policies, poor high school preparation, disintegration of four major universities (thus inhibiting of their quality work), lack of funding and work equipment , lack of concern for hiring assistants and non-teaching staff, lack of interest and motivation of students, unequal presence of all stakeholders in university authorities, insufficient information on the work of key university bodies, undeveloped international collaboration and neglected science (Kristof, Pisk, Radek, 2011., 34). Also, the available data on the mobility of students, teaching and non-teaching staff at Croatian

universities shows that it did not even occurred. In this way the potential of synergy effect on the level of the European Higher Education Area (EHEA) wasn't realized.

## 5. Conclusion

In modern society, the knowledge society, education is the key factor of development and positive change. Bologna project is in its structure complex "hybrid" that is made up of various elements. This further confirms previous requirement for need to align reforms implemented at the national levels. The implementation has resulted in a number of positive and negative consequences. On the positive side are equal opportunities for all participants in Bologna reform, openness to the outside, a larger percentage of higher education. As negative consequences of Bologna process occur: increase in administrative obligations, incompatibility of curricula, and generally insufficient use of opportunities that are provided as goals of Bologna process. Republic of Croatia is a full member and a signatory of Bologna Declaration since year 2001. As 28th member of European Union, Croatia has an opportunity to build up and gain better position in the European higher education area.

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**THE HUMAN RESOURCES IN FUNCTION OF CREATION OF  
INNOVATIVE TOURISM OF THE REPUBLIC OF CROATIA -  
PERSPECTIVES OF EASTERN CROATIA**

**LJUDSKI POTENCIJALI U FUNKCIJI STVARANJA INOVATIVNOG  
TURIZMA REPUBLIKE HRVATSKE – PERSPEKTIVE ISTOČNE  
HRVATSKE**

**ABSTRACT**

*Tourism is now one of the leading activities of the global economy that constantly developing. In the Republic of Croatia tourism is one of the most important economic activities. Tourism is an extremely labor intensive and dynamic activity, which means that tourism services are based on the quality of human resources. In each knowledge-based economy, the knowledge and the human resources are becoming the key factors of development. Namely, the ability of economy depends on human resources and their permanent development to keep the level of success and to advance further.*

*The development is based on the principle of sustainability, which provides development based on protection of existing resources. Achieving sustainable development in tourism strongly depends on the acceptance of global tourism trends and the creation of knowledge.*

*In order better quality to respond the increasingly complex and diverse demands of competition in the European tourism market, in front of Croatia is set a need of creating more innovative tourism products to attract the potential foreign tourists. However, in front of tourism activities of Republic of Croatia, there are numerous and complex development problems that must be tackled faster in order to achieve a satisfactory level of competitiveness in the European Union market. Croatia needs to keep up with upcoming trends in order to survive in the market by constantly increasing its competitiveness.*

*Touristic significance of eastern Croatia is an extremely large because of its geographical and ecological factors. It also has a great potential for tourism development that could significantly contribute to the economic development of the country and improve the image of the Republic of Croatia in the European Union.*

*The subject of this research is aimed at two major areas: human resources management as a decisive factor of tourism development success, and the institutional support of the European Union, with special emphasis on the counties of eastern Croatia.*

*The basic aim of this paper is to emphasize the importance of human resources in all areas and at all levels of performance of tourism activities, as a precondition of quality and growth of the competitiveness of tourism of the eastern Croatia, and institutional support of the European Union, in order to achieve high quality of innovative tourism offer.*

**Key words:** *tourism, competitiveness, innovativeness, institutional support, eastern Croatia*

## SAŽETAK

*Turizam je danas jedan od vodećih djelatnosti svjetskog gospodarstva koji se konstantno razvija. U Republici Hrvatskoj turizam kao gospodarska djelatnost je jedna od važnijih. Turizam je izrazito radno intenzivna i dinamična djelatnost, što znači da se turističke usluge zasnivaju na kvaliteti ljudskih potencijala. U svim gospodarstvima temeljenima na znanju, upravo znanje i ljudski potencijali postaju ključni čimbenici razvoja. Naime, sposobnost gospodarstva da zadrži razinu uspješnosti i daljnji napredak ovisi o ljudskim resursima i njegovu stalnom razvoju.*

*Razvoj se temelji na principu održivosti koji osigurava razvoj temeljen na zaštiti postojećih resursa. Ostvarivanje održivog razvoja u turizmu bitno ovisi o prihvaćanju svjetskih turističkih kretanja i o stvaranju znanja.*

*Kako bi se što kvalitetnije odgovorilo na sve složenije i raznovrsnije zahtjeve konkurencije na europskom turističkom tržištu pred Republiku Hrvatsku se postavlja potreba stvaranja inovativnih turističkih ponuda koje bi trebale privući potencijalne inozemne turiste. No međutim, pred turističkom djelatnošću Republike Hrvatske nalaze se brojni i složeni razvojni problemi, koji se moraju brže riješavati u cilju dostizanja zadovoljavajućeg razine konkurentnosti na tržištu Europke unije. Hrvatska mora držati korak sa nadolazećim trendovima kako bi i dalje mogla opstati na tržištu konstantno povećavajući svoju konkurentnost.*

*Turistički značaj istočne Hrvatske je zbog geografskih i ekoloških činilaca izuzetno veliki te ima veliki potencijal za razvoj turizma koji bi mogao značajno doprinijeti ekonomskom razvoju zemlje i poboljšanju imidža Republike Hrvatske u Europskoj uniji.*

*Predmet istraživanja ovog rada usmjeren je na dva glavna područja: upravljanje ljudskim potencijalima kao odlučujućim faktorom uspješnosti turističkog razvoja te institucionalna podrška Europske unije s posebnim osvrtom na županije istočne Hrvatske.*

*Temeljni cilj ovog rada jest ukazati na važnost ljudskih potencijala u svim segmentima i na svim razinama obavljanja turističke aktivnosti, kao preduvjet kvalitete i rasta konkurentnosti turizma istočne Hrvatske te institucionalnoj podršci Europske unije, radi postizanja visoke kvalitete inovativnih turističkih ponuda.*

**Ključne riječi:** *turizam, konkurentnost, inovativnost, institucionalna podrška, istočna Hrvatska*

### 1. Introduction

Tourism, as an activity, in the entire Croatian economy has a very important role. Croatia itself has also recognized the opportunities that tourism opens to rural areas. Although Croatia builds reputation as tourist country, continental part of country is still under-represented. Continental tourism (rural tourism), makes only 5 percent of the total tourist traffic in Croatia which shows a significant backwardness. Continental tourism is linked more to the type of service than for area of tourism destinations. Advantages of continental tourism are that it can be sold for all 12 months, not just during the season. Continental tourism is extremely

important because it actually is understood year-round tourism. In order to promote continental tourism investment is needed, but also designing and making offers and content.

## **2. Croatia and continental tourism – regulations and practices and institutional support of European Union**

With the accession into EU Croatia is faced with new challenges but also new opportunities in tourism. The EU recognized Croatia as a tourist destination with the potential, so the main task is to make maximal use in the interest of the own growth. The main development document of Croatian tourism is 'Croatian Tourism Development Strategy until 2020'.

"Croatian Tourism Development Strategy until 2020 represents a comprehensive conceptual framework that enables: a) coordinated action of holders of tourism policy and systematic harmonization of tourism policies; b) a comprehensive understanding of the key directions of development of Croatian tourism as a prerequisite for attracting the interest of potential domestic and foreign investors, and c) targeting of development and investment process and the effective withdrawal of EU funds." (<http://www.mint.hr/UserDocsImages/130426-Strategija-turizam-2020.pdf>) Continental tourism is of interest to various government ministries, especially the Ministry of Tourism, Ministry of Agriculture, Fisheries and Rural Development and the Ministry of Culture. These Ministries are currently implementing legal regulations governing capacity development in rural areas, and provide funds under various programs of investment support and encourage the development of rural tourism.

European Union as the largest economic and political integration in the world, with its tourism market and its economic potential has become the largest and the most important regional economic community, which significantly affects the tourism development in Croatia. European Union development of rural tourism places on a high priority. „The contribution of tourism in EU to GDP is 5%, and employs 5.2% of the active population.” ([http://www.europarl.europa.eu/aboutparliament/hr/displayFtu.html?ftuId=FTU\\_5.6.12.html](http://www.europarl.europa.eu/aboutparliament/hr/displayFtu.html?ftuId=FTU_5.6.12.html)) The European Union apply certain regulations and standards of the tourism industry in order to be able to develop in accordance with the desires the modern tourism demand, which today define new forms of supply and new trends in tourism management. Four priorities for action have been identified in the 2010 communication on tourism: “stimulate competitiveness in the European tourism sector, promote development of sustainable, responsible, high-quality tourism, consolidate Europe's images as a collection of sustainable, high-quality destinations, maximize the potential of EU financial policies for developing tourism.” ([http://ec.europa.eu/enterprise/sectors/tourism/background/index\\_en.htm#h2-1](http://ec.europa.eu/enterprise/sectors/tourism/background/index_en.htm#h2-1))

In practice, many programs and policies significantly affect the activities related to tourism like European Regional Development Fund (ERDF), European Social Fund (ESF), European programmes for life-long learning and Erasmus for young entrepreneurs, European Agricultural Fund for Rural Development (EAFRD), European Fisheries Fund (EFF), Competitiveness and Innovation Framework Programme and so on. All listed may help the tourism sector. The Common Agricultural Policy is the most important policy of the European Union. It is especially important to note the pre-accession SAPARD program designed to candidate countries for Agriculture and Rural Development and the IPARD program

which comes into force in 2007. Among the most famous targeted programs to support the development of rural areas of the EU countries, with special emphasis on the development of rural tourism is the Leader program. „Leader program is an initiative of the European Community for mobilizing and implementation of rural development in rural communities through local public-private partnerships. It aims to help people, organizations, companies and other potential factors in rural areas to consider the potential of their areas and encourage implementation of integrated, high-quality and original strategies for sustainable

development. In Croatia, Leader was incorporated in IPARD implementation.” ([http://www.pbiro.hr/leader\\_program\\_europskom\\_praksom\\_do\\_vlastitih\\_prilika.pdf](http://www.pbiro.hr/leader_program_europskom_praksom_do_vlastitih_prilika.pdf))

Besides special programs and initiatives are a growing number of institutions that support development initiatives in rural areas. Some of them are European Council for the Village and Small Town (ECOVAST), and the European Federation of agro and rural tourism (EuroGites). Croatia is a member of both the International Association. There are also some programs that may indirectly affect the development of rural areas like Culture Programme which includes cultural tourism.

### **3. The role of human resources review on eastern Croatian counties**

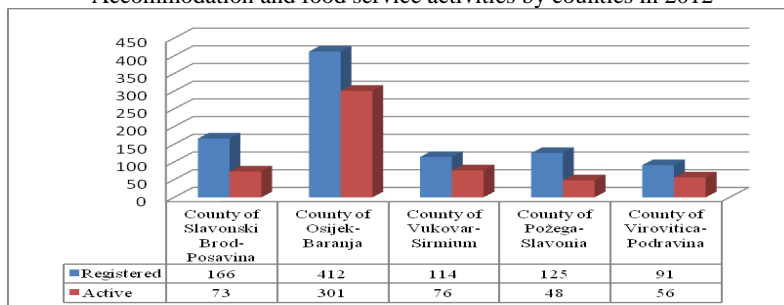
The role of human resources in the 21st century is enormous. Namely, each knowledge-based economy recognizes the knowledge and the human resources as the key factors of development. Human resources are the set of individuals who present the workforce of economy. Sometimes it's called human capital or labor force. Labor force is comprised of employees who are considered as assets to the economy. Their value is enhanced by development. Development of human resources is becoming an eternal challenge that any organizational system has to face. One of the objectives of this paper is to analyze the importance of human resources in all areas and at all levels of performance of tourism activities. It was very difficult to analyze data related to tourism because according to NKD 2007 it doesn't have its own section. For the purposes of paper we analyze section Accommodation and food service activities.

At the beginning it is necessary to explain few terms that appear below. Accordingly, business entities are legal entity and natural persons who perform allowed activities such as state government bodies and bodies of local and regional self-government units. Legal entity is unit which relates to enterprises, institutions, trade companies, etc. and has legal standing. Natural entity is unit that refers to the crafts and free-lances. It involves making something in a skillful way by using hands. (Statistical yearbook 2013, p. 78)

The following analysis will show the number of business entities by activity and by counties according to NKD 2007. section Accommodation and food service activities and the number of persons in employment in business entities by counties. According to Statistical yearbook 2013, the numbers of total registered legal entities in 2012 were 294.475 and in 2011 were 283.932. At the same time, the numbers of total active legal entities were totally different. In 2012 there were 139.630 active legal entities, and in 2011 were 128.930. Therefore, in a year, the number of active legal entities has increased by 8.3 %. The number of active legal entities in section Accommodation and food service activities has also increased. So, in 2012 there were 7.901 such entities, and in 2011 were 6.826. It is important to point out the fact that accommodation and food service activities seem only 5.66 % of total active legal entities in the Republic of Croatia. In 2012 there were 88.160 crafts and trades and free-lances, and in 2011 were 90.751. Therefore, in a year, the number of crafts has decreased by 2.86 %. The number of that kind of entities in section Accommodation and food service activities has also decreased. It is important to point out the fact that this section seems only 11.21 % of total crafts in Croatia.

It has already mentioned that the number of registered legal entities on the territory of Republic of Croatia differs significantly from the number of active legal entities. The situation is similar if we analyzed the eastern Croatian counties. Next graph shows the number of registered and the number of active legal entities in five counties according to NKD 2007 section Accommodation and food service activities in 2012.

Graph 1 Number of registered and active legal entities according to NKD 2007 section Accommodation and food service activities by counties in 2012

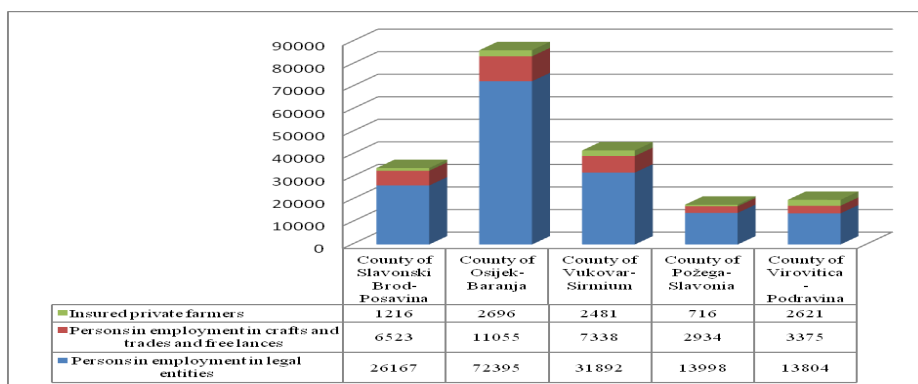


Source: Made by authors according to Statistical Yearbook 2013, [www.dzs.hr](http://www.dzs.hr)

Graph 1 shows that the share of active legal entities makes up 43.98 % of registered legal entities in County of Slavonski Brod-Posavina. County Požega-Slavonia has the smallest share of active legal entities compared to the number of registered legal entities, just 38.4 %. The largest share of active legal entities compared to the number of registered legal entities has County of Osijek-Baranja, about 73.06 %, County of Vukovar-Sirmium has 66.67 % and County of Virovitica-Podravina has 61.54 %.

It is also interesting to analyze the number of persons in employment in business entities by counties in 2012. At the first, it is important to emphasize that the number of persons in employment in legal entities is the largest, both in individual counties, as well as on the entire territory of Croatia, almost 83 %. Next graph shows shares of persons in employment in business entities by counties.

Graph 2 Persons in employment in business entities by counties in 2012



Source: Made by authors according to Statistical Yearbook 2013, [www.dzs.hr](http://www.dzs.hr)

As we can see in graph 2, the largest number of persons in employment has County of Osijek-Baranja. Even 81.18 % of persons in employment consist of persons in legal entities, 12.7 % of persons are in crafts and trades and free-lances, and just 3.1 % are insured private farmers in this county. County of Slavonski Brod-Posavina has 75.32 % of persons in legal entities, 8.78 % of persons in crafts and trades and free-lances and 3.5 % are insured private farmers. County of Vukovar-Sirmium has 75.38 % of persons employed in legal entities, 17.33 % of persons employed in crafts and trades and free-lances, and 5.86 % are insured private farmers. County of Virovitica-Podravina has 66.4 % of persons employed in legal entities, 16.23 % of

persons are employed in crafts and trades and free-lances and 12.61 % are insured private farmers. So, we can see that in this county the number of insured private farmers is significantly. County of Požega-Slavonia has 77.32 % of persons employed in legal entities, 16.21 % of persons are employed in crafts and trades and free-lances and just 3.95 % are insured private farmers.

#### **4. The interview with the representatives of the tourist board**

##### **4.1. The interview with the manager of the Tourist Board of Slavonski Brod - Biljana Lončarić, Ph.D.**

###### **1) Does the Tourist Board invest directly or indirectly into development of human resources and to what extent?**

Yes, it does. The investments are defined through the internal marketing policy, which manage human resources. As a part of the internal marketing, there are training workshops, educational trips, etc. and this is one of the compulsory fields.

In the Tourist Board office the education of human resources is only that what refers to the members of the body of the Tourist office and its employees. For external entities such form of education is not organised, but there is a cluster - Slavonska košarica (Slavonian basket) which is founded by the Tourist Board of Slavonski Brod, together with the Development Agency of Slavonski Brod and the city of Slavonski Brod. But the cluster has developed and become regional. It includes members from all five Slavonian counties and has 110 members. The city is a representative of the founders and the Tourist board is a co-founder. The cluster keeps educations and training workshops for its members and businessmen during the year.

The Croatian Tourist Board, the umbrella national organisation organises the seminars only for its members, but also implements programmes for the third parties, for example, in cooperation with the Association of Croatian Travel Agencies it organises the seminars for travel agencies, in cooperation with the hoteliers for hoteliers, etc. But the members at lower levels (the cities) do not organise such training directly. The local members such as the Tourist Board of Slavonski Brod takes up training sessions only for the members of the tourism council and its employees.

###### **2) In what way does the Tourist Board give supports to the development of innovative tourism i.e. development of innovative tourism offers?**

There is a contest in the Croatian Ministry of Tourism with the title: Programme of encouraging of innovations in the tourism industry - "INNOVATIVE TOURISM". The objectives of this project is development of new and innovative tourism products the same as enriching and improving the overall tourist and gastronomic offer. The users of this programme are the companies, businesses, associations, travel agencies, tourist boards, etc.

Specifically in the case of the Tourist Board of Slavonski Brod we just had a promotion of video mapping, as the part of innovative tourism Slavonski Brod's RetroFutura - a project for children, which is an innovative approach of projection of the characters from Ivana Brlić Mažuranić's fairy tales on a wall or on a canvas, where the children run or manage the characters on the projection by their movements (arms / feet).

###### **3) What is the significance and contribution of financial incentives to local tourism business events and manifestations?**

Aid to the Tourist Board of Slavonski Brod is significant and amount is about 33% of total revenues.

###### **4) Is there a strategy for development of tourism, and can you tell how much it has been recognized as an important factor of economic development of the region in the coming times?**

Guidelines of strategies are in the tourism master plan and have been made by the Institute of Tourism, but within the Masterplan strategy of the City and County the tourism is also included. Tourism is not sufficiently recognized because of the wrong perception. For

example, in delivery of information into the Croatian Tourist Board, we deliver only data on the number of overnight stays and on this basis, it is estimated what tourism is or is not like. For continental tourism in the tourist product for accommodation there is a small percentage of total services and perceptions of tourism is only watched through overnights, what actually does not reflect the real picture. So in continental Croatia the tourism includes transportation, trading, passenger mediation, working in the exchange offices, etc. So, if the tourism in Slavonski Brod would be now analysed and compared with, let's say tourism in Šibenik, it would be obvious that the off-season tourism through the commercial activities is much stronger in Slavonski Brod than in Šibenik, because there is a wrong perception.

**5) So, in what way is it possible to measure the tourism properly?**

For now it is not measured at the county level and it is a problem, because the measurements must be performed by authorised institutions such as the Croatian National Bank, etc., and the measurements and measuring tools are very expensive. Therefore, people wrongly perceive the tourism. The concrete case, for example is the Tourist Board of the City of Šibenik (despite a number of overnights during the season), which currently stands financially worse than us. We, the same as them, get revenues from tourist taxes and dues. While the membership amounts are similar, the overnights are on the side of Šibenik. But, they do not receive extra support from the state, which Tourist Board of Slavonski Brod gets, because it is under the category of tourist undeveloped areas, so these funds are invested into improving of tourism however, not in terms of overnights because it is not possible, but in investing into improvement of tourism infrastructure such as video mapping from the previous example. When the tourism infrastructure gets improved, the number of tourist groups' arrivals on a day or long-hour trips gets increased and therefore the tourist spending increases. All of them use other tourist services (food, etc.) and if this month would be compared at the example of a restaurant in the center of Šibenik with the restaurant in Slavonski Brod, it would be noticed that larger tourist spending is in Slavonski Brod. More intense season in Šibenik is only two months. Its limiting factor is the weather.

**6) What is your opinion about agritourism?**

People are not enough interested (especially foreign tourists), because the rural tourism in Italy or in France, for example, where it is the most developed, 95% of participants are local people - weekenders. They also do not oversleep, but come into their cottages and visit the wine cellars. That is, what actually the rural tourism is. In our country there is a different perception.

**The next few questions are put to the manager of the Tourism Cluster "Slavonska košarica" (Slavonian basket), Tanja Petrović, spec.oec.**

**7) Are you actively involved in the programme of EU supports through the projects, either as a holder or a partner? If yes, what is the number of projects and are the reference projects connected with development of human resources or development of innovative tourism offers?**

The cluster "Slavonska košarica" (Slavonian basket), which one of the founders is the Tourist Board of Slavonski Brod has been until now the applicant from Croatian side on the project BOSS FOOD (Bosnia - Slavonia Slow Food) under the Cross-Border Programme Croatia-Bosnia and Herzegovina 2007-2013, IPA Component II - Cross-Border Cooperation. We have not found out the results yet.

**8) What is the role of your community on spreading awareness about the possibility of withdrawal of funds for tourism development through the financial sources of funds of the European Union, and do you give your help or advice in writing of the projects?**

The cluster does not give the help or advice in writing of the projects because we also need advice and help from Development Agency of Slavonski Brod (co-founder of the cluster) and CTR, the Center for Technological Development, from development agencies of Brod-Posavina County (cluster member), that help us with their experience and knowledge. As for spreading awareness about the possibilities of withdrawal of funds for tourism development

through the financial sources of EU funds, we have done it so far through the talk "The possibilities of withdrawing of funds from EU funds in tourism" which gave dr.sc. Berislav Andrić from Polytechnic in Požega on Katarinski sajam (Catherine's Fair).

#### **4.2. Questions put to the director of the Tourist Board of Vukovar, Jasna Babić**

##### **1) Does the Tourist Board invest directly or indirectly into the development of human resources and to what extent?**

Human resources are the basis for development of any segment of economy, and investing in them, a precondition of quality. We are aware of it, but we have limited financial possibilities, and accordingly we plan and realise investments in education of employees in the Tourist Board of Vukovar, because continuing education has become an imperative.

##### **2) In what way does the Tourist Board give supports to development of innovative tourism i.e. development of innovative tourism offers?**

Tourist Board supports innovative and progressive ideas, according to our long-standing statement that without private entrepreneur or enterprising private businessman there is no tourism development. We are always here as a logistics, advisory services or whatever needs to be done. We go to the field, at the invitation of individuals, so they introduce us the plans, available assets, but also ask for advice and help in the realisation. We also proposed several new tourism products for development strategy of tourism and the city of Vukovar and Vukovar-Sirmium County.

##### **3) What are the significance and share of financial incentives from the state level that are intended for local tourism businesses, particularly for human resource development?**

At the state level, funds are provided for investment in human resource development, but still a lot should change in the minds of people in order to become aware that investing, primarily in people is investing for the future.

##### **4) Are you actively involved in the programme of EU support through the projects whether as a holder or a partner? If yes, what is the number of projects (names ...) and are the referents the projects connected with development of human resources or the development of innovative tourism offers?**

Yes, now we are partners in the project of association B.a.B.e., and in the period 01.02.2011-31.01.2013 we spent our project of cross-border cooperation with Bački Petrovac county with the name "The formation of the center for the advancement of knowledge in rural tourism". Within this project, we equipped six double bedrooms and organised educational workshops from ten traditional crafts.

##### **5) Can you specify the basic guidelines of tourism development strategy of your city / county for the next few years and how is the tourism recognised as a significant factor in the development of the region during this period?**

Our strategy for the period 2014-2020 has just been in preparation at the county level, and the fund for the reconstruction and development has been doing the same for city of Vukovar for which The Tourist Board of Vukovar suggested several projects, which would raise the level of tourist offer and make this town competitive tourist destination.

#### **5. Conclusion**

The tourism plays a key role as a driving force of economic development. The impact of tourism has in the different parts of economic development depends on the specific characteristics of each country. With the Croatian accession to EU, tourism sector has become a dynamical environment. In such position, development of employees needs to be understood as the condition of survival and constant need for innovation. Eastern Croatia is well on its way as proving conducted interviews.



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## **LINKING HIGHER EDUCATION AND ECONOMY AS A ROLE FOR REGIONAL DEVELOPMENT**

### **POVEZIVANJE VISOKOG OBRAZOVANJA I GOSPODARSTVA KAO KLJUČNA ULOGA REGIONALNOG RAZVOJA**

#### **ABSTRACT**

*Higher education, research and innovation play a crucial role in supporting social cohesion, economic growth and global competitiveness. Broader access to higher education by linking with the economy is an opportunity for higher education institutions to make use of a new richness of diverse individual experiences for empowering the development of the local community. Main objective of the paper is by evaluating necessary skills for current and future needs of the economy to find out whether the Croatian education system is able to acquire knowledge and skills relevant to the current needs of the economy. Research has been conducted among graduated (alumni) students at the University of Osijek who by using knowledge and skills acquired in the study successfully perform work in the profession. This target group of respondents is particularly interesting because the five year lag of working in the profession, can give a clear picture of the quality of educational programs which are important for development of the individual, on one hand, and for development of the local community, on the other hand. Reliable and validated KVALIMETAR measuring instrument has been used to compare perception results, among graduated (alumni) students, in two waves of measuring: 2009 year and 2014 year. By comparing the results of the research it will be detected critical points in the quality management system as well as to ensure quality guidelines for increasing the level of satisfaction of all stakeholders as well as the overall quality level of the University. The significance of this research is also in the connectivity needs of the labor market with the implementation of educational programs and linking the evaluation of learning outcomes that create a baseline in the alignment of the Croatian Qualifications Framework (CQF) with the European Qualifications Framework (EQF).*

**Key words:** quality, research, higher education, KVALIMETAR measuring instrument

#### **SAŽETAK**

*Visoko obrazovanje, istraživanje i inovacije imaju ključnu ulogu u održavanju socijalne kohezije, gospodarskog rasta te globalne konkurentnosti. Širi pristup visokom obrazovanju kroz povezivanje sa gospodarstvom predstavlja izvrsnu priliku za visoko obrazovne institucije da kroz bogatstvo različitih pojedinačnih iskustava osnažuju razvoj lokalne zajednice . Glavni je cilj rada kroz procjenu vještina potrebitih gospodarstvu utvrditi je li hrvatski obrazovni sustav u mogućnosti stjecati znanja i vještine relevantne trenutnim potrebama gospodarstva. Istraživanje je provedeno na uzorku diplomiranih (bivših) studenata Sveučilišta u Osijeku, koji pomoću znanja i vještina stečenih na studiju uspješno obavljaju posao u struci. Ova ciljna skupina ispitanika posebno je zanimljiva jer s odmakom od pet godina rada u struci, mogu dati jasnu sliku o kvaliteti obrazovnih programa koji su važni*

*kako za razvoj pojedinca, s jedne strane, tako i za razvoj lokalne zajednice, s druge strane. Pouzdan i valjan KVALIMETAR mjerni instrument korišten je kako bi se usporedili rezultati percepcije između diplomiranih (bivših) studenata, u dva vala mjerenja: 2009 i 2014 godine. Uspoređujući rezultate istraživanja detektirane su kritične točke u sustavu upravljanja kvalitetom, kao i smjernice za povećanje razine zadovoljstva svih zainteresiranih strana, ali i ukupnu razinu kvalitete na Sveučilištu.*

*Značaj ovog istraživanja nalazi se u potrebi povezivanja tržišta rada s provedbom studijskih programa ali i kroz povezivanje ishoda učenja stvoriti osnovicu za usklađivanje Hrvatskog kvalifikacijskog okvira (HKO) s Europskim kvalifikacijskim okvirom (EKO).*

**Ključne riječi:** kvaliteta, istraživanje, visoko obrazovanje, KVALIMETAR mjerni instrument

## 1. Introduction

Strategy Europe 2020 issues a vision of the European social market economy for the following decade, which is socially conscious and is based on three priority fields: smart growth (stimulating the knowledge, innovation, education and digital society), sustainable development (more effective and „greener“ production) and social inclusion (increasing the participation on the labor market, gaining skills and struggling against poverty). One of the main goals of the strategy is increasing the level of education, through preventing the early abandonment of education on one side, and through active increase of the generation (30-34 years of age) that has finished their higher education (to at least 40% by 2020) on the other. Europe 2020 suggests following priorities in the field of education (European Commission, 2014); *Innovation union*: better connection of education, entrepreneurship, surveys and innovations, especially with a goal of bridging the gap between the science and the market; *Youth on the move*: enhancing the efficiency of higher education, increasing the quality of education (with fostering the excellence and fairness) and encouraging the mobility in higher education; *An agenda for acquisition of new skills and creating new work positions*: enabling the lifelong learning, especially for the groups with lower education level, enabling the flexible learning ways, especially among different educational and training sectors and reinforcement of the vocational education's appeal; *European platform against poverty*: developing programs for equal opportunities in education, training and on the labour market for sensitive and socially endangered groups. National Strategic Reference Framework (2013) recognizes the importance of the education that can permanently give the greatest contribution to the social development. Therefore, Strategic Framework states the necessity of increasing the extent of highly educated people in the total population and raising the total expenses given for the education, as well as increasing the effectiveness of the available resources' disbursement. In this context one should observe the investments in education and treat them as investments in regional development, although it sometimes will not meet the short-term goals of the growth. Expectations by the local economy and society representatives raise new assignments and challenges for the modern universities. Therefore, it is of utmost importance that the universities reassess their role in the regional development in order to become more ready to meet the needs of the regional economy and the society as a whole. Consequently, the wider approach to higher education through connecting with the economy presents an extraordinary opportunity for the institutions of higher education to empower the local community's development through the profusion of various individual experiences. On the other hand, it is possible that a region can also receive long-term economic benefits from having a university in its location through the knowledge effect, referring to the knowledge production and technology transfer function of university (Hui-chen Wang, 2010,2). Another source of knowledge effect is the education function of the institutions, namely, the production of human capital. Because universities are producers of educated workers, an area located around the university is likely to have a higher concentration of skilled workers. The

higher earnings of faculty graduates would add to the regional income, and the better-trained workers may have a higher potential to start-up or attract new firms. An increase in the supply of highly educated labor may also lead to increased productivity, increased capacity to perform research and development activities, and increased absorption capacity (Smith, Drabbenstott, 1999). The impact of the university on economic growth is the strongest when they are adapted to the economic structure of the local economy, which means that universities can focus partly on the creation of new industries, and much of the increase in the ability of companies to adapt to market requirements and to successfully compete in a market that is constantly changing (Škare, Lacmanović, 2013, 331).

## **2. Role of the alumni student experiences in the regional development**

Alumni experience is relevant in assessing the quality of services provided by their faculty, as also expressed by Bauer and Bennett (2001) that faculties and universities are increasingly calling upon alumni to provide critical assessments of the institution's performance in preparing students to lead active and rewarding lives. Denny John P. (2012) postulate that the outcomes approach to alumni assessment rests on the assumption that institutional quality and effectiveness can be appraised on what alumni have accomplished in the years following degree completion.

Escobar (2008) opined that alumni can give an institution useful feedback on how well it is doing its job and their satisfaction with the faculty. Parkyn (1991) notes that a continued effort at measuring the perceptions of alumni shows them that they are still a valued constituent for the faculty and permits current students to benefit from the insights gathered via such a study. In addition, Purezer and Rooney (2002) assert that alumni surveys are utilized to refine the goals, and methods in the educational enterprise. Furthermore, alumni surveys are commonly used to determine postgraduate outcomes, to obtain feedback on program effectiveness, and to fulfill accreditation requirements (Borden 2005). Alumni feedback is important because it can highlight an institution's strengths and weaknesses in order to promote and improve performance, make students and the general public see what graduates of the institution experienced while in faculty, and ensure transparency in the institution. Thus, better understanding the relationship between faculty experience and alumni behaviours is very important both to management of higher education and to the public at large.

Concerning the aforementioned, some authors have tried to define the value of high education by using a mathematical function (Doost, 1999,270). With such approach, the value of university (VU) can be observed as a function of faculty knowledge and abilities (F), positive interaction among the faculties (FF), interaction of the faculties with the students (FS), efficiency of the administration (A), administrative support of the faculty and the students (AFS) and public perception of the product quality delivered by the university (PP). Interaction among the aforementioned elements could be expressed in the shape of an equation:  $VU = f(F, FF, FS, A, AFS, PP)$ . By debating the value and the role of university in society, it is important to mention that science and scientists have always been expected to be critical towards the dogmas and prejudice, and to contribute the development of the society by practicing critical thinking (Škare, Lacmanović, 2012, 328).

## **3. Research methodology**

In order to answer the research aim concerning the assessment of the skills necessary for the economy, the task was to deduce whether the Croatian education system, in this case the University of Osijek, is able to provide knowledge and skills relevant for the current economic needs.

With the aim of conducting a research, a reliable and valid measuring instrument named KVALIMETAR was used on the sample of graduate students at University of Osijek in two

measuring periods; 2009 and 2014, in order to examine to which extent the acquired knowledge and skills are successfully applied in the performance of the work tasks in the profession and whether the (dis)contentment of the ex students has changed after five years. KVALIMETAR measuring instrument (Legčević et al., 2011, 275) consists of 31 statements grouped into five dimensions: teaching staff (deals with motivation, competence, and communication of the scientific staff, usage of teaching aids and modern technology, regular lectures, valid and objective knowledge grading, courtesy during office hours), administrative staff (includes availability, decent attitude towards the students, duly handling of the students' requests and inquiries, reporting on new changes in the schedule, and precise handling of students' documents), image (includes the reputation of the faculty, qualified teaching staff, finishing the education with the ability to transfer knowledge and skills), environment and equipment (includes the environment and the equipment necessary for learning and teaching, which are: libraries, laboratories, workshops, IT classrooms, lighting and classroom cleanliness, adequacy and accessibility of the literature) and programs of studying and teaching syllabus (includes clear objectives and guidelines, various programs of studying intended for student education). Encompassed research is a part of a project approved by the University J. J. Strossmayer named: KVALIMETAR with the function of improving the quality in educational sector. The research was conducted using the web application [www.surveymonkey.com](http://www.surveymonkey.com) where the official notifications concerning the conduct of the research were forwarded to the presidents of the Quality Committee on each faculty of the University via Center for Quality. The research was conducted through January, February and March 2014. A self-administered, structured questionnaire was pre-tested on a sample of twenty five (25) alumni students. Adjustments were made based on the pre-test to get a more effective instrument. After that the questionnaire was finally administered to the alumni through the above mentioned web link. Since high predictive validity was of major concern, a five-point Likert scale was used. The Likert scale ranged from strongly disagree to strongly agree for alumni rating of all defined statements of the questionnaire.

### **3.1. Sample**

The first sample of the alumni students (n=121) was questioned in the summer semester of the academic year 2008/2009 with the goal of measuring perception of quality in order to examine whether the perspective of the alumni students change after offering their knowledge and skills on the labor market. This preliminary research, which was designed at the educational constituents level of the University in 2009, showed that the interest of the alumni students who had, in significant numbers, emphasized that the attempt of quantifying the quality urges them towards a more whole contemplation on the topic and had expressed a critical attitude towards the quality of study. The second sample of the alumni students (n=138) was questioned in the January – March 2014 time period, with the goal of measuring similarities and differences in the perception of the examinees with the regard to the first sample in order to define the space for possible improvement and determine the current contribution of the high education to the regional development based on the differences in samples.

### **3.2. Survey results and discussion**

The first sample of graduate students (n=121) was comprised of 36,4% male and 63,6% female examinees, by which the greatest group of alumni students was the one aged 25 to 28 (46,2%), while the least represented group was the one aged 34 to 35 (4,2%). The biggest part of the alumni students was from the Faculty of Law (20,7%) and Faculty of Economics (40,5%), while the smallest was from the Faculty of Food Technology (1,7%) and the Faculty of Medicine (2,5%), by which the 89,3% of the total number of students attending a regular

program with the Ministry of Education and Sports' grant, while 10,7% studied as non-regular students.

The second sample of graduate students (n=138) was comprised of 65% female and 35% male examinees, in which most of the students took a regular program with the Ministry of Education and Sports' grant (89%), while a small part of them studied in the framework of non-regular program (11%). The biggest part of the alumni students examined was from the Faculty of Law (17,4%), the Faculty of Food Technology (14,5%), while the smallest part was from the Department of Mathematics (0,7%). The data worth mentioning are the average grades during the study, as well as the lecture attendance where it is clear from the tables (Table 1 and Table 2) that this small group of examined alumni students had regularly attended the lectures (73,9%), but also had a good (43,5%) grade average.

Table 1 Attendance to classes

Attendance to class	Relative frequencies (%)
-25%	3,6
25-50%	3,6
50-75%	18,8
75% -	<b>73,9</b>
Total	100

Source: Author, 2014

Table 2 Grade point average

Grade point average	Relative frequencies (%)
Sufficient	27,5
Good	<b>43,5</b>
Very good	25,4
No response	3,6
Total	100

Source: Author, 2014

After comparing both alumni students samples in two measuring periods (2009 and 2014), one can conclude that the samples are of similar demographic structure. In order to compare the samples more minutely and give answers to the enquired research goals dealing with the perception of the alumni students in the field of knowledge and skills application in the working environment, the research moved towards verifying the factor structure of the alumni students in 2014, comparing it with research year 2009.

Table 3 Factor analysis of the KVALIMETAR measuring instrument on the sample of alumni students in the second wave of measuring (year 2014)

STATEMENT	F1	F2	F3
Administrative staff is available and ready to provide students with ....		.855	
Administrative staff treats students with respect and dignity.		.860	
Administrative staff deals with students' enquiries in a prompt and ...		.884	
Administrative staff helps students with respect to providing ...		.899	
Professors and teaching assistants give an impression of love and ...	.819		
Professors and teaching assistants are highly motivated for doing their ....	.807		
When teaching, professors and teaching assistants seem to have proper ...	.767		
Using teaching tools and modern technology, professors and teaching...	.457		
Professors and teaching assistants hold classes, seminars and practices ...	.488		
Professors and teaching assistants encourage students to actively participate..	.669		
Professors and teaching assistants assess students' performance ...	.792		
Professors and teaching assistants are available and friendly to students...	.762		
Professors and teaching assistants possess proper communication skills ...	.782		
Professors and teaching assistants are available and willing to receive ...	.653		
Professors and teaching assistants can also be reached after classes...	.723		
Faculty is characterized by its professional image...			.664
After the studying, students are capable of transferring acquired knowledge.			.546
Faculty includes adequately qualified teaching staff...			.589
Faculty possesses appropriate equipment necessary for organization ...			.770

Faculty manages with adequate rooms for teaching and studying ...			.821
Illumination and cleanliness of classrooms are also adequate ...			
Faculty owns teaching tools as well as adequate and available literature...			
Student access to faculty classrooms/rooms is at a proper level...			
Student access to IT classrooms is at a proper level...			
Curriculum and teaching plans contain clear goals and guidelines...			.626
Curriculum standard matches the acquired level of qualifications....			.527
Faculty as an entity offers various curriculums (majors) intended ...			
Goals and guidelines of curriculums are harmonized with course contents...			
Students' applications and enquiries are timely and accurately dealt with...		.599	
Student office keeps records of students properly and precisely...		.712	
Students are timely informed by the faculty on current changes of course...		.411	

Source: Author, 2014

Based on the factor analysis (Table 3) conducted on the sample of the alumni students examined in 2014, three interpretive, reliable factors were extracted. The first factor encompasses the items which match in content the dimension "Teaching staff", the second factor matches the dimension "Administrative staff", and the third factor encompasses the items of other three dimensions of KVALIMETAR measuring instrument, "Image", "Environment and equipment", and "Programs of study and teaching syllabi", hence the title of the factor, "Ensuring the performance quality". All of the items showed correlation with the total result above .50, while the Cronbach Alpha reliability coefficients for individual factors were in order .93, .88, .91.

It is interesting to compare the factor structure of the alumni students examined in 2009, by which the three interpretive factors were singled out: "Environment and equipment", "Administrative staff", "Intrinsic faculty values" (Teaching staff, Image, Programs of study and teaching syllabus).

Based on the conducted analysis, it is evident that both observed samples believe that in quality management of high education one must pay attention to the four key factors: *quality of the teaching staff* (decency, methodological skills, professional competence, good communication skills in the relationship with students), *quality of the administrative staff* (competence, decency and promptness), *quality of the study programs and teaching syllabi* (clear objectives and guidelines of the study programs and plans understood by the students and teachers, quality lectures with regular holding, valid grading), and *quality environment and equipment* (satisfying lighting, classroom cleanliness, adequate teaching aids, accessibility of the literature).

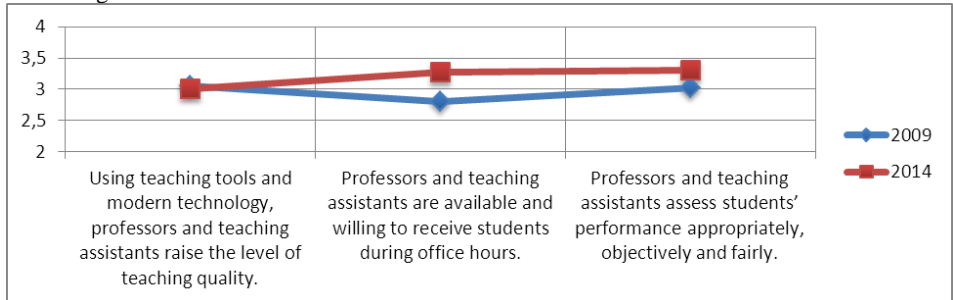
Both examined samples perceive the quality of high education institutions which they attended through the frame of the quality and competence of the teaching staff executing the programs of study in available spaces of the individual high education constituents, by using adequate equipment, which is all mutually imbued with promptness of the administrative staff that is available for helping the current students, as well as the former ones and the total teaching staff.

Considering the fact that on the basis of the conducted factor analysis the results, as perceived by the alumni students examined, had not changed, it seemed useful to enter into each dimension of the KVALIMETAR measuring instrument and examine the scope of the average response values with the goal of detecting the critical spots and the guidelines for connecting the labor market with the execution of the study programs, which represents an extraordinary opportunity for the high education institutions to reinforce the local community development through the profusion of various individual experiences.

On the basis of the deeper analysis in the "Teaching staff" dimension's structure, the examined sample of the alumni students and their average values of the dimension in both research periods (2009 = 3,24; 2014 = 3,47) show that the lowest average values were assigned to the same statements, which means that the five year gap did not bring the

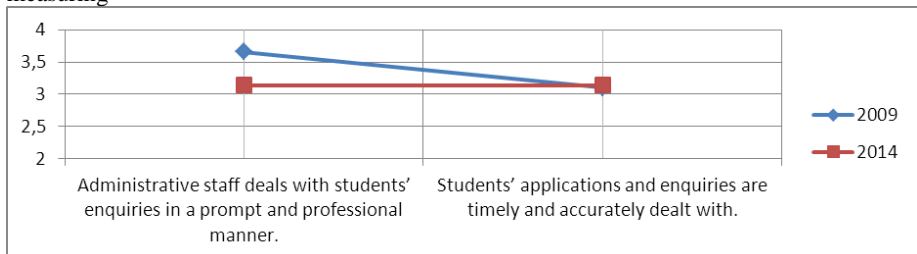
change in examinees' perception. The examinees emphasize that the key areas for improvement in this dimension are: *“Valid and objective grading”*, *“Contacting the lecturer outside the lecture”* and *“Usage of new technologies in teaching”* (Chart 1).

Chart 1 Lowest average grades in the dimension “Teaching staff” in the two waves of measuring



In the framework of the *“Administrative staff”* dimension, the examined sample of the alumni students and their average values of the dimension in both research periods (2009 = 3,31; 2014; 3,59) show that the same statements were assigned the lowest average values. The examinees emphasize that the key areas for improvement in this dimension are: *“Duly handling with the students' requests and inquiries”* and *“Decent attitude towards the students”* (Chart 2).

Chart 2 Lowest average grades in the dimension “Administrative staff” in the two waves of measuring



In the framework of the *“Programs of study and teaching syllabi”* the examined sample of the alumni students and their average values of the dimension in both research periods (2009 = 3,27; 2014 = 3,43) show that the same statements were assigned the lowest average values. The examinees emphasize that the key areas for improvement in this dimension are *“Various programs and courses of studying intended for student education”* (2009 = 2,97; 2014 = 3,14).

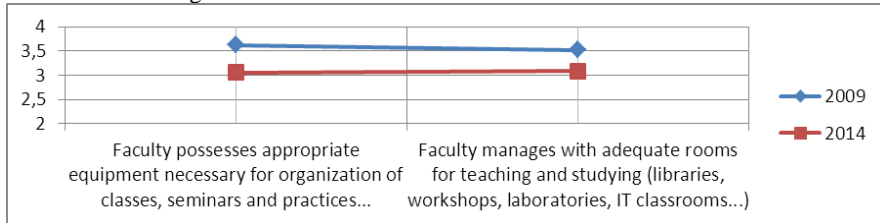
In the framework of the *“Faculty image”* dimension, the examined sample of the alumni students and their average values of the dimension in both research periods (2009 = 3,41; 2014 = 3,40) show that the same statement was assigned the lowest average value and that it represents the area for the possible improvement: *“Finishing the education with the ability to transfer knowledge and skills”* (2009 = 3,09; 2014 = 3,28).

Concerning the dimension *“Environment and equipment”*, the examined sample of the alumni students and their average values of the dimension in both research periods (2009 =



3,72; 2014 = 3,35) show that the same statements were assigned the lowest average values and that they represent the area for the possible improvement: “*Adequately equipped classrooms for lectures, seminars, tutorials...*” (2009 = 3,52; 2014 = 3,09)

Graph 3 Lowest average grades in the dimension “Environment and equipment” in the two waves of measuring



On the basis of the comparison of the alumni perceptions expressed in the average scores across all five dimensions KVALIMETAR measuring instrument in two observation periods, the same conduct patterns were noted. The average values across all dimensions were in favor of 2014, except in the dimensions “*Image*” and “*Environment and equipment*”. Within these two dimensions, the average perception of respondents differed in favor of the first sample, year 2009, by which the statements were assigned higher average scores of 2009 in relation to year 2014.

In the following analysis it seemed important to examine whether the perceptions of examined alumni students differed significantly in statistics given the socio-demographic variables: *gender, age, grade point average, study status* and *employment*. One-way analysis of the variant did not show statistically significant differences only within the variable employment. Contrary to expectations, the difference was not found in the (dis)satisfaction with the quality of education between the employed and unemployed respondents, nor between the different levels of study. It is interesting to note that in both samples the results of perception did not differ with respect to unemployment, while the portion in 2009 was 13% of the unemployed in relation to the total number of participants, while in 2014 that number amounted to 32% of the unemployed, by which the perceptions of alumni students did not differ. Differences were noted between the alumni students with better grade point average and regular attendance (50-75% and more than 75%) and those of weaker GPA and rare attendance, while students with higher averages and regular school attendance perceive all the elements in the provision of educational service with higher grades. Such results were expected in regard to the development of critical thinking in respondents and certain realized and unrealized experiences in the educational process.

Based on the conducted analysis of the alumni student samples across all dimensions of the measuring instrument, the areas which represent the points for improvement of satisfaction were distinguished. First of all, by continuous communication with graduates, there is an attempt to determine their wishes and needs, as well as to accept their propositions and remarks by following their views and thoughts about the study aims in order to improve the quality of the teaching process and profile new teaching curricula. The aforementioned facts should be taken into account in the process of planning the future educational programs in order to improve the quality of education at the University of Osijek and to meet the demands of the modern business environment. Therefore, greater emphasis should be placed on the growing demands of modern business because in this way the link between the different areas of the local community, higher education institutions and alumni is accomplished and the quality basis for their long-term cooperation to the satisfaction of all parties is created.

Academic program is one of the important activities of any faculty or university; it forms part of faculty's activities that are assessed for the purpose of accreditation. Faculty performance is therefore an area that is frequently addressed in the accreditation process for many programs. This is in line with Escobar (2008) assertion that faculty performance is a component typically mentioned in alumni surveys as well as in mission statements. An other issue that drives the performance of a faculty and seen as relevant activity of any faculty or university is instruction quality. The quality of instruction is underpinned by the quality of teaching staff, availability of resources such as well equipped library, laboratory, workshops, quality classrooms, computer and internet access, among others. In the view of Escobar (2008), faculty have a big influence in shaping the education of faculty students; they are supposed to be knowledgeable of the material that they teach, and have an interest in students academic success.

In the context of the above mentioned, and in response to a survey conducted, the system of higher education of the University of Osijek should be first of all implemented with the following changes: raising the quality of higher education primarily through investment in education of the research-teaching staff and through training of the administrative staff posing as a quality support to the academic and administrative activities of the university, updating the content of curricula, improving communication with representatives of the regional economy, modernization and upgrading of university library holdings, encouragement of communication with alumni, development and additional training through the programs of lifelong learning.

#### **4. Conclusion**

The impact of higher education on the local region is the strongest when universities and faculties understand what they can offer to the economy and society as a whole. Regional development involves the process of improving the standard of living and the quality of life of all citizens of the region, and in this context the paper analyzed the contribution of the University of Osijek to the development of the region through the perception of the target group of respondents, alumni students, who represent valuable on which one should build the recognition and competitiveness. The task of universities is to permanently cultivate the character of a public institution and demonstrate to itself and the region the value it possesses for its regional economy and the society as a whole, where by communication they provide a public space for discussing the current economic and social issues. Based on the analysis of the perceptions of alumni students in two periods of measurement, year 2009 (n = 121) and year 2014 (n = 138) the same patterns of behavior were observed, in which the average score of the dimensions examined are, on average, higher in 2014, in relation to the measure taken five years ago, by which one can conclude that all the necessary resources in providing quality educational services had improved, indicating a significant positive shift in quality of the higher education at the University of Osijek in responding to the needs of the economy and the society of the region. However, these results should be maintained and there should be a more active monitoring of the labor market needs and coordination of the acquired competencies with the employers' wishes and needs. It will thus be possible to create a competitive workforce through adaptation of the programs of study, through introducing the programs for lifelong learning, but also through linking learning outcomes in order to create a basis for harmonization of the Croatian Qualifications Framework (CQF) with the European Qualifications Framework (EQF), by which the University of Osijek will improve competitiveness and image on the market.

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**HUMAN CAPITAL IN PROFESSIONAL SPORTS CLUBS -  
FIRST CROATIAN FOOTBALL LEAGUE**

**LJUDSKI POTENCIJAL U PROFESIONALNIM SPORTSKIM  
KLUBOVIMA - PRVA HRVATSKA NOGOMETNA LIGA**

**ABSTRACT**

*People are the key factor of each organization. They are the driving force and bearers of all organizational activities, therefore in analyzing the functioning of any organization certain attention should be given to human resources. Human potentials are exactly the factor which connects all other organizational resources. Management structure in Croatian sports clubs is usually composed of people from politics, economic branches and similar, often they are not qualified enough to manage sports organizations.*

*The objective of the research is to provide an overview of the human potential, mainly in club management in professional football clubs of the Republic of Croatia in relation to achieved sports results. The structure, role and importance of management in football clubs of the First Croatian football league through a quinquennial period from 2007/2008 until 2011/2012 will be presented. The analysis has been conducted among nineteen football clubs in the First Croatian football league, which is also the overall number of clubs in the First Croatian football league in the given period. The results indicate severe differences in the number of employees among different clubs. Regarding the educational structure of managers, most of them are university graduates and undergraduates (baccalaureus). The analysis of clubs data has indicated that the clubs which achieve high competitive results have highly educated staff on manager positions. The possibilities for professional education of football coaches and other sports workers, which are available in Croatia at the moment, are described.*

**Key words:** *human capital, management, professional football clubs*

## SAŽETAK

Ljudi su ključni čimbenik svake organizacije. Oni su pokretači i nositelji svih organizacijskih aktivnosti, stoga je ljudskim resursima potrebno pridati pozornost u analizi funkcioniranja bilo koje organizacije. Upravo su ljudski potencijali čimbenik koji povezuje sve ostale organizacijske resurse. Upravljačka struktura u hrvatskim sportskim klubovima najčešće je sačinjena od osoba koje dolaze iz politike, gospodarskih djelatnosti i sl., a često nisu dovoljno kvalificirani za vođenje sportskih organizacija.

Cilj istraživanja je dati prikaz uloge ljudskog potencijala, u prvom redu klupskog menadžmenta, u profesionalnim nogometnim klubovima u Republici Hrvatskoj u odnosu na postignute sportske rezultate. Prikazani su rezultati istraživanja strukture, uloge i značenja menadžmenta u nogometnim klubovima Prve hrvatske nogometne lige kroz petogodišnje razdoblje od 2007./8. do 2011./12. natjecateljske sezone. Ispitivanje je provedeno na devetnaest nogometnih klubova Prve hrvatske nogometne lige što ujedno predstavlja ukupan broj klubova 1. HNL u navedenom razdoblju. Rezultati su ukazali na velike međuklupske razlike u broju djelatnika po klubovima. U obrazovnoj strukturi menadžera prevladava visoka stručna sprema i stručna sprema prvostupnika – "baccalaureus". Analiza podataka po klubovima pokazala je da klubovi koji ostvaruju visok natjecateljski plasman na menadžerskim funkcijama imaju visoko obrazovan kadar. Opisane su mogućnosti stručnog obrazovanja nogometnih trenera i ostalih sportskih djelatnika koje su trenutno dostupne u Hrvatskoj.

**Ključne riječi:** ljudski potencijal, upravljanje, profesionalni nogometni klubovi

### 1. Features of management in sports

Sports management is in theory part of general management, whereas in practice the coach and other experts are the ones who have the role of managing sports clubs or organizing major sports events. The role of sports management is analyzing the problems in sport, identifying the causes of certain conditions, choosing many different solutions to achieve goals more efficiently.

The goals of sports management are specific and they can be classified as:

- accomplishing sports goal during a certain period of time
- accomplishing business goals of the sports organization

The goals are codependent because achieving sports results is not possible without accomplishing business goals (organizational, material, financial). At the same time, the level of sports results influences directly the actualization of business goals (club's income, material costs, paychecks, taxes etc.). Sports management, as a part of general management, deals with specific problems of organization and management in sport or in a specific sports organization with a rational use of limited resources. Sport manager can be defined as an „organizer, driver of a sports-business organization, whose goal is to achieve certain sport and business results.“<sup>46</sup> Sport manager is defined for the first time by the new Sports Act, namely as „a person who, according to the rules of the national federation, is authorized to perform the task of mediating the transfer of athletes from one sports club to another“ (NN 71/06). It is important to mention that the sport manager's functions and responsibility are much wider than the ones defined by the law.

Management in competitive sport can be classified: <sup>47</sup>

- as social management

<sup>46</sup>Bartoluci, M., *Ekonomika i menadžment sporta*. Zagreb: Informator. str.155., 2003

<sup>47</sup> Bartoluci, M., Škorić, S. *Menadžment u sportu*. Zagreb: Odjel za izobrazbu trenera Društvenog veleučilišta u Zagrebu, Kineziološki fakultet Sveučilišta u Zagrebu. str.73., 2009

- as operative management

**Social management** includes different social authorities, which treat sport as public good. These are the assembly, board of directors, supervisory board etc.

**Operative management** is made of managers of sports organization with different profiles and on different levels and business affairs, such as: club manager, sports manager, financial manager, marketing manager, secretary etc.

## **2. Football management**

Football specificities create distinct requirements for managers who manage football clubs.

### **2.1. Role of management in professional football clubs**

Football is one of the first professionalized sports in which trainers and players started playing for money, and “football” management is one of the branches that are being actively studied on academic level. The most appropriate and most used term is definitely the term coach, who trains the team to achieve strategic and operative goals. A good manager in a team has to be not only an excellent playmaker, but also an excellent expert and game organizer. He has to stir and give purpose to his team and the game itself.

## **3. Paper objective**

The objective of this paper is to present the role of human capital, foremost in club management and in football clubs in the First Croatian football league, and to depict these results in comparison to the achieved sports results.

## **4. Methodology**

The structure, role and importance of management in football clubs of the First Croatian football league, through a quinquennial period from 2007/2008 until 2011/2012 competitive season, has been researched through a survey. The analysis has been conducted among nineteen football clubs in the First Croatian football league, which is also the overall number of clubs in the First Croatian football league in the given period.

Data about the number of managers in a club (social management and operative/executive management) during five seasons from 2007/2008 until 2011/2012 has been collected. As well as the number of employees in a club according to their workplaces in aforementioned departments and their professional qualifications (education lower than secondary school, secondary school, bachelor, graduate, masters, doctorate).

## **5. Results**

### **Staff structure of clubs in the First Croatian football league**

People are the key factor of each organization. They are the driving force and bearers of all organizational activities, therefore in analyzing the functioning of any organization certain attention should be given to human resources. Human potentials are exactly the factor which connects all other organizational resources.<sup>48</sup> Employees in Croatian sports clubs are „usually managers from politics, economic branches and similar, and they are often not qualified to manage sports organizations.“<sup>49</sup>

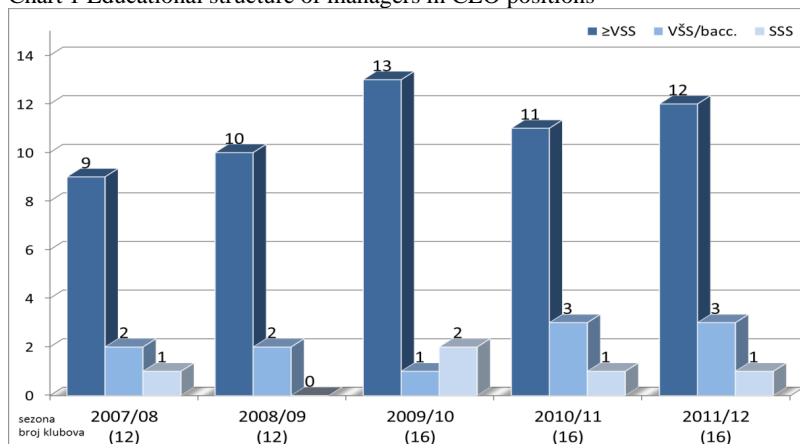
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<sup>48</sup>Buble, M. *Management*. Split: Ekonomski fakultet Split, pod.20. str 118., 1993

<sup>49</sup>Bartoluci, M., Škorić, S. *Menadžment u sportu*. Zagreb: Odjel za izobrazbu trenera Društvenog veleučilišta u

The analysis of clubs' data has indicated that the clubs which achieve high competitive results have highly educated staff on manager positions. In the following results collective data on educational structure in several main manager positions in clubs will be presented.

Chart 1 Educational structure of managers in CEO positions



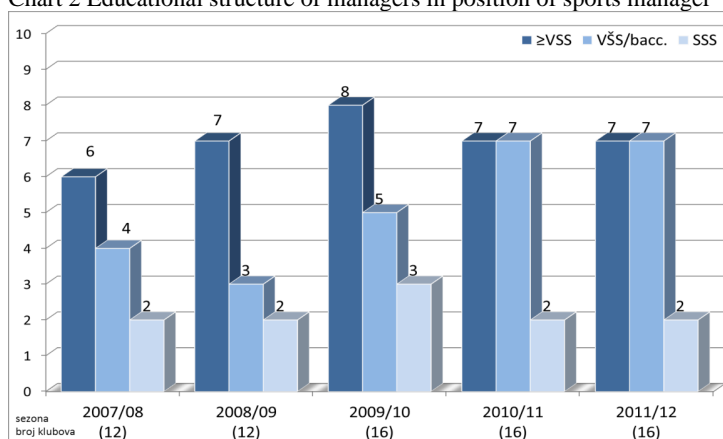
(Eng: VSS- bienall aducation; VŠS- triennial education/baccalareus; SSS- secondary education)

(Eng: sezona- season; broj klubova- number of clubs)

Source: Širić,Ž.(2012) magistarski rad, Uloga menadžmenta u upravljanju profesionalnim nogometnim klubovima u Republici Hrvatskoj- 1. HNL, Osijek, Ekonomski fakultet Sveučilišta J.J.Strossmayera u Osijeku

In most of the clubs in the First Croatian football league the general manager is a university graduate. During a quinquennial period there were no signs of significant changes regarding the educational structure of manager in the CEO position of the club. The manager in the position of a CEO is typically a university graduate.

Chart 2 Educational structure of managers in position of sports manager



(Eng: VSS- bienall aducation; VŠS- triennial education/baccalareus;SSS- secondary education)

(Eng: sezona- season; broj klubova- number of clubs)

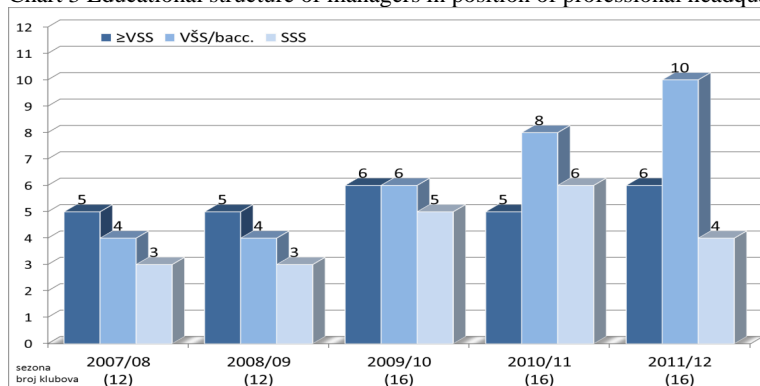
Source: Širić,Ž.(2012) magistarski rad, Uloga menadžmenta u upravljanju profesionalnim nogometnim klubovima u Republici Hrvatskoj- 1. HNL, Osijek, Ekonomski fakultet Sveučilišta J.J.Strossmayera u Osijeku

Sports managers are usually university graduates, followed by undergraduates i.e. bachelors, whereas there is only in two (and one season in three) clubs a sports manager with secondary education. Increase in number of sports managers with bachelor degrees reflects the changes in the Croatian educational system. New members of the staff that appear in recent years have bachelor degrees, which they got in triennial studies according to the bologna process, which was non-existent in the earlier educational system, and they usually continue their studies for another two years to get their master's degree. Therefore it is expected that in the future there will be much more people with quinquennial university education in place of sports managers.

### Professional headquarters' chief

Managers who are in the professional headquarters' chief position usually have undergraduate biennial or triennial, i.e. bachelor, levels of education. It is evident in chart 3 that the number of people with biennial and triennial, i.e. bachelor, levels of education has been increasing in the position of professional headquarters' chief. Within a particular competitive season the number of these experts is different from the total number of clubs, due to the changes of staff during the competitive season. We can conclude from the results that these kinds of managers have higher education, but different professions (educational areas) and they are lacking in special education in the area of sports management. Apart from the education itself, professional analysis of managers in sport is definitely an area that can be improved.

Chart 3 Educational structure of managers in position of professional headquarters' chief



(Eng: VSS- biennial education; VŠS- triennial education/baccalareus; SSS- secondary education)

(Eng: sezona- season; broj klubova- number of clubs)

Source: Širić, Ž. (2012) magistarski rad, Uloga menadžmenta u upravljanju profesionalnim nogometnim klubovima u Republici Hrvatskoj- 1. HNL, Osijek, Ekonomski fakultet Sveučilišta J.J.Strossmayera u Osijeku

Regarding the education of sports managers, there are two study programs in Croatia which train their attendants for sports management. Those are professional study programs of Management of tourism and sports at the Polytechnic of Medimurje in Čakovec, which has duration of three years. After finishing the program student acquires the professional title Bachelor of Economics – Management of tourism and sports ([www.mev.hr/](http://www.mev.hr/)). Professional study program of sports management at the University College of sports management Aspira in Split is assigned to educate students for management roles in sport.

Professional study program of sports management is assigned to educate students for management roles in sports associations and other business systems and to educate managers –agents of athletes, sports associations, individual athletes and sports teams. The goal of the professional study of sports management is to educate experts for management roles in sports

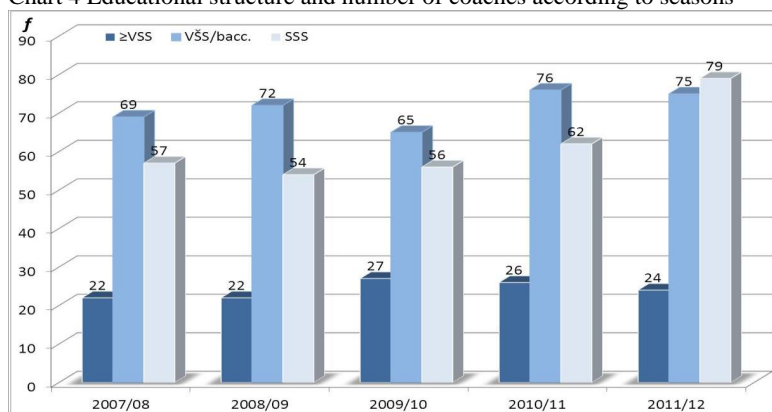


associations and managers – sports agents using manager techniques and skills.<sup>50</sup> Apart from professional studies, there is also a possibility of specialization in sports management at the Faculty of Kinesiology, University of Zagreb. In the program of graduate studies according to the Bologna there is a module – *Sports management* with duration of four semesters. The final title of these experts is master of kinesiology – sports management. The first generation of students studying this is at the moment underway.<sup>51</sup>

## Coaches

Chart 4 shows the total amount of coaches and their levels of education according to seasons. The highest number of coaches has secondary education (44%) and undergraduates with biennial, i.e. triennial education according to Bologna process (42%) and the lowest is the number of university graduates (14%).

Chart 4 Educational structure and number of coaches according to seasons



(Eng: VSS- biennial education; VŠS- triennial education/baccalareus; SSS- secondary education)

(Eng: sezona- season; broj klubova- number of clubs)

Source: Širić, Ž. (2012) magistarski rad, *Uloga menadžmenta u upravljanju profesionalnim nogometnim klubovima u Republici Hrvatskoj- 1. HNL, Osijek, Ekonomski fakultet Sveučilišta J.J.Strossmayera u Osijeku*

Total number of coaches in each club is taken from the total of coaches in next categories: assistant coaches, novice coaches, coaches for junior pioneers, senior pioneers, cadets, juniors, goalkeepers and conditioning coaches.

Coach of the first team and leader of the program for development of younger generations in a first league club has to have an UEFA PRO License or a valid foreign non-UEFA coaching license, which corresponds to the aforementioned license and is acknowledged by UEFA, or he has to be enrolled and regularly attend an educational program for UEFA PRO License, which is organized by the Croatian Football Federation.

Assistant coach of the senior team has to have an UEFA A-license or a valid foreign non-UEFA coaching license, which corresponds to the aforementioned license and is acknowledged by UEFA.

In the program for development of younger generations each club has to have at least one coach in each of the five mandatory younger teams. Coaches of junior and cadet teams have to have at least the UEFA A-license, or a license which enables issuing a national PRO-license (in accordance to the Regulations on coach status in CFF, CFF Licensing Regulations

<sup>50</sup> Jerkunica, A. *Obrazovanje sportskih menadžera*. Hrvatski znanstveno stručni skup o menadžmentu u turizmu i sportu : zbornik radova Vol. 1., 2010

<sup>51</sup> Kurikulum Kineziološkog fakulteta u Zagrebu, 2012. www.kif.hr

and CFF Football Academy program), or a valid foreign non-UEFA coaching license which corresponds to the aforementioned licenses and is acknowledged by the UEFA.

Coaches of other younger teams have to have at least a national A-license or a diploma which enables issuing a national A-license.<sup>52</sup> Education of professional staff according to the UEFA model is carried out at the CFF Football Academy, which also has power to validate coach diplomas from the Faculty of Kinesiology. Coaches, therefore, have to be educated and trained professional with pedagogical skills and communicational abilities, which are inevitable in order to achieve quality communication with the players. Role of the senior team's coach, who, in co-operation with the sports manager, defines basic guidelines of the game's system, selects the players and the way of maintaining professional politics of the club, is especially significant. Equal professional importance, in terms of qualifications needed, is in the hands of program leader for the development of younger generations, who is expected to have exceptional organizational skills.

There are also nutrition specialists in clubs, i.e. nutritionists and pharmacologists, whose advices on proper sports diet help in accelerating recovery of sports organisms, which are exposed to ever-growing strains.

Important position in medical teams belongs to physical therapists, who conduct regular massage treatments before and after exposing to great physical strains and conduct physical therapy and rehabilitation in case of injuries.

Ambitious clubs which aim at certain results and have more demanding and intensive training and competitive activities, often employ psychologists, who help eliminate consequences of stressful situations and resolve problems during crisis periods in lives of professional football players.

Besides the ones mentioned, economist is also one of the important people in professional headquarters.

Table 1 shows average significance attributed to managers, i.e. coaches, in clubs.

Table 1 Descriptive statistics to estimate importance of individual factors

Factors	Median (M)	Standard deviation (SD)	Minimal assessment	Maximal assessment
<b>Managers</b>				
General manager	<b>4,8</b>	0,4	4,0	5,0
Deputy manager	3,4	0,7	2,0	4,0
Assistant manager	3,7	0,8	2,0	5,0
Marketing manager	4,2	0,4	4,0	5,0
Financial manager	4,1	0,8	3,0	5,0
Sports manager	<b>4,7</b>	0,5	4,0	5,0
Technical manager	3,7	0,9	2,0	5,0
Sports school manager	4,6	0,5	4,0	5,0
<b>Coaches</b>				
Professional headquarters' chief	<b>4,8</b>	0,4	4,0	5,0
Assistant coaches	4,2	0,5	3,0	5,0
Beginners	4,3	0,6	3,0	5,0
Junior pioneers	4,3	0,6	3,0	5,0
Senior pioneers	4,3	0,6	3,0	5,0
Cadets	4,4	0,5	4,0	5,0
Juniors	4,5	0,5	4,0	5,0

Source: Širić, Ž. (2012) magistarski rad, *Uloga menadžmenta u upravljanju profesionalnim nogometnim klubovima u Republici Hrvatskoj- 1. HNL, Osijek, Ekonomski fakultet Sveučilišta J.J.Strossmayera u Osijeku*

Factors that are considered important or extremely important in improving club's football in all of the clubs are: general manager, sports manager, sports schools manager, marketing

<sup>52</sup> Petrović, A. *Karakteristike i uloga sportskog direktora u nogometnom klubu*. Zagreb: Društveno veleučilište u Zagrebu - Odjel za izobrazbu trenera pri Kineziološkom fakultetu Sveučilišta u Zagrebu, str.12-15, 2007

manager. Amongst the coaches these are professional headquarters' chief and coaches of cadet and junior teams, whereas in the case of coaches of younger players, there isn't an agreement when talking about importance.

Generally it could be stated that the coaches of younger players are in fact especially important, because at that age foundations are set and they learn football basics. Importance grades from 3 to 5 are given to the coaches of younger players, hence some clubs recognize the importance of coaches in that category, whereas others consider them neutral regarding importance. It is important to mention that none of the clubs consider them irrelevant. Taking into consideration the results in educational structure of coaches, the recommendation would be to have quality coaches with experience and appropriate higher education working with younger generations.

## 6. Conclusion

There are factors which can contribute to improving football management, and some of them are singled out as universally important for all clubs in the First Croatian football league. Among all the mentioned factors regarding managers, the greatest importance is attributed to the general manager, followed by the sports manager. In estimating the importance of these managers clubs are homogenous in their assessments. All nineteen clubs graded them as "important" or "very important". Among coaches, the greatest importance is attributed to the professional headquarters' chief. Data analysis of staff's educational structure in clubs has shown that clubs which achieve better results have highly educated staff in manager positions, which tells us a lot about the influence of management quality on club's results.

Quality football management on all levels has to lead to perceiving football as planned, socially and economically beneficial activity in social community, which is investment-worthy. In order to achieve that it is necessary to form a development strategy on all levels, i.e. plans, which can be realized in optimal time period.

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**Novi trendovi  
u razvoju  
gospodarstva**

**New trends  
in economic  
development**

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## **EVALUATION OF ENTREPRENEURIAL PROJECTS FOR THE PURPOSE OF SUSTAINABLE TOURISM DEVELOPMENT OF EASTERN CROATIA**

### **VALORIZACIJA PODUZETNIČKIH PROJEKATA U FUNKCIJI ODRŽIVOG RAZVOJA TURIZMA ISTOČNE HRVATSKE**

#### **ABSTRACT**

*The subject matter of this research is connected with economic evaluation of entrepreneurial projects of special interest tourism in Eastern Croatia. The basic characteristics of special interest tourism (SIT) developed in tourist destinations are derived from special interests and needs of tourists for culture, religion, health, sport and physical recreation, hunting, fishing, ecology, wine, gastronomy, etc. It is precisely these varieties that are the potentials of Eastern Croatia, and they can be evaluated through various entrepreneurial projects of rural tourism. The experience of the neighbouring countries, e.g. Austria, Slovenia, Hungary, etc., has shown that similar regions have developed a wide offer of special interest tourism that generates significant economic effects. Eastern Croatia is at the very beginning of developing such offer, and at the moment the modest economic effects amount to 1% of the total turnover in tourism in the Republic of Croatia. The accession of Croatia to the European Union opened new market opportunities both as regards the foreign tourism demand and in terms of financing new investment projects. To attract new investments and means from structural and other funds of the European Union, as well as from other sources, entrepreneurial projects are necessary that will optimally evaluate ecological, socio-cultural and economic factors of development.*

*The aim of this paper is to research into and to economically evaluate the selected entrepreneurial projects of special interest tourism types for the purpose of sustainable development of tourism in Eastern Croatia.*

*The basic hypothesis of this research is that SIT types may be successfully developed as entrepreneurial projects only if they are ecologically, but also economically sustainable in a destination on a long-term basis.*

*The pilot research results have been used to serve to test the set hypothesis. The survey was done on the sample of tourism experts. Entrepreneurial projects can be sustainable on a long-term basis provided that the basic prerequisites be realized – the structure and the range of domestic and foreign tourism demand, favourable sources of financing, quality and competitive tourism offer, a wide range of autochthonous products and services provided by quality personnel, etc. These are elements necessary for economic evaluation of entrepreneurial projects that need to be analysed and identified before investments are made for each prospective projects. Economic evaluation of entrepreneurial projects has shown their economic profitability, which is a prerequisite of their long-term sustainable development.*

*To realize the set aim of the research, desk research has been made, descriptive statistics has been calculated and the methods for the evaluation of entrepreneurial projects' profitability has been applied.*

**Key words:** *entrepreneurial projects, development of sustainable tourism, Eastern Croatia*

## SAŽETAK

*Problem ovog istraživanja vezan je uz ekonomsku valorizaciju poduzetničkih projekata specifičnih oblika turizma u regiji Istočna Hrvatska. Temeljna obilježja specifičnih oblika turizma (SOT-ova) koji se razvijaju u turističkim destinacijama proizlaze iz posebnih interesa i potreba turista za kulturnim, vjerskim, zdravstvenim, sportsko-rekreacijskim, lovnim, ribolovnim, ekološkim, vinskim, gastronomskim i drugim sadržajima. Upravo su to potencijali koje ima regija Istočna Hrvatska, a moguće ih je valorizirati kroz različite poduzetničke projekte ruralnog turizma. Iskustva iz susjednih zemalja Austrije, Slovenije, Mađarske i dr. pokazuju da su slične regije razvile vrlo široku ponudu specifičnih oblika turizma koji generiraju značajne ekonomske učinke. Regija Istočna Hrvatska tek je na početku značajnijeg razvoja ovakve ponude sa skromnim ekonomskim učincima koji se kreću oko 1% od ukupnog turističkog prometa u Republici Hrvatskoj. Ulaskom RH u Europsku Uniju otvaraju se nove tržišne mogućnosti kako na strani inozemne turističke potražnje, tako i u području financiranja novih investicijskih projekata. Za privlačenje novih investicija i sredstava iz strukturnih i drugih fondova Europske Unije, ali i dugih izvora, potrebni su poduzetnički projekti koji će optimalno valorizirati ekološke, sociokulturne, kao i ekonomske čimbenike razvoja.*

*Cilj je ovog rada je istraživanje i ekonomska valorizacija odabranih poduzetničkih projekata specifičnih oblika turizma u funkciji održivog razvoja turizma u Istočnoj Hrvatskoj.*

*Temeljna hipoteza ovog istraživanja je da se SOT-ovi mogu uspješno razvijati kao poduzetnički projekti samo ako su ekološki ali i ekonomski dugoročno održivi u destinaciji.*

*Dokazivanje hipoteze izvršeno je pomoću rezultata izviđanog istraživanja, a koje je provedeno pomoću anketnog ispitivanja turističkih stručnjaka. Poduzetnički projekti mogu biti dugoročno održivi ako se ostvare temeljne pretpostavke: određena struktura i opseg domaće i inozemne turističke potražnje, povoljni izvori financiranja, kvalitetna i konkurentna turistička ponuda, široki asortiman autohtonih proizvoda i usluga uz kvalitetnu radnu snagu i dr. Sve su to elementi za ekonomsku valorizaciju poduzetničkih projekata koje je potrebno istražiti i utvrditi prije ulaska u investicije za svaki potencijalni projekt. Ekonomska valorizacija poduzetničkih projekata pokazala je njihovu ekonomsku isplativost što je pretpostavka njihovog dugoročnog održivog razvoja.*

*U radu su korištene znanstvene metode: desk research, metoda deskriptivne statističke analize te metode za ocjenu isplativosti poduzetničkih projekata.*

**Ključne riječi:** *poduzetnički projekti, održivi razvoj turizma, Istočna Hrvatska*



## 1. Introduction and methodology

The subject matter of this research is connected with research into perceptions regarding entrepreneurial projects of special interest tourism (SIT) in sustainable development of Eastern Croatia. The basic characteristics of special interest tourism developing in destinations are the result of special interests, wishes and needs of tourists. In the era of contemporary tourism development, special interest tourism appears as a new quality of tourism product in destinations where it represents an additional source of economic values and economic sustainability of a destination. In tourism in the continental part of Croatia special interest tourism produces new opportunities for tourism development, where it can become a primary or a recognizable tourism product. The analysis of the past development of special interest tourism will be done in this article, together with the programming and economic opportunities of development of the existing and of new special interest tourism types.

Past research, as well as the new Croatian Tourism Development Strategy until 2020 (2013), shows that special interest tourism types have not been planned on the basis of research regarding objective market opportunities, but that their future development is based exclusively on areal resources (Bartoluci, Kesar, Hendija, 2014, 4). Hence, the aim of this research is to analyse market needs, as well as areal, socio-cultural and economic opportunities of sustainable development of special interest tourism. Tourism and sustainable development are interdependent, since tourism is mostly interested in the sustainability of resources that are the basis of its long-term sustainable development. Past research has led to the perception that sustainable tourism development can be realized by applying numerous principles: ecological, socio-cultural, technological and economic ones (Vukonić, Keča, 2001, 190). It is therefore necessary to plan the sustainable tourism development according to the requirements of tourists, but also in compliance with ecological, socio-cultural, technological and economic limitations of a certain tourism area (Bartoluci, 2013, 132).

*Economic sustainability* is based on healthy and economically efficient development implying optimal resource management in a sustainable way, subsequently making it possible for future generations to use these resources as well. Economic sustainability in tourism is compatible with ecological, socio-cultural and technological principles of sustainability. Economic sustainability should enable an economically successful development, and resource use and management should provide their preservation for future generations. The principles of economic sustainability of tourism are not incompatible with other principles, although in practice this situation may become possible, e.g. in case of facility construction (e.g. illegal construction) or in case of overcommercialization of cultural and historical heritage, etc. The balance of sustainable development of tourism can be attained in a destination if all indicators of sustainability are harmoniously triangulated (Mihalič, 2006, 103). Economic sustainability, as well as sustainable tourism, should be built on a long-term basis by all participants in a certain area, because this is the only way to ensure the quality of life both in the present and in the future. Therefore, in sustainable development policy equal attention should be paid to taking into account all principles of sustainability, because they are interdependent and synergistically affect tourism development.

Economic evaluation of entrepreneurial projects will show their economic acceptability as a component of the long-term sustainability.

The aim of this paper is to research into and to economically evaluate the selected entrepreneurial projects of special interest tourism types for the purpose of sustainable development of tourism in Eastern Croatia.

It is hypothesized that special interest tourism types may be successfully developed as entrepreneurial projects only if they are ecologically, but also economically sustainable in a destination on a long-term basis.

The confirmation of this hypothesis has been done on the basis of research results. General scientific methods of deduction and analysis for the interpretation of secondary data have been used in this empirical research. Descriptive statistics was done and Delphi method has been used in the primary research. Secondary data have been collected from official statistical reports, scientific and professional papers, as well as relevant Internet sites. The primary research has been conducted on 237 long-term experts of various profiles in tourism in the period between 15<sup>th</sup> and 22<sup>nd</sup> January 2014 by means of distributing the questionnaires through electronic mail. A representative response of 32%, i.e. 77 questionnaires, has been realized. The results were processed on anonymous basis. The structured questionnaire consisted of six close-ended questions, half of which demanded multiple answers. The development of special interest tourism types in Continental Croatia (excluding the Town of Zagreb) has been analysed. The subjects were asked to evaluate certain research elements on a Likert five-point scale, where *five* expressed high influence or importance, and *one* low influence or importance for tourism development, depending on the contents of a question.

## **2. Basic features of special interest tourism types**

The concept of mass tourism has developed on the basis of the economy of scale which attempts to maximize the number of tourists, the number of overnights, tourism consumption and other economic effects. Research throughout the world shows numerous positive, but also negative consequences of mass tourism, so that in searching for new concepts of development new opportunities and alternatives to negative influences of mass tourism are sought. As an alternative to mass tourism ecotourism, green tourism, alternative tourism, etc. evolved, having one common feature – sustainable tourism (Bartoluci, 2013, 184). These tourism types are termed special interest tourism (SIT). With special interest tourism the emphasis lies on market segmentation and defining the primary motive that affects the decision of tourists to travel to certain places and destinations that can meet their specific wishes and needs. Special interest tourism types can therefore be defined as those that are based on specific interests of tourists for contents and activities in a certain tourism destination (Bartoluci, Škorić, 2009, 1). In other words, specific types of tourism are based on motives as prime movers of tourists that make them choose to go to those destinations that can optimally meet their special interests. These motives are those that address sport and recreation, health improvement, culture, history, education, religion, etc. It is such needs that produce special interest tourism types like sport tourism, health tourism, cultural tourism, education tourism, congress tourism, religious tourism, etc.

Geographical area is the basic resource in a destination for the development of special interest tourism. Geographical area is also the most important attraction that obtains use and market value through various types of tourism. Apart from areal resources, special interest tourism types are created in specially prepared resources. Special interest tourism types are mostly connected with natural resources or anthropogenic tourism resources, whereas some of them use both. What is particularly important for each special interest tourism type is that each demands not only specific resources, but a different organizational and market approach, various contents, experts who will render specific services, etc.

The basic features of special interest tourism types are that they are organized on an individual basis as independent and homogeneous activities of smaller groups, and that they provide long-term optimal development (Kesar, 2007, 53). Special interest tourism types can generate larger income for all subjects, employ more people from the area, as well as

encourage family entrepreneurship, investments in attractions, facilities and contents that are smaller in volume than investments in mass tourism. Accommodation capacities are built in compliance with the style typical for a particular area, and the market of special interest tourism is more homogeneous and more independent than the mass tourism market, etc. In terms of areal planning of special interest tourism a destination, i.e. a complex areal unit referring to the area of a functional tourism entity (tourism place), becomes the carrier of development. This area builds its tourism identity on the concept of its cumulative attractions which, due to the tourism experience that they provide, together with a certain urban tourism infrastructure, creates an area of intensive gathering of tourists. In spatial terms, the development of special interest tourism types is directly connected both with the concept of sustainable development and with the concept of the carrying capacity.

Special interest tourism types can be developed in a tourism destination either as a primary tourism development orientation or as an additional tourism product. Special interest tourism types as a *primary tourism orientation* develop on the basis of special characteristics of natural resources, e.g. sea, thermal mineral water, beneficial climate, mountain areas, etc. Special interest tourism types developing accordingly are ecotourism, health tourism, spa tourism, nautical tourism, winter sports tourism, agritourism, mountain tourism, etc.

Special interest tourism types also have an influence on the area within a certain destination, because it would be utopistic to believe that economically sustainable development of a tourism activity will not have any impact on the environment (Kesar, 2007, 53). Special interest tourism types, as the concept of the development of tourism, offer more opportunities of applying the criteria of sustainable development as a developmental option of mass tourism. Therefore, the concept of the development of special interest tourism is the most acceptable option in managing attractive areas in a destination.

Each receptive tourism country or region has its own specific characteristics of tourism resources from which various types and kinds of tourism emerge.

Nowadays in Croatia various specific types of tourism are offered that have been developed in tourism offer of competition countries as well. The key difference lies in a lower degree of development of special interest tourism types in Croatia, compared to other Mediterranean countries. This is so because other special interest tourism types did not develop simultaneously with the resort-spa tourism, so that a significant amount of unused potential for the development of the existing and new offer of special interest tourism types remained in the Republic of Croatia. This claim has been confirmed by the findings of the primary research regarding the current development level of twelve special interest tourism types in Continental Croatia. According to the opinion of 77 tourism experts, special interest tourism types in Continental Croatia received a low average mark of 2.7, which points to their poor developmental level. However, the expectations related to development are much more optimistic for special interest tourism types in Continental Croatia, because they received a much higher mark of 3.9. As the types of special interest tourism that have the best opportunities for development are gastronomic and wine tourism, rural tourism, ecotourism, cultural tourism, health tourism, sport and recreation tourism and event tourism. A somewhat slower development is expected for hunting and fishing tourism, religious tourism, urban tourism, congress tourism and memorial tourism (Bartoluci, Kesar, Hendija, 2014, 4).

### **3. Analysis of tourism features in Eastern Croatia**

Past tourism development in Continental Croatia can be assessed with a medium mark in comparison with the total development of tourism in the Republic of Croatia. Since according to its geographical position Croatia is a Mediterranean country with almost 6,278 km of the

coastline of the Adriatic Sea (CBS, 2013a, 40), it is only logical that tourism has developed strongly in its coastal area, because numerous natural and geopolitical prerequisites existed for this development. Nowadays when Croatia is already a full member of European Union, and in international tourism market a strong megatrend of special interest tourism types is under way, the continental part of Croatia represents an area with significant natural and social potentials for the development of small-scale tourism which could significantly contribute to the economic and social revitalization of numerous social communities in this area.

Potentials for the development of tourism in the area under consideration have long been known. They are derived from rich and diverse natural resources geographically dispersed across the whole territory and involving fertile planes, picturesque mountains and hills, forests, rivers and lakes, beneficial climate, thermal mineral water springs and other resources which rural areas are rich in. Additionally, Continental Croatia is rich in tangible and intangible cultural heritage that is presented to the visitors through preserved historical heritage, but also through the contemporary life style of people in these areas. Rich and exceptionally preserved natural and social resources have equally affected the development both of the rural and of urban areas in which numerous opportunities for the development of complementary special interest tourism types have been opened. Through the accession of Croatia to European Union these opportunities have become even more expressed, which has also been recognized by the participants of the tourism offer in that they invested tangible and financial assets.

Since this area is yet to face a more intense development of tourism offer, it should be mentioned that key perceptions regarding tourism development management based on the principles of sustainable development are still insufficient and poorly disseminated. This is the reason why the authors of this article are trying to critically address the necessity of applying the concept of economic sustainability of development of special interest tourism types in Eastern Croatia, and to point to potential threats arising from unsustainable investment into new tourism capacities and from incorrect management of available tourism resources.

Although the concept of sustainable development has been present in the development theory and practice for decades, though only partially treated and applied in its early years of existence, the actual turning point in its theoretical deliberation and practical implementation at the global level was made by the United Nations World Commission on Environment and Development (UNWCED, known also as the Brundtland Commission) and its report entitled "Our Common Future" in 1987. The report was, in fact, the first comprehensive conceptualization of sustainable approach to development that determined globally applicable principles of sustainability. It also defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UNWCED, 1987). Following years witnessed much discussion on sustainable development, the peak of which was the Earth Summit in Rio de Janeiro in 1992, when the "Agenda 21" was introduced and adopted, a comprehensive and detailed UN action document that contained strictly defined directives and principles of how to rationally use resources while, simultaneously, ensuring sustainable economic growth (UN, 1992).

The implementation of the concept of sustainability in tourism development is based upon balance among three areas of seemingly opposed interests: ecological, social and economic sustainability. Each of the listed sustainability areas should be regarded as an integral component of the general model of sustainable tourism development, meaning it is not acceptable to single out any of the areas for observation, analysis and conclusion drawing. Although attention of researchers has been first oriented to the ecological component of

sustainability, due to the occurrence of serious ecological issues emerging from excessive tourism development in particular destinations of Spain, France and Italy in 1980s, recently both the economic and social components of sustainability are becoming increasingly important. It is particularly obvious in research studies on tourism, since it has been proven that all three components of sustainability, viewed through the prism of preserving tourism resources, are equally important for success of its overall development.

According to WTO (1993, 10), economic sustainability should provide economically effective development that is designed in such a way as to improve the quality of life of local community in a particular tourist destination. At the same time it should also provide high quality experience to visitors and preserve quality of environment, on which both the local community and visitors depend. Although the concept of sustainability implies the widespread implementation of its principles in tourism development, Stabler, Papatheodorou and Sinclair (2010, 310) argue that the application of sustainability concept in most economic studies has been focused on microeconomic modelling. A particular model has then been elaborated and improved through many attempts and then, after all processing, applied to a wider context. However, Goeldner, Ritchie and McIntosh (2000, 552) advise caution since, even at the level of destination management, the implementation of sustainability concept becomes rather complex and, consequently, more challenging to manage. Microeconomic approach to economic sustainability was utilized by e.g. Schaltegger, Bennett and Burritt (2006, 591) who, in order to conceptualize the processes of monitoring and reporting on the status of sustainable development, singled out three key points that determine the concept of economic sustainability – financial performance, a long-term competitiveness and economic impact. From that standpoint, it is valuable to cite Choi and Turk (2011, 118) who suggest that tourism development must be primarily profitable since tourism is, in its essence, a set of economic activities. It can be concluded, therefore, that economic sustainability of tourism development implies the optimization of economic growth to the level where its development is still manageable with regard to environmental limitations.

It is worth mentioning that Continental Croatia (excluding the Town of Zagreb) is the area occupying 55% of the inland territory of the Republic of Croatia, and that 49% of the total population of Croatia lives in it (CBS, 2013b). The share of the region in accommodation offer in Croatia amounts only to 2.4%, and in the realized physical tourist flow only 2% in the year 2013 (Institute for Tourism, 2014; CBS, 2014). Further, due to the significantly shorter duration of the average stay of tourists in this region (two nights per arrival on average) compared to their average stay in coastal Croatia (5.8 nights per arrival in the year 2013), the totally realized tourist flow in comparison to the available accommodation and other tourism capacities can be assessed as extremely modest.

It further points to the need for additional research in the field of economics-related sustainability of tourism development at macroeconomic level, i.e. in the field of profitability of business activities of numerous subjects within the system of tourism offer at microeconomic level.

It should be pointed out that hotels have the highest occupancy rate of all accommodation capacities in this region, with an average of 89 days of full occupancy, so that it is not surprising that in the year 2013 as much as 43.9% of the total tourist flow of the region has been realized in them. These numbers make it possible to conclude that the occupancy rate of all accommodation capacities in Continental Croatia (63 days on average) is relatively poor, which is by 14 days less than the average occupancy rate of accommodation capacities in the coastal region of Croatia (77 days), which is characterized by seasonal business activities in tourism.

#### 4. An example of case analysis of an entrepreneurial project in Eastern Croatia<sup>53</sup>

The entrepreneurial concept is based on positive experience of similar projects from closer and wider surroundings of Kutjevo. The project has been made for a winemaker – the owner of a family farm who is a manufacturer of different field crops and whose experience in growing healthy vegetables and in preparing traditional meals will be the frame of gastronomic offer.

The rural facility is situated in a location that is attractive both for tourists and hikers. It is well connected with the principal generating market – the city of Zagreb: 150 km by highway to Zagreb. In this way the area in question could become a recognizable and a well-known tourism destination for domestic tourists and hikers, as well as for guests from neighbouring countries. Tourism offer in this part of Croatia is still rather poor and monotonous, whereas contemporary guests look for autochthonous products and require high quality, particularly of catering services. This is why the entrepreneur offers both a gastronomic offer of domestic specialities and wines produced on the estate and high-category accommodation capacities. The whole object is decorated in autochthonous style – the house is a hundred years old and is built of wood. When selling accommodation capacities, the entrepreneur first addresses the residents of Zagreb through travel agencies, but also through direct promotion, and then the prospective guests from neighbouring countries and representatives of foreign companies in Croatia.

The specific profile of prospective guests is divided into three groups:

- tourists who require nature, good food and drink, peace and quiet, and good accommodation,
- specific guests, the so-called tourism nomads, who travel from place to place, changing destinations (even countries or regions) they visit every season, who require the best possible accommodation and who recommend, if they are satisfied with the offer, this destination to their friends and acquaintances,
- hunters from Croatia, Austria, Italy, Slovenia and Hungary who, although hunting is the primary motive for their visit, require good accommodation and good food and drink; hunters are consumers of high financial solvency.

The planned income of this project is realized from several sources. It can be divided into income from overnights, lunches and dinners for regular and special guests (group or individual), income from selling wine from one's own vineyards and the income from organizing various events such as Martinje (Feast of St. Martin), New Year's Eve parties, wedding parties, etc.

The planned average occupancy rate of rooms is 37.5%, which means that the rooms are occupied 137 days in a year.

Since this is a family farm, some business activities, e.g. facilities management and preparing wine, will be realized by family members. To provide high-quality service that can ensure added value and adequate income, additional employees are necessary, and sometimes part-time employees are required, e.g. at the time of vintage or when accommodating larger groups of tourists. There are twelve full-time employees. The monthly expenditures for gross salaries are 116,000 kunas.

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<sup>53</sup>The case analysis has been taken from the textbook written by M. Bartoluci (2013): *Upravljanje razvojem turizma i poduzetništva (Managing the Development of Tourism and Entrepreneurship)*, Školska knjiga, Zagreb, 424-437

The aim of investment was to equip the autochthonous wooden house which ultimately serves as a facility in which accommodation and catering services are rendered. In the basement of the house is a wine cellar where the owner's home-made wine can be tasted. Upon reconstruction and restoration of the house, a wine cellar and a room for wine tasting were built, the restaurant where autochthonous food is offered, as well as double rooms.

To finish the construction the entrepreneur used the credit of 1,615,000 kunas. The credit has been approved within the crediting programme, termed *Encouragement to Success*, of family entrepreneurship in tourism, and in compliance with a part of the same programme termed *Under Centennial Roofs*.

For the entrepreneur, mortgage on real estate is the means of insurance for returning the loan. The loan has been approved under following conditions: the interest rate of 2% in the first half of instalment payment, whereas the interest rate in the second half of instalment payment amounts to 4%, the time of repayment of the loan is 10 years or 120 monthly instalments, with the grace period of 12 months at the beginning of instalment payment.

The calculation of investment into short-term assets or working capital in investment project has been done on the basis of calculated financial amounts of working capital items, items of resources from business activities and the corresponding turnover coefficients.

The estimate of expenses of business activities is based on the past experiences regarding the costs increased by the anticipated expenses for enhancing the range of activities.

While estimating profit and loss for the investment project on the basis of data from calculations, the total income is distributed (Table 1). The distribution of the total income is presented in the profit and loss formula which expresses all allocations from the total income:

- the coverage of invested factors (capital, material and work);
- the coverage of expenses of external financial sources (interest rates and other expenses);
- general expenditures (taxes);
- profit (dividends or the share in profit, reserves and *retained profit*).

Table 1 Distribution of total income expressed through the profit and loss calculation (in kunas)

ITEMS/YEAR	-1st	0	1st	2nd	3rd	4h	5th	6th	7th	8th	9th	10th
TOTAL INCOME	2,266,853	2,390,853	2,515,853	2,640,853	2,765,853	2,765,853	2,890,853	3,015,853	3,015,853	3,015,853	3,166,646	3,324,978
TOTAL EXPENDITURE	1,835,531	1,898,827	2,265,546	2,321,744	2,378,022	2,434,379	2,490,816	2,547,334	2,553,931	2,560,609	2,601,366	2,642,884
GROSS INCOME	431,322	492,026	250,307	319,109	387,831	331,474	400,037	468,519	461,922	455,244	565,280	682,094
TAXES	86,264	98,405	50,062	63,822	77,566	66,295	80,007	93,704	92,384	91,049	113,056	136,419
NET INCOME	345,058	393,621	200,245	255,287	310,265	265,179	320,030	374,815	369,538	364,195	452,224	545,675

Note: Total expenditures imply production expenses, material costs, depreciation, gross salaries and financing expenses.

Source: entrepreneurial project of the family farm investor

The acceptability of the project was assessed by the annual rate of return which is calculated according to the following formula:

$$RR = \frac{I - MC}{TI} \times 100$$

$$RR = \frac{3,015,853 - 2,400,081}{2,710,936} \times 100$$

RR=22.64%

RR = annual rate of return in the representative year

I = income in the representative year  
 MC = material costs in the representative year  
 TI = total investments

In the presented entrepreneurial project the annual rate of return of the investment is 22.64%, which means that 0.23 kunas of profit can be realized for each invested kuna in a year. Therefore, the project has been rated as acceptable.

The *dynamic* approach to the assessment includes in the analysis the whole duration period of the project, implying permanent prices, and the bases are: the flow of capital for the assessment of solvency and the economic flow for the assessment of profitability.

The assessment of solvency: the flow of capital makes it possible to conclude that the project has been solvent throughout its technological duration, which means that it can regularly cover all its obligations, as well as the obligations regarding the financial loan. The flow of capital shows that the programme can regularly provide the financial resources for the return of the loan.

The period of the return on investment implies the period that is necessary for the project to be able to execute the return on investment. This period can be interpreted as a period during which it is necessary to realize net-positive revenues, so that the sum of negative net revenues in this period could be zero. The estimation of the *period of return on investment* has shown that the means invested in the project can be returned in the seventh year of its duration, which is acceptable for the project taking into account its total duration of ten years (Table 2).

Table 2 Period of return on investment for the first and the seventh year of instalment payment (in kunas)

Year	Total investment		Amount of accumulation		Uncovered part of the investment
	per year	cumulatively	per year	cumulatively	
1 <sup>st</sup>	0	4,620,715	492,042	1,481,592	-3,139,123
7 <sup>th</sup>	0	4,758,613	633,641	5,032,987	+274,374

Source: *entrepreneurial project of the family farm investor*

In this analysis the discount rate of 3% was applied that is equal to the weighted arithmetic mean of interest rates applied for commercial loans (Table 3).

Table 3 Net present value of the project

Discounted revenues = 3.57%	30,643,534
Discounted expenses = 3.57%	25,620,977
Present value of net revenues	5,022,557
Present value of investment – nominal amount	4,527,414

Source: *entrepreneurial project of the family farm investor*

The present value of net revenues, at the discount rate of 3%, amounts to 5,022,557 kunas, i.e. it is above zero, so that from this point of view the project is acceptable.

The assessment of the entrepreneurial project – this model of the entrepreneurial model has been realized according to the listed conditions. Its implementation will show to which extent the planned investments can be realized. From methodological point of view, the project can be indicative for similar entrepreneurial projects in tourism.

By applying the same methodology, it is possible to economically evaluate other special interest tourism types, e.g. gastronomic tourism, health tourism, cultural tourism, hunting



tourism, fishing tourism, etc., in Eastern Croatia as well. Without this it is not possible to identify its economic profitability, and consequently its sustainability.

## 5. Conclusion

On the basis of this research it is possible to draw certain conclusions and make certain recommendations. The area of Eastern Croatia is relatively poorly developed as regards tourism, although it is dominantly a rich rural area with numerous natural resources, and historical and cultural heritage, as well as other potentials. This is primarily the consequence of insufficient investment in the development of tourism and its complementary activities. The accession of Croatia to European Union opened new market opportunities for the development of tourism and activities that are connected with it: agriculture, food industry, construction, handicrafts, etc. The research has shown that it is special interest tourism types—in particular gastronomic tourism, wine roads, rural tourism, ecotourism, cultural tourism, health tourism, sport and recreation tourism and event tourism—that have the largest opportunities. The development of hunting and fishing tourism, religious tourism, urban tourism, congress tourism and memorial tourism is also anticipated. These types of special interest tourism can be developed as an integral tourism product on the basis of entrepreneurial projects that are sustainable on a long-term basis. To realize this, it is necessary to conduct a research and evaluation of entrepreneurial programmes as a prerequisite for financing the investments either from domestic sources or from EU funds.

The presented entrepreneurial model could be a methodological basis for economic evaluation and for other projects that could be sustainable on a long-term basis only if a compromise be made in applying ecological, socio-cultural and economic principles of sustainable development of tourism in Eastern Croatia.

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**TRANSITION OF RURAL INTO URBAN SPACE ON THE EXAMPLE  
OF VIŠNJEVAC**

**TRANZICIJA RURALNOG PROSTORA U URBANI NA PRIMJERU  
NASELJA VIŠNJEVAC**

**ABSTRACT**

*Distinction between urban and rural space is closely related to historical heritage, administrative division and subjective perception. The authors of this study would like to set up the basic framework for the assessment of urban and rural elements in the perception of space. Evaluation of the space and traffic was made using the selected parameters on the example of Ban Josip Jelačić Street in the settlement of Višnjevac. This paper is based on the analysis of the cartographic material, the existing literature and a pilot study that includes a survey of various target groups and different age structures. According to the administrative division, Višnjevac belongs to Osijek's urban environment, though it is, according to its typology and space structure, more rural than urban settlement. The main goal is to analyse the urban elements present in the perception of space and the degree of the transition process in the analyzed area. These results are indicative, but they should be taken with a certain caution, because they include analysis and synthesis of just one main street of the settlement. For a more realistic picture, it is necessary to include the entire area of the settlement, analyze the social and economic activities, observe distribution of function and communication networks, as well as to increase the number of respondents in a survey of subjective perception.*

**Keywords:** *elements of space, perception of space, rural, urban*

## SAŽETAK

*Distinkcija između urbanog I ruralnog prostora usko je povezana s povijesnim nasljeđem, administrativnom podjelom I subjektivnom percepcijom. Cilj autora ovog rada bio je postavljene osnovnog okvira za ocjenu urbanih I ruralnih elemenata u percepciji prostora. Pomoću odabranih parametara izvršeno je prostorno I prometno vrednovanje Ulice bana Josipa Jelačića u prigradskom naselju Višnjevac. Rad se zasniva na analizi kartografskih materijala, postojeće literature i pilot istraživanja koje obuhvaća anketiranje različitih ciljnih skupina, različite dobne strukture. Prema administrativnoj podjeli Višnjevac pripada urbanoj cjelini, kao šire tkivo Grada Osijeka, iako je tipologijom I strukturom naselje bliže ruralnom izgledu. Namjera autora je analizirati urbane elemente prisutne u percepciji prostora I stupanj procesa tranzicije u promatranoj sredini. Dobiveni rezultati su indikativni, ali treba ih uzeti s rezervom, jer obuhvaćaju analizu I sintezu jedne, glavne ulice, naselja. Za realniju sliku potrebno je uključiti cijelo područje naselja, analizirati društvene I ekonomske aktivnosti, rasprostranjenost funkcija I mreže komunikacija, ali I uključivanje većeg broja ispitanika u analizu subjektivne percepcije prostora.*

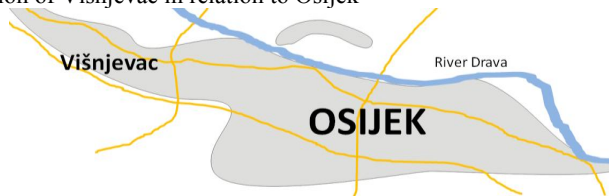
**Ključne riječi:** *elementi prostora, percepcija prostora, ruralno, urbano*

### 1. Introduction

We are witnessing a transition process that implements the urban elements and deletes a clear boundary between urban and rural areas in space and consciousness of people. Traffic demand is very often the initiator and accelerator of transition processes that, once typical, rural environments undergo.

The basic idea of this study is to determine differences between urban and rural space and indicate the need for experiencing the space through perception<sup>54</sup>, and not only through visual observation. This research articulates the wish to set up the basic framework for the assessment of urban and rural elements in the perception of space. The main objective of this paper is to examine the evaluation of the space in which the physical elements of urban and rural life overlap from the perspective of an individual.

Picture 1: Position of Višnjevac in relation to Osijek



Ban Josip Jelačić Street in the suburb of Višnjevac is experimental framework for examination of perception of traffic and space and of urban and rural characteristics. The Višnjevac is located west from the City of Osijek, at the main city road, which connects the centre of the city with its suburbs and other cities. Field research analyzed some independent elements present in perception of space and experience of the space as the whole made of

<sup>54</sup> **Perception** (lat.), insight, noticing, awareness, acuity. A psychological function by which the human spirit represents items and acts to itself; a complete experience encompassing the reflection of subject (object) world through an individuals' senses; sensory information combined in a complete form. SINobservation; according to Croatian Lexicon (HrvatskiLeksikon, <http://www.hrleksikon.info/definicija/percepcija.html>, last entry: 03.02.2014.)

those elements. Gathered data were broken down into individual elements and served as a basis for the survey which was used to assess individual opinions in the wider area of the city of Osijek. Authors of this paper presume that Višnjevac is a border area where urban and rural overlap and perception depends on individual experience of the environment and the space.

## **2. What is urban and what is rural?**

Urban areas, according to the research of SERG<sup>55</sup> (Socio-Economic Research Group), from 2007, refer to a city or a town that is independent and densely populated with developed markets and services, where the culture of impersonal and anonymous relationships takes place among the urban population. For determination of urban areas three following approaches are used:

1. Monitoring the size of construction area,
2. Classification of population density level,
3. Planning functional areas of the city, which include not only the construction areas within, but also those outside the city.

Definition of rural areas is more complex and multidimensional. Rural areas refer to the areas of small settlements situated on the outskirts of large towns and cities, but also to remote villages and hamlets, which are mainly oriented to crop production and farming. Whether it is the rural areas close to cities with stronger relationships with the urban communities or the rural areas with mainly agricultural activities, their common feature is a culture of close personal and intimate social relationships among the population. For determination of rural area the following characteristics are used:

1. Rural areas are the ones that are not urban,
2. Low population density,
3. Basic economic activities and self-employment,
4. Community cohesion and governance.

Researches of interrelations between urban and rural areas show that the connections between urban centres and rural areas play a significant role in the process of rural-to-urban transitions. Rural areas that are in constant interactions with urban centres have experienced social and economic changes, rapid decline of agricultural employment and a significant change in the form of settlements. Changes in the form of settlements are very specific at the outskirts of urban centres, in so called suburbs. These are the zones where urban and rural areas overlap and with regard to their interactions, practices and interpersonal relationships it is often difficult to determine the boundary between them and whether the area is of urban or rural character. This appearance is characteristic for Višnjevac, where the overlapping raises a question of the perception of space. At the Višnjevac changes that are visible are the ones of physical nature, which means that the elements of rural design are replaced by urban ones, but the question is how an individual experiences the space as a whole. A survey among residents of wider area of the City of Osijek served as an instrument for measuring the perception of space.

## **3. Elements of the survey**

The survey was used for better understanding of perception of space present among inhabitants and visitors of the Ban Josip Jelačić Street in Višnjevac. It is based on opposites, by which it explores how people perceive the space where the physical elements of urban and rural life overlap. The first group of questions in the survey demands a respondents' opinion

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<sup>55</sup>Alister Scott, Alana Gilbert, Ayele Gelan

on belonging of certain elements to a rural or an urban area. Spatial elements that were estimated are the elements present in the current picture of Ban Josip Jelačić Street in Višnjevac, and are predominantly urban. The next group of questions relates to the overall perception of the street (rural/urban) and it demands that, beside the external elements which create the space, the emotional experience of the space as a whole, and social characteristics of the settlement which are highly influential when it comes to views about it, are also included. The research covers the period between January and March of 2014.

#### 4. Results of the survey

##### 4.1. Demographic results

The age of respondents was between 7 and 90 years and the majority (77%) was aged between 20 and 60 years. Some respondents are residents of the city or villages who work in Višnjevac while the majority of respondents were born in Višnjevac or live there for a long time (Figure 1). The question about the place of residents offered two answers: city and village. We got a very interesting response to this question from the residents of Višnjevac (Figure 2). 34% of respondents living in Višnjevac believe to live in the country, while 66% of them think that they live in the city. This result shows that the residents of Višnjevac themselves do not agree on whether Višnjevac is urban or rural environment.

Figure 1 Place of residence

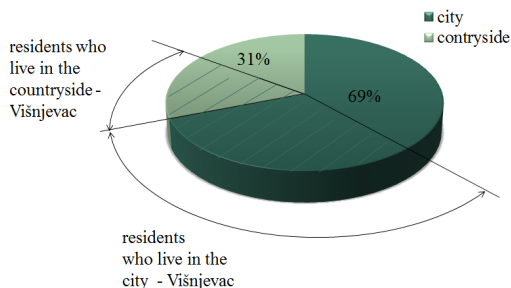
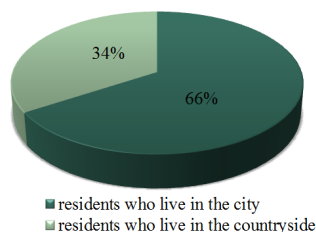


Figure 1 Place of residence of inhabitants of Višnjevac



Source: Authors' calculation

##### 4.2. Perception of spatial elements

Our research is based on the definition of rural as non-urban area (Scott, Gilbert, Gelan, 2007). In the survey to the existing urban elements of Višnjevac, elements of channel and tree alley were added.

Spatial elements listed in the survey are: pedestrian crossing, traffic light, channel, roundabout, curb, sidewalk, tram, detached house, semidetached house<sup>56</sup>, row house<sup>57</sup>, apartment building, tree alley, street lights, benches, and trash cans. The majority of respondents, more than 80% of them, consider most of the listed spatial elements as urban. Except channel and detached house, which are perceived as rural elements, by more than 80% of respondents. The only spatial element that divided the opinions is tree alley (see the Addendum 1). Authors of this study believe that this is due the vicinity of Osijek which is one

<sup>56</sup>Double family home, double home

<sup>57</sup>Family home in a row

of the few cities in area with tree alleys, so it influences the perception of tree alleys as an urban<sup>58</sup> spatial element.

It is interesting to notice the different positions of elements belonging to a typology of family housing, where a higher percentage of respondents classified semidetached houses and row houses as urban and a detached house as rural (Addendum 1).

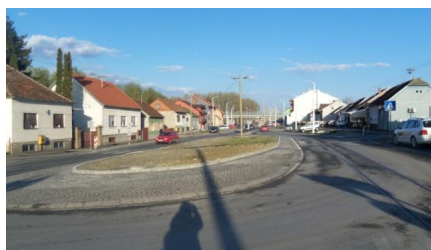
By analysis of the first group of question we come to a conclusion that the Ban Josip Jelačić Street in Višnjevac creates an urban area image with its spatial elements. These results are independent of the place of residence of the respondents (Addendum 1).

### 4.3. Perception of space

Perception is a comprehensive experience connected by data gathered through senses into its complete form. The second group of questions demanded the information about respondents' perception of street space, which includes an emotional component and social features of the settlement which significantly affect attitudes.

The survey offered two photographs of the Ban Josip Jelačić Street. Picture 2 shows the street in 2011, when there were a tree alley and channels in the street, and the Picture 3 was photographed in 2014 and it shows the street after the reconstruction where you can see the elements which were characterized as urban in the first part of the survey: tramways, roundabout and curb.

Pictures 2 and 3: Ban Josip Jelačić Street before and after the reconstruction



Street view in Figure 2 is characterized as a rural area by 73% of respondents, and the street view in Figure 3, 80% of respondents defined as urban. The results indicate that the reconstruction of the street changed the perception of respondents. The street, considered to be rural by the majority of respondents before the reconstruction, is perceived as urban today. Introduction of urban elements into rural environment changes the image of the village and erases clearly defined boundaries between city and countryside.

In order to include social and traditional components in the evaluation of the space, the last question in the survey requested an answer about respondents' view of Višnjevac, as they perceive it today. Regardless of the clear distinction between urban and rural elements and the opinion that the reconstruction turned rural area into urban, the overall perception of Višnjevac is divided. 50.5% of respondents consider Višnjevac to be urban area, while 49.5% perceive it as rural.

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<sup>58</sup>Trees are very rarely seen in the streets (of a town). And when there are, they are surrounded by bars. According to: Pereg, G. (2005): *Vrste prostora (Types of Space)*, Bilblioteka Psefizma, Zagreb

## 5. Final observations

Transition process appears in areas close to traffic infrastructural facilities and relativizes a boundary between urban and rural areas. The distinction between urban and rural is closely related to real elements in space, as well as to historical heritage and subjective and emotional perception of space. The survey was used as an instrument for exploring the subjective perception of individual spatial elements and the perception of space as a whole. The survey covered 111 respondents between 7 and 90 years of age. Respondents belonging to lower and upper age limits have a clear perception of the urban and rural elements, and the mean age group of respondents showed greater dissipation in the assessment of individual elements. There is an interesting difference in the perception of residents of Višnjevac regarding the area in which they live, so that 66% of them said that they live in an urban environment. The only elements, among independent spatial ones, assessed as typical rural are the channel and detached house. The tree alley caused the biggest ambiguities among respondents, so only slightly over one half of them assessed it as rural spatial element, which points to a long park tradition of Osijek as a green city full of alleys in the urban area. The remaining independent elements were assessed as predominantly urban (Addendum 1). What is particularly interesting is the perception of the space as a whole, because it largely involves the emotional component, hence the present appearance, after the reconstruction, of Ban Josip Jelačić Street is assessed as urban, and the photograph taken three years ago reminds the respondents of rural area. The question that aims the most influence is whether Višnjevac is urban or rural (without any photo attached). There is a strong division in opinions of respondents for that question and 49.5% of them still perceive Višnjevac as rural area.

It would be interesting to analyse emotional and cognitive perception of space and consequences of traffic reconstruction of the examined street in a few years from now, when the transition process continues, in order to see trends in perception of space by people who gravitate towards it.



urbn/rural elements	all respondents (111) 100%		urban respondents (42) 37,8%		rural respondents (16) 14,5%		respondents from Vršinec (53) 47,7%	
	urban	rural	urban	rural	urban	rural	urban	rural
1. pedestrian crossing	104 93,7%	7 6,3%	40 95,2%	2 4,8%	12 75,0%	4 25,0%	52 98,1%	1 1,9%
2. traffic light	108 97,3%	3 2,7%	42 100,0%	0 0,0%	14 87,5%	2 13%	52 98,1%	1 1,9%
3. channel	1 0,9%	110 99,1%	1 2,4%	41 97,6%	0 0,0%	16 100,0%	0 0,0%	53 100,0%
4. roundabout	109 98,2%	2 1,8%	41 97,6%	1 2,4%	15 93,8%	1 6,3%	53 100,0%	0 0,0%
5. curb	95 85,6%	16 14,4%	31 71,4%	12 28,6%	14 87,5%	2 12,5%	51 96,2%	2 3,8%
6. sidewalk	96 86,5%	15 13,5%	38 90,5%	4 9,5%	12 75,0%	4 25,0%	46 86,8%	7 13,2%
7. tramway	111 100,0%	0 0,0%	42 100,0%	0 0,0%	16 100,0%	0 0,0%	53 100,0%	0 0,0%
8. detached house	27 24,3%	84 75,7%	7 16,7%	35 83,3%	4 25,0%	12 75,0%	16 30,2%	37 69,8%
9. semidetached house	80 72,1%	31 27,9%	36 85,7%	6 14,3%	10 62,5%	6 37,2%	34 64,2%	19 35,8%
10. row house	90 81,1%	21 18,9%	38 90,5%	4 9,5%	12 75,0%	4 25,0%	40 75,5%	13 24,5%
11. apartment building	111 100,0%	0 0,0%	42 100,0%	0 0,0%	16 100,0%	0 0,0%	53 100,0%	0 0,0%
12. tree alley	50 45,0%	61 55,0%	20 47,6%	22 52,4%	7 43,8%	9 56,3%	23 43,4%	30 56,6%
13. street lights	98 88,3%	13 11,7%	41 97,6%	1 2,38%	9 56,3%	7 43,8%	48 90,6%	5 9,4%
14. benches	98 88,3%	13 11,7%	40 95,2%	2 4,76%	13 81,3%	3 18,8%	45 84,9%	8 15,1%
15. trash cans	106 96,5%	5 4,5%	42 100,0%	0 0,0%	15 93,8%	1 6,3%	49 92,5%	4 7,5%

urbn/rural elements	all respondents from Vršinec (53) 100%		respondents from city Vršinec (42) 66,0%		respondents from village Vršinec (18) 34%	
	urban	rural	urban	rural	urban	rural
1. pedestrian crossing	52 98,1%	1 1,9%	34 97,1%	1 2,9%	18 100,0%	0 0,0%
2. traffic light	52 98,1%	1 1,9%	34 97,1%	1 2,9%	18 100,0%	0 0,0%
3. channel	0 0,0%	53 100,0%	0 0,0%	35 100,0%	0 0,0%	18 100,0%
4. roundabout	53 100,0%	0 0,0%	35 100,0%	0 0,0%	18 100,0%	0 0,0%
5. curb	51 96,2%	2 3,8%	35 100,0%	0 0,0%	16 88,9%	2 11,1%
6. sidewalk	46 86,8%	7 13,2%	33 94,3%	2 5,71%	13 72,2%	5 27,8%
7. tramway	53 100,0%	0 0,0%	35 100,0%	0 0,0%	18 100,0%	0 0,0%
8. detached house	16 30,2%	37 69,8%	11 31,4%	24 68,6%	5 27,8%	13 72,2%
9. semidetached house	34 64,2%	19 35,8%	27 77,1%	8 22,9%	7 38,9%	11 61,1%
10. row house	40 75,5%	13 24,5%	27 77,1%	8 22,9%	13 72,2%	5 27,8%
11. apartment building	53 100,0%	0 0,0%	35 100,0%	0 0,0%	18 100,0%	0 0,0%
12. tree alley	23 43,4%	30 56,6%	18 51,4%	17 48,6%	5 28,0%	13 72,0%
13. street lights	48 90,6%	5 9,4%	31 88,6%	4 11,4%	17 94,4%	1 5,6%
14. benches	45 84,9%	8 15,1%	31 88,6%	4 11,4%	14 77,8%	4 22,2%
15. trash cans	49 92,5%	4 7,5%	32 91,4%	3 8,6%	17 94,4%	1 5,6%

Addendum 1: Survey results for all respondents / Survey results for respondents from Vršinec

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## **COST ANALYSIS OF INFORMATION AND COMMUNICATIONS INFRASTRUCTURE IN THE AREA OF EASTERN CROATIA**

### **ANALIZA TROŠKOVA INFORMACIJSKO KOMUNIKACIJSKE INFRASTRUKTURE NA PODRUČJU ISTOČNE HRVATSKE**

#### **ABSTRACT**

*Information and Communication Technology is one of the most important components of modern enterprises. Information and Communication Technology can be defined as the coverage of computer hardware, software, networks and media for collection, storage and memory, processing and transmission of data and presentation of information in the form of voice, data, text and images. Information technology with fast communication and the possibility of using a distributed database and centralized data warehouse and locally distributed decision support tool supports non-hierarchical organization of work where the rapid changes in the business environment, individuals and workgroups in the realization of the task largely independent and can quickly adapt to change and respond to new challenges. Electronic business leads to optimization of operations and opportunities for faster and better decision-making. However, the growing need for new types of information and communication infrastructure increases the costs of doing business and is an important factor of competitiveness in the market.*

*The objective of this paper is to investigate and analyse the application of Information and Communication Technology in the enterprises in Eastern Croatia. The authors analyse the possibilities and costs of the introduction and use of the leased information and communications infrastructure in eight cities of Eastern Croatia. They thereby use a range of scientific research methods (methods of analysis, comparison, induction, deduction, description and classification, etc.) as well as individual mathematical-statistical methods used for the analysis and ranking of certain parameters. In the paper, the enterprises are*

divided by size, and the analysis is done according to projected needs of companies based on the number of users and average requirements for services. The authors researched the costs establishment of enterprise and the cost of taxes, local taxes and other fees for each city separately. Based on the results the cost of infrastructure was calculated for each city. Based on these costs the cities were allocated ranks of feasibility of establishment and the possibility to increase the competitiveness of existing businesses in the market.

**Key words:** Information and Communication Technology, infrastructure, costs, enterprise, Eastern Croatia

## SAŽETAK

Informacijsko komunikacijska tehnologija jedna je od bitnijih sastavnica modernih poduzeća. Informacijsko komunikacijsku tehnologiju moguće je definirati kao obuhvat računalnog sklopovlja, programske podrške, mreže i medija za prikupljanje, skladištenje i memoriranje, obradu i prijenos podataka te prezentiranje informacije u obliku glasa, podatka, teksta i slike. Informacijska tehnologija s brzom komunikacijom i mogućnošću distribuiranog korištenja centraliziranih baza i skladišta podataka te lokalno smještenih alata za potporu odlučivanju podržava i nehijerarhijsku organizaciju rada u kojoj su zbog brzih promjena u poslovnoj okolini pojedinci i radne skupine u realizaciji zadatka u velikoj mjeri nezavisni te se mogu brže prilagoditi promjenama i odgovoriti novim izazovima. Elektroničko poslovanje dovodi do optimalizacije poslovanja te mogućnosti bržeg i kvalitetnijeg odlučivanja. No, sve većom potrebom za novim vrstama informacijsko komunikacijske infrastrukture povećavaju se troškovi poslovanja i bitan su čimbenik konkurentnosti na tržištu.

Cilj ovoga rad je istražiti i analizirati primjenu informacijsko komunikacijske tehnologije u poduzećima na području istočne Hrvatske. Autori u radu analiziraju mogućnosti i troškove uvođenja i korištenja unajmljene informacijsko komunikacijske infrastrukture na području osam gradova istočne Hrvatske. Pri tome koriste niz znanstvenih metoda istraživanja (metode analize, komparacije, indukcije, dedukcije, deskripcije i klasifikacije itd.) kao i pojedine statističko-matematičke metode korištene za analizu i rangiranje određenih parametara. U radu su poduzeća podijeljena prema veličini, a analiza se vrši prema predviđenim potrebama poduzeća zasnovanim na broju korisnika i prosječnim zahtjevima za uslugama. Također, u radu su istraženi troškovi osnivanja poduzeća te troškovi poreza, prireza i ostalih davanja za svaki grad posebno. Na temelju dobivenih rezultata izračunati su troškovi infrastrukture poduzeća po gradovima. Temeljem tih troškova gradovima su dodijeljeni rangovi isplativosti osnivanja poduzeća i mogućnosti povećanja konkurentnosti postojećih poduzeća na tržištu.

**Ključne riječi:** Informacijsko komunikacijska tehnologija, infrastruktura, troškovi, poduzeće, istočna Hrvatska

## 1. Introduction

Information and communication technology is an essential part of everyday life in both personal and in business terms. It is almost unthinkable to start the day without using a computer. Computers are used for a whole range of activities, from simple ones such as a morning wake up call, to complex such as the processing of complex data and information and decision-making at management. Systems supported by information and communication technologies are extremely important for successful operation of institutions and companies.

In the following chapters the application of information and communication technology at the companies in the Eastern Croatia will be explored and analyzed. The paper analyzes the

opportunities and costs of introduction and use of information and communication infrastructure leased in the area of eight cities in Eastern Croatia.

## 2. Information and Communication Technology in Business

A piece of information defined as data that is linked to some meaning has become one of the key resources in the business. Upon the development of communication networks information have become more accessible. However, not all of the available information is also useful information. "Knowing that decisions and their implementation makes up the future of the successful performance of each company, leads to special attention in the research of the decision-making process, where we try to discover the laws that govern this process in order to limit irrational behaviour and steer decision-makers to use rational methods to achieve rational objectives." (Pilepić & Šimunović, 2010, 411) It is necessary to know how to manage the available information, and to make a valid decision based on useful data. Information technology in business process automation accelerates the course of collecting and processing information. Support systems in the decision-making process are assisting in faster problem-solving and achieving positive results.

"Information technology has not exhausted its potential in allowing business automation and acceleration of the operation execution, but it is used as a key resource that can ensure long-term growth, increase revenue and market competitiveness for organization." (Čerić & Varga, 2004, 10) In the business environment that has recently been characterized by uncertainty, decision support and information management is increasingly attracting the attention of the management and it is becoming more important in the execution of business processes. The ever more rapid development of Information and Communication Technology has enabled the emergence of new ways and techniques of decision-making and data management which have not been used before. Various information systems that enhance business processes of production and management are developed.

## 3. Companies in Croatia

According to the Small Business Encouragement Law, the definitions and criteria for differentiation of small business entities with respect to their size was determined. According to this Law, there are micro, small and medium-sized operators of small businesses and large enterprises in the Republic of Croatia. The following table shows the structure of enterprises in the Republic of Croatia.

Table 1 The number of entrepreneurs in Croatia within the period under observation

Commercial enterprises	Large (L)		Medium (M)		Small (S)		Total		Small businesses (S+M)	
	Number	%	Number	%	Number	%	Number	%	Number	%
2003	889	1,3	2.597	3,8	64.698	94,9	68.184	100,0	67.295	98,7
2004	962	1,4	2.692	3,9	65.327	94,7	68.981	100,0	68.019	98,6
2005	1.074	1,5	2.969	4,1	67.760	94,4	71.803	100,0	70.729	98,5
2006	441	0,6	1.480	1,9	76.588	97,6	78.509	100,0	78.068	99,4
2007	475	0,6	1.590	1,9	81.467	97,5	83.532	100,0	83.057	99,4
2008	453	0,5	1.396	1,6	87.807	97,9	89.656	100,0	89.203	99,5
2009	436	0,5	1.446	1,6	89.438	97,9	91.320	100,0	90.884	99,5
2010	375	0,4	1.379	1,4	95.004	98,2	96.758	100,0	96.383	99,6
2011	359	0,4	1.292	1,4	89.539	98,2	91.190	100,0	90.831	99,6
2012	348	0,4	1.309	1,3	95.597	98,3	97.254	100,0	96.906	99,6
2013	459	0,4	1.426	1,2	114.797	98,4	116.682	100,0	116.223	99,6

Source: Croatian Chamber of Economy, Central Bureau of Statistics, Financial Agency, [www.cepor.hr](http://www.cepor.hr), author

According to the data in Table 1 it is possible to notice a trend of constant growth of small enterprises in Croatia within the study period, especially after the year 2006. The reasons for this increase are the changes of the criteria for determining the size of the company according to the new Accounting Law, which made these criteria similar to those of the European Union. The application of new criteria in 2006, brought to a significant decrease in the number of large and medium enterprises, while it led to the increased number of small entrepreneurs and in 2013 it amounted to 98.4% compared to the total number of enterprises in the Republic of Croatia. Given that the number of small firms has been increasing over the years, the question of ensuring quality of information and communication technology required in business arises. In this paper, the companies in the Eastern Croatian region in particular will be analyzed.

#### **4. Eastern Croatian Region**

Thanks to its geographical area, the Eastern Croatia has many prerequisites for a number of economic activities. Apart from agriculture, forestry, waterpower engineering, extracting oil and gas that has been used in these areas for many years, because of its characteristics the Eastern Croatia has space for further development. Modern development of the population in Eastern Croatia is substantially burdened by the expressive spatial population polarization between urban (city) and rural (village) settlements/areas in almost all parts of the population development, making it difficult, or even preventing stable and prosperous socio - economic and regional development of that region. (Živić, 2003, 70, a).

In rural areas, the potential of utilization is lower than in urban areas, and higher distance between locations is resulting in higher costs of implementation. The reduced density of population leads to reduced demand for services, which results in reduced infrastructure development in these areas.

The age structure of the population in rural areas is much less favourable. There is less chance that the elderly population will use the Internet, often because of their ignorance of technology and fear that they can make mistakes. It is not uncommon that the level of education in rural environment is somewhat lower, resulting in lower IT literacy, and it is a barrier to the use of the Internet. The smaller income, which prevents most of the people to afford a computer and the Internet connection, is also a hindrance. The indicators that affect regional competitiveness most are: employment levels and productivity of employees, the share of employment by industry, demographic trends, investments, investment in knowledge, infrastructure, the level and type of education, innovation and research and development. (Tijanić, 2010, 422, a).

Since the declaration of its independence, Croatia has inherited uneven regional development, and the Homeland War has only increased the disproportion of certain areas. (Blagojević, 2008, 1177). Despite of the more and more significant concentration of population in urban areas, the Eastern Croatia has, according to the number and proportion of the rural population, still retained more rural characteristics in relation to Croatia as a whole, as well as in relation to other macro-regional areas of Croatia. (Živić, 2003, 79, b). The average working engagement of the rural population in Eastern Croatia is in decline, which points to its diminishing economic activity, and thus the development of its area.

Croatia needs to continue to invest in programs that encourage the development of broadband Internet access in developing regions, being aware of the fact that the fluctuations of capital will be in the direction where there is a direct revenue. Human resources (human capital base)

are becoming more important determinant of competitiveness, both at national level, and at lower levels. (Tijanić 2010, 426, b).

## **5. Infrastructure Opportunities**

The demand for high speed data transmission is becoming more pronounced in today's business, as well as on the communications market. In order to achieve competitiveness in the market today and set aside from the rest of the competition it is necessary for companies to invest in Information and Communication Technology infrastructure. Companies that are based on business Information and Communication Technology generated economic growth. The largest contribution is reflected in the services segment, where it creates the biggest share of the total income. The growth of this industry is expected to have a significant impact on Croatian economic growth and thus increasing the productivity of the economy.

The demands of end-users for telecommunications services, IT systems and computing solutions with the option of mobility and/or higher speed are on the increase. For this reason there is an increased use of wireless and optical networks, in order to be able to fulfil the increasing number of requests. Most of the infrastructure that is currently on the market has reached its maximum physical capabilities and cannot meet all the requirements of users in a satisfactory manner. Most of the solutions that exist on the market have been developed based on the growing need for doing business over the Internet. Thus the number of services on the market has increased. A modern business undertaking involves the provision of voice services over the Internet and leasing space for the Web pages and email addresses. The desire for access to all business data from any location and using all available devices led to the development of cloud computing and enabled the creation of one's own virtual data centre.

Competitive business is unthinkable without business information systems that require network devices, storage systems and servers. Cloud Computing's development gives enterprises the opportunity to rent the necessary Information and Communication Technology infrastructure from the operators, and thus reduce the costs of accommodation, power, cooling, upgrades and maintenance of the infrastructure itself. They choose which programs they want to use themselves, and pay them after use. In this way the investment in the purchase of software, necessary licensing or installing them is reduced. Investments in telecommunications infrastructure per capita amounted to HRK 357,75 in 2011 (Mastelić, 2013, 419, a). The fact is that the demand for an increasing number of telecommunication services is growing rapidly. The desire of end-users for the increasing availability of multimedia content via telecommunications networks and simultaneous data storage in the cloud represent demanding technology that is becoming more popular for both private and business users.

Electronic communications market in Croatia is currently on the slight increase, but the adoption of new technologies in the mobile and telecommunications networks has major opportunities for rapid progress and development. The development of broadband Internet access has become an important political issue in the European Union. (Mastelić, 2013, 420, b). The number of requests for stable and high speed Internet access via symmetrical speeds through optical infrastructure is increasing. In this area Croatia is lagging behind in the number of connections to an average Member States of the European Union. (Mastelić, 2013, 420, c). The development of broadband access is in direct correlation with economic growth and quality of life in the area. It is up to the state and local government and regulatory bodies to encourage and support the rapid development of the density of broadband, especially in rural areas.

## 6. Cost analysis of Information and Communication Technology infrastructure

Taking into account the extensiveness of the business, the need for constant connectivity between all company locations and stable and fast access to the Internet for each of these divisions the service proposal for a complete Information and Communication Technology solution that one modern enterprise should have was made. So for all sizes of businesses Voice Over Internet Protocol service is foreseen, including devices, Web hosting with 500MB of space so they can receive e-mail and symmetrical internet speed depending on the size of the company. For small enterprises the Internet speed access of 10/10 Mbps, for medium access speed of 20/20 Mbps, while for larger companies the speed access of 30/30 Mbps is planned.

Table 2 Monthly costs of Information and Communication Technology infrastructure of the region towns according to the company size

TOWN	Monthly costs of Information and Communication Technology infrastructure in the companies		
	Small	Medium	Large
Đakovo	HRK 2.620,00	HRK 4.790,00	HRK 7.975,00
Našice	HRK 2.620,00	HRK 4.790,00	HRK 7.875,00
Osijek	HRK 2.270,00	HRK 4.290,00	HRK 7.175,00
Požega	HRK 2.620,00	HRK 4.690,00	HRK 7.875,00
Slavonski Brod	HRK 2.390,00	HRK 4.390,00	HRK 7.475,00
Vinkovci	HRK 2.370,00	HRK 4.290,00	HRK 7.475,00
Virovitica	HRK 2.390,00	HRK 4.390,00	HRK 7.475,00
Vukovar	HRK 2.620,00	HRK 4.790,00	HRK 7.875,00

Source: authors

Based on the data, the fixed monthly expenses of complete Information and Communication Technology solutions small companies are the lowest in Osijek and amount to HRK 2.270,00. In Vinkovci, Virovitica and Slavonski Brod the situation is almost the same. In Vukovar, Đakovo, Požega and Našice due to isolated location, smaller needs and reduced availability of optical infrastructure fixed monthly costs have increased and amounted to HRK 2.620,00. As for medium-sized enterprises the situation is changing, depending on the geographical location. The fixed costs range from HRK 4.290,00, as stated in Osijek and Vinkovci, to HRK 4.790,00 in Vukovar and Đakovo. For large companies, the lowest fixed monthly cost of the complete solution is again in the biggest place in the region - Osijek and amounts to HRK 7.175,00. Because of the lower availability of infrastructure in the remaining cities the costs themselves increase. Thus Vinkovci, Virovitica and Slavonski Brod are immediately behind Osijek by the amounts of the monthly costs for Information and Communication Technology solutions with the amount of HRK 7.475,00. Again the biggest expenses are in Vukovar, Đakovo, Požega and Našice, and are ranging from HRK 7.875,00 to HRK 7.975,00.

## 7. Company establishment and the analysis of taxes, local taxes and other contributions

Costs of founding companies can be divided into several levels. For the establishment of a Limited liability company a minimum share capital of HRK 20.000,00 is required. The fees which are additionally paid are the court fee for the application in the amount of HRK 400,00 the entry of the company in National Gazette in the amount of HRK 900,00 and the fee of the Central Bureau of Statistics in the amount of HRK 55,00 and a notary public service. Upon the founding of the company, the name of the enterprise must be specified and an application for entry in the register, which shall be certified by a notary public, must be made. After this,



the company stamp is formed and company trading account is opened in a bank upon which the start-up capital should be paid in the amount of HRK 20.000,00. In continuation of this study the city taxes and the tax burden on businesses in the towns in the region will be analyzed.

City and municipal taxes vary according to the rates and monthly or yearly amounts of the tax burden. The city taxes include surtax on income tax, consumption tax, houses for rent tax, taxes on company or the name and the tax on the use of public surfaces. Table 3 shows the most frequent tax burden on businesses in the towns of the region. Taxpayers of the company or the name are legal entities or physical persons who are liable to profits or income tax and are registered for the activity performance. A tax on use of public surface is paid by legal and physical persons for the use of public land. Public areas particularly include sidewalks, streets, squares, parks, green areas and other surfaces.

Table 3 Tax burden of the companies in the towns of the region

TOWN	TAX BURDEN OF THE COMPANIES		
	Surtax	Tax on company or the name	Tax on the use of public surfaces.
Đakovo	10%	Individuals (HRK 500,00 – 1.000,00) Legal entities (HRK 800,00 – 1.000,00)	10% of the amount paid for the use of public surfaces
Našice	8%	Individuals (HRK 50,00 – 2.000,00) Legal entities (HRK 50,00 – 2.000,00)	-
Osijek	13%	Individuals (HRK 200,00 – 500,00) Legal entities (HRK 500,00 – 1.000,00) Independent caterers (HRK 600,00)	10% of the amount paid for the use of public surfaces
Požega	10%	Individuals (HRK 400,00 – 700,00) Legal entities (HRK 750,00 – 2.000,00)	-
Slavonski Brod	12%	Individuals (HRK 400,00 – 1.000,00) Legal entities (HRK 600,00 – 2.000,00)	-
Vinkovci	13%	Individuals (HRK 200,00 – 2.000,00) Legal entities (HRK 600,00 – 2.100,00)	10% of the fee amount paid for the use of public surfaces
Virovitica	10%	Individuals (HRK 200,00 – 400,00) Legal entities (HRK 500,00 – 1.800,00)	-
Vukovar	0%	Individuals (HRK 200,00 – 2.000,00) Legal entities (HRK 500,00 – 2.000,00) Independent caterers (HRK 400,00 – 1.200,00)	5% of the rent amount

Source: Ministry of finances, available on [www.porezna-uprava.hr/](http://www.porezna-uprava.hr/) (March 30, 2014)

Based on the data in the table it is possible to observe different rates of local taxes in the cities, as well as various annual payments of company tax and tax on use of public land in the region. More developed areas of the region as well as those with more residents have a higher tax burden, compared to smaller cities. Surtax rates amounts are ranging from 8 % to 13 %, and the city of Vukovar is the exception with 0 % surtax.

The amount of tax on the company name is different in every city for physical and legal persons, and it is the lowest in Našice (for physical as well as for legal entities). Taxes on use of public surfaces is mostly equal in all towns, except in Vukovar, where the rate of this tax is lower than in the other cities of the region, while Virovitica, Slavonski Brod, Požega and Našice do not have this type of tax.

## 8. Analysis of the company's expenses in relation to Information and Communication Technology infrastructure and tax load

The following table shows the ranks of cities in relation to the costs of Information and Communication Technology infrastructure and the tax burden. Monthly costs of Information

and Communication Technology infrastructure are ranked for each city separately as well as the size of the company. In the same way, the tax burden for each city in particular is ranked, and the sum of these ranks gave the final ranking of the feasibility of establishing companies within the region.

Table 4 Town ranking with relation to costs of Information and Communication Technology infrastructure and tax burdens

TOWN	Monthly costs of Information and Communication Technology infrastructure			Tax burdens of the companies			Sum	Rank
	Small	Medium	Large	Surta x	Company tax	Tax on the use of public surfaces		
Đakovo	4	4	4	3	3	3	21	6
Našice	4	4	3	2	6	1	20	5
Osijek	1	1	1	5	2	3	13	2
Požega	4	3	3	3	4	1	18	4
Slavonski Brod	3	2	2	4	5	1	17	3
Vinkovci	2	1	2	5	8	3	21	6
Virovitica	3	2	2	3	1	1	12	1
Vukovar	4	4	3	1	7	2	21	6

Source: authors

Based on the data in Table 4 it is possible to notice, corresponding to the rank obtained, that the lowest costs of the Information and Communication Technology infrastructure, as well as tax burdens are in Virovitica. The rank two of feasibility of establishing companies in the region has Osijek, despite the high rate of surtax and other tax burdens, and then Slavonski Brod and Požega follow. The biggest cost of Information and Communication Technology infrastructure and tax burdens are in Đakovo, Vinkovci and Vukovar and these are also towns of the region in which the feasibility of establishing a company is minimum.

## 9. Conclusion

The paper presents data on the structure of companies in the Republic of Croatia and the costs of Information and Communication Technology infrastructure in the cities of the Eastern region. For the analyzed cities tax burden on businesses are also investigated. In the paper companies are divided according to the size of the undertaking, and the analysis is carried out according to the foreseen needs of companies based on the number of users and the average requests for services. Also, the paper examines the costs of company founding and tax expenses, local taxes and other fees for each city separately. Based on the results gained, the costs of infrastructure for enterprises in the cities were calculated. Based on these costs cities were assigned ranks of feasibility of establishing enterprises and the possibilities of increasing the competitiveness of the existing companies on the market.

The costs of Information and Communication Technology and the tax burden on businesses in Eastern Croatia depend on a number of factors that also affect the feasibility of the establishment of enterprises within the region. The rates of local taxes and other tax burdens are particularly high in the bigger cities of the region, however, despite that fact, the feasibility of establishing companies in them is greater than in the smaller towns. Based on the above mentioned, it can be concluded that the application of Information and

Communication Technology in these cities (especially towns with a rank 1-3) is higher, as well as the profitability of its introduction.

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**ICT AND CERTIFICATION AS FACTORS INFLUENCING  
DEVELOPMENT OF INTELLIGENT CITIES ON CLOUD  
COMPUTING STRATEGY**

**CERTIFICIRANJE I ICT KAO ČIMBENICI RAZVOJA  
INTELIGENTNIH GRADOVA UZ POMOĆ RAČUNARSTVA U  
OBLAKU**

**ABSTRACT**

*In this work, we discuss Information and communications technology (ICT) and certification as factors that influence the development of intelligent cities. Business Friendly Certificate (BFC), an internationally recognized quality standard is a process promoting favourable business environment in line with international standards contributing to creating cities with standardized systems for the provision of services and information to potential investors.*

*Business Friendly Certification is a process allowing the evaluation of the quality of service and information the cities provide to investors and businesses. Criteria of Business Friendly Certification can be seen as a reminder of what a city or municipality needs to develop as its own capacity and which operative segments of city or municipal organisations need to be functional. This process is expected to serve to increase competitiveness with respect to the cities and municipalities in the region inside and outside the country borders helping them compete with competitors that started reforms during the transition process much earlier.*

*In this work, we study the concepts of City Information Systems aimed at managing data and information flow in supporting investors and businesses enabling quick response to client request, faster and easier dealing with papers required for issuance of location and building permit, municipal requirements and other activities necessary to investors and businesses.*

*In 2013, eight cities from the Southeastern Europe, among which Croatia's Bjelovar and Ivanec, were certified as cities with favourable business environment.*

*Cloud computing along with Information and communications technology has now emerged to become a recognized method for dealing with given criteria at city or municipal authority level ultimately serving to all interested cities. Implementation of solutions that are continuously upgraded with innovative ideas is a process contributing to the development of project.*

**Keywords:** *Certification, Information - Communication Technology, City and municipality, Cloud computing*

## SAŽETAK

*U radu se razmatraju certificiranje ICT (informacijsko – komunikacijske tehnologije) kao čimbenici razvoja inteligentnih gradova. Međunarodno priznat BFC (Business Friendly Certificate) certifikat označava pozitivnu poduzetničku klimu grada u skladu s međunarodnim standardima, što znači da je u gradu koji je certificiran uspostavljen standardizirani postupak pružanja usluga i informacija potencijalnim investitorima.*

*Program i koncepcija certificiranja omogućava procjenu kvalitete usluga i informacija koje grad pruža gospodarstvenicima i investitorima. Kriteriji za certificiranje predstavljaju neku vrstu podsjetnika o tome što sve jedan grad/općina treba razvijati, kao vlastiti kapacitet, te koji operativni segmenti gradske/općinske organizacije trebaju biti funkcionalni. Ovaj proces trebao bi rezultirati povećanom konkurentnošću u odnosu na gradove/općine u regiji unutar i van granica zemlje i pomoći im u takmičenju sa konkurentima koji su znatno ranije počeli proces tranzicije i reformi.*

*U radu se razmatra koncipiranje informacijskog sustava grada u funkciji upravljanja podatkovnim informacijskim tijekovima koji će omogućiti potporu gospodarstvenicima i investitorima, a koja se očituje u sljedećim performansama: brzina rješavanja zahtjeva i izdavanja dokumentacije potrebne za davanje lokacijskih i građevinskih dozvola, komunalnih zahtjeva i drugih aktivnosti, koje su potrebne gospodarstvenicima i investitorima.*

*Tijekom 2013.godine uvjete za dobivanje certifikata grada s povoljnim poslovnim okruženjem ostvarilo je osam gradova jugoistoka Europe, među kojima su Bjelovar i Ivanec u RH.*

*Cilj istraživanja je pojasniti kako tehnologija računalstva u oblaku uz informacijsko-komunikacijsku tehnologiju zapravo rezultiraju prepoznatljivim načinom rješavanja zadanih kriterija razinama gradske ili općinske vlasti koji mogu poslužiti svim zainteresiranim gradovima. Doprinos razvoju projekta je svakako implementacija predstavljenih rješenja koja se sustavno nadograđuju novim inovativnim rješenjima.*

**Ključne riječi:** *Certificiranje, Informacijsko – Komunikacijska Tehnologija, Grad, Računarstvo u oblaku*

## 1. Introduction

In the period from 1992 until 2010, world population grew at 1.3 per cent per year and increased by one billion and a half to 7 billion people in 2010 where urban population increased by 45 per cent and reached 3.5 billion.

Nearly half the world population now lives in urban areas. Cities generate 75 per cent of the total energy consumption. On the other hand, 25 largest world cities produce more than a half of world wealth. UN experts estimate that by 2050 almost 70 per cent of people will live in cities. This shows how important it is to invest in multiple innovative solutions to guarantee a good quality of life and business opportunities in accordance with sustainable development

policies. Almost 80 per cent of the total global emissions are generated from cities. The world's towns and cities are the biggest polluters of our time [8].

This sudden growth in urban population has caused problems in planning, transportation, supply and delivery. City infrastructure that was designed for a significantly lower number of inhabitants has now become unsuitable. Aging utility infrastructure, often being completely inappropriate in terms of capacity for such a rapid growth in urban population, becomes an increasingly bigger problem for organising city life.

Those cities that in spite of this sudden increase in population wish to keep up with sustainable development principles and maintain good quality of life of their citizens, concurrently attracting new investors and companies to open new jobs, are seeking for a wiser approach to urban development planning using new intelligent systems for city infrastructure, transportation, energy consumption, goods delivery as well as a wider implementation of high technology and technology innovations aimed at improving the quality of life in general.

## **2. 'Smart'Solutions**

Above described problems have led to a gradual development of concepts using 'smart' solutions for city living conditions with implementation of information and communications technology that is inevitable in all segments at local, regional, national and international levels. Implementing innovative solutions to organise entire life of people in a city, from smart tech tools and devices to energy-smart homes or city districts, has brought us closer to creating a completely new concept of intelligent cities.

Intelligent cities deploy sensor networks, which are sending off all relevant information on infrastructure, utility systems, roads, bridges, large buildings, shopping centers or public buildings and halls. These sensitive nanosensor networks promptly report on all necessary information that may indicate a possible dysfunction in any part of the system allowing timely detection, intervention and repair avoiding serious consequences. Intelligent software solutions can control the entire city utility infrastructure in an integral manner (heating systems, transportation, traffic systems, supply or cleaning), linking to all relevant city services and interactively rescue services, alert systems and state hydrometeorological institutes. An integrated and coordinated way of managing the entire city and utility systems enable us to make significant savings, improve supply and increase efficiency of utility networks [3].

## **3. Intelligent Cities = Digital City**

Digital cities offer wide area digital networks and application services enabling a variety of aspects of social and economic life.

Local government can benefit from building a digital city and obtain competitive advantages such as:

- ☞ Cutting local government costs,
- ☞ Increasing the quality of communication between local government and citizens,
- ☞ Increasing the quality of life and satisfaction of citizens,
- ☞ Providing a large number of activities and services for both citizens and business entities,
- ☞ Speeding up local economic development,
- ☞ Increasing citizens safety and protection,
- ☞ Stimulating growth and use of Internet in massive scale etc.

Most present wide area networks in Europe support transmission rate of up to 20 Mbit/s.

Every digital city has its own architecture, organization and services. Infrastructure models are not unique and suitable for all cities. Cost of building a digital (intelligent) city is equivalent to constructing a few kilometers of high-road. A city with a million people can be transformed in an intelligent city for less than 50 million euros, with non-linear cost reduction for small-sized cities [3].

Integrating state cities into networks is the precondition for achieving good modern life. The fact that a number of cities in Croatia are using new ICT technologies that contribute to a significant increase in efficiency and transparency of local government – makes us happy.

#### **4. Practical Example (Business Friendly Certification South-East Europe – BFC SEE)**

According to the data of this year published in the WEF's report on information technology, Croatia is ranked 51st of total 144 states by ICT competitiveness. We, therefore, strongly believe that strengthening dialogue and cooperation between representatives of the economy and public government as well as science and education is the key condition for achieving stronger development in Croatia's ICT industry, and a basis for attracting new investors. Implementation of the second phase of Business Friendly Certification South-East Europe program (BFC SEE), initiated in 2011 by the German Society for International Cooperation Association (GIZ) and Serbia's National Alliance for Local Economic Development (NALED), started at the beginning of 2014. In Croatia, BFC SEE project is managed by the Center for the Local Economic Development at the Faculty of Economics Rijeka [1].

BFC SEE is the first regional project that stimulates development of cities and municipalities, strengthening international economic relationships within the region and contributing to creating of recognizable business quality standards at national, regional and world levels. City/Municipality Certification provides a systematically conceived tool to establish evaluation criteria and procedures that a local unit has to fulfill in order to be recognized for a favorable business environment thereby realizing goals of increased investment, revenues and economic growth at local level [1].

Carefully conceived software solutions simplify the city certification process. Criteria of Business Friendly Certification can be seen as a reminder of what a city or municipality needs to develop as its own capacity and which operative segments of city or municipal organizations need to be functional. This process is expected to serve to increase competitiveness with respect to the cities and municipalities in the region inside and outside the country borders helping them compete with competitors that started reforms during the transition process much earlier.

Criteria of Business Friendly Certification can be seen as a reminder of what a city or municipality needs to develop as its own capacity and which operative segments of local organizations need to be functional. This process is expected to serve to increase competitiveness with respect to the local units in the region inside and outside the country borders helping them compete with competitors that started reforms during the transition process much earlier.

## 5. Cloud Computing Models and Levels

### 5.1. Cloud Computing Models

The major architectural models of cloud computing service are known as SPI; Software as a Service, Platform as a Service and Infrastructure as a Service. Cloud computing providers offer their services according to several fundamental models [2]:

5.1.1. Software as a Service (SaaS) – The capability provided to the user is to use the provider's applications running on a cloud infrastructure. End users access cloud-based applications from different devices via a web browser. SaaS is a technology platform that enables users to access applications via Internet and rent services as necessary, instead of actually purchasing and installing them on their own home or office computers. Companies can rent textual, table, calendar or other software according to what is needed thereby avoiding cost of software purchasing, installing, upgrading and maintenance. The end user is not concerned with the additional costs related to service provider licencing or software license, and service providers have low costs comparing to traditional database systems. Google Apps and Zoho Office are examples of SaaS.

5.1.2. Platform as a Service (PaaS) is a variation of SaaS structure that provides an end user with a development environment as a service. PaaS provides a software platform on which users can build their own applications and host them on the PaaS provider's infrastructure. Developers create applications on the provider's platform over the Internet. End users do not have complete freedom in designing and deploying applications. Users cannot check out cloud structure or network, storage systems, operation systems or providers, but do have control over applications. Sometimes, users can control environmental configuration. Some of PaaS examples are: Salesforce.com, Force.com, Coghead and Google App Engine.

5.1.3. Infrastructure as a Service (IaaS) – IaaS is defined as computer infrastructure, such as virtualization, being delivered as a service. Instead of having to purchase software, servers, storage area or network equipment, users can buy these as a fully outsourced service. IaaS users are responsible for managing applications, operation systems, data, storage, networks, and other basic computing resources, while vendors still manage cloud infrastructure. The end user can also have a limited control over chosen network components.

5.1.4. Business Process as a Service (BaaS) is a top-level part of the service-level architecture for cloud platform. BaaS describes integration of technology, people, process and analysis enabling development and use of virtual inter-organizational applications, which link and integrate business activities and processes between cities and local communities.

### 5.2. Development Levels of Electronic Business

According to the Strategy for the development of electronic business in the Republic of Croatia for the period from 2009 until 2012, we can systematize five levels of informatization [6]:

1 – Information

Only information on service such as procedure description, books of rules etc. is available on the Internet.

2 – One-way interaction

You can print and save electronic forms to your computer.



### 3 – Two-way communication

Interactively completing a form. Creating an application that requires authentication. After the end user has completed the form, service is initiated.

### 4 – Transaction

Whole service is available on the Internet including completing forms, authentication, payment and delivery of confirmations, orders or other forms of complete service via Internet.

### 5 – Targeted, automated proactive service

This service is completely adjusted to individual users. It is automated and proactive. This means that the end user receives electronic form (that contains all information on the user, which have already been stored in public administration information systems) and timely warning notice to submit data or initiate electronic service.

## 6.3. Combining Cloud Computing Models and Development Levels of Electronic Business

### - One-way interaction

One-way interaction describes local government web pages, on-line news and various simple on-line forms and questionnaires.

### - Two-way communication

Internet forum such as Google Group is an example of cloud computing as a service categorized into a group of two-way communications. Such service can significantly improve communication with the local and regional government bodies, local branches of state government bodies or generally within a community.

Creative communication with citizens is a practical example of how to use Internet forum. For instance, when an individual or a group of people in a community need to communicate or cooperate with each other, using Internet forum and web applications can be a good way to activate citizens via electronic communication and stimulate their creative thinking. Through a process of sending and receiving creative information a local community can react better and provide new business opportunities and ways of resolving local problems. Local authorities can in this way become good managers who actually care of the community interests instead of just being bureaucratic masters filling the budget hole. Use of applications and cloud computing as a service in communication between the local government and users may enable more citizens to participate in different discussions, share their opinions about community and offer new solutions for individual problems [7].

### - Transaction Service

Transaction service describes services and forms dealing with the public services and procedures provided by state eAdministration.

### - Automated, Proactive and Interactive Service

An example of automated, proactive and interactive service is common work on a project and project management. Local and regional government bodies work on various projects. Most of them work on at least one large project that consists of several smaller parts where each one depends on completion of previous tasks. Following up all individual tasks, spending funds, project flow and dynamics can be valuable information not only for citizens but also economic entities. Cloud computing tools can be used for managing and controlling projects and project documentation. Every member of a project team can work individually on his or her part of the report. After all individual parts of the report have been completed, project manager and other interested parties can review the entire report or its parts [7], [5].

Project dynamics can often influence business decisions made at local community level. Project follow-up and reporting project dynamics can be simplified by use of web applications

for project management. Members of a project team can open the application from anywhere and access individual databases. Authorized persons can add or update project tasks, mark completed ones, add and disclose information on payment etc. As the project management application is accommodated on a cloud, every member of the team sees the same Gantt chart and the same task list. Data contained in the database are immediately updated as soon as any member of the team enters a change. Many project management applications have also additional functions such as web-based database sharing, bill boards, timeline and cost control etc. thereby allowing an insight into the project by elected rep

## **6. SWOT Analysis of Cloud Computing Development and Implementation in Local Government**

A simplified SWOT (Strength, Weaknesses, Opportunities, Threats) analysis of development and implementation of cloud computing in local government can be systematized as strengths, weaknesses, opportunities and threats. SWOT analysis is shown in scheme 1.

Scheme 1. SWOT Analysis of Cloud Computing Development and Implementation in Local Government

<b>Strength:</b>
☐ Optimal use of cloud computing services as necessary
☐ Maintaining software centrally on a cloud infrastructure
☐ Service accessibility (available wherever you have Internet access)
☐ Providing high-speed Internet connection (ADSL)
☐ Affinity and capabilities of human resources for abstract and imaginative thinking in developing and implementing cloud computing services
☐ Several university scientific educational units in electrical engineering, computing and economics generating top experts
☐ Developed cooperation with top foreign IT companies in the process of informatization
☐ Development of ICT technology at an EU average
☐ High ranking of Croatia in terms of ICT investment (according to the World Bank's data Croatia is ranked first among transition countries by ICT investment.
<b>Weaknesses:</b>
☐ Insufficient number of good managers and IT experts required to build a well conceived and systematic strategy on cloud computing, particularly from the point of view of a coordinated approach to business infomatization in Croatian companies aimed at developing and implementing cloud computing
☐ Safety problems related to confidential data made available to service providers
☐ Bigger need for integration
☐ Lack of companies providing server management
☐ Difficulties in establishing responsibility for loss of data
☐ Legal issues related to various laws dealing with hardware for data storage
☐ Lack of strategy on cloud computing development and implementation
☐ Low annual production of ICT experts
☐ Low participation of local IT firms in cloud computing development
☐ Supremacy of leading foreign IT companies
<b>Opportunities:</b>
☐ Growing and synergy integration of hardware and software resources and human resources in Croatian IT firms modelled on successful IT companies and corporations from developed countries
☐ Incentive for development of new and innovative business models operating together with technological innovations
☐ Increased computing possibilities at lower cost, faster communication and more efficient use of computing capacity
☐ Possible economic benefit in tandem with synergy achievement of added value at lower cost of development and use of computing system
☐ Standardized cloud computing services enabling fulfillment of specific user (city) needs can be an attractive way of converting capital cost into business cost through faster availability and measurement of effectiveness of IT infrastructure and superstructure in the cloud

*Scheme 1. (continued)*

<b>Opportunities:</b>
☒ Creating a powerful ICT sector competitive and capable of entering into partnership with developed foreign IT companies in the cloud computing service development and implementation
☒ Stimulating integration of small-sized and mid-sized firms by reducing obstacles for entering the market (i.e. by decreasing IT infrastructure costs)
☒ Positive orientation and EU openness for investing in Croatia, particularly in ICT sector
☒ Insufficiently developed regions of Middle and East Europe with increased needs for ICT technology creating export opportunities
<b>Threats:</b>
☒ Non-understanding of the significance of ICT technology on the account of general lack of knowledge
☒ Increased requirements and needs for supervision over information of individual users and approach to such information and their protection by data storage provider
☒ Risks for users especially in terms of delicate data
☒ Use of outsourced cloud computing services increases risks related to citizen data and public service duties and tasks
☒ Responsibility for safety of information belonging to each individual user passes from user to provider
☒ Foreign IT companies have control over IT development
☒ Insufficient digital literacy of decision makers and focus on old technology due to social issues
☒ Lack of support for starting new business. Use of outsourced computing services increases risks related to citizen data and public service duties and tasks

## 7. Conclusion

Cloud computing provides a flexible, scalable access to hardware and software resources where end users do not need to know in advance their exact needs, but can ask for and use resources as necessary and at request. This allows for creating infrastructure conditions, which enable employees, organizations and subsystems of local government to focus on strategic factors of development of smart cities such as communication, cooperation and innovativeness.

Systematization and integration of cloud computing models and levels can help the cities in defining ways, approach and dynamics of inclusion into cloud computing systems, and contribute to the development and visualization of the informatization of local government activities and processes. A simplified SWOT analysis of cloud computing development and implementation in local government allowed us to systemize strength, weaknesses, opportunities and threats. SWOT analysis can serve in defining guidelines and building a methodological frame for quality, successful and proactive inclusion of the cities and local communities into cloud computing systems.

The biggest advantage of cloud computing is use according to need. Instead of having to purchase their own equipment, users pay for cloud services enabling vendors to rent and allocate resources to individual users according to need and priority.

The most important disadvantages are accessibility and safety. Users are expected to run business that is depending on services accommodated in somebody else's infrastructure. In case of inaccessibility due to difficulties, the end user might suffer huge losses. Other than that, confidential data must be kept secure in the cloud. Service providers are expected, therefore, to establish relationships with clients that are based on trust and ensure data protection and privacy.

There may be a number of indistinctness when defining clouds. The biggest one is what is meant by a cloud. In general, the cloud is defined based on its infrastructure size. In large infrastructures, exploitation and effective allocation of resources is very important for successful business. From user's view one feels that there are unlimited computing resources used as necessary. This is obtained by virtualization methods and smart allocation of resources.

Cloud computing has become one of the key factors influencing the concept of the smart city, which will enable building of systems of integrated and whole cities and an aligned development and functioning of local government activities and processes such as administration, energy, transportation, environment protection, health, education and culture.

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**MODERN COST MANAGMENT MODELS: ARE THEY USED IN CROATIAN COMPANIES?**

**MODERNI MODELI UPRAVLJANJA TROŠKOVIMA: KORISTE LI SE U HRVATSKIM PODUZEĆIMA?**

**ABSTRACT**

*Cost management is a managerial powerful tool for increasing competitiveness and improving business results. The main objective of cost management is to achieve cost efficiency, which in practice means the realization of the optimal ratio between the costs involved and the results that it achieves. Cost management models statistical analysis in Croatian companies was made. The main aim was to research cost management models used in Croatia as a support for sustaining and enhancing competitiveness. The survey was conducted in November 2012. Using simple random selection procedure 70 Croatian companies were selected from Register of business subjects in Croatian commercial Chamber. The selected companies were surveyed mostly by e-mail (50 companies) but also by phone (10 companies) and by personal contact (10 companies). The final response rate was 41%. The main hypothesis was that Croatian companies fail to apply adequate models of cost management and thereby significantly reduce their efficiency and competitiveness. Modern cost management model usage provides options for managers in their actions to be more precise, efficient and effective. But the research has shown that Croatian companies are mostly using traditional methods of cost management. The further cost management model usage analysis in the Croatian companies showed that most companies consider that they*

could achieve significant cost savings thanks to better use of different models of cost management. The empirical research results have shown that Croatian companies do not use adequate models of cost management, thus confirming the hypothesis. Further research aims should be to investigate reasons of not using modern cost management models as integral parts of the companies' strategic orientation.

**Key words:** cost management models, Croatian companies, competitiveness, statistics

## SAŽETAK

Upravljanje troškovima je snažan alat za jačanje konkurentnosti i poboljšanje poslovnog rezultata. Glavni cilj upravljanja troškovima je postizanje troškovne efikasnosti, što bi praktično značilo postizanje optimalnog rezultata uz optimalne troškove. U hrvatskim poduzećima napravljeno je istraživanje o modelima upravljanja troškovima. Glavni cilj istraživanja bio je istražiti i analizirati koje modele upravljanja troškovima hrvatska poduzeća koriste kako bi održali i ojačali konkurentnost. Istraživanje je provedeno u studenom 2012. godine. Koristeći proceduru slučajnog uzorka, 70 hrvatskih poduzeća je izabrano iz baze Registra poslovnih subjekata Hrvatske gospodarske komore. Navedena poduzeća kontaktirana su najvećim dijelom e-mailom (50), telefonom (10 poduzeća) ili osobno (10 poduzeća). Od ukupno poslanih 70 upitnika prikupljen je uzorak od 29 ispravno ispunjenih upitnika, što predstavlja stopu odgovora od 41,4%. Postavljena je glavna hipoteza kako hrvatska poduzeća ne primjenjuju adekvatne modele upravljanja troškovima i zbog toga značajno smanjuju svoju efikasnost i konkurentnost. Moderni modeli upravljanja troškovima pružaju različite opcije menadžerima kako bi u svojim aktivnostima i donošenju odluka bili što precizniji, učinkovitiji i djelotvorniji. No, provedeno istraživanje je pokazalo kako hrvatska poduzeća u većini slučajeva još uvijek koriste tradicionalne modele upravljanja troškovima. Također, istraživanje je pokazalo kako hrvatska poduzeća smatraju kako bi mogla ostvariti značajne uštede ukoliko bi koristili različite modele upravljanja troškovima. Rezultati istraživanja su pokazali kako hrvatska poduzeća ne koriste adekvatne modele upravljanja troškovima što potvrđuje postavljenu hipotezu. Buduća istraživanja biti će fokusirana na pronalaženje razloga o nekorisćenju modernih modela upravljanja troškovima kao integralnog djela strateške orijentacije hrvatskih poduzeća.

**Ključne riječi:** modeli upravljanja troškovima, hrvatska poduzeća, konkurentnost, statistika

## 1. Introduction

The subject of this paper emerged as particularly interesting given the crisis conditions of doing business in today's economic environment. In such conditions, costs and cost management are becoming increasingly important factor in the performance of the company in relation to the instability and unpredictability of the overall economic trends. Traditional cost management models do not allow a distinction between the costs and different activities that occur in companies (whether it is a service or manufacturing company). Moreover, they do not offer an answer to the question: where to cut cost? The development and emergence of modern cost management model ensures managerial critical mass of information needed for decision-making in order to optimize costs in existing business conditions in the global market. Using modern cost management model provides options to managers in their actions to be more precise, effective and efficient. The complex transformation processes in companies and other organizations, sometimes caused by institutional changes, require a change in business policy, particularly in the area of cost management.

The purpose of this paper is to investigate the implementation level of existing theoretical cost management models in Croatian companies in order to draw conclusions about the use of modern cost management models in Croatia. Modern cost management models in companies are considered to be active and usually produce results in increasing market competitiveness by reducing operating costs, reducing financial expenses, increasing added value in internal processes and reducing business risk. Therefore, the aim of this paper is to highlight the importance and role of cost management and to explore the characteristics and level of usage models cost management in Croatian companies. The authors have set up hypothesis that *Croatian companies fail to apply adequate models of cost management and thereby significantly reduce their efficiency and competitiveness*. Conducted survey is planned to prove that Croatian companies mostly apply traditional methods of cost management. The survey was conducted by questionnaire method on a selected sample of 70 Croatian companies.

## **2. Background and literature review**

Business conditions are changing rapidly becoming more and more complex. But, for companies this is not the only thing that has changed. According to Drury, factors that are influencing the change in companies and trade market are: a) globalization of trade market; b) privatization of government controlled companies; c) change in product life cycle (it is getting shorter and shorter); d) change in customer consciences and they expect more for less (lower cost, higher quality, higher reliability, delivery and in choice of new products); and e) the emergence of e-business (Drury, 2012, 36.). Increasing attention is now being given to value chain analysis as a mean of increasing customer satisfaction and managing cost more effectively. Cost management focuses on cost reduction and continuous improvement and change rather than cost containment (Drury, 2012, 36.). It involves process improvements, where an opportunity has been identified to perform processes more effectively and efficiently. Ideally, cost management aim to take actions that will both reduce costs and enhance customer satisfaction (Drury, 2012, 37.). Traditional or static cost management models such as job order costing, process costing, standard costing and variance analysis, traditional budgeting and cost volume profit (CVP) analysis are no longer adequate to be used in the present manufacturing environment (Kaplan, 2003, 24.). Moreover, the shorter product life cycles, advanced manufacturing technologies, decreasing emphasis on labor in the production process and global competition may lead to the misuse of the above tools (Drury, 2008, 37.). To succeed in the present dynamic business environment, companies should link their strategies to quality improvement; increased flexibility in meeting customer's individual requirements; reduce lead times, inventories and cost (Kaplan, 2003, 24.). Thus, management accounting is continuously evolving, with the emphasis shifting from a cost determination and financial control focus, to the provision of advice that results in addition or creation of value, to taking part in decision making and strategy formation (Allott et al., 2000). Traditional cost management models have only emphasis on how to reduce cost to achieve short-term profit and setting price after products are produced. In today competitive market, sustain in the market is not that easy. Customers' satisfaction becomes the most important factor that is determining sustainability of the company, so they need to maximize the value to the customer by a minimum cost. The companies should work with continuous improvement and try to identify and remove non-value added activities. So, companies should have information about cost relevant for decision making process and product profitability. They should be reliable in presence based on past event and trying to predict the future (Lucey, 1996, 31). Modern cost management models enable the evaluation of product profitability through the entire product life cycle and optimizing cost of the whole company. Therefore, this approach is oriented to the long run decisions regarding pricing the product, forming the



adequate product mix, eliminating the non-profit product line, introducing the new product line etc. That is the reason why modern cost management models considered being active and dynamic. But, in order to provide the management with relevant information regarding costs, accounting function in companies need to combine and compare cost management models in the short run and in the long run (Blocher at al., 2005, 24). Only the interaction of these two cost management approaches can give the objective and reliable picture regarding costs (Horngren at all., 2003, 27). While traditional cost management approach is based on traditional cost accounting methods which are focused mainly on manufacturing costs towards the determination of the manufacturing cost per unit, modern cost management approach involves modern managerial (management) accounting methods focused on the total costs through the whole product life cycle. Modern cost management models compared to traditional models tend to perform more precise schedule of indirect costs of the product or service or any other cost object, while the analysis of the cost of added value are trying to eliminate those activities that are not bringing any value to the company.

Modern cost management models, as a powerful management and strategic tool for preserving the value of the company, were developed in accordance with the development of decentralization and diversification of the production program (Blocher at all., 2005, 24). Traditional management model production costs occurred during the dominance of labour-intensive production when the cost of production overheads had a disproportionately small share of total production costs than today. With the development of technology, information systems and globalized business conditions there is a need for the development and use of modern cost management model as the Activity Based Costing method (further ABC method). ABC method is a relatively new approach developed in 1980th year, which eliminates the disadvantages of the traditional cost accounting. ABC method began to be applied in practice in the 1980s in large manufacturing companies and have yielded primarily benefits through cost reduction, integration of some separate activities and very high level of cost control. In such conditions, new modern methods of cost management, as Target Costing and „Kaizen" method, had also appeared. In the period from 1990th to today there was an explosion of new models of cost management, such as the ABC method, cost management based on the life cycle, benchmarking strategies, Balanced Score Card and etc. Today, traditional methods of allocating costs are not desirable in terms of reducing costs and increased interest of producers for accurate information on product costs in order to achieve greater market competitiveness, and thus higher levels of profitability. The table below gives an overview of cost management models.

Table 1 Overview of cost management models

<b>Cost models</b>	<b>Model origins</b>	<b>Prerequisite</b>
<b>Traditional Product Costing - TPC</b>	Where costs occur?	Cost allocation rates and different calculation
<b>Process Based Costing -PBC</b>	What causes overheads to appear?	Processes, decomposition processes at II. level ( the process steps or stages in the process) , bases to allocate costs
<b>Activity Based Costing - ABC</b>	Why costs appear?	Activities, decomposition activities at III. level
<b>Activity Based Budgeting - ABB</b>	What are the capacities needed for production of product or service?	Normative and standards
<b>Target Costing - TC</b>	How high cost may be?	Knowledge about cost structure, knowledge about market and preferences of costumers
<b>Life – cycle Costing (LCC)</b>	When the cost of product or a service will be covered?	Knowledge about costs in total life cycle of a product or a service

<b>Cost models</b>	<b>Model origins</b>	<b>Prerequisite</b>
<b>" Kaizen " Costing - KC</b>	Can you do better?	The existence of developed procedures
<b>Value Engineering - VE</b>	Can I still reduce costs?	Functional analysis, knowledge of technology
<b>Quality Cost Management - QCM</b>	What costs would not appear if the job was performed well first time?	Built system for monitoring quality costs
<b>Balanced Score Card - BSC</b>	What are the results in balancing success factors?	Developed system of indicators
<b>Benchmarking</b>	What can we learn from competition (others)?	Knowledge about others in the same branch or position

*Source: authors according to Belak, 2011, 48.*

Each of aforementioned models can be used to manage costs. However, these models are not exclusive. It is common in companies to use combined application of different models of cost management. Unlike traditional cost management model involving the concept of measuring and controlling the cost of production of goods and services, modern cost models are adequate and effective tool for company in getting the information to customize the economic and technological development. Modern cost management models for companies in today's business environment represent the main base of business strategy that ensures not only the existence but also the preservation and improvement of competitive position (Cingula, Klačmer, 2003, 23).

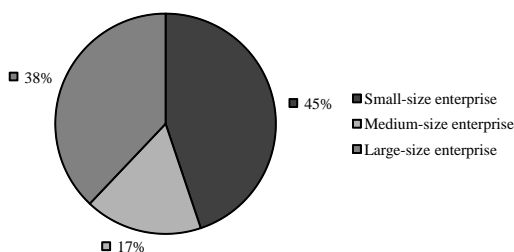
### **3. Usage of cost management models in Croatian companies**

In order to research the cost management models position in Croatian companies the survey about this topic was conducted. 70 Croatian companies were selected from the Register of business subjects in Croatian commercial Chamber with usage of simple random selection procedure. The selected companies were then contacted by e-mail (50 companies), phone (10 companies) or by personal contact (10 companies). The survey was conducted during November 2012. The questionnaire consisted only of 10 questions plus some questions about the company and respondent who filled out the questionnaire. Such small amount of precise, short and non-misleading questions should have a great impact on the response rate. And indeed, from 70 contacted Croatian companies, 29 of them decided to take part in the survey and fill it. This gave a response rate of 41,43% which is remarkable high for a such kind of research.

The usage of cost management models in Croatian companies could differ according to their size. According to the Accounting Act (Accounting Act, 2007) in Croatia companies are recognized regarding their size as small, medium and large companies. The companies are defined on the last day of the fiscal year preceding the fiscal year for which the financial statements are prepared according to the following three criteria: total assets value; the income value; and average number of employees during the financial year. So the small companies are those which do not exceed two of the following criteria: total assets value of HRK 32.5 million, the income of HRK 65 million, average number of 50 employees during the financial year. On the other hand, the medium companies are those which do not exceed two of the following criteria: total assets value of HRK 130 million, the income of HRK 260 million, average number of 250 employees during the financial year. Large companies are those which fulfilled two requirements for medium-sized companies. Also, according to the Accounting Act as large companies are considered banks, savings banks, electronic money

institutions, insurance companies, leasing companies, investment fund management and separate assets without legal personality under their management companies, investment fund management and property investment funds with legal personality, society for a mandatory or voluntary pension funds and separate assets under their management, and pension insurance. In the survey 13 small-, 5 medium- and 11 large-sized companies participated. Their structure is shown in Figure 1.

Figure 1 Structure of companies which have taken part in the survey according their size



Source: authors

The departments which are in charge for cost management can be grouped into the three groups: department of accounting and finance, department of controlling, and management department. Obtained data showed that in the 9 companies from the 29 sample companies (31.03%) for cost management is responsible department of accounting and finance, in the 8 (27.59%) department of controlling, and in the 12 companies (41.38%) management department.

Table 2 Departments in charge for cost management grouped by company size

Company size	Accounting and finance	Controlling	Management
Small	35,71%		64,29%
Medium	75%		25%
Large		90,91%	9,09%

Source: authors

It is interesting to see that in small companies in Croatia, management department is dealing with cost management. The reason for that is that the owner of small company probably is trying to manage cost and they do not have a department or a person in charge for managing costs. Medium companies have an accounting and finance department and because of that analysis and planning of cost goes under that department. Since large companies have all the functions within the company, it is evident that they are highly adapted to demanding and modern conditions of market through controlling department which is in charge of tracking; planning and analysing costs.

One of asked question was how well the company know about cost management models. The most companies, 21 of them, answered that they have good knowledge about cost management models. Excellent knowledge about cost management models stated 6 companies, and poor knowledge about them expressed only one company. Also, one company did not answer on this question. It is assumed that vast majority of Croatian companies, or, to be precise, more than 0.8 of them has good or excellent knowledge about cost management models. The proportion test showed that the null hypothesis can be rejected at significance

level of 5% ( $\hat{p} = 0.9643$ ,  $\sigma_{\hat{p}} = 0.756$ ,  $z\text{-value} = 2.173$ ,  $p\text{-value} = 0.015$ ). This means that the stated hypothesis about cost management models knowledge in Croatian companies could be accepted.

Table 3 Knowledge of companies about cost management models grouped by size of the company

Cost management models	Small	Medium	Large
Traditional models	78,58%	25%	27,28%
Modern models	14,28%	50%	63,63%
I do not know	7,14%	25%	9,09%

Source: authors

It is evident from the upper table that small companies know traditional models the best while modern models as they have stated knows only theoretically. This is logical since they are using mostly traditional models for cost management because modern models are very expensive and exhaustive for implementation. Large companies are familiar with modern models and that is because they are using most of the modern cost management models since they have department dealing with active cost management.

In spite of fact that almost all companies are good or excellent familiar with cost management models, only 19 or 65.5% companies in the sample use at least one cost management model. On the other hand, 10 or 34.5% companies do not use any of cost management models. The hypothesis that more than 50% Croatian companies are using at least one cost management model has been stated. It has been concluded that the null hypothesis can be rejected at the significance level of 5% ( $\hat{p} = 0.6552$ ,  $\sigma_{\hat{p}} = 0.093$ ,  $z\text{-value} = 1.671$ ,  $p\text{-value} = 0.047$ ). In other words, more than 50% Croatian companies uses at least one cost management model.

The cost management models can be recognized as traditional and modern. From those 19 companies that are using at least one cost management model, traditional cost management models use 7 companies in the sample. On the other side modern cost management models are used by 6 companies in the sample. Both, traditional and modern, cost management models are used by 5 companies. One company did not answer on this question. From the table below it is visible that all the companies that are using cost management models are using more than one model. From modern cost management models the most commonly used are PBC method, then ABC method, TC method and ABB. It is also interesting to see that even 6 companies is using BSC model which is considered to be the most complicated for implementation. The responses are given in Table 4.

Table 4 Cost management models used in Croatian companies

Cost management models	No. Of companies using cost management models
Traditional Product Costing - TPC	12
Process Based Costing -PBC	7
Activity Based Costing - ABC	6
Activity Based Budgeting - ABB	6
Target Costing - TC	6
Life – cycle Costing (LCC)	4
" Kaizen " Costing - KC	0
Value Engineering - VE	4
Quality Cost Management - QCM	2
Balanced Score Card - BSC	6
Benchmarking	3

Source: authors

It is remarkable that 15 companies agreed that the used cost management model fully ensures them enough information for bringing better decisions in order to optimize costs. The rest of the companies, which use cost management models, think that the used management model only partially fulfil their needs for information about costs. In table below it is visible satisfaction with cost management models that are used in small, medium and large companies about cost information provided by used model for decision making regarding cost optimization what is helping in their efficiency and competitiveness.

Table 5 Satisfaction with used cost management models for decision making

Satisfaction of companies	Small	Medium	Large
Yes	57,15%	75%	81,82%
No	14,28%	-	-
Partially	28,57%	25%	18,18%

Source: authors

From Table 5 we can draw conclusion that large companies are very satisfied with implemented cost management models.

It is very important that employees are continuously educated about cost management models in order to bring out their maximum. The same number of companies (7) agreed that they do and do not give enough attention to education in the field of cost management. Also there were 14 partially satisfied companies with their investments in the cost management education. One company did not answer this question. The hypothesis that only 15% Croatian companies gives enough attention to cost management education is stated. At significance level of 5% the null hypothesis cannot be rejected ( $\hat{p} = 0.25$ ,  $\sigma_{\hat{p}} = 0.067$ ,  $z - value = 1.482$ ,  $p - value = 0.138$ ). The test results pointed out that vast majority of Croatian companies do not invest enough in cost management education and because of that they are not able to get maximum benefits from cost management models use.

Table 6 Satisfaction with education in cost management area

Satisfaction of companies	Small	Medium	Large
Yes	7,14%	25%	36,36%
No	35,72%	50%	9,09%
Partially	57,14%	25%	54,54%

Source: authors

The companies were also asked to grade the cost management results importance on the five-point scale where grade "1" is fully not important and grade "5" is very important. The results are shown in Table 7. It can be concluded that the most important result for companies is improved business processes control because 62% companies gave grade 5 to it.

Table 7 The importance of cost management results to companies in the sample

Cost management result	Importance						Total company number
	1	2	3	4	5	Do not know / Not answered	
Reduced business risk	0	2	6	10	7	4	29
Increased added value	0	2	6	2	15	4	29
Decreased operating expenses	0	0	3	12	11	3	29
Reduction of financial expenses	1	3	2	13	6	4	29
Improved business processes control	0	0	2	8	16	3	29
Increased competitiveness	0	3	4	9	9	4	29

Source: authors

Following result by importance is increased added value (60% companies gave grade 5). It has been assumed that more than 50% Croatian companies agrees that each of given cost management result is important (grade 4) or very important (grade 5). For this purpose the Wilcoxon signed rank test about assumed value of median is used where hypothesis were following:  $H_{0...n} \leq 3$ ;  $H_{1...n} \leq 3$ . The median test results are given in Table 8.

Table 8 The Wilcoxon signed rank test results of cost management results importance to companies

Cost management result	Sample size	Sample size for the test	Wilcoxon statistic	p-value	Estima. median
Reduced business risk	25	19	177.0	0.001	4.0
Increased added value	25	19	185.0	0.000	4.0
Decreased operating expenses	26	23	276.0	0.000	4.5
Reduction of financial expenses	25	23	230.5	0.003	4.0
Improved business processes control	26	24	300.0	0.000	4.5
Increased competitiveness	25	21	211.5	0.000	4.0

Source: authors

The median test results have shown that, at significance level of 5%, for each observed cost management result the null hypothesis can be rejected. On that way it can be concluded that more than 50% Croatian companies recognizes the importance of cost management results.

Table 9 The importance of cost management results grouped to companies' size

Cost management result	Small	Medium	Large
Reduced business risk	15%	5%	5%
Increased added value	15%	10%	5%
Decreased operating expenses	5%	15%	50%
Reduction of financial expenses	15%	10%	20%
Improved business processes control	10%	10%	15%
Increased competitiveness	40%	50%	5%

Source: authors

From Table 9 we can see that small and medium companies believe that they have the highest benefit in cost management models in increasing their competitiveness, while large companies believes that the highest benefit in cost management models can be visible in reducing operating expenses.

Based on this results authors are assuming that the cost management will be more used in Croatian companies in the future and more of them will start to use some of cost management models.

## 6. Conclusion

Today, the numerous factors in the business environment, such as strategic interest, contemporary organizational and managerial structure of the company, flexible technology, e-business activities, modern management style and organizational culture changes, have affected on cost management practices within the companies and have led to gradually implementation of modern cost models.

Conducted empirical survey, on the selected sample of Croatian companies, has showed that Croatian companies are still primary focused on traditional cost management models even though they cannot meet increased needs of management in the decision making process. From obtained data is obvious that the vast majority of companies use at least one of the cost management models. But still the traditional cost management models are the most used ones even though some companies are using both traditional and modern cost management models. So through conducted survey, authors have confirmed initially set hypothesis that *Croatian companies fail to apply adequate models of cost management and thereby significantly reduce their efficiency and competitiveness*. Nevertheless it is necessary to highlight positive trend that the most of the companies in the sample are familiar with modern cost management models in the theory.

The introduction of modern cost models, such as ABC method, Target Costing model with a wide range of applications, are becoming a priority and incentive to maintain and strengthen the competitive position of the company. Authors think that the reasons for still using traditional cost management model in Croatian companies could be find in insufficient knowledge about modern cost management model and opportunities that they bring as a tool for making efficient and accurate strategic decisions and in the lack of financial resources for implementation of new cost methodology. Moreover, the authors believe that only the interaction of these two cost management models, traditional and modern, can give the objective and reliable picture regarding costs and on that way improve cost management within the Croatian companies. Therefore, future research will be focused on actual implementation of cost management models and their connection with traditional costing systems.

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**MANAGING AND PROMOTION OF EVENTS IN FUNCTION OF  
ACHIEVING<sup>59</sup> COMPETITIVE TOURIST OFFER OF EASTERN  
CROATIA**

**UPRAVLJANJE I PROMOCIJA DOGAĐAJA U FUNKCIJI  
OSTVARENJA KONKURENTNE TURISTIČKE PONUDE ISTOČNE  
HRVATSKE**

**ABSTRACT**

*Tourist events represent a highly valuable element of an integral tourist product, so it is necessary to dedicate significant attention to them, considering that their uniqueness enables high positioning of a tourist destination on the tourist market and creating additional value of tourist offer. Eastern Croatia is abundant with various and unique events based on tradition and cultural heritage, which take place all year round, and which can, through use of adequate knowledge and skills, and marketing activities, contribute significantly to the competitiveness of its tourist offer and creation of a recognizable brand. The purpose of the paper is to point out the importance of managing events with a goal of enriching and diversifying the tourist offer of Eastern Croatia, while the goal of the paper is to present the current offer of events of Eastern Croatia, and give a proposition of strategic and promotional guidelines for improving and expanding tourist offer with a goal of strengthening competitive advantages of (Eastern) Croatia as a tourist destination.*

**Keywords:** *tourist events, Eastern Croatia, guidelines of future development, strategic guidelines, promotional guidelines*

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<sup>59</sup> The authors of the paper would like to thank Z.A.K.U.D. (Community of Amateur Cultural-Arts Activities of County of Vukovar-Srijem and the Tourist Board of Vukovar-Srijem on a high professionalism and help in obtaining all the necessary data for the preparation of this paper.



## SAŽETAK

*Turistički događaji predstavljaju visoko vrijedan element integralnog turističkog proizvoda, stoga je nužno posvetiti im dodatnu pozornost, s obzirom da njihova jedinstvenost omogućuje visoko pozicioniranje turističke destinacije na turističkom tržištu i stvaranje dodatne vrijednosti turističke ponude. Istočna Hrvatska obiluje raznim i jedinstvenim događajima baziranim na tradiciji i kulturnoj baštini, koji se odvijaju tijekom cijele godine, i koji mogu, kroz uporabu adekvatnih znanja i vještina, te marketinških aktivnosti, značajno doprinijeti konkurentnosti turističke ponude i stvaranja prepoznatljivog brenda. Svrha rada je istaknuti važnost upravljanja događajima s ciljem obogaćivanja i diverzifikacije turističke ponude istočne Hrvatske, dok je cilj rada prikazati trenutnu ponudu događaja istočne Hrvatske, i dati prijedlog strategijskih i promotivnih smjernica za poboljšanje i proširenje turističke ponude s ciljem ojačanja konkurentskih prednosti (istočne) Hrvatske kao turističke destinacije.*

**Ključne riječi:** *turistički događaji, istočna Hrvatska, smjernice budućeg razvoja, strategijske smjernice, promotivne smjernice*

### 1. Introduction

Tourist events are an important element of modern tourist offer, and an important factor in achieving competitive advantages on the turbulent tourist market which is proven by numerous scientific and professional research. If their development is properly managed (while adhering to sustainable development principles), profiling, strategic (marketing) presentation and promotion of their offer on the tourist market, they will enable branding of the tourist destination. The purpose of this paper is to show the importance of management of tourist events pointing to how they contribute to enrichment and diversification of the tourist offer. The objective of this paper is to show the current offer of events in Eastern Croatia with special emphasis on the example of Vinkovačke jeseni 2012 (Vinkovci Autumn Festival), which will show how such an event can significantly contribute to the development and branding of tourist events in Eastern Croatia.

### 2. Theoretical Considerations of the Importance of Events in the Contemporary Tourist Offer

Tourist events and their impact on competitiveness of tourist offer started to be analysed in more detail in the literature by the end of the 1980s, and most of the research were conducted in the first decade of the 21<sup>st</sup> century. However, we can say that tourist events have existed since there is humanity so that gladiator games in Ancient Rome, the Olympic Games in Athens, etc. may be perceived as a kind of a precursor of tourist events. According to Getz, with regard to associations that base their activities on realisation of new and different tourist events, Getz states that in 1885, the International Association of Fairs and Expositions (IAFE) began with a half dozen fairs, while the International Association for Exhibition Management was organized in 1928 as the National Association of Exposition Managers to represent the interests of tradeshow and exposition managers. Established in 1972, Meeting Professionals International (MPI) is the global community committed to shaping and defining the future of the meeting and event industry. The International Special Events Society (ISES) was founded in 1987 and embraces both event designers/producers and their numerous suppliers. As well, there are associations for carnivals, and many arts and sports-specific associations that deal with events, and they organize at local, national and international levels. In the United

Kingdom, the Association for Events Management Education (AEME) was established in 2004 (Getz, 2008, 405).

Tourist events represent a challenge to contemporary destination management. To realise and develop successful tourist events, numerous skills and knowledge of destination management are required. In terms of their specificity and, so to speak, constant change, tourist events are a remarkable source of sustained competitive advantage of a tourist destination. According to Milohnić, when events, local culture, tradition and customs are celebrated, entertainment and recreation complement each other and cultural and social advancement is ensured. Events are a very important motivator of tourism and they are very present in destination development plans and tourism development strategies (Milohnić's adaptation according to 2010 Hede, Jago & Deery, 2002, 2).

Tourist events can be divided into local, regional, hallmark (typical) events and mega tourist events.

Picture 1 The portfolio approach to event tourism strategy-making and evaluation



Source: Getz, D., (2008). *Event Tourism: Definition, evolution, and research*, *Tourism Management* 29, pp. 403 - 428

The characteristic of local and regional events is their periodicity and taking place „from occasion to occasion“; they attract a small group of visitors, mostly locals, and they do not realise significant financial benefits. Hallmark events can be characterised as highly valuable and highly attended events that represent a characteristic tourist event important for broader community and can be identified with the host country and become a kind of a destination brand (Carnival in Rio de Janeiro). Occasional mega tourist events (the Olympics, soccer championships, etc.) are top tourist events that take place in a specific cyclical period (four years) and globally represent the most important tourist event. Destinations which organise these mega events become attractive for marketing and tourism professionals and achieve, along with substantial costs, exceptional economic benefits for the organisers.

The value of tourist events can be measured (author's adaptation according to Getz, 2008, 407) according to potential growth, market share, quality, image, acceptance of the local community, sustainable income, economic benefits for organisers of the event, sustainability and adequacy of the tourist event itself. Van Der Wagner and Carlos (2008) state that creation of tourist events can be followed through 11 steps. If these steps are complemented by

creating permanent procedures of quality control of organisation, planning, control, promotion, and other steps in the chain, higher level of quality of tourist events is achieved, thus strengthening the satisfaction with the tourist offer, and realises the possibility to raise the tourist event from the local level to regional or hallmark which, by selecting the appropriate marketing tools, managerial knowledge and skills, can become a kind of a mega-brand of the destination.

Picture 2 Steps in managing the creation of tourist events



Source: Authors' adaptation according to Van Der Wagner, L., Carlos, B.R. (2008). *Event Management for Tourism, Cultural, Business and Sporting Events*, Zagreb: Mate d.o.o. pp. 287-290

It is necessary that a creative team in a destination devises the "guiding idea" of the tourist event, followed by organisation of the tourist event and contracting (permits, agreements). Successful and well-designed marketing, but also management, are very significant for a successful tourist event. Special attention should be devoted to elimination of possible weaknesses and threats for successful organisation of tourist events, ensure high quality implementation plans, and ensure permanent improvement and development of tourist events, in the way that they become one of the main motivations for tourists to visit the destination, which is possible by implementing quality standards. By implementation of internal standards (adapted to a specific region or an event of greater importance), or international quality standards such as ISO20 121 Sustainable Development of Events, complete satisfaction of all the stakeholders in the destination is achieved. This is hard to achieve in the Republic of Croatia due to the lack of qualified human resources, statistical data and organisations which would focus on designing, improvement and sustainable quality of tourist events.

### 3. Characteristics of the Tourist Offer of Events in Eastern Croatia with Special Focus on Vinkovačke jeseni

Previous studies of modern tourist trends point to the growing demand for new and specific events that will provide tourists with a new experience. Non-material heritage is an important element of the tourist offer of cultural tourism, and its presentation in the form of

organisation of traditional events represents an invaluable experience for tourists, given that they experience something new, yet unseen, learning about the culture and tradition of a nation. In case of the Republic of Croatia, it is to highlight the richness and variety of events in its Eastern part (Đakovački vezovi, Vinkovačke jeseni, Tamburitza Music Festival, Eco-Ethno Festival, Osijek Summer Nights, Days of the First Croatian Beer, Days of Wine and Tourism, Festival of Fruit Brandies, Liqueurs, Jams, Pumpkins and Zucchini, National Evaluation of the Slavonian kulen/kulin, Carnival Days in Nova Gradiška, Festival of Amateur Singers Zlatni glas Zlatne doline, Folklore Festival Bekteški susreti, In the World of Fairytales by Ivana Brlić-Mažuranić, and many others).

These examples of events point to the fact that Croatia has a diverse resource base of events (whether it is gastronomic-enological, cultural or other), which are mainly of local importance. The task of tourist destination management and organisers of tourist events must be designing a new strategic and marketing plan with the goal to raise visibility of the event to a higher level (for example, hallmark). This will be possible by implementing chain of values of designing tourist events in the Eastern Croatia (more about the chain of events in the following text). In the following text, the authors will focus on the significance of Vinkovačke jeseni as an invaluable event in the scope of the offer of cultural tourism and tourism of events in (Eastern) Croatia.

The first Vinkovačke jeseni took place in 1966, and represent a tourist event of invaluable significance for the tourist offer, not only of Vinkovci and the county, but also the Republic of Croatia. Landeka notes that Jeseni in the past four decades evolved from a local event to a large and important Croatian folklore event and thus preserved local Slavonian and Syrmian folklore and significantly contributed to preservation of Croatian folklore heritage. After the political changes in 1990 and the creation of independent Croatian state, Jeseni retained nearly all the events that they had in the previous regime, and are enriched with new contents or added some innovations to previous events (authors' adaptation according to Landeka, 2007,21). The particularity of this event is primarily reflected in the presentation and preservation of traditional Croatian folklore outdoors or indoors, with a variety of additional contents. Performers present their skills in the performance of traditional dances, songs, while wearing traditional costumestypical for Eastern Croatia. It is also important to mention Children's Jeseni (participation of children in the context of this important event such as participation in school activities or activities in cultural associations, which is of great importance for acquiring knowledge about their own culture and tradition, and its preservation), literary autumn festivities (top-quality literary works by Eastern Croatian authors are highlighted through public readings, various festivals, etc.), theatre and musical events of accompanying festivals, art exhibitions, sports activities, etc.). This points to their great importance in the tourist offer, not only of Vinkovci, but the entire county. This is supported by the fact that the Town of Vinkovci initiated Crafts Fair of Vinkovačke jeseni on which over a hundred craftsmen present themselves with the goal to achieve better marketing of traditional products. In addition to entrepreneurship, there is considerable potential for the development of selective forms of the tourist offer like rural tourism, ecotourism, gastro-enological tourism, cultural tourism, etc. Through the crafts fair, a direct connection can be made between supply holders and the market, which is especially important for tourism development. Manufacturers of ecological products and traditional tools, textiles, food, and beverages can, by including their offer in the tourist event of Vinkovačke jeseni, achieve a significant increase in the interest in organic products, by which Vinkovci and the entire Vukovar-Srijem County are promoted as a destination of high-quality indigenous offer and competitive tourist offer.

In order to ensure further development with the aim of improving the overall tourist offer (of events), it is necessary to carry out continuous marketing activities while using cutting-edge

marketing tools, knowledge management, modern technology and best practice examples from the world in order to make information available to potential tourists and to encourage them to visit the tourist destination and to participate in a particular event.

In order to monitor the interest in this event, and its economic effects, it is necessary to monitor the achieved level of tourist turnover at the time the event takes place (tourist arrivals and overnights). The table below shows tourist arrivals and overnight stays of tourists who participated in Vinkovačke jeseni, and their share in total arrivals and tourist overnights in Vinkovci.

Table 1 Presentation of the share of tourist arrivals and overnights of tourists who participated in Vinkovačke jeseni within the total tourist arrivals and overnights in Vinkovci in the period of Vinkovačke jeseni

September	Tourist Arrivals*	Tourist Overnights*	Arrivals total September	Overnights total September	Share of arrivals of %	Share of overnights in %
09.-19.09.2010.	1.128	1.669	3.130	5.725	36,04	29,15
09.-18.09.2011.	1.013	1.677	2.693	5.382	37,62	31,16
07.-16.09.2012.	1.063	1.995	2.714	5.790	39,17	34,46
06.-15.09.2013.	1.336	2.400	3.280	6.195	40,73	38,74

Source: Data received from the Tourist Board of Vinkovci

\* - tourist arrivals and overnights realised by the tourists who actively participated in Vinkovačke jeseni

According to the data from the table above, in 2011, there was a small decline in the number of tourist arrivals and overnights; however, tourist arrivals started recording growth. This is also indicated by the data on the share of the realised tourist turnover of tourists who participated in Vinkovačke jeseni in respect of total number of arrivals and overnights in the same period in Vinkovci. To facilitate further growth of this positive trend, it is necessary to develop quality standards in the organisation of this event and propose economic activities as guidelines for successful development.

#### 4. Proposed Strategic and Marketing activities aiming to reposition Vinkovačke jeseni on the Tourist Market

In order to properly design guidelines for the development of tourist events, but also promotional activities of the destination, it is necessary to realistically evaluate all the features of the offer of the tourist destination and the event Vinkovačke jeseni as the basis for the creation of a „mega“ brand of Eastern Croatian region. S.W.O.T. analysis of Vinkovačke jeseni is provided as the tourist event on the basis of which promotional activities will be developed and destination brand created using the umbrella branding concept.

Table 2 S.W.O.T.analysis of the tourist event Vinkovačke jeseni

STRENGTHS	WEAKNESSES
<p>Preserved resource base (landscapes of Eastern Croatia)  Events based on long tradition  High level of authenticity of the event  Significant level of involvement of the local community  Easily accessible destination  Differentiation of the offer on the tourist market  Long-term viability of the project</p>	<p>Insufficient level of involvement of Eastern Croatian tourist offer in the offer created at the national level  Insufficient involvement of destination management in the creation of individual events  Insufficient level of knowledge of all participants in tourist events  Lack of clear and measurable indicators for designing the offer of events  Lack of clear marketing strategies</p>
OPPORTUNITIES	THREATS
<p>Financing projects of tourist events through Cohesion Funds  Raising awareness among the citizens and businesses of the benefits of forming tourist events  Higher employment  Economic benefits for all the stakeholders in the destination  Increase in product quality  More available products and services to tourists/customers  Creation of special teams for tourist events in destination management.</p>	<p>Intolerance of the local community towards tourists  Pollution caused by tourism  Violation of authenticity of the event by tourist commercialisation  Failure to adhere to the „value for money“ principle  Desire for quick profit  Low level of quality offer</p>

Source: Authors' analysis

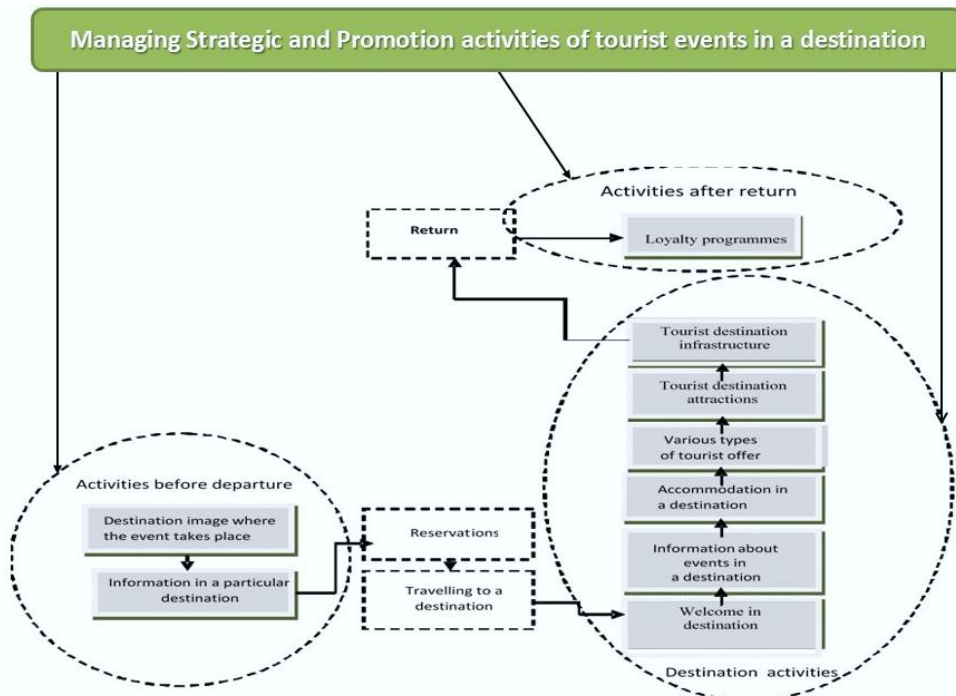
The above SWOT analysis lists the basic strengths and development opportunities of tourist events and creation of a brand of Eastern Croatia, and identifies weaknesses and threats to desired development. Some of the basic strengths are high level of recognition of the event in the Republic of Croatia, which provides a basic precondition for the creation of hallmark events in the region, and preserved resource base that provides the opportunity for continuous upgrading of the existing events with new ones. This is also supported by high level of authenticity of the event with almost non-existing commercial influences. As this is a relatively easily accessed destination (by airplane, train, car), and since local population is significantly involved in the event, it can be assumed that there are significant opportunities for improvement of the existing tourist offer by tourist events such as Vinkovačke jeseni, which achieves recognisability of the entire Eastern Croatia. New financial perspectives which became available after the Republic of Croatia accessed the European Union may be pointed out as developmental opportunities which will enable significant economic benefits for the entire region (higher consumption of tourists, easier access of home-made original products and services to the market, growing satisfaction with the quality of life, new workplaces, etc.). Weaknesses and threats are insufficient level of knowledge and skills management in Eastern Croatian destinations, lack of clear and measurable indicators that would allow creation of events, as well as potential intolerance of the local population towards tourists. In order to reduce the existing weaknesses, there should be constant encouragement of management education, insistence on the establishment of clear rules and measures to achieve quality tourist events and devising mechanisms to protect the authenticity and particularities of tourist events in Eastern Croatia.

#### 4.1. Chain of values of tourist events of Eastern Croatia

What follows is the presentation of the chain of values in the creation of tourist events and marketing approach based thereon, which can be implemented in Eastern Croatia.

Implementation of the chain of values achieves growth of competitive advantages of the destination, emphasises its particularities, and ensures increase in the quality of the offer.

Picture 3 Chain of values – management and promotional activities of tourist events in a destination



Source: Authors' adaptation according to Ivandić, N. (2007): *Panonski turizam: Stručno osposobljavanje za kvalitetni panonski turizam, modul Menadžment i turizam na seoskom gospodarstvu*, pp. 11, <http://www.pannoniantourism.hu/htmls/uitati.html> - Module Management and Tourism on country farms (accessed 15 March 2014)

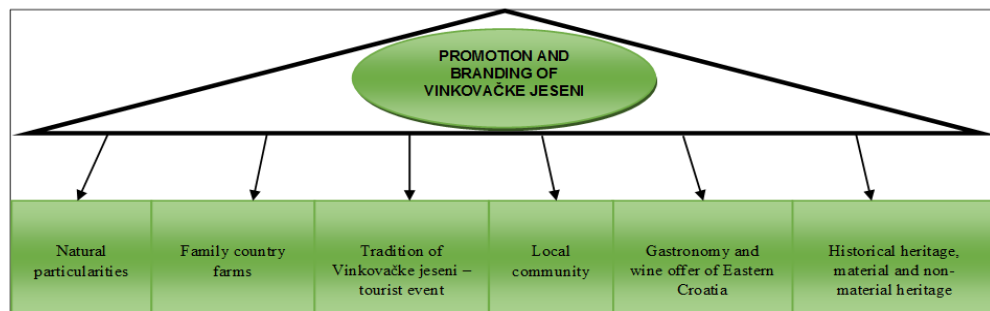
In order to point out and use all the competitive advantages in a particular area, including Eastern Croatia, it is necessary to ensure smooth implementation of all the links in the chain of values. Grey steps indicate parts of the chain of values in which it is possible to achieve continuous and successful communication of a tourist destination with target markets, which is especially important in the formation of tourist events and their promotion since tourist events often represent the highest recognition of a certain destination, and have many positive, but also negative effects on the overall development of the area. The objective of management of the destination and tourist event like Vinkovačke jeseni should be minimisation of negative impacts on the community (loss of authenticity, disturbance of public order and peace, destruction of cultural monuments, intolerance of the local community towards tourists), while at the same time increasing positive effects (increase in economic benefits, increase in the living standard, increase in environmental awareness, etc.). It should be pointed out that the entire process takes place in several stages, and that communication with the markets takes place before, during and after the tourists visit the destination in which the tourist event takes place. It is very important that tourists are provided with complete and timely

information which should be available at all times and at all places (the internet, professional magazines, advertising in the newspapers, radio, TV, through specialised tourism fairs and agencies), which will allow the creation of a positive image of the destination Eastern Croatia. In order to be adequately implemented in the destination Eastern Croatia, the chain of values must be designed in accordance with the desired destination brand that is to be communicated to tourists, which can be achieved through the formation of an umbrella brand.

#### 4.2. The concept of umbrella brand on the model of Vinkovačke jeseni – top tourist event of Eastern Croatia as a tourist destination

Recognisability of a certain region or a country can be achieved by creation of a unique and high-quality tourist offer. In the authors' opinion, this can be achieved by creation of a unique umbrella which forms the basis for overall identity of rural Croatia which is a platform for all other important elements of economic, tourist, social, and demographic identity of rural Croatia which should be interconnected, and new joint force should be used for positioning on the global tourist market. Eastern Croatia must form an integral part of the tourist offer of the Republic of Croatia, i.e. become an integral and recognised part of the „umbrella“. Umbrella brand should stimulate the desire on the target market to visit Eastern Croatia as a highly ranked tourist destination which stimulates the creation of new events based on Vinkovačke jeseni as a recognisable tourist event. Recognition and specificity of Eastern Croatia's tourist products must be clearly defined and recognisable. Creating identity and image of Eastern Croatia is based on determination of comparative advantages, which also achieves high competitive advantage of the destination, and destinations are defined through elements under the umbrella which is designed on the basis of previous analyses presented in the paper (chain of values, S.W.O.T. analysis).

Picture 4 The concept of umbrella brand of Vinkovačke jeseni in the function of realisation of competitiveness of Eastern Croatia



Source: authors' analysis

The following guidelines for the brand development of Eastern Croatia can be derived from the above table, and they are presented in the following table. Elements of the umbrella brand of Eastern Croatia, based on the tourist event *Vinkovačke jeseni*, contain the following important components (see Table 3):



Table 3 Elements of the umbrella brand of Eastern Croatia

Elements of umbrella brand:	Holders/representatives	Preferred associations
Natural particularities	original landscape vistas, thatched roofs, meadows, urban vistas, forests, churches, grain fields...	romance, peace, harmony, connection with nature
Family country farms	accommodation on a family country farm decorated in the traditional architectural style of Eastern Croatia, ecologically grown food, traditional lifestyle	return to childhood, home, warmth, love, sadness, longing, healthy lifestyle, living in harmony with nature
Tradition of Vinkovačke jeseni – tourist event of the highest level	sijela, (evening gatherings in the village),divani (traditional village conversations), musicians, story tellers, Vinkovačke jeseni as a tourist event	return to the past, living in harmony with nature, labour, honesty, openness, cordiality, sincerity...
Local community	dance and folklore groups, craftsmen, farmers,carpenters	return to the past, the patina of the past that can be seen and felt, peace and prosperity, community
Gastronomy and wine offer of Eastern Croatia	representatives of gastronomic and wine offer wine, plum brandy, cheese, kulen and other home-made products (honey, naturally grown vegetables and fruit...)	healthy food, healthy life at every turn, tradition that can be felt – richness of colours, scents and flavours
Historical heritage, material and non-material heritage	manors, castles, architectural heritage, convents and churches...	rich history, cultural heritage, crossroad of cultures of the East and the West

Source: Authors' analysis

The above model is only one of the possible scenarios of its introduction to development of promotional activities of Vinkovačke jeseni as the top „mega“ brand of Eastern Croatia. This model represents only an initial guideline that must be subject to constant changes and new creations, with the objective to meet the needs and desires of modern tourists and the local community, as a basic precondition for successful and permanent development of Eastern Croatia.

### 5. Prospects of future development of the tourist offer of events of Eastern Croatia with special emphasis on Vinkovačke jeseni

Events are very important for diversification of the tourist offer of a destination on the tourist market. However, in order to achieve the desired level of quality, distinctiveness and diversity of the tourist offer and high positioning on the market, it is necessary to achieve their sustainable and focused development in the way that experts from various stakeholder groups in the destination are included in all the levels of planning of the tourist event (depending on the character of the event), with the goal to meet the needs of tourists (in terms of the offer of value and experience for money, etc.), and achieve benefits for organisers and the entire community.

In addition to successful development of events as a part of an integrated tourist product, with strict adherence to sustainable development principle, it is also necessary to undertake adequate marketing activities with the goal to raise awareness of potential tourists by pointing out particularities, advantages, and quality of the tourist offer of Eastern Croatia with the goal to create a new experience and motive for visiting the tourist destination in which the event takes place and allow tourists to participate in the event (actively or passively), which will achieve growth of tourists' satisfaction with the offer, which will surely have a positive effect

on increase in tourist consumption. Despite the fact that Eastern Croatia has many traditional events, they have not been sufficiently profiled and valued in terms of tourism, and this can be achieved through tourist events designed in accordance with market needs. In the authors' opinion, the most recognisable tourist event Vinkovačke jeseni was used to display all the strengths and weaknesses of the tourist offer of Eastern Croatia, with the objective to draw attention to the necessity of their branding and more active presentation on the international tourist market, and creation of a „mega“ brand and regional/hallmark event. Previous developmental, strategic and marketing activities are, despite undoubtedly large current efforts, insufficient, and it is therefore necessary to devise a set of measures and activities which should be implemented and designed in accordance with realistic possibilities of Eastern Croatia. This can be achieved by establishing models based on the presented chain of values, branding through the umbrella branding concept, taking into account the strengths and weaknesses, opportunities and threats to development of tourist events, in accordance with the S.W.O.T. analysis presented in the paper.

In order to improve the current tourist offer of events (with special emphasis on Vinkovačke jeseni), the authors propose the following developmental guidelines:

- Future development of the tourist offer must be conducted with strict adherence to the sustainable development principle in order to preserve the rich resource base as the basis for development of a recognisable offer;
- It is necessary to monitor contemporary trends in tourism and to implement best practice of competitive tourist destinations;
- Implementation of advanced knowledge and skills, basic competitive advantages in the 21<sup>st</sup> century;
- Application of the proposed chain of values of management and promotional activities of tourist events in the destination and the concept of the umbrella brand of Vinkovačke jeseni aiming to contribute to the achievement of competitiveness of the tourist offer of Eastern Croatia;
- Education of the local population about the importance of the event for the development of the tourist offer and the area in which the event takes place;
- Tourism development in general as well as development of tourism events should not be designed in the way that results in negative implications on traditional lifestyle and the quality of life of the local population, which would result in loss of one of the main competitive advantages of Eastern Croatia. The objective of destination management should be to motivate the local community by its activities to create new products and services, and to undertake other business activities which will directly affect the development of the entire Eastern Croatia and contribute to growth of the general level of quality of life.

## **6. Conclusion**

Eastern Croatia is rich in material and non-material heritage and centuries-old tradition and culture based on this heritage, which is a basis for creation of competitive, innovative and unique tourist offer, and there are many perspectives in the development of the entire economy of Eastern Croatia. Additional development of the tourist offer in terms of events can be determined as one of the main factors for achieving the previously mentioned goals. Basic elements of a new tourist offer and brand of Eastern Croatia are created by improving and upgrading the existing events, like Vinkovačke jeseni presented in the paper, or by creating new events. Vinkovačke jeseni, for example, due to their numerous advantages which

are reflected in a long tradition of organising the event, educational effects (preservation of non-material heritage – chants, gatherings, dances, etc.), and economic performance of the event, enabling the realisation of added value of the tourist offer and directly affecting the growth of consumption and satisfaction of tourists, achievement of direct contact and empathy between the local community and visitors, while businessmen are provided with the possibility of direct interaction with the demand. More effective quality management of the entire tourist offer of Eastern Croatia through tourist events is possible by implementation of designed strategy of tourism and of general economic development that is accepted by all the stakeholders in the destination as the foundation for achieving competitiveness, and marketing strategy based thereon, presented in the paper, which will provide greater visibility and effectiveness of tourist events (Vinkovačke jeseni and other) on the international tourist market. This will undoubtedly affect the increase in tourist turnover and revenue from tourism and other complementary activities, increase the level of satisfaction of tourists and the local community through higher employment and stronger competitiveness of tourism and economy of Eastern Croatia.

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**ARCHAEO TOURISM AND N-TIPLE HELIX MODEL FOR  
DEVELOPMENT OF CONTINENTAL TOURISM OF CROATIA: THE  
CASE OF THE PANNONIAN CROATIA REGION**

**ARHEOTURIZAM I MEĐUSEKTORSKA SURADNJA U RAZVOJU  
KONTINENTALNOG TURIZMA HRVATSKE NA PRIMJERU  
PANONSKE HRVATSKE**

**ABSTRACT**

*Croatian tourism has been challenged by global tourism trends and Croatian accession to the EU. Cultural heritage is widely recognized as strength in all Croatian tourism and strategic development documents, however, multisectoral cooperation for its commercialization and development of continental (inland) tourism is still lacking. The question is why numerous features of Croatian tourism have not been used for better positioning Croatia as the cradle of European culture.*

*This paper addresses the need for recognition and acknowledgment of the significant role of archeology in the development of continental tourism. It also points out the need for cooperation between universities, institutions, business and civil society, and knowledge of the cultural and natural environment for the launch of the innovative development of tourist destinations, their commercialization and networking with the compatible regions of Europe.*

*The starting point for this paper was found in the unique archaeological heritage of Pannonian Croatia and in the work of world known archaeologist Sir Arthur Evans in 1871. In order to develop and utilize this tourist potential, it is necessary to evaluate the key factors that influence the creation of innovative tourism product. Therefore, the PEST analysis was made. In addition to analyzing the existing intersectoral collaboration and analysis of Triple/Quadruple/Quintuple Helix dynamics, this paper offers recommendations for introducing commercial aspect of this particular tourism product and easier access to financial resources for its implementation*

*The contribution of this paper is in identifying neglected potential of existing archaeological heritage as advantage for the development of continental tourism, placing the same in the context of crosssectoral cooperation, and pointing towards the need for strengthening cooperation in achieving a common goal.*

**Keywords:** *Cultural tourism, Heritage tourism, Continental tourism, Archaeotourism, Triple/Quadruple/Quintuple Helix, PEST analysis*

## SAŽETAK

Globalni turistički trendovi i ulazak Hrvatske u EU predstavljaju izazov hrvatskom turizmu. Kulturna baština je prepoznata u svim hrvatskim razvojnim turističkim i strateškim dokumentima kao snažan potencijal, no još uvijek izostaje suradnja za njezinu komercijalizaciju u svrhu razvoja kontinentalnog turizma. Postavlja se pitanje zašto brojne značajke hrvatskog turizma nisu iskorištene za kvalitetnije pozicioniranje Hrvatske kao kolijevke europske kulture.

Ovaj rad ukazuje na potrebu prepoznavanja i priznavanja značajne uloge arheologije za razvoj kontinentalnog turizma. Također ukazuje na potrebu suradnje između sveučilišta, institucija, poduzetništva i civilnog sektora, te poznavanja kulturnog i prirodnog okruženja za pokretanje inovativnog razvoja destinacija, njihove komercijalizacije, te umrežavanje Hrvatske sa kompatibilnim regijama Europe.

Polazište za ovaj rad je pronađeno u jedinstvenoj arheološkoj baštini Panonske Hrvatske i radu arheologa Sir Arthura Evansa iz 1871. godine. Kako bi se takav turistički potencijal razvio i iskoristio, potrebno je valorizirati ključne faktore koji utječu na stvaranje inovativnog turističkog proizvoda, pa je u tu svrhu napravljena PEST analiza. Uz analizu postojeće međusektorske suradnje i analizu Triple/Quadruple/Quintuple Helix dinamike, predstavljene su preporuke za komercijalizaciju tog turističkog proizvoda i lakši pristup financijskim sredstvima za njegovu realizaciju.

Doprinos ovog rada je u prepoznavanju neiskorištenih potencijala postojeće arheološke baštine kao aduta za razvoj kontinentalnog turizma, te postavljanje iste u kontekst međusektorske suradnje, ukazujući pri tome na potrebu jačanja te suradnje u ostvarenju zajedničkog cilja.

**Ključne riječi:** *kulturni turizam, kontinentalni turizam, arheoturizam, Triple/Quadruple/Quintuple Helix, PEST analiza*

## 1. Introduction

In 1837, for the first time Stendhal used the English word "tourist" instead of the French word "traveler" in his book *Memoirs of a Tourist*. This is a word indicating that passengers are "on their travels actively involved in life of visited community, discovering the environment, introducing with cultural monuments and traditions of the community" (Richards, 1996). That would fit the description of cultural tourism today, but not completely to the definition of it. Due to the complexity of the term *cultural tourism*, which incorporates the concept of *tourism* and the concept of *culture*, it is difficult to give a simple definition of *cultural tourism* as well as everything that *cultural tourism* is (Richards, 1996). For the purposes of this study, descriptive meaning of the term will suffice: "cultural, heritage tourism is travel enriched with the experience that tourists perceive in visited places and events, which allows them to authentically *graze the stories*, places and events from the past and present and to connect with their environment" (Jelinčić, 2008).

Globalization encouraged the opening of many countries to tourism trends and thus intensified the competitive environment. Many countries have reached for all resources to increase their competitiveness. Heritage and culture are among the most favorite resources due to their uniqueness as an inimitable resource and a viable source of revenue and job

creation. However, the increasing demand resulted with market segmentation on specific niches that have the purpose of adding a competitive advantage and focus on the specific interests of certain types of tourists (eco- tourism, rural and agro tourism, cycling, wine tourism, archeology, etc.) Developing niche is a response to the needs of tourists to differentiate from mass tourism and to express their individuality through specific activities and cultural needs that also overlap with their other interests (Novelli, 2005). Quality tourist offer is a result of the merger of most into one niches into one unique product that may be attractive and highly successful in terms of revenue, with the one niche to stand out on a dominant position with a predisposition to create a recognizable brand, as this could be the case with archeology in Pannonian Croatia.

Cultural tourism in general offers a long-term competitive advantage because the merger of culture and tourism enriches the destination image, increase consumption, the length of stay of guests and their satisfaction. At the local level it stimulates enterprise development, employment and new market segments that contribute to the development of the entire region (Demonja, 2011).

## **2. Tourism in Croatia**

Even the Croatian Tourism Development Strategy until 2010 (Ministry of Tourism, 2003), emphasized that tourism contributes significantly to the economic growth of Croatia and prosperity of its citizens, based on the sustainable use of natural, cultural and historical resources, actively participating in their preservation and development, and creating an environment attractive to investors. The same position about the need to accelerate the growth of continental tourism destination is taken in the recent Tourism Development Strategy until 2020. Furthermore, it advocates the need for development of specialized receptive tourism agencies to encourage the development of continental tourism (Ministry of Tourism, 2013).

According to the Institute of Tourism (Croatian Tourism in Figures, Institute of Tourism 1/2012), in 2012 in Croatia were around 62.7 million over night stays, out of which continental Croatia accounts for only 1.9% or 1193000 nights, while the number of Pannonian Croatia was 713000, which amounts to only 1.14%. It is a very small proportion Pannonian Croatia contributes to a total tourist traffic, though has a large number of cultural monuments, rich in archaeological treasure and all predispositions for development of heritage tourism, which can be the engine of development in the region.

In a study on the impact of various elements of offer on the choice of destinations (Croatian Tourism in Figures 1/12), it was noted that culture and heritage are represented by 34.6% (according to TOMAS methodology 14 parameters of offer are observed, and the study took into account only the answers of respondents who indicated that the impact of this element for them is large or very large), which is a good indicator for off-season cultural tourism, which could be the driving force for the development of continental tourism. In this context, archaeological heritage of Pannonian Croatia could have a significant place.

In the summer of 2010, TOMAS research showed that tourists who visited Croatia and were most interested in the culture, aged 50 years and over (43%). These were mainly persons looking for quieter vacations, appropriate to their age. Given that one third of tourists (32%) were inspired by their former visits to revisit Croatia, and nearly a third of tourists were inspired by the word of mouth by friends and family (28 %), it can be concluded that the new facilities in the continental part of the country could significantly contribute to the growth of

tourism. These guests could be a generator that will continue to transmit their experience to the relatives and friends which would represent a positive force for branding continental Croatia as tourist destination (TOMAS, 2010). The increasing use of the Internet as a tool for selection of destinations (27%) indicates the direction in which the promotion of archaeotourism as a brand and of the Pannonian Croatia as tourist destination should go. Furthermore, prospects of development of inland tourism increased significantly by passing road connecting corridor Vc from the Baltic to the Adriatic (Benderly, Coric & Podgorčić, 2006).

## **2.1. Archeology of Pannonian Croatia**

Archaeologists argue that almost everything through the prehistory and history of Europe happened on its territory and the material traces remained in the area. When the various people began to move from the Anatolian plateau, Scandinavia or even Korea, their movement is stopped at the edge of the hills and mountains of Bosnia, Lika and Banovina. Carthaginian military commander Hannibal was never in the Balkans, but in his attempt to conquer Rome he bought the iron from the upper stream Une, which was evidenced by large hoard of his money. The ancient Greeks, the Romans, the Franks, and in the recent past the Austrians and the Turks, the ultimate reach was river Danube, while for those from the far East Asia (Huns, Avars, Hungarians, Tatars and others) it was river Sava, while their ultimate destination was the western Una. All of these are stories that archeology has discovered and proved, the history recounted, but still have not been used for the development of inland tourism. Exciting to think about bringing more than a million tourists a year, mostly Europeans, to the Pannonian Croatia, to witness beginnings of Western civilization (Durman 2006a, 2006b, 2007).

Vinkovci, the city in the Pannonian Croatia with the oldest record of continuous living in Europe, is in the 9th millennium of its existence. The concept of continuous inhabitation at certain space implies the summation of archaeological findings with intervals not longer than 100 years. However, these intervals in Vinkovci excavation area amounted less than 50 years. In addition, the oldest European calendar was found there, which is in the same time the oldest Indo-European calendar. Therefore, Vinkovci sets very high in the world in archaeological contexts. In Vinkovci there is an evidence of the first serial production of metal objects, the first produced bronze was found, so as the one of the largest hoard of Roman silver and gilt bowl. In addition, it has been proven more than 8,000 years of continuous ceramic production, and the most complex of the early Christian church in the continental Croatia was discovered as well (Kish, 2012) and it is only a fraction of what Pannonian Croatia possesses. In the nearby archaeological park in Sopot there is the reconstructed part of the settlement, old over seven millennia. Since prehistoric times, there are Sarvas (with seven meters layers) and Bapska (dating between 6000 and 3500th BC). It is important to point out other important sites including Vucedol with its plateaus, the remains of the fortifications, Megaron and museum at 1500 m<sup>2</sup>, which will soon be opened.

Thus, there is a foundation to build great cultural destination and brand of the region in both European and global context. This is supported by the world-renowned archaeologist Sir Arthur Evans in his travelogue of 1871 "Walk through Bosnia and Herzegovina during the uprising of August and September 1875", where the values mentioned in this space in terms of cultural and heritage speaking of Sisak as "one of the most powerful cities in the world."

### **3. Methodology**

Creation of a new destination, the Pannonian Croatia, and branding the same archaeotourism requires research of all relevant factors of its development and environmental impacts. By scanning the environment one can observe trends and events, compare and create relationships between the mandthus bring strategy (Beech et al, 2006). In preparing this paper field visits were used, so as study of secondary resources, PESTEL analysis, and Triple/Quadruple Helix Model.

The bestway to scan and analyze the environment is to apply PESTEL analysis. It provides an overview of the impact of external factors on the project: political, economic, social, technological, legal, naturaland ecological (Ten Have et al, 2003). This analysis is used in strategic planning because it provides a very useful macro-framework which establishes the pressures from the external environment, and how to observe them as opportunities and/or threats.

#### **3.1. Political factors**

Political and legal environment has a major impact on businesses in the tourism industry and in creation of conditions for achieving the goal: Pannonian Croatia becoming a new unique destination. The Strategic Plan of the Ministry of Tourism for the period 2012-2014 sets the development criteria that will take special attention to the creation of new tourism/catering facilities, native Croatian tourism products that are based on the inclusion of the total natural, historical, cultural and architectural heritage, particularly in creating a different and attractive tourist new products, development of special forms of tourism (rural, cultural, health, eno-gastronomic tourism, ecotourism, fishing, hunting, adventure, religious, youth, etc.) which will all contribute to the increase of continental tourism-

The Republic of Croatia is divided into three NUTS statistical regions: (1) Northwest, (2) Central Adriatic, and (3) Eastern (Pannonian) Croatia. Pannonian Croatia covers eight counties. Law on the Croatian Regional Development (2009) determined the basis for strengthening the competitiveness of the region through regional development agencies, who are also planning activities in strengthening the development of tourism. Accordingly, the development of continental tourism was an important strategy for Regional Development 2011-2013, national and regional Tourism Development Strategy and the Strategy of Cultural Development and Cultural Tourism Development Strategy to 2010: From tourism and culture to culture of tourism (2003) as part of the development strategy of Croatia in the 21st century (Demonja, 2011). All these strategies outlined the richness of Croatian culture and historical heritage.

At the state and local level, much has been done for the development of cultural tourism, but it is still too low in relation to cultural heritage resources that are available in Croatia, especially on archaeological resources in the Pannonian Croatia. To activate these resources for tourism due to the size and capabilities arcaeotourism, it is necessary to unite all stakeholders and good inter-sectoral collaboration, education and coordination of stakeholders, including the Pannonian Croatia, the Ministry of Culture, Ministry of Tourism, tourist offices and a network of regional development agencies aimed at the implementation of the strategy for development of the region. It forms an institutional framework for connecting a series of activities in order to realize common goals and assists in the utilization of EU funds.



### 3.2. Economic factors

Pannonian region faces many economic problems: an underdeveloped infrastructure, high unemployment rate, underdeveloped entrepreneurship, high level of gray economy and a high proportion of the population living in poverty, low levels of local governments' revenues, dependence on state aid as well as the insufficient capacity of regional and local governments to plan and implement activities. Pannonian Croatia has a share of 20.6% in the Croatian gross domestic product (GDP), in 2005 there were only 69.1% of the national average, which represents 34.5% of the EU average. It is the region with the least developed road infrastructure, underdeveloped rail structure and underdeveloped inland navigation (Regional Development Strategy of the Republic of Croatia 2011-2013, from 2010).

Pannonian Croatia falls under the so called "assisted areas", entitled to be assisted in the exploitation and use of their development potential. Pannonian region is on average the least competitive and requires the most investment to catch up with the competitive level and socio-economic development of other regions. In particular, it lags in the development of entrepreneurship, business infrastructure and investment promotion (Regional development strategy, 2013). The development index of the first eight counties representing Pannonian region was the lowest in Croatia, because they belong to the group of one of the regional government, whose development index value is less than 75% of Croatia's (Saracevic, Štavlić, Kukec & Capanec, 2013).

At the same time the Regional Development Strategy of the Republic of Croatia clearly expressed the specifics of each region and its capital, which differentiates it from others and as a trump card in its development and attracting investment. It is curious that the development strategies of tourism, despite the commitment to cultural tourism, did not prioritize the exploiting the huge archaeological treasures of Pannonian Croatia despite already published and publicly known specificities and the uniqueness of this area in the form of archaeological sites.

Of the 140 countries Croatia is on 35 place according to the Index of tourism competitiveness (WEF, 2013), which measures the performance of individual countries, and is divided into three categories (legislative regulations, a favorable environment for business development and quality of human resources and a wealth of cultural and national resources) and consists of 14 columns. In the 12th column, which refers to the propensity to travel and tourism, Croatia is ranked high 29th due to its protected areas, world heritage sites and natural beauty. Cultural tourism activities and related archaeological tourism certainly represents the future of Croatian continental tourism.

Pannonian Croatia with its existing tourist infrastructure and a capacity of 12,649 beds (on August 31, 2011, as per Tourism in Figures, 2011), could not immediately accommodate a sudden increase in tourist visits. Therefore, for the full exploitation of archeology to develop inland tourism in Pannonia should join forces with other stakeholders and create a foundation for the maximum utilization of this wealth. Joining the European Union is one of the factors that positively influences the growth of archaeotourism, since more than 35% of the EU budget invests in developing regions, in order to increase the competitiveness of the region and living conditions (Tropina Godec, 2009).

### 3.3. Social and cultural factors

Croatia is a country with diverse natural, cultural, social and territorial characteristics, which can offer tourists the values of the culture, tradition, gastronomy, agro-tourism, to all sorts of niche forms of tourism. Tourists generate demand by the exceptional offer and thanks to the development of tourism and developing the local economy. But it is questionable how much the locals are ready for tourism development in their area because this development will inevitably change the image of the end as we know it, as well as the effect of altering their lifestyle (Benderly, Coric & Podgorčić, 2006).

However, comparison of regions according to their competitiveness (Strategy for Regional Development, 2011-2013), Pannonian Croatia lags in all parameters for other regions. The worst are rated business infrastructure, entrepreneurial development, demography, health and culture. The region is in the first place by depopulation, has the lowest employment rate and the highest unemployment rate in Croatia. Number of enterprises per 1000 population is 8.5% (Rural Development Strategy, 2011). It is also important to note that the English language as a mandatory minimum for inclusion in tourist flows in the Pannonian Croatia is at the lowest level in Croatia. In fact, on average, when taking into account all the counties that are part of the region, 60.6 % of the population does not speak English as a major obstacle to tourism development (UNDP, 2007). In addition, the Pannonian Croatia is worn with cultural conflicts and rivalries between cities. Vinkovci and Vukovar, for example, instead of exploiting their own competitive advantages and networking to develop, rather choose a kind of isolation and separation.

Tourism can mobilize and assist farms that their activity may, in addition to agriculture, tourism based on whether it is about providing accommodation or food sales. In the Pannonian Croatia, these trends are still in their infancy and it is necessary to provide new accommodation facilities and supporting facilities as a great opportunity for rural areas. Unfortunately, so far has not used the potential of archeology to develop its tourism. It also failed to include academic sector as partner, which would in this sense be of great benefit.

Networking in international organizations with similar interests, such as the Danube Competence Center (DCC) still expands the possibilities of development in the Pannonian Croatian tourism. The exploitation of the existing potential of tourism on the Danube, which combines all Danube countries in a unique tourist brand is a great opportunity for archaeotourism. DCC operates proactively and is working on organizing a workshop to be held to discuss the creation of archaeological tourism product which would include Vucedol, Vinkovci, Vince and Lepenski Vir. In this sense, the DCC has already had discussions with the Ministry of Tourism of Croatia and Serbia and some other museums in the region (Čamernik, 2013).

Besides DCC and there are other organizations that are stakeholders in the development of quality archaeotourism, in which Croatia has already been included. One of these is The Danube Tourist Commission (DTC), which promotes the Danube tourism through the preparation of films, publications, guides and agencies that serve the guests on "cruising" trips, excursions and cultural events along the Danube. DTC is working with relevant EU bodies and regional and national organizations dealing with the Danube. DTC is a member of the UNESCO team based in Vienna. The other association is Working Community of the Danube region, a platform for developing archaeotourism of Pannonian Croatia.

Croatia is since 2012 involved in the projects Route of Roman Emperors, and the Danube Wine route. Vinkovci (Roman Cibalae) gave two Roman emperors Valentinian I and Valens . It was the son Gratian Valentinian I. 379, one of his imperial title Pontifex Maximus gave Pope Damasus I, that the pope still carries (Durman, 2006a, 2006b).

Croatia brings great archaeological treasures of ancestors to the European Union, which proved that there were grounds to be recognized as the cradle of European culture. Using these facts and the launch of key stakeholders in Triple/Quadruple Helix model can put it at the service of tourism.

### **3.4. Technology factors**

Since information technology is the key to planning , marketing, sales and implementation of the tourism sector and these are positive steps towards a stronger continental tourism, the Pannonian Croatia has lots of portals and web sites that can be used for branding archaeotourism. The problem is that some of these sites is not translated to either a foreign language or has just been translated into English. Creating quality portal itself archaeotourism with locations in Pannonian Croatia would be very important for the whole project.

Protection of intellectual property that is accompanied by the State Intellectual Property Office showed that the Pannonian Croatia in the period from 1997th to 2008 had at least filed patents , the lowest number of registered designs and acknowledged trademarks. Also, measured indicators of innovation capabilities of the region are lower in relation to the other two regions in Croatia. Number of enterprises in the business sector who are engaged in research and development is the lowest compared to the other two regions. Pannonian Croatia has the least favorable educational structure in Croatia with 12.8% of the highly educated, 7.4 % of people with high , 46.1 % with medium and 33.59% of those with lower education, and poor investment in research and development of new technologies. Thus Pannonian Croatia becomes a region with the most unfavorable educational structure of employees in relation to the Croatian average.

It is the region with the least developed road infrastructure measured density of the road network and is located at 88% of the Croatian average. The unfavorable situation with the railway network that does not use its regional transport potential ( Strategy for Regional Development , 2011).Osijek Airport is another significant infrastructure is a major priority in the region , but so far has not been sufficiently exploited.

However Pannonian Croatia has the most developed infrastructure in the form of free and commercial zones, business centers, business incubators, technology parks and institutions for technology transfer which can be of great help in the development of continental tourism region (Strategy for Regional Development, 2011) and the establishment of the Triple/Quadruple Helix model of cooperation.

The total number of Internet users in the whole of Croatia as well as in the Pannonian Croatia shows a tendency to increase, but the Pannonian Croatia from extremely rural areas must in this area has a lot of progress. In Croatia, the population under 24 years of age used the Internet in a high percentage of 96%, while the population between 25 and 34 years of age 87% , while in the elderly population aged 45-54 years, the percentage falls to 70 % (GfK, 2011).

As a positive side to be mentioned very good coverage of the territory of higher education institutions . Pannonian Croatia has one university (J. J. Strossmayer in Osijek ) with 16 faculties , four colleges, high schools, etc. ( [www.azvo.hr](http://www.azvo.hr)).

#### **4. Analysis of results**

The environment which is responsible for the development of archaeotourism and continental tourism in the Pannonian Croatia was analyzed by PEST analysis, which processed four parts: the political, economic, socio-cultural, and technological environment. For each of these units the influence of the main factors was evaluated: (a) positive, where the factor acts as an opportunity that enhances the possibilities for realization of the project, or (b) negative factor, when acting as a threat. Assessed importance of factors can scale from 1 to 5 (where 1 is the least important and 5 the highest) and the intensity of their impact on project scores from 1 to 10, where 10 represents the greatest impact. Finally, the weight given opportunities or threats for the project.

The conclusion is that for the realization of archaeotourism in Pannonian Croatia there is still a lot of threats that should be removed since they have a very big impact on the realization of the project. In the first place with the highest threat is the socio-cultural environment, which is represented by the general low competitiveness (unemployment, entrepreneurship, depopulation, etc.), rivalries rather than cooperation, narrow specialization based on agriculture, lack of awareness of the archaeological values in the region by locals and beyond, and very weak inter-sectoral cooperation and coordination. Overall assessment of the five environmental factors is +300, and the achieved score of +55 indicates that the overall effects of the environment is quite low and is only 18.34%. Since the socio-cultural factor proved to be the most vulnerable, clearly demonstrated the need for tight coordination, networking and collaboration of all stakeholders.

##### **4.1. Triple (Quadruple) Helix model**

Triple helix (TH) is a spiral process of innovative model characterized with multilateral relationships among the academic, business and public sector. They interact as equal institutional spheres and work towards process of capitalization of know how to increase in global competitiveness of a country or region (H. Etzkowitz, 2002). In order to complete TH model, the fourth actor should be added to form Quadruple Helix (QH) structure. The theory considers that the QH innovation model of cooperation lacks the civil sector which has mostly local character (Ahonen et al, 2010).

The idea of T/QH is associated with the term "knowledge-based economy". Croatian region, due to the inheritance from the past (centralization, lack of coordination activities and projects) does not achieve neither optimal speed and development, nor usage of innovative capacity of the region.

Good base for connection of these sectors are activities of Bearing Consulting in Croatia (introduction of commercialized archeology project in Solin) with the purpose of prosperity of the region. Bearing consulting idea is based on the idea of "place excellence", based on clear brand development which includes local knowledge, clusters, innovations. Through integrated projects based on archaeology and branding of cultural inheritance, the region can establish the strong foundations of sustainable economic development and eco-friendly tourism ([www.bearing-consulting.com](http://www.bearing-consulting.com)).

## 5. Conclusion

Trends in both international tourism, as well as national, indicate continued growth of this sector and position it as a very important economic activity of the country or region. Further growth of cultural tourism in Croatia and specific niches in this field are to be expected. Moreover, the document "Development Strategy for Tourism by 2020" specifically anticipates further growth of creative tourism that enables active participation of tourists in the local culture, which in turn provides an opportunity for positioning archeology as a brand in the Pannonian region.

Although Croatia has significantly developed continental tourism, in its practical implementation there are a lot of obstacles. For example, there are a lot of strategies that are aimed at the development of both continental Croatia and Pannonian Croatia as regions, much of which still have not been implemented in practice. Strategy for the development of cultural tourism, which has been made in 2003, launched some processes, but the general impression is that everything is developing far too slow for the speed of changes in economic and other sectors which take place in real time. The existence of "too many" strategies and laws regulating the tourism activity can lead to contradictions, especially because the existing legal framework is quite inappropriate, uncoordinated and incomplete (Development Strategy for Tourism to 2020), as an aggravating circumstance for investing in the tourism sector (in general), and particularly in cultural tourism.

It is also an aggravating circumstance and under-use of strategic plans for tourism as an expert bottom line for the preparation of spatial plans, which significantly influence the investments. Furthermore, the absence of good, cross-sectoral collaboration is the most important negative factor for the development of archaeotourism for branding continental Croatia as new destination. This proves the fact that nationally there is a need for an interdepartmental body with a clear mission of conducting tourism strategy and the adoption and implementation of operational measures. In addition, the inefficient destination management model overtly includes a large number of subjects, but without clear rights and responsibilities, there is a need to find new models of cooperation. The *Strategy for development of tourism by 2020* states that "there are not created enough reasons (products and services) for the travel and stay of tourists in Croatia off-season" and states that "part of the reason is the lack of entrepreneurial interest and part of the development and business barriers, so as insufficient active public sector". Therefore, in conditions of low competitiveness of the business operating environment and the lack of regulatory functions between the national, regional and local levels, the contribution of tourism to economic and social development of the country is lower than objectively possible.

This emphasizes the need for Triple/Quadruple Helix cooperation of all stakeholders in the sector to the same goal: the creation and strengthening of continental tourism of Pannonian Croatia, where archeology is of great importance and commercial value. Such cooperation has so far been fragmented, but there is a formula for success that is applied to successful models such as the Croatian competitiveness clusters and "place excellence" model that has been applied and financed from the EU funds for the development of the archaeological park of Salona to develop cultural tourism in the region of the T/QH model.

There are many examples in the world where tourism has been developed on the basis of "historicizing" sites and stories for the purpose of tourist attractions (Richards, 2001), while Croatia has proven that Pannonian Croatia does not have to "reinvent" the history as it has a

real, strong archaeological resources that have both European and global character. These resources have an important role in positioning Croatia not as „small country that has finally joined the big ones“, but as the cradle of that large European civilization.

To activate key resources for tourism purposes, it is necessary to unite all stakeholders and good inter-sectoral collaboration, education and coordination with regard to the size and capabilities of archaeotourism for development of continental tourism. Thanks to the generosity of EU structural and cohesion funds, money should not be a problem, so it should be the own forces in the development of continental tourism where archaeotourism can be an engine for development, which urgently needs a strong central position that could unite all existing and future local tourism projects.

In addition to the fact that the Internet is increasingly used as a tool to select the destination, it is clear that the promotion of archaeotourism as a brand and as the Pannonian Croatian destinations should increase the use of online advertising and the use of social networks. Also, a key factor in the success of this promotion and advocacy of continental tourism development in the Pannonian Croatia, is the mobilization of as large number of stakeholders as possible in creating the destination and brand "archaeotourism of Pannonian Croatia", which indicates the need for introduction of cross sectoral collaboration through the Triple and Quadruple Helix model, which could be a driving force behind this project on regional, national, and global level.

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## **PERSPECTIVE OF HEALTH TOURISM DEVELOPMENT OF RURAL CROATIA**

### **PERSPEKTIVA RAZVOJA ZDRAVSTVENOG TURIZMA RURALNE HRVATSKE**

#### **ABSTRACT**

*The current economic crisis still puts a significant impact on the world and Croatian tourism trends, therefore producing the necessity for creating a better and higher quality tourist product. This would enable repositioning of Croatian tourist offer on the tourist market. Health tourism of rural Croatia represents an essential element in the creation of integral rural Croatian tourist product, out of which numerous benefits will be achieved (economic and socio-demographic development of rural areas, overcoming the seasonal character of the tourism offer, meeting the needs of tourists of various profiles and age groups, creating new jobs for domicile population, achieving value for money and experience for money, increasing tourist turnover, etc.) in relation to the competitive tourist destination, and it must be given considerable attention. Despite the rich resource basis, the tourist offer is not developed according to its real potential. The previously mentioned facts point to the necessity of creating strategic guidelines for future development, and undertaking appropriate marketing activities with a goal of achieving competitive advantages. The purpose of the paper is to emphasize the importance of creating a more attractive offer of health tourism of rural Croatia with a goal of strengthening the overall competitiveness of the Croatian tourist product. The objective of the paper is to analyze the current state of health tourism of rural Croatia, and offer a proposal of strategic guidelines with a goal of further development and achievement of competitive advantages in relation to the leading tourist destinations of health tourism.*

**Keywords:** *health tourism of rural Croatia, strategic guidelines, marketing activities, competitive advantages, tourist product*

## SAŽETAK

*Još prisutna ekonomska kriza ostavila je značajan utjecaj na svjetske i hrvatske turističke tokove, što je rezultiralo potrebom stvaranja boljeg i kvalitetnijeg turističkog proizvoda koji će omogućiti repozicioniranje hrvatske turističke ponude na turističkom tržištu. Zdravstveni turizam ruralne Hrvatske predstavlja esencijalan element stvaranja hrvatskog integralnog turističkog proizvoda, s kojim će se ostvariti brojne koristi (ekonomski i socio-demografski razvoj ruralnih područja, prevladavanje sezonalnog karaktera turističke ponude, zadovoljenje potreba turista raznih profila i dobnih skupina, stvaranje novog zapošljavanja domaćeg stanovništva, ostvarenje vrijednosti za novac i iskustva za novac, povećanje turističkog prometa, itd) u odnosu na konkurentne turističke destinacije, stoga mu se mora posvetiti značajna pozornost. Usprkos bogatoj resursnoj osnovi, turistička ponuda nije razvijena u odnosu na svoje realne mogućnosti. Prethodno navedene činjenice ukazuju na nužnost stvaranja strategijskih smjernica za budući razvoj, i poduzimanje prikladnih marketinških aktivnosti s ciljem ostvarenja konkurentskih prednosti. Svrha rada je naglasiti važnost stvaranja atraktivnije ponude zdravstvenog turizma ruralne Hrvatske s ciljem ojačanja cjelokupne konkurentnosti hrvatskog turističkog proizvoda, dok je cilj rada analizirati trenutno stanje zdravstvenog turizma ruralne Hrvatske i ponuditi prijedlog strategijskih smjernica s ciljem daljnjeg razvoja i ostvarenja konkurentskih prednosti u odnosu na vodeće destinacije zdravstvenog turizma.*

**Ključne riječi:** *zdravstveni turizam ruralne Hrvatske, strategijske smjernice, marketinške aktivnosti, konkurentske prednosti, turistički proizvod*

### 1. Introduction

Economic crisis has left numerous negative impacts on the tourist trends at the European and World level. According to Alkier Radnić, reduction of the share of personal consumption allocated for tourist travels affected changes in tourist demand, such as reduction of the number of tourist travels, increase in shorter trips in the duration from 1-4 days, increase in demand for cheaper accommodation facilities, reduced consumption of tourists in the destination, etc. (authors' adaptation according to Alkier Radnić, 2010, p.4). In order to remove negative consequences, it is necessary to enable availability of a tourist product to various groups of potential tourists (of various interests and paying capabilities). Tourist destinations are encountering the constant need of creating a high quality and unique tourist product (quality improvement of accommodation capacities and additional elements of offer), and creation of adequate strategic and marketing plans for competitive and successful tourist market approach, with the goal of stimulating tourist's interests, determined as target market niches, in order to stimulate them to allocate their available funds and visit a certain tourist destination. Development of selective forms of tourism within a tourist offer represents a key component for achieving competitive advantages, considering that their offer is adjusted to a particular target segment of users-tourists. Among selective forms of tourism is also health tourism which represents one of the fastest growing segments of tourist offer, which represents an important factor of improvement of a Croatian tourist product. In the paper, the importance of health tourism in achieving competitive position on the tourist market will be pointed out, as well as the perspective of its development in rural areas of Croatia.

## **2. Health Tourism of Rural Croatia-its importance and presentation of current situation**

The term "health tourism" covers all types of tourist travels which relate to health. There are two driving forces for visitors of this sector. The first is to recover and recuperate – that is to say, to improve its own health from its present state. For this term, we also use the term "medicinal tourism". The second is to preserve or maintain health, which embraces prophylaxis – and which we also refer to as "wellness tourism". Health tourism is not only one of the most visibly and rapidly developing sub-branches of domestic and world tourism, it is currently one of the world's most innovative business sectors. Within the tourism sector, the development of health tourism can significantly enhance the number of guest arrivals and overnights as well as the actual tourist consumption. Major reasons for this include the fact that demand shows much lower seasonal fluctuation than is evident in general tourism and also fact that tourism for most health-related purposes requires more time to be spent at the destination. Consequently, the development of health tourism could contribute significantly in countering the normal imbalances in domestic tourism shown in terms of season, time as well as generating revenue over a broader range of locally provided, on-site services (authors' adaptation according to Bakucz, Klesch i Lamperth, 2010, p.2). Previously mentioned facts point to numerous advantages of development of this selective form of tourism for offer improvement of tourist destination. Croatia records a moderate, but still insufficient development of quality and variety of its tourist offer, despite of its high potential and resources that it has at its disposal, and in relation to the leading tourist destinations. Up until now, the development of tourist offer was mostly concentrated on coastal destinations and the 3S concept (Sun-Sea-Sand), while the rural areas were unfairly neglected. They are rich in natural (beautiful landscape, clean air, clean waters, the climate, healing minerals springs, mud, etc.) and other resources necessary for a development of a high quality tourist offer of health tourism. Health tourism represents an important factor of achieving competitive advantages of (rural) Croatia on the tourist market. It's offer combines sports and recreation, wellness, healthy nutrition, medical and other services provided under a strict supervision of top quality experts such as doctors, nutritionists, instructors, etc., which through lifelong learning continuously expand their knowledge and improve their skills, and by that are in the possibility to satisfy the needs of tourists of all profiles and age groups which are in search of active/passive vacation, relaxation, recuperation of stress or illness damaged health, etc. Successful development of this form of tourism offer will enable numerous advantages for (rural) Croatia (increasing tourist turnover, foreign exchange earnings, opening new work places, increasing quality and recognizability of the total tourist product, achieving competitive advantages on the tourist market, branding the tourist offer, etc.). Unfortunately, in spite of its great potential, the offer of health tourism of Croatia is significantly lagging in comparison with the offer of the neighboring competitive countries which have a richly developed high quality offer of the same, and by that could serve as a benchmark for Croatia. Continuous monitoring of development of tourist trends in health tourism is of great importance for improvement of tourist product of Croatia, considering that everyday tourists are becoming more demanding, and are asking specific services and individual approach, which is of great importance for segregation of a tourist destination on a tourist market, and achieving leading position.

This is supported by the research of Global Market Development Centre (GMDC) which was conducted in the USA in 2009 on the sample of 2176 users. The research defined three target groups (segments) of tourists of health tourism, and who undertook one of the most extensive researches of consumer behavior market regarding health and wellness, and according to received results determined profiles of tourists-users of services of health

tourism. According to that research, there are three segments of wellness consumers: Periphery, The middle, and the Core (see table 1).

Table 1 Segmentation of health and wellness tourism consumers

Periphery (25% or 77 million consumers)	Middle (62% or 190 million users)	Core (13% or 40 million consumers)
<input type="checkbox"/> Consumers "beginners" <input type="checkbox"/> They have an aspiration for stronger inclusion in health and wellness, but are still not behaving that way <input type="checkbox"/> They are mostly reactive, but not proactive consumers	<input type="checkbox"/> Moderately included in healthy life and wellness <input type="checkbox"/> They are trying to follow the trends set by the Core <input type="checkbox"/> They spend significant sums on conventional, but also on unconventional products related to health and wellness <input type="checkbox"/> The price and convenience are somewhat giving them limitations, but at the same time are led by knowledge and experience	<input type="checkbox"/> Most involved in healthy life and wellness <input type="checkbox"/> Trendsetters, role models to others <input type="checkbox"/> Health and wellness represent their central point of their life <input type="checkbox"/> They are led by sustainability, authenticity and local sources

Source: GMDC and the Hartman Group. *Consumer Shopping Habits for Wellness and Environmentally Conscious Lifestyles Study: Insights for Health, Beauty and Wellness*, authors' adaptation according to <http://www.pacific.edu/Documents/school-pharmacy/acrobat/Consumer%20Shopping%20Habits%20for%20Wellness%20-%20Presentation.pdf> (19.02.2014.).

It is evident from the previous table that the target segment of users of services of health tourism can be monitored considering their habits and service price-ranges. According to previously mentioned study, consumers can be differentiated on "Periphery" who just started using the services of wellness and are mostly recreationists. The next group is characterized as the "Middle". This group contains the users who are actively included in using the services of wellness, but they give equal importance to use of conventional and non-conventional methods of preservation and improvement of quality of health. The price of services has a significant role for mentioned users. As the most important segment of users of wellness services, so called users from the segment "the Core" can be determined, which represent the target market niche, based on those needs and experiences of marketing and tourist destination experts (destination management) who create their product. It is about the users of higher/high purchasing power, for who wellness and healthy life represent the life's backbone. Istarske, Daruvarske, Bizovačke, Varaždinske, Tuheljske, Krapinske, Topusko and Sveti Martin on Mura Spa are spas which by providing their services, make the tourist offer of health tourism of rural Croatia. Despite of positive movements regarding improvement of quality of spas tourist offer, it has been noticed that its level is uneven. The offer is still mostly based on classical services of sports recreation, wellness, medical services, etc., while innovative and creative models of tourist offer are missing. Unfortunately, when the total spas' offer is monitored, and when comparing it with the competitive destinations of health tourism, in most of Croatian spas there were no significant movements on the existing quality of services which would enable, in terms of quality and diversity, for Croatia to become the leading destination in the Mediterranean. Competitive destinations offer a whole range of services of equable and high quality for the whole family, all year round, in a high quality

accommodation units and fun attractions for all age (pools, children's playrooms, sports activities, one-day trips, etc.), which enables them a high level of occupancy all year round, high utilization of services (by domicile population as well), and by all that, overcoming the seasonality of the offer, while the spas in Croatia (in relation to the competition) in a significant measure offer accommodation services on a lower level, with insufficiently developed system of providing additional services which enables achieving extra service consumption and achieving higher profit. One of the problems is also that certain objects are more oriented in providing medical services, while providing whole services of health tourism is given less attention. According to Alkier Radnić et al., modern visitors of world's and Croatian tourist destinations are constantly searching for experiences which will provide them a sense of connection with nature, tradition and peaceful way of life, and complete inclusion in the life of the local community, in order to fully learn about its tradition and all the particularities offered by a certain tourist destination (Alkier Radnić, Milojica, Drpić, 2012, p. 8). Contemporary tourists are more and more ecologically aware, and aim towards preservation and quality of health improvement, and their interest in staying in tourist destinations of health tourism, in accommodation capacities which base their business on respecting the postulates of sustainability (high standards of eco business) is greater and greater. Previously mentioned is confirmed by the data of the research Europeans and Tourism from 2009, where 35% of respondents from the EU member countries answered that they prefer staying in eco-tourist destinations (authors' interpretation according to [http://ec.europa.eu/public\\_opinion/flash/fl\\_281\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_281_en.pdf), p.27). Rural Croatia and the offer of health tourism based on sustainability and ecological standards of business can for certain achieve previously mentioned tourist's motives. In order to achieve a stronger competitive position of health tourism, it is necessary to establish a joint "Green Rural Health resort" of Croatia by applying postulates of sustainable development (preserving resource basis, using of renewable energy sources, and successful waste management) whose members will coordinate their standards of ecology and quality among themselves, by which they will align and advance the quality of services, which will standardize and improve the quality of services, taking into account reduction of lacks of the existing offer with strengthening all the advantages of the offer of sustainable health tourism of rural Croatia at the same time. When speaking about positive experiences, in the example of Slovenia, Rogaška Slatina spa can be singled out as a good example, which in their programs include the surroundings as well, and besides providing services of health tourism, enable for tourist the experience of a destination in total, and various segments of tourist offer (connection of health, rural, summer and wine tourism). The importance of health tourism was recognized in Slovenia already after its independence, in 1995 to be exact, when the promotional brand was shaped in a form of a bouquet of flowers, it consisted a special green flower which symbolized the cluster of health resorts and health tourism. In order to enable successful managing the development of services, it is necessary to monitor the achieved tourist turnover (achieved arrivals, overnights, and if possible, tourist consumption), considering that an insight can be received, in how much health tourism contributes economically to the total tourist turnover of Croatia. The following table presents the number of tourist overnights achieved in Spas of rural Croatia in the period of 2005-2013.

Table 2 Achieved overnights in spas of rural Croatia in period 2005-2013.

Spas	2005.	2006.	2007.	2008.	2009.	2010.	2011.	2012.	2013.
Istarske*	68.083	69.318	72.283	67.841	58.206	54.112	...	...	...
Daruvarske	14.103	16.439	16.558	18.434	15.677	9.790	13.520	12.870	13.738
Bizovačke	37.579	30.887	31.442	32.095	27.360	23.980	25.356	20.122	14.172
Varaždinske	56.521	61.566	55.593	51.634	45.273	38.195	44.197	34.080	23.652
Tuheljske	30.998	44.917	54.069	58.111	56.299	55.476	45.424	50.270	65.597
Krapinske	25.955	29.422	38.869	44.322	36.902	30.783	35.994	37.451	36.903
Topusko	42.262	40.413	49.574	49.939	48.729	49.220	47.946	40.779	35.830
St. Martin on Mura	8.211	28.330	37.104	37.446	34.815	50.107	49.149	64.142	66.001
<b>Total</b>	<b>283.712</b>	<b>321.292</b>	<b>355.492</b>	<b>359.822</b>	<b>323.261</b>	<b>311.663</b>	<b>261.586</b>	<b>218.935</b>	<b>153.393</b>

Source: Authors' analysis according to the data received by e-mail from the spas of rural Croatia

\*The authors of the paper contacted Istarske Spa with a request for the data in the period 2011-2013. The data wasn't delivered.

Previously presented data point on significant oscillations in achieved total tourist overnights in spas of rural Croatia. Moderate growth was recorded in the period 2005-2008, while in the following years a decrease of overnights was recorded (it has to be noted that the amounts for the period 2011-2013 do not contain Istarske Spa overnights due to non-provision of informations). However, the authors consider that the reason of the decrease is mostly the economic crisis, but also insufficiently profiled tourist offer in total in relation to the competitive destinations. In order to have an insight in types of users of health tourism and wellness and their real interests, it is of great importance to continuously research their desires and their level of satisfaction with the total offer and experience during their stay in spas, so that possible errors could be removed on time, and in order to successfully manage total quality of health tourist offer, and through that provide them total fulfillment of their wishes and desires. This is supported with the excellent example of the conducted research in the USA in 2009, which was previously mentioned in this paper. Also, it is of great importance to give additional attention to the improvement of other elements of tourist offer (gastronomic offer of traditional Croatian cuisine, enological offer of Croatian wines and spirits, shopping, organization of traditional events, etc.) which will not only enable value and experience for money, but it will also enable the Croatian tourist offer to stand out among numerous other offers of competing destinations. According to available resources, in order for health tourism of rural Croatia to reach the desired highest possible level of quality of offer and total competitiveness, it is necessary to create a developmental and marketing strategy which needs to be coordinated with the complete developmental strategy of tourism of Croatia. Health tourism in rural areas represents the possibility for qualitative upgrade of the existing tourist offer, which will enable strengthening socio-demographic development and regeneration of rural areas, and repositioning of tourist product of Croatia as a destination on the tourist market.

### 3. Propositions of future development of health tourism of rural Croatia

In order for creating successful strategic guidelines and marketing strategies, it is necessary to undertake following necessary steps:

- To determine the target tourist market and a focused marketing and promotion mix to that market;

- To design and create communication channels towards target markets (new (e-) media and similar);
- To create tourist products and facilities which combine programs based on improvement of health, state of mind, vitality in general and life with the landscape;
- Based on previously mentioned, to create a unique and recognizable brand of health tourism of rural Croatia.

For successful creation of an innovative tourist offer of health tourism of rural Croatia, it is necessary to perceive all the advantages and disadvantages that rural Croatia has in relation to the competitive destinations. The following is presented in the SWOT matrix of health tourism of rural Croatia.

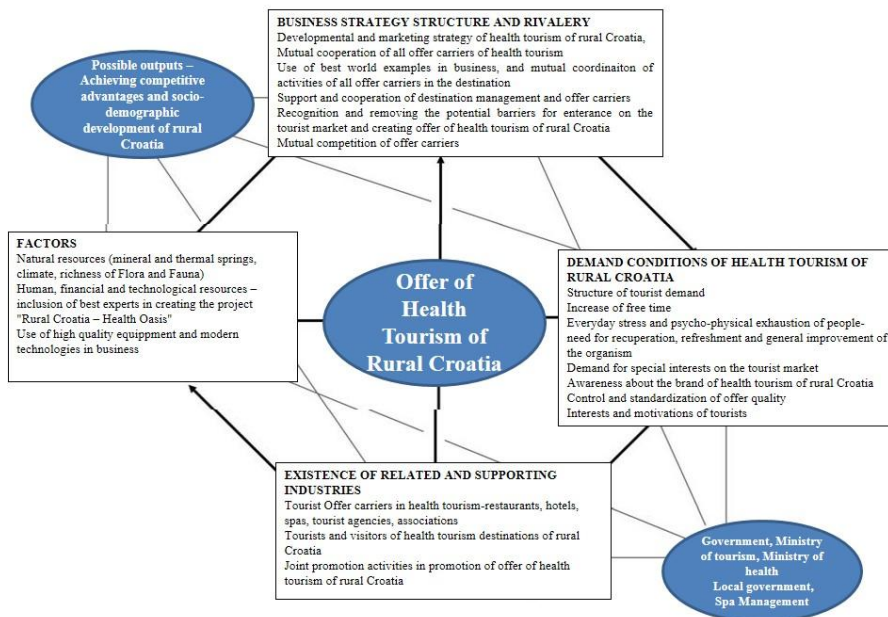
Table 3 SWOT analysis of health tourism of rural Croatia

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>– Convenient geographical position</li> <li>– Adequate and preserved resource basis (clean air, preserved landscape particularities)</li> <li>– Rich and various Flora and Fauna</li> <li>– Rich cultural-historical heritage</li> <li>– Springs of thermal and curative waters</li> <li>– Traditional architecture of rural Croatia</li> <li>– Tradition in tourism and hospitality</li> <li>– Good traffic connection</li> </ul>	<ul style="list-style-type: none"> <li>– Non-existence of clear developmental strategy of health tourism</li> <li>– Lack of starting and developing new tourism forms</li> <li>– Lack of private initiatives and entrepreneurship in tourism in relation to its real possibilities</li> <li>– Inadequate and incomplete marketing and promotion of tourist attractions</li> <li>– Lack of educated personnel in tourism</li> <li>– Relatively high labor cost</li> <li>– Insufficient communication among tourist employees</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>– Trends of increasing the share of health tourism in world tourist flows</li> <li>– Increasing demand for preserved destinations</li> <li>– Possibility of offering an eco-product in tourist offer of health tourism</li> <li>– Quality and more innovative offer of health tourism of rural Croatia</li> <li>– Use of cohesion EU funds</li> <li>– Use of "good practice" of the neighboring countries</li> <li>– Connecting the offer of coastal and rural Croatia</li> <li>– Spontaneous arrival of tourists in destination</li> <li>– High-income market of health tourism</li> <li>– Vicinity of outbound tourist markets</li> </ul>	<ul style="list-style-type: none"> <li>– Insufficient and unregulated legal basis</li> <li>– Environment pollution, violation of natural preservation</li> <li>– Disrespect of postulates of sustainable development in tourism development</li> <li>– Climate changes</li> <li>– Strong and developed competition of health tourism</li> <li>– Insufficiently motivated human resources</li> <li>– Incoherence, misunderstanding and disharmony of health personnel and tourist employees</li> </ul>

Source: Authors' analysis

Previously presented SWOT analysis indicates that rural areas of Croatia possess significant resources for achieving a successful and high quality offer of health tourism, and rich experience that Croatia has in tourist offer development, which was until now unfortunately mostly limited to coastal Croatia, which is witnessed by numerous scientific and professional researches. Based on the conducted SWOT analysis, following was created Porter's Diamond of comparative advantages of offer of health tourism of rural Croatia (see pic.1).

Picture 1 Porter's Diamond of comparative advantages of offer of health tourism of rural Croatia



Source: Analysis according to Drpić, Milojica (2012) according to Porter, M., E. (1998) *The Competitive Advantage of Nations*. New York: Free Press

Creation of Porter's Diamond of comparative advantages of health tourism offer of rural Croatia acknowledges the necessity of creating a new and more competitive tourist product which will enable satisfaction of needs and desires of contemporary tourists, in a way to maximize the usefulness for a destination, but also for tourist offer carriers with preserving natural particularities of rural Croatia. The basic purpose of creating the Diamond is to ensure that the offer of health tourism of rural Croatia in the future becomes one of the principle and leading carriers of a new tourist offer with a goal of promoting Croatia as the closest tourist destination which bases its offer on preservation of resources, care for prevention of diseases and health preservation, and its further development bases on sustainable development. Furthermore, the diamond of competitiveness will enable strengthening of mutual cooperation between all offer carriers in a rural destination, strengthening mutual integration of different forms of selective tourist offer, and during that establishing understanding between different economic and social sectors, etc. These activities represent the foundation for creating a unique and competitive tourist product of Croatia, which in the future needs to become unique, same valuable, indivisible, and by all that, recognizable to the wide circle of potential users of a tourist product of Croatia. Following a plan of implementation activities of health tourism of rural Croatia is given. The prices and periods of implementation activities are of indicative character and are subject to changes, depending on the sort and comprehensiveness of projects in a certain area of rural Croatia.



Table 4 Plan of implementation activities of creating an offer of health tourism of rural Croatia

Activities/ Measures	Enforcer of the activities	Target group	Deadline	Possible financial resources	Target priority	Potential budget in Euro
Production of promotion flyers, brochures, websites, promotion shows and videos	Ministry of tourism, specialized marketing agencies, interested spas	Offer carriers, Local community	Continuously	Ministry of tourism, Tourist Board, community, PPP	Maximum	100.000,00
Seminars and workshops for human resources employed in spas-education with a goal of raising the quality of offer and creating the awareness about the brand "Rural Croatia – Health Oasis"	Ministry of Tourism, Ministry of Health Destination Management Spa Management	Offer carriers	6 months - Continuously	Ministry of Tourism, Ministry of Health Spas	Maximum	50.000,00
Seminars/educations and workshops with the topic of active life and preservation of health by target groups	Ministry of Tourism, Ministry of Health, professionals in the area of health tourism, health personnel	Destination's visitors, Local community	continuously	Ministry of Tourism, Tourist Board, county, PPP, Spas	Maximum	50.000,00
Free marketing for offer carriers of health tourism in rural areas	Tourist Board	Offer carriers	Continuously	Tourist Board, Ministry of Tourism, county	Maximum	150.000,00
Help in creating marketing strategy of an individual offer carrier	Tourist Board, Local government and self-government, Ministry of Tourism, interested spas	Offer carriers	Continuously	Tourist Board, Ministry of Tourism, county	Maximum	100.000,00
Creation and developing a Brand "Rural Croatia - Health Oasis"	Tourist Board, Local government and Self-government, Ministry of Tourism, Ministry of Health, interested spas	Offer carriers	1 year – continuously	Ministry of Tourism, Ministry of Health, Tourist Board, county, PPP	Maximum	270.000,00
Project Green rural health resorts Croatia-branding, support to construction, establishing interest Associations	Private Investors, Financial institutions	Visitors of a destination and owners of new objects	3 years	Croatian Bank for Reconstruction and Development, EU cohesion funds, entrepreneurs, Ministry of Tourism, public-private partnership	Maximum	500.000,00

Source: Authors' analysis

Creating a unique promotion activity for offer carriers is anticipated in the project, as well as organizing educations for spa employees with a goal of strengthening the offer's quality, organizing educations and workshops about health for service users, and creating a unique offer of health tourism of rural Croatia within the project Green Health Resorts and Rural Croatia – Health Oasis. Green Health Resorts would consist of health resorts of rural Croatia (the existing or new ones) which would base their offer on programs of health preservation, encouraging ecological offer (cooperation and placement of products from family farms), creating the offer that is achieves the connection of service user with nature, use of renewable energy sources, respecting the postulates of sustainable development, etc. Through project

Rural Croatia-Health Oasis, all the comparative advantages of rural Croatia need to be emphasized, in relation to the competitive destinations.

The goal of developing previously mentioned project is multi-significant, and its realization achieves:

- Strengthening the competitive position of health tourism offer of rural Croatia
- Growth of quality of health tourism offer of rural Croatia and strengthening the total competitiveness of tourism of Croatia
- Socio-demographic and economic regeneration of rural Croatia in total
- Creating an innovative and unique tourist product
- Enabling inter-sector cooperation between ministries of tourism and health, offer carriers in tourism and spas
- Possibilities are created for destination management for development of further tourist products and prolonging of tourist season
- Creation of associations of spas of Croatia – Green Health Resorts.

Besides its own innovative solutions, in this paper presented offer will be based on international experiences and world practice of competitive countries which have progressed so much in relation to Croatia, which will enable a strong and successful repositioning of health tourism offer of rural Croatia, as an undivided unit of a Croatian tourist product on the world tourist market, which is very important especially today when numerous new developmental potentials are created, in a form of free knowledge exchange, free trade and available funds for projects of rural development from the cohesion funds of the European Union. In order for development of health tourism in rural Croatia to be possible, it is necessary that the country respects the postulates of sustainable development, and that the destination management is included in creation of a new and innovative tourist product. There is a possibility for developing small and medium entrepreneurship, especially for family farms which can offer services of accommodation, and under controlled conditions produce ecologically grown groceries which can be used within the gastronomic offer of health tourism, but also in production and selling of original and highly valuable products for preservation and improvement of health (i.e. creams, peelings, oil massages, etc.). On family farms various services of recreation, and various sports facilities (horseback-riding, trekking, walks in nature, etc.) can be offered, by which the existing offer of spas and hotel facilities in spas may be complemented.

#### **4. Conclusion**

The economic crisis affected the tourism on a world level, as well as in Croatian tourism. In order to reduce all the negative implications, and improve its current state, it is of great importance to use adequately all the resources Croatia has, and profile an even more diverse, more recognizable and higher quality tourist offer based on postulates of sustainability, particularly since the modern tourists tend to stay in eco-tourist destinations. Health tourism has a great potential in Croatia, particularly in rural areas. However, its offer is undeveloped in relation to the competitive destinations (Slovenia, Hungary, etc.). A significant lack in forming developmental models is the non-existence of database about the movements in health tourism of rural Croatia, which aggravates formation of a clear development and marketing strategy which would enable competitiveness on the tourist market. The development of health tourism would bring significant advantages in rural areas (higher employment of local population, stimulation of development of small and medium entrepreneurship, increase of tourist turnover, contribution of tourist offer of rural areas to the

total tourist offer of Croatia, achieving higher recognizability in the European and world level). Active marketing activities will enable the entrance in the potential customer's awareness, and will point out the advantages that a specific tourist offer contains (uniqueness, high level of quality, providing value and experience for money, etc.). Success of further tourist development of health tourism of rural Croatia will be enabled if in development of tourist offer suggested implementation activities are included, they need to be coordinated and upgraded according to the needs of a certain destination of health tourism of rural Croatia.

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## **HOW DOES CAPITAL STRUCTURE AFFECTON PROFITABILITY OF SME's**

### **UTJECAJ STRUKTURE KAPITALA NA PROFITABILNOST PODUZEĆA**

#### **ABSTRACT**

*This paper aims to determine how does profitability affects capital structure of Croatian small and medium size companies. Most of previous studies have shown an inverse relationship between profitability and leverage, but also the positive correlation is claimed by some authors.. A survey has been conducted on a sample of 500 Croatian small and medium size companies for the period 2005. to 2010. The data used for the empirical analysis were derived from companies' annual reports. Pearson correlation coefficient is applied in order to examine the relationship between profitability and leverage measures. The results of this research indicate negative relationship between profitability and leverage. But, profitability differently affect short-term and long-term leverage. The relationship between profitability and short-term leverage is negative and statistically significant in all observed years. The relationship between profitability and long-term leverage is not negative in all observed years and is not statistically significant. These results suggests that Croatian SME's use profits to reduce their debt level or becoming less levered when they are profitable. This finding is consistent with the pecking order theory which argues that firms prefer internal financing from external.*

**Key words:** capital structure, profitability, leverage, small and medium-sized enterprises

#### **SAŽETAK**

*Cilj ovog rada je istražiti utjecaj profitabilnosti na strukturu kapitala malih i srednjih poduzeća u Hrvatskoj. Većina prethodnih istraživanja pokazala je negativnu vezu između profitabilnosti i strukture kapitala, no neki autori utvrdili su pozitivnu vezu između profitabilnosti i strukture kapitala. Istraživanje za ovaj rad provedeno je na uzorku od 500 malih i srednjih poduzeća u Hrvatskoj u razdoblju od 2005. do 2010. godine. Za poduzeća u uzorku na raspolaganju su bili godišnji financijski izvještaji poduzeća u obliku računa dobiti i gubitka te bilance. Da bi se ispitala veza između profitabilnosti i strukture kapitala korišten je Pearsonov koeficijent korelacije. Rezultati istraživanja potvrdili su negativnu vezu između profitabilnosti i strukture kapitala hrvatskih poduzeća. No, s obzirom kako je mjerena struktura kapitala poduzeća, profitabilnost različito utječe na kratkoročnu i dugoročnu zaduženost poduzeća. Ukoliko je struktura kapitala mjerena odnosom kratkoročnih obveza i ukupne imovine poduzeća tada je veza između profitabilnosti i zaduženosti poduzeća*

*negativna i statistički značajna u cijelom promatranom razdoblju. Ukoliko je struktura kapitala mjerena odnosom dugoročnih obveza i ukupne inovine poduzeća tada veza između profitabilnosti i strukture kapitala nije negativna i statistički značajna u cijelom promatranom razdoblju. Takvi rezultati ukazuju na zaključak da je hrvatskim malim i srednjim poduzećima profit u funkciji smanjivanja zaduženosti, odnosno da se profitabilnija poduzeća i manje zadužuju. Rezultati istraživanja u potpunosti podupiru hijerarhiju financiranja teorije postupke slaganja.*

**Ključne riječi:** *struktura kapitala, profitabilnost, zaduženost, mala i srednjapoduzeća*

## **1. Introduction**

The subject of the capital structure decisions of firms has been properly studied and theoretically and empirically. Capital structure can be define as the mixture of firm's capital with debt and equity. Many theories have been developed in the literature for examining determinants of capital structure. Mostly they focus on which determinants are more likely to have a major role on leverage decisions. Although there have been various studies analyzing capital structure, it is still debated what are the determinants of capital structure and how they impact capital structure decisions. Myers (1984.) called them *the capital structure puzzle*.

Since Modigliani and Miller published their seminal paper in 1958, the issue of capital structure has generated unforeseen interest among researchers. From the theoretical point of view, existing empirical studies widely used two models of capital structure: the trade-off theory and the pecking order theory. Trade-off theory imply that company's capital structure decisions involve a trade-off between the tax benefits of debt financing and the costs of financial distress. Pecking order theory points out that there is a certain order in financing starting from retained earnings as a primary source of internal financing, then moving to debt and using equity only as a last resort. Each of these theories suggests how certain determinants affect capital structure. According to theories, researchers found various impacts of determinants on capital structure depending on country which they analyze.

The aim of this paper is to investigate how does profitability affects capital structure of Croatian small and medium-sized enterprises (SME's). These enterprises represent important parts of all economies in terms of both their total number and their job offer and job creation. Literature expresses different views at the correlation between profitability and capital structure. Most of previous studies have shown an inverse relationship between profitability and leverage which is closely related to the packing order theory. But also the positive correlation is claimed by some authors which is consistent with the trade-off theory. In the light of previous studies this paper address following question: Are Croatian SME's more or less levered when they are profitable? It is also important to find, relating to profitability, are Croatian SME's more short-term or long-term indebted. And finally to conclude does empirical results of this paper supports packing order theory or trade-off theory.

According to existing empirical studies and results of the researches, the research hypothesis of this paper is: profitability is negatively related to leverage. Profitable companies which possess their own financial resources do not need to borrow larger amounts of money. It assumes that businesses in the first place, rely on their retained earnings with debt being a secondary source of financing (Myers, 2001.)<sup>60</sup>.

This article is organized as follows: Section 2 introduces previous studies which are used in this paper. Section 3 presents description of the methodology that includes description of data

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<sup>60</sup>Myers, S. C.(2001.): Capital structure, Journal of Economic Perspectives, Vol. 15, No. 2, pp. 575-592,

and variables, and methods applied in research. Sections 4 and 5 presents results, discussion and conclusions.

## 2. Literature review and previous studies

Empirical studies generally concentrate on identifying determinants that managers should consider in making capital structure decision. In a study of companies from five developed countries Wald (1998.)<sup>61</sup> concluded that profitability is single most important determinant of leverage. According to Gaudet al. (2003.)<sup>62</sup> one of the main theoretical controversies concerns the relationship between leverage and profitability of the companies. The pecking order theory states that companies will prefer internal funds rather than external financing. As a result, companies that are profitable will use their internal funds (retained earnings) to finance them selves and thus they will borrow relatively less than companies with low profitability. Therefore, relationship between profitability and leverage is negative. But, in a trade-off theory when companies are profitable they should prefer debt to benefit from the tax shield. Under this circumstances relationship between profitability and leverage is positive. Table 1 presents summarized empirical studies in which researchers analyzed different determinants of capital structure in different countries on different pattern and their influence on capital structure. In order to examine the relationship between profitability and capital structure, positive or negative relationship between profitability and capital structure is emphasized in last row.

Table 1 Past empirical studies used in research

Researcher:	Period of research:	Focus:	Sample size:	Determinants:	Relationship between profitability and leverage:
Akdal, S. (2011.)	2002. - 2009.	Publicly listed companies in UK	202	Profitability, size, non-debt tax shield, growth, tangibility, liquidity and volatility	Negative
Gaud, P., Jani, E., Hoesli, M., Bender, A. (2003.)	1991. - 2000.	Swiss companies listed in the Swiss stock exchange	106	Profitability, size, growth, tangibility and risk	Negative
Deari, F., Deari, M. (2009.)	2005. - 2007.	Macedonian listed and unlisted companies from the Pollog region	32	Profitability, size, non-debt tax shield, growth and tangibility	Negative/Positive

<sup>61</sup>Wald, John K. (1998.): How Firm Characteristics Affect Capital Structure: An International Comparison, <http://ssrn.com/abstract=6763> (accessed 20 January 2014.)

<sup>62</sup> Gaud P., Jani E., Hoesli M., Bende A. (2003.): The capital structure of Swiss companies: an empirical analysis using dynamic panel data, <http://onlinelibrary.wiley.com/doi/10.1111/j.1354-7798.2005.00275.x/> (accessed 20 January 2014)

Researcher:	Period of research:	Focus:	Sample size:	Determinants:	Relationship between profitability and leverage:
Cole, R. A. (2008.)	1987.,1993., 1998., 2003.	Privately held U.S. firms	5000000	Size, age, profitability, liquid assets, tangible assets, growth and creditworthiness	Negative
Bas, T., Muradoglu G., Phylaktis, K. (2009.)	2002. - 2005.	Small and private firms in 25 developing countries	11125	Profitability, size, tangibility, GDP/ Cap, growth, inflation, interest and tax	Negative
Ramlall, I., (2009.)	2005. - 2006.	Non-listed firms in Mauritius	450	Profitability, size, growth, tangibility, non-debt tax shield, liquidity, investment and age	No influence
Psillaki, M., Daskalakis, N. (2008.)	1998. - 2002.	Small and medium-sized enterprises of Greek and French firms	16290	Profitability, size, growth and tangibility	Negative
Degryse, H., Goeij, P., Kappert, P. (2010.)	2003. - 2005.	Dutch small and medium-sized enterprises	99031	Size, collateral, profitability and growth	Negative
Song, H.S. (2005.)	1992. - 2000.	Swedish firms	6000	Profitability, size, growth, tangibility, non-debt tax shield, uniqueness and income variability	Negative
Buferna, F., Bangassa, K., Hodgkinsin, L. (2005.)	1995. - 1999.	32 public i 23 private companies from Libyan	55	Profitability, size, growth, and tangibility,	Positive

Akdal(2011).<sup>63</sup> in his study examined the capital structure determinants of 202 listed companies in UK in the period of 2002-2009. He came to the conclusion that profitability is negatively related to leverage. Gaud et al. (2003).<sup>64</sup> analyzed determinants of the capital structure for panel of 106 Swiss companies listed in the Swiss stock exchange. They found

<sup>63</sup> Akdal, S. (2011): How do firm characteristics affect capital structure? Some UK evidence, <http://ssrn.com/>, (accessed 20 January 2014)

<sup>64</sup> Gaud P., Jani E., Hoesli M., Bende A. (2003): The capital structure of Swiss companies: an empirical analysis using dynamic panel data, 2003., <http://onlinelibrary.wiley.com/doi/10.1111/j.1354-7798.2005.00275.x/>, (accessed 20 January 2014)

that profitability is negatively associated with leverage. Deari and Deari (2009.)<sup>65</sup> in their research used two different samples. First sample was based on 32 Macedonian listed companies covering the period of 2005-2007. Second sample was based on 30 Macedonian small and medium businesses covering the period of 2005-2007. On the sample of listed companies they found out that profitability is negatively associated with leverage. While unlisted companies showed inverse relationship. Cole (2008.)<sup>66</sup> in his study, which was based on a sample of privately held U.S. companies concluded that profitability is consistent negative related with leverage. Bas et al. (2009.)<sup>67</sup> in their study used data for small and private companies from 25 countries in different stages of financial development from different regions. They argued that profitability is inversely related to leverage, long-term debt and short-term debt. Ramlall (2009.)<sup>68</sup> in his study explored capital structure on 450 non listed companies from Mauritius. Interestingly, results showed that profitability not statistically affect leverage. Daskalakis and Psillaki (2008.)<sup>69</sup> in their study investigate the capital structure determinants of small and medium sized enterprises using a sample of Greek and French companies. The results showed that the SMEs in both countries exhibit similarities in their capital structure choices. They found negative relationship between leverage and profitability in both countries. Degryse et al. (2010.)<sup>70</sup> in their study, which was based on a sample of Dutch small and medium-sized enterprises (SMEs) pointed that profitability is negatively related to leverage. Song (2005.)<sup>71</sup> in his study investigated capital structure determinants of Swedish companies. The results showed that profitability is negatively correlated with all three leverage measures. Buferna et al. (2005.)<sup>72</sup> based their study on 32 public and 23 private Libyan companies. The results in their study showed positive relationship between profitability and leverage in Libyan companies.

### 3. Methodology

For purposes of this research a data sample consisting of Croatian firms was selected. The sample contains small and medium-sized enterprises as defined in the Accounting law. They are randomly selected from the database Financial Agency. The sample is consisted of 500 Croatian SME's for the period 2005. to 2010.

Descriptive statistics consist of mean, standard deviation and median. In order to examine the relationships between variables and to test the hypothesis set out in the study, Pearson correlation coefficient which determines the degree to which two variables covary, is used.

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<sup>65</sup>Deari F., Deari M. (2009): The determinants of capital structure: evidence from Macedonian listed and unlisted companies, <http://ideas.repec.org/a/aic/journal/y2009v56p91-102.html>, (accessed 20 January 2014)

<sup>66</sup> Cole, Rebel, A. (2008.): What do we know about the capital structure of privately held firms? Evidence from surveys of small business finance, <http://papers.ssrn.com/>, (accessed 20 January 2014)

<sup>67</sup> Bas, T., Muradoglu, G., Phylaktis, K. (2009): Determinants of capital structure in developing countries, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.136.5311>, (accessed 20 January 2014)

<sup>68</sup>Ramlall, I. (2009): Determinants of capital structure among non-quoted Mauritian firms under specificity of leverage: looking for a modified pecking order theory, *International research journal of finance and economics*, No. 31, <http://www.eurojournals.com/finance.htm>, (accessed 20 January 2014)

<sup>69</sup>Daskalakis, N., Psillaki, M. (2008): Do country of firm explain capital structure? Evidence from SMEs in France and Greece, *Applied financial economics*, No. 18, pp. 87-97

<sup>70</sup>Degryse, H., Goeij, P., Kappert, P., (2010): *Small Bus Econ*, No. 38, pp 431-447

<sup>71</sup> Han-Suck Sock (2005): Capital structure determinants: an empirical study of Swedish companies, CEIS Electronic working paper series, <http://papers.ceis.se/CESISWP25.pdf>, (accessed 20 January 2014)

<sup>72</sup>Buferna F., Bangassa K., Hodgkinson L. (2008): Determinants of capital structure: evidence from Libya, <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.136.5311>, (accessed 20 January 2014)



Profitability as variable is defined in similar ways in research papers. In most cases it is understood as the financial result of a given period divided by total assets. Deari and Deari(2009), Bas et al. (2009.) and Ramlall(2009.)in their study measured companies profitability as the ratio of earnings before tax (EBT) scaled by total assets. Cole (2008.)also measured profitability as net income divided by total assets (ROA). Following Akdal (2011.) and Degryse et al. (2010.)for purposes of this paper profitability is defined as earnings before interest, taxes and depreciation (EBITDA/total assets) scaled by total assets.

Different measures of leverage are used in past papers and each leverage measure is defined in different way. In general, two most common proxies of leverage exist such as calculated at book value of equity and at market value of equity (Loof, 2004.)<sup>73</sup> The most commonly used measure for leverage is defined as total debt over total assets. I also consider the short-term and long-term debt ratio separately. Debt is measured by its book value. Market values are not known for SME's in this sample. Following Akdal (2011.) I calculated leverage of the company as the ratio of total debt to total assets, long-term debt to total assets and short-term debt to total assets.

#### 4. Results

Descriptive statistics of the used ratios are given in Table2. Numbers in *mean* column represent mean values of each ratio calculated for all 500 firms in the sample. Numbers in *standard deviation* column represent *standard deviation* values of each ratio calculated for all 500 firms in the sample. Numbers in *median* column represent *median* values of each ratio calculated for all 500 firms in the sample.

Table 2 Descriptive statistics of financial ratios use in research

<i>Ratio</i>	<i>Year</i>	<i>Mean</i>	<i>Median</i>	<i>Standard deviation</i>
<i>Profitability</i>	2005.	0,06	0,05	0,12
	2006.	0,06	0,06	0,12
	2007.	0,09	0,06	0,15
	2008.	0,08	0,07	0,16
	2009.	0,07	0,04	0,18
	2010.	0,04	0,03	0,1
<i>Total debt/total assets</i>	2005.	0,74	0,8	0,36
	2006.	0,74	0,8	0,39
	2007.	0,72	0,77	0,42
	2008.	0,7	0,75	0,4
	2009.	0,69	0,71	0,41
	2010.	0,7	0,72	0,42
<i>Long-term debt/total assets</i>	2005.	0,06	0	0,12
	2006.	0,13	0	0,26
	2007.	0,13	0	0,25
	2008.	0,13	0	0,27
	2009.	0,13	0	0,26
	2010.	0,13	0	0,24
<i>Short-term debt/total assets</i>	2005.	0,58	0,57	0,39

<sup>73</sup>Loof, H., (2004.): Dynamic optimal capital structure and technical change, Structure Change and Economic Dynamics, Vol. 15, No. 4, pp. 449-468

<i>Ratio</i>	<i>Year</i>	<i>Mean</i>	<i>Median</i>	<i>Standard deviation</i>
	2006.	0,6	0,61	0,39
	2007.	0,59	0,56	0,42
	2008.	0,57	0,55	0,4
	2009.	0,57	0,51	0,43
	2010.	0,57	0,5	0,42

Source: Authors' calculation

It is interesting to notice that Croatian SME's have more short-terms loans than long-term loans (they are high short-term leveraged around 58%). Contrary, Degryse et al. (2010.) in their study found that Dutch SMEs have more long-term loans (63% of total debt is long-term debt). But generally Croatian SME's are high leveraged (around 70% in observed period). After 2007. profitability of the companies is in decreasing line mostly because of global economic crisis which started in 2007. Many of Croatian SMEs after 2007. finished their financial year with negative results. Low profitability is the result of illiquidity, low economic activity and low growth potential of companies in observed period.

The aim of this paper was to examine whether high profitability means less leverage or vice versa. Results are presented in Table 3.

Table 3 The correlation coefficients between profitability and leverage ratios

<i>Variables/year</i>	2005.	2006.	2007.	2008.	2009.	2010.
<i>Total debt/total assets</i>	-0,303 (0,000)	-0,228 (0,000)	-0,295 (0,000)	-0,173 (0,001)	-0,327 (0,000)	-0,316 (0,000)
<i>Long-termdebt/total assets</i>	0,028 (0,591)	-0,068 (0,229)	-0,117 (0,022)	0,009 (0,850)	0,062 (0,252)	-0,037 (0,530)
<i>Short-termdebt/total assets</i>	-0,202 (0,000)	-0,148 (0,010)	-0,221 (0,000)	-0,133 (0,011)	-0,308 (0,000)	-0,294 (0,000)

Note: Figures in parenthesis indicate statistical significance of the correlation coefficient

Source: Authors' calculation

In order to examine the relationship between profitability and leverage, correlation coefficients between profitability and leverage ratios are calculated. Results in Table 3 show that there is a negative correlation between profitability and total debt over total assets in all observed years. Also there is a negative correlation between profitability and short-term debt over total assets in all observed years. Correlation between profitability and long-term debt over total assets is negative only in three of observed years and statistically significant only in 2007.

Results prove a negative correlation between profitability and the share of debt in capital structure. Debt levels are lower if companies generates profit. Results are consistent with implication of Pecking order theory (the theory of the order of sources of financing).

## 5. Conclusion

Previous studies that were analyzing determinants of capital structure showed a various impacts of profitability on capital structure depending on country which they analyze. This paper adds to existing literature by examining how profitability affect capital structure of small and medium size companies in Croatia. It is important to analyze how small and

medium size companies in Croatia finance themselves, using profit or using debt. Without adequate access to financing potential growth of firm is jeopardized. In reality, for small and medium size companies obtaining finance and other banking services has never been easy.

Results in this study are in line with the predictions of the Pecking order theory. SMEs use profits to reduce their debt level, since they prefer internal funds over external funds. Profits particularly affects short-term debt. Therefore, this suggests that after companies explored internal funds, short-term debt comes next in the order of financing. Some authors (Degryse et al. (2010.)) claimed that short-term debt is more expensive than long-term debt and can be amortized easily. Why are then Croatian small and medium size companies short-term leveraged? It is because short-term debt is easily to obtain because Croatian SMEs has a large tangible asset which they use for collateral. Furthermore, in companies which preferring retained earnings as a primary source of financing, potential bankruptcy risk becomes lower. Contrary to Akdal (2011.) who argued that total and long-term leverage are more representative of companies capital structure than short-term leverage, this study confirmed that Croatian small and medium size companies are short-term leveraged, therefore total and short-term debt are better measures of leverage than long-term debt.

For further studies it might be interesting to focus on countries in region and compare how profitability in their companies affect capital structure and are they short-term or long-term leveraged.

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## **ROLE OF THE ACCOUNTING AND ACCOUNTING INFORMATION IN MANAGEMENT THE ASSET SPECIFIC FOR THE PUBLIC SECTOR**

### **ULOGA RAČUNOVODSTVA I RAČUNOVODSTVENIH INFORMACIJA U UPRAVLJANJU IMOVINOM SPECIFIČNOM ZA JAVNI SEKTOR**

#### **ABSTRACT**

*A very important feature of the current reform process in public sector management, known as New Public Management, is to encourage effective, efficient and accountable management of all public resources. In doing so, there is an emphasised need for effective asset management in the public sector, particularly management the asset specific for the public sector. The necessary precondition for effective management the asset specific for the public sector include definition, accounting recognition, measurement and reporting on asset specific for the public sector, the establishment of the state asset register and effectively management the cost and performance. The results of the research conducted during 2012, on a selected sample of the budgetary users in Croatia, show that a small number of budgetary users have the register of assets they dispose. In order to create a base of information, experiences show that the accounting and accounting information are a very important precondition for efficient asset management. This leads to the main goal of this paper which relates to the identification and systematization of existing and possible models for recognition and measurement of asset specific for the public sector and their presentation in the financial statements. Current public sector accounting in Croatia is based on a modified accrual basis. That means that in the balance sheet are presented information about financial assets and non-financial assets, while the information on asset specific for the public sector are not presented in the balance sheet. The basic assumption of the efficient management the asset specific for the public sector represents the introduction of an accrual basis of accounting in public sector accounting in Croatia. Only by fulfilling this condition, it can be expected the improvement of the effectiveness and efficiency in management the asset specific for the public sector. In the paper primarily are used the secondary data which are processed by application the methods of analysis and synthesis, induction and deduction, the methods of comparison, compilation and classification.*

**Key words:** accounting, accounting information, asset specific for the public sector, Croatia

## SAŽETAK

*Vrlo važna značajka aktualnog reformskog procesa upravljanja javnim sektorom, poznatim pod nazivom Novi javni menadžment, jest poticanje učinkovitog, efikasnog i odgovornog upravljanja sveukupnim javnim resursima. Pri tome, vrlo važnim se nameće potreba za učinkovitim upravljanjem imovinom u javnom sektoru, posebno imovinom koja je specifična isključivo za javni sektor. Nužne pretpostavke za učinkovito upravljanje imovinom specifičnom za javni sektor obuhvaćaju pojmovno određenje, računovodstveno priznavanje, mjerenje i izvještavanje o imovini specifičnoj za javni sektor, uspostavu registra državne imovine te učinkovito upravljanje troškovima i učincima. Rezultati provedenog istraživanja tijekom 2012. godine na odabranom uzorku proračunskih korisnika u Republici Hrvatskoj pokazuju da neznatan broj proračunskih korisnika ima registar imovine kojom raspolaže. Iskustva pokazuju da u cilju stvaranja informacijske osnove kao vrlo važne pretpostavke za upravljanje imovinom sve veću ulogu ima računovodstvo i računovodstvene informacije. Iz navedenog proizlazi cilj ovog rada koji se odnosi na utvrđivanje i sistematiziranje postojećih i mogućih modela priznavanja i vrednovanja imovine specifične za javni sektor te njihovog iskazivanja u financijskim izvještajima. U postojećem sustavu proračunskog računovodstva u Republici Hrvatskoj primjenjuje se model modificirane obračunske osnove što znači da se u bilanci iskazuje financijska imovina te dugotrajna nefinancijska imovina, dok se imovina specifična za javni sektor ne iskazuje u bilanci. Osnovnu pretpostavku učinkovitom upravljanju imovinom specifičnom za javni sektor predstavlja uvođenje modela obračunske osnove u proračunsko računovodstvo u Republici Hrvatskoj. Tek ispunjenjem ovog uvjeta može se očekivati poboljšanje učinkovitosti i efikasnosti u upravljanju imovinom specifičnom za javni sektor. U radu se prvenstveno koriste sekundarni podaci za čiju obradu se primjenjuju metode analize i sinteze, metode indukcije i dedukcije te metode komparacije, kompilacije i klasifikacije.*

**ključne riječi:** računovodstvo, računovodstvene informacije, imovina specifična za javni sektor, Hrvatska

### 1. Introduction – the significance of the financial management in the public sector

One of the most important features of the current reforming process in public sector includes effective, responsible and efficient management. It is considered equally important the overall management of the public resources (financial and non-financial). For the purpose of this paper, the emphasis is on the management the asset specific for the public sector. Australia, United Kingdom and New Zealand are highlighted as leaders in all directions and trends of public sector reform (Hood, 1991, 4). These countries introduced many changes in area of modernization the public sector and the role of public management. Some of these reforms include: limiting the public spending, introduction of market criteria (or principles of good management) in general government operations, redirection of some rights and obligations of providing public services to private partners in order to increase the quality and availability of public services and encouraging the efficient management in public sector which includes the cost-benefit analysis (Guthrie, Olson and Humphrey, 1999, 211-214). All this reform processes in public sector in literature are known as *New Public Management*.

In public sector reform, all fields of public sector accounting have been concerned: management accounting, financial accounting and auditing. In modern conditions, when the citizens and the public are aware of their right to information about the use of public resources, the task of public sector accounting is to provide the information on all aspects of public spending and present them in a clear and understandable form, in the form of financial statements. In fact, financial resources are an essential condition for the ongoing working of public entities over time – control over the spending financial resources. Most countries in the public sector accounting are applying the cash basis of accounting. Those accounting systems which are based on cash basis recognize business events when cash flow is followed and inform users only about the cash and cash equivalents. Reforms in the public sector require the introduction the accrual basis in the public sector accounting.

In the last thirty years led many discussions about the benefits of introducing accrual accounting in the public sector. Taking into account some of these studies (Brorström, 1998; FEE, 2007; IFAC, 2010; Perrin, 1998), the benefits of the accrual basis of accounting in the public sector can be summarized in the following:

- better monitoring of assets,
- more precise cost measurement of supplied services and political programs in order to maximize public sectors' efficiency and productivity,
- more accurate measurement, communication and comparison of public sector entities' financial position and performance,
- better and comprehensive information for management and decision making (cost and price calculation, decision about in-sourcing or outsourcing, make-or-buy decisions, etc.),
- better management control (comparison of resources consumption and achieved results),
- the possibility for assessment of long-term financial stability of public policies.

Accordingly, the application of accrual basis in public sector accounting is expected to provide better information for internal and external use, through improving transparency, accountability and performance evaluation of public sector entities.

In this paper is highlighted the significance of public assets management in comprehensive public sector management through the classification, recognition and measurement of the asset specific for the public sector and its management on the international and national level.

## **2. Literature review**

Management the asset specific for the public sector is often associated with the concept such as irrationality, inefficiency and a lack of transparency. For the purpose of efficient management the assets specific for the public sector it is necessary to define the term and types of the assets specific for the public sector, its accounting treatment which includes recognition and measurement. Accordingly, it is evident the significant role of the accounting and accounting information for the purpose of the efficient management the asset specific for the public sector. This is specially emphasized in the area of transparent and comprehensive basis of the information about the type and value of the asset specific for the public sector (Bond, Dent, 1998, 373).

## **2.1. Management of the asset specific for the public sector**

Management processes in the public sector are primarily focused on satisfaction of public needs through the provision of public goods and public services, efficient management of public financial resources and their efficient reallocation in public spending, public debt service, public investments, preserve the value of national assets and achieving the national strategic goals and interests. Ranson and Stewart (1989) point out that management activity in the public sector should be in the function of satisfaction the needs of all citizens and management activities that imply comprehensive economic consequences. In order to achieve mentioned goals, the main features of public sector reform concerning on the implementation of principles of management in the private sector in the management practice in the public sector.

Tanzi and Prakash (2000, 1) consider that the efficiency of public administration should not be seen only from the point of spending public financial resources, but they warn on today's problem of non-recognition of the cost of using the public assets, which entities of the general government sector use in its operations. Management of the public asset includes the total assets which are used by public administration in performing the public interest and needs.

In order to achieve efficiently use of public assets it is necessary to determine all types of public assets and to define ownership and management rights over that assets. Associated with this, the construction of a unique register of state assets is a good solution for better and efficiently public assets management. Identification and adduction of certain types of public assets in the register requires its recognition, evaluation and measurement. Furthermore, the construction of a unique register of state assets encourages development and implementation of professional oriented instead of politically oriented public assets management.

Many authors (Barret, 2004; Bond and Dent, 1998) points out the role of accounting system and financial reporting in the reform of public assets management as an integral part of the financial management reform in the public sector. Pallot (1992) emphasized that making decisions about the use of public assets should be based on collected and comprehensive accounting information about the total assets and the related liabilities, revenues and expenses for each entity in the general government sector. As the data are the most important prerequisite for effective management in the public and private sector, the construction of an adequate accounting information system is a fundamental assumption of successful planning of public revenues and expenses, management and control over the public assets management and efficient measuring the effects arising from the operations of general government sector entities (Likierman, 1994).

Effective management in the public sector implies the application of management techniques from the private sector in the public sector as in developed countries is achieved through the implementation of accrual basis of accounting in financial accounting and budgeting in public sector. It is pointed out the measurement of outcomes, respectively the coordination and monitoring the relationship between the inputs, defined and achieved goals, purpose of operation the public sector entities and the achieved results. It leads to the transformation of government accounting information system from evidence system into a modern management and control system. Such changes in accounting information system have effects on improving the financial management and more precise assessments of public sector management performance. That effect it should be taken into consideration the needs for public assets management since the effective public assets management requires the



recognition and evidence of the total public assets in a comprehensive and unique register of state assets. It points out the need for construction a comprehensive database of various types of assets and the related costs and liabilities in order to ensure appropriate care on that assets as well as the preservation of its value in use. Furthermore, the development of register of state assets provides establishing the accountability for managing these assets. The establishment of the accountability ensure the prescribing the authority and duties of certain holders of management functions, management control and supervision over the public assets, reporting about the achieved goals and effects of management and disposal of public assets and undertaking actions against the managers who do not accord with regulations. Effective public assets management implies the realization of economic, infrastructural and other objectives defined in strategy.

Construction of the unique register of state assets allows the consideration of the features of public assets and costs and liabilities arising from these assets. Data in this register should be accurate, timely and hard as in this way it allows to make decisions about different manners of usage and disposal of public assets. As the best examples of countries that have built a unique and comprehensive register of state assets, Tanzi and Prakash (2000) indicate the United Kingdom, France, Australia and New Zealand. A unique database on public assets enables the rational management of maintenance cost of this assets and the assessment of opportunity cost of its alternative use.

The objectives and principles of public assets management vary among countries depending on the political system, the degree of democracy, the coverage of general government sector, the size of public assets portfolio, historical and cultural environment, the perception of the role of public sector management and government accounting information system. Although the above characteristics can be significantly different among countries, nevertheless it can be identified basic requirements that should be met in order to ensure effective and efficient public assets management, such as:

- construction of a unique register of state assets,
- classification of public assets,
- recognition and measurement of public assets,
- professional and responsible public assets management and
- management of costs and results (outcome).

## **2.2. The classification, recognition and measurement of the asset specific for the public sector**

The first step in developing a unique register of state assets refers to the identification of different types of public assets and the purpose of its use. After that, it approaches to the valuation of these assets – it is not possible to measure effects of the use of public assets without defined its value. Future economic benefits are expected with the use of public assets; while still significant are the service potential and its use in performing the key government functions. There are many different classifications of public assets that arise from the dilemma about which types of public assets include in the register and how to evaluate them. With regard to the purpose of which it is used, the public assets can be classified as assets which is free available, public assets which is used by government institutions and assets which is used or can be used in the service provision.

According to IFAC (1995, 8-12), public assets include cash, financial assets, physical assets and intangible assets. International Public Sector Accounting Standards (IPSAS) adopted by

the International Public Sector Accounting Standards Board's (IPSASB) are the basis for classification and valuation of public assets (IFAC, 2013). According to IPSAS 1 *Presentation of financial statements* assets are divided into current and fixed assets as a standard classification of public assets in the balance sheet. IPSAS 17 *Property, plant and equipment* recognize different types of public assets as land, operational buildings, roads, machinery, electricity transmission networks, ships, aircraft, specialist military equipment, motor vehicles, furniture and fixtures, office equipment and oil rigs (IFAC, 2013, 549). Particularities in public assets management are highlighted in assets specific to the public sector which include: infrastructure assets, heritage assets, defense assets and natural resources (IFAC, 1995, 8-13).

There can be used different models of asset valuation depending on the adopted assets classification. A number of different measurement basis are employed to different degrees and in varying combinations in financial statements, and they include the following (IFAC, 1995, 34): historical cost, current cost, realizable (settlement) value and present value. Among them, historical cost is the measurement basis most commonly adopted by enterprises in preparing their financial statements. Sometimes, certain types of public assets are not recorded in financial statements, or their value equates to zero, just because that assets was acquired or inherited in the past and which, according to actual national practices does not have the characteristic of budgetary expenditure (Tanzi and Prakash, 2000).

Bond and Dent (1998) distinguish three main approaches to the valuation of public assets:

- valuation on the base of appraisal value of public assets,
- valuation on the base of expected revenues and
- market valuation according to characteristics of similar assets.

Problems arise in the valuation of the asset specific for the public sector since the main characteristics of these assets includes long useful life, unknown acquisition cost and the fact that its value increases with time. Also, there is no market for some types of assets so it is more difficult to determine the value for these assets. If the acquisition cost of some assets is not known or the price level has changed significantly, it is necessary the value of these assets subsequently evaluate using the methods and techniques that are required in IPSASs (IFAC, 2013). Due to the problems relating to the recognition of certain types of asset specific for the public sector that arising from the fact that acquisition costs are not known, generally accepted valuation methods are not defined, or there is no relevant market for these assets, it is often situation that these assets remain outside of the accounting records. Other solutions include recognition of these assets of a symbolic value (1 EUR or 1 \$) in the financial statement (France, Australian State of New South West) (IFAC, 1995, 37-38). In conditions when authorities decided not to publish information on particular public assets in the balance sheet, then this information should be published in the notes to the financial statements.

### **3. Management of the asset specific for the public sector in Croatia**

Croatia has a lot of public assets that is used in the execution of public tasks, numerous properties and movable assets which are used for performing public tasks, housing and transportation of public administration, a number of natural and cultural resources as well as many public assets that is not in use but has a significant potential for its use.

For many years public assets in Croatia is classified, recorded and assessed on the wrong and inappropriate manner. Also, ignoring the fact that public assets belong to the public (citizens) resulted in the unfulfilled promises of public authorities that are related to establishing and

ensuring the most effective use of certain forms and types of public assets. Some types of public assets have never been in a useful and productive function of the state in order of execution and fulfilment of public interest. For other types of public assets is often pointed out that they are used in an ineffective and inefficient manner. There is almost no information on the cost-benefit analysis of the use of certain types of public assets and it is impossible to assess the feasibility and appropriateness of the chosen mode of the use of certain type of assets. Since for many years there was no comprehensive register of state assets, as it is proved by the research results, public asset management mainly came down to manage the states' business interests (shares) in public sector enterprises. The implication is that the process of privatization represents the only manner of public assets management.

The State Administrative Office for State Assets Management is the central authority for management and disposal of public assets<sup>74</sup> and coordinating management and disposal of assets owned by the Republic of Croatia. The unique central Register of state assets until 2014 has not been fully functional established and public disclosed. Therefore, it was not possible to define with certainty which and how much of public assets has Croatia and which is the value of this assets. Problems in establishing the Register of state assets are reflected in dispersed documentation on public resources by various evidences of public institutions.

The results of the research conducted in the middle of 2012 on the sample of 130 managers in the public sector (managers of the budgetary users) show that only 19,23% of budgetary users at that time had formed a register of assets they use and manage. Also, the results show that 96,9% of respondents presents a total fixed asset in its records and in this presentation is not included the asset specific for the public sector. Furthermore, 70,80% of respondents consider that it is necessary to record and value the assets specific for the public sector, even though they do not dispose of this data.

The table bellow summarizes the research results on the potential benefits from the use of accounting information that should be contained in the Register of state assets when the same will be established.

Table 1 The application of accounting information from the Register of state assets in public sector management

<i><b>Purpose</b></i>	<i><b>Response Percent</b></i>	<i><b>Response Count</b></i>
Cost-effective assets management	70,8%	92
Management procedures to maintain assets	65,4%	85
Optimal use of assets	58,5%	76
Comprehensive information needed for assets management	34,6%	45
Rational inventories management	28,5%	37
Successfully disposal of potential assets surplus	25,4%	33
Effective basis for the procurement processes management	23,1%	30
None of the above	4,6%	6
<b>Total</b>	<b>100%</b>	<b>130</b>

Source: Author's

The regulatory framework for managing public assets is ordered by The Act on management and disposal of assets owned by the Republic of Croatia (Official Gazette, 2013). Although

<sup>74</sup> In this paper terms state assets and public assets are used as synonyms.

mentioned Act defines over 30 types of state assets, the Register of state assets consists only of a list of owned interests in companies and properties divided into several categories. The tendency of the governmental structures is to extend the Register with new categories and new types of assets in order to record all existing types and forms of state assets.

For the efficient and effective management of public assets owned by Croatia, are necessary comprehensive and up to date information about all types of assets and related costs and liabilities. Therefore, the objectives that should be achieved by establishing the Register of state assets are (DUUDI, 2014):

- insight into the scope and structure of the assets owned by Croatia,
- supervision over the state of the assets owned by Croatia,
- establishment of mechanisms for high quality and faster decision making on assets management,
- monitoring of the benefits and effects of assets management.

The Register of state assets includes the following categories of state property (DUUDI, 2014): list of properties, list of stocks in companies and legal entities and list of business shares in companies. The category of properties includes the following types of assets: building land and buildings, public water, property that is used for the purpose of preserving the sovereignty, independence and defense of territorial integrity of Croatia, property used by the state administration body, agricultural land, commercial space, residential building, housing, forests and forestry land (DUUDI, 2014).

The current government accounting system in Croatia does not prescribe the mandatory presentation of assets specific for the public sector in the financial statements. Accordingly, in practice these types of public assets very often are not identified and not recorded in the financial statements. In the balance sheet is recorded and valued only financial assets and long term non-financial operating assets (capital assets). The acquisition costs of long term non-financial assets are not capitalized, but they are recognized as expenses in the period in which the acquisition is performed. Based on that, it can be concluded that the use of modified accrual basis of accounting in current government accounting system focuses on financial assets, while the presentation of information on the value and use of assets specific for the public sector is ignored.

#### **4. Conclusion**

Quality public assets management and the entire public sector can be achieved only if there is developed practice of performance measurement of public management, or the practice of measurement the effects of public spending with the existence of clearly defined authority and responsibility for management of public resources. Effective public assets management include making decisions about its use so as to achieve an optimal balance between benefits and costs for owners and users of public assets (citizens).

It is necessary to recognize all types of public assets in order to accurately determine the book value and economic value of public assets. In determining the public assets value, it is necessary to take into account economic characteristics of public assets relating to the service potential in order to increase net social benefits. In doing so, important role has a government accounting information system and accounting information that is the output of the accounting process and the basis for determining the public assets value, including assets specific for the public sector.

The current Register of state assets in Croatia is not comprehensive and does not include all types of public assets. The most significant reasons for this are the incompleteness of existing records of public assets, overlapping the formal property rights as well as the rights and responsibilities of use and/or management of a certain public assets among various entities in general government sector. The application of modified accrual basis in public sector accounting makes it difficult the recognition and measurement all types of public assets. Furthermore, the lack of qualified specialists for valuation of public assets as well as the insufficient uses of financial management methods leads to deficiencies of public assets data that tends to decrease the quality of public asset management.

It is concluded that despite of the establishment the Register of state assets, there is necessity for further improvement and upgrading of existing government accounting information system in Croatia in order to ensure a broader coverage of accounting information that is used in decision making and affects on the quality of management processes in the public sector.

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**COMPETITIVENESS CLUSTERS – PARADIGM FOR ECONOMIC  
DEVELOPMENT OF THE REPUBLIC OF CROATIA**

**KLASTERI KONKURENTNOSTI – PARADIGMA RAZVOJA  
GOSPODARSTVA REPUBLIKE HRVATSKE**

**ABSTRACT**

*The accession of Croatia to the EU has obliged the public sector to seriously reconsider its strategic approach to development priorities and how they are achieved, as the ad hoc solutions until now are more reactions to the changes in the economic environment, than they are the result of strategic planning of long-term goals. Although the economy of Croatia as a small country is inevitably dependent on exogenous processes, it is also evident that since the creation of the independent state, political elites have not reached a consensus on the development agenda and economic development goals they desire. In order to secure access to European Union cofinancing for economic-development activities, the Croatian Government was asked to present to the European Commission an economic development plan for a financial perspective on 2014 – 2020. They selected the Smart Specialization Strategy to advance the development of twelve sectors of the economy that are deemed the sectors with the highest competitiveness potential. Further development of these sectors is stimulated through creation of competitiveness clusters designed to enable a triple-helix cooperation model connecting the scientific and public sector, and the economic actors. Their cooperation creates a framework which enables the scientific sector to better understand the needs of the economy and to link its research agenda with these needs, foster faster transfer of innovation and new technologies into the real sector, and educate public policy makers to create an enabling environment to intensify this cooperation. Activities in the development of competitiveness clusters up until now have not been sufficient to ensure a full functioning of the triple-helix model. To prove this hypothesis, we conducted a study, the results of which show why the Croatian economy has still not managed to create competitiveness clusters. The ideas we gained through the study should serve as guidelines to decision makers at different levels for more effective implementation of the activities for the development of competitiveness clusters in the Republic of Croatia. The methods employed in the study comprise methods of analysis, synthesis, induction and deduction, as well as a descriptive and a compilation method.*

**Key words:** innovation, competitiveness clusters, development, triple-helix model, public policy

## SAŽETAK

Pristupanje Hrvatske Europskoj uniji javnom je sektoru nametnulo obavezu ozbiljnog strateškog promišljanja razvojnih prioriteta i načina njihovog ostvarivanja, koji se uvelikorazlikuju od dosadašnjih ad hoc rješenja, a koja su većim dijelom bile rezultat reakcije na promjene u okruženju, a manje rezultat sustavnog planiranja dugoročnih ciljeva. Iako je gospodarstvo Republike Hrvatske, kao male zemlje, ovisno o egzogenim procesima, od trenutka stvaranja nove države evidentan je izostanak strateškog promišljanja i konsenzusa političkih elita o poželjnom smjeru i ciljevima gospodarskog razvoja zemlje. Kako bi se omogućio pristup sredstvima Europske unije za sufinanciranje aktivnosti usmjerenih na gospodarski razvoj, Vlada Republike Hrvatske je Europskoj komisiji morala prezentirati plan gospodarskog razvitka za financijsku perspektivu 2014 – 2020. godine. Odabrana je strategija pametne (osmišljene) specijalizacije uz unapređenje onih dvanaest sektora gospodarstva za koje se drži da predstavljaju sektore s najvećim potencijalom povećanja konkurentnosti gospodarstva. Njihov daljnji razvoj potiče se osnivanjem klastera konkurentnosti koji trebaju omogućiti ostvarivanje triple helix modela suradnje kojipredstavlja povezivanje znanstvenog i javnog sektora, te gospodarstva. Njihovo je povezivanje okvir za bolje prepoznavanje potreba gospodarstva od strane znanstvenog sektora i povezivanje područja istraživanja s tim potrebama, brz transfer inovacija i novih tehnologija u gospodarstvo, kao i stvaranje uvjeta za intenziviranje te suradnje od strane kreatora javnih politika. Dosadašnje aktivnosti na razvoju klastera konkurentnosti nedostatne su za funkcioniranje triple helix modela. Za dokazivanje te hipoteze provedeno je istraživanje čiji rezultati kazuju zašto hrvatski gospodarski sustav još ne uspijeva uspostaviti klastera konkurentnosti. Dobivene spoznaje donositeljima odluka na različitim razinama trebaju poslužiti kao smjernice efikasnije provedbe aktivnosti na razvoju klastera konkurentnosti u Republici Hrvatskoj. Korištene metode istraživanja obuhvaćaju metode analize, sinteze, indukcije, dedukcije, deskriptivnu i metodu kompilacije.

**Ključne riječi:** inovacije, klasteri konkurentnosti, razvoj, triple helix model, javne politike

## 1. Introduction

The Republic of Croatia became a full member of the European Union on 1 July 2013. During preparations for membership, in the pre-accession period, the greatest amount of attention and European financial assistance were focused on the public sector and its customization to the possibilities that EU membership provides to all segments of society. In the economy, from the moment when Croatia was granted candidate status, the focus was on the development of a competitive, dynamic, knowledge-based economy based on the Lisbon Strategy and its economic, social, and environmental pillars. Within this strategy framework for the achievement of economic aims, clusters, a method for promoting cooperation among the public, scientific and business sectors, were given a special place. This would provide an overall competitive position for the European economy on the global market. The Lisbon strategy has been revisited in terms of concretizing the objectives and additionally channeled towards growth and employment. Also, due to the economic crisis, its undesired results and a lag in the European economy behind its competitors, especially those in the BRIC countries, this same orientation was confirmed in the new strategic document *Europe 2020*. The document places emphasis on achieving competitive advantages for the European Economic



Area in relation to market competitors with a focus on smart, sustainable and inclusive growth, which will ensure an employment rate of 75% for the working-age population aged 24-65<sup>75</sup>. Clusters and business networks are again identified as key instruments for the implementation of the Europe 2020 strategy, because they are considered to be stimulants that accelerate industrial transformation and the development of new, regional competitive advantages which accomplish the goal of economic growth and job creation. This is supported by the major European initiatives *Innovation Union*<sup>76</sup> and *An Integrated Industrial Policy for the Globalization Era*<sup>77</sup> which have been formulated to meet the 2014-2020 program period. Within the cluster policy, the primary focus has been to help small and medium enterprises increase their innovation potential by joining with stakeholders from the academic sector, even though large companies in this interaction have their place, which is especially related to the capacity for articulation of scientific problems, and connection with the scientific community.

The Republic of Croatia has situated all its strategic goals within the frame of the goals for the development of the European economy, to which it now belongs. To pursue the goal of economic development with appropriate policy measures, twelve sectors of the national economy were selected which are thought to represent fields of competitive advantage in the Croatian economy. After the establishment of the twelve competitiveness clusters, due to the way they were initiated and the lack of funds to support their activities, there has been an absence of concrete activities that would go beyond the participation in the establishment of sectoral clusters and participation in selecting of offered options for the creation of a smart specialization strategy.

## **2. Clusters as a lever of competitiveness**

### **2.1. Organizational form**

The clusters represent organizational forms that connect business subjects of one economic sector whose motives are to merge for the benefit of efficiency in placing products and services. Clusters cooperate with the public and scientific sector; they connect at the regional or even national levels. A model of cooperation which involves these three sectors is called a triple-helix model<sup>78</sup>. By merging into a cluster, members lay the groundwork for the implementation of joint projects, and they reduce individual costs for investments in research and development. With the creation of a common cluster infrastructure, and the selection of projects and investments which increase the level of knowledge and innovation in their segment of the economy, clusters are important drivers of economic development, especially for small and medium entrepreneurs. Also, the role of clusters is key for breaking into foreign markets for those members with limited individual strength so that they can be recognized as an economic segment outside the domestic market, and for export growth. Competitiveness clusters reduce innovation costs with their activities; they strengthen the process for the creation of value and creation of new market opportunities. It is almost an unwritten rule that a state at the initial stages of clusters development supports the creation and function of clusters, because clusters are an effective instrument for enhancing competitiveness. The EU

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<sup>75</sup>[http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/targets/index\\_en.htm](http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/targets/index_en.htm) (accessed 10 March 2014)

<sup>76</sup>[http://ec.europa.eu/research/innovation-union/index\\_en.cfm?pg=home](http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=home) (accessed 10 March 2014)

<sup>77</sup> European Commission, *An Integrated Industrial Policy for the Globalisation Era, Putting Competitiveness and Sustainability at Centre Stage*

<sup>78</sup>The triple helix model implies collaboration among the scientific, business and the public sectors.

ambition is to support regional clusters whose coverage extends beyond the borders of national regions, because this creates synergic effects of national economies.

## **2.2. Clusters in the Age of Globalization**

Globalization has challenged economic subjects with competition in which the imperative of quality and price competitiveness is being supplemented by the demand for originality, often resulting from regional or national distinguishing features, and thus creating a much-needed global recognition on a global market. Improving the competitiveness of intellectual capital with an emphasis on networking of managers and entrepreneurs, the stimulating of partnership among businesses, universities, institutes and local governments is certainly a winning combination in today's market conditions (Horvat, 2003, 228). One of the goals of clusters is the realization of a sustained competition, with the help of merging with similar companies in specific regions and centers of excellence and competence, in other words the research centers and the government institutions that support them. They have spurred the competitiveness of the Spanish province Basque, and France also profited from this approach. The Basque province, for example, since 1990, thanks to competitiveness clusters, has raised the per capita GDP from 90% to about 130% of the EU average. Investments in research and development have grown from 0.5% of GDP (today Croatia invests in R&D around 0.75% of the GDP) to as high as 2%, while companies from different competitiveness clusters represent 35% of Basque's GDP. On the other hand, France became one of the European Union leaders in innovation and technology, and last year's study<sup>79</sup> shows that one third of members in the cluster increased their revenues and exports, while two-thirds increased the number of employees<sup>80</sup>. In areas where the use of the cluster model proved successful this was, clearly, due to a successful selection of strategic development objectives from the public sector. Its role was essential to the creation of a supportive environment for the interface between the economy and scientific institutions, and for the promotion of cooperation in all three sectors toward the achievement of the economic goals. In this context, the role of the European Union is to reduce barriers for investments, capital flows and employment.

## **2.3. Clusters in the European Union**

Since the early 1980s, clusters were recognized in the European Union as an effective instrument for achieving economic growth and development. For individual regions the cooperation between economic actors, along with their market competition, became a spur for a higher level of productivity and innovation inside related groups in relation to similar ones in other countries. Instruments of cohesion policies are, therefore, also used to improve cluster development.

Over time, the strengths and weaknesses of applied approaches have become apparent among EU member states, but particularly valuable for the achievement of the objectives of economic development was cluster capability to provide a boost for achieving the economic and scientific potential of individual regions. Since the late nineties, synergy-oriented public policies, business initiatives and scientific institutions can be seen to enable the creation of strong clusters. In finding answers to global challenges, the European Union also recognizes the role of research and development as well as innovation processes in the advancement of

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<sup>79</sup><http://www.poslovni.hr/hrvatska/ugledajte-se-na-baskiju-tamo-su-klasteri-lansirali-rast-bdp-a-238208> (accessed 11 March 2014)

<sup>80</sup><http://www.poslovni.hr/hrvatska/ugledajte-se-na-baskiju-tamo-su-klasteri-lansirali-rast-bdp-a-238208>(accessed 11 March 2014)

economic growth and regional development, and therefore encourages the establishment, improvement and excellence of cluster support with various instruments.

In 2006, the European Commission published the strategic document *Putting Knowledge into Practice: A Broad-Based Innovation Strategy*<sup>81</sup> which mentions clusters as important holders of growth and development and states the intention of promoting clusters with public policies. That same year the Europe INNOVA project began with the aim of creating a regional clusters survey among the old 15 EU<sup>82</sup> member-states, both to determine which policies support the establishment and development of clusters at the national level and to propose further initiatives for public policies to improve the state of innovation and European economy competitiveness. An overview of the clusters situation has confirmed the unevenness of conditions for clusters development among the new member states in comparison with 15 old EU member states. This is particularly germane to restrictions associated with trade, work-force mobility and investments, with regard to old Europe, and between the new EU member states. The historical legacy of planned economies in these countries has left its mark on the allocation of economic resources in a way that is not based on entrepreneurship and economic efficiency but on political decisionmaking. The first act of The Europe INNOVA initiative entitled *Innovation Clusters in the 10 New Member States of the European Union*<sup>83</sup> suggests that increased competitiveness should be based on a geographically efficient allocation of resources. In countries with a relatively weak public sector, the European Union needs to help strengthen cooperation between actors within clusters with the dissemination of knowledge, experience and tools for the realization of a new and qualitatively different development and also focus and coordinate the implementation of various existing policies (SME policy, regional policy, innovation policy, etc.) along with achieving synergic effect in supporting cluster development. The INNOVA project was focused in its second phase (2009-2012) on three European innovation platforms which were thematically oriented to knowledge-based services, collaboration of clusters and eco-innovation, with a particular attention given to SME clusters.<sup>84</sup> At the same time, the European Cluster Alliance<sup>85</sup> was established as a platform at a European level for enabling discussions about policies for cluster development. The initial goal was to help policy-makers at the national and regional levels on the optimal routing of policy for cluster development. The activities of ECA today are expanding towards support for the development of new industries through clusters in Europe and improving international cooperation of clusters.

In the previous financial perspective (2007-2013) at the EU level, cluster development was enforced through various policies, from directing 25% of the Cohesion Fund budget for research and development activities, through the adjustment of state aid rules to allow non-exclusive financing of cluster activities, the *Regions of Knowledge* initiative in the FP7 programme for research and development, and the creation of the *European Cluster Observatory* and the *European Cluster Excellence* initiatives.

The *Regions of Knowledge* initiative was aimed at strengthening the innovation potential of European regions by linking research and technological development to economic development. This approach brought more focus to the regional integration of clusters,

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<sup>81</sup> European Commission, *Putting Knowledge into Practice: A Broad-Based Innovation Strategy for the EU*, COM(2006) 502 final, 13 September.2006.

<sup>82</sup> With them the review also encompassed Turkey, Bulgaria, Romania, Switzerland, Norway, Iceland and Israel.

<sup>83</sup> *Innovation Clusters in the 10 new member states of the European Union*, Christian Ketels, Orjan Solvel, Europe INNOVA paper No.1, European Commission, DG Enterprise and Industry

<sup>84</sup>[http://ec.europa.eu/enterprise/policies/innovation/support/europe-innova/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/support/europe-innova/index_en.htm)(accessed 10 March 2014)

<sup>85</sup><http://www.eca-tactics.eu/eca/about>(accessed 11 March 2014)

businesses, research institutions, universities and the local and regional public sector. Hence the aim was not only to improve the investment capacity of the regions, but also to strengthen their competitive power, primarily in terms of the capacity for the generation of new knowledge and global networking. The Internet platform *European Cluster Observatory* (ECO)<sup>86</sup> was drawn up in early 2007 as a juncture where cluster employees, creators of public policies and scientists can access information about clusters and European cluster policy analysis. Beyond generic data on clusters, it was possible on this platform to access information on the state of regional competitiveness, cluster networks, as well as best business practices in clusters. *European Cluster Excellence*<sup>87</sup> is a European Commission's initiative from 2009 which also talks about efforts made by the Commission over the last fifteen years to insure conditions for a better functioning of clusters. This initiative is primarily focused on improving the efficiency of cluster manager efforts in managing clusters, and in creating both a clusters knowledge base and quality indicators in cluster development. The strategic objective of the European Union in the new budget period is smart, sustainable and inclusive growth. More precisely, the creating of new jobs, an increase of employment and sustainable growth are the most important factors for European competitiveness in the global market.

Despite the efforts made so far and the results achieved in the field of cluster development, in preparing the documents for the new programme period (2014-2020) it has been ascertained that although the European Union has a large number of clusters there are not so-called world-class clusters.<sup>88</sup> The new period, therefore, plans policy measures for continued improvement of conditions for cluster development and operation. Cohesion policy from 2014 to 2020 mentions clusters in the context of the national strategies for research and innovations that lead to smart specialization. Smart specialization is oriented towards the use of regional specificities for achieving economic growth, targeting research investments, development and innovation, according to the needs of the business sector and for the implementation of public sector development strategies. Innovation is a priority, for the realization of which a smart allocation of public funds into research is needed, in order to bring about the synergies of all the participants in the process. Smart specialization is possible if all the stakeholders share the vision for the development of their areas, and work together to realize it. As a prerequisite for using funds from the European Regional Development Fund, each member state is obligated to submit a national smart specialization strategy to the European Commission, before creating individual operational programmes. Smart specialization strategy marks a change from the previous regional policy that used to transfer funds to the less developed regions. It is now seeking regional specialization and the exploitation of the innovation potential of regions and their connection with the scientific, research and public sectors.

### **3. Implementation of the cluster policy in Croatia**

#### **3.1. The Identification of the Role of Clusters in Economic Development**

The creators of public policies in Croatia have recognized clusters as a desirable model for encouraging the development of competitive potentials in the Croatian economy. The Ministry of Economy, Labour and Entrepreneurship drew up a strategy of cluster

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<sup>86</sup><http://www.clusterobservatory.eu/index.html#!view=aboutobservatory;url=/about-observatory/> (accessed 11 March 2014)

<sup>87</sup><http://www.cluster-excellence.eu/3552.html> (accessed 11 March 2014)

<sup>88</sup> European Commission, *Towards world-class clusters in the European Union: {SEC(2008) 2637}*, str. 5, Communication from the Commission to the Council, The European Parliament, The European Economic and Social Committee and the Committee of the Regions

development in the Republic of Croatia 2011 – 2020, which was adopted by the government of Croatia in April 2011. This document defines the strategic approach to cluster development; the policies for their development, specific goals and measures for their attainment have been ascertained. In line with the orientation of the Lisbon agenda and the strategic document Europe 2020, within the strategy of cluster development in the Republic of Croatia, business clusters were recognized as a “tool for the strengthening of the competitiveness of the Croatian Economy.”<sup>89</sup> The goals of their establishment are given as the increase of export, introduction of new technologies to the economy, the improvement of conditions for innovation as well as the interconnection of complementary sectors. At that time Croatia had around ninety registered clusters, of which 46 clusters received financial support in the period of 2007 – 2013 for their work, for a total of 35 million HRK.<sup>90</sup> Despite all of this, it was evident that the existing clusters were not achieving the expected impacts.

### 3.2 Support to Cluster Development Project

Support to Cluster Development project was conducted in Croatia in the period from 2011 to 2013 to continue to assist in cluster development, and help in their profiling.<sup>91</sup> The project was financed with EU funds as part of the IPA programme. The goal of the project was to improve the competitiveness of the Croatian economy, through better direction of support for cluster development. An analysis of cluster sector determined that the absence of cluster financing criteria to evaluate the propensity of clusters to contribute to growth and economic development resulted in the further entrenchment of those whose existence was not sustainable. A failing of the existing clusters, proved to be the lack of the operationalization of the concept of *triple helix* cooperation. Additionally, there was an absence of “ownership” found among the participants in the clustering process of that type of participation. Furthermore non-selective approaches to the financial support of clusters which failed to result in the formation of operational structures that could bring about the cooperation of business subjects and scientific institutions, the dominant local character of established clusters (although several were established with national and international reach), the lack of guidance in developing cluster activities or the existence of real connections between clusters as representatives of business sectors and the scientific community. The point is about a modern, matrix and distributed approach, with channelled development of innovation capacities, which require synchronized and collaborative activities of the public and the private sector, respectively, the public administration, the economy and the scientific community (Radman, 2011, 48).

After analysing the state of the cluster sector and organizing educational and other training activities, which were run for cluster members and their leadership and as well as developing three competitiveness clusters, an implementation plan was drafted by the end of the project for supporting cluster development strategy<sup>92</sup>. The plan sets out not only the barriers that the cluster sector is facing, the deficiencies in understanding the development of the type of cooperation which could enhance the impact of cluster activities and increase their contribution to economic growth, but the document provides concrete recommendations for the development of policies which would advance the impact of cluster activities. The most

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<sup>89</sup>Strategy of cluster development in the Republic of Croatia 2011. – 2020., pg.13

<sup>90</sup>[http://www.minpo.hr/UserDocsImages/Podrška%20razvoju%20klastera/17.%20Provedbeni%20plan%20za%200 potporu %20Strategiji%20razvoja%20klastera.pdf](http://www.minpo.hr/UserDocsImages/Podrška%20razvoju%20klastera/17.%20Provedbeni%20plan%20za%200%20potporu%20Strategiji%20razvoja%20klastera.pdf), str.6 (accessed 12 March 2014)

<sup>91</sup>Project Support to Cluster Development, Contract No. IPA2007/HR/16IPO/001-020601

<sup>92</sup> Policy Review and Implementation Programme to support the Government of Croatia’s Cluster Development Strategy (2013-2020)

important area in which the operation of clusters should be improved is precisely the realization of the triple helix model of cooperation, where the detailed activities indicate what each of the participants in the triple helix model of cooperation should perform.

Regarding this, very important are trust and cooperation based on competencies that ultimately can provide concrete and measurable results. Achieved results are the main criteria for extension of business cooperation and eventually connection with new stakeholders.

### **3.3. The Competitiveness Cluster in Croatia – The Current Situation**

In keeping with recommendations in the Support to Cluster Development project for cluster development support and based on the selection of twelve economic areas with the largest potential for competitiveness, all twelve competitiveness clusters were developed. Clusters contributed to the process of developing smart specialization strategy for Croatia, although further significant activities were lacking after they were founded. The work of the clusters is still being guided by the Agency for Investments and Competitiveness and cluster members are not clear as a rule about how their work will be guided going forward.

Existing competitiveness clusters have the legal form of an association. In 2014, aside from participating in activities on the development of the Smart Specialization Strategy, their activities have been reduced to meeting legal obligations (adoption of annual financial statements and annual reports), while the proposals for the plan of activities in 2014 that was presented to the clusters Management Committees for consideration and implementation, were met with reservation.

Although it is evident that the economic situation and the existing constraints of the government budget require rational allocation of budgetary resources, the national funds allocated for the operational function of clusters are insufficient for any significant activity, just a year since they were established. Although future plans have clusters co-financing their activities with European Union funds, for now this is not a possibility. As the beginning of the new financial perspectives requires from each member state to first develop obligatory national strategic documents and operational programmes to access European Regional Development Fund support for investment in research and innovation, clusters face a period of limited options.

To improve cooperation among the sectors which currently cooperate poorly, there obviously needs to be an incentive to connect within the cluster framework, but that initial push is missing because only meager funds were appropriated for the financing of joint cluster activities.

## **4. Implications for managers**

Managers must monitor the policies and measures of the government systematically, and this knowledge should be enhanced by a systematic market analysis. At the same time, an appropriate strategy should be developed for connecting in clusters, as the result of visionary business thinking. Knowledge is already the primary economic engine for instances when small and medium business entities have no capacity for generating independently all the necessary knowledge. Besides this, managers must pay special attention to the engagement of more creative individuals who will collaborate with the scientific community and state administration. In this regard, specific models for motivation should be developed. The final objective of clusters, i.e. interconnection of the state administration, science and economic subjects, is the enhancement of innovation potentials and the placement of new products and services on the market. Partners must have profound confidence in each other, because the innovation process is very risky. One of the managerial tasks is the articulation of an

appropriate organizational culture, ensuring open communication channels. Flexibility and teamwork are just some of the components for successful cluster operation in terms of dominating with intangibles such as quality, speed, and design.

## 5. Conclusion

The fundamental goal of this paper was to explore why the present activities on the development of competitiveness clusters are insufficient for the functioning of the *triple helix* model. National public policies have recognized competitiveness clusters as catalysts of growth which are based on regional comparative advantages, innovations and new knowledge. The development of connections between *triple helix* partners is a pre-condition for attaining this goal; meanwhile, the absence of such cooperation is the missing link in the Croatian economy. Therefore it is of special importance that at the moment when the operational programmes of the Republic of Croatia are being developed for the use of structural funds and the Cohesion Fund of the EU, that the Croatian Government encourages further activities of competitiveness clusters with national funding. The challenges of the economic crisis, the decline in GDP, the rise in unemployment and budget shortages should be incentives for investing in sectors with the potential for improvement and acceleration of economic development, as the lack of concrete activities for the actualization of new qualitative links between these cluster partners slows cluster development and achieving competitiveness. Innovation is a priority. A smart allocation of public funds for the research and achievement of synergy of all participants is what is needed to get there, as smart specialization is feasible if all the participants share the developing vision for their area. Analysis has shown that clusters provide a framework for the implementation of efficient public policy and public funding for advancing economic development, while the lessons learned for decision-makers at different levels should serve as guidelines for the efficient application of activities to promote development of competitiveness clusters in the Republic of Croatia. This is imperative for new economic circumstances which require a new paradigm of action based on alliances and various forms of business associations where the processes can successfully realize the cluster structure. The constant innovating and launching of new products and services requires the generation of new knowledge and the engagement of creative individuals and small and medium business entities which could successfully achieve this with the help of the cluster. This is a framework for realizing sustainable competitiveness for the majority of economic subjects and the state administration should provide these processes with a supportive environment, something that has still not been fully realized in Croatia.

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**ECONOMIC EXPEDIENCE OF GLAGOLITIC SCRIPT IN  
PUBLISHING SECTOR OF CREATIVE INDUSTRY**

**EKONOMSKA KORISNOST GLAGOLJICE U NAKLADNIŠTVU  
SEKTORU KREATIVNE INDUSTRIJE**

**ABSTRACT**

*Creative industries are a new appearing sector in western societies. Various EU documents, such as ESSnet Culture (2012), Eurostat (2011) and DZS (2013), define nomenclature categories of various components of this sector, hence publishing sector as well.*

*The Glagolitic script, as well as Glagolitic tradition, is a Croatian cultural phenomenon unique for its linguistic, graphic, ethnological, anthropological and semiotic characteristics (Lukić and Horvat, 2013). What differentiates Glagolitic from other scripts is the fact that its creator is known (St. Ćiril Constantine), as well as its mission (promoting Christianity) and vision (simultaneous acceptance of both script and faith). It is the only script which justified its regional, global and economic purpose already in the 9<sup>th</sup> century. These and other unique characteristics of the Glagolitic script are prerequisites of economic expedience as well as may be utilised for the exploitation of the Glagolitic script and tradition in various components of creative industries.*

*From the standpoint of a cultural property, Glagolitic tradition and monuments testifying to its existence potentially generate those components of creative industries which have been, through cultural and religious tourism, oriented towards the consumption of existing cultural*

properties (seeing museums, churches, exhibitions, breviaries, etc.). Besides tourist connection, Glagolitic artefacts contain economic gain reflected in the production of new cultural properties inspired by original, authentic Glagolitic artefacts (the business concept of the brand Croata, boutique Mara, novel AZ, etc.). This paper aims at researching the economic expedience of the Glagolitic script within and outside of creative industries. Main results suggest that intangible cultural heritage could be both protected and exploited through publishing. In this sense, the paper puts forward the concept of the "production" of books as cultural products based on intangible cultural heritage, i.e. on its exploitation in the context of publishing. Further, the paper implies methodological inconsistencies in statistical nomenclatures referring to creative and cultural industries. The research impetus of this paper may be summed up in the following short syntagm: cultural consumption (of the publishing cultural product) invigorates and broadens national culture and its cultural identity.

**Key words:** Glagolitic script, creative industries, cultural product, statistical nomenclature, publishing, economic expedience

### SAŽETAK

Kreativna industrija sektor je u nastajanju o čemu svjedoče dokumenti (ESSnet Culture, 2012; Eurostat, 2011; DZS, 2013) publicirani od strane EU u kojima se definiraju nomenklturni razredi pojedinih sastavnica ovoga sektora, pa tako i nakladništva.

Glagoljica i glagoljaška tradicija hrvatski su kulturni fenomen, jedinstven po svojim lingvističkim, grafijskim, etnološkim, antropološkim, ali i semiotičkim odlikama (Lukić, Horvat 2013). Za razliku od drugih svjetskih pisama, glagoljičko pismo ima poznatog tvorca (sv. Ćiril Konstantin), misiju (promicanje kršćanstva) i viziju (istodobno primanje pisma i vjere) te je jedino pismo koje je već u 9. stoljeću ostvarilo regionalnu, globalnu i ekonomsku opravdanost. Ove i ostale jedinstvenosti nositelji su ekonomske korisnosti i mogućnosti eksploatiranja kako same glagoljice tako i cijele glagoljaške tradicije u različitim sastavnicama kreativne industrije.

Promatrana kao kulturno dobro, glagoljaška tradicija i spomenici koji svjedoče njezino postojanje, potencijalni su generatori onih sastavnica kreativne industrije koji su posredovanjem turizma (kulturnog i religijskog) orijentirani na konzumiranje postojećih kulturnih dobara (posjeti muzejima, crkvama, knjigama, izložbama, misalima itd.). Osim turističke poveznice, glagoljaški artefakti posjeduju ekonomsku korist koja se reflektira u proizvodnji novih kulturnih dobara inspiriranih originalnim, autentičnim glagoljaškim artefaktima (Croatina poslovna koncepcija, butik Mara, roman Az itd.). Cilj rada istražiti je ekonomsku korisnost glagoljice u i izvan kreativne industrije. Glavni rezultati upućuju na mogućnosti zaštite i eksploatacije nematerijalnog kulturnog dobra kroz nakladničko poslovanje. U tom smislu u radu se daje prijedlog modela „proizvodnja“ knjige kao kulturnog proizvoda temeljenog na nematerijalnom kulturnom dobru; tj. na njegovoj eksploataciji u nakladničkom kontekstu. Rad implicira i metodološke prijepore statističkih nomenklatura koje se odnose na kreativne i kulturne industrije. Istraživački poticaj ovoga rada moguće je formulirati u kratkoj sintagmi: kulturna potrošnja (nakladničkog kulturnog proizvoda) oživljava i širi nacionalnu kulturu i njezin kulturni identitet.

**Ključne riječi:** glagoljica, kreativna industrija, kulturni proizvod, statističke nomenklature, nakladništvo, ekonomska korisnost

## 1. Introduction

Cultural heritage management poses a challenge to holders of economic and cultural policies aimed at the effective exploitation and consumption of (in)tangible cultural heritage/products. In 2014, following the decision of the Ministry of Culture, the Glagolitic script<sup>93</sup> was inscribed into the list of intangible cultural heritage of the Republic of Croatia. On 7<sup>th</sup> February 2014 the Ministry of Culture issued a Decision, stating that *the art of reading, writing and printing of the Glagolitic script possesses attributes of an intangible cultural property*. Recognizing the importance of this decision for the future cultural strategy of the Republic of Croatia, the paper authors aim at researching the economic expedience of the Glagolitic script within and outside of creative industries, thus generating a problem discussion on the heritage script as a component of the emerging creative industries in the Republic of Croatia and bringing in their deliberations the simultaneous process of the protection of a cultural property and its consumption - in which the more frequent the consumption of an intangible cultural property is, the more protected it is - into close connection.

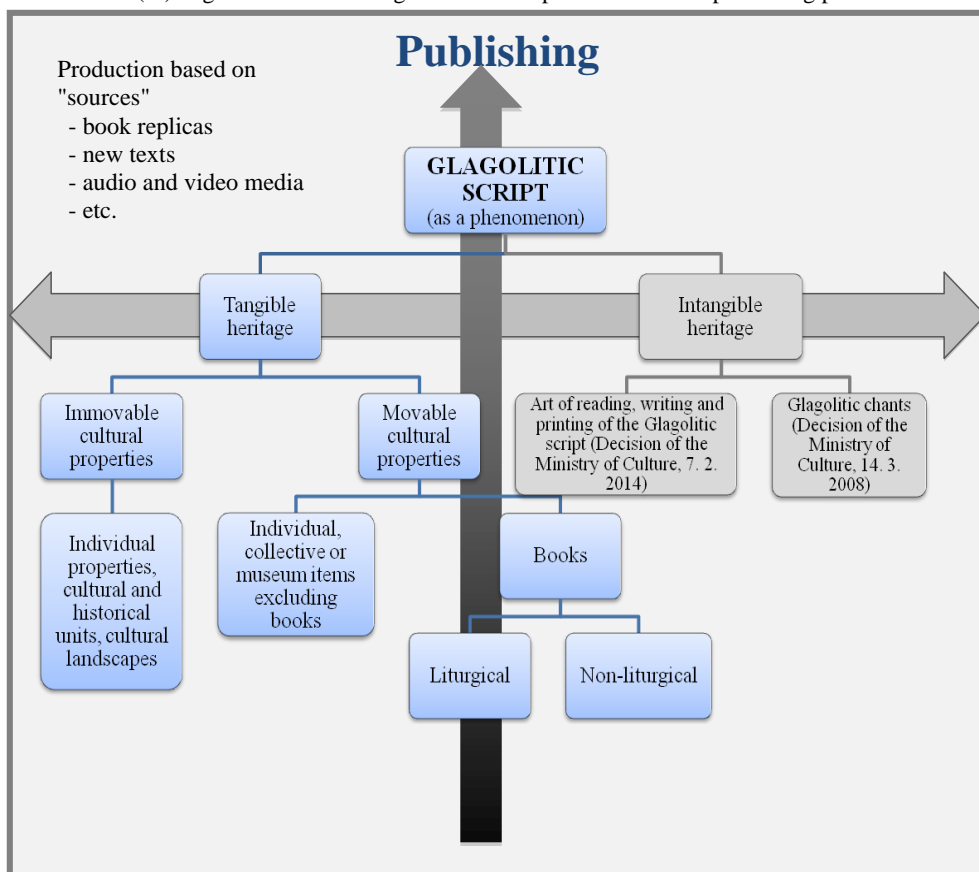
Protected cultural properties belonging to intangible heritage represent forms of cultural expression of particular significance in a certain area and their concentration i.e. dispersion bears out their historical rootedness, particularly in the traditional culture of intangible cultural heritage of high value or popular and traditional expressions that are significant from the historical, artistic, ethnographic, sociological, anthropological, linguistic or literary point of view (The Ministry of Culture of the Republic of Croatia<sup>94</sup>). The database on the Register of cultural properties of the Republic of Croatia represents the main source of information on all intangible properties protected by the law. The Scheme no.1 represents the theoretical and empirical basis of the paper, in which functions of an (in)tangible property - the Glagolitic script and a publisher as the mediator using the Glagolitic script as a cultural phenomenon so as to create a cultural product, are intertwined. In the Scheme no.1 the Glagolitic script has been regarded as a resource in the production of a future (publishing) product.

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<sup>93</sup> The Glagolitic script is the first Slavic script, created by Constantine Cyril prior to him leaving on his mission to the Moravian Slavs, in 863 (Bratulić, 1995).

<sup>94</sup> <http://www.min-kulture.hr/default.aspx?id=3639> (accessed on 18<sup>th</sup> March 2014)

Scheme 1 (In)tangible cultural heritage as the conceptual basis in the publishing production<sup>95</sup>



Source: authors

In terms of it being an intangible cultural property based on which publishers (and other partakers of creative industries) generate final products, the Glagolitic script has been perceived as an intangible cultural property generating in itself the conceptual potential for the (publishing) cultural production, as well as a symbol of "the Glagolitic cultural context" that has been enlisted as (in)tangible cultural heritage of the Republic of Croatia (the church of St. Lucia in Jurandvor, the Baška tablet and the like).

Activities of creative industries show a potential for the conversion of a cultural property (e.g. the Glagolitic script) into a cultural product (e.g. a book<sup>96</sup>) intended for a final consumer, who popularizes cultural heritage (the Glagolitic script) through the consumption of such a product, which in the long term has the potential of being converted into a cultural property

<sup>95</sup>The authoresses have drawn up the scheme following the Register of cultural properties(<http://www.min-kulture.hr/default.aspx?id=6212>) and the decision of the Ministry of Culture pursuant to which the art of reading, writing and printing of the Glagolitic script has been inscribed on the list of intangible cultural heritage of the Republic of Croatia.

<sup>96</sup><http://www.ljevak.hr/knjige/knjiga-610-az> (accessed on: 10<sup>th</sup> April 2014)

(e.g. a book as a future cultural property: Scheme no. 4). Hence, creative industries imply processes in which for instance the Glagolitic script may be, in the "hands" of a publisher transformed into a cultural product, and it in turn again into a cultural property spurred with the already protected cultural property.

This paper focuses on the pattern followed by aproducer in the exploitation of a cultural property for the purpose of its protection. The consumption of cultural products, for which initial investments are minimal (or often even unnecessary), leads to economic expedience for all partakers involved in the process of creating and shaping of a cultural product based on the Glagolitic script. The authoresses imply various points of view within the Glagolitic cultural context through the production aspect of creative industries, which they set forth on the example of publishing activities.

## **2. Publishing as a creative industries sector**

The cultural and creative sectors are a significant driver of growth and jobs in Europe, a key source of creativity and innovation, as well as contributing significantly to social cohesion and well-being (European Commission, Culture, 2009<sup>97</sup>). Approaches taken with regard to defining cultural and creative industries differ, however two definitions given by two international institutions are often cited- UNESCO's definition of culture dated 2001 and that of the European Commission dated 2010. The UNESCO definition states that 'Culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs' (UNESCO, 2001). The European Commission Green Paper (2010) defines the cultural and creative industries as follows:

Cultural industries are those industries producing and distributing goods or services which at the time they are developed are considered to have a specific attribute, use or purpose which embodies or conveys cultural expressions, irrespective of the commercial value they may have.

Creative industries are those industries which use culture as an input and have a cultural dimension, although their outputs are mainly functional. They include architecture and design, which integrate creative elements into wider processes, as well as subsectors such as graphic design, fashion design or advertising.

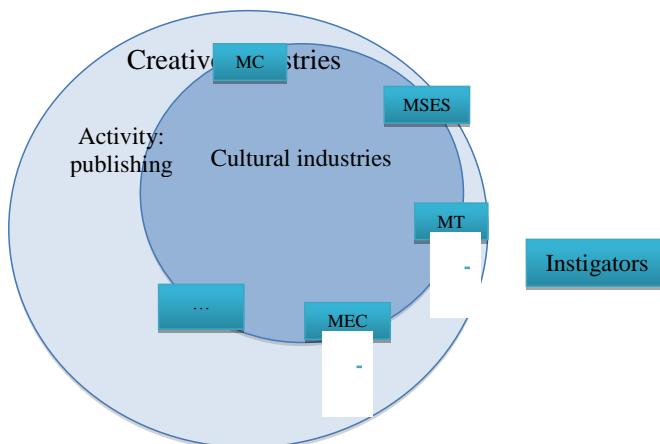
Defining the creative industries sector presupposes having an insight into the nomenclature-based classification of all activities included in the sector. In the Republic of Croatia, those activities belonging to the (future) creative sector are for the time being dispersed in various categories and subcategories of all other activities. Experiences from other countries reveal that creative industries are associated with the knowledge economy and that new technologies, investments in ICT, researches, innovations, education and trainings are of great significance for their development (Bartolčić et al, 2013). Likewise, cultural industries include "those activities which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property" (Fleming, 1999: 33).

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<sup>97</sup>[http://ec.europa.eu/culture/our-policy-development/eurostat-essnet-culture\\_en.htm](http://ec.europa.eu/culture/our-policy-development/eurostat-essnet-culture_en.htm) (accessed on: 9<sup>th</sup> November 2013)

Despite their discernible usage in the creative industries sector, there is still no uniform classification of creative industries at the level of the EU or other large conglomerates. In Croatia, all the activities of the future creative industries sector are present, however only cultural activities have been integrated within the cultural sector<sup>98</sup> and organized under the Ministry of Culture, unlike all other creative activities, the classifications of which are not considered an integral part of creative industries. Hence, from the formal and legal point of view creative industries do not exist in the Republic of Croatia and the establishment thereof will substantially determine the future work of the creative sector, and thus also publishing as one of the activities which are implemented simultaneously in both cultural and creative industries and presuppose a synergetic cooperation of various competent authorities-instigators<sup>99</sup> for its efficient operation. It should however be borne in mind that the concept of creative industries is wider than the cultural one and that it comprises also those activities operating solely based on market valorisation (e.g. architecture, advertising, design, fashion and the like). Publishing companies operate in both sectors (both in the cultural and creative) and can devise its activities in cooperation with as many partakers in creative strategies (Scheme no. 2).

Scheme 2 Publishing activities in creative and cultural industries



Source: authors

For the purpose of the full comprehension of the Scheme no.2 it is important to note that, according to the current structure, the publisher represent a natural person or a legal entity initiating book publication, bears the costs of its publishing and is in charge of its production and distribution (NSK, 2014<sup>100</sup>).

Bartolčić et al (2013) believe that publishing is an industry no society can develop without and that it contributes to the preservation and development of a society's culture, ensures information sharing, enables the development of democracy in the society, etc. Although the creative industries sector, in which publishing holds a position already due to its belonging to

<sup>98</sup><http://www.min-kulture.hr/default.aspx?id=5>(accessed on: 2<sup>nd</sup> April 2014)

<sup>99</sup> In this paper, the term "instigators" refers to competent authorities inviting tenders for the instigation of publishing activities (MC – Ministry of Culture, MSES - Ministry of Science, Education and Sports, MT – Ministry of Tourism, MEC – Ministry of Entrepreneurship and Crafts)

<sup>100</sup><http://www.nsk.hr/isbn/>

creative industries, is not legally regulated and structured in the Republic of Croatia, this paper discusses publishing as a component of creative industries and its role in the creation and exploitation of cultural heritage aimed at creating a cultural product.

In the classification of activities belonging to creative activities, publishing is found among activities utilizing the cultural capital (of a community, society, and nation) and is therefore entitled to *subsidies* (granted by political, economic and cultural decision-makers), however it at the same time generates manufacturing *profit*. In other words, although the publisher is, in the conduction of its business, driven by profit, it at the same time – due to its social and cultural responsibility- also relies on the system of incentives and subsidies. Incentives referring to cultural and creative industries are awarded by European and world instigators (EU strategy 2013-2020, the UNESCO, etc.), national (MC, MSES, MEC, MT) and regional and local fosterers (cities, county and various associations).

Publishing is a sector which is almost forced to develop both sorts of activities, i.e. the production of a cultural product which is prompted/ evaluated in two different ways: a) by institutions of the social community, b) on the market (through sales).

Subsidies and incentives awarded for creative (cultural) industries foster the production and promotion of the (publishing) cultural product as well. The production is fostered through the system of various subsidies and incentives<sup>101</sup>, and promotion through the organization of various events (e.g. Book Festival, Culturenet programme of Croatian books' translation<sup>102</sup>) and system of awards (e.g. Iso Velikanović Award<sup>103</sup>). In both cases a publisher relies in the cultural production, while developing the initial idea for a publishing product, on cultural heritage. It follows from the aforementioned that a publisher, by uniting literature production which is based on cultural heritage, obtains a financial, marketing and social benefit. Pursuant to the Decision of the Ministry of Culture dated 7<sup>th</sup> February 2014, the Glagolitic script is an intangible cultural property whose production potential is still unexplored and untapped.

The future of creative industries will largely rely on the ability to monitor its development and evaluate the efficiency in constructing a creative product. The first prerequisite to be ensured is the formation of a statistical and methodological groundwork that would conform to related nomenclatures in the EU<sup>104</sup>. This would ensure that the development of creative industries is strategically guided, and thus also the assessment of its effect upon the publishing industry in the Republic of Croatia, economy in general, as well as the culture of the community which is related with the publishing sector in the closest possible manner (through textbooks, monographs and other publications in which the memory of the whole society is preserved/bequeathed/ evaluated).

## 2.1. Statistical nomenclatures in the publishing sector

Statistical monitoring of creative and cultural industries is aggravated or in certain countries even impossible (for instance Croatia) due to the absence of a uniform statistical nomenclature. The absence of a statistical nomenclature can be grounded in the fact that creative industries is an emerging sector and that there is no solid legal framework behind it.

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<sup>101</sup> Overview of incentives for books for 2013: <http://www.min-kulture.hr/userdocsimages/Odobreni%20programi%20u%202013.%20godini/potpورا%20izdavanju%20knjiga%20u%2031.07.2013.pdf> (accessed on: 4<sup>th</sup> April 2014)

<sup>102</sup> Full list of events cofinanced by the Ministry of Culture related to the book and publishing sector: [http://www.min-kulture.hr/userdocsimages/Odobreni%20programi%20u%202013.%20godini/Knjizevne%20manifestacije%202013\\_odobreno%2018.03.2013..pdf](http://www.min-kulture.hr/userdocsimages/Odobreni%20programi%20u%202013.%20godini/Knjizevne%20manifestacije%202013_odobreno%2018.03.2013..pdf) (accessed on: 4<sup>th</sup> April 2014)

<sup>103</sup> <http://www.min-kulture.hr/default.aspx?id=194>

<sup>104</sup> which are also being developed (Report of the ESS Culture 2012, 133).



Initiatives of statistics organizations (Eurostat and ESS<sup>105</sup>) show a tendency towards the creation of parameters of cultural/creative industries and deliberations on a future legal structure by means of which four practices of EU countries currently used in defining key concepts in this domain would be unified (Tomašević, 2013). The economic definition rests on a clear legal precept which assumes on the other hand the theoretical and practical mastery and understanding of the phenomenon under discussion. It is assumed that future unified definitions will be discussed within economic practices. They represent, as already noted, prerequisites for a statistical comparison at European and world level. In the Republic of Croatia, statistical data related to the book and publishing may be obtained using nomenclatures currently in force (National Classification of Activities, NKD 2007) and all inconsistencies arising from statistical analyses of the publishing industry are burdened by non-unified classifications of cultural and creative activities. Publishers themselves believe (Bartolčić et al, 2013) the National Classification of Activities (NKD) to be somewhat misleading for researchers not having first-hand experience and knowledge on how it functions, since a number of publishers have been registered under a code that does not provide accurate information on a company's nature.

Tomašević (2013) notes that systems of constructed and unified nomenclatures represent at the same time the basis for corrective and emergency measures and an argument in the planning of the future of both publishing and the whole sector of cultural and creative industries.

### **3. Creation of a cultural product through publishing**

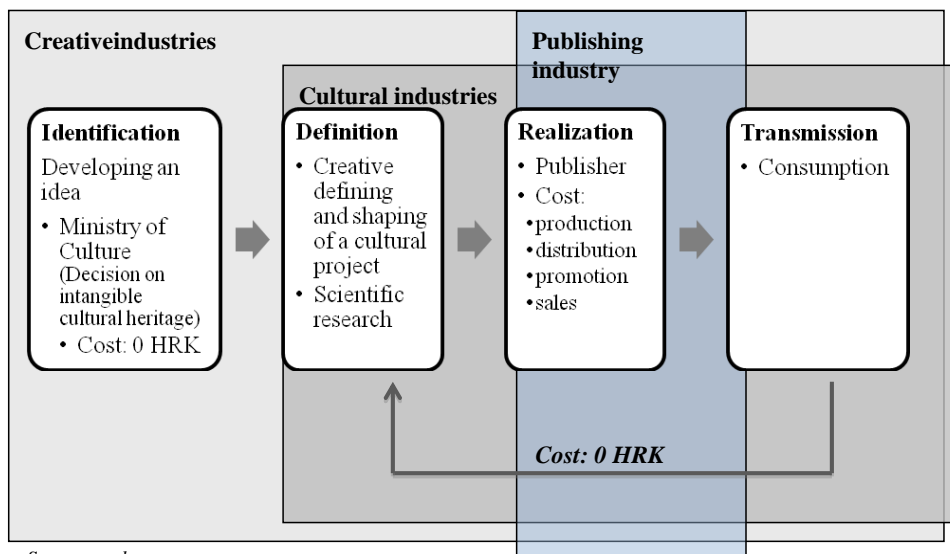
Discussing a cultural product necessarily includes deliberation about production within cultural and creative industries. According to KEA, 2006, in: Švob-Đokić et al, 2008: 58, "cultural/creative industries involve the production of cultural properties (film, video, book and other products of the publishing industry, music products, etc.), new information and knowledge reproduced through the utilisation of new (communication) technologies." It should be noted that a publishing cultural product possesses a significant feature which, in addition to its tangible value, holds an intangible value as well, primarily discernible in its distinct effect on the society. One of the ways in which a publisher influences a society is the popularisation of cultural heritage through its consumption i.e. "consumption" of publishing products. In its strategies (2011), the Ministry of Culture stated that utilising cultural heritage may generate profits, a part of which is reinvested into its protection, thus contributing to the sustainability of cultural heritage and simultaneously enabling addition financing from sources other than budget.

Economic utilisation of cultural heritage affects the raise of the awareness and understanding of its importance to the preservation of cultural identity, community and social cohesion. In this regard, cultural heritage is observed seen through two forms: cultural tourism and entrepreneurship based on cultural heritage. The Decision of the Ministry of Culture further states that "management of production and reestablishment of a cultural property through its consumption should encourage the participation of the community and groups inheriting a property in the identifying, defining, realization and transmission of a property." The said has been taken into consideration by the authoresses of this paper in the drawing up of Scheme no. 3, which illustrates the flow of production exploitation of a cultural property in the function of its protection. The scheme is designed using the example of a publishing company.

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<sup>105</sup>European Statistical System

Scheme 3 Production exploitation of cultural properties aimed at its protection set forth on the example of a publishing company



Source: authors

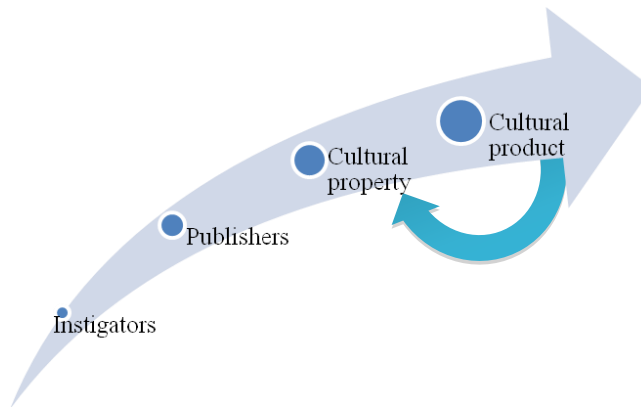
As partakers in cultural industries, publishing companies define their cultural projects, run them through the production of publishing products and take care of their distribution as a prerequisite for consumption. Unlike some other products, a publishing cultural product manages to receive subsidies from instigators (MC, MSES, MT, etc.). Instigators' subsidies are directly related to subsidies for the promotion of culture (tenders for subsidies to publishers in books' releasing), but also to promotional activities affecting books' distribution, marketing and sales. Although the publisher receives subsidies for the production of cultural products, it can autonomously dispose of the profit generated from a realized cultural product. Taking into account the role of the publisher in a social - cultural context, the said synergy of instigators and publishers results in a very specific production and business circle in which production exploitation of a cultural property is utilised for the purpose of its protection. Cultural identities without their "consumers" disappear sooner or later, while their frequent consumption leads to the reestablishment of cultural resources. The authoresses of this paper observe the economic expedience of the Glagolitic script through its protection in terms of publishing.

### 3.1. Protection and exploitation of the Glagolitic script through publishing activities

The Glagolitic script as a cultural property is to be researched and creatively transformed into a publishing cultural product. As noted in the Scheme no.3, the consumption of cultural properties itself reflects the culture and leads to a twofold expedience for a publisher. The publisher achieves the first one by generating profit through the consumption of a cultural product (a part of profits is obtained from fosterers for the creation of a cultural product and the rest from the sales of the produced cultural product). The second expedience the publisher obtains is long-term and is reflected on the creation of the publisher's image with the

possibility of its cultural product being transformed into a cultural property through a long-term consumption thereof (Scheme no. 4).

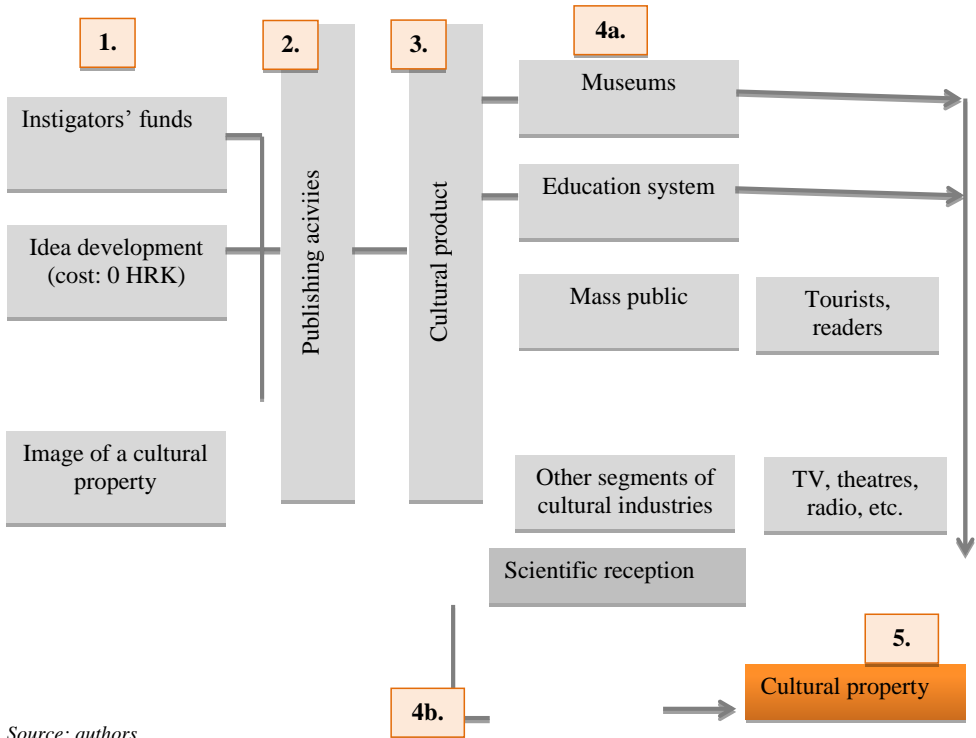
Scheme 4 Process of cultural product creation based on publishing activities



Source: authors

If applied on the Scheme no.4, the creation of a cultural product based on the Glagolitic script as an intangible cultural property within the framework of publishing activities would suggest that the publisher addresses its instigators on the open tender and submits a cultural product shaped based on the Glagolitic script as a heritage script. Should such a publishing product take hold (through the sufficient circulation and notable public and scientific reception), so would its frequent consumption be ensured and in turn prerequisites for the cultural product's transformation into a cultural property created. However, it should be taken into account that the creation of a cultural product based on the Glagolitic script should be customized to the segment (of consumers) being approached. The publisher shall then, depending on the chosen segment of *performance* (production, distribution, marketing and sales), customize the cultural product. Although the Glagolitic script is both an intangible and tangible cultural property and can be - depending on a publisher's emphasizing of the first, second or both of these two features thereof - managed differently, which at the same time suggests various forms of its exploitation, it is crucial for publishers to set the book as the imperative within which *the living culture does not disappear, that is the cultural consumption (of a publishing cultural product) revives and expands the national culture and its cultural identity*. The Scheme no. 5 illustrates in detail the exploitation of the book as a cultural product based on the Glagolitic heritage- an example of a protected intangible cultural heritage of the Republic of Croatia.

Scheme 5 Exploitation of the book as a cultural product based on the Glagolitic heritage



Source: authors

From the economic point of view, the conceptual potential of the Glagolitic script contained at the source of a new cultural product is a value for which no costs have to be borne. As any other cultural property so is the Glagolitic script also available for everyone's use and a production of such a publishing cultural product based on the Glagolitic script shows economic expedience already in the first step of publishing activities – in the (non-)financing of a product's development idea. A publisher at the same time receives funds from an instigator for the production of a cultural product inspired by a cultural property and takes up all benefits the cultural property carries in its image. The second step includes all other publishing costs commonly borne by the publisher (for instance editorial and author royalties, graphic and visual design, language editing, proofreading, reviewer's honorarium, printing costs, etc.) and the third step the publishing production of the product itself. The latter step implies the necessity of a nomenclature-based separation of all significant features of publishing activities necessary for the production of a cultural product and it is at the same time significant in recording the distributions of a cultural product, its consumption place i.e. market valorisation. The next step (4a) includes, along with the market valuation, the public reception (educational system, museums and other cultural segments of cultural industries). Shall the publisher receive a notable market and public reception, their publishing product will experience scientific reception (4b) as well, which in the long-term leads to designating that publishing cultural product as a new cultural property (step 5).

#### 4. Discussion

The global society increasingly economizes with cultural diversities. Cultural diversities can be effectively recognized upon the examination of the registers of tangible and intangible heritage. In the Republic of Croatia, the Glagolitic cultural context is inscribed into tangible and intangible cultural heritage. Through the inclusion of the art of reading, writing and printing of the Glagolitic script into intangible cultural heritage (MC, 07.02.2014) the Glagolitic script has become an attractive economic conceptual source in matter and manner. In this sense, publishing is brought into the focus of attention, particularly if taken into account that it represents the manufacturing potential of an emerging sector - the creative industries sector.

Inconsistencies in the creative industries sector arise precisely from the fact that creative industries are an emerging sector. It is therefore marked by unsystematic statistical nomenclature, overlapping in the categorization and enumeration of finished products regardless of whether products are categorized by the criterion of their pertaining to a certain production branch or by the profit gained through sales turnover. Publishing, as well as other future branches of the creative industries sector is facing the challenge of organizing and adapting its activities to this emerging sector, within which there is space and interest for the exploitation of cultural heritage. This is supported by the current standpoint taken by the competent authority with regard to needs for the fostering of sustainable development of intangible cultural heritage<sup>106</sup>. Another issue publishing nomenclatures face is the absence of national working groups (bodies) that would deal with issues of national (Croatian) culture, examine nomenclatures and devise measurement customized for the need of cultural/creative industries, i.e. gather more detailed data on cultural/creative industries with the purpose of a review and clearer systematisation of the data.

Economic expedience achieved through the consumption of the Glagolitic script as a cultural property in the production of a publishing product includes a number of benefits for the publisher. In addition to getting an opportunity to partake in foresters' tenders for the creation of cultural products inspired by a cultural property, the publisher, when producing these products, generates a positive image of a cultural property which it incorporates into a product and it does not bear any costs for the development of an idea. In addition, when distributing and promoting its cultural product, the publisher receives stimulus from the wider social community. On the other hand, the usage of a cultural property for publishing purposes results in the creation of a cultural product that may become, in the long term, a cultural property and the process of a cultural product creation itself can, based on the same protected cultural property alone, begin anew and hence contribute to the economic expedience of publishing activities.

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<sup>106</sup> Arguments laid down in the said document (Ministry of Culture, 2011) include, among other: equal inclusion of representatives of all levels and sectors (state and competent institutions, museums, non-profit organisations, associations, local government and local community) in the planning of utilising intangible heritage for the purpose of its preservation; inclusion of intangible heritage into new business practices (particularly opportunities provided by the electronic and Internet environment), which would ensure a better perceptibility of intangible heritage and prompt the younger generation, upon which the transmission and preservation of that heritage depends.

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**COMMUNICATION PROCESSES OF THE INFORMATION AGE AND  
SEMIOTIC COMMUNICATION USING THE GLAGOLITIC SCRIPT  
IN PUBLISHING**

**KOMUNIKACIJSKI PROCESI INFORMACIJSKOG DOBA I  
SEMIOTIČKO KOMUNICIRANJE GLAGOLJICOM**

**ABSTRACT**

*Communication processes of the Information Age demand the implementation of all civil legacies of communication, their integration into a well-organised communication system and the construction of new communication methods, channels and technics. This paper analyses features of communication processes of the Information Age as well as the influence of new e-technologies on methods of communication, notably in regard to organisation, management and the market. The emphasis is on analysis of those communication processes that are based on script and written word, that is, on those technical aids which use a Latin alphabet keyboard for communicational purposes. The Latin alphabet is, therefore, viewed as a means of communication and its character potential, especially that which relies on information age technology, is examined.*

*The research of the character potential of the Latin alphabet includes comparison of features of the Latin script to the writing system known as the Glagolitic script. Glagolitic is described in its genesis as well as in the ability of the Glagolitic system of characters to convey a threefold message with a single character (each character is simultaneously a grapheme, a number and a symbol). Also discussed is the ability of Glagolitic characters to form a „symbolic sentence“, which is a result of the order in which they are placed in a character unit and their ability to convey a twofold message: a) „a word“ or „a symbolic sentence“, which communicationaly is more demanding and complex. The said attribute of Glagolitic characters (graphemes) indicates their ability to create, unlike the letters of the Latin alphabet, communication by variations in the order in which they are placed within a single*



*meaningful unit and according to their place in the „symbolic sentence“ (the order accorded to them in a character sequence) and according to their graphemic-phonetic meaning when they are read and interpreted as a „word“ that is an integral part of the language. This shows how the Glagolitic script effectively creates semiotic communication and thus is observed as a model for setting a paradigm for potentials of Latin and other written characters in communication processes of the Information Age.*

**Key words:** *communication processes, Information Age, management, semiotics, Glagolitic, publishing*

## SAŽETAK

*Komunikacijski procesi informacijskog doba zahtijevaju implementaciju svih uljudbenih stečevina komuniciranja, njihovu integraciju u promišljen komunikacijski sustav te izgradnju novih komunikacijskih sredstava, kanala i tehnika. U radu se analiziraju odlike komunikacijskih procesa informacijskog doba i utjecaj novih e-tehnologija na načine komuniciranja posebice u organizacijskom, upravljačkom i tržišnom smislu. Pri tome se naglasak stavlja na analiziranje onih komunikacijskih procesa koji su temeljeni na pismu i pisanoj riječi, odnosno, na onim tehničkim pomagalima koja za pretpostavku komuniciranja koriste tipkovnicu označenu slovima latinice. Latinično se pismo, dakle, promatra kao sredstvo komuniciranja te se razmatra njegov znakovni potencijal, posebice onaj koji se naslanja na tehnologiju informacijskog doba.*

*U cilju istraživanja znakovnog potencijala latiničnog pisma uspoređuju se odlike latiničnog pisma sa sustavom pismena poznatim pod nazivom glagoljica. Glagoljica je opisana u svojoj genezi kao i u sposobnosti glagoljičkog sustava znakova da jednim znakom istodobno prenesu trovrstu poruku (svaki znak istodobno je grafem, broj i simbol). Pri tome se ističe sposobnost glagoljičkih znakova da tvore „simboličku rečenicu“, odnosno, da, ovisno o poretku kojima su nanizani u znakovnoj cjelini, uspijevaju ostvariti dvojaku poruku: a) „riječ“ ili, b) „simboličku rečenicu“ – komunikacijski zahtjevniji kompleks. Ovo svojstvo glagoljičkih znakova upućuje na sposobnost glagoljičkih znakova (grafema) da variranjima u svojim poretcima unutar jedne smislene cjeline, za razliku od slova latiničnog pisma, ostvaruju komunikaciju i svojim položajem kada čine „simboličku rečenicu“ (poretkom koji im je dodijeljen u znakovnom nizu) i svojim grafemsko-fonemskim smislom kada se čitaju i tumače kao „riječ“ koja je sastavni dio jezika. Cilj rada jest pokazati kako glagoljičko pismo uspješno ostvaruje semiotičko komuniciranje te se na taj način promatra kao model za postavljanje paradigme o potencijalima latinice u komunikacijskim procesima informacijskog doba.*

**Ključne riječi:** *komunikacijskih procesi, informacijsko doba, upravljanje, semiotika, glagoljica, latinica, tipkovnica*

### 1. Communication processes

It is not easy to define communication unambiguously since it permeates human society and is used in many different ways. Most generally speaking, communication can be verbal or non-verbal. „Communication“ is defined in the Merriam-Webster Dictionary<sup>107</sup> as (1) the act or process of using words, sounds, signs, or behaviours to express or exchange information or to express one's ideas, thoughts, feelings, etc., to someone else, and (2) as a message that is given to someone: a letter, telephone call, etc. Communication is extremely vital to any

<sup>107</sup><http://www.merriam-webster.com/dictionary/communication>, accessed 4.25.2014.

discipline and even more so when disciplines come together. Defining communication depends on the goal of the investigation and on the specific context and, as observed from scientific investigations, investigators approach communication processes from different perspectives. So, for instance, communication is viewed as communication within the workplace (Argenti and Forman, 2002; Whittaker et al, 1994; Clyne and Clayne, 1996), communication with consumers (Givens, 2006; Kuksov et al, 2013), communication in the service industry (Neo, 2011; Santana et al, 2010), etc.

If a communication process is viewed as the transfer of information from sender to receiver under the condition that the receiver understands the message (Weirich and Koontz, 1998), we come to an assumption made by Turunen (2005), which states that communication forms society and is based on signs of communication.

The Information Age changes communication processes and demands new deliberations on communication based on a script. Ivas and Žaja (2003) indicate that New technologies may, and for the most part do, change human communication and in the long run human society. Computer communication is no exception in this respect. Persons communicating by computer try to make the most of its advantages, while at the same time attempting to overcome its constraints as much as possible. One of the drawbacks of communicating by computer is the physical absence of the interlocutor and the actual communication setting, and thus of an enormous amount of both non-verbal and co-verbal information signals.

## **2. Communication processes of the Information Age**

The Internet is the latest in a long succession of communication technologies. During the past two decades, Internet technology has facilitated a large amount of nearly instantaneous interpersonal communication, not only between strangers, but also between those who have already established a face-to-face relationship (Lenhart et al., 2001). Although a number of studies have examined the impact of the Internet as a tool for synchronous and dyadic conversational interaction through different services such as Instant Messenger (IM) and ICQ ("I Seek You"), the major focus has been on the dynamic of the anonymous relationships Internet users form with strangers (Bargh et al, 2002), both areas of which illustrate that the new era makes communication not only more complex and more important, but more challenging in terms of the sending of the message. Ivas and Žaja (2003) observe that the majority of communications on the Internet are written communications; if they do not communicate by audio or even audio-visual channels, which have become available in recent times, participants in conversation do not see or hear each other. This phenomenon affects communication, especially its efficiency. Ivancevich and Matteson (2002) mention that for efficient communication it is necessary that the receiver understands the meaning of the message and indicates it to the sender through some expected reactions. Ivas and Žaja (2003) also show how in the Internet age new communication symbols are being created (using emoticons as an example<sup>108</sup>) whose communicativeness is achieved by non-graphic,

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<sup>108</sup>“Emoticons or smileys are graphic expressions of emotions, moods and opinions (usually schematically representing certain facial expression), actions, situations, living creatures and objects. The term 'emoticon' is a combination of the English words *emotion* and *icon*. Perhaps, for a more precise definition, all of those signs in a broader sense should be called emoticons, and only those emoticons which show emotions with a picture of a face should be called [?] and, in an even narrower sense, only smiling faces should be called smileys. They are the result of redesigning graphic textual signs, letters, numbers, punctuation marks and numerical symbols, so that those signs in different combinations serve as material for creating schematized pictures ... Most often they are used for commenting on verbally (linguistically) expressed messages, that is, a text in a narrower sense” (Ivas and Žaja, 2003: 82).

conventional signs – letters, numbers, punctuation marks, mathematical symbols and other characters available on a computer keyboard. The said authors see this as the practice of redesignation or reinterpretation of signs, namely, iconisation of arbitrary signs and naturalisation of conventional signs. „It is the mixture of graphics (naturalness) and conventionality (sociability) that makes emoticons diagrams, the sort of iconic signs that were first defined by Charles Sanders Peirce as an instrument for a graphic presentation of relations in an object or a phenomenon they represent and whose functioning furthers a certain degree of conventionality (Jakobson, 1966: 170). Conventionality enabled the reduction of graphics, that is, the stylisation and schematisation of a picture. Emoticon pictures have different proportions of graphics and schematisation.“ (IvasandŽaja, 2003: 83). The said attributes of new communication symbols suggest the phenomenon of the need to create a *multiple sign script*. Following this assumption, the authors consider the Glagolitic script as a *multiple sign script* and continue to explore its basic communication features.

In so doing, the authors aim to show how the inclination of the Glagolitic script to convey symbolic messages is akin to Internet communication which is (according to Ivas and Žaja, 2003) analogous to artistic language. The authors state that Internet communication is inclined to the creation of “special worlds” – so-called *possible worlds*, that are called *phantasmic or virtual worlds* in computer communication, and what they have in common is detachment from customary, functional communication. “While playing with available keyboard characters, features that were once considered to be predominately features of artistic language are appearing, namely the so-called *poetic function* – or, as Jakobson (1960) defined it, a pronounced orientation to the form of a message. However, such messages confirm some of the critiques of Jakobson's division of verbal (linguistic) functions. One critique indicates that it is impossible to talk about a “function” since that term means “informative-practical” functioning, while that which Jakobson calls a poetic function is completely different from all other verbal functions, since it is “worldcreating” (Užarević, 1990: 92-98). The other critique supplements Jakobson's lapidary definition of the metalinguistic function as an orientation to a code with the purpose of verifying the meaning of a message, and claims that the connotation of a code is important for artistic-language communication because of the need to compensate for a specific verbal situation, and for determining the affiliation of a message to a certain type of message (genus, species, genre) also indirectly, and for determining the affiliation of a sender to a group that creates such messages (Kravar, 1983: 398-402)” (IvasiŽaja, 2003: 89-90).

### 3. Glagolitic script – a multiple sign script

The Glagolitic script (azbuka) was created for the Old Church Slavonic in the second half of 9th century (862/863) for the Slavic people in Moravia, and it became a unique script for all Slavic peoples and spread together with the Old Church Slavonic at one part of their history in a part of their original territory. By the 12th century it was no longer being used by most Slavic peoples, except in a part of the Croatian national territory where it continued to be used until the mid 19th century. Glagolitic letters are at the same time phonemic signs in (the Old Church Slavonic) language, numeral signs and symbols<sup>109</sup> (in a philosophical-theological system) which, in and of itself, suggests an extraordinary potential for semiotic communication (Lukić and Horvat, 2013).

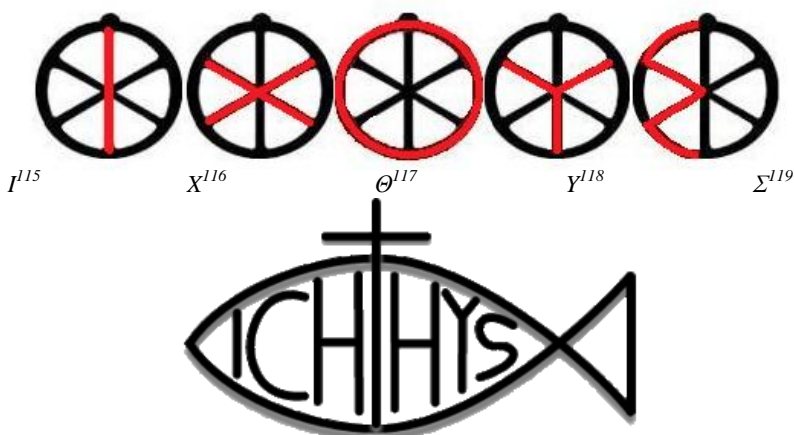
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<sup>109</sup> What is meant is a symbol in a narrow sense as when it is viewed as a subclass of signs. There are three main types of definitions in a narrow sense: a symbol as a *conventional sign*, as a type of *iconic* (graphic) sign, and as a sign laden with special *connotations*. Glagolitic letters as symbols can be defined by all three definitions.

Glagolitic is a multi-communicative script whose symbolic-philosophical structure is still the topic of research papers (Žagar, 2013; Sambunjak, 1998; Sambunjak, 2007; Velčeva, 2009; Lukić and Horvat, 2013; Horvat et al., 2009). One can communicate with grapheme (letter/signs) forms, but also with a letter module – a form out of which graphemes arise. Žagar states that there is "no doubt that it is precisely Byzantine 9th century visual art and spirituality in general that brought about the creation of the geometrically transparent unique module within which the letters of Glagolitic alphabet were composed" (Žagar, 2013: 110). In fact, it is a module in the form of a rosette, or a circle divided into eight equal parts, which was considered for centuries to be Christ's monogram and was used in the days of the persecution of Christians in the Roman Empire in the same capacity as the fish, that is, as a sign of recognition.

Actually, Christ's monogram is an „acronym into which the Greek word IXΘΥΣ (fish) could have been inscribed – which symbolically (with an outline of a fish) and by the composition of letters of the word itself signified the person of Jesus Christ through the letters in the order: I = Ἰησοῦς – Jesus<sup>110</sup>, X = Χριστός – Christ/Anointed One, Θ = Θεοῦ – of God<sup>111</sup>, Y = Υἱός – Son<sup>112</sup>, Σ = Σωτήρ – Saviour<sup>113</sup>“ (Žagar, 2013: 110).<sup>114</sup>

Scheme 1 Symbolic meaning of a rosette – letter module into which Glagolitic graphemes were inscribed



Source: authors

<sup>110</sup> ἸΗΣΟΥΣ (Iēsoûs „Jesus“)

<sup>111</sup> Θεοῦ (Theoû „of God“)

<sup>112</sup> Υἱός (Hyiós „Son“)

<sup>113</sup> ΣΩΤΗΡ (Sōtēr „Saviour“)

<sup>114</sup> „However, the same author states that that form „was known in the age of pre-Christian civilizations, and was constant in symbolising divine and human values and was engraved among the ruins of Ephesus and, it is presumed, marked places in which Christians gathered. Interestingly, a mosaic of the same form exists in front of a parish church in Vrnbik, a town on the Glagolitic island of Krk.“ (Žagar, 2013: 110)

<sup>115</sup> ἸΗΣΟΥΣ (Iēsoûs „Jesus“)

<sup>116</sup> Christ/Anointed One

<sup>117</sup> Θεοῦ (Theoû „of God“)

<sup>118</sup> Υἱός (Hyiós „Son“)

<sup>119</sup> Σωτήρ – Saviour

The Glagolitic system of characters has the ability to convey a threefold message with a single character (each character is at the same time a grapheme, a number and a symbol). It is important to keep in mind that Glagolitic characters convey a very specific message (of Christianity) and also that Constantine Cyril the Philosopher (the creator of Glagolitic script according to endogenous theories) promoted ideas of Christianity with the alphabet, which is why he systematically imbedded the idea of Christianity into the „visual and contextual identity of each individual character, but also into all of the characters aligned in alphabetical order“ (Horvat et al, 2009: 161).

The appearance of graphemes support this theory since in their initial form (Proto-Glagolitic) they consisted of combinations of a triangle, a circle and a cross inscribed in a rosette as a letter module. The triangle, circle and cross are also the basic characters of the Glagolitic script and their interpretation is also related to the religious concept it conveys: the triangle signifies the Holy Trinity, the circle signifies the wholeness of Divinity, and the cross signifies Christ and his suffering (Bratulić, 2009: 41).

Accordingly, Glagolitic characters have the capacity to create a „symbolic sentence“. Namely, in respect to the meaning they create individually and in the order in which they are aligned in a character unit, Glagolitic character formations<sup>120</sup> communicate in two ways: a) as a word<sup>121</sup> and b) as a symbolic sentence<sup>122</sup>. Schematising their communicational doctrine results in Table 1:

Table 1 Communication features of Glagolitic characters

Letter module for construction of Glagolitic characters	rosette <sup>123</sup> (circle with 8 sections – symbol of Christianity)
Dominant symbols	3 characters: circle cross triangle
Level of construction	tetragonal (ones, tens, hundreds, thousands)
Structure of levels	based on number 9 (9 ones, 9 tens, 9 hundreds)
Character communicativeness	threefold each character is simultaneously a letter, a number and a symbol
Communicativeness of character formations	- word - symbolic sentence
Story interpreted by and conveyed by system of characters	Christianity
First letter	A (azъ)
Last letter	Ī (ižica)
Meaning of first 9 characters as a symbolic sentence	names of first letters of azbuka: a, b, v, g, d, e, ž, 3, z, convey the message: <i>I, who know letters, say it is good to live on earth</i> , Damjanović (2007: 9)
Estimated number of characters	30

Source: authors

<sup>120</sup> The term *character formations (character unit)* implies sets that consist of more than two characters.

<sup>121</sup> Explanation: a spoken word is written by arranging characters (graphemes) according to their phonemic sonority.

<sup>122</sup> Explanation: the names of the first letters of azbuka: a, b, v, g, d, e, ž, 3, z viewed in their symbolic order make a character set that conveys a message: *I, who know letters, say it is good to live on earth*.

<sup>123</sup> According to the theory developed by Vasil Jončev in the 1980s.

Bearing in mind the fast spread of the Glagolitic script<sup>124</sup> and that the Glagolitic presentation of Christian thought can be observed as a precursor to contemporary semiotical marketing (Horvat et al, 2009), the discussion on the communication capabilities of the Glagolitic script opens up a number of questions, including the following: how to send a letter, numerical and symbolic message with only one grapheme/logo/sign?; how to use the arrangement of logotype expressions as a communication signal?; how to persuade a user of a message to adopt that message as an object of personal identification?; how to expand a message within a family or some other communication circle, etc.?

Furthermore, the knowledge of Glagolitic signs also opens up questions related to the communication ability of the Latin script, its semiotical potential in the Information Age and investigative challenges that derive from it.

#### 4. The potential of semiotical communication in the Information Age

As opposed to the Glagolitic script – created in the 9<sup>th</sup> century for the purpose of Christianisation and the spreading of literacy (Lukić and Horvat, 2013) and whose creator, purpose and mission are known, the Latin script<sup>125</sup> is a much older script whose character order is called *alfabet*<sup>126</sup>, and which, in its most distant form, often unknown to those who use the script in everyday life, is the story of a bull (alef) and his qualities. Thus today's letter *a* initially represented the head of a bull (𐤀 - aleph), which has been reshaped over the course of time and laid sideways ( $\alpha$  – alpha) to be finally turned upside down and put “on its horns” in the Latin script (A), but the knowledge of its origins is lost and today's spelling books commonly match it with a picture of an automobile or an airplane. In light of what has been

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<sup>124</sup>„Soon after its creation, Glagolitic script became an efficient instrument of semiotic communication and was used for Christianisation and for promoting literacy, initially among Slavic peoples of Great Moravia and Pannonia and eventually, together with Old Church Slavonic, extended among all Slavic peoples / countries, where it continued to be used during at least one part of their history and on one part of their original territory. Only on Croatian national territory it continued to exist for almost one thousand years – from the 9<sup>th</sup> to 19<sup>th</sup> century, and a number of monuments (liturgical, literary, judicial) speak of its great importance in all segments of life.“ (Lukić and Horvat, 2013: 25)

<sup>125</sup>The Latin script 1. General designation for every script derived from ancient Roman Latin script (eg. *Croatian Latin script*). 2. Group designation for all such scripts. (<http://proleksis.lzmk.hr/7885/>, accessed 7. April 2014.)

<sup>126</sup>Alphabet, a system of written characters (letters) in which one character is assigned to one sound (phoneme). The fundamental principles of the alphabet were established in the 3<sup>rd</sup> millennium BC in Ebla (today's Tell-Mardih in Northern Syria), on the basis of Mesopotamian syllabic cuneiform script. The script has developed from syllabic, through alphabetic syllabic and consonant syllabic to the true alphabet. It seems that prototype characters were a schematic graphic of a consonant type, and that the West Semitic alphabet appeared in the beginning of the 2<sup>nd</sup> millennium and that it derived from some cuneiform characters with some added characters. The script spread quickly, and since there were no strong political and cultural ties among city-states, variations of the proto-alphabet were created. There were two groups of scripts in XVI/XV centuries BC: South Semitic and North Semitic. In the XV<sup>th</sup> century BC the Ugaritic script was created on the basis of the North Semitic script. In the XIII<sup>th</sup> century BC, due to changes in the phonological system in northern central languages, there appeared a markedly simpler Phoenician script. Since it is generally accepted that the Greek script has derived from the Phoenician script, the Phoenician script would then be the source of all alphabetic scripts in the world, except Korean, Armenian and Georgian (the latter two are adapted from Aramaic and Greek; the Glagolitic script and Cyrillic script are also derived from the Greek script). However, it is thought that the Greek script did not derive directly from the Phoenician script and that there were many influences, such as interactions with the alphabets of Asia Minor, which have also derived from Semitic alphabets. From the Greek script also sprung the Etruscan script and some other scripts of ancient Italy, and from the Etruscan script arose the Latin script. The Aramaic script is a branch of West Semitic scripts. From it - in the V<sup>th</sup> century BC – the Hebrew script arose, as well as the Middle Persian script Pehlevi, Farsi, Sogdian, Khwarezmian and other scripts. From the Aramaic script sprung the Indian script Brahmi which gave birth to other Indian scripts. The Arabic script is also of Aramaic origin. (<http://proleksis.lzmk.hr/7885/>, accessed 7. April 2014.)

said, a need arises for a comparison of communication qualities of the Glagolitic azbuka and Latin alphabet to establish whether the communication basis of a letter system has changed. We should bear in mind that the Glagolitic azbuka is „older“<sup>127</sup> than the Latin alphabet and could in itself have corrected possible deficiencies of the Latin alphabet.

Scheme 3 Comparison of communication qualities of Glagolitic and Latin scripts

	<b>Glagolitic script</b>	<b>Latin script</b>
<b>Background story</b>	The story of God Christ.	The story of the bull god.
<b>Familiarity of the story</b>	Extreme	Rare
<b>Communicativeness</b>		
Of the letter module	Extreme	Nonexistent
Of the letter code	Extreme	(forgotten)
Of the number code	Extreme	Nonexistent or imbalanced
Of the symbolic code	Extreme	In formation

Source: authors

Without going into a broader discussion, and on the basis of what we see in Scheme 3, it is possible to conclude that the Latin alphabet, when compared to the Glagolitic azbuka, contains fewer active communication transgenerators. For the purpose of quick adoption and further dissemination, the Glagolitic script has used “the story of God Christ” which was, as shown, imprinted in its letter module and all three communication codes of Glagolitic graphemes (letter, numeral, and symbolic). The Latin alphabet of today does not use any of the mechanisms (except the letter code) that were initially present in old scripts. With that being said, we are inclined towards the conclusion that the communication potential of the Latin script is not being sufficiently used, which in turn opens up a space for future multidisciplinary discussions.

## 5. Discussion

The Information Age brings new rules of communication and simultaneously creates new symbols which influence the efficacy of the communication process. New symbols (eg. emoticons) that have been studied in this work show that in their combining of text and picture (eg. when communicating on Facebook, ICQ and other platforms for social networking and communication) there are «similarities to some earlier ways of combining symbols of different meaning systems. In “serious” or elite communication this is exemplified by poetic calligrams, while in mass and popular communication we have comics and rebuses. If we look deeper in the past, we find similarities in early endeavours to record messages in less transient mediums than speech. The first scripts, pictograms, were sequences (comics) of schematised pictures in which a natural (motivated) connection between a designator and designated was still strong, but in the course of time, and further schematisation, that connection became weaker and conventionality took over. This led to a type of script – ideograms – and gradually to syllabic and, finally, phonemic script. However, the image of historical “development” is disturbed by periodical renovations of old solutions in new media (Ivas and Žaja, 2003: 90).

The Glagolitic characters (graphemes) with their variations in arrangement within a meaningful unit, as opposed to letters of the Latin script, also realise communication through

<sup>127</sup>The year 863 AD is thought to be the year of creation of the Glagolitic script.

their position by forming «a symbolic sentence» (by an arrangement assigned to them in a character sequence) and by their graphemic-phonemic meaning when they are read and interpreted as a «word» which is a constitutive part of a language. In this way, Glagolitic characters distinguish themselves among old scripts, especially compared to the Latin script, and affirm once again that a “new medium quickly replaced old ones” but “with usual communication contents and old communication solutions. This process of usualisation of the unusual was followed by the process of unusualisation, which derived mainly from the particularity of a new medium”(Ivas and Žaja, 2003: 91).

No matter the technological advancements that occur in science, communication among individuals is imperative to progress in science. The field of communication has always emphasised the future. In an attractive and challenging piece of research the authors designate communication solutions and actions similar to those of older media which are included in the new medium, but which also possess elements of innovation. The work shows that the Glagolitic script successfully realises semiotical communication, which is why it is observed as a model for a new paradigm of potentials for the Latin script and other written characters in communication processes in the Information Age.

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## **PROMOTING EFFICIENCY AND TRANSPARENCY OF PUBLIC ADMINISTRATION BY IMPLEMENTING CLOUD COMPUTING**

### **PROMICANJE EFIKASNOSTI I TRANSPARENTNOSTI TIJELA JAVNE UPRAVE IMPLEMENTACIJOM „RAČUNARSTVA U OBLAKU“**

#### **ABSTRACT**

*One of the prerequisites of economic growth in the Republic of Croatia is the development of an e-government based on openness, transparency, efficiency and effectiveness. New trends in ICT technology create new economic opportunities which on one hand support the economic sector by generating added value and on the other, contribute to the rationalization of public administration activities. The use of innovative solutions leads to a decrease in the need for traditional advertising channels which are more expensive and less effective.*

*This paper presents a way of using new ICT technologies in such a manner that the existing Public Sector Information is republished at public places by Cloud Computing Solutions making the information more accessible to a wider range of citizens. The paper presents and describes an example of good practice i.e. it presents the advantages of cloud solutions achieved through the Speeding Every European Digital (SEED) EU project in which the City of Rijeka took part as one of the partners. The paper focuses on the advantages of using Cloud Computing for interactive Public Sector Advertising of services provided by public authorities. Its affordability contributes to long-term sustainability of the system, establishment new e-Service for informing the public about services provided by public authorities, educational and scientific institutions thus having a stronger end user impact and raising public awareness of the existence of e-Government and content and open data services. This all contributes to an increase in the level of transparency, openness and mutual benefit, thus providing the information that will give its users the possibility for creating new economic opportunities.*

**Keywords:** *cloud computing, e-Government, digital economy, digital advertising, public administration, transparency.*

## SAŽETAK

Jedan od preduvjeta za ekonomski rast u RH je razvoj e-uprave koja se temelji na otvorenosti, transparentnosti, efikasnosti i učinkovitosti. Novi trendovi u ICT tehnologiji omogućuju stvaranje novih ekonomskih prilika koje postaju podrška gospodarskom sektoru s jedne strane i racionalizaciji poslovanja javne uprave s druge strane budući da se korištenjem inovativnih rješenja omogućuje smanjivanje potreba za tradicionalnim kanalima oglašavanja koji su skuplji i manje učinkoviti.

U ovom radu se prikazuje mogućnost korištenja novih ICT tehnologija za publiciranje postojećih informacija tijela javne uprave na javnim mjestima uporabom rješenja „računarstva u oblaku“ (Cloud rješenja) kako bi informacije postale dostupnije širem spektru građanstva. Kao primjer dobre prakse u radu su prikazane prednosti Cloud rješenja kroz EU projekt Speeding Every European Digital (SEED) čiji je partner grad Rijeka. Cilj je ovog rada prikazati prednosti korištenja jednog takvog tehnološkog rješenja za informiranje javnosti o uslugama tijela javne vlasti, zasnovanog na „računarstvu u oblaku“, koje financijskom pristupačnošću doprinosi dugoročnoj održivosti sustava, uspostavlja novi elektronički servis informiranja javnosti o uslugama tijela javne vlasti, obrazovnih i znanstvenih institucija, čime pridonosi jačem utjecaju na građane i ostale korisnike javnih usluga.

U radu su također navedene mogućnosti korištenja prikazanog sustava u svrhu podizanja svijesti građana o postojanju e- Uprave i servisa koji im nude sadržaj i otvorenu vrstu podataka te time podižu razinu transparentnosti, otvorenosti i obostrane korisnosti, čime se otvara mogućnost za stvaranje novih ekonomskih prilika.

**Ključne riječi:** računarstvo u oblaku, e-U prava, otvoreni podaci, digitalno oglašavanje, javna uprava, transparentnost

### 1. Introduction

Continuous and rapid development of Internet technology, the growth in its users and the requirements set by legal entities and citizens in terms of public administration have led to the development of an electronic government. In order to achieve the above requirements it is necessary to conduct an organizational restructuring of the government, define the legal framework, ensure adequate ICT infrastructure, and educate users (Šegota; Jardas Antičić; Rakamarić Šegić, 2012).

Digitalization has entered all spheres of life, from business to the private. It has changed the way in which people interact, their life environment and habits, and imposing a question on the impact of these changes on surrounding institutions and their business activities (Jardas Antičić, Šegota, 2012, 35).

Objectives in the implementation of ICT in public administration bodies have never been more demanding than nowadays. In times of crisis it is necessary to optimize and rationalize the business of public administration with the help of ICT technologies i.e. to reduce costs and increase the efficiency and availability of administrative body services to citizens and the business sector.

In accordance with the Malmo's strategic guidelines for the development of digital administration in the EU (Andersen, Francesconi, Grönlund, Engers, 2011, 332), it is necessary to create new digital public administration services which will be tailored according to the needs of citizens and the business sector by placing the user at the center. The aim of these services is to simplify communication with the public administration bodies by making

it faster, easier and more accessible to all citizens regardless of age, social or other exclusion and, at the same time, extremely safe.

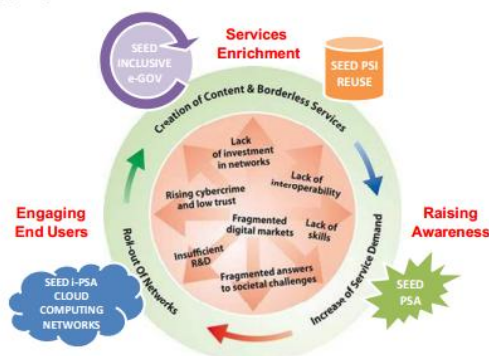
Nowadays many authors speak about the world as an Information Society centered around the production, storage, retrieval, and utilization of information in which the *network society* transforms politics, economic, culture but also family and individuals (Castells, 2000, 13). The SEED project is a part of this Information Society-centered system implemented in public administration.

## 2. Virtual Economy and Cloud Computing

As a new EU member, Croatia is faced with the challenge to make all the information about its services and public institutions available to all EU citizens. From the foregoing, there is an evident necessity to create new innovative solutions tailored according to the needs of citizens. They should be able to access the desired information by using different technology platforms such as smart phones, tablet computers and other. These modern technological solutions should be implemented on technologies such as Cloud Computing, which will reduce operating costs and at the same time provide flexibility, interoperability, dynamic and emergent security solutions. Cloud Solution analyzed in this paper contributes to all aspects mentioned above (Figure 1).

Studies have shown that in UK and the U.S. the implementation of Cloud Computing in public administration resulted in savings of 20% in the private sector on a sample of 1,300 companies and 83% of them generated savings with the implementation of ICT solutions (Nicholson B., 2013).

Figure 1 SEED Contribution to the strength of the Virtuous Circle of Digital Economy



Source: A Digital Agenda for Europe, Brussels, 2010.

Cloud Computing is based on the business model of renting computing services such as computers, applications and services primarily through Internet access (Leavitt, 2009, 15). The user can enjoy the maximum benefits of mobility and interoperability due to the fact that the desired cloud service is available via a web browser on any of their mobile devices from any location. One of the elements of cost reduction through Cloud Computing is that the price of the service depends on how much it is used, which allows dynamic scaling of resources with respect to users' needs by minimizing the possibility of over-dimensioning the investment in IT resources and yet providing all the required security in the case of a rapid growth in the need for additional resources.

The main advantages of Cloud Computing versus the classical model of providing IT services are: dynamism and flexibility of services, broad network access, joining and scalability of resources, metered service and service on request.

There are the three basic models of service delivery in the cloud based concept "everything as a service"(Erl, Puttini, 2013, 63):

- Infrastructure as a Service (IaaS)
- Platform as a Service (PaaS);
- Software as a Service (SaaS)

Each model varies according to the type of services it provides. The IaaS model provides the ICT infrastructure as a service, the PaaS model provides the ICT environment and finally there is the SaaS model which provides the complete application solution as a service. All these models free the user (the public body providing e-Government service) from wasting highly educated ICT human resources for maintenance of such solutions in addition to all the benefits of the models "pay as you use". The advantage of this service is that the user pays only for the mere usage of the service and may at any time terminate that use, without additional cost, since it is exempt from any licensing. However, a problem which may arise in using SaaS solutions is of legal and regulatory nature, especially in the area of cloud solutions for public bodies. Namely, in some countries such as the Republic of Croatia, there are laws that prohibits the storage of data beyond national borders. The Cloud solution analyzed in this study is based on the SaaS model and it is developed to comply with the legal framework of the Republic of Croatia.

### **3. The SEED solution**

In accordance with the previously discussed, the applicative solution for Interactive Public Sector Advertising will be presented and implemented on Cloud technology via the SaaS model developed within the SEED Project. The SEED project is funded by the European Commission through the Programme Competitiveness and Innovation Programme (CIP) (CIP, Project SEED, 2011). The SEED project is realized by 13 partners from 7 EU countries. The aim of project was to, through an applicative solution based on cloud computing, cut the current costs of public institution advertising and at the same time increase the level of citizens' knowledge about the e-Government services and public sector information (PSI) already published on an existing Internet portal (Figure 1). Statistics show that less than 41 % of EU citizens are aware of the existence of PSI already posted on the Internet. The European Commission estimates that there is a potential market worth € 30 billion in the re-use of public sector information (Kroes, 2010)

This paper gives an overview of the structure of the technical solution that was developed as a part of the project and presents its implementation in the City of Rijeka.

Figure 2 SEED project aims



Source: *Project SEED, DOW, 2011*

Public Sector Information belongs to a special category of Open Data owned by a public authority. Open Data arose from the idea that there are certain categories of data which can be accessed and re-used. In addition to the economic benefits arising from PSI, another great benefit is a more efficient and transparent public sector which, through new e-Government services to citizens and businesses enables end-users to create additional value based on the provided information. Apart from creating additional value, one of the goals of e-government is to create a service that will be available to everyone regardless their social, economic or other exclusion. Consequently, the development of e -Services must also follow the EU guidelines on e-Inclusion.

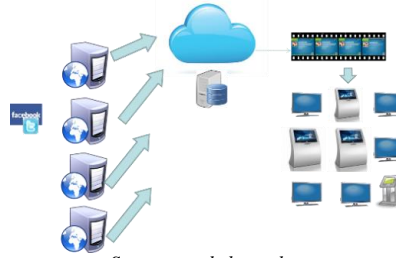
#### 4. SEED project – the Case of Rijeka

The City of Rijeka, in accordance with previously stated, has implemented the applicative solution of the SEED project for Interactive Public Sector Advertising with maximum use of publicly available data found on various portals. This has increased availability, openness, transparency and inclusiveness of citizens in informing and interaction.

One Point Stop Spots for dispensing information to citizens have been implemented at 12 most frequent locations in the City of Rijeka such as hospitals, sports facilities owned by the City and waiting rooms at public administration premises.

Depending on the location, digital displays for providing information to citizens, with or without the possibility of interaction, have been implemented. Due to the fact that the applicative solution was implemented on the SaaS model in the cloud, all that was needed for its use was an Internet connection and a web browser. (Figure 3).

Figure 3 Diagram of the SEED solution



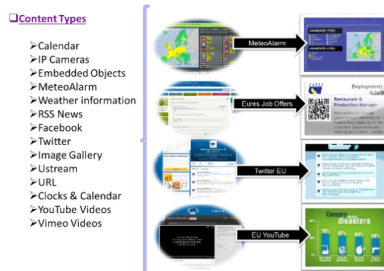
Source: made by author

The applicative solution is conceived to maximize the use of already available stock of information published on the Internet, to mold the said information and to publish it in form of news feeds, video clips and interactive materials on a specific web address. Every location with a digital display installed has the ability to display a web address that contains information tailored for that specific location. Because of this, it is possible to adjust the content being broadcast according to the location or the exact time of broadcasting.

Given that one of the goals of the application is to maximize the use of information already available on the Internet, a whole range of applicative components have been developed to connect the SEED solutions with as many applications on the Internet as possible. In this way, the need to further engage the employees of the City of Rijeka in creating new information tailored to the citizens has been reduced.

Figure 4 shows all the components of the SEED cloud solution that can be connected to existing applications on the Internet and the mode of conversing information for it to be broadcast on the digital display

Figure 4 Modules of the SEED solution for connecting with other applications on the Internet

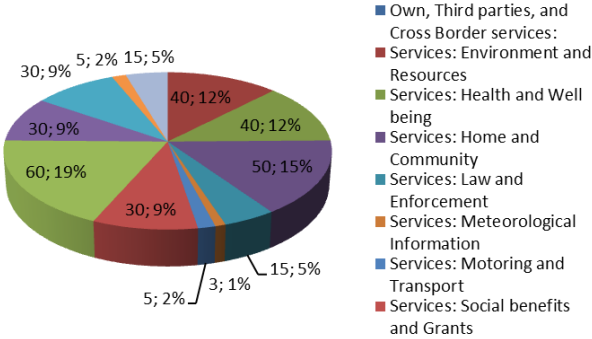


Source: Project SEED, DOW, 2011

During the development of the said solution, one of the priorities was the scalability in designing the hierarchical structure in view of which news can or cannot be published. During this process, the functionality of the editorial system for publishing and approving the news was implemented. This type of functionality proved to be very useful during the implementation of the solution in the City of Rijeka, because the number of institutions broadcasting their information has increased since the initial implementation of the solution. The publishing of information on the info channel was delegated to the public officials in charge of public relations of individual institutions and therefore reduced the need for additional hiring of human resources in this regard. The information reaching the citizens

through these channels is timely, the costs of publication minimal and at the same time, the city government is becoming more efficient, more open and transparent to its citizens. The diversity of news categories in dissemination of information is tailored in accordance with the location of information points, and is shown by category and percentages below (Figure 5).

Figure 5 Categories of published information in percentages



Source: made by authors

A big advantage of a Cloud solution implemented in this way, is the exchange of already published information with other SEED system users, resulting in the possibility of targeted exchange of information between institutions throughout the European Union. For example, the City of Rijeka has enabled the members of the University of Rijeka to publish and share news in the field of higher education, student exchange and scientific cooperation with other academic institutions across Europe that also use the SEED system. This has increased the socio-economic conditions of students, teaching and scientific staff.

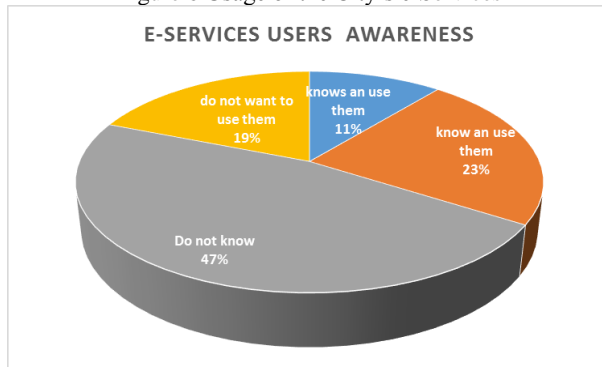
One of the intentions of the City of Rijeka in implementing info channels was to bring a large number of its digital services closer to its senior citizens and other digitally excluded groups in accordance with the principles of e-inclusion. The surveys, which have been conducted through all this time in order to ensure the quality of services, have found that the reactions of senior citizens were extremely positive. However, the same surveys identified that a large number of citizens belonging to younger age groups are uninformed about the availability of digital services provided by of the city authorities, municipal, cultural and other institutions.

A very small number of citizens participated or even knew about the consultative services of the city government, through which they themselves can have a say in city government decisions relating to urban planning or the granting of concessions for the city beach.

The survey also found that 11% of the population knows about or uses the City's e-Services, 23% know about, but do not use them, 47% of the population do not know anything about the e-services of the City and municipal companies and 19% do not want to use them (Figure 6). After the first year in the implementation of the SEED solution, a survey found that the percentage of citizens informed about the City's e-Services has increased by about 10%, while the system tracks doubling of usage of several e-Services provided by the City.



Figure 6 Usage of the City's e-Services



Source: made by authors

Encouragement of multi-ethnicity and multiculturalism through the info channel is extremely well received by the minorities, which is a small but valuable step in building the confidence of minorities toward public administration bodies.

## 5. Conclusion

The implementation of interactive information hubs through visually attractive and intuitive interfaces enabled citizens not prone to digital technology to participate in decision-making via e-consultative services. This is just one of the paths through which properly implemented digital technology is put into use for the benefit of the citizens, encouraging democracy, openness and transparency.

The reduced cost and efficiency of a public advertising channel implemented in this way, greatly exceeds the conventional method of public advertising through brochures, flyers or the media. The social benefit of this project which enables non-profit organizations, cultural institutions, charities, health organizations and others to advertise in times of financial crisis, represents an added value to all the previously listed benefits. However, it is also necessary to point out that there are a number of public institutions websites containing information which is not updated and is therefore useless for a public announcement system like this one i.e. there is no possibility for creating added value to the citizens.

Advanced technology, no matter how innovative and effective, will not solve the problem of efficiency and effectiveness of public officials without a radical change in the perception of their role in the society. Information should be available to citizens at all times, and not just on request. Only in this case will the use of new technologies give additional value to existing information, put the citizens at the center of interaction and foster their confidence in the bodies and services of the public administration.

Experience shows that the e-Services of public administration, implemented on the most advanced technologies, must have the support of local officials and citizens, because, if they are not used, they only represent a cost, regardless of how well designed they are.

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**ATTITUDES TOWARD GREEN FOOD PURCHASE AMONG  
STUDENTS: EVIDENCE FROM EASTERN CROATIA**

**STAVOVI STUDENATA PREMA KUPNJI EKOLOŠKIH  
PREHRAMBENIH PROIZVODA: SPOZNAJE IZ ISTOČNE  
HRVATSKE**

**ABSTRACT**

*Every day consumers around the globe are making a shift toward healthier and more environmentally conscious lives, especially concerning their food preferences. Following this trend, many food producers focus their efforts on targeting prospective green food buyers in the best possible way. To do that, they need to have a deep understanding of the main factors that drive the decision to buy green food. Considering a high growth potential of Eastern Croatia in terms of production and distribution of green food products, this topic is of the utmost importance for all stakeholders interested in sustainable food industries. This is further emphasized by the fact that consuming locally grown and processed food is particularly important issue when green food is concerned.*

*The main purpose of this study is to examine the relationship between personal attitudes and intentions to buy green food products. Personal attitudes are widely acknowledged as an influential factor in explaining the reasons for green food purchasing decision. This paper moves a step forward from previous research and investigates specific types of attitudes that facilitate green food purchases. The study is based on the outcomes of a questionnaire completed by a sample of 181 undergraduate and graduate students at the Faculty of Economics in Osijek. Results from regression analysis reveal significant positive relationship*

*between green food purchase intention and personal attitudes related to health consciousness, environmental protection and green food origins. Finally, implications for policy makers, green food producers as well as companies and marketers engaged in the promotion and commercialization of green food products are discussed.*

**Keywords:** *green food, intentions, attitudes, students, Eastern Croatia*

## SAŽETAK

*U novije vrijeme na globalnoj razini moguće je zamijetiti sve češće preusmjerenje potrošača prema zdravijem i ekološki osvještenijem načinu života, a što se posebice odražava na njihov odabir prehrambenih proizvoda. Utemeljeno na ovom trendu, mnogi proizvođači prehrambenih proizvoda usmjeravaju svoje napore na ciljanje potencijalnih kupaca ekoloških prehrambenih proizvoda. Pri tome je od izuzetne važnosti dubinsko razumijevanje temeljnih faktora koji usmjeravaju odluku o kupovini ekoloških prehrambenih proizvoda. Uzimajući u obzir veliki potencijal Istočne Hrvatske u smislu proizvodnje i distribucije ekoloških prehrambenih proizvoda, ova tema od iznimne je važnosti za sve dionike vezane uz održivu proizvodnju hrane. Ovo je dodatno naglašeno činjenicom da je konzumiranje lokalno uzgojenih i prerađenih prehrambenih proizvoda izuzetno važno pitanje kada je riječ o ekološkim prehrambenim proizvodima.*

*Temeljna svrha ovog istraživanja je utvrditi odnose između osobnih stavova i namjera kupnje ekoloških prehrambenih proizvoda. Osobni stavovi široko su priznati kao utjecajni faktor u objašnjavanju razloga za donošenje odluke o kupnji ekološkog prehrambenog proizvoda. Ovaj rad odlazi korak dalje u odnosu na prethodna istraživanja te istražuje specifične vrste stavova koji dovode do kupnje ekoloških prehrambenih proizvoda. Ovo istraživanje utemeljeno je na podacima prikupljenim putem upitnika provedenog na uzorku od 181 studenta preddiplomskog i diplomskog studija na Ekonomskom fakultetu u Osijeku. Rezultati provedene regresijske analize otkrivaju signifikantnu pozitivnu vezu između namjere kupnje ekoloških prehrambenih proizvoda i osobnih stavova koji se odnose na zdravstvenu osviještenost, zaštitu okoliša i podrijetlo (lokalni karakter) ekoloških prehrambenih proizvoda. Također, u radu se raspravlja i o implikacijama za donositelje strateških političkih odluka, proizvođače ekoloških prehrambenih proizvoda kao i za sve gospodarske subjekte i marketere uključene u process promocije i komercijalizacije ekoloških prehrambenih proizvoda.*

**Ključne riječi:** *ekološki prehrambeni proizvodi, namjere, stavovi, studenti, Istočna Hrvatska*

### 1. Introduction

Every day consumers around the globe are making a shift toward healthier and more environmentally conscious lives, especially concerning their food preferences. It is expected that this trend will only strengthen in the future (Salleh et al., 2010) under the influence of consumers' increased and continuously growing interest in nutrition, health, and environmental protection (Brčić-Stipčević, Petljak, Guszak, 2013; Gil, Gracia, Sánchez, 2000), in addition to the influence of increased confidence of consumers based on the certification and improvement of the availability of these products through their increasing penetration into standard channels of distribution. In line with that, many food producers focus their efforts on targeting prospective green food buyers in the best possible way.

Of all the forms of environmentally-oriented consumer behavior in Croatia, the most accepted and widespread is precisely the behavior related to the purchase of green food products, and this kind of behavior has recently become one of the main research focuses for Croatian scientists from the different scientific disciplines. Another reason for this lies in the fact that the Republic of Croatia's strategic development directions are based on factors that are closely related with the production of healthy food and the preservation of the environment. This is particularly true in Eastern Croatia, since here is the highest number of areas registered for eco-agriculture. It could be argued that eco-agriculture is one of the dominant features of Eastern Croatia.

Considering a high growth potential of Eastern Croatia in terms of production and distribution of green food products, this topic is of the utmost importance for all stakeholders interested in sustainable food industries. This is further emphasized by the fact that consuming locally grown and processed food is particularly important issue when green food is concerned. On the other hand, the existing literature does not provide sufficient information and knowledge about consumers, necessary for development of marketing strategies in this growing market. (Brčić-Stipčević, Petljak, Guszak, 2013). In order to achieve positive synergy of different stakeholders and to steer their actions in the right direction, they need to have a deep understanding of the main factors that drive the decision to buy green food.

Previous research in Croatia provides some insight into the level of environmental awareness of consumers (Ham, 2009) and consumers' attitudes towards environmental products (Krupka, Kelečić, 2011), or, more specifically, into attitudes related to the purchase of environmentally friendly food products (Brčić-Stipčević, Petljak, 2011; Štefanić, Štefanić, Haas, 2001; Renko, Bošnjak, 2009). The present research attempts to add knowledge on facts important for promoting and fostering purchases of green food. This paper examines the relationship between personal attitudes and intentions to buy green food products. Personal attitudes are widely acknowledged as an influential factor in explaining the reasons for green food purchasing decision.

## **2. Personal Attitudes**

Personal attitude is usually defined as permanent mental or neural willingness gained from the experience, making the directive or dynamic influence on an individual's response to objects and situations that he comes into contact with (Allport, 1935). Psychological attitude structure consists of three components: cognitive, affective and conative. The cognitive component consists of what we think about someone or something (regardless we are right or not). The affective component consists of our feelings toward someone or something, while third component (conative) represents the intention to act in a certain way and is sometimes called the behavioral component (Fraj, Martinez, 2007, 27). We can also say that the first two components form and direct the third (behavioral) component (Stone, Barnes, Montgomery, 1995, 597). In other words, cognitive component includes the opinions, beliefs, and ideas about the object of the attitude, emotional refers to the feelings that are associated with the object of the attitude, and behavioral consists of the tendency or willingness to act in relation to the object of the attitude.

Personal attitudes of individuals towards environmentally-oriented behavior are based on positive or negative evaluation of outcomes of the observed behavior (Ajzen, Fishbein, 1975). When it comes to individuals' attitude formation, most contemporary psychologists take the cognitive approach. The focus on the cognitive component in most research stems from early

research that showed significant influence of knowledge and awareness on attitudes toward environment. That early research assumes that knowledge affects attitudes and attitudes affect behavior. That is the so-called linear model. However, it should be stated that there is no consensus on that matter. Some studies show only limited influence of cognitive components like for example, the knowledge about environment, while demonstrating the significant influence of affective components on making environmentally oriented purchasing decisions. (Hartmann, Apaolaza Ibáñez, ForcadaSainz, 2005, 12). In accordance with that is also the Fishbein and Ajzens theory of attitudes and values (Ajzen and Fishbein, 1975) according to which an attitude is formed based on the beliefs that an individual has about a particular object (another person, object, place, or event) and is represented by attributes that are tied with the observed object. In the case of the attitude towards a certain behavior, each belief links the behavior with a specific outcome, consequence, or some other attribute (such as the cost of undertaking a specific behavior). Since each attribute is evaluated in advance as positive or negative (emotional component of the attitude), the behavior is therefore automatically perceived as desirable (if it has predominantly positive outcomes) or undesirable (if it is linked with the predominantly negative outcomes).

Chan and Lau (2000) confirmed in their study that even people with little knowledge on environmental issues can demonstrate a strong emotional connection toward environment. Also they proved that knowledge and emotional variables have independent influence on certain behavior and it is therefore justifiable to treat them as independent. The relationship between attitude and intention to perform a certain behavior is confirmed to be stronger than the relationship between intentions and actual behavior (Kim, Hunter, 1993), which is expected, considering that the relationship of intentions and behavior is under the powerful influence of external factors.

Research indicates that measures of specific attitudes (e.g., judgments about products or behaviors) rather than general measures of environmental concern (e.g., judgments about environmental problems) are likely to manifest in environmental behavior (Tanner, WöflingKast, 2003). According to Newhouse (1990), inconsistency between attitudes and behavior occurs most frequently when measurement of general attitudes is applied for predicting the specific (concrete) behaviors. Namely, the variables that measure attitudes toward specific behaviors (attitudes toward activities) are better predictors of environmentally oriented behavior than those that measure general attitudes towards environment (Bodur, Sarigöllü, 2005, 504). It is necessary to take into consideration the possibility that attitudes of consumers toward different environmental issues as well as toward different environmental behaviors can vary.

## **2.1. Attitudes toward Buying Green Food**

Foods which are safe to use, have fine quality, are nutritious, take into account concerns for the welfare of animals and are grown and produced in line with the principles of sustainable development, are known as green food (Saleki, Seydsaleki, 2012). An individual's attitude towards consuming a product is one of the most important antecedents for predicting and explaining consumers' choices across products and services, including food products (Honkanen et al., 2006). Previous studies have associated organic food consumption with behavioral attitudes such as health consciousness, environmental consciousness, trust of organic food claims, desirability of organic food attributes such as taste, texture, freshness (Voon et al., 2011, Sallehet et al., 2010; Michaelidou, Hassan, 2008; First, Brozina, 2009) and other

attitudes such as attitudes toward local origin of products, fair trade (Tanner, WöflingKast, 2003) and reference knowledge (Amran,Nee, 2012; Saleki, Seydsaleki,Rahimi,2012).

Trust of organic food claims is a strong determinant of intention to consume due to the credence nature of organic food. Credence products are those for which consumers are not able to evaluate effectively as the benefits of consumption cannot be directly or immediately observed. Consequently, consumers may rely on product labeling, advertisements and certifications as signals of the trustworthiness of product claims. The extent to which these engender consumer trust will therefore influence the intention to consume organic food. (Voon et al.,2011). The lack of consumers' confidence in the credibility of environmental products and producers is often identified as one of the main barriers to increasing the purchase of ecological products in general (Kalafatis et al., 1999, 459)

Furthermore, thegrowing level ofinterest, awareness andknowledgeabouthealth and nutrition, and easier access toallinformationinthis regardleads toincreasinglevels ofso-calledhealthawareness. Consequently it leads to greater willingness to adopt healthy lifestyles. As green food is generally believed to be more nutritious, healthier and safer than conventional food, it is likely that the health-conscious consumer will have positive attitudes towards green food which will drive the greater demand for this type of products. Accordingly, many studies found thathealth benefits are the main motives for buying green food products (Wier, Calverly, 2002; Roitner-Schobesberger et al., 2008). Salleh and his associates (2010) determined that health consciousness factor has more impact on customer purchase intention of organic food products rather than the environmental concern.

According to the research of Voon et al. (2011) health and environmental concerns together with trust of organic food claims and desirability of organic food attributes form Malaysian consumers' attitude towards organic food. The importance of health and environmental concerns reflect the growing affluence of consumers. The rising educational levels coupled with better access to worldwide communication and information channels have raised their awareness of health and environmental issues. Following Tanner and WöflingKast (2003), it is also important to consider the attitudes toward local origin of products.

### **3. Methodology**

#### **3.1. Sample**

The sample consisted of 181 undergraduate and graduate business students. Data were gathered using a questionnaire distributed in the classroom. Students who participated in the study were awarded additional points toward earning grade in respective class. However, it was emphasized that their answers will not affect participation points. Out of the respondents, 25,8% were male students and 74,2% were female students with an average age of 22 years.

#### **3.2. Instrument and Measurement**

To explore the relationship between various types of attitudes and green food purchase intention, five main measurement scales were employed to capture an individual's attitudes toward health concerns, environmentalprotection, local origin of the green food products, and individual's trust toward information found on the product label of the green food items, as well as individual's intention to purchase green food product.

The authors adopted Tanner and WöflingKast (2003) measurement scales to gauge two constructs: 1) individual's attitude toward health concerns and the extent to which they take into account information about food ingredients when considering buying and consuming green food item; and 2) the importance of local origin to prospective green food buyers. Additionally, to measure an individual's trust toward information provided on the product label as well as their attitude toward environmental protection, the authors used same measurement scales as in Voon et al. (2011). The measure for purchase intention was modified based on Liñán, F., Chen, Y. W. (2009) scale used to assess entrepreneurial intentions. Each scale comprised a set of statements presented in Likert-type format with a five-point scale to capture the extent to which respondents agree or disagree with the statements in the questionnaire. Number of items included in each construct and basic reliability measures are provided in the Table 1.

Table 1 Reliability Measures of the Constructs

<i>Measurement scale</i>	<i>Number of items</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Cronbach's Alpha</i>	<i>Average inter-item correlation</i>
Purchase intention	5	13,22	4,789	0,924	0,712
Attitude toward health	4	12,79	3,787	0,852	0,592
Attitude toward environment	4	16,62	7,700	0,723	0,400
Attitude toward local origin	6	20,89	4,877	0,833	0,457
Attitude toward trust	4	13,91	3,252	0,848	0,583

All constructs have an adequate level of internal consistency measured by Cronbach's Alpha coefficient and average inter-item correlation.

#### 4. Research Results

Results of Pearson Correlation are shown in Table 2. The table indicates the relationship between all four types of attitudes and intention to buy green food. Attitude toward health and attitude toward local origin are shown to have the strongest positive relationship with the purchase intention.

Table 2 Correlations Analysis (n = 181)

<i>Variables</i>	<i>Intention to buy green food</i>	
	<i>Pearson Correlation</i>	<i>Significance</i>
Attitude toward health	,410	,000*
Attitude toward environment	,272	,000*
Attitude toward local origin	,408	,000*
Attitude toward trust	,203	,006*

\* Correlation is significant at the 0,01 level (2-tailed)

Results obtained from the regression analysis are presented in Table 3. Based upon results, the predictive power of attitude toward health, environment and local origin is confirmed.

Table 3 Linear Regression Model

<i>Predictor variable</i>	$\beta$	<i>t</i>	<i>Significance</i>
Attitude toward health	,250	3,302	,001
Attitude toward environment	,203	2,694	,008
Attitude toward local origin	,239	3,526	,001



<i>Predictor variable</i>	$\beta$	<i>t</i>	<i>Significance</i>
Attitude toward trust	,097	1,526	,129

a. Dependent variable: Intention to buy green food

Overall, the model explains 31% of variance. The findings strengthen the view that people concerned with their state of physical and mental well-being are more inclined to purchase green food. Furthermore, concerns about environmental pollution and presence of pesticides in the food can also induce people to switch their dietary preferences to green and environmentally friendly food. Theoretically and practically relevant finding of this study relates to the importance that young people attach to the local origin of food. Attitude toward local origin is shown to have statistically significant predictive power of purchase behavior among student population.

## 5. Implications and further research

From the research perspective, the measurement scales used in this study are applied on the population of students from Croatia for the first time. Relatively high indicators of internal reliability point to the potential of used measurement scales to be retested and further amended to create an instrument that will provide reliable and valid tool for assessing attitudes and intentions of people in Croatia.

When it comes to practical implications, the results of this research may serve as a useful input for producers and retailers of green food products in designing an optimal marketing strategy and marketing plan to market and promote green food product. They may also be useful for other social stakeholders involved in fostering and promoting more widespread consumption of green products and green consumer behavior in general, especially among young consumers. The fact that health considerations variable has certain influence on the intention for buying green food products (it is a predictor variable) suggests that health benefits of green food should be in the focus of marketing communications related to green food products. In order to stimulate the demand for green food products, the consumers should be educated on positive influence of ecological products on their health. Furthermore, demand for these products can be increased by promoting additional motives, such as preference for domestically produced food since this variable also has the predictive power and a very strong correlation with the intention to buy. In other words, positive effects of marketing efforts can be achieved by focusing on locally produced products and by targeting health conscious consumers.

Consumers' trust in the credibility of green products and their attitudes toward environmental issues are also significantly correlated with intention to buy. However, the correlation is much weaker and there is no predictive power of trust variable. To achieve a significant influence on consumer behavior, it is still necessary to invest significant efforts into consumers' knowledge on genuine green products differentiation and their influence on environment.

Encouraging individuals to purchase green food products is undoubtedly a desirable social goal. Individuals can then, through their demand for a particular kind of product, focus production systems in the direction of environmentally friendly modes of production and a better supply of green food products. It is precisely this course of action we consider to be particularly important in terms of contribution to sustainable development of the Eastern Croatia.

## APPENDIX

### List of items included in the measurement scales

<i>Variable</i>	<i>Items</i>	<i>Reference</i>
Attitude toward health	It is important to me that food products contain no preservatives.	Tanner and WölfingKast (2003)
	I avoid products containing too much sugar.	
	When making purchases, I pay attention to whether the food products contain unhealthy substances.	
	Health issues play an important role for me when I make up my menus.	
Attitude toward environment	The government is not doing enough to help control pollution of the environment.	Voon et al. (2011)
	I am greatly concerned about the harm being done to plant and animal life by pollution.	
	Environmental pollution is not a serious issue. (reverse)	
	I am concerned about how food is processed.	
	It frightens me to think that much of the food I eat is contaminated with pesticides.	
Attitude toward local origin	It is important to me to support local farmers when making purchase.	Adapted from Tanner and WölfingKast (2003) and complemented with additional items.
	It is good to support domestic agriculture by buying regional products.	
	It is not important to me whether food products are grown locally or not. (reverse)	
	When considering food products, it is very important that they are produced in Croatia.	
	If there is a local product available, I will always choose local over imported product.	
	I will buy local food product even if the imported one can be bought at a discounted price.	
Attitude toward trust	I trust that those selling organic food are honest about the organic nature of their products.	Voon et al. (2011)
	I trust that local producers of organic food are practicing organic farming.	
	I trust the organic certification logo on organic food labels.	
	<i>I trust the information on organic food labels.</i>	
Intention to buy green food	I am willing to go out of my way to obtain green food products.	Adapted and modified from Liñán, F., Chen, Y. W. (2009)
	My personal goal is to consume as much green food products as possible.	
	I will make every effort to purchase green food products.	
	I have seriously thought of buying more green food products.	
	I have a firm intention to buy green food products in the future.	

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## **THE IRRI PROJECT OF IRRIGATION – EXAMPLE OF DEVELOPING EASTERN CROATIA**

### **IRRI PROJECT OF IRRIGATION – EXAMPLE OF DEVELOPING EASTERN CROATIA**

#### **ABSTARCT**

*„IRRI - The Irrigation Project“ is by EU through IPA II Cross-Border Program Croatia – Bosnia and Herzegovina and implemented by the Municipality of Lovas on the Croatian side and Municipality of Odžak on the Bosnian and Herzegovina side together with project partners: Vukovar-Srijem County, Municipality of Tompojevci, Associations of Users of the Opatovac and Tompojevci Irrigation System, Municipality of Šamac and Association Independent Office for Development.*

*The project seeks to increase incomes by reducing the effects of droughts which in cross-border region occur once in three to five years. The average yield of primarily vegetables, fruit and other crops is low comparing to European Union countries. Also one of the major problems is lack of education, basic knowledge and training what leads to the fact that farmers are not involved in the growing global irrigation trend.*

*Therefore, the project is intended to develop demonstration irrigated fields through investments that are cost effective, environmentally and socially sound and beneficial to the rural poor. Special accent is put on education where conducted series of workshops and field trainings will enable the transfer of the latest knowledge and technologies in the field of irrigation and establish a number of experts in irrigation. All results of project activities are presented to the wider audience through events, presentation and demonstration fields.*

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*The aim of the assignment is to contribute to increase crop productions and raise farmers' incomes in the municipalities Lovas and Tompojevci through supporting of production of agriculture producers by introduction of the system for irrigation, enhancing of knowledge of farmers and expertise of technicians and increasing of cooperation and public awareness in irrigation.*

**Key words:** *IRRI project, project of irrigation, irrigation technique, agricultural crops, irrigation conditions, expected irrigation effects*

## SAŽETAK

*“IRRI – Projekt navodnjavanja” financiran je iz Europske unije sredstvima IPA II Prekograničnog programa Hrvatska – Bosna i Hercegovina. Nositelj projekta je Općina Lovas, a projektni partneri su Općina Tompojevci, Vukovarsko-srijemska županija te udruge korisnika sustava za navodnjavanje iz Opatovca i Tompojevaca dok je od strane Bosne i Hercegovine za provedbu zadužena Općina Odžak sa partnerima Općinom Šamac i Udruženjem Nezavisni biro za razvoj.*

*Projekt teži povećanju prihoda smanjivanjem učinaka suša koje se u pograničnom području Hrvatske i Bosne i Hercegovine pojavljuju jednom u tri do pet godina. Prosječni prinos prvenstveno povrća, voća i drugih usjeva je mali u usporedbi sa zemljama Europske unije. Jedan od većih problema je i nedostatak obrazovanja i temeljnih znanja, što u konačnici dovodi do toga da poljoprivrednici nisu dovoljno uključeni u rastuće globalne trendove u navodnjavanju.*

*Projektom su postavljena demonstracijska polja kroz ulaganja koja su isplativa, ekološki i socijalno zdrava i korisna za ruralna područja. Poseban naglasak je stavljen na edukaciju te su održane radionice i obuka na terenu, omogućen je prijenos najnovijih znanja i tehnologija na području navodnjavanja, a obučeni su i određeni broj stručnjaka za navodnjavanje. Svi rezultati projektnih aktivnosti predstavljaju se (projekt u tijeku) široj javnosti putem organiziranja raznih događanja, prezentacija i demonstracijskih polja.*

*Projektom se želi doprinijeti povećanju proizvodnje usjeva i povećanju prihoda poljoprivrednika u općinama Lovas i Tompojevci kroz poticanje proizvodnje poljoprivrednih proizvođača uvođenjem sustava za navodnjavanje u poljoprivredi, unaprjeđivanje znanja poljoprivrednika i stručnosti tehničara (trenera) i povećanjem suradnje i svijesti javnosti o navodnjavanju.*

**Ključne riječi:** *IRRI projekt, projekti navodnjavanja, tehnika navodnjavanja, poljoprivredne kulture, preduvjeti navodnjavanja, očekivani učinci navodnjavanja*

## 1. Introduction

Climate changes, especially precipitation and temperature regimes, have often adverse influence on the quantity of field crop yields. Annual global temperatures have increased for approximately 0.4 °C since 1980, with even larger changes observed in several regions (IPCC, 2001). Lobell and Field (2007) estimated that approximately 30% variations of global average yields for the world's six most widely grown crops (wheat, rice, maize, soybeans, barley and sorghum) are result of growing season precipitation and temperature variations.

Josipović et al. (2014), in four-year investigation, were satisfied by grain yields of tested maize inbred lines in amount 1809 kg ha<sup>-1</sup> under N non-fertilized conditions which is an indication of the high level of natural soil fertility. Maize yield under more favorable weather

conditions of the 2006 growing season was about 3-fold higher (average 2450 kg ha<sup>-1</sup>) in comparison of yield achieved under drought and the high air-temperature stress of 2007 (823 kg ha<sup>-1</sup>). Maize yield under non-irrigated conditions was 1500 kg ha<sup>-1</sup>. By two steps of irrigation yields of maize were linearly increased for 21% and 41%, respectively. Differences of the 4-year average yields among the maize genotypes were in range from 1259 to 2765 kg ha<sup>-1</sup>.

Heat and drought-stress conditions very frequently have an impact on the quantity and quality of wheat production in the most regions of the world (Kovačević et al., 2014). Therefore, it is essential to improve drought and heat stress tolerance in wheat breeding programs (Reynolds et al. 2007; Shao et al. 2008; İlker et al. 2011). Many authors investigated a water deficit or drought stress impact on agricultural plant and reported that water deficit leads to the perturbation of all, or some of physiological and biochemical processes thus, consequently reduces plant growth and yield (Ingram and Bartels 1996; Denčić et al. 2000; Shao et al. 2005a, 2005b; Boutraa 2010; Akhka et al. 2011) as well as the rate of photosynthesis in plant (Sharkey 1990; Cornic 2000; Lawlor 2002; Akhka et al. 2011). Rational water use of plant cultivars can be a good indicator of plant production in water-limited conditions (Passioura, 1977; Reynolds et al., 2007; Araus et al., 2008; Blum 2009; Yong'an et al., 2010).

Building of water accumulations and increases of irrigated arable lands could be priorities, particularly with aim of application to high profitable activities as vegetable growing and seed production of the field crops (Kovačević and Josipović, 2013).

The project seeks to increase incomes by reducing the effects of droughts which in cross-border region occur once in three to five years. The average yield of primarily vegetables, fruit and other crops is low comparing to EU countries. Also one of the major problems is lack of education and training what leads to the fact that farmers are not involved in the growing global irrigation trend.

„IRRI - The Irrigation Project“ is financed by European Union (EU) through IPA II Cross-Border Program Croatia – Bosnia and Herzegovina and implemented by the Municipality of Lovas on the Croatian side and Municipality of Odžak on the BIH side together with project partners: Vukovar-Srijem County, Municipality of Tompojevci, Associations of Users of the Opatovac and Tompojevci Irrigation System, Municipality of Šamac and Association Independent Office for Development.

Therefore, the project is intended to develop demonstration irrigated fields through investments that are cost effective, environmentally and socially sound and beneficial to the rural poor. Special accent was put on education where conducted series of workshops and field trainings was enabling the transfer of the latest knowledge and technologies in the field of irrigation and establish a number of experts in irrigation. All results of project activities were presented to the wider audience through events, presentation and demonstration fields.

The aim of the project is to contribute to increase crop productions and raise farmers' incomes in the municipalities Lovas and Tompojevci through supporting of production of agriculture producers by introduction of the system for irrigation, enhancing of knowledge of farmers and expertise of technicians and increasing of cooperation and public awareness in irrigation. In order to improve competences of target groups it is foreseen: a) conducting of research related to the irrigation management of current practice within targeted areas with developed irrigation practices register, b) setting up and following up demonstration plots on improved water management/farming practices in the project areas and conducting of research at experimental area over one production season, c) conducting of training of technicians to advice farmers on irrigation methods with developed manual on irrigation techniques, d) presentation of the results and study trips to established irrigation systems.

## 2. Material and methods

Under the requested services of the IRRI – irrigation project we have had three lots of services: 2.1. LOT 1 - Irrigation Development Expert, 2.2.; LOT 2 - Workshop Expert - Management and administration of irrigation systems and Irrigation System Design and 2.3. LOT 3 – Train the trainers course Irrigation specialist.

- a. LOT 1 - Irrigation Development Expert  
Support and facilitate the Contracting Authority in planning and implementation of small-scale irrigation schemes, with particular emphasis to promotion of highly efficient and modern small-scale irrigation techniques. Specific responsibilities of the Irrigation Development Expert will include the following:
  - A. Study research of current irrigation practice within Vukovar-Srijem County,
  - B. Identify and discuss feasible scenarios of investments in irrigation on up to 20 agriculture plots,
  - C. Design irrigation schemes on at least 8 selected pilot agriculture plots,
  - D. Conduct research at pilot agriculture plots over one production season.
  
- b. LOT 2 - Workshop Expert - Management and administration of irrigation systems and Irrigation System Design  
The expert will design and conduct two one-day workshops on following topics:
  1. Management and administration of irrigation systems.
  2. Irrigation system design. The expert should prepare training material. The course includes a certificate on completion.
  
- c. LOT 3 - Train-the-trainers course Irrigation specialist  
The expert will design and conduct 20-day train-the-trainers for at least 10 trainees. The objective is to provide a group of local technicians with appropriate level of skills for competent planning and installation of agricultural irrigation systems, as well as with ability to provide counsel to local growers on best management practices in irrigation of agricultural crops. The education is a combination of theory and practical work. The trainers should produce training manual. The course includes a certificate on completion. These Lot have had two parts:
  1. Theoretical education and
  2. Field practical training.

## 3. Results and discussion

On the basis of tasks mentioned in the material and methods we realized tasks LOT by LOT. Because we have relatively short time to realize planed program of the IRRI- irrigation project, Agricultural Institute Osijek, who was the responsibility and sign the contract with municipality of Lovas, organized expert team which one by one prepared his specialties.

First of all, we take the TOR – term of reference and one by one part solved.

In connection with the project coordinator, Anica Panenić, we organized the meeting with all interested farmers, as potential applicants for irrigation project. Total amount from Lovas and Tompojevci municipality was eighteen. We visiting the farmers, one by one, and on the bases of 12 parameters made a decision who will be applicant of the project. The mentioned parameters were: 1) soil suitability for irrigation, 2) necessity for irrigation – climate criteria, 3) waters sources and water quality for irrigation, 4) quantity of water for irrigation, 5) mark of the user, 6) experience and practice of the user, 7) crop and benefit from crop, 8) market of



the produced crop, 9) registered family farm - OPG subject (“obiteljsko poljoprivredno gospodarstvo”), 10) cost benefit effect, 11) water protected area and 12) expert estimated value. Each parameters had mark from 1 to 5 (from bad = 1 to excellent = 5). After we made rang list and chose the users (6 from Lovas and 7 from Tompojevci), we started with projecting of the irrigation systems. For each user we prepared the irrigation project with necessity details.

d. LOT 1 - Irrigation Development Expert

Under the plan of LOT 1 we planning and implementing the small-scale irrigation schemes, with particular emphasis to promotion of highly efficient and modern small-scale irrigation techniques. Specific responsibilities of the Irrigation Development Expert include the following:

A. In the “Study research of current irrigation practice within Vukovar-Srijem County” we made report (80 pages) and wright actual situation about the political, legal and economic management model, barriers and potentials in irrigation in Croatia, Vukovasko-srijemska county and Lovas and Tompojevci municipalities.

B. We identify and discuss feasible scenarios of investments in irrigation on 18 agriculture plots: a) we visited field to municipalities of Tompojevci and Lovas to the proposed agriculture plots to assess their irrigation potential, b) assess the technical potential for construction or improvement of short listed potential irrigation agriculture plots, technical and cost-benefit analysis, c) recommend the correct irrigation regime with emphasis on maximizing water use efficiency, d) identify, suggest and discuss feasible scenarios of investments in irrigation.

C. We design irrigation schemes on 13 selected pilot agriculture plots: a) planed, designed and specified irrigation equipment for the selected agriculture plots, b) support and facilitate the Contracting Authority in development tender documents, designs and technical specifications, c) supervised implementation, operated and maintenance of irrigation systems on the selected agriculture plots, d) in drilling wells, used the hydrogeological data to determine the location of drilling.

D. We conduct research at pilot agriculture plots during this (year 2014) production season: a) collecting field data from pilot plots to deliver proof for irrigation necessity, b) developed and conducted irrigation site visit program, c) organize at least four events to demonstrate results to wider public (including one-day irrigation site visit).

e. LOT 2 - Workshop Expert - Management and administration of irrigation systems and Irrigation System Design

The experts were designed and conducted four one-day workshops (plan was two) on following topics:

3.2.1. Management and administration of irrigation systems were done in two days (one in Lovas and one in Šamac). Through this introductory course users might learn the basics of irrigation installation. Topics that will be also covered included: introduction to irrigation and product identification and terminology.

3.2.2. Irrigation system design was done in two days education, also (one day in Orašje - BiH and one in Tompojevci - Croatia). Course was made on basic principles and techniques for designing irrigation systems within industry guidelines. Topics that will be also covered included: techniques in installation and system set-up and fine tuning.

Training offered to all interested farmers. The expert produced training material (paper and computer presentation). The course included a certificate on completion.

### 3.3. LOT 3 - Train-the-trainers course Irrigation specialist

The expert designed and conducted 16-day train-the-trainers for at least 12 trainees. The objective was to provide a group of local technicians with appropriate level of skills for competent planning and installation of agricultural irrigation systems, as well as with ability to provide counsel to local growers on best management practices in irrigation of agricultural crops. The education was a combination of theory and practical work. The trainers produced training manual which have basic lectures for trainers. The course included a certificate on completion.

#### A. Theoretical education involved the following subjects:

Theme 1. Introduction in the irrigation systems and basic of irrigation: Irrigation – part of the hydro-technical amelioration; methods and manners of irrigation; soil drought; crop water supplies; water balance; irrigation rate; irrigation distance; time off irrigation and hydromodul of irrigation.

Theme 2. CROPWT program for irrigation – application: Introduction; reference evapotranspiration; crop water requirement; month evapotranspiration and rainfall amount; crop data; crop water supplies; irrigation supplies; optimal irrigation; irrigation schedule; irrigation practice.

Theme 3. Legal regulation for water and irrigation: Introduction; legality regulative; national irrigation program; developing of irrigation projects.

Theme 4. Agronomic irrigation basis: Introduction; basic pedology and soil irrigation properties.

Theme 5. Others agronomy basis for irrigation: Introduction; water in the soil; implement of crop rotation in irrigation; actual cropping structure; planed cropping structure; total growing season; planning water supplies.

Theme 6. Impact of irrigation on the crops: Irrigation impact on the vegetable; irrigation of fruit plants; grape wine irrigation impact; irrigation in indoor farming - green house's; autumn tomato production – experience of the farmer Ljekar Željko.

Theme 7. Hydrologic and meteorological basis for irrigation: hydrologic and meteorological parameters; hydrologic drought; basis for irrigation; irrigation equipment parts; hydraulic calculation.

Theme 8. Water sources and water quality for irrigation; irrigation water sources; irrigation water quality.

Theme 9. Crop fertilization importance in agriculture production in irrigation: Introduction; soil as a source of crop fertilizers; content of biogenic elements in plants; soil measure of soil fixing – fertilization and liming; mineral fertilization.

Theme 10. Basis of current fruit production in irrigation conditions: Introduction; agro ecological growing conditions; soil cultivation for planting; growing system and plant number; planting and production area organization; soil fertility maintenance; waste production worthy.

Theme 11. Problems and consequences of non-proper irrigation: Problems of nonprofessional irrigation; environment irrigation impact.

Theme 12. Specific notes of used equipment: 12.1. Basic notes of meteorological station, „Pinova“; 12.2. Basic notes of soil water equipment control - Gato automatika d.o.o.; 12.3. Irrigation equipment specificity on the IRRI project - „Pšeno d.o.o.“.

During the 8 working days experts presented mentioned themes and trainers got each presentation and published “book for irrigation practice on the IRRRI - irrigation project”.

#### B. Field practical training

Themes made in to two parts, the first one was during the summer time in year 2013 and second during the May and July in 2014.

B1. On-the spot knowledge implementation during implementation of pilot irrigation schemes (8 days). According the plan and program, 8 themes were made in the field directly with prepared data: name of presenter, date, time and place where presentation will be.

1. Pedology basis for irrigation practice – practical part:

Showing in situ basis of pedological equipment for soil sampling; practical showing two soil pedology profiles (sampling and soil description, in peach orchard).

2. Irrigation and heating system indoors (green house):

Production of vegetable for replanting and producing paper and tomato – basic technology; water sources was deep well; parts of heating and irrigation system; crop water requirement; soil water content (in OPG Ljekar Željko, Mikluševci).

3. Irrigation system on the potato seed production:

Self-propelled traveling irrigator (tifon); storing potato seed; irrigation system in red paper; parts of the system; specific of production; water source; crop water requirement; soil water control; yields and its specificity in 2013.

4. Irrigation system in pears and apple orchards:

Water sources reservoir 5000 l and pipeline; distribution pipeline with compensation drip irrigation system; distribution pipeline with micro irrigation system; distribution pipeline with drip irrigation system; distribution pipeline, drip irrigation system on the wire above the soil; (in pear and apple orchards).

5. a) Irrigation system in the plum orchard:

Water sources pipeline; drip irrigation system on the soil surface; Chlorine as a problem in pipeline water source in crop production; growing season specificity for plum production (practice in the plum orchard),

5. b) Irrigation system on the vegetable production:

Water sources is pipeline; specific of vegetable production in the year 2013 growing season; parts of the irrigation system,

5. c) Irrigation system on the grape for vine:

Water source is pipeline; parts of the irrigation system; specific of the 2013 growing season.

6. Device for soil moisture control; meteorological station “Pinova” and bore holing wells.

7. a) Irrigation system in the peach orchard:

Water source is reservoir 5000 l; drip irrigation system on the soil surface; specific of the irrigation system and the growing season.

7. b) Irrigation system in the peach orchard:

Drip irrigation system on the soil surface; water source is deep well; peach production specific in growing season.

8. Sustainable irrigation in orchards:

Production in orchards; practical lectures in apple, peach and pear orchards; fertilization; cutting; irrigation.

B2. Demonstrate results of the pilot agriculture plots over one growing season 2014 to wider public; presentation of the results (brochures; open).

During the growing season 2014, were set trials with all crops in the irrigation project planned: plums, pears, peach, apple, grape for vine, vegetables, potato for seed, red paper. Treatments

with two irrigation regime were set on mentioned crops. Except the yields of tested crops the important quality parameters will be tested.

#### 4. Conclusions

The different irrigation treatment impact on tested crops is expecting. The set irrigation equipment will be factor to ensure stability of yields and quality of agricultural products. Quality water, irrigation equipment and knowledge are basic suppose for safe and good yield.

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**THE ANALYSIS OF ADDITIONAL HEALTH INSURANCE IN  
CROATIA**

**KOMPARATIVNA ANALIZA DOPUNSKOG ZDRAVSTVENOG  
OSIGURANJA U REPUBLICI HRVATSKOJ**

**ABSTRACT**

*Every Croatian citizen is obliged to report to the mandatory health insurance.*

*People residing in the Republic of Croatia and foreigners with permanent residence permits in the Republic of Croatia, if an international agreement on social insurance doesn't provide it differently, to perform the application under the compulsory health insurance.*

*In an era where the most important thing is the health, the citizens are willing to do anything to keep it and improve their quality of life.*

*In addition to the compulsory health insurance Croatian citizens have the option of choosing an additional health insurance according to their own preferences.*

*Additional health insurance can be provided only by persons who have determined the status of the insured person in the compulsory health insurance at the Institute.*

*The paper will, along with additional insurance by the Croatian Institute for Health Insurance, analyze the additional insurance two Croatian insurance companies.*

*The aim of this paper is to analyze and determine the difference between additional insurance by the Croatian institute for health Insurance and additional insurance in Croatia and Basler Insurance.*

*Definition of research objectives derived object of research that relates to the cost of additional health insurance in Croatian institute for health and the previously mentioned insurance companies.*

*Croatia insurance additional health covers the cost of all kinds of participation in the mandatory health insurance for the full amount without restrictions.*

*Basler insurance Zagreb provides each insured person entitled to reimbursement up to the full cost of health care from the mandatory health insurance, as defined in the laws and regulations in the field of health care, which refers to the participation and the cost of drugs. During research of facts and possibilities that currently exist, for the formulation of the research results in this paper, the following research methods are used in a different combination: historical method, the method of analysis and synthesis, classification and description method.*

**Key words:** health, additional insurance, analysis

## SAŽETAK

*Svaki građanin Republike Hrvatske dužan je prijaviti se na obvezno zdravstveno osiguranje. Osobe s prebivalištem u Republici Hrvatskoj i stranci s odobrenim stalnim boravkom u Republici Hrvatskoj, ako međunarodnim ugovorom o socijalnom osiguranju nije drugačije određeno, prijavu vrše prema Zakonu o obveznom zdravstvenom osiguranju.*

*U današnje vrijeme kada je zdravlje ono najdragocjenije, građani su spremni učiniti sve kako bi ga zadržali i poboljšali kvalitetu svog života.*

*Uz obvezno zdravstveno osiguranje građani Republike Hrvatske imaju mogućnost odabira dopunskog zdravstvenog osiguranja prema vlastitim preferencijama. Na dopunsko zdravstveno osiguranje, mogu se osigurati samo osobe koje imaju utvrđen status osigurane osobe u obveznom zdravstvenom osiguranju kod Zavoda.*

*U radu će se, uz dopunsko osiguranje od strane Hrvatskog zavoda za zdravstveno osiguranje, analizirati i dopunsko osiguranje dva hrvatska osiguravajuća društva.*

*Cilj ovog rada je analizirati i utvrditi razliku između dopunskog osiguranja od strane Hrvatskog zavoda za zdravstveno osiguranje te dopunskog osiguranja u Croatia osiguranju i Basler osiguranju.*

*Iz definiranja cilja istraživanja proizlazi objekt istraživanja koji se odnosi na troškove dopunskog zdravstvenog osiguranja u HZZO-u te u prethodno navedenim osiguravajućim društvima.*

*Dopunsko zdravstveno osiguranje Croatia zdravstvenog osiguranja, pokriva troškove svih vrsta sudjelovanja (participacija) u obveznom zdravstvenom osiguranju u punom iznosu bez ograničenja.*

*Basler osiguranje Zagreb osigurava svakom osiguraniku pravo na naknadu troškova do pune cijene zdravstvene zaštite iz obveznog zdravstvenog osiguranja, kako je definirano zakonima i zakonskim propisima iz područja zdravstva, što se odnosi na participaciju i troškove lijekova.*

*Pri istraživanju činjenica i mogućnosti koje trenutno postoje; a za formuliranje rezultata istraživanja u ovom radu su u različitoj kombinaciji korištene sljedeće znanstvene metode: povijesna metoda, metoda analize i sinteze, metoda klasifikacije te metoda deskripcije.*

**Ključne riječi:** zdravstvena zaštita, dopunsko osiguranje, analiza

## 1. Introduction

Health is the most precious thing a man possesses, citizens are willing to do everything to keep and improve the quality of their life. In addition to the compulsory health insurance Croatian citizens have the option of choosing a additional health insurance according to their own preferences. Additional health insurance can be provided only by persons who have

determined the status of the insured person in the compulsory health insurance at the Institute. This paper also analyzes the advantages and disadvantages of additional insurance in the Basler Insurance Zagreb, Croatia Health Insurance and the Croatian Institute for Health Insurance. This paper will analyze the costs arising from contracting additional insurance, length of contractual obligations and what is included in the additional insurance policies.

## **2. The concept of security and features**

Insurance is a term with which everyone encounters every day in the individual properties of the segments. Preventive measures can partially reduce the effects and the harmful consequences of certain hazards. Insurance should be observed from different aspects, from the stand point of the individual, or from the perspective of society. From the standpoint of the individual insurance represents an economic instrument which replaces individual small amount (insurance premium) for a large uncertain financial loss that would exist if individual would not be assured. Another perspective from the standpoint of society is economic instrument for reducing and the eliminating the risk by the process of combining a sufficient number of identical exposure risks, in order to predict losses for the observed group as a whole. It can be concluded that insurance is a method of risk transfer from the insured to the insurer, who accepts to compensate for accidental damage to those in which they are incurred and to distribute them to all members of risk groups. (Klasić, Andrižanić, 2007) The main participants in the insurance are: the insurer, the policy holder, the insured and the reinsurer. The insurer represents an insurance company, legal person with whom the contract of insurance is signed and which agrees to the policy holder or the insurance beneficiary, in accordance with the terms of insurance to compensate the damage or pay indemnity.

The policyholder is the person with whom the insurer has concluded insurance. The contractor is required to pay the insurance premium and fulfill the obligations under the contract by the insurer. The insured is person under insurance contracts whose property interest is secured and whom belongs the rights under the insurance, and the person on whose survival, death, disability or impaired health depends payment of compensation from insurance. (Klasić, Andrižanić, 2007)

### **2.1. The insurance market**

The insurance market represents totality of relationships between suppliers and applicants for insurance products, where these relations are conducted based on the free decision of all participants. The size and strength of the insurance market can be determined in several ways, of which the most commonly are used data on the total annual premium in one country, the average premium. (Klasić, Andrižanić, 2007) It is important to explain the market of insured in order to understand here in after the difference between individual additional health insurance at different insurance companies.

What is important in the insurance market is that the number of insurers does not significantly affect the cost of insurance. Legal regulation relating to the insurance sector, together with other subordinate legislation and ordinances passed by HANFA regulate the behavior of participants in the Croatian insurance market. Croatian market thus meets the characteristics of a competitive insurance market where all participants in the process of insurance are in the equal position.

The insurance market provides: (Klasić, Andrižanić, 2007)

- Homogeneity/risk equivalence by type and size
- transparency
- Personal, spatial and temporal preferences of insured



- Ensuring in the economic principles

- A large number of insured and the insurer

Competition affects the selection of risks and it leads to the process of the individualization of premiums (adjustment of the average premium rate to each specific risk).

Individualization of premiums is applied for larger insured companies and it is realized by: (Klasić, Andrijanić, 2007)

- Determining the amount of the premium according to features of each insured person (discount for quantity of insurance, implementation of preventive measures, etc.

- Using experiential premium rate, here the premium depends on the previous individual damages of each insured person individually

- Determining the amount of the premium using the discount or allowance at a premium, whilst taking into account the damage that can occur for the entire duration of insurance of the insured individual (not just in one year).

### 3. Health insurance

The divisions of insurance by type are incurred by dividing similar or identical risk in specific groups or types of insurance. Types of insurance are classified according to different criteria for historical reasons. Type of insurance denotes the insurance of things or persons covered by the same insurance conditions. According to the division made by HANFA (NN 139/06), a group of insurance, types of insurance within the groups and types of risk within the types of insurance are prescribed.

The division is the following:

1. According to the criterion of balancing the insurance business and the determining of business results
  - a) Non-life insurance
  - b) Life insurance
2. According to the way of concluding the insurance contract
  - a) Voluntary insurance
  - b) Mandatory Insurance

Health insurance is insurance in case of illness, injuries and other accidents, covering: (NN 150/08)

- The cost of treatment, the cost of supplying drugs and medical-technical aids,

- The payment of the agreed financial compensation and

- A combination of the above mentioned payments, and includes:

a) Compulsory insurance of procedural charges in case of injury at work and occupational diseases

b) Additional insurance of differences over the value of health services of mandatory health insurance

c) Additional health insurance on a large scale of law

At the compulsory health insurance, according to one of the bases of insurance established by law on compulsory health insurance, are obliged to provide all persons residing in the Republic of Croatia and foreigners with permanent residence permits in the Republic of Croatia, if an international agreement or special law doesn't provide it differently.

Insured, children up to 18 years, members of their families and other insured persons mandatory insured in certain circumstances are considered insured persons which provide rights and obligations under the compulsory health insurance under this Act.

Today's lifestyle leaves less time to care for our own health. It is necessary to conduct regular checkups in order to timely detect any disease. A medical care is better every day and all the lower number of incurable diseases.

Advances in medicine and technology in this area today was once unthinkable. The costs of treatment in medicine have also progressed. Today, one can hardly endure the burden of the cost of medical treatment alone.

With compulsory health insurance that is required by the Compulsory health insurance Law it is possible to arranged additional medical insurance. When using health care, insured person pays in person health care costs under paragraph 1 act. 35., or by additional health insurance, according to the Voluntary health insurance Law.

In addition to the compulsory health insurance, there is a voluntary health insurance that includes complementary, additional and private health insurance. Additional medical insurance are contracted as long-term insurance, for at least one year.

Additional health insurance is insurance which provides coverage of health care costs of compulsory health insurance in Article 16 Paragraph 3 and 4 and Article 17 paragraph 5 on Compulsory health Insurance Law. Additional health insurance provides a higher standard of care compared to standard care from compulsory health insurance and higher scope of rights in relation to the rights of compulsory health insurance. Private health insurance provides health care to individuals who residing in the Republic of Croatia, who are not obliged to ensure under the Compulsory Health Insurance Law and Health Care Act of foreigners in the Republic of Croatia.

The contractor of additional health insurance, according to the mentioned law, is the insured or a legal entity or natural person, government or other authority which is concluded an additional health insurance for the insured and which is committed for payment of insurance premiums.

Person insured with additional health insurance, according to the provisions of Act, is a physical person who has or who was, by virtue of its consent, concluded a contract for supplementary health insurance and who uses the rights determined by the insurance contract. Insured person under paragraph 1 Law on additional health insurance can only be the person who has determined the status of the insured person in the compulsory health insurance under the Compulsory Health Insurance Law. The insured under paragraph 2 Article of the Law on additional insurance by the loss of status of the insured person in the compulsory health insurance loses the status of the insured person in the additional health insurance.

#### 4. Comparative analysis of additional health insurance in HZZO, Croatia and Basler insurance companies

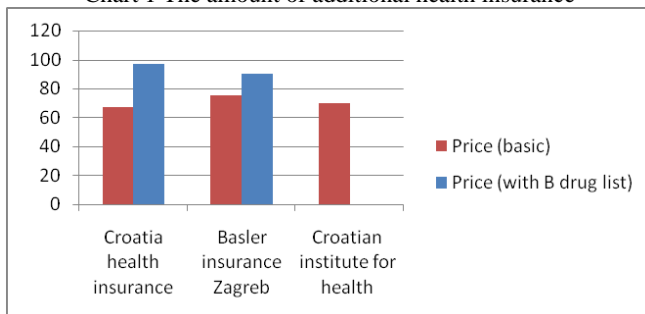
Table 1 The amount of additional health insurance

	Croatia health insurance	Basler insurance Zagreb	Croatian Institute for Health
Price (baasic)	From 67 KN/month	From 75 KN/month	70 KN/month
Price (with B drug list)	From 97 KN/month	From 90 KN/month	-
Contractualobligations	3 years	2 years	1 year

*Source: Authors' calculation*

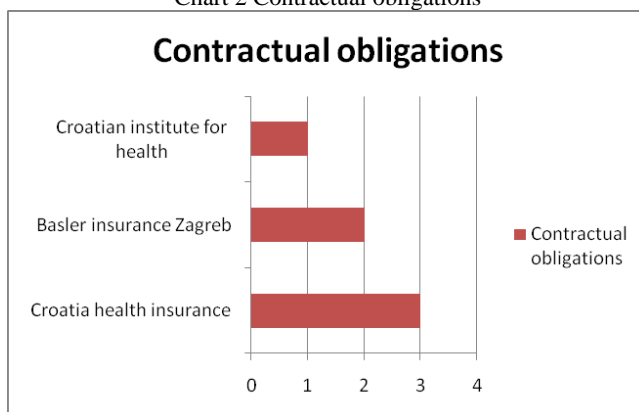
According to Table No.1 price of additional health insurance is from 67 to 75 KN per month. By signing the contract insured person accepts the price of the selected health insurance.

Chart 1 The amount of additional health insurance



Created by the author

Chart 2 Contractual obligations



Created by the author

In the Croatia health insurance contract is signed for the period of three years, Basler Insurance Zagreb two years, while the Croatian Institute for Health Insurance one year.

#### 4.1. Croatia health insurance

Croatia health insurance offers the possibility of contracting policies of additional health insurance with or without coverage for drugs from B drug list. Terms of additional health insurance provides financial security through coverage of all participation from the compulsory health insurance: (Croatia health insurance, 2014)

- a) In primary care for specialist examinations
- b) Diagnostic laboratory services
- c) Physical therapy for dental services
- d) The cost of hospital treatment
- e) The costs of accommodation and food in hospitals
- f) Expenses for the issuance of a drug by prescription.

#### 4.2. Basler insurance Zagreb

Basler Insurance Zagreb offers four types of supplemental insurance packages.

Contracting additional health insurance each insured person is entitled to reimbursement up to the full cost of health care from the compulsory health insurance, as defined in the laws and regulations in the field of health care, which refers to the participation and the cost of drugs.

Basler additional health insurance in a package of basic health insurance provides coverage for the treatment and a system of voluntary health insurance Basler safe health. (Basler insurance Zagreb, 2014)

Basler has provided 24 hours a day assistant (professional medical service) Basler insurance Zagreb, through which policyholders are entitled to a service from concluded insurance policy, and if necessary receive various medical referrals and information.

### **4.3. Croatian institute for health**

Insurance in HZZO additional health insurance is the only additional health insurance in Croatia with the same price for all, regardless of age and health.

By setting the price of additional health insurance from 70 KN per month HZZO wishes to show that the concept of public health based on intergenerational solidarity is not only sustainable but also the most affordable for all citizens. (Croatian institute for health, 2014)

In addition to reasonable prices of insurance, HZZO card additional health insurance highlights the simplicity of use.

Only HZZO card allows cashless participation in all public health institutions and practices around the Croatian.

## **5. Conclusion**

Analyzing the additional insurance in Basler Insurance Zagreb, Croatia health insurance and Croatian Institute for Health Insurance leads to conclusion that the Croatian health insurance premiums offered the lowest price of the basic model of additional insurance from 67 KN, while in relation to the three listed insurance companies, the highest price of additional insurance has Basler insurance Zagreb, 75KN.

Croatian Institute for Health Insurance offers affordable cost of additional insurance, 70KN.

The biggest difference was observed in the length of the contractual obligations of the contracting additional insurance policies. Croatian Institute for Health insurance obliges users for a year, Croatia health insurance for three years, and Basler Insurance Zagreb for two years.

In a basic package of additional health insurance all of three insurance companies offer similar benefits.

The biggest drawback Basler Insurance Zagreb and Croatia health insurance is the need for cash payments of services and subsequent payments charged to the cost mentioned by the insurance companies. In conclusion, it can be determined that the ratio of price premiums, coverage and service functionality additional insurance is best arranged in the Croatian Institute for Health Insurance.

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## **CERTIFICATION AND CONTROL OF ORGANIC AGRICULTURE**

## **CERTIFICIRANJE I KONTROLA EKOLOŠKE POLJOPRIVREDE**

### **ABSTRACT**

*Increased concerns about health and environment lead toward increasing demands for organic products. Share of organic farming in Republic of Croatia in overall used farming land in 2012 was 2.45%, which is extremely low considering rich natural resources we have. Organic farming is often presented as a way of producing "healthy food" without use of agrochemicals (mineral fertilizers, pesticides, growth hormones and other), but it represents a lot wider concept. Organic agriculture tends to use all potentials of a certain ecosystem, and leans towards mixed economy that has a rounded agricultural production. According to law (NN 139/10) organic agriculture is subject to mandatory professional control of a whole economy. The nature and frequency of professional control is determined by the risk evaluation, appearance of irregularities and determination of compliance. Professional control is performed at least once a year except in those subjects who are engaged in packed food wholesale or those who sell directly to final consumers or users. Except professional control, organic agriculture is also subject to official food controls in accordance to provisions of the food Act (NN 81/13) and regulations enacted under it. Certification and production control have been established in order to protect consumers, and in order for a consumer to be sure that a certain product is produced according to demands of organic farming as it is specified in Act regulations on organic production and labelling of organic products. The paper presents methods and conditions that agricultural producer needs to fulfil in order to get certificate and become organic producer.*

**Key words:** organic farming, certification, control, organic production, eco sign

### **SAŽETAK**

*Sve veća briga za zdravlje ali i okoliš dovodi do povećane potražnje za ekološkim proizvodima. U Republici Hrvatskoj udio ekološke u ukupno korištenom poljoprivrednom zemljištu u 2012. godini iznosi 2,45 %, što je izrazito malo s obzirom na bogate prirodne resurse koje imamo. Ekološku poljoprivredu se često predstavlja kao način proizvodnje „zdrave hrane“ bez upotrebe agrokemikalija (mineralnih gnojiva, pesticida, hormona rasta i sl.), no ona predstavlja mnogo širi pojam. Ekološkom poljoprivredom se nastoje iskoristiti svi*

*potencijali nekoga ekosustava, a teži mješovitom gospodarstvu koje ima zaokruženu poljoprivrednu proizvodnju. Prema Zakonu (NN 139/10) ekološka poljoprivreda podliježe obveznoj stručnoj kontroli na cjelokupnom gospodarstvu. Priroda i učestalost stručne kontrole određuje se na temelju procjene rizika, pojave nepravilnosti i utvrđivanja sukladnosti. Stručna kontrola provodi se najmanje jednom godišnje osim kod subjekta koji se bave trgovinom na veliko zapakiranom hranom i subjekata koji proizvode prodaju direktno krajnjem potrošaču ili korisniku. Uz obveznu stručnu kontrolu ekološka proizvodnja podliježe i službenim kontrolama hrane sukladno odredbama Zakona o hrani (NN 81/13) i propisima donesenim na temelju njega.*

*Certificiranje i kontroliranje proizvodnje je uspostavljeno kako bi se zaštitili potrošači, odnosno kako bi kupac bio siguran da je proizvod koji kupuje proizveden prema zahtjevima ekološke proizvodnje koji su navedeni u propisima Zakona o ekološkoj proizvodnji i označavanju ekoloških proizvoda. U radu se prikazuje postupci i uvjeti koje poljoprivredni proizvođač treba zadovoljiti kako bi dobio certifikat i postao eko proizvođača.*

***Ključne riječi:*** ekološka poljoprivreda, certificiranje, kontroliranje, ekološka proizvodnja, ekoznak

## **1. Introduction**

In eyes of wider public ecological, organic or biological agriculture represents production of so called "healthy food" or agricultural production without use of agrochemicals (mineral fertilizers, pesticides, hormones etc.) Although the most known, this is just one of the characteristics of that kind of production.

According to definition of International Federation of Organic Agriculture Movements this is a process by which sustainable agri-ecosystem is developed. Existing soil fertility is key of success for that kind of system, and it is based on natural abilities of plants, animals and landscape with aim of quality optimizing in every aspect of agriculture and environment protection (Lodeta et al., 2011, 137). Ecological agriculture maximally reduces usage of artificial chemical fertilizers, pesticides and protective assets, therefore enabling agency of powerful natural forces which are increasing yield and disease resistance. It sticks to globally adopted principles, but applies them locally, respecting regional socio-economical, geoclimatological and cultural characteristics.

Ecological agriculture is concept of agricultural production much more complicated and whose point is not only in absence of agrochemicals, but in overall management by which is possible to achieve that (Puđak and co., 2011, 142). Potentials of agricultural economy with contented social and economic needs, preservation of natural ecosystem and environment protection (Petljak, 2011, 383) are trying to be maximally used by ecological agricultural production, as a new agricultural production system.

Ideal eco-economy is a mixed type economy, with both, plant and animal production, organised in a way so it represents a harmonic unit that satisfies most of the needs out from own resources and minimizes "import", that is inputs of those from out of economy itself.

Meaning of ecological agriculture is not in denial or rejection of achievements of conventional agriculture, but in finding out ecologically acceptable solutions where necessary and possible. Equally, ecological agriculture is not regress to old ways of farming, farming of our grandparents. On the contrary, ecological agriculture is part of modern agricultural production, trade and agricultural science, and it is based on latest comprehensions and achievements (Puđak et al., 2011, 142).

## 2. Professional control system in ecological agriculture

Control system of these products is very important so consumers would be ensured that food which they consume is produced in an ecological way. Control is defined by Rule book of professional control in ecological production (NN 68/11). A way of professional control conduction is prescribed by Rule book, as well as obligations of control bodies in professional control procedure and obligations of subjects included in professional control. When subject includes in professional control system, to control body it has to deliver:

- Name and address of subject,
- Locations of commercial expanse and ARKOD pitches with areas on which production is planned
- Kinds of actions and products
- Statement that all actions will be in order with rules of ecological production
- By agricultural economy, date when on submitted ARKOD pitches usage of banned means in ecological agriculture has been stopped.

Subject (producer, importer and exporter) must inform control body every year in written way about time period (crop rotation) of plant production, by individual land plots.

When subject is involving in professional control system for the first time, it must make detailed description of unit and/or work space and/or activity, make the list of measures that are at the same time constituent parts of control system, that are needed for compliance with rules of ecological production, accept the implementation of measures in case of determination of deficiencies or violating the regulations or rules of ecological production.

Control body must carry out professional control of all subjects once a year, and also conduct unannounced professional controls, based on risk evaluation regarding incompatibilities with rules of ecological production, considering results of previous professional controls, product quantities and product replacement risk.

Producer must keep merchandise and financial logs which are checked by control bodies (kinds and quantities of delivered ecological products, acquired/bought materials, stored ecological products).

Inasmuch economy is not entirely included in ecological production, control body also controls objects for storing of incoming raw materials which are not ecological.

Producer is obligated to keep records on plant and animal production, and records in type of inscription must be available to control body in any time.

During the validation process (certification) in current year, subject is not allowed to change a control body.

List of control bodies:

1. Bioinspekt, d.o.o. – HR-EKO-01 – Đakovština 2, 31000 Osijek
2. Prva ekološka stanica, d.o.o. – HR-EKO-02 – Kuraltova 8, 10000 Zagreb
3. Zadruga Agrobiocert – HR-EKO-03 – Veli dvor 11, 51513 Omišalj
4. Biotechnicon, d.o.o. – HR-EKO-04 – Hrvatskih iseljenika 30, 21000 Split
5. Hrvatske šume, do.o.o. – HR-EKO-05 – Vukotinovićeve 2, 10000 Zagreb
6. Trgo-invest, d.o.o. – HR-EKO-06 – Dragutina Rakovca 74, 35209 Bukovlje
7. Austria Bio Garantie, d.o.o. – HR-EKO-07 – Ruđera Boškovića 12, 40000 Čakovec

Ministry of agriculture delivers solution on authorization of control bodies for conduction of professional control of ecological production after control bodies have been accredited by accreditation body.

Control bodies must meet these requirements:



- That legal person is registered for professional control performance in ecological production or is in structure of legal person;
- That it has corresponding equipment for professional control performance (computer equipment, sampling equipment and other required equipment) which is adequate to number of employed employees, range of work and specific needs as well as contract with authorized laboratory;
- That it has organizing scheme with staff displayed and scheme for individual phases of professional control actions;
- That staff that is responsible for professional control has a proof about finished undergraduate or graduate universal or expert study in field of biotechnological or biomedical science;
- That it has at least one full time employed employee with at least one year experience in profession.

As a result of their work, control body hands out the verification/certification. Control bodies are bound to deliver a report about conducted professional control to Ministry of agriculture within 30 days since it has been done. Control bodies from other members of European Union who wish to work in territory of Republic of Croatia need to hand out the evidence in Croatian language and to give written statement that all actions and documentation management will be in Croatian language.

Official controls concerning Regulations of Council (EC) no. 834/2007 and special regulations on agriculture and food are conducted by food quality inspectors, higher agricultural inspectors for ecological production, sanitation inspectors, veterinarian inspectors and economic inspectors.

Authorized person for implementation of official controls has a right to:

1. check documentation, agricultural parcels, all objects and means of work in ecological production process, and to take documentation copies or to make photo documentation of subjects included in subject register,
2. supervise the implementation of production rules in ecological production
3. supervise the way of collecting of wild grown plants or mushrooms,
4. supervise the implementation of production rules in processing of ecological food and animal food,
5. take samples of ecological products, soil, fertilizers, soil enhancers, agents used for plant protection, and other ingredients used in production and processing of ecological products, in accordance with regulations from relevant inspections in field of agriculture and food, and to deliver them for analysis to authorized laboratories,
6. supervise the implementations rules by labelling, packaging, storing and transportation of products from ecological production,
7. inspect the way of keeping and accuracy of data in records that subject is obliged to keep based on Regulations of Council (EC) no. 834/2007 and adopted regulations based on it,
8. forbid production, usage of ecological product symbol, and for those for whom they determine that products are produced in contrary to Regulations of Council (EC) no. 834/2007 and adopted regulations based on it, until determined irregularities are corrected,
9. supervise the work of control bodies in implementation of Regulations of Council (EC) no. 834/2007 and adopted regulations based on it,
10. forbid further work to control body if it is determines that they are not fulfilling the Regulations of Council (EC) no. 834/2007, until evidence on fulfilling needed regulations are delivered,

11. act according to Magistrates Act if it determines that there have been violations of Regulations of Council (EC) no. 834/2007 and adopted regulations based on it,
12. inform other body if there have been violations of law or other regulations from jurisdiction of that body,
13. Order and undertake other measures and actions needed for fulfilling of Regulations of Council (EC) no. 834/2007 and adopted regulations based on it.

### 3. Procedure of certification of products

Certification is a process that helps consumer, as it does to a producer. Consumers have to be sure that they are getting „different“ product, the one made by following precise ethical and technological norms, for which they are willing to pay more. For producers certification allows to find buyers who are willing to pay higher price. Certification is based on following documentation course about all imports and exports on a farm. The final result of process of certification is approval for use of certification brand. Price of certification is relatively high and it is not economically justifiable for small scale farmers. Certification for them is predicted through associations, as in that way price becomes acceptable. In order for that to be possible it is necessary to find inner system of quality control, find the financing sources and hire specialists for individual business activities.

There are few procedures, or steps, to become a registered ecological agricultural producer:

First step: registration in register of agricultural producers

Family holding or some other economic subject that wishes to practice agricultural production for market, must be signed into Register of agricultural producers in Republic of Croatia, no matter which system of production it wishes to perform on it's acreage (conventional, integrated, ecological). Applications are usually performed in bigger communities at correspondents for economy who solve further registration or directly in Ministry of agriculture. After registration, economy holders or it's members, or economical subjects are getting identification card with which they prove that they are in agricultural production.

Step two: Meeting the law regulation

It is necessary to meet with the law regulation which regulates ecological agricultural production and processing of ecological products.

Ecological production is regulated by numerous laws and rule books:

- Law on ecological production and ecological products labeling (NN 139/10)
- Rule book about ecological production of plants and animals (NN 1/13)
- Rule book about ecological production and aquaculture (NN 153/11)
- Rule book about professional control in ecological production (NN 68/11)
- Rule book about requirements and methods of registration in Register of ecological production subjects (NN 39/11)
- Rule book about labeling food and animal food in ecological production (NN 25/11)
- Rule book about processing, packaging, transportation and storage of ecological products (NN 129/09)
- Rule book about keeping database for agricultural reproduction material from ecological production (NN 89/08)
- List of legal and physical person, erased from Register of producers in ecological production of agricultural products (NN 22/06., NN 18/08., NN 15/10.);

- List of supervising stations for implementation of professional supervision over ecological production (NN 81/02., NN 15/04., NN 22/06)
- Rule book about ecological production of animal products (NN 13/02., NN 10/07.)
- Rule book about ecological production on plant production and plant products (NN 91/01., NN 10/07.);

#### Step three: First professional control

Family holding or other economic subject needs to address oneself to one of supervising stations and ask for first professional supervision which is a precondition for registration in Register of ecological producers at Ministry of agriculture. In Republic of Croatia following Supervising stations are authorized for implementation of professional supervision:

- „AGRIBIOCERT“, cooperative for implementation of professional supervision and contracted goods control, Veli dvor 11, 51 513 Omišalj
- „ZAVOD ZA ISPITIVANJE KVALITETE ROBE“ d.d., Ljudevita Gaja 17/III, 10 000 Zagreb
- „BIOTECHNICON“ entrepreneur center d.o.o., Hrvatskih iseljenika 30, 21 000 Split
- „HRVATSKE ŠUME“ d.o.o. Ljudevita Farkaša Vukotinovića 2, 10 000 Zagreb
- „PRVA EKOLOŠKA ZADRUGA“, Kuraltova 8, 10 000 Zagreb
- “BIOINSPEKT” d.o.o. for supervision in ecological production, Đakovština 2, 31 000 Osijek

#### Fourth step: Request for registration in Register of ecological agricultural producers

After Supervision stations had done the first professional control and have delivered the record about the first professional supervision, request for registration in Register of ecological agricultural producers is delivered to Ministry of agriculture.

Further documentation is needed to enclose:

- request for registration in register with stamps worth 70,00 Kn;
- settlement about registration in register for legal person, testimonial of competent office of state's administration that you are agricultural producer;
- excerpt from lands registers and/or contract about long term land use (at least 5 years) as an evidence about ownership, that is, right to use the land;
- cadastral plan with exactly determined land partial which belong to certain production unit and their areas;
- list and size of holding's objects, agricultural mechanization and other machinery for ecological production;
- statement from legal person or statement from producer that he is familiar with rules and regulations of concerning production, as a form of special trust between producers and consumers;
- if unit for ecological production has production manager, evidence on business relationship with production manager;
- record of supervising station for ecological production about first professional supervision done.

#### Fifth step: Solution

If everything is pleased, Ministry of agriculture registers family holding or other economic subject into register under certain ordinal, about what the producer gets the Solution. List of

registered producers is published in National newspaper. Matriculation number is also mentioned in declaration of ecological product.

#### Sixth step: Obtaining certification

After professional supervision had been done and after registration by legal person for implementation of validation process, family holding or other economic subject needs to ask for certificate. Registered legal persons for conduction of procedure of certification in Croatian Republic from whom certificate can be asked are:

- „AGRIBIOCERT“ - „, cooperative for implementation of professional supervision and contracted goods control, Veli dvor 11, 51513 Omišalj,
- „BIOINSPEKT“ d.o.o. for supervision in ecological production, Đakovština 2, 31000 Osijek
- „PRVA EKOLOŠKA STANICA“, Kuraltova 8, 10000 Zagreb
- „BIOTECHNICON - PODUZETNIČKI CENTAR“ d.o.o., Hrvatskih iseljenika 30, 21000 Split
- „OMEGA-CERT“ d.o.o., Rebar 131, 10000 Zagreb

Sign “ecoproduct“ is a guarantee that product is produced according to regulations on ecological production. The sign is given for a period of one year, or one vegetation and with declaration it confirms the quality of product. Getting the sign is related to whole system of production and professional control as well as the certification. The right to use the “ecoproduct“ sign on their products have the producers who gained the certificate document from legal person.

#### Seventh step: Request for using „Eco-product“ sign

After getting the certificate, in order to put their product on market with “ecoproduct“ sign, or to declare it as an ecological, family holding or other economic subject must ask from Ministry of agriculture to give settlement on right to use the “ecoproduct“ sign.

Request must contain:

- name/superscription and address of producer, admissions code from Register of ecological products and state's landmark in worth of 70,00 Kn,
- name of the product for which “ecoproduct“ sign is asked, size of packaging, number of packaging and total quantity,
- certificate released by authorized legal person for implementation of validation procedure,
- record copy of last supervision by supervising station.

Since July 1st 2010 it is determined that labeling of ecologically produced products from EU is obligatory for ecological farmers and traders. That logo guarantees that product is made in compliance with EU regulative on ecological agriculture. In that way, trust within consumers is gained, and they can be sure about product's origin and quality of ecologically produced food and beverages, and sign is recognized in all members of EU. Terms „eco“, „bio“ and „organic“ can be used in order to describe ecological product, his ingredients or raw materials in labeling, promotion and commercial documentation. Declaration of ecologic product must be clearly visible on wrapping and must contain reference by control body who certified the product.

Aside from this, in Croatian Republic there is one more kind of label permitted, for ecologically produced products, but it is valid only on territory of Croatia. Labeling of

ecologic products in Croatian Republic is regulated by Rule book about ecological production NN 86/13.

#### **4. Conclusion**

When we speak of ecologic product then quality is what is understood by it and before everything else what buyers made into buying those kinds of products is that it is „healthy food“ that is, agricultural production without use of agrochemicals (mineral fertilizers, pesticides, hormones etc.).

Ecologic agriculture maximally reduces use of artificial chemical fertilizers, pesticides and means of protection.

Advantage of Croatian Republic from point of view as it is one of the countries of European Union is that we are a country that has many uncultivated land that stands uncultivated for a decade or more and therefore are ideal for ecologic farming development because in stated period they have not been treated with agrochemicals and have been purified from chemicals. At the moment Croatia does not have possibilities or potentials for placement of big food quantities on market, but it has a perspective compared to other countries in form of potential to supply other countries with ecologic products. Those kind of products are the most wanted at the moment and they will be even more requested because concern about healthy diet is rising, and beside of that ecologic agriculture is not using chemicals, and in that way it minimally pollutes the environment. Agricultural producers who have potential and possibility for practicing ecologic agriculture should inform themselves as soon as possible about hoe to become eco producer and about certification procedure in order to place those kinds of products on local and foreign market.

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**TOURIST BOARD NETWORKING IN THE REGION SLAVONIA AS  
THE CONDITION FOR AN EFFICIENT MANAGEMENT OF THE  
REGION**

**UMREŽAVANJE TURISTIČKIH ZAJEDNICA REGIJE SLAVONIJE  
KAO PREDUVJET EFIKASNOG MARKETINŠKOG UPRAVLJANJA**

**ABSTRACT**

*There are different models of regional networking of tourism organizations. The first regional tourism organization was founded in 1864<sup>th</sup> in St. Moritz. After that a greater role of regional organizations have not come to the fore until the seventies and eighties of the 20<sup>th</sup> century. The England Tourist Board (ETB) was established in 1969 by 12 regional tourism organizations, with the support of local authorities and the private sector. In other European countries, regional tourism organizations have been established starting from the eighties of the 20<sup>th</sup> century. Models of regional networking of tourism organizations may be different. In some countries, the system is dictated by the state, as it is the case in England or in Queensland, in Australia. In Sweden and New Zealand, there is freedom of the regional networking, each establishment of a regional structure is preferred. The Croatian practice at the national level still do not know the formal model of regionalization. Tourist board networking in the tourist undeveloped continental part of Croatia, particularly of those that operate in Slavonia as the most underdeveloped tourist region in Croatia, is a prerequisite for effective marketing and management of tourist destinations in this area. The same is corroborated by the results of primary research that was conducted in September and October 2013 among directors of the Tourist Boards in the region of Slavonia. The primary research objective was to determine if the region of Slavonia may become more recognizable in tourist markets only if its tourism development is managed unified, from the regional level. At this level, there is a need to constitute the Tourist Organization of Slavonia. Main functions*

*of this organization will be, beside marketing, strategic planning and development; tourism system management, and research and information gathering.*

**Key words:** *tourist networking; regionalization; destination management organizations; tourist region of Slavonia; regional tourism organization*

## SAŽETAK

*U svijetu postoje različiti modeli regionalnog povezivanja turističkih organizacija. Prva regionalna turistička organizacija osnovana je 1864. u St. Moritzu, nakon čega veća uloga regionalnih turističkih organizacija u promoviranju odredišta dolazi do izražaja tek sedamdesetih i osamdesetih godina 20. stoljeća. Turistička zajednica Engleske (ETB) je 1969. osnovala 12 regionalnih turističkih organizacija, uz potporu lokalnih vlasti i privatnog sektora. U drugim europskim zemljama regionalne turističke organizacije se osnivaju počevši od osamdesetih godina 20. stoljeća. Modeli regionalnog okrupnjavanja turističkih organizacija mogu biti različiti. U nekim zemljama sustav je diktiran s državne ili nacionalne razine, kao što je slučaj u Engleskoj ili u Queenslandu u Australiji. U Švedskoj i Novom Zelandu postoji sloboda regionalnog vezivanja, svaka struktura regionalnog ustrojavanja je poželjna, s tim da je regionalnim turističkim organizacijama na raspolaganju mala ili indirektna financijska pomoć, pa su, vezano za financiranje, prepušteni milosti i nemilosti lokalnih vlasti. Hrvatska turistička praksa još uvijek ne poznaje formalni model regionalizacije. Umrežavanje Turističkih zajednica turistički nerazvijenog kontinentalnog dijela Hrvatske, posebno onih koje djeluju u Slavoniji kao najnerazvijenijoj turističkoj regiji, predstavlja preduvjet za efikasno marketinško upravljanje turističkim odredištima na ovim područjima. Isto je potkrijepljeno rezultatima primarnog istraživanja koje je putem web ankete u rujnu i listopadu 2013. provedeno među direktorima Turističkih zajednica unutar regije Slavonije. Cilj provedenog primarnog istraživanja bio je utvrditi je li Slavonija na turističkim tržištima može postati prepoznatljiva ako se njezinim turističkim razvojem bude upravljalo jedinstveno s regionalne razine. Na ovoj razini treba formirati Turističku organizaciju Slavonije, čije će glavne funkcije, osim marketinga, biti i strateško planiranje i razvoj; upravljanje sustavom turizma te istraživanje i prikupljanje informacija.*

**Ključne riječi:** *turističko umrežavanje; regionalizacija; menadžment organizacija odredišta; turistička regija Slavonija; regionalna turistička organizacija*

## 1. Introduction

Cluster-based economic development is a model of development of economic operators, particularly the small and medium sized ones, as they initiate growth and innovation and both the local and regional level through networking. (Horvat, 2012:230).

The first regional tourism organization was founded in 1864<sup>th</sup> in St. Moritz (Lasser, 2000:111-126). In some countries, the system is dictated by the state or national level, as it is the case in England or in Queensland, in Australia. In Sweden and New Zealand (Ateljević, 2009, 296), there is freedom of the regional networking, each establishment of a regional structure is preferred. The small or indirect financial assistance for regional tourism organizations is available, so, related to finance, they are left to the mercy of the local authorities (Pike, 2008, 51,68).

Croatian National Tourist Board practice for now does not know the model of regionalization. In the formation of tourist communities, it has been started from administrative organization, without being mindful of whether a particular administrative unit in which a certain tourist board operates really presents a tourist destination which has to be managed in as efficient a way as possible, and in which integrated tourism products have been created (Wang, 2008,139).

## **2. Tourist communities organization in Croatia**

The establishment of the regional tourist boards has not been anticipated by The Law on Tourist Boards and the promotion of Croatian tourism (2008, Article 3) nor the mandatory or in optional shape. Therefore, we can say that the current legal framework does not provide the ability to manage Slavonia as a tourist destination and its tourism products as a whole (Šalamon Vrdoljak, 2013).

The principal activities of the tourist boards of the region Slavonia can be seen through the analysis of data from reports on the work and on the financial performance of the tourist boards of counties and cities which are county seats in the region. Thus, analyzing the financial indicators for the 2012<sup>th</sup>, the following has been found:

- in total income at all observed tourist boards the biggest one is the income from membership fees and residence taxes,
- cofinancing of own projects through funds transferred from The Croatian National Tourist Board and the Ministry of Tourism in the largest amount among county tourist boards has been provided by the Tourist Board of Virovitica-Podravina County (283,222.45 million kunas), and among city tourist boards by the Tourist Board of Slavonski Brod ( 155,710.00 kunas ),
- in total expenditures of functional marketing at all observed tourist boards, largest participation (over 50.0 %) have projects in the area of policy " improving products " such as decorating the place, tourist signs, new tourism products, information points and welcome services, and special projects providing support for events ( at the level of the national tourist board, according to data from the Report on the work and on the financial operations of the Croatian Tourist Board in the period from January, 1 to December, 31 2012<sup>th</sup>, projects in the field of policy "improving products" in the structure of expenditures accounted for only 8, 9%,
- the most funds for promotional activities spent in the 2012<sup>th</sup> among county tourist boards the Tourist Board of the Virovitica - Podravina County ( 1.110.452.20 kunas), and among city tourist boards, the Tourist Board of the city of Osijek ( 785.606.05 kunas ),
- when it comes to funds intended for advertising ( these funds in the expense structure of functional marketing of the Croatian National Tourist Board, according to data from the above mentioned reports, account for the largest share, even with 62.6 % ) most of them, although in a relatively small percentage, allocated the Tourist Board of the Osijek - Baranja County (270,106.14 kunas,or 14.5 %),
- the possibility of fair appearances and a special presentation abroad, with co-financing by the Croatian National Tourist Board, took advantage of, in the 2012<sup>th</sup>, all county Tourist Boards in the region, with the exception of the Tourist Board of the Požega-Slavonia County .

In other words, the present analysis shows that, in opposite to the Croatian coastal tourist communities in which the majority of revenue and income come from the residence taxes, the



main source of financing continental tourist boards, including the region of Slavonia, makes membership fees, as well as the budgetary grants or, in some communities, transferred funds from the Croatian National Tourist Board and the Ministry of Tourism, for co-financing projects.

From the analysis of the data is also evident that in contrast to the Croatian National Tourist Board with the largest expenditure of functional marketing for advertising, the Tourist Boards in the region of Slavonia, as a tourist underdeveloped region, most funds spend on activities related to the creation and improvement of tourism products that are in this area still fragmented, underdeveloped, and poorly interpreted and promoted.

### 3. Primary research results

In order to determine the attitude of the representatives of some tourist boards in the region with regard to a possible unified management of the region as a whole tourist destination, and promoting and selling the region as a tourist unit, during September and October 2013 it has been conducted independent survey among the directors of the Tourist Boards within the region.

Questionnaires were completed by four representatives of the county Tourist Boards, a representative of the Tourist Board of Baranja as an area, nine representatives of the city Tourist Boards, and 11 representatives of the municipality Tourist Boards, therefore, the representatives of the 68.6 % of the total number of tourist communities that operate in the region.

The research results are presented in tables.

Table 1 The existence of tourism master plans in the region of Slavonia, questions and answers of the respondents

Has the area of your county (city, municipality) adopted a strategic plan for tourism development?		
	Replies, in %	Replies, in absolute terms
It has not.	46,0	11
It has been working on it.	33,0	8
It has.	21,0	5
Total.	100,0	24

Source: Independently conducted research, Slavonski Brod, September and October 2013

Table 2 Compliance of tourism master plans of lower levels with the tourism master plans of higher levels in the region of Slavonia, questions and answers of the respondents

Is a strategic plan for tourism development in your area aligned with the strategic plan for tourism development in the area of higher level?		
	Replies, in %	Replies, in absolute terms
Yes, totally.	30,0	3
Yes, in part.	40,0	4
Not at all.	20,0	2
I have no knowledge.	10,0	1
Total.	100,0	10

Source: Independently conducted research, Slavonski Brod, September and October 2013

**Table 3 Sufficiency of funds to perform promotional activities, questions and answers of the respondents**

Are you of the opinion that assets coming from different sources of financing are sufficient to carry out your own promotional activities?		
	Replies, in %	Replies, in absolute terms
Yes, they are.	0,0	0
No, they are not.	54,0	13
We adopt ourselves to the situation.	38,0	9
It depends from case to case.	8,0	2
Total.	100,0	24

*Source: Independently conducted research, Slavonski Brod, September and October, 2013*

**Table 4 Presentation of the tourist region Slavonia abroad, questions and answers of the respondents**

Are you of the opinion that it would be more efficient when it comes to the region of Slavonia, that the Croatian National Tourist Board co-finances the costs of special presentations and performances on the international tourist markets of the Slavonian region as a whole, or do you prefer the current model of providing support for presentations abroad done by county Tourism Boards ?		
	Replies, in %	Replies, in absolute terms
I prefer the model of co-financing presentation of the tourist region of Slavonia as a whole.	61,0	14
I prefer the current model of co-financing tourist presentations of individual counties.	35,0	8
I have no particular opinion.	4,0	1
Total.	100,00	23

*Source: Independently conducted research, Slavonski Brod, September and October, 2013*

**Table 5 Support to the concept of creating unique tourist products at the level of the region Slavonia, questions and answers of the respondents**

Do you support the concept of creating a unique tourism products at the region level in function of its better positioning on tourist markets at home and abroad ?		
	Replies, in %	Replies, in absolute terms
Yes, completely.	42,0	10
Yes, in part.	50,0	12
Not at all.	8,0	2
Total.	100,00	24

*Source: Independently conducted research, Slavonski Brod, September and October, 2013*

**Table 6 Support to the concept of creating the tourist board at the regional level, questions and answers of the respondents**

Do you support the idea of creating the Tourist Board at the regional level to manage the unique tourism development in the region?		
	Replies, in %	Replies, in absolute terms
Yes, completely.	14,0	3
Yes, in part.	59,0	13
Not at all.	27,0	6
Total.	100,00	24

*Source: Independently conducted research, Slavonski Brod, September and October, 2013*

Table 7 Co-financing of the project of creating a unique tourist board and making a single marketing plan at the regional level, questions and answers of the respondents

Are you of the opinion that the bodies of your tourist community would be ready to support the co-financing of the project of creating a unique Tourist Board and creating a unified marketing plan at the regional level?		
	Replies, in %	Replies, in absolute terms
Yes, completely.	14,0	3
Yes, in part.	59,0	13
Not at all.	27,0	6
Total.	100,00	24

Source: *Independently conducted research, Slavonski Brod, September and October, 2013*

Relevant research results, which are presented in the above tables, are as follows:

- by 46.0 % of respondents tourism development has been carried out without the tourist development plan, while in 33.0 % cases working on tourism master plan is in progress,
- only 30.0 % of respondents have tourism plans aligned with development plans for lower or higher levels; partial compliance is expressed in 40% of the respondents, while one-fifth of representatives of tourist boards are talking about non-compliance,
- when it comes to the sufficiency of funds for carrying out promotional activities, more than half of the respondents is of the opinion that the funds are insufficient for this purpose, while 38.0 % of them say that they are adapting to the situation,
- the majority of respondents, 61.0 %, is committed to presenting and co- presenting tourist region of Slavonia abroad as a whole, while 35.0 % of respondents prefer the current model of providing support for the representation abroad to county tourist boards,
- the concept of creating a unique tourism products at the regional level has full support of 42.0 % of respondents, while 50 % of respondents support this concept partially,
- with the idea of creating a unique tourist destination management organizations at the regional level of Slavonia in principle agree 73.0 % of respondents, although it unreservedly support only 14.0 % of respondents,
- however, only 14.0 % of respondents believe that their tourist boards are willing to support the project of financing the Tourist Board at the regional level, as well as the creation of a single regional marketing programs, while even 27.0 % of respondents believe that it is not realistic to expect.

In any case, the conclusion that by the present investigation and the results that were obtained, can be drawn is that most tourist boards in the region basically support unique management of the region as a tourist destination, as well as the creation of a unique marketing programs at the regional level, to make it more recognizable the tourist market.

However, the results also suggest that a significant number of respondents talk about their own limited sources of funding, in addition to partial and political interests, which could become a major threat to the realization of the project of tourist board networking in the region of Slavonia.

As tourism development plan is the first step in destination management and mechanism for the establishment of cooperation and partnership among all stakeholders involved in tourism development (Pender, Sharpley, 2005,51), while most tourist destinations in Slavonia in which tourist boards operate has no tourist development plans, in the area of region is almost impossible to single out a tourist board which fully performs the role of the destination management organization (Pike, 2008, 31), although in modern conditions is increasingly

seen that destination management is a prerequisite for achieve significant results in tourist markets.

#### **4. Conclusion**

It is increasingly clear that in the modern tourist area, the needs of tourists are becoming more complex, and a growing number of tourists pursues a unique and memorable travel experiences. Therefore, tourism products are becoming more complex and the number of individual services forming part of them is getting bigger and bigger.

The overall tourism product might be defined in terms of five main components: destination attractions; destination facilities and services; accessibility of the destination (including transport); images, brands and perceptions; price to the visitors. Hence, destination is a provider of experiences. Destinations can increasingly be seen as “clusters” or aggregations of businesses, consisting of mainly small and medium- sized Tourism Enterprises (SMTEs) (Middleton and Clarke, 2001).

This complex tourism products should be managed by destination management organizations that should also, within the scope of their work, deal with marketing activities, but also encourage cooperation between the public and private sectors; concern for the environment and the protection of the interests of local communities; create and develop of new tourism products etc.

Destination system complexity derives from the multitude of elements that participate to make it work. Destination system requires integrated management to achieve the synergistic effect of coordinated horizontal management (territorial management) and vertical management (branch or sector management) (Bošković, Saftić, Trošt, 2010, 24). The success of a destination depends on the overall level of services quality, which represents the function of a whole series of variables which are united under the same denominator - the destination management (DMO – Destination Management Organization) (Saftić, Trošt, Rafajac, 2010,117).

Domestic practice shows that in most cases, tourist boards operating in less developed tourist areas have a negligible impact on the development process and are often without political support. The activities of tourist boards are often unrecognized and unacknowledged in the local environment, and due to financial constraints, sometimes have been reduced to giving tourist information and collecting data on realized tourist traffic. In a word said, except for the tourist boards of major cities (Osijek, Slavonski Brod, Vinkovci, Vukovar ) that have significant revenue from the membership fees and residence taxes, it can be said that the performance of the basic tasks of tourist communities in tourism most underdeveloped region of Slavonia depends on the local government and the means by which it encourages their work.

The problem is in the organization of tourist communities in Croatia which follows the administrative structure. The promotion of tourism products is done at the county level, what, when talking about the Croatian inland, due to lack of financial resources, but also not sufficient recognition of certain counties of the continental Croatia on the tourist markets, proved insufficiently effective.

Slavonia could achieve much better tourist results, if it would be moved away from the concept of the development of its tourism products by individual counties. Efforts should primarily be focused on creating a recognizable tourist regions within which specific tourism subclusters would be formed, and where the role of the regional tourism organization ( RTO ) would take over management of the destination organization ( DMO ), which would represent the tourism product in the region of Slavonia in general (Bartoluci, Hendija, Budimski, 2013, 198).

Thus, the Strategic Marketing Plan for Croatian tourism for the period 2010<sup>th</sup> to 2014<sup>th</sup> p. 648, recommends networking of the county tourist boards in the cluster of Slavonia in the DMO, as well as extract resources for its activities. Support to the project of development DMO has been also envisaged by The Operational Marketing Plan of Croatian Tourism (p. 26) (Scott, Baggio, Cooper, 2008, 44).

The management of tourist destinations should be seen as the tourist activities that engage local interests within a meaningful business relationship with tourist suppliers, in order to create products in a tourist destination as well as manage development within tourist destination. The management of the tourist destinations in the executing of its public functions of coordination, and using the functions of planning, organizing and control, creates prerequisites for systematic attribution of all those that are essential for the development of the product destination (Magaš, 2008, 2,3,19 ).

In Slavonia, which on the tourist markets can be positioned only as a whole, the role of management of tourist destinations is becoming an indispensable element of tourism development. A tourist organization formed at the regional level should be responsible for the management of Slavonia as a complete and recognizable tourist destination.

Within the project "Training of tourist communities to act according to the model of destination marketing/management organizations (DMO)" conducted by the Croatian National Tourist Board in collaboration with the Ministry of Tourism, which has a stronghold in the Development Strategy of the Republic of Croatia tourism by 2020. (N.N., 2013), on the workshops held for the representatives of the tourism sector, including the directors of the Tourist Boards, throughout the Croatia, a new model for structuring regional organizations as a starting point for a transformation of the existing county Tourism Boards in the management organizations of the regional character was presented.

In doing so, it remains unclear whether as such regional tourism organizations, which in this model of development become decision makers, for the region of Slavonia, have been provided county Tourist Boards operating in the region, or one single tourism organization that would manage the regional level of tourism development in the region as a whole.

The model for which we stand when it comes to the specific region of Slavonia is the model of constituting a regional management organization (RMO). In this model, the rights and responsibilities of managing all aspects of tourism in the region of Slavonia should be conveyed to this organization, while its role would primarily stem from the need to perform marketing activities related to the particular selective forms of tourism whose development is possible in the region, but also from the strategic planning and development; tourism system management system, and research and information gathering.

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## **LOCAL ACTION GROUP (LAG) – FUTURE OF REGIONAL AND RURAL DEVELOPMENT**

### **LOKALNE AKCIJSKE GRUPE (LAG) – OKOSNICE REGIONALNOG I RURALNOG RAZVOJA**

#### **ABSTRACT**

*Local Action Groups (hereinafter referred to as LAG) are organizations that are established on the initiative of local governments, entrepreneurs, civil association and OPGs within certain area of the local community and in accordance with the EU LEADER program as the relevant measure for the implementation of the objectives and activities of the LAGs. The main objective of LAGs is the creation of local partnerships, connecting organizations from public, civil and economic sectors and to coordinate with these organizations in order to establish local development strategies which will result in creation of strategic framework for growth and community development relevant for LAG.*

*Policies and measures which are emanated from the objectives, activities and results of each LAG will be main subject of the paper entitled "Local Action Group - future of regional and rural development." Throughout this document I will show importance of LAG for regional and rural development, explain relevance of LAG for future growth and development of the region as leader organization in the process of economic, public and civil sector networking which is one of the main difficulties in current situation in Croatia. LAG will therefore have the opportunity to be the bearer of many changes which will result in organized market of labour, goods, services and capital. The main result of such activities will be rural and regional development, which will be based on balanced development of economic, environmental and social potential of the community, with an emphasis on the individual, in so-called "bottom-up" approach.*

*For this reason I believe that the future of regional and rural development should be based on implementation of LAGs policy. I will support this with several examples of cases where the true value and potential of LAGs in the community are still not recognized and properly valuated.*

**Keywords:** LAG, rural and regional development, partnership between public, civil and economic sectors, organization of labour, goods, service and capital market, „bottom up“ approach.

#### **SAŽETAK**

*Lokalne akcijske grupe (u daljnjem tekstu LAG) su organizacije koje se osnivaju na inicijativu jedinica lokalnih samouprava, poduzetnika, obrtnika, OPG-ova i udruga s područja određene lokalne zajednice sukladno LEADER programu EU kao mjerodavnoj mjeri za provedbu*



*ciljeva i aktivnosti LAG-ova. Osnovni cilj LAG-ova je stvaranje lokalnih partnerstva, povezivanje organizacija iz javnog, civilnog i gospodarskog sektora te koordinacija s navedenim organizacijama u cilju izrade lokalne razvojne strategije i stvaranja strateškog okvira rasta i razvoja zajednice mjerodavnog LAG-a.*

*Upravo politika i mjere iz koje proizlaze ciljevi, aktivnosti i rezultati rada svakog LAG-a glavna su tema rada pod nazivom „Lokalne akcijske grupe – okosnica regionalnog i ruralnog razvoja.“ Tijekom definiranja važnosti LAG-a za regionalni i ruralni razvoj zastupati ću ideju u kojoj LAG vidim kao predvodnicu budućeg rasta i razvoja regija te liderom u procesu umrežavanja gospodarskog, javnog i civilnog sektora što je jedan od bitnih problema u RH. LAG će iz tog razloga imati priliku biti nositelj brojnih promjena koja će se manifestirati u konkretna rješenja za stvaranje organiziranijeg tržišta ljudi, robe, usluga i kapitala. Rezultat takvih aktivnosti biti će ruralni i regionalni razvoj koji će se temeljiti na očuvanju i uravnoteženom razvoju gospodarskog, okolišnog i društvenog potencijala zajednice s naglaskom na pojedinca kako bi zbir takvih aktivnosti osigurao konkretne učinke za tu zajednicu, takozvani „bottom up“ pristup.*

*Iz tog razloga smatram da je LAG budućnost i okosnica budućeg regionalnog i ruralnog razvoja a kako bih svoju teoriju približio realnom stanju društva, u radu ću se koristiti istraživanjem aktualnih okolnosti i primjera iz prakse a sve s ciljem kako bih dokazao još uvijek nedovoljno prepoznatu vrijednost i potencijal LAG-ova za zajednicu.*

***Ključne riječi:*** LAG, regionalni i ruralni razvoj, povezivanje javnog, privatnog i civilnog sektora, organizacija tržišta ljudi robe, usluga i kapitala, „bottom up“ pristup

## **1. Introduction**

One of the main priorities of the EU is a balanced development of its regions. Large differences in the development of rural and urban parts of the EU obliged EU institutions to act and determine strategy that will achieve balanced development and establish growth of underdeveloped rural areas with high rates of depopulation, deruralization and deagrification. Rural policy as an important segment of the Common Agricultural Policy of the EU and therefore agriculture as a main activity of these regions was and still is one of the main priorities. Activities of this policy determined that it's important to encourage so-called bottom-up approach because any other way will not be efficient as this one and in that way old fashion way of policy determination must be changed. Another issue that has been more rule than specified exceptions is cooperation between local government bodies, entrepreneurs, educational, non-governmental organizations and citizens as residents of these communities. Poor coordination of activities between listed organizations was the main reason why many rural municipalities had and still have difficulties to use EU funds and create sustainable projects that would provide new workplaces and a better life in those communities. As a result of this behaviour those municipalities had and still have unused natural and human resource potential which directly reflects on economic strength of these regions but also reflects even on national and EU budget what we can see through smaller inflow of funds every year. As part of the Common Agricultural Policy and therefore of rural development policy, each member state is obliged to establish a National Plan for Rural Development in accordance with the strategic guidelines for rural development. This will determine the way of allocation of funds from EPFRR (European Agricultural Fund for Rural Development), either it's based on a national or regional level.

Today, rural development policy covers more than 90 percent of the territory and 56 percent of the total EU population<sup>136</sup>. To solve problems mentioned in earlier part of this work, EU started to support establishment of Local Action Groups (LAGs). They need to become main instrument of implementation of rural policy. Their importance for rural development, role in future EU rural development and performance indicators of these organizations will be the main topic of this work. I will try to explain its position and determine that LAGs are backbone of rural and regional development in all EU member states, even in Croatia. My opinion is that in rural areas lies the true potential of economic recovery and development of the economy and Croatia will be my example that this potential is still unused. Renewable energy, agricultural production and other kind of production, continental tourism, are all activities that can bring a breakthrough in the current status of rural areas and new momentum of economic boom of whole country. Unfortunately, lack of cooperation within public, civil, private sectors; non-competitiveness; small budgets; poorly educated workforce; lack of information and other problems provides difficulties in almost all rural areas, especially if they are from Southern and Eastern Europe. Regarding to this I will try to explain my views and inform public about the potential that lies in the LAGs as holders of Rural Regional Development and EU rural development policy, as one of the most important policy which EU promotes and provides financial support. I hope that my work will provide new way of thinking which will ensure implementation of this institutions and rural development in the end. To do so I determine to write more about "Local Action Groups - the backbone of regional and rural development" and open new horizons regarding to rural and regional development.

## **2. LAG - backbone of rural and regional development**

### **2.1. LEADER program**

Public institutions and LAGs as well serve as service for implementation of specific policies and projected program. If I want have successful explanations of LAGs importance for rural community first I must explain the main program that defines purpose of this kind of institutions. Name of this document is LEADER program ("Links between actions for the development of the rural economy"). Main purpose of LEADER is to encourage public and private partnerships at the community level, and between subjects who live, works as integral part of a particular community.

The EU has started the implementation of LEADER program since 1991. Today it became one of best EU programs and initiator of development of the EU, mainly because of successful implementation of all measures into national development programs of all EU members. That tells us that basic EU initiatives to support the balanced development of its regions are substantially reflected through the application and implementation of the LEADER program and main principles of this program are: sustainable rural development, area peculiarity in order to preserve the identity of the area, a bottom up approach, establishment of local partnerships, innovations, multi-sector approach, networking and collaboration of public and private entities. And why is the LEADER program so revolutionary?

Bottom up approach is one of the fundamental principle of LEADER program. Former policy development was in most cases defined from the top down or from the highest instances to lowest ones. LEADER program changes such practice and sets the local unit as the main core of all future guidelines which will define future national and European development strategy.

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<sup>136</sup> LEADER program EU and rural development, VESTA association, Tuzla 2012., page 5

LAG as instrument of LEADER program implementation will be used for networking, establishment and implementation of cooperation among subjects and as a body which will provide establishment and implementation of local development strategy. This strategy will contain project activities and it will define policy which will recognize all potentials of region and therefore help local municipalities to work better according to national and European policies. Strategy will in that way achieve common goals, reduce unemployment, enhance GDP growth and production, competitiveness, energy efficiency, as well as numerous other identified problems. To summarize, the establishment of organizations that will implement policies and measures presented in above mentioned principles will provide new opportunities for rural development and better cooperation and information of all subjects in particular community. Ministry of Agriculture is competent for implementation of the LEADER program in Croatia<sup>137</sup>.

## 2.2. LAG and local community

Local Action Groups are established in order to carry out measures of LEADER program, and to encourage development of rural areas. Although each country has its own rules, models and legal forms for establishment of such organizations, the most common form of establishment is non-profit organizations in areas which combine similar economic, cultural and political interests.

LAG has a duty to recognize the potential of the community under its jurisdiction and take advantage of their potentials which will indicate community development and benefit for whole society. Local development strategy created for this purpose will submit and gather public and private partnership institutions, local governments, non-governmental sector, private sector and citizens so their interest and vision can be implemented in common vision and provide development which will mainly be based on common projects. Given the importance and seriousness of such a strategy and organization, LAGs need to be coordinated and surveillance by higher organization formed by the Government. Paying Agency for Agriculture, Fisheries and Rural Development is that kind of organization and its main duty regarding to accredited LAGs in Croatia is to approve contracting with LAGs, provide funds according to signed agreements, monitor Local strategy documents, etc. Controlling this document, it defines not only the future or local municipalities within its jurisdiction but a national and EU strategies as well. This is so called "bottom up approach" and importance of creation of such documents is beneficial for whole society.

Today in EU we have more than thousand LAGs. This number is changing every year resulting new LAGs or reorganization of existing ones, it depend on the modalities prescribed by the valid regulations of each country. Purpose and functionality of LAG depends on certain requirements and status of accreditation<sup>138</sup>. Conditions are different from country to country and the most common regulation of terms what is needed for LAG to have full rights is to define minimum and maximum number of residents that LAG must cover, number of local governments that participate in the work of the LAG or under the authority of the LAG or size of the area under the jurisdiction of the LAG. Every LAG needs to have certain number of private, public and other kind of institutions namely because its important to establish multi sector cooperation. Problem of modern rural municipalities is that cooperation between subjects are on very low level and politics of local communities doesn't have common objectives or there are not on disposal of private sector, civil society and ultimately citizens

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<sup>137</sup> Iva Štifanić i Borna Debelić, LEADER program – From Europe practice to opportunity, Rijeka 2009,

<sup>138</sup> Accredited LAG entails certain rights and obligations. LAG who received such status in the Republic of Croatia has the option to withdraw some funds, up to 900,000 kuna in the agreed period, the ability to send recommendations for actions submitted (In the IPARD it meant and extra points)

who are actively or passively involved in community life. This problem is precisely what LAGs needs to compensate. The sustainability of such communities can hardly survive if there is no imperative for collaboration, networking, creating a common policy development at the local level and projects which will encourage new investment, strengthening the competitiveness and innovation.

### 2.3. LAGs in Croatia

Croatia is very centralized country where we can clearly see polarization between developed urban areas of the Central Croatia and other underdeveloped areas, especially those located in the East of the country. The main role in solving this problem should have LAGs.

Basic program that will prescribe the objectives and purpose of LAGs in Croatia is the Rural Development Programme from 2014 to 2020. The same is aligned with the LEADER program and Croatia will have access to more than 300 million kunas per year to generate all goals of rural development. This program is supported directly through EAFRD fund from which countries, as well as Croatia, withdraw funds for implementation of the measures, targets and applied projects. Its successor of IPARD and EU member states are using this for their own approved rural and agricultural policies. Priorities of Rural Development Programme in Croatia are: to promote knowledge and innovation in agriculture, forestry and rural areas, strengthening the competitiveness of all types of agriculture and enhancing the sustainability of farms; promote the organization of the food chain and risk management in agriculture; restoring, preserving and enhancing ecosystems dependent on agriculture and forestry; promote resource efficiency and a shift towards climate-resilient economy with low carbon in the agricultural, food and forestry sector; promotion of social inclusion, poverty reduction and economic development in rural areas<sup>139</sup>. The priority aligned with the LEADER program and strategy of the EU Rural Development Programme as well will open new possibilities for the formation of Local Action Groups on Croatian territory with possibility to be financed by EU funds.

LAGs in Croatia can be registered only as a non-profit organisation - associations, according to the Law for Associations. In the process of establishment LAG must ensure certain criteria which includes clearly defined and continuous of geographical area, minimum two or more units of local government (municipalities, cities). Minimum number of residents according to current regulations in LAG is 5,000 inhabitants and a maximum is 150,000 inhabitants. There are also other limitations such as the size of the settlement, maximum number must be 25,000 inhabitants and settlement can belong to only one LAG. As far as the control structure of LAGs in Croatia, members may be legal and natural persons. LAG can be successfully accredited to withdraw funds necessary for their purpose only if 50 percent members of comity are from private or civil sector, 20 percent from local government and minimum 30 percent must be women<sup>140</sup>. As I said before, the most important document established by LAG is Local development strategy which consists plan for rural development.

Agency that is responsible for establishing, monitoring and assisting the work of LAGs is Paying agency, as I mentioned before. All reports accredited LAGs are sent to this Agency, which is responsible to process all reports and refund funds according to prescribed rules. On the territory of the Republic of Croatia currently there is 61 registered LAG which are covering 451 local governments. The average population covered by LAGs in Croatia is about 30,000 people per LAG. This leads us to current crucial problem of the excessive number of LAGs and difficulties in co-financing them due to lack of funds. But now, Paying Agency in

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<sup>139</sup> [www.appr.hr](http://www.appr.hr)

<sup>140</sup> Ivan Ciprijan, *Ruralni razvoj i LEADER pristup u RH u razdoblju 2014 – 2020*, Ministarstvo poljoprivrede, 2013

cooperation with Ministry of Agriculture and LAGs in Croatia wants to bring a new model of consolidation of LAGs. One of the proposals is to increase minimum number of local units within specific LAG, or to increase amount of surface area that LAG must cover and number of population under LAGs jurisdiction. If we take look into geopolitical circumstances of the majority of local authorities and governments in Croatia who need to find solutions and rearrange the current number of LAGs and make them compatible with the new rules, we can clearly conclude that such changes will lead to the disintegration of fundamental objective and purpose of these organizations. It will lower down their capabilities to help subjects under their jurisdiction and in that way be less efficient in strengthening competitiveness, or recognition of potentials, protection of cultural diversity of area under their jurisdiction and creation of successful local development strategies that will enable a better life for all people in the community that LAG covers.

### **2.3.1. Future of LAGs**

After I have explained the way how LAGs in Croatia are established and their purpose, it is important to point out model which will provide information about how and who are financing LAGs so it can be sustainable. Until 2014 Accredited LAGs will be partly financed through the IPARD program and after throw other EU funds (this refers to EU member states). Local government units, legal entities, public institutions, civil society and citizens can't finance LAG on their own so funds are ensuring them help and support so this institutions can be focused on their primary task. Each accredited LAG has signed two-year contract and amount which they will receive for their work is 900,000 kuna. Other resources are resources of all subject partners and founders of LAGs. Countries like Germany have arranged that local governments must carry out payment of over 15 kunas per capita per month. This ensures the sustainability and functioning of such LAGs, especially in the beginning when LAGs do not have funds generated from membership fees or refunds. Unfortunately, Croatia doesn't have this practice and this is mainly because LAGs are still not recognized as good opportunity for local development.

Although the period that will follow regarding to reconstruction of LAGs in Croatia is uncertain, it is certain that LAGs will soon have on disposal funds which will be managed by them for the purpose of projects from local development strategy. Currently there are some delays regarding to creation of local development strategy of each LAG for period from 2014 until 2020 and its mainly because EU and Croatia have difficulties regarding to delay of program guidelines for this period. Clearly, fact is that each lost year means less funds for LAGs to work and implement Rural and Regional Development. It is therefore essential that institutions who have competence over this question manage all effort so there will be no problems in implementation of EU policy in future.

From all I have displayed in text we can clearly see that future of rural development lies in a way how LAGs will implement common rural policy. LAGs have ability to recognize benefits of the area under its jurisdiction, presenting its uniqueness through local development strategy and implement it in national and European strategy. And what is most important, they have chance to ensure new age of rural development and salvation of rural areas in whole Europe.

Picture 1 Map of LAGs in Croatia<sup>141</sup>



Source: Croatian rural development network web site

### 3. Conclusion

Local Action Groups are future of rural development. Advantage for local municipalities in the past 25 years from establishment of first Local Action Groups generated new possibilities and encouraged opportunity for development of all societies within jurisdiction of this organizations. Croatia follows good EU examples regarding to this matter but there are still numerous adjustments which are required so this organizations can be sustainable and dedicated to implement measures from Rural Development Programme as well as LEADER program.

I must point out that despite a fact that there are large numbers of LAGs in Croatia, the potential of these subjects in the case of rural development still doesn't provide sufficient results. The main reason for this problem lies in the lack of awareness regarding to capability of LAG and financial capacity for implementation of projects which will indicate new employments, production or providing service to subjects on their territory jurisdiction. For this reason I expect that Croatian LAGs will not withdraw all funds for their purpose and projects. Newer the less I think that LAGs in Croatia will fulfil their purpose in future and became main carrier of rural development in Croatia and other countries of EU.

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<sup>141</sup> <http://www.hmrr.hr/hr/leader/hrvatski-lagovi/>

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**IMPORTANCE OF EVALUATION OF BUSINESS OPPORTUNITY IN  
THE PROCESS OF NEW VENTURE CREATION  
EXAMPLE OF PRIVATE ENTREPRENEURIAL INITIATIVE IN  
PRESCHOOL EDUCATION**

**ZNAČAJ PROCJENE POSLOVNE PRILIKE PRILIKOM  
POKRETANJA POSLOVNOG POTHVATA  
PRIMJER PRIVATNE PODUZETNIČKE INICIJATIVE U  
PREDŠKOLSKOM ODGOJU**

**ABSTRACT**

*Entrepreneurial process is the process from idea to entrepreneurial venture. It consists of several phases that guide future entrepreneurs through the process of idea validation and defining all the elements needed for starting a business venture. Understanding the entrepreneurial process is important for understanding "the big picture" of entrepreneurial venture, which includes all the elements that are needed to convert an idea to a successful business venture. The most important thing in this process is to evaluate whether an idea is a business opportunity. Business opportunity is the initiator of business venture and it consists of a series of circumstances in the market that enable turning a business idea into a business venture. There are many tools and methods that can be used in the process of evaluation and validation of a business idea. These methods can also help in the process of modification and adaption of the business idea to the environment in which the business venture will develop.*

*Vast majority of entrepreneurs pay too much attention to business idea and they decide to start a business venture without a lot of thinking and researching. Because of that, many business ventures fail at the beginning of their existence.*

*The goal of this paper is to explain the importance of understanding the difference between business idea and business opportunity, to explain different methods of evaluation of business opportunity and to explain the importance of balance of the main elements of business venture (business opportunity, resources and team). Using the example of private initiative in*

*preschool education (starting a Montessori kindergarten,) the goal is to show how a seemingly good business idea does not have to be a good business opportunity.*

**Key words:** *entrepreneurial process, business opportunity, evaluation of business opportunity, new venture creation*

## **SAŽETAK**

*Put od ideje do poslovnog pothvata nazivamo poduzetničkim procesom. Poduzetnički proces sastoji se od nekoliko faza, koje vode budućeg poduzetnika kroz proces vrednovanja ideje i definiranja svih elemenata, potrebnih za pokretanje poslovnog pothvata. Razumijevanje poduzetničkog procesa važno je za razumijevanje „velike slike“ poduzetničkog pothvata, odnosno razumijevanje svih elemenata, koji su potrebni da se ideja „pretvori“ u poduzetnički pothvat. U tom procesu, ključno je procijeniti je li ideja ujedno i poslovna prilika. Prilika je pokretač poduzetničkog procesa; čini ju splet okolnosti u okruženju koje omogućavaju realizaciju poslovne ideje u poslovni pothvat. Kako bi procijenili je li ideja poslovna prilika (može li se realizirati u uspješan poslovni pothvat), poduzeticima stoje na raspolaganju brojni alati i metode vrednovanja i procjene poslovne ideje, koji ukazuju na prednosti i nedostatke ideje, te daju mogućnost modifikiranja ideje i njeno prilagođavanje okruženju u kojem se poslovni pothvat razvija. Velika većina poduzetnika daje preveliku važnost ideji, te kreću u pokretanje poslovnog pothvata, bez da su prethodno ispitali postojanje poslovne prilike. Zbog toga i veliki broj poduzetničkih pothvata propada već u prvim godinama svog postojanja.*

*Cilj ovog rada je objasniti važnost poznavanja razlike između ideje i poslovne prilike, objasniti različite metode vrednovanja poslovne prilike, te značaj usklađenosti elemenata poduzetničkog pothvata (prilika, resursi, tim). Na primjeru privatne inicijative u predškolskom odgoju (otvaranje dječjeg vrtića Montessori) željelo se pokazati kako naizgled dobra poslovna ideja ne mora nužno biti i dobra poslovna prilika.*

**Ključne riječi:** *poduzetnički proces, poslovna prilika, vrednovanje poslovne prilike, pokretanje poslovnog pothvata*

## **1. Introduction**

Entrepreneurial process is the process from idea to entrepreneurial venture. It consists of several phases that guide future entrepreneurs through the process of idea validation and defining all the elements needed for starting a business venture. Understanding the entrepreneurial process is important for understanding "the big picture" of entrepreneurial venture, which includes all the elements that are needed to convert an idea to a successful business venture.

The environment in which an existing venture operates or a future venture is being created often changes and it is therefore crucial that entrepreneurs keep track of all the changes in the market. In the free market system, opportunities arise when circumstances change, when chaos and confusion occur, when inconsistencies, lagging behind or leading are detected, when there is knowledge of, or lack of information, and when various gaps in an industry or a market arise (Timmons, 2003). For these reasons it is very difficult to define a model according to which opportunities arise, which would serve as guidance for entrepreneurs. A constant interaction of ideas, circumstances in the real world and entrepreneurial creativity is



shaping and creating opportunities, and this interaction is a highly dynamic and complex process.

## 2. Entrepreneurial process

The entrepreneurial process consists of several phases, which are mutually intertwined and enter one another (Hisrich, R.D, Peters, M.P., Shepherd, D.A., 2011, Barringer, B.R., Ireland, R.D., 2010). According to Barringer (2010), flow chart of the entrepreneurial process begins with a person's decision to become an entrepreneur. After making the decision, entrepreneur must successfully develop his or her business idea through opportunity recognition, analyse their feasibility, develop a business plan, analyse the industry and competition, and then develop an efficient business model.

According to Barringer and Ireland (2010.), the entrepreneurial process consists of the following 4 steps:

### Step 1: Deciding to become an entrepreneur

Starting a business venture is preceded by a person's decision to become an entrepreneur, i.e., desire to start a business venture. People become entrepreneurs for various reasons, but primarily because they want to become their own boss, realize their own ideas, and/or achieve financial gain.

### Step 2: Developing successful business ideas

Developing successful business ideas is the second step of the entrepreneurial process, allowing entrepreneurs to reduce the possibility of failure of their business ventures. For this purpose, opportunity is explored, feasibility analysis is performed, business plan is written, plan, analysis of industry and competition is conducted, and developing an efficient business model is given consideration.

### Step 3: Moving from an idea to an entrepreneurial firm

The third step in which an idea is transformed into a business venture relates to defining appropriate legal and legislative acts, evaluation of financial viability of the new venture, creation of a team, and setting the basis for financing of the new venture.

### Step 4: Managing and growing the entrepreneurial firm

From the moment an entrepreneurial venture is started it is necessary to continuously work on it in order to ensure growth of the firm.

Neglecting and/or skipping individual phases of the entrepreneurial process decreases the possibility of success of an entrepreneurial venture.

Opportunity, team and resources as driving forces of entrepreneurial process, which is dependent on their alignment, are at the centre of the Timmons model of the entrepreneurial process (Timmons, 2003). Every entrepreneurial process starts with *opportunity*, not with money, not with strategies or business plan. Timmons (2003) considers opportunity more important than entrepreneur's talent, abilities of the entrepreneurial team and available resources. *Team* is the second part of the entrepreneurial process, whose strength is reflected in dedication, persistence, motivation, communication and creativity, which is led by entrepreneur /leader, whose task is to transform opportunity into entrepreneurial venture. At the beginning of the entrepreneurial journey entrepreneurs often consider it necessary to have all the available resources immediately, attributing the highest value to money. Timmons

(2003) states that this is a big mistake, and that it is a natural sequence of events that a good business opportunity will attract money. To start the entrepreneurial process it is necessary to define the minimum sum of the required resources using the *less is more* principle, that is, use as few resources as possible and utilize creativity and abilities of the entrepreneur and his team in the beginning. This way of starting a business venture reduces the initial risk and ensures competitive advantage.

In order to seize opportunity, entrepreneur must have a good understanding of the time period in which company can enter the market. Timmons (2003) refers to this time period as window of opportunity. It depends on the size of the market and time when the business venture appears on the market. It is the time when entrepreneur needs to assess whether it is an opportunity to launch their venture, that is, positioning their products/services on the market. If the timing of entering the market entry is well estimated, launched product or service will have greater earnings potential. As the window expands, the market is rapidly growing and engagement by the entrepreneur is necessary in order to obtain the largest possible market share. After some time, the market matures and the window of opportunity for new entries closes. This is the period in which eventual penetration of new ventures on the market is very difficult. The market has become mature, growth has slowed, and it is dominated by renowned companies. This is the time when entrepreneurs need to maintain competitiveness.

## **2.1. Business idea vs. business opportunity**

Idea and business opportunity are often used as synonyms, but that is not correct. Idea is a thought about something, a notion, something that comes to mind. The importance of ideas is often overestimated in practice, because, after entrepreneur gets an idea, what usually has to follow is a series of repeated trials and errors before they actually design or create a product that customers are willing to buy (Timmons, 2003). Opportunity represents a set of favourable market conditions that create the need for a new product, service and/or work (Barringer, Ireland, 2010). An idea may or may not have and meet criteria to be and/or become an opportunity. Often the reason for the failure of business ventures is that entrepreneurs are trying to create a business venture from an idea that doesn't have the characteristics of an opportunity and which doesn't create a need in the market. Every business opportunity contains an idea, but every idea does not necessarily represent a business opportunity.

In order for an idea to become an opportunity for an entrepreneur, it must possess certain characteristics.

Barringer (2010) states that opportunities have four characteristics, which are: attractiveness, timeliness, durability, and that they are anchored in a product, service, or business that creates or adds value for its buyer or end user. In his "four anchors" model, Timmons (2003) claims that a good opportunity is characterized by businesses that create or add significant value for the buyer or end user, solve an important problem or satisfy an important desire for which someone is willing to pay a certain fee/price, have a strong market, high margins and quickly achieve cash inflow: they are big enough, have a high growth rate, strong and achievable inflow of cash, high profit potential (at least 10-15% after taxes), and offer attractive rates of return to investors (at least 25-30%), they are acceptable for the founder and his team at the given time and in a particular market with a balanced ratio of risk and profit.

## **2.2. How to evaluate business opportunity?**

Many entrepreneurial ventures fail not because entrepreneurs that have started them are doing things badly, but because a real opportunity never existed. It is therefore necessary to check, before enthusiasm with the idea takes over, whether the idea satisfies a specific need and whether it meets the opportunity criterion (Barringer, 2010). Once entrepreneur recognizes a

business opportunity, it is necessary to submit it to analyses, which will allow him insight into feasibility and sustainability of a business venture with the aim to reduce risk and prevent creation of losses.

According to Mullins (2003), the principal question that entrepreneurs have to ask themselves is "Why should this new business venture succeed, when majority of them fail?" This seemingly simple question helps the entrepreneur explore all the possibilities that are in front of him (both positive and negative) and check whether his idea satisfies the criteria of business opportunity. The Mullins' model for assessing entrepreneurial opportunities offers guidelines and advises entrepreneurs explore in detail all the relevant facts and known aspects before writing a business plan with the intention of accepting, modifying or dropping an idea. Mullins' model is a tool for assessing and shaping business opportunities, and provides an understanding of what is required to establish a business venture (Tomasevic, 2012). The model is based on the underlying assumptions and questions that help the entrepreneur to examine the attractiveness of a business opportunity: *Are the market and industry attractive?; Does the opportunity offer a compelling benefit for the buyer and sustainable advantage over other solutions to buyer's needs?; Can the team achieve the results they predict and promise to others?*

Market and industry are not the same category and they should be distinguished. Market is a group of current or potential customers who are willing and able to buy a product to meet some of their needs or desires, while industry is a group of providers (sellers) who offer products and services that can be substitutes for each other (Mullins, 2003). The importance of knowing these differences is based on different levels of attractiveness of the two areas, which can be observed at the macro and micro level. Macro-level market analysis involves collecting data on market size from secondary resources, including number of customers, availability of money for spending and annual product sales. In addition to market size, also examined is the possibility of its growth, which is based on forecasts of trends (demographic, socio-cultural, economic, technological and legal frameworks) with the intention to determine whether they represent a positive aspect that will help realize the opportunity, or if entrepreneur will have a hard time countering them.

The micro level refers to the market segment on which data is collected from primary and secondary resources, and is focused on finding answers in the form of existence of a market segment that is willing to pay for the added value of satisfying its needs, which is offered by a particular product, as well as the speed of its growth and the possibility of entering other market segments after conquering the first. The attractiveness of a particular market depends both on the customers, who will not buy products without differentiated benefits, and on the investors, who will not invest unless market growth is visible. In conclusion, without differentiated benefits, majority of customers are not going to buy, and without expected market growth, majority of investors are not going to invest in a new business venture. Attractiveness of an industry at the macro level was best described by Porter with his Five Competitive Forces model (Porter, 1998, Porter, 2008), while observing an industry at the micro level implies a set of factors that ensure possibilities for sustaining growth of the newly established company, such as, for example, intellectual property (patents, recipes), competencies and resources that are difficult to imitate by other companies, etc. Observing an industry at the micro level presumes analysis of prerequisites for creation of company's sustainable competitive advantage. At the centre of the Mullins' model is the team and its characteristics with which a business opportunity is evaluated by examining the correlation of the team and opportunity in relation to team's business mission, personal desires and capacity to take risks, team's knowledge of the key factors of success (along with achieving the breakeven point, profitability and company growth), and team's connectedness in the value creation chain (the way in which team will cope with the dynamic environment in which it

will operate). Any opportunity that is not in accordance with personal preferences of team members is considered unattractive (because it could hardly create team members' passion for the venture, which is one of the key characteristics of successful entrepreneurs and prerequisite for success of any venture).

Timmons (2003) also notes that opportunities can be evaluated using three basic parameters: market demand, market structure and profit potential, with an emphasis that opportunity is better if the market is characterized by a large dose of uncertainty, which is dominated by a high level of risk. Timmons (2003) also explains the broader framework with criterion for evaluating business opportunities which investors use to evaluate potential clients, markets and industries. But, along with investors, it is also applicable to entrepreneurs in order to assess whether their idea is a good opportunity. This framework/model consists of eight criteria for evaluating opportunities: industry and market, financial indicators, "harvest" issue, i.e., increasing the value of the business, competitive advantage, team, fatal flaw of the project, which can lead to project failure, entrepreneur's characteristics in terms of personal and business goals, alignment of work with his or her lifestyle, entrepreneur's attitude towards stress and acceptance of risk, and strategic differentiation, which analyses the degree of alignment of idea, opportunity and resources. The particular value of this model is that in addition to the factors that affect the success of the venture (market, industry, competitive advantage, earnings), it focuses a great deal of attention to the analysis of the entrepreneur and his or her team. Analysis and assessment of entrepreneur and the team can often be neglected, which can lead to a fatal flaw at the very start, because entrepreneur and his or her team are crucial for identifying and evaluating business opportunities, and for the success of business venture. Due to its comprehensiveness and complexity, this model requires a lot of time, because of which it is relatively rarely applied in practice (Tomasevic, 2012).

A business opportunity can also be tested using analysis of viability of the business model according to Kathleen R. Allen (1999), which will offer an answer to a very general question: Is there an acceptable market for the business concept? Business model encompasses product/service, customer, distribution and benefit for the customer, which have to be tested in order to verify the feasibility of the business idea. This analysis has practical value because it helps the entrepreneur to answer three key questions: "Are there enough customers and is the market big enough for the business concept to be acceptable?", "Are investment requirements, based on an assessment of sales and expenses, justified?", and "Can entrepreneur put together a good team that will participate in the realization of the project?". This model advises the entrepreneur to test his idea, that is, business concept through four main factors: product/service, industry, market/customer, finance. The value of the model proposed by K. Allen is in its simplicity because it is understandable to beginner entrepreneurs, as well as in its comprehensiveness because it touches on all the issues that have to be considered when thinking about a business venture. Assessment of a business opportunity does not require a lot of time, because it is based on the most basic, necessary facts that should be known prior to starting a business venture. The model directly indicates the problematic areas, and even if the results of the analysis show that the business concept is not feasible, entrepreneurs should not give up on their idea. On the contrary, results of the analysis should be used as guidelines according to which the business concept will be adapted to market conditions, minimizing weaknesses and maximizing advantages, thus making it feasible.

At the start of the entrepreneurial journey, due to emotional factors such as ecstasy and enthusiasm, entrepreneurs are often "blindly in love" with the idea and cannot realistically examine all the aspects of business (customers, market, expenses, competition), which are of crucial importance for the development of entrepreneurial venture. To answer the question whether his or her idea can become a business opportunity, entrepreneur needs to set aside

time for a proper assessment. However, entrepreneur must take into account that too long evaluating of a business opportunity can lead to the awakening of other market participants, who could quickly take advantage of favourable situation in the market and start a business venture. Experience teaches the entrepreneur and shortens the time needed for opportunity assessment.

### **3. Case: Entrepreneurial initiative in preschool education (starting a Montessori kindergarten in Osijek)**

The aim of description of this idea is to show how a seemingly excellent and interesting business idea does not necessarily have to be a business opportunity, and to show on this example how methods of assessing business ideas can help minimize the risk of starting a business venture.

The case describes the idea of starting a kindergarten based on the Montessori method in the city of Osijek. Actor in this case is a preschool and Montessori<sup>142</sup> kindergarten teacher.

The market of the kindergarten in this case are parents of children aged from 3 to 6 years who want to provide their children a method of upbringing that is different from the traditional one, which is present in all municipal and private kindergartens in Osijek. Entrepreneur considers the application of the Montessori method as her most important competitive advantage compared to other kindergartens, which will transform children into people who are going to deal with the challenges of the world they live in more easily and competently.

The planned investment for starting a kindergarten is 433,298 HRK, part of which would be financed by entrepreneur's savings, while the rest of financing should be secured by getting a bank loan. The said funds are needed for the renovation of the house in which the kindergarten will be situated.

The planned capacity of the kindergarten is 25 children in the first year of operations, and 50 in the second. In order to obtain a more realistic picture of the future business venture, the financial plan has been developed on the principle of minimizing revenue and maximizing costs. Thus, enrolment of 15 children was planned for the first year, and 30 for the second.

In addition to the basic income, which is comprised of parents' payments and subsidies from the city of Osijek, it is planned that the kindergarten generate other income from organising workshops and other educational activities aimed at the general public, whose aim is not only to increase the kindergarten's revenue, but also to promote a new kindergarten concept. Employment of two educators is foreseen in the first year of operations, one of which is the entrepreneur herself, as well as involvement of external, professional associates who will monitor the progress and development of children, while employment of two additional educators is planned in the second year.

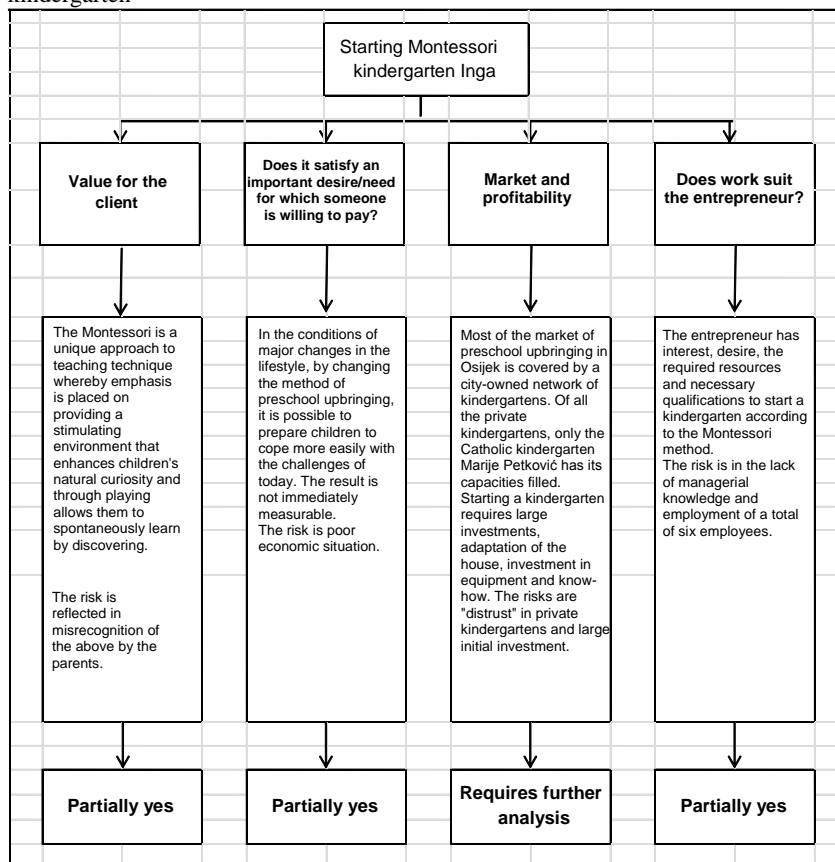
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<sup>142</sup> The Montessori is a unique approach to teaching technique whereby emphasis is placed on providing a stimulating environment that enhances children's natural curiosity and through playing allows them to spontaneously learn by discovering. The basic starting point of this method is respecting the individuality of each child, teaching them operational knowledge in areas of life in which they will later participate as adult persons. The principal difference between the Montessori method and traditional preschool education is the absence of direct involvement of educators, and education based on real life situations (for example, there are no toys in the shape that we are used to in kindergartens). Incredibly rapid changes that are taking place in today's world lead us to begin to cultivate the desire to learn in children from the youngest age, which will last a lifetime and help them become self-aware, confident and responsible individuals (Tomasevic, 2012).

### 3.1. Is the idea of starting a Montessori kindergarten in Osijek a good business opportunity?

After collecting data from primary and secondary sources, and before writing the business plan, it is necessary to try to find an answer to the question whether the idea of starting a Montessori kindergarten in Osijek is also a good business opportunity. For this purpose Timmons' four anchors model (2003) and Mullins' model of seven domains of attractiveness of opportunity will be used. The four anchors model serves as a flash-tool, with which characteristics of an opportunity can be quickly evaluated, that is, provide an answer to the question whether an idea has the potential to be transformed into a profitable venture.

Image 1 Results of the "four anchors" analysis for the idea of starting a Montessori kindergarten



Source: Tomašević V., *Private entrepreneurial initiative in preschool education*, 2012

The analysis of the idea using the Timmons' model has indicated the following:

Timmons' four anchors model shows that this idea has the potential to become a business opportunity, but it needs to be explored in more detail in order to create a more accurate of the idea, team, financial justification and sustainability of starting an entrepreneurial venture.

The key shortcomings, that were indicated by this method of analysis are: poor economic situation and increase in the number of unemployed (less disposable income, taking care of children is entrusted to relatives or the unemployed parent, "black" market), market's unwillingness and ignorance of the new methods of upbringing (significant engagement and time are necessary to familiarize the market with Montessori pedagogy, habit of enrolling children into municipal kindergartens), high cost of starting this business venture and lack of managerial knowledge for running the business (the entrepreneur has so far worked only as a kindergarten teacher), as well as absence of a team, which would compensate for these weaknesses.

For these reasons, the idea of starting a Montessori kindergarten will also be analysed using the Mullins' model of seven domains of attractiveness of opportunity and the financial plan.

Mullins' model of seven domains of attractiveness of business opportunity shows a deeper analysis of market, industry (observing them at macro and micro level) and team, measuring their un/attractiveness in relation to the business opportunity.

Macro level of the market entails getting a broader picture about market size and trends foreseen in it. In 2010, the market of institutions of preschool education in Osijek achieved total revenue of 80 million HRK, while the total number of customers was 5,000 (refers to number of parents whose children attend kindergartens). The possibility of growth of the said market is likely in the future, which is contributed by improved economic situation through increased disposable income, higher employment, increasing awareness about the importance of knowledge (more developed cities than Osijek have Montessori kindergartens – Zagreb, Split, Poreč), legally prescribed preschool upbringing and existence of 5,500 more preschool age children in Osijek, who are not enrolled in preschool institutions (Tomasevic, 2012).

Understanding of the market at micro level entails getting a broader picture about the existence and characteristics of the market segment that the company will serve, specifically, it relates to parents who would enrol their children into a Montessori kindergarten. Since no detailed study was conducted, the assumption is that out of the total number of enrolled children; 2,700 in one year, 2% of children could enrol in a Montessori kindergarten, which would be enough to fill the capacity. Due to limited availability of capacities, further increasing of the market segment would not influence profitability. Also, smooth transition to another market segment is not possible (traditional method of upbringing), because this is a specific method of upbringing, which entails special decoration of the environment, use of equipment, and training for Montessori educators, which requires large financial resources.

Based on the above mentioned, we conclude that, in relation to the business opportunity of starting a Montessori kindergarten, the market is partially attractive.

Looking at the industry at the micro level, we conclude that it is attractive in relation to the business opportunity, which is reflected in the existence of entrepreneur's competencies through many years of work experience in preschool education and possession of Montessori teaching certificate, which allow her to develop different and competitive ways of doing business, intellectual property and resources that are difficult to imitate by other companies in the short-term. Namely, new potential entrepreneurs who wish to open a kindergarten whose concept is based on the Montessori or some other alternative pedagogy, need to go through training, which requires time and resources, which entrepreneur Ivana Sarić already has.

Analysis of the industry at the macro level involves analysing the attractiveness and profitability of a particular branch of industry in which companies offer similar products and services, which is explained by Porter's Five Competitive Forces model. Taking into account that the threat of entry of new competitors into the market is weak, the rivalry among existing kindergartens is strong, bargaining powers of customers and suppliers and influence of substitutes are moderate to strong, and that the entrepreneur possesses competencies, specific method of education, and resources that are difficult to imitate in the short-term, we conclude

that the industry of preschool education in Osijek is partially attractive for entry of new ventures.

The next domain of the Mullins' model for evaluation of business opportunities is the team domain, which is assessed with regard to: alignment of personal preferences of the team with the opportunity (mission, personal desires and capacity to take risks), knowledge of the key factors of success and possession of core competencies, which provide a competitive advantage in the market.

Besides a strong desire and interest to start a kindergarten, the entrepreneur has a network of contacts that could help her. She needs to employ 3 educators and hire 4 expert associates on service contracts, and also attract volunteers, assistants. There is no team at this stage of the entrepreneurial process; it is connected solely to the entrepreneur.

Given that the entrepreneur has worked as a kindergarten educator for many years, she is familiar with the key success factors in that industry. However, it is necessary to point out that most kindergartens in Osijek are owned by the city, and that there are no common market principles, (supply, demand, adjustment of prices in relation to demand, creation of competitive advantage, etc.). The key factors of success in this industry are related to: educators' personality (who with their personal values, verbal and non-verbal communication affect the development of the same in children), respecting the rights of children and parents (right to safety, protection, healthy nutrition, privacy, choice of friends), partnership with parents in the upbringing (various workshops for parents and children organized by the kindergarten), and equipment of kindergarten's internal and external environment.

Analysing these key success factors, derived from experience in traditional upbringing, and the specifics of the Montessori method, we can conclude that future business venture mostly possesses competencies with which it can satisfy these key factors of success, and build its competitive advantage based on those competencies.

Looking at the team and its connectedness to the opportunity, it is indicative that entrepreneur is by herself at the present, and that she is only planning hiring other team members. Success of a business venture is highly dependent on the quality of the team. As the entrepreneur does not have other experiences from which she could have acquired knowledge about team management, the above represents a risk for the business venture, and team's connectedness to opportunity is presented as unattractive.

Mullins' model of seven domains of attractiveness of opportunity has shown that market and industry are partially attractive, and that team's connectedness to opportunity is unattractive, primarily because of non-existence of a team, which, observed together, decreases optimism and expectations that the entrepreneur had at the start, characterising the idea as partly to poorly attractive business opportunity.

Using Timmons' and Mullins' models of valuation of business, this opportunity was assessed as partly to poorly attractive. Other important facts that make this business opportunity partly attractive are: good network of municipal kindergartens (strong and stable competition), tradition of enrolling children into municipal kindergartens, lack of knowledge of the Montessori method, and low-profit activity. All these facts are objective obstacles for this business venture to be projected as successful.

#### **4. Conclusion**

Entrepreneurial process encompasses the journey from getting an idea to recognizing an opportunity in which entrepreneur needs to align team and resources in order to be able to start an entrepreneurial venture. The importance of recognizing the business opportunity has crucial impact on the entrepreneurial process, because it is the basis on which the two other driving forces – team and resources, are modified and upgraded.



Theory offers several models for reviewing business opportunities (Timmons, 2003, K. Allen, 1999, Mullins, 2003), which can be a practical tool for entrepreneurs to become thoroughly familiar with all the relevant facts (both positive and negative) that affect their business venture, before writing a business plan. The use of these models in practice is very simple because entrepreneurs themselves can get almost all the answers, investing only their time and effort to gather information.

Use of models for evaluation of business opportunities allows entrepreneurs to "open their eyes" in order to avoid risks of a future venture, but also helps them transform existing ideas into business opportunities by modifying them.

The idea of starting a Montessori kindergarten seemed very realistic and feasible at the start. Entrepreneur owns a property, has savings, she is a Montessori educator, has a passion for the application of Montessori pedagogy, because she believes that Montessori pedagogy is going to broaden the upbringing of children by developing skills that are not specifically taught in traditional kindergartens (patience, self-confidence, independence, etc.).

Timmons' and Mullins' models of valuation of business opportunity have shown that this business opportunity is only partially attractive and that its realization very likely would not result in a successful and sustainable entrepreneurial venture.

Facts obtained through models for evaluation of opportunities significantly affect the future of business ventures. They offer a wider picture of the entrepreneurial process and can be useful, not only for entrepreneurs to understand all the risks they have to deal with, which can sometimes drive them to drop an idea too quickly and miss the opportunity, but also to empower and encourage them to take and modify risks, accept a business opportunity and start a profitable business venture, which in reality is the goal of every entrepreneur.

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## **EFFECTIVE MANAGEMENT OF STATE PROPERTY AS PREREQUISITES FOR ECONOMIC DEVELOPMENT**

### **UČINKOVITO UPRAVLJANJE DRŽAVNOM IMOVINOM KAO PRETPOSTAVKA GOSPODARSKOG RAZVOJA**

#### **ABSTRACT**

*The economic crisis that has affected world since 2008 year until today showed, with the need to change the ways of functioning of the private sector, the pressing need for fundamental changes in the manner of functioning of the public sector. Inertia and inefficiency of the public sector in any case do not contribute to overcoming the economic crisis and the orientation to the principles of new public management both worldwide and in Croatia is necessary. New public management involves the introduction of values and principles of the private sector to the public sector in order to improve the competitiveness of the economy as a whole. Accordingly, efficiency, economy and effectiveness should be the basis of the functioning of the public sector. Effective management of state property is certainly the assumption of an efficient public sector and the assumption of rapid economic development. In Croatia, in spite of privatization, the state still owns the assets of great value in the form of stocks and shares in companies and real estate. State property management of the Republic of Croatia has so far been characterized by non-transparency and inefficiency with the constant changes of the legal framework and institutional forms of state property management. This lack of transparency was fertile ground for the development of numerous corruptions and misuse of state property management system. The aim of this paper is to show the possibilities of efficient management of state property as a prerequisite for economic development.*

**Key words:** *new public management, public property, state property management, economic development*

## SAŽETAK

*Gospodarska kriza koja je zahvatila svijet od 2008. godine pa sve do današnjih dana ukazala je, uz potrebe promjene načina funkcioniranja privatnog sektora, na nužnu potrebu temeljitih promjena u načinu funkcioniranja javnog sektora. Tromost, inertnost i neučinkovitost javnog sektora ni u kom slučaju ne doprinose prevladavanju gospodarske krize te je orijentiranje ka principima novog javnog menadžmenta kako u svijetu tako i u Republici Hrvatskoj nužna. Novi javni menadžment podrazumijeva uvođenje vrijednosti i principa poslovanja privatnog sektora u javni sektor u cilju poboljšanja konkurentnosti gospodarstva u cjelini. Sukladno navedenom efikasnost, ekonomičnost i efektivnost trebali bi postati i temelji funkcioniranja javnog sektora. Učinkovito upravljanje državnom imovinom svakako je pretpostavka učinkovitog javnog sektora i pretpostavka ubrzanog gospodarskog razvoja. U Republici Hrvatskoj, unatoč provedenoj privatizaciji, država je još uvijek vlasnik imovine velike vrijednosti bilo u obliku dionica i udjela u poduzećima, bilo u nekretninama. Upravljanje državnom imovinom u Republici Hrvatskoj do sada je bilo obilježeno netransparentnošću i neučinkovitošću uz stalne promjene zakonskih okvira i institucionalnih oblika upravljanja državnom imovinom. Upravo je ta netransparentnost bila plodno tlo za razvoj korupcije i brojne zloupotrebe u sustavu upravljanja državnom imovinom. Cilj ovog rada ukazati na mogućnosti učinkovitog upravljanja državnom imovinom kao pretpostavkom gospodarskog razvoja.*

**Ključne riječi:** *novi javni menadžment, državna imovina, upravljanje državnom imovinom, gospodarski razvoj*

### 1. Introduction

The economic crisis that has affected world since 2008 year until today showed, with the need to change the ways of functioning of the private sector, the pressing need for fundamental changes in the manner of functioning of the public sector. Inertia and inefficiency of the public sector in any case do not contribute to overcoming the economic crisis and the orientation to the principles of new public management both worldwide and in Croatia is necessary. New public management involves the introduction of values and principles of the private sector to the public sector in order to improve the competitiveness of the economy as a whole. Accordingly, efficiency, economy and effectiveness should be the basis of the functioning of the public sector.

Many world states own the large amount of property that can be most severely divided into two broad groups (financial and non-financial assets). The development of the economic crisis trend of declining of state assets, which was based on privatization processes, stops and even comes to increasing of state assets, whether financial, or non-financial. According to Pargendler (2012) this is best shown by the fact that SOEs are now responsible for approximately one-fifth of global stock market value, which is more than two times the level observed just one decade ago. Given the fact that state assets primarily represents infrastructure and state-owned enterprises are primarily concerned with infrastructure activities, their importance for economic development is immeasurable. Effective management of state property is certainly the assumption of an efficient public sector and the assumption of rapid economic development.

In Croatia, in spite of privatization, the state still owns the assets of great value in the form of stocks and shares in companies and real estate. State property management of the Republic of Croatia has so far been characterized by non-transparency and inefficiency with the constant

changes of the legal framework and institutional forms of state property management. This lack of transparency was fertile ground for the development of numerous corruptions and misuse of state property management system.

The aim of this paper is to show the possibilities of efficient management of state property as a prerequisite for economic development. This paper is organized as follows. Section 2 describes definition of state asset and shows the scope of state asset in world economy. Section 3 presents institutional framework of state asset in Republic of Croatia. Section 4 deals with the current scope of state asset in Republic of Croatia. Section 5 brings guidelines for effective management of state assets in the Republic of Croatia. Finally, Section 6 presents our conclusions.

## **2. Scope and definition of state asset**

Due to the economic crisis and increasing pressure on state budgets due to falling revenue, but also because of increased costs (primarily financing costs) world states put in the focus state assets and the possibilities of increasing the revenue from it, either through more efficient use or through sale or privatization. According to System of National Accounts 2008, provided by the European Commission, International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations and World Bank, an asset, financial and nonfinancial, is a store of value; only economic assets are recorded on the balance sheet. According to Bova et al. (2013:33) an asset represents a benefit, or series of benefits, accruing to the economic owner, and is a means of carrying value forward from one accounting period to another. Economic assets generate value either through use in production (e.g., an office building where employees work), or by being held over a period of time (e.g., a parcel of land held as an investment). (Bova et al., 2013:33)

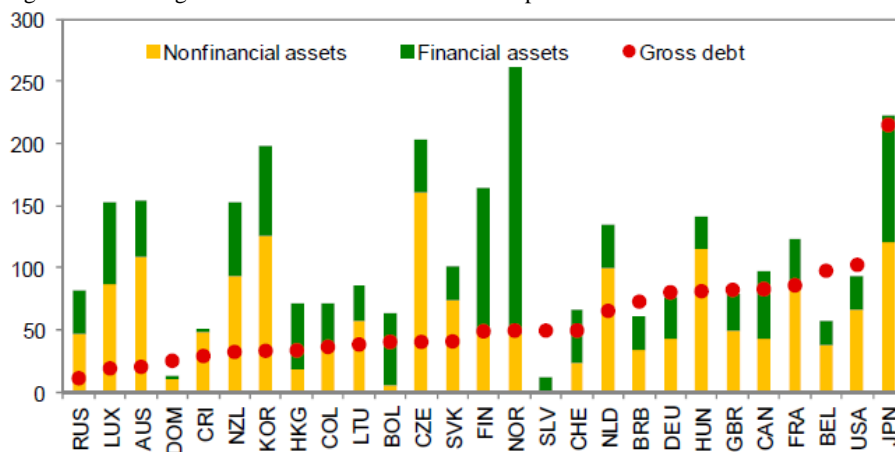
Economic assets can be classified as financial and nonfinancial (Bova et al., 2013:34):

- Financial assets are not generally tangible and consist of items for which a financial claim exists, that is, there is a counterpart liability. The financial claim usually arises from a contractual arrangement, for example, currency and deposits, bonds, loans, or Special Drawing Rights, upon which the value of the financial asset may be based. Also, ownership of corporations (in stocks or other forms of ownership) is considered a financial asset.
- Nonfinancial assets are largely tangible in nature and are subdivided into two main categories: produced and nonproduced.
  - Produced assets are generally tangible in nature and are created or constructed as a result of the economic production process. They include fixed assets (buildings, machinery and equipment), inventories, intellectual property products, and valuables (artwork, precious metals, and jewellery).
  - Nonproduced assets may be tangible or nontangible and include: natural resources (oil, natural gas, and minerals); contracts, leases, and licenses; and purchased goodwill and marketing assets (trademarks).

The volume and value of state assets varies from country to country. These variations stem from the historical, political and ultimately economic reasons. In fact it is very difficult to estimate the volume of state assets because, on the one hand, many states do not keep accurate statistics and lists. On the other hand, where there are lists of the assets, there are problems in assessing its value. The problem of valuation is particularly pronounced for non-financial assets, where different methods can give very different results from country to country.

According to Bova et al. (2013:33), as shown in Figure 1 for selected countries, nonfinancial assets are usually higher than financial assets, and total assets typically exceed general government gross debt. Nonfinancial assets surpass financial assets on average, by a ratio of 1.2 to 1.3.

Figure 1 General government assets and liabilities as percent of GDP



Source: Bova et al. (2013:13)

### 3. Institutional framework of state asset in Republic of Croatia

Acquisition, management and disposal of assets owned by the Croatian government is prescribed through numerous laws and regulations. According to the Strategy on management and disposal of assets owned by the Republic of Croatia for a period of 2013. upto 2017. (Strategija, 2013) there is as many as 43 laws and regulations. The basic law governing the management and disposal of state assets is a Law on the management and disposal of assets owned by the Republic of Croatia (Narodne Novine, 94/2013).

Law on the management and disposal of assets owned by the Croatian Republic of Croatia regulates (Zakon, 2013):

- the management and disposal of assets owned by the state,
- establish the forms of state property,
- principles of managing state assets,
- the documents for management of state assets,
- the manner and conditions of management and disposition of shares and interests that make up the state assets in companies,
- the manner and conditions of management and disposition of real estate assets that form the,
- the scope and authority of the State Office for State Property Management in the management and disposal of state assets,
- delineation of powers in the management and disposal of state property between the state offices, ministries and companies who have been given special powers and laws,
- establishment and maintenance of the Register of state property,
- establishment and organization of the Centre for the restructuring and sale, its scope and the public authority,

- monitoring and inspection and other issues in this regard.

State Property Management in the Republic of Croatia is entrusted to a number of state institutions thereby management efficiency is very questionable. According to the Strategy (2013) state-owned assets in Croatia is currently managed by:

- Ministries,
- State Office for State Property Management,
- Agency for State Property Management,
- Agency for Transactions and Mediation in Immovable Properties,
- Croatian Institute for Pension Insurance,
- Croatian Institute for Health Insurance,
- Fund for restitution,
- other funds, agencies, companies and legal entities.

According to the law (Zakon, 2013) State Office for State Property Management is the central body for the management and disposal of state assets and coordinating management and disposal of assets owned by the state in relation to central government bodies and other bodies or legal persons established by special laws, which are holders, or dispose of property owned by the state. Documents of management and disposal of state assets are Strategy on management and disposal of assets owned by the Republic of Croatia, Management plan and Report on the implementation of the Management plan. The strategy defines medium-term objectives and guidelines for the management and disposal of state assets, taking into account economic and development interests, and is brought by Croatian Parliament at the proposal of the Croatian Government for a period of four years. The management plan sets short-term goals and guidelines for management of state assets and implementing measures in order to implement the strategy. It is brought by the Croatian Government for a period of one year. Report on the implementation of the Management Plan, the State Office submits to the Croatian Government for the previous year.

#### **4. Scope of state asset in Republic of Croatia<sup>143</sup>**

When speaking about enterprises, it should be emphasized that at the beginning of the transition process in Croatia there was also launched and process of transformation and privatization of state owned enterprises. In Croatia there was conducted transformation and privatization process of large-scale, however, the extent of state ownership of enterprises remains high. The above is best evident from the analysis of the portfolio as follows (Strategija, 2013):

- In March 2013. the share of state ownership exceeds 50% in only 61 company or cca. 10% of the active portfolio. In remaining 555 enterprises the state's share is below 50% of the shares, which represents about 90% of the active portfolio.
- From a total of 555 companies in 420 minority-owned enterprises are stocks that are fully or partially available for sale, while 135 enterprises there are no shares available for sale, which makes about 24% of the total active state portfolio.
- Majority the portfolio can be divided into enterprises available for sale (total 36 enterprises), companies "under the reservation that are currently not available for sale" (a total of 2 companies) and enterprises of special state interest (total 23).
- According to FINA in 2011., 85 leading enterprises in Croatia had revenues of 228.7 billion kuna, of which 50.1% realized enterprises in foreign ownership (or 114.5 billion

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<sup>143</sup>—The analysis looks only at the assets of the central government, without any assets owned by the local government units.

kuna), 25.4% domestic private enterprises (58,1 billion kuna), and the rest is revenue of state owned companies (56 billion kuna).

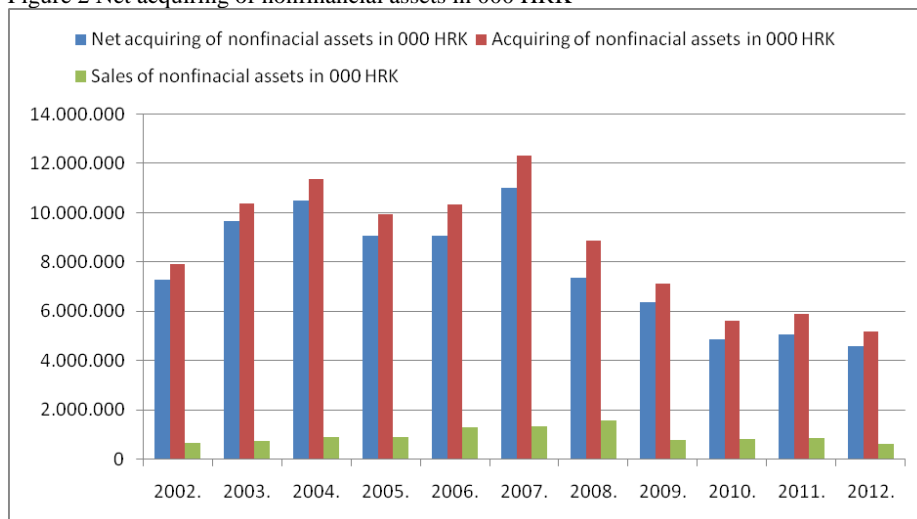
- On the list of 85 largest companies operating in Croatia, 35 are foreign owned, 29 in domestic private enterprises while 21 are state-owned.

When discussing about other forms of property situation is regarding the list of assets a little better after the publication of the register of state property (Registar, 2013). However in the registry assets is listed only in form of appearance, but without valuation. According to data from the register state owns 362.628 of real estates of which (Registar, 2013):

- 2109 buildings and building land,
- 27,790 residential buildings,
- 8,414 businesses buildings,
- 940 of real estate used by government bodies,
- 24 representative residential buildings or villas and
- 630 real estates used for national defence.

About value of previously mentioned assets both for stocks and shares in companies, and for real estate, it's very difficult to talk because there is no established methodology for assessing value. While data on the value do not exist, there is evidence of an increase or decrease (net acquiring) of non-financial assets and stocks and other equities in the enterprises that are shown in Figures 2 and 3.

Figure 2 Net acquiring of nonfinancial assets in 000 HRK



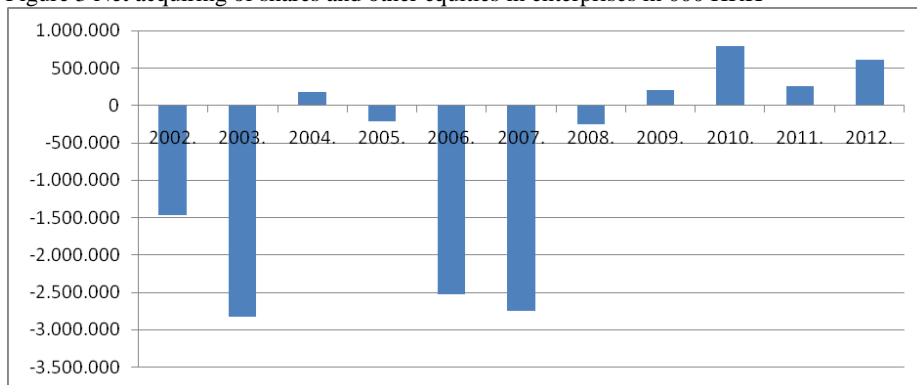
Source: Ministry of Finance (2014)

As shown in Figure 2, the value of non-financial assets owned by the state significantly increases (in this analysis are not monitored changes in the value of existing assets but investing in new assets). However, from this figure can be read out two very important trends. First, the change in value is primarily affected through the acquisition of new non-financial assets, while the impact of the sale of non-financial assets almost insignificant. So privatization efforts in non-financial assets are small, which probably points to the fact that the property is not disposed rationally. It also shows that the state in covering the deficit does not



use sufficiently sales of unproductive non-financial assets. Another trend shows that the acquisition of non-financial assets closely related to the economic situation in the country. While in times of economic growth investment in non-financial assets was big (especially for large infrastructure projects in road construction), in times of recession investments are substantially reduced.

Figure 3 Net acquiring of shares and other equities in enterprises in 000 HRK



Source: Ministry of Finance (2014)

Figure 3 also shows two important things. The first is the fact that the government has not achieved higher revenues from privatization except in the case of INA d.d. and Hrvatski Telekom d.d. (2002 and 2003 through the sale to strategic partners and in 2006 and 2007 through an initial public offering to citizens). Another important fact is that since 2008, the beginning of the crisis stopped the privatization trends. These points to the need to strengthen the privatization effort as well as a need for more efficient management of state enterprises in a given situation cannot or do not want to be privatized.

## 5. Guidelines for effective management of state assets in the Republic of Croatia

Due to the very large volume and value of state property and the fact that the economic crisis cannot be expected greater improvements in privatization, it is necessary to put the focus on the effective management of state assets. Strategy (Strategy, 2013) offers basic guidelines for the effective management of state assets for certain types of assets. Below will be analyzed only the most important guidelines.

When it comes to state-owned enterprises (partial or complete), according to Strategy (Strategy, 2013), the primary objective should certainly be complete privatization, except for enterprises of strategic importance. If it is not possible to privatize the state must begin to play a role of active owner. In conducting an active ownership policy state should stick to the world's best standards of corporate governance in state-owned enterprises established by the Organisation for Economic Co-operation and Development (OECD, 2005) result of which should be to increase the efficiency of state-owned enterprises. When it comes to strategic enterprises, given their role and importance, it is necessary to define their role in the overall economic development. Furthermore, in line with European competition law, the state should clearly separate the ownership role from the regulatory role. This ensures conditions for the development of free market competition and the development of private enterprises.

When it comes to real estate, according to Strategy (Strategy, 2013), it is above all necessary to ensure a "clean" initial state ("clean start"). It involves the establishment of a comprehensive list of real estate, synchronizing data in the cadastre and land registers, as well as resolving legal relations to real estate, as a basic prerequisite for the realization of investment projects. Furthermore, all decisions on the management of real estate owned by the state should be based on the greatest possible economic impact and sustainable development. Economically most valuable estate should be put into function. With the donation and sale it is necessary to develop other ways of activating property rights through the provision of construction and usage rights, concessions and the like. It is also necessary to work closely with local units of government in order to establish large areas suitable for investment. This should be done through clustering of building and agricultural land.

## **6. Conclusion**

Due to the economic crisis and increasing pressure on state budgets due to falling revenue, but also because of increased costs (primarily financing costs) world states put in the focus state assets and the possibilities of increasing the revenue from it, either through more efficient use or through sale or privatization. The volume and value of state assets varies from country to country. These variations stem from the historical, political and ultimately economic reasons. In fact it is very difficult to estimate the volume of state assets because, on the one hand, many states do not keep accurate statistics and lists. On the other hand, where there are lists of the assets, there are problems in assessing its value.

Acquisition, management and disposal of assets owned by the Croatian government is prescribed through numerous laws and regulations. According to the Strategy on management and disposal of assets owned by the Republic of Croatia for a period of 2013.upto 2017. (there is as many as 43 laws and regulations. The basic law governing the management and disposal of state assets is a Law on the management and disposal of assets owned by the Croatian government. When speaking about enterprises, it should be emphasized that at the beginning of the transition process in Croatia there was also launched and process of transformation and privatization of state owned enterprises. In Croatia there was conducted transformation and privatization process of large-scale, however, the extent of state ownership of enterprises remains high. Investment in non-financial assets and stocks are following the trends in the economy. From the beginning of the recession decreases investment in non-financial assets while investing in stocks increases and decrease revenues from privatization. Due to the very large volume and value of state property and the fact that the economic crisis cannot be expected greater improvements in privatization, it is necessary to put the focus on the effective management of state assets.

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**ANALYSIS OF CONSUMERS' LOCAL PURCHASING IN OSIJEK-  
BARANYACOUNTY**

**ANALIZA POTROŠAČA LOKALNIH PROIZVODA U OSJEČKO-  
BARANJSKOJ ŽUPANIJI**

**ABSTRACT**

*The research is conducted using a survey in Osijek-BaranyaCounty. Buying locally produced products has become more important for producers in Osijek-BaranyaCounty since the beginning of the economic crisis. The knowledge on who buys locally produced products, why and for what reasons, might provide vital information for Slavonian producers. Successful product differentiation and finding optional marketing and promotional solutions require specialized knowledge on consumer's preferences concerning locally produced products. The findings of this paper point to suitable marketing and promotional tools for different consumer segments based on preferences concerning locally produced products. The information collected is analysed using statistical methods.*

**Key words:** local purchasing, local producers, Osijek-BaranyaCounty, marketing, statistical methods

**SAŽETAK**

*Istraživanje je provedeno pomoću ankete u Osječko-baranjskoj županiji. Kupnja lokalno proizvedenih proizvoda postala je važnija za proizvođače u Osječko-baranjskoj županiji od početka gospodarske krize. Znanje o tome tko kupuje lokalno proizvedene proizvode, zašto i iz kojih razloga, može pružiti vitalne informacije za slavonske proizvođače. Uspješna diferencijacija proizvoda i pronalaženje optimalnih marketinških i promotivnih rješenja*

*zahtijevaju specijalizirano znanje o preferencijama potrošača lokalno proizvedenih proizvoda. Rezultati ovog istraživanja ukazuju na odgovarajuće marketinške i promotivne alate za različite segmente potrošača na temelju njihove sklonosti lokalno proizvedenim proizvodima. Prikupljeni podaci se analiziraju pomoću statističkih metoda.*

**Ključne riječi:** *kupnja lokalno proizvedenih proizvoda, domaći proizvođači, Osječko-baranjska županija, marketing, statističke metode*

## **1. Introduction**

Due to an increase in competitiveness in the global food system and a number of scandals concerning food quality and origin, consumers have become more sensitive towards the origin of the food they eat. Consumers are becoming more interested in a healthy lifestyle, which also leads to an increase in interest in ecological food, but also the purchase of locally produced foods which are considered a healthier choice. This trend influenced many food markets in the world: in 2008, the value of the market for ecological products tripled since 1999, from \$15.2 billion to \$50.9 billion (Action Plan of the Development of Ecological Agriculture in the Republic of Croatia 2011 to 2016, pp. 8). This trend of an increase in demand for healthy and local food might prove to be a solution to many problems Slavonian producers are faced with. Namely, the recent economic crisis influenced farmers from Osijek-BaranyaCounty, even lower prices of their products and also lower prices of commodities from the European Union due to the accession to the EU etc. Local producers should turn to producing ecological and organic products, but also those products consumers could recognize and appreciate among many others in the Croatian food markets.

In order to find their position in the market, local producers must understand their consumer better. The information on who buys their products, for what reason and what makes them choose local products would allow for a better marketing plan and promotion of locally produced foodstuff. Segmentation of the consumers in Osijek-BaranyaCounty according to willingness to pay for locally produced food should help local producers to better understand their consumer wants and how to shape their offer.

The goal of this paper is to acquire information on the demand for locally produced food in Osijek-BaranyaCounty, gain insight on the characteristics of consumers of such products and their willingness-to-pay for locally produced food. The goal is to be accomplished through statistical methods such as factor analysis, cluster analysis and ANOVA. The findings of the article should provide food producers in Osijek-BaranyaCounty with information on how to effectively modify their marketing mix and communicate to their prospective consumers and target market.

The following section of this paper provides a literature review of studies dealing with consumer demand of locally and ecologically produced food. The third section contains the information about the survey conducted and the results of the statistical analysis of the collected data. The fourth section contains suggestions of marketing solutions for each segment of consumers. The last section provides a conclusion and suggestions for further study.

## 2. Literature review

Consumers prefer locally produced food because they consider it to be healthier, more environmentally friendly, or they choose to be more supportive of local rural communities. This preference may lead to willingness to pay a premium price for a product. This is why this subject has proven to be very important and interesting to researchers.

Locally produced food was defined differently by different authors and consumers, but most people consider either food grown within a country, region or a county as local (Zepeda and Leviten-Reid, 2004, 2). Darby et al. (2006) found that state boundaries may define what is considered local.

There is a large body of studies dealing with consumer awareness and willingness to pay for locally produced food. Timmons et al. (2008) claim that the sales of locally grown food increased significantly in USA during the past twenty years. Zepeda and Leviten-Reid (2004) found that about 2.8 million people bought their food at farmers' markets on a weekly basis, generating about \$888 million in sales. Darby et al. (2006) found that consumers are willing to pay higher prices for locally produced foods in the case of strawberries. Carpio and Isengildina-Massa (2008) found that consumers from South Carolina had strong preferences towards South Carolina products, stating they were willing to pay price premium of about 27% for state-grown produce and 23% for state-grown animal products compared to out-of-state products. Giraud, Bond and Bond (2005) argued that consumers' willingness to buy local products and also pay a premium price for them varies among different states of USA. Wang, Sun and Parsons (2010) found that consumers from Vermont exhibited a strong preference and willingness to pay for locally grown apples compared with apples from other regions of USA. Jekanowski, Williams and Schiek (2000) found that 60% of Indiana consumers were likely to purchase and consume locally produced foods. The remaining 40% of consumers were either neutral or at least somewhat likely to buy locally produced food. They found that income of the household, perception of quality of Indiana agricultural products and the time a consumer resided in the state positively related to the likelihood of purchasing local products.

Authors found that consumers buy locally produced food due to different motivations and reasons. Zepeda and Leviten-Reid (2004, 4) found that consumers bought locally produced foods in farmers' markets because they enjoyed buying directly from farmers and also the market atmosphere. Other reasons were freshness and flavor of food, quality and longer lasting food, support for local farmers, entertainment and direct contact with farmers. The aforementioned authors found enthusiastic support for local food production among consumers, but less will to buy such products unless direct benefits from buying local are perceived. Some shoppers thought local food provided direct environmental, economic, communal and health benefits, so they chose to look for labels indicating locally produced food (Zepeda and Leviten-Reid, 2004, 5). Loureiro and Hine (2002) found that those consumers concerned about nutritional value and freshness are more willing to pay a premium price for local than organic or GMO-free potatoes. Van der Lans et al. (2001) found that certificates about region of origin of olive oil allow for higher prices for two reasons: cultural identification for consumers from the same region and perceived quality. Burchardi et al. (2005) found that consumers perceive milk from local farms to be trustworthy, of high quality, and that buying such products enables them to support local producers. Williams and Hammit (2001) found that willingness to pay for organic food is positively related to beliefs that it was more environmentally friendly and supportive of local small-scale agricultural production.

The trend in the world and the EU being an increase in the demand of locally and ecologically produced food, it is very likely that consumers in Croatia might become more interested in these types of food and ready to pay premium prices for them. The producers in Osijek-Baranya County already have the advantages of enough farming land and surfaces for ecological farming which allows them to produce and market adequate quantities of food. But in order to decide on who they should sell or direct their communication and offer, they should learn enough about their potential consumers.

### 3. Conducted survey and the results

Data for this study were collected through a questionnaire survey, and the respondents in the sample were selected by the principle of a simple random sample. The survey covered a total of 105 inhabitants of Osijek-Baranya County, of which 37.5% were male and 62.5% female, 1.9% of respondents were younger than 18 years of age, 16.19% between 18 and 25 years of age, 50.48% between 25 and 40 years of age, 16.19% between 40 and 65 years of age and 15.24% is above 65 years of age.

1.9% of respondents have an average monthly income of less than 3000 kuna, 26.67% have an average monthly income between 2000 and 6000 kuna, 42.86% have an average monthly income of between 6000 and 10000 kuna, and 28.57% have an average monthly income of more than 10000 kuna. 30.77% of respondents live in rural, 46.15% in urban, while 23.08% of the respondents live in suburban areas, 5.71% of the respondents have completed primary school or lower, 4.76% are skilled workers, 21.9% have secondary education, 7.62% are high-skilled workers, 19.05% have a college degree, 35.24% have a university degree, 2.86% have completed specialized study and 2.86% have completed a master's degree or doctorate. 13.33% live in a household with one member, 34.29% in households with two members, 24.76% in households with three members, 17.14% in households with four members and 10.48% in households with more than four members.

The survey respondents were asked, alongside some demographic data (age, gender, number of household members, the average monthly income, level of education, place of residence), about their attitudes on the purchase of food products. For example, the statements: (Q1) If the shop where I usually buy food clearly indicated that certain food products were produced in Osijek-Baranja County, I would decide to buy just these products; (Q2) Sales promotions of food in the shop would encourage me to buy a food product, even if I did not intend to buy it; (Q3) Compared with food products from other counties, products from the Osijek-Baranja County are of much higher quality; (Q4) The freshness of food that I buy is extremely important to me; (Q5) The most important characteristics of the food products I buy is the nutritional value and its impact on health; (Q6) I try to live a healthy life (eat healthily, do sports, etc.); (Q7) I would buy food products from local food producers rather than in the shop if they were more accessible; (Q8) When purchasing food products the most important for me is the price etc. These answers were offered to respondents: 1 - strongly disagree, 2 - slightly disagree, 3 - neither agree nor disagree, 4 - slightly agree, 5 - strongly agree.

Furthermore, for the statements: I buy organically grown food; I buy food products at the same point of sale; I buy food products on the market; I buy food from local producers, offered answers are: never, sometimes, often and always. For questions: How many times have you purchased food products from local producers this year and How many times have you purchased food products at the market this year, these answers were offered: more than

10, 6 - 10, 1 – 5 and 0. To the question "Do you buy or would you buy food products from local producers because of" these answers were offered: freshness of food products, support to local producers, taste of the food, I know how this food is grown, nutritional value and more. For the statement: "Information about quality food products I find" these answers were offered: in brochures of the supermarket chains, in newspaper advertisements, I find them on the internet, the recommendation of acquaintances or family and more.

In order to analyze data, factor analysis with varimax rotation axis with Kaiser normalization factor was applied to the replies on the first eight questions in the survey. Factor analysis examines the interdependence within the large number of variables that tend to be explained by a small number of common factors with minimal loss of information. In the statistical analysis of the data, the statistical package SPSS16.0 was used. First, test of the adequacy of the sample and a test of sphericity was conducted. Kaiser-Meyer-Olkin measure of sampling adequacy was tested. KMO value is an index that indicates whether the factor analysis is appropriate. The value should be greater than 0.5 to factor analysis could be applied, and the results (Table 1) show that this is the case (0.727). Also, Bartlett's test of sphericity was statistically significant, which means that the correlation matrix is non-unitary.

Table 1 KMO and Bartlett's test of sphericity

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,727
Bartlett's Test of Sphericity	Approx. Chi-Square	297,786
	Df	28,000
	Sig.	,000

Source: Authors' calculations.

Factor analysis results indicate the existence of three factors. These three factors cumulatively explained 74.69% of the variance. First factor attributed to the 40.92% of the variance, the second factor of 18.79% of the variance while the third factor is attributed to 14.99%. Other factors are insignificant.

Table 2 Rotated Component Matrix.

	Component <sup>a</sup>		
	1	2	3
Q1	,846		
Q2			,881
Q3	,879		
Q4		,50	
Q5		,863	
Q6		,763	
Q7	,834		
Q8			,735
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			



	Component <sup>a</sup>		
	1	2	3
Q1	,846		
Q2			,881
Q3	,879		
Q4		,50	
Q5		,863	
Q6		,763	
Q7	,834		
Q8			,735
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 7 iterations.			

Source: Authors' calculations

Varimax rotation matrix of factors is implemented in order to facilitate the interpretation and understanding of the factors. Variables Q1, Q3 and Q7 belong to the Factor 1 related to accessibility, visibility and quality of food products from the Osijek-Baranja County and the factor is called *factor of accessibility and quality*. Variables Q4, Q5 and Q6 belong to Factor 2 related to freshness, nutritional value and correlation with health and this factor is called *factor of effect on health*. Variables Q2 and Q8 belong to Factor 3 related to sales promotions and food prices, and this factor is called *factor of price*.

In further analysis factors are used as the basis for segmentation of consumers by using cluster analysis (K-means). Results of cluster analysis showed the existence of two clusters or segments of the market. Each individual segment is described in detail using demographic characteristics such as age, gender, level of education, the average monthly income and place of residence.

K-means method showed that an optimal number of clusters is two clusters or two segments of the consumer market. The results of the ANOVA analysis showed that the differences in means in clusters are statistically significant. Means of the factors as well as the results of the ANOVA analysis are shown in Table 3.

Table 3 Means of the factors and ANOVA results.

Variables	Cluster 1	Cluster 2	F-ratio
Factor 1	13.33	8.92	178,526**
Factor 2	13.59	10.79	84,851**
Factor 3	6.37	7.46	9,212**

Note: \*\*significance  $p < 0.01$ .

Source: Authors' calculations.

Cluster 1 includes 54 or 52.9% of the respondents. Members of this cluster are mostly middle-aged women who have completed college or university and mostly live in the city with higher financial income. Those respondents are equally affected by factor 1 and factor 2 while factor

3 has the least impact. Members of this cluster sometimes buy organically grown food, always at the same point of sale, sometimes at the market, and more than 10 times this year from local producers. Information about the food products they get mostly by recommendations of acquaintances or family, and less frequently in advertisements in newspapers.

Cluster 2 includes 48 or 47.1% of the respondents. Members of this cluster are of different ages and gender, slightly lower financial income, live both in rural and urban areas, and are of different ages. These subjects are most affected by factor 2 while factor 3 impacts the least. Members of this cluster rarely, almost never buy organically grown food. When they do, it is some times in the market, and some times from local producers, less than 5 times this year. Information about food products they obtain from various sides, mostly from the ads in newspapers.

#### **4. Suggestions of marketing solutions**

The results of the conducted study point to marketing solutions which could provide better communication with their target market and a more efficient marketing strategy.

Different marketing strategies are to be developed if a producer chooses to address members of the first or the members of the second segment. If one chooses to approach the members of the first segment, one would be able to set a higher price, thus giving an impression of higher quality since the members of this cluster have higher incomes and do not pay much attention to price. Also investing into food quality, possibly obtaining the label of ecological or organic product, might also prove to be important to affect this consumer segment. Maintaining personal relationships and catering to consumer needs indicated by present consumers and potential could affect and create a favourable word-of-mouth which proves to be an important source of information for this segment.

If one chooses the second cluster as his target market, one should communicate nutritional value and healthy benefits one gets from consuming locally produced food. Instead of highlighting the price and using a high price strategy, one should pay more attention to developing the product and distribution channels. The producer should label his product appropriately, thus significating its origin, method of production and nutritional value. Since consumers from this segment prefer buying in shops, local producers should cooperate with local shops and supermarket chains, which should clearly and visibly indicate the producer and its origin. Producers should also consider placing ads in newspapers, possibly alongside with supermarkets that sell their products, since members of this segment mostly rely on information from this source. Ads should include already mentioned information about healthiness of the food products and their origin.

#### **5. Conclusion and suggestions for further study**

This paper showed insight into the market for locally produced food in Osijek-Baranya County. The provided information shows preferences and willingness to pay for locally produced food, but also other habits and opinions concerning food buying of inhabitants of this county. The results point to the need for better understanding of the needs of buyers and necessity for adjusting the marketing strategies and actions to different segments of consumers.

In order to deepen understanding of consumers and their local food products buying behaviour, further investigation and research should be conducted. Some interesting questions which could not have been answered in this study arise: do the consumers notice or understand the difference between locally produced, organic or ecologically produced food? What premium would they be willing to pay for locally produced food? Could different segments be found in different populations in Osijek-Baranya County? What are the marketing solutions producers of food from Osijek-Baranya County could apply in reaching consumers from other counties or even foreign markets? The answers to all of these questions could provide a useful basis for developing a marketing and production plan for producers of food products in Osijek-Baranya County thus providing them with a competitive advantage needed for their survival.

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## **SOCIAL NETWORKS SIGNIFICANCE IN GLOBALIZATION PROCESS OF ECONOMIC DEVELOPMENT**

### **ZNAČAJ DRUŠTVENIH MREŽA ZA RAZVOJ GOSPODARSTVA U PROCESU GLOBALIZACIJE**

#### **ABSTRACT**

*Globalization has been happening for a while. There is much coverage in talks and books about this subject. In his book *The Lexus and the Olive Tree: Understanding Globalization*, Thomas Friedman talks about the problems experienced by small nations caught in this process of globalization. Small nations that do not embrace the information age and present themselves to the world with a unique identity, risk succumbing to the pressures of globalization rather than thriving from it.<sup>1</sup> Embracing globalization through social networks can help companies and entrepreneurs in small nations survive and empower themselves. It is important that the entrepreneur create social connections on a world level in order to lower barriers for entry into new markets. This allows companies within small nations to sell beyond their borders by leveraging social networks.*

*The aim of this paper is to point out the significance of social networks in the context of globalization and entrepreneurship in economic development.*

**Key words:** *social media, emerging economies, globalization*

#### **SAŽETAK**

*Proces globalizacija traje i pokriva sve zemlje svijeta. Mnogi ekonomisti i znanstvenici analiziraju tema globalizacije, problemi i utjecaj ekonomija razvijenih na ekonomiju zemalja u razvoju. Jedan primjer je knjiga Thomasa Friedmana 'Lexus and Olives'.*

*Ukoliko male i nerazvijene zemlje ne postanu dio informacijskih mreža i ne predstave se svojom osobnosti, posustati će pod pritiskom globalizacije umjesto da ih globalizacija podigne na nivo razvijenih zemalja. Društvene mreže i media bi trebali pomoći tvrtkama i malim poduzetnicima da uspiju i da se pripreme kako bi konkurirali na otvorenom tržištu. Zbog toga je važno da poduzetnici stvaraju društvene mreže na svjetskom nivou, drugim riječima društvene mreže mogu umnjiti prepreke ulaska na svjetsko tržište. Tvrtke malih zemalja mogu maksimirati izvore sredstava na tržištima izvan granica svojih zemalja. Cilj ovog rada je ukazati na značaj društvenih mreža u kontekstu globalizacije i poduzetništva u ekonomskom razvoju.*

**Ključne riječi:** *društveni medij, udružene ekonomije, globalizacija*

## 1. Introduction

Social Media has pervaded much of today's society. Commonly used social platforms include Facebook, YouTube and Twitter are top amongst the many sub niche categories being developed (figure 1) and as such a social media strategy is required to focus on that which will make a brand thrive.

**Ranking**  
**Social Media Brands 2013**

Rank	Brand	m \$	Country*
1 (1)	Facebook	34,320 (18%)	US
2 (2)	YouTube	26,824 (48%)	US
3 (3)	Twitter	23,656 (78%)	US
4 (4)	Qzone	16,336 (45%)	CN
5 (8)	Tencent Weibo	10,022 (184%)	CN
6 (5)	Sina Weibo	9,718 (143%)	CN
7 (7)	LinkedIn	6,522 (79%)	US
8 (6)	Badoo	5,998 (60%)	UK
20 (28)	Tumblr	2,552 (202%)	US
21 (16)	Pandora	2,292 (8%)	US
22 (new)	Instagram	2,101	US
23 (18)	Kaixin	2,058 (9%)	CN
24 (new)	Pinterest	1,987	US
25 (30)	Yelp	1,971 (2699%)	US
26 (26)	Flickr	1,726 (58%)	US
27 (new)	Ning	1,721	US
28 (29)	Wikipedia	1,718 (1999%)	US
29 (19)	Netlog	1,713 (1%)	BE
30 (new)	WeeWorld	1,419	UK

8 (6)	Badoo	5,998 (60%)	UK
9 (23)	Google+	5,878 (309%)	US
10 (13)	Tagged	5,809 (144%)	US
11 (24)	Youku	5,601 (302%)	CN
12 (21)	Tudou	4,839 (214%)	CN
13 (12)	Renren	4,555 (74%)	CN
14 (9)	Zynga	4,332 (38%)	US
15 (14)	Pengyou	3,002 (37%)	CN
16 (17)	Craigslist	2,921 (54%)	US
17 (15)	Odnoklassniki	2,622 (21%)	RU
18 (10)	Habbo	2,600 (-16%)	FI
19 (22)	hi5	2,560 (68%)	US

\* Head office

Figure 1. <sup>ii</sup>

With such an influx and change of social networks a social media strategy can be difficult to implement. Regardless of the size of organization some thought needs to be put into how to use social media in a broad sense. Entrepreneurs within emerging economies have limited budgets where they need to be effective in social media engagement. Let us define social media and break the word down to give it meaning.

It is interesting to note the proliferation of the word 'social'. It is tagged in front of many words to give new meaning. For example, there is social media, social capital, social enterprise, social network, social prospecting, social selling, social community, social web, social classification, social indexing, social tagging, social software, social bookmarking, social curation, social engineering comprising of:

- Social engineering (political science), influencing society on a large scale
- Social engineering (security), obtaining confidential information by manipulating and/or deceiving people.

Social farming, social disruption, social CRM, social data, social analytics, social media analytics, social entrepreneurship, social venture, social publishing, social marketing, social community, social software, social hardware, social dynamics, social statics, social intermediation, social collaboration, social learning, social commerce, social cluster, social gaming. All these in some way involve social media, as this is the online medium for where interaction takes place.

Social media is a growing ever-evolving entity. It is encompassed by all the above terms that have 'social' tagged on to them, which associates in some way to sustainability. Let's

consider farming, as it is relevant to Slavonia; Croatia's most fertile agricultural region and tag on the word 'social.' From the perspective of a social farming organization, the Multicultural Agriculture in Europe (MAiE), their aim is "to create the opportunity to establish contacts throughout Europe and to learn from each other in order to advance the movement for social farming at a national as well as international level."<sup>iii</sup> The scope of this group has a 'sustainability' purpose and that is to utilize farming and agriculture as a therapeutic tool for one or more vulnerable groups of people suffering with mental health problems, physical or learning disabilities, and drug/alcohol addiction as well as adults and young people on probation. "It is a growing movement across Europe that has been recognized by the European Union".<sup>iv</sup> Thus 'social' as tagged to another word creates a sustainable meaning. I focus on MAiE because its aim is apropos to how an entrepreneur can utilize social media.

"Our [MAiE] vision is to develop a variety of ways of spreading knowledge about social farming by:

- promoting the social farming movement,
- supporting rural areas to work in well-organized networks,
- developing fields of social work in combination with agriculture, and
- establishing links between movements and activities in Europe."<sup>v</sup>

Aside from the community linked direct benefits of social farming there are other not readily apparent benefits to the farmer. The farmer becomes part of collaboration network and can harness the power of the collective to meet production requirements, increase economies of scale for buying power and share best practices. All these activities make the secular farmer more robust and able to withstand hardships such as drought, flood, pest infestation, financial and economic difficulties while providing a sustainable working environment and employment prospects for people in difficult times.

In many instances today, the 'old' co-op is now a virtual community connecting common interests. A small farmer could never imagine committing to the amount of wheat production required by multinational corporations. But a small farmer who is part of a 'social farming' network as MAiE could have established connections to multi-source supplies in a cooperative way to meet the required capacity and yet still be able to cater to existing local customers in his or her community. One of the benefits to the multinational corporation is they become implicated in the support of small economies with social initiative. The social initiative allows entrepreneurial farmers to connect globally with other farmers rather than just through a local co-op.

Social farming is a sustainable initiative and it serves like-minded people to a higher mantra. This social movement is an example how something can develop through noble causes. The entrepreneur, like the farmer, needs to find their value set and communicate on the web. Others will gravitate, a community will be formed and exchange of ideas will happen. Once hype grows beyond your active involvement, trust becomes the success in social media.

## **2. Leveraging Social Media – the paradigm shift**

Now that we have established a connection for what does 'social' engender, we can delve deeper into the online world and how emerging markets can be poised and ready to embrace globalism and its rapid rate of change. Based on statistics trust is pivotal in today's buying psychology:

- A new buyer paradigm exists today where 93 percent of buyers begin their buying process using the internet for research.<sup>vi</sup>
- 72 percent of B2B buyers (last year) used social media to research a potential solution.<sup>vii</sup> 74 percent of C-level executives say the Internet is very valuable for finding information and 53 percent say they prefer to locate information for themselves.<sup>viii</sup>
- 59 percent engaged with a peer who had addressed the challenge and 37 percent posted questions on social networks for feedback.<sup>ix</sup>

Social Media if utilized correctly can be a tool to create trust.

How can emerging economies such as Croatia and its entrepreneurs internalize this paradigm shift of how social media is creating a sustainable cultural tapestry connecting the world? To some, this is a paradigm shift that incorporates elements such as empathy, fluidity, unfiltered ubiquity of knowledge, democratization and disintermediation all contribute to the sustainable and value-driven aspects for society to thrive. Could social media be a construct to aid in the development to improve all aspects of our society? A company with a long-term social media plan that can tell a story and has sustainable initiatives, these elements can elicit a following and, as a by-product, develop financially.

Short-term myopic mindset is well demonstrated in the “Marshmallow Experiment” which tracked the success element of school kids over a 20-year period based on whether or not they chose to eat the marshmallow or wait 15 minutes until the experimenter returned and be given a second marshmallow. “Tracking the kids over time, Mischel found that the ability to hold out in this seemingly trivial exercise had real and profound consequences. As they matured and became adults, the kids who had shown the ability to wait got better grades, were healthier, enjoyed greater professional success, and proved better at staying in relationships—even decades after they took the test. They were better at life.”<sup>x</sup>

A further experiment by Kidd *et al* added another layer to the Mischel Marshmallow experiment. The trust was betrayed where the experimenter did not provide the expected reward for holding out. In subsequent experiments, the kids that would normally hold out chose the immediate gratification route because of previous false promises. To try to reverse the behaviour, Kidd in terms of “getting kids to be better at waiting—in the lab and in life—is a matter of persuading them that there’s something worth waiting for.” Trust has grave consequences in these experiments in the same way it can be lost via social media.

### 3. Conclusion

How can emerging economies such as Croatia and its entrepreneurs capitalize on the rapid rate of change? Understand the buyer, provide information to the buyer that is of value, create a following, develop trust, have perseverance (that is, wait for the second marshmallow) and develop a sustainable mindset. Co-exist in online communities and listen to people half-way around the world; the stressors they are experiencing could be not too far away. Do not only connect but schmooze; that is, “discover what you can do for someone else.” Get someone else to where they want to go and you will somehow get to where you want to go. Lastly, the company that can tell a story, cater to a niche group of people and do all of the above will see things coming before they happen and create bonds.

Social Media is proven to be a sustainable cultural tapestry connecting the world. So embracing a sustainable mindset is perhaps a good first step to embark into this online world.

To some, this is a paradigm shift; however, this does not stop here. Elements such as empathy, fluidity, unfiltered ubiquity of knowledge, democratization and disintermediation all contribute to the sustainable and value driven aspects for society to thrive. Could social media be a construct to aid in the development to improve all aspects of our society? Begin with noble causes and make small wins daily. Social media is about building relationships, begin with helping a friend engage in social media, share a story or valuable information, connect, create trust and grow an audience. Those who use social media as a testing ground to find their voice and are persistent will benefit from receiving the proverbial 'second marshmallow.

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## **THE PROCESS OF ENTERPRISE BUSINESS IMPROVEMENT**

### **PROCES UNAPREĐENJA POSLOVANJA PODUZEĆA**

#### **ABSTRACT**

*Pivots are the current 'buzz' word for how companies change the game so they can win at it. Through the process of continuous reframing and promoting a culture of creativity, companies can drastically improve metrics such as market share, revenues and profits. One recurring theme of many successful companies is that they establish 'why' (the purpose of their existence), followed by 'how' and 'what' they do to fulfill their purpose. The 'why' statement perhaps does not fit in with the mission or vision statement; therefore, a company's foundation statement becomes the umbrella mantra of its raison d'être. Reframing 'how' a business operates and 'what' it shall provide needs to be reviewed continuously and innovatively. The continuous innovation process of successful companies is that they not only focus their attention on improving their product and/or service but across each aspect of the company. This paper will discuss successful companies that define the 'why' through their foundation statement, reframe often, engender an innovative culture, and thus pivot their company forward in a competitive global economy.*

**Keywords:** *reframing, pivoting, foundation statement, 'why', innovation*

#### **SAŽETAK**

*Proces unapređenja poslovanja je stalni proces koji traje koliko traje i tvrtka. Onog trena kada se prestane razmišljati i raditi na unapređenju poslovanja, postoji opasnost njenog opstanka. Ako se samo stane, drugi idu i već su ispred jer preuzimaju vodstvo. S obzirom na vrijeme brzih promjena i prestiža danas se često spominje „buzz word“ riječ „pivot“ što u prenesenom smislu znači „promjena smjera“- riječ, koja se često primjenjuje u terminologiji strategije u postizanju uspješnog poslovanja. Kroz proces kontinuirane preobrazbe i podrške u kreativnosti, poslovanje se može drastično poboljšati u smislu metrika – ustaljena pravila mjerenja- udjela na tržištu, prihoda i profita. Bitna tema koja se ponavlja u uspješnom poslovanju tvrtki je da se uspostavi 'zašto', koja je svrha postojanja tvrtke? Idući korak slijedi "kako" i "što", također važni faktori u procesu ostvarenja ciljeva i unapređenja postojećeg poslovanja. Proces unapređenja poslovanja (reframing), i revizija faktora "kako" poslovanje funkcionira i "što" je rezultat poslovanja, su daljnji koraci u kontinuiranom i inovativnom razvoju tvrtke. Ovaj članak će raspravljati primjere uspješnih tvrtki, kako su definirali 'zašto', tvrtke koje često primjenjuju promjene u unapređenju postojećeg poslovanja (pivot), i kroz podršku kulture inovativacije usmjeravaju poslovanje u napredovanju na konkurentnom*

*globalnom tržištu.*

**Ključne riječi:** *pivot, kreativnost, preobrazba, 'zašto', inovacija.*

## **1. Introduction**

Great companies are great because of the way they do things. More importantly, they understand why they do things. Once they understand pivoting to catapult the company into a new reframing and to go beyond the company's mission and vision statements is where many companies fail. The mission and vision are just words in the company newsletter or policy manual. Employees may read the mission and vision statements but still treat their work as a daily passionless job just to pay the bills.

The 'why' is the company's existence articulated and communicated so that it provides a basis for all ideas going forward and thus attracts top talent who align with its existence. In essence, a potential employee cannot only read and understand the underpinnings of a company's mantra, but associate, identify and align it with their own personal goals.

Communicating a company's purpose, which encompasses the 'why', goes beyond acquiring the pursuit of human capital. This is the foundation statement that transcends into other aspects of the company. It is what decisions are made upon as it aligns the whole organization. Everything from marketing and product development through to stakeholder engagement and strategic initiatives in combination, results in a company's unique selling proposition. In other words, "by innovating on all fronts the company develops its own unique selling proposition (USP) and decreases barriers to entry." Often, however, once a "company establishes a successful USP in a market, competitors rush in to copy it."<sup>ii</sup> The USP thus needs to be ever evolving through innovation that is ubiquitous throughout the whole organization. While the first part of this paper aims to provide the rationale for a company to have a foundation statement, the second part aims to provide a construct for innovation. The two parts translate to providing unparalleled and evolving USP.

## **2. Foundation Statement**

"Why" is a child's first step in understanding his or her world? Paraphrasing the late Steve Jobs, "go into life with childlike curiosity." With no previous conceptions and no previous knowledge, a tabula rasa, a child has unbelievable curiosity and search for knowledge. To emulate this in the corporate world, a company in its infancy has to establish its foundation statement which incorporates the 'why' of its conception. Prior to the creation of a company's mission, vision or business plan, a foundation statement is the basis behind many of today's successful organizations.

Christel Quek of the Havas Media Group has described "stories that start with 'why' - that articulate the organization's purpose and passion - are able to get more consumers tuning in to the brand and what it stands for. But what is a good story without purpose? The best stories have a key message - a driving force that underpins the 'why' and builds the connection of why the audience should care".<sup>ii</sup> However, a small company may choose to keep its motto internal until it has reached a comfort level to be on the radar of its competitors. A small company perhaps strategically chooses to articulate its foundation statement outside the company when it has reached critical mass and speed to be able to defend its USP.

Even Netflix, which in 2013 earned 4.3 billion dollars in revenue, has not actively disclosed its purpose to the public. About seven years ago, Netflix was a mail-order DVD rental service stating, “Our appeal and success are built on providing the most expansive selection of DVDs; an easy way to choose movies; and fast, free delivery.”<sup>iii</sup> They evolved from being a pay-per-use DVD rental service, to a monthly subscriber model and now to a very successful data warehouse of online movie streaming across North America. Claiming 4 billion hours of content viewing in the first quarter of 2013, Netflix averages 87 minutes of daily per subscriber for its 28 million plus customers, making it the “hypothetical” top cable network alongside The Disney Channel.”

Once a company’s purpose is created, it is then able to pivot and change its unique value proposition to align with the needs of its customers and market demands. Apple Inc., the American consumer electronics giant, is a good example of how a company stayed true to its purpose, which it first stated in 1997 — “Think different.” It continues to this day to innovate with a cause and succeed globally. In his discussions of how great leaders inspire action, Simon Sinek states, “People don’t buy what you do, they buy why you do it. If you talk about what you believe, you will attract those who believe what you believe. Microsoft sells the ‘what’, and sometimes the ‘how’, but Apple sells the ‘why’ ”.<sup>iv</sup>

Professor Theodore Levitt saw that 20<sup>th</sup>-century American railroads defined their business too narrowly, proclaiming, “We are in the railroad business!” This myopic focus caused them to lose sight of who their customers were and what they needed. The railroads failed to develop strategies to compete with airlines, barges, pipelines and trucks and thus many had to merge or go out of business. They failed to realize that they were in “the transportation business.”<sup>v</sup>

The business foundation statement if not well thought out can actually impede a company’s progress and prosperity. Sinek also discussed in his Tedx talk that a company should always start with ‘why’ then ‘how’ followed by ‘what’. In this order a company can ensure that it formulates its foundation statement and propels itself forward.<sup>vi</sup>

### **3. Innovation paradigm**

Now that we have discussed the importance of a clear company statement that epitomizes the values, the ‘why’ and the purpose for successful growth, we can follow how they innovate and function in their divisions and markets. That is, how they utilize their mantra to align, to filter, to adopt, to unify, to energize and to capitalize on innovation.

Approximately seven years ago I personally had the opportunity to hear Larry Keeley of Doblin Inc. speak in Ottawa, Canada. He stated (paraphrasing) “that most companies focus on product and service innovation.” I interpret this to mean that innovation needs to be rampant throughout the organization. Every single aspect of a company can be a game changer. Here are a few: logistics, supply chain, network, human capital and resources, IT infrastructure, accounting, metrics (lead and lag factors), big data analysis, quality, marketing, sales, customer experience, environment, production, sustainability, industry association involvement, cross function teams, value assessment, stakeholders, customer engagement, information technology, tinkering time, culture, giving back to community, broad *vision ROI*, finance, business model, partnerships, platforms, vertical integration, continuous customer analysis, articulation of the company principles. All of these functions and more can be sorted in the below diagram that Mr. Keeley presented in his talk to our group.

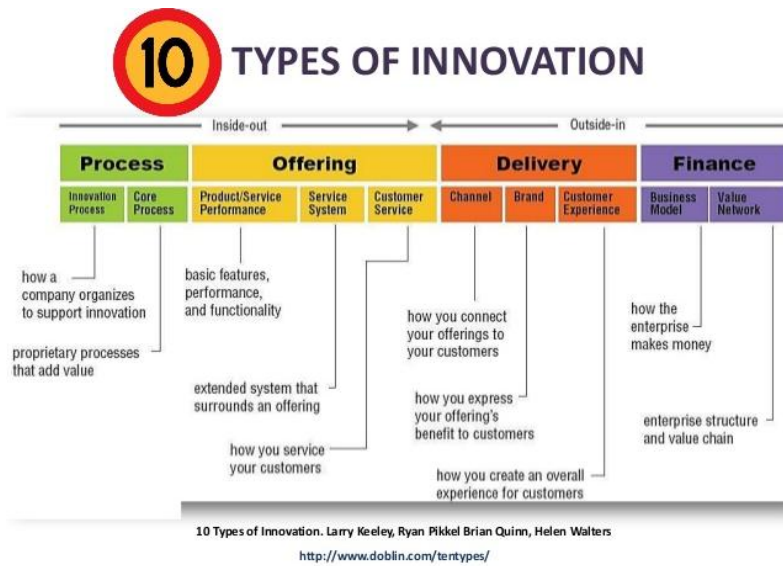


Figure 1<sup>vii</sup>

One of the points Mr. Keeley had mentioned was that if a company becomes world class on 6 or more out of the 10 innovation classifications listed that it has the potential to corner the market. The unique selling proposition becomes so tightly knit that the model becomes difficult to emulate. In Mr. Keeley's talk in 2011<sup>viii</sup> he provides another paradigm shift in that innovation occurs with scarcity and with solving a problem. He used the example of Cemex one of the worlds largest cement companies. The problem was to get their trucks full of cement to the construction site so that the cement would not harden. The company committed to a project to come up with a traffic algorithm to route trucks in real-time to their destinations. Cemex now makes more money selling their world-class algorithm then selling cement. The paradigm shift is not to extend on a selling more cement but to fill a need and therefore pivot the company in a new direction.

The paradigm shift is well expressed by Larry Page the co-founder and CEO of Google where he debunks the incremental innovation model. "The way Page sees it, a 10 percent improvement means that you're basically doing the same thing as everybody else. You probably won't fail spectacularly, but you are guaranteed not to succeed wildly... How exciting is it to come to work if the best you can do is trounce some other company that does roughly the same thing? That's why most companies decay slowly over time. They tend to do approximately what they did before, with a few minor changes. It's natural for people to want to work on things that they know aren't going to fail. But incremental improvement is guaranteed to be obsolete over time. Especially in technology, where you know there's going to be non-incremental change."<sup>ix</sup>

Google has the finances of small nations and while it is at the innovation forefront it is perhaps too ambitious for a smaller company to keep up with. A small company therefore needs to put this in perspective. Develop a guiding mantra and innovate toward that. Solely,

analyzing the competition leaves you trying to catch up; therefore, coming up with a purpose focuses the company to innovate on multiple fronts and move forward.

#### 4. Conclusion

Business is an organization run by people. The greater percentage of people in a company that know and identify with the company's foundation statement the more they will be able to work synergistically and passionately as a team. The foundation statement becomes the beacon or guiding light to systemically provide a construct for all ideas for which innovation results. Sometimes the innovation is so profound that the company pivots into a new revenue stream. The process of pivoting is fundamentally how a company can develop its unique selling proposition. The Doblin Group has developed a classification innovation model that works to explain innovation within 10 aspects of a company. The more innovation within the aspects a company becomes the best at, the greater its chances to compete successfully. Finally, innovation stems from a need or a pain point and can be as prolific within a multinational as a start-up. In sum the entrepreneur or decision maker of a company needs to lead a company forward. It helps if the 'why' is articulated, practiced and tells a meaningful story. Innovation happens because employees don't just think they are employees, rather that they are part of a company with a higher purpose. The result is to pivot and reframe a business to make it prosper.

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## **FINANCING ENERGY EFFICIENCY PROJECTS FOR RETAIL SECTOR**

### **FINANCIRANJE PROJEKATA ENERGETSKE UČINKOVITOSTI ZA SEKTOR GRAĐANSTVA**

#### **ABSTRACT**

*Energy poverty is defined as a situation in which the household is unable to pay the costs of heating and electricity, or the amount needed for those costs exceeds a tenth of household income. This problem is one of the biggest problems in the European Union. Sources for financing energy efficiency projects could be represented as a part of the solution to this problem. Furthermore, solution key could be knowledge of housing sector structure and "energy products" that could be appropriate for households at risk of poverty. Countries in the region that are longer faced with this problem have developed a series of products, through which they encourage new investments, but also substantially reduce its impact.*

*Croatia, as a new member of the European Union adopted "The energy renovation of residential buildings in the area for the period from 2013th by 2020." Program is aimed at improving the energy performance of existing buildings in Croatia. Measures described in the Program are encouraging renewal of the outer shell (increase thermal protection of the outer shell and windows replacement) encouraging the replacement of the heating system (replacement of existing heating systems that use electricity or fossil fuels new systems with condensing gas boilers), and encouraging the use of renewable energy (installation of solar thermal collectors, heat pump installation and installation of small biomass stoves). The Program defines forms of financing these measures from the national level, but also the role of other stakeholders in their implementation. The question is if measures listed in the Program are for themselves sufficient to address the issue of energy poverty? Second question is if some other measures used in neighboring countries could be used in Croatia.*

*This paper will analyze the measures implemented/ or measures that are planned to be implemented in Croatia. Further analysis will show measures implemented by countries in the region. After that further conclusion will be made about the possibility of extending the measures, or "product" that could be of interest to the target group.*

*The purpose of this research is to explore the possibilities of application of the new measures, or "products" of energy efficiency, which could have impact on reducing energy poverty.*

**Key words:** *energy poverty, energy efficiency projects*

## SAŽETAK

*Energetsko siromaštvo se definira kao situacija u kojoj kućanstvo nije u mogućnosti plaćati troškove grijanja i električne energije ili iznos tih troškova premašuje desetinu primanja kućanstva. Ovaj problem predstavlja jedan od najvećih problema Europske unije. Izvori financiranja projekata energetske učinkovitosti predstavljaju dio rješenja ovog problema. Poznavanje strukture stambenog sektora, ali i „energetskih proizvoda“ koji će kućanstvima kojima prijete siromaštvo biti prihvatljiva, ključ su rješenja. Zemlje u okruženju koje se duže suočavaju s ovim problemom razvile su čitav niz proizvoda, kroz koje su potaknule nove investicije, ali i u bitnoj mjeri smanjile njegovu naglašenost.*

*Republika Hrvatska kao nova članica Europske unije je tijekom 2013. godine usvojila „Program energetske obnove stambenih zgrada na prostoru RH za razdoblje od 2013. do 2020. godine“ Program je usmjeren na unaprjeđenje energetske svojstava postojećih zgrada Republike Hrvatske, a mjere se odnose na poticanje obnove vanjske ovojnice (povećanje toplinske zaštite vanjske ovojnice, zamjena prozora), poticanje zamjene sustava grijanja (zamjena postojećih sustava grijanja koji koriste električnu energiju ili fosilna goriva novim sustavima s kondenzacijskim plinskim bojlerima) te poticanje korištenja OIE (ugradnja sunčanih toplinskih kolektora, ugradnja dizalica topline te ugradnja malih peći na biomasu). Program je definirao i oblike financiranja ovih mjera s nacionalne razine, ali i ulogu ostalih dionika u njihovoj provedbi. Postavlja se pitanje u kojoj su mjeri mjere koje su navedene u Programu same za sebe dostatne za rješavanje pitanja energetske siromaštva, te koji su još oblici financiranja prisutni u zemljama okruženja, odnosno u kojoj mjeri se ti oblici financiranja mogu primijeniti i na Hrvatsku. U ovom radu biti će analizirane mjere koje se provode ili je njihovo provođenje u planu u Republici Hrvatskoj. Nadalje provest će se analiza mjera koje provode zemlje u okruženju, a odnose se na sektor građanstva. Analizirati će se mjere koje bi se mogle provoditi, te iz svega ranije navedenog izvesti zaključci, o mogućnostima proširenja mjera, odnosno „proizvoda“ koji bi mogli biti zanimljivi ciljnoj skupini. Cilj rada je istražiti mogućnosti primjene novih mjera, odnosno „proizvoda“ energetske učinkovitosti, koje mogu utjecati na smanjenje energetske siromaštva u Republici Hrvatskoj.*

**Ključne riječi:** *energetsko siromaštvo, projekti energetske efikasnosti*

### 1. The concept of energy poverty

Although there is no single universally accepted, unique definition of energy poverty, the term itself implies the inability (or difficulty) for the households in gaining access to energy needs that ensure dignified living conditions at an affordable price in terms of total revenue generated in the household. In these restrictive terms of heating, it means the inability of household heating at an acceptable level at an affordable cost. (Brynart, Grevisse, 2011, 538)<sup>144</sup> The basic objections to such definition of the concept of energy poverty relate to the incompleteness or the lack of uniform criteria which determine the meaning of the term dignified living conditions, the criteria used in determining the energy needed for living conditions that characterize a dignified standard of living and the criteria of "acceptable" costs.<sup>145</sup>

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<sup>144</sup>Brynart, Marie, Grevisse Francois: "Energy poverty in Europe: Towards a more global understanding", ECEE 2011. Summer study- Energy efficiency first: The foundation of low carbon society, pp. 538.

<sup>145</sup> Ibid., pp 538

Consequently, although still subject for further discussions, the most concrete and the general application of the definition of energy poverty, is defined by the UK<sup>146</sup> government and by that definition the household is considered fuel poverty if:

they have required fuel costs that are above average (the national median level)  
were they to spend that amount they would be left with a residual income below the official poverty line

In accordance with the statistical indicators household is considered poor if energy to maintain an acceptable level of indoor temperature in the heating regime (when the usual temperature for the main living area is 21 degrees, and 18 degrees for other occupied rooms) requires cost of energy accounts that exceed more than 10 % of total revenues.<sup>147</sup> Energy poverty is a growing problem in the European Union and the member states. All countries affected and still facing this problem are required, with the aim of reducing the number of affected people, to develop a national action plan, or other appropriate framework to solve it. (Boromisa, Bukarica, Kaselj-Pavičić, LandekaiRobić, 2011.,1)<sup>148</sup> Member States should provide the necessary energy for the most vulnerable consumers, where it would be desirable to use an integrated approach and measures such as social policy and improve energy efficiency in homes.<sup>149</sup> System of protection for the vulnerable consumers has been regulated by Directive on common rules for the internal market in natural gas.<sup>150</sup> Based on research conducted by GFKin collaboration with the United Nations Development Program (UNDP) in Croatia two-thirds of households spend about 12.2% of total revenues on energy costs. In other words if you take the terminology common in the UK, then the two-thirds of households in Croatia are considered energy poor<sup>151</sup>. Furthermore, the results showed that:

10% of households can not adequately warm their homes in the coldest months

26% of households are delaying with payment of monthly energy bills

63% of households are spending too much money for the energy costs in accordance to the total income per household<sup>152</sup>

Based on European Directive 2006/32/EC on energy efficiency and energy services (ESD)<sup>153</sup> the National Energy Efficiency Program for the period from 2008th to 2016th<sup>154</sup> was developed and adopted. Its stipulated targets for energy savings and set the basis for making three-year national energy efficiency plans for three-year period by the year 2016. Based on the template of the European Commission<sup>155</sup>, this document includes a report on the states assessments in

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<sup>146</sup><https://www.gov.uk/government/collections/fuel-poverty-statistics>, (accessed 25. February 2014.)

<sup>147</sup> Ibid.

<sup>148</sup> Boromisa A, Bukarica V, Kaselj-Pavičić A, Landeka J iRobić S:

"Financiranje poboljšanja energetske učinkovitosti", CENEP, Zagreb, september 2011. pp.. 1.

<sup>149</sup> Ibid pp.. 2.

<sup>150</sup> Directive 2009/73/EC of the European Parliament and of the council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, October 2009, pp.. 94-135,

<sup>151</sup> [www.seebiz.eu/](http://www.seebiz.eu/) (accessed 25 February 2014)

<sup>152</sup> <http://mreza.tv/pristupacnost-energije-izazov-za-mnoga-kucanstva/> (accessed 26 February 2014)

<sup>153</sup> <http://www.hep.hr/hep/propisi/Direktiva200632Energetskaucinkovostiusluge.pdf> (accessed 28 February 2014)

<sup>154</sup> <http://www.mingo.hr/userdocs/images/energetika/Nacionalni%20program%20energetske%20u%C4%8Dinkovosti%202008.%20-%202010..pdf> / (accessed 28 February 2014)

<sup>155</sup> "Vodičipredložak za izradu dugoročnog nacionalnog akcijskog plana energetske učinkovitosti"

Europska komisija i Zajednički istraživački centar ( Joint Research Centre), prosinac 2010., Ispra, Italija

implementation of energy efficiency policy and establishes energy savings in the preceding three-year period also providing guidelines for the following period. In accordance with the second National Action Plan for Energy Efficiency for the period up to the 2013th The Ministry of construction and physical planning adopted the "Program of Energy renovation of residential buildings in the territory of the Republic of Croatia for a period of 2013th-2020th."

## **2. Energy reconstruction program for residential building in the period from 2013 up to 2020 with detailed plan for the period from 2014 by 2016.**

The Program<sup>156</sup> defines the action lines of the energy efficiency policy in new buildings (where the greatest impact will be further development of regulations and the provision of financial assistance) and the existing building. However, the measures set out in the Program are relating to existing buildings. Because of their technical characteristics, but also the possible savings, priority buildings are those built between the 1945th and in 1980. The program separates measures for multistage buildings and measures for the houses. Measures relating to the family home (houses), predict that their owners can apply to tenders by local and regional governments in cooperation with the Fund. In other words, Environmental protection and energy efficiency Fund announces contest on which local and regional governments could apply. If they manage to fulfill contests requirements and if there project is approved, they can announce contest in their area. There is the possibility of association units (regional) self-government and local government, and this association increases the share of funding for the citizens. According to the Program, Environmental protection and energy efficiency Fund is in charge of implementing measures divided in three separate groups:

- encouraging the renewal of the outer shell (increase thermal protection of the outer shell, window replacement)
- encouraging the replacement of the heating system (replacement of existing heating systems that use electricity or fossil fuels to new systems with condensing gas boilers) and
- encouraging the use of renewable energy (installation of solar thermal collectors, heat pump installation and installation of small biomass stoves).<sup>157</sup>

For multistage building measures are co-financing for energy audits and energy certification of buildings; support for the preparation of project documentation for building reconstruction; encouraging integral renovation of apartment buildings: increasing the thermal protection of the outer shell; windows replacement; upgrading or replacement of heating systems. In those measures building managers should apply on Fund competition. Thought local and regional governments could help building managers in there paper submission to the contest, there role is not defined as an intermediaries as it is for the private houses.

## **3. Energy efficiency programs in neighboring countries**

Group of authors (Boromisa, Bukarica, Kaselj-Pavičić, Landeka and Robić:, 2011.,<sup>10</sup>)<sup>158</sup> Have made scientific research and founded that the most common form of financing energy efficiency projects/ programs aimed for individuals (citizens) measures are financed through loans. It is stated that with classic loans, using models in which the risks are divided among the participants in the project (except for the end user, can include contractors, equipment suppliers, energy suppliers, and sometimes a third party that provides funding ). Still, there

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<sup>156</sup> Program energetske obnove stambenih zgrada na prostoru Republike Hrvatske za razdoblje od 2013 do 2020 godine s detaljnim planom za razdoblje od 2014 do 2016. godine, studeni 2013. , pp. 32.

<sup>157</sup> Ibid pp. 41

<sup>158</sup> Boromisa A, Bukarica V, Kaselj-Pavičić A, Landeka J i Robić S: Financiranje provedbe mjera energetske učinkovitosti, CENEP, Zagreb, rujan 2011. pp 10.

are also some other financing options used for citizens in those countries:

"The financing of equipment suppliers, where leasing is the most common form of financial funding equipment manufacturers

- Energy mortgages (mortgage involves financing the house / apartment, which takes into account the increase in energy efficiency, increases the value of the house / apartment. Has to do with the property, rather than its owner, thereby enabling investments with longer repayment)

- Funding through the electricity bill - integrated loan repayment for improving energy efficiency in the monthly bill

- Funding through special bank credit lines aimed at improving energy efficiency in households (EBRD)

- Joint purchases of equipment to improve the energy efficiency of buildings (Eng. Pooled procurement)

- Green Loans (Eng. Carbon finance - Green investment schemes / domestic carbon offsets) " Boromisa ,Bukarica, Kaselj-Pavičić, LandekaandRobić, 2011. 10.)<sup>159</sup>

EU Member States have developed a variety of different forms of aid (grants, soft loans, tax breaks and exemptions) through which the successful cooperation between national, regional and local authorities is trying to encourage investment <sup>160</sup>in energy efficiency improvements. Those forms are considered as incentives are used as space for new investments. Subsidy programs (co- investments or subsidized interest rates), are very common form of financing that supports the high initial costs of energy efficiency projects. Group authors<sup>161</sup> stated that the initial cost of increasing financial rate of return on investment, and thus increase the demand for such investment. Most are used for the promotion of energy-efficient renovation of existing buildings and the use of renewable energy sources (RES). These measures are aimed at investing in existing, mature technologies (e.g. insulation) and new technologies (e.g. renewable or micro - cogeneration and subsidized : substitute fuels in buildings heated to inadequate/unacceptable manner (e.g., electricity,use of specific technologies (e.g., installation of solar panels, heat pumps), renovation of existing buildings in order to achieve its reduction of energy consumption ( typically 20-30 % ) or meet the requirements of the applicable regulations<sup>162</sup>simultaneously taking into account the specifics of the social status of individual groups, special programs are designed for particular social groups, such as households with elderly, etc.

Preferential loans are generally used for the implementation of energy efficiency measures, and are characterized by: a prolonged period of repayment, zero or low interest rate, and delay the start of the repayment of the loan <sup>163</sup>Furthermore, revolving fund<sup>164</sup> is a financial mechanism to fund specializing clearly defined types of projects. When we talk about energy efficiency projects we assume return on investment through the contrast achieved after the implementation of the project from savings. A revolving fund is usually a multilateral agreement between the national / international institutions and financial institutions. The reason for the establishment of a revolving fund is a discrepancy between market supply and

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<sup>159</sup>Boromisa A, Bukarica V, Kaselj-Pavičić A, Landeka J i Robić S.Financiranje provedbe mjera energetske učinkovitosti, CENEP, Zagreb, rujan 2011. str 10

<sup>160</sup>Bertoldi, Paolo, Rezessy Silvia: Financing energy efficiency: Forging the link between financing and project implementation, Report prepared by the Joint Research Centre of the European Commission, May 2010, pp. 25

<sup>161</sup>Boromisa A, Bukarica V, Kaselj-Pavičić A, Landeka J iRobić S.Financiranjeprovedbemjeraenergetskeučinkovitosti, CENEP, Zagreb, rujan 2011. str 18.

<sup>162</sup>ibid pp. 19.

<sup>163</sup> Financing energy efficiency: Forging the link between financing and project implementation, Joint Research Centre of the European Commission, svibanj, 2010.

<sup>164</sup>Bertoldi, Paolo, Rezessy Silvia: Financing energy efficiency: Forging the link between financing and project implementation, Report prepared by the Joint Research Centre of the European Commission, May 2010, pp. 22.

demand for financing energy efficiency projects. Business practices in countries that are longer in energy efficiency projects (Hungary, Slovakia, Czech Republic, Lithuania, Latvia, Estonia, etc.) have defined several models in which revolving funds are used as a form of financing. The main difference between the types of revolving funds is a way of financing the government's role in their financing.

The first model involves an agreement between the state and commercial banks on the establishment of a revolving fund, whereby the funds collected from the state budget or through a dedicated tax. Initial, usually grant funds can provide international institutions such as the Global Environment Facility (GEF) and the World Bank. Commercial banks to finance energy efficiency projects granted interest-free loans from the fund, resulting in interest rates more favorable than the market. End users can be public companies, institutions and local governments, small and medium-sized enterprises and the ESCO. Care billing placements assume that banks are required to return within fund borrowed money or pay penalty interest. In this way the state provides the market risk except opportunity cost of borrowed interest-free funds.

#### **4. Implementation in Croatia**

If Croatia is compared with neighboring countries, we could observe that there are not so many measures that national, regional and local authorities are providing to encourage investment in energy efficiency improvements. Out of 20 counties and the city of Zagreb, only few counties have provided to its citizens proposals for using renewable sources in homes or in multistage housings. Thought there are possibilities for project expansion to other cities and municipalities in the county, or to other businesses registered for the management of buildings, the major problem in expansion is limited fiscal capacity of municipalities / cities, but also limited credit capabilities and low capability of adoption for long term obligations.

Thought there are some credit lines provided by commercial banks for energy efficiency, if compared to European countries, Croatia still has potential in developing forms and projects of financing and coo financing energy efficiency measures.

Under the supervision, and organization of Regional Agency of Northwest Croatian (REGEA)<sup>165</sup> counties in north Croatia have launched projects aimed primarily for households in Zagreb County, Karlovac County, Krapina- Zagorje County and the city of Zagreb, as well as the municipality Jelsa and Konavli. However most of them are related to the previously described financing models that are implemented in collaboration with the Fund for Environmental Protection and Energy Efficiency. The Law on Environmental Protection and Energy Efficiency<sup>166</sup> prescribed the fees and charges paid by taxpayers to pay for environmental protection and energy efficiency, as well as environmental pollution charges, user fees for environment, charges for burdening the environment with waste and special environmental charge for motor vehicles. Although the purpose of Fund establishment is similar to the above described revolving funds, financing is quite different, and because of that comparison is not appropriate.

While fiscal measures could be a very powerful tool for energy efficiency promotion, through tax exemptions and tax relief (relating to income tax, taxes property tax, VAT)<sup>167</sup>, this kind of stimulation of energy efficiency has not yet been introduced in Croatia.

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<sup>165</sup> <http://www.regea.org/> (accessed 23 January 2014)

<sup>166</sup> Zakon o Fondu za zaštitu okoliša i energetske učinkovitost, Narodne Novine (107/03, 144/12) i Statut Fonda za zaštitu okoliša i energetske učinkovitost, Narodne novine :193/03, 73/04, 116/08, 101/09 i 118/11 i 67/13), članak 47.

<sup>167</sup> Bertoldi, Paolo, Rezessy Silvia: Financing energy efficiency: Forging the link between financing and project

Thought at the beginning of describing models of financing energy efficiency projects were considered models that are primarily related to citizenship, however, some of the above models are used to finance public projects<sup>168</sup> and the entrepreneurial sector. Fund for Environmental Protection and Energy Efficiency Fund has so far funded projects in public and entrepreneurial sector.

Croatian Government has adopted Program of energy renovation of buildings of the public sector for the period of 2014. - 2015th. In this Program<sup>169</sup> financing models of energy efficiency related to the building of the public sector are defined.

Models are:

1. Loan Program for energy renovation of public buildings.
2. Issuance of guarantees
3. The financing of the Treaty on the energy performance

Loan program for energy renovation of public buildings imply that the Croatian Bank for Reconstruction and Development ( CBRD ) adapt existing lending program that will allow the implementation of energy renovation of buildings of the public sector with favorable interest rates, according to which the credit app. 50% of investments in the energy reconstruction of public buildings ( depending on the amount of funds eligible costs Fund ), with a grace period of one year and a maximum repayment period of 14 years, including a grace period . The maximum loan amount will be limited, and depends on funding opportunities CBRD specific investment program, the creditworthiness of the borrower and the acceptability of the project on the basis of certificates of technical and financial feasibility of the project (APN issued the prior opinion of the Expert Commission) with a guarantee CASB Invest that guarantees the repayment of loans to the extent of 80 % of the loan and other instruments according to the loan program.<sup>170</sup>

Issuing guarantees CASB Invest implemented by creditors of undertakings aimed at the realization of previously contracted energy renovation project, which fulfilled the conditions of competition for the implementation of projects under the Program in accordance with the guarantee schemes HAMAG Invest. Warranties can use companies that are contracted to perform energy renovation of buildings according to the Program. Warranties can be achieved and a newly formed company (SPV) which is formed with the purpose of implementation of energy renovation of buildings , along with a statement that the founders of this company will not perform other tasks<sup>171</sup>. In accordance with Article 4 § 34 Act on efficient use of energy in final consumption of energy performance contract is a contractual agreement between users and providers of energy services ( regularly ESCO ) on measures to improve energy efficiency, where investments in these measures paid according to the agreed level of energy efficiency improvements.<sup>172</sup>

Until now described forms of financing are mainly related to national forms of financing, with the opportunities for participation of local and regional municipalities. Projects financing and energy efficiency programs at the Croatian so far are usually conducted in the form of grants, aid or grants legal and / or physical persons to carry out projects or programs, but also through the ESCO and financing options for loans. ESCO financing model involves the provision of services which includes development, implementation and financing of projects in a way that

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implementation, Report prepared by the Joint Research Centre of the European Commission, May 2010, pp. 25.

<sup>168</sup>Pod pojmom javnog sektora podrazumijeva se opća država središnja vlast, regionalna i lokalna samouprava i javna društva ( dakle sva ona društva koja opća država posjeduje ili kontrolira)

<sup>169</sup>Program energetske obnove zgrada javnog sektora za razdoblje 2014. – 2015. godine, listopad 2013., pp. 23.

<sup>170</sup>ibid pp. 24

<sup>171</sup>ibid pp. 25.

<sup>172</sup>Act of energy efficiency in the final energy consumption, NN 152/08, 55/12, 101/13, 153/13

savings in energy costs and maintenance to achieve investment return. The most significant provider of these services in Croatia is HEP.<sup>173</sup>

Some banks in Croatia have developed models and loan programs, environmental protection, energy efficiency and renewable energy. These are also the most important projects aimed at financing energy efficiency projects for medium and small businesses. Bank managed the implementation of these projects started 2010th<sup>174</sup> The projects are primarily related to the implementation of investment projects whose purpose : remediation of landfills , avoiding and reducing waste generation, waste management, treatment and exploitation of valuable waste, encouraging cleaner production, preventing and reducing waste and emissions in the production process, the protection and conservation of biological and landscape diversity, the implementation of national energy programs, encouraging the use of renewable energy, encouraging sustainable development, cleaner transport, as well as all other projects which are environmental protection, energy efficiency and renewable energy choices. Until now described forms of financing mainly relied on domestic sources, so as such, could be classified as predominantly national forms of financing. Significant forms of financing energy efficiency projects represent EU programs and funds which are described below.

## 5. Conclusion

Earlier studies have demonstrated that the number and types of energy efficiency projects that could have a direct impact on the reduction of energy for the poor population is in its scope somewhat narrower in Croatia than it is in the EU countries.

Croatian accession to the European Union created the preconditions for the implementation of new projects, created a market for new projects, and initiated new investments. Part of new products for the retail sector could easily retrieve the dimensions and form of financing provided for the public sector buildings. At the same time, limited financial resources, and rational usage of financial resources in the retail sector, as well as a high level of awareness that all the savings can reallocate the quality- level of living, make this sector more prepared and motivated for their own initiatives, but also the adoption of new programs. Increasing awareness of the potential savings through energy efficiency measures, increased, and in the future will be increasing measures performance that have been through the program of energy renovation of residential buildings for the period 2013-2020 with a detailed plan for the period of 2014. by 2016. However it is expected that over time, the implementation of those measures, will be increased by some more products and measures already in use in EU countries.

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<sup>173</sup> <http://www.hep.hr/esco/onama/> (accessed 2 February 2014).

<sup>174</sup> <https://www.zaba.hr/home/wps/wcm/connect/36490100495bdaf4a63abefdba424cab/Program+kreditiranja+pr ojekata+zastite+okolisa.pdf?MOD=AJPERES>, (accessed 2 February 2014).



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## **ATTITUDES TOWARDS ENVIRONMENTAL RESPONSIBILITY: THE CASE OF CROATIA**

### **STAVOVI O ODGOVORNOSTI PREMA OKOLIŠU: HRVATSKI SLUČAJ**

*The environment is considered as a serious social and economic issue that needs to be addressed comprehensively if we want to achieve and maintain the quality of life for ourselves and for generations to come. The environment is an integral part of the broader economic and social development of virtually every country in the world. All those who wish to preserve their environment and contribute to the overall protection and conservation of biodiversity are committed to developing its legal system and installed it to those normative values that can help the environment and sustainable development. The aim of this paper was to provide a theoretical framework for understanding the key concepts related to the environmental responsibility segment and to help create a clearer picture of Croatia's population by gathering secondary data from the available literature and previous research. For this analysis, backdate of eight research waves through 4 years, 2 waves per year from 2010 to 2013 was used, all of them conducted on a random sample of Croatian citizens, examining (as a part of wider study) attitudes and preferences of the respondents on environmental protection through prism of survival of the human species, behavior of individuals and society to nature and expected economic growth. Attitudes of the respondents differ mutually with regard to observed socio-demographic characteristics of the sample where the population of younger age (15-19 years old) and Region Slavonia as statistical significant difference in all the four waves of measurements in all examined variables. A healthy environment is a fundamental prerequisite for the preservation of human health and quality of life. Europe 2020 is a new strategy of the European Union, which succeeds the Lisbon Strategy, indicates the need for smart, sustainable and inclusive growth, and leads to high levels of employment, productivity and social cohesion.*

**Keywords:** *environmental protection, sustainable development, measurement, economic framework, sustainable regional development*

#### **SAŽETAK**

*Zaštita okoliša smatra se ozbiljnim socijalnim i ekonomskim problemom kojemu se mora pristupiti holistički želimo li postići i sačuvati kvalitetu života za nas same, kao i za generacije koje dolaze. Zaštita okoliša danas čini sastavni dio gospodarskog i šireg socijalnog razvoja gotovo svake zemlje na svijetu. Svi oni koji žele sačuvati svoj okoliš te pridonijeti ukupnoj zaštiti i očuvanju biološke raznolikosti imaju obvezu razvijati svoj pravni sustav i u njega ugrađivati one normativne vrijednosti koje mogu pripomoći u očuvanju*

okoliša i održivom razvoju. U tu je svrhu provedeno istraživanje na slučajnom uzorku stanovnika Republike Hrvatske u tri vala: 2010 (n=4029), 2011 (n=4015) i 2012 (n=4077), a kako bi se ispitali stavovi i preferencije ispitanika o zaštiti okoliša kroz prizmu opstanka ljudske vrste, ponašanja pojedinca i društva prema prirodi te očekivani gospodarski rast. Stavovi ispitanika međusobno se razlikuju obzirom na promatrane socio-demografske karakteristike uzorka pri čemu su populacije mlađe dobi (15-19 godina starosti) i regija: Slavonija kao statistički značajne razlike najzastupljenije u sva tri vala mjerenja na svim ispitivanim varijablama. Zdrav okoliš temeljna je pretpostavka za očuvanje zdravlja ljudi i kvalitete života. Europe 2020 nova je strategija Europske unije, koja nasljeđuje Lisabonsku strategiju, ukazuje na potrebu pametnog, održivog i uključivog rasta, te vodi prema visokim razinama zaposlenosti, produktivnosti i socijalne kohezije.

**Ključne riječi:** zaštita okoliša, održiv razvoj, mjerenje, ekonomski okvir, održiv regionalni razvoj

## 1. Introduction

To turn the economic and financial crisis into an opportunity, the EU considers it crucial “to address financial and ecological sustainability and develop a dynamic low-carbon and resource efficient, knowledge-based, socially inclusive society.” The focus is on ‘green growth’, since green measures help to revive the economy and create jobs, and stimulate new technologies and reduce the impact on climate change, the depletion of natural resources and the degradation of ecosystems (Commission, *Mainstreaming sustainable development into EU policies: Review of the European Union Strategy for Sustainable Development*, 2009). This is reflected in a key policy document for the EU sustainable growth strategy adopted in 2010, the ‘Europe 2020’. Priorities of the strategy are: smart growth - development of an economy based on knowledge and innovation; sustainable growth - promoting a more resource efficient, greener and more competitive economy; inclusive growth - fostering a high-employment economy delivering social and territorial cohesion. Flagship initiatives attached to the strategy envisages a range of policy measures, e.g. on resource and energy efficiency, biodiversity, action on raw materials, decarbonise the economy, use of market-based instruments, greening of tax systems, phasing out of environmentally harmful subsidies (Commission, Europe 2020, 2010). During the preparations for the 2012 Rio+20 Conference on Sustainable Development, the Commission presented its view on the EU attitude towards ‘green economy’. It stated that responses to challenges posed by growing world population and environmental pressures “will not come from slowing growth, but rather from promoting the right kind of growth”. Conventional model of economic progress should be fundamentally changed: “What is needed is an economy that can secure growth and development, while at the same time improving human well-being, providing decent jobs, reducing inequalities, tackling poverty and preserving the natural capital upon which we all depend. Such an economy – a green economy – offers an effective way of promoting sustainable development, eradicating poverty and addressing emerging challenges and outstanding implementation gaps” (Commission, Rio+20, 2011).

The Sixth EAP titled ‘Our Future, Our Choice’ also aims at a contribution to the EU Sustainable Development Strategy; it forms a basis for its environmental dimension. Its priorities are: tackling climate change, preservation of nature and biological diversity, protection of environment and human health, improvement of quality of life, improvement of resource efficiency, resource and waste management. In its proposal the Commission considered sustainable development as a major opportunity for Europe: “If we can support

and encourage the development of a greener market place, then business and citizens will respond with technological and management innovations that will spur growth, competitiveness, profitability and job creation” (Commission, Communication on the sixth environment action programme of the European Community, 2001). The draft Seventh EAP is an overarching framework for the EU environment policy to 2020, building on policy initiatives of the Europe 2020 strategy for smart sustainable and inclusive growth. As a follow up to the UN Rio+20 Conference, the programme sets as its objective to turn the Union into a resource efficient, green, competitive and low carbon economy, in the context of sustainable development and poverty reduction. Green economy is seen the one that secures growth and development, safeguards human health and well-being, provides decent jobs, reduces inequalities and invests in and preserves natural capital, as a central part of a broader strategy for sustainable development. The programme identifies principles and 9 priority objectives, *inter alia*, to protect, conserve and enhance the EU’s natural capital and strengthen ecological resilience; to turn the EU into a resource efficient, green and competitive low carbon economy; to effectively address environment-related threats to health; to improve environmental integration and policy coherence, i.e. the way environmental concerns and requirements are reflected in other policies.

For building the green economy, the program envisages measures to further improve the environmental performance of goods and services on the EU market over their whole life cycle through measures to increase the supply of environmentally sustainable products, and stimulate a significant shift in consumer demand for these products. This will be achieved using a balanced mix of incentives for consumers and businesses, market-based instruments and regulations to reduce the environmental impacts of their operations and products. The programme envisages the review of existing product legislation such as the Eco design and Energy Label Directives and the Eco label Regulation, and the full implementation of waste legislation, with a view to improving the environmental performance and resource efficiency of products throughout their lifecycle, thus ensuring a more coherent framework for sustainable production and consumption in the EU. (Commission, Proposal on a *General Union Environment Action Programme to 2020*, 2012).

## **2. Economic Incentives and Regional dimensions for Environmental Responsibility**

The European Union aspires to become the most dynamic and competitive economy in the world. The Lisbon Strategy, launched by EU leaders in 2000 and subsequently revised and simplified in 2005, emphasises the need to modernise Europe’s economy and focus attention on growth and employment, in order to address the challenges of globalisation and demographic change and to support our wider economic, social and environmental goals (Commission, *Staff Working Document, Lisbon Strategy*, 2010). To achieve this, the updated strategy emphasises the need for Europe to become a more attractive place to live and work, to develop knowledge and innovation for growth, and to create more and better jobs. The current global economic crisis represents a significant setback in implementing Europe’s economic agenda, with problems of loss of demand, unemployment and deteriorating public finances (Horvath, Z., Legčević, J., 2013) In order to address these economic problems, restore growth and tackle unemployment, a European Economic Recovery Plan (European Commission, 2008) was launched, which sets out the actions the EU will implement to deal with the crisis (Rayment et al 2009). It is explained how environmental policy may benefit the economy by delivering eight key economic outcomes (Hahn, R., 1999):

- *Enhances Productivity* - There is widespread agreement that environmental policy can enhance productivity by increasing the efficiency with which we use resources and

energy. This will benefit the economy and the environment alike, thus being a true winning strategy for the EU's economy. Resource efficiency including oil, raw materials and food are becoming increasingly scarce and expensive, while EU imports are increasing. There is much evidence that many resource efficiency gains can be achieved relatively easily and cost effectively. Studies of the EU eco-industries demonstrate that they have higher productivity and higher growth rates than the manufacturing sector as a whole (Commission 2011)

- *Environmental Policies and Innovation* - Environmental policies can stimulate innovation and investment in innovation. By internalising the external costs of pollution and natural resource use, policies change relative prices and stimulate research and development and uptake of alternative inputs, production methods and products. Similarly, restricting the use of certain processes and materials stimulates the commercialisation and diffusion of cleaner alternatives. Environmental policies have led to innovations in conservation of energy and resources, pollution prevention and environmental clean-up. The European Commission has estimated that the total commercial value of eco-innovative products and technologies in sustainable construction, renewable energy, bio-based products and recycling in the EU can grow from €92 billion in 2006 to €259 billion in 2020, creating more than 2.4 million new jobs (OECD, 2011).
- *Environmental Policies and Employment* - the net effects of environmental policies on employment are positive or neutral. While environmental policies can cause shifts in the composition of employment, evidence suggests that any negative effects on polluting products and processes are at least balanced by growth in less pollution-intensive ones (Raymet et al 2009, p.59)
- *Environmental Policies and the Balance of Trade* - Environmental policies can improve the balance of trade by enhancing competitiveness, supporting export-oriented eco-innovation, and reducing material use and hence imports. Furthermore, progressive environmental policies require industries to innovate and adapt quickly, giving them first mover advantages and positioning them well against foreign competitors when the latter catch up. High environmental product standards drive innovation and create export opportunities over time.
- *Environmental Policies and the Public Finances* - Environmental policies have positive effects on the public finances by (UNEP, 2010): raising revenue and expanding the tax base through environmental taxes and by reducing environmentally harmful subsidies.
- *Environmental Policies and the Capital Base* - Environmental policies can greatly add to and enhance the quality of our capital base, contributing to the stock of buildings and infrastructure, plant and machinery, human capital and natural capital. This capital stock determines the long term output and income streams of the economy. Environmental investments make a key contribution to economic development, providing the infrastructure necessary for growth, driving the transition to a resource efficient economy, maintaining the health and productivity of the workforce, and delivering the ecosystem services on which people and the economy depend.
- *Environmental Policies and Cohesion* - The environment has a key role to play in achieving the goals of cohesion policy and vice versa. Since poor environmental quality is often a barrier to development, investing in the environment is essential in many cohesion areas to provide the right conditions for growth and the necessary infrastructure for sustainable development. Environmental activity offers opportunities for all cohesion regions but has a special role to play in peripheral areas with few

alternative development opportunities for which high environmental quality may be one of the greatest economic assets.

- *Environmental Policies and the Transition to a Sustainable and Resilient Economy* - The EU's Growth and Jobs Strategy and certain aspects of the European Economic Recovery Plan (2009) aim at stimulating the transition towards a sustainable, low-carbon, low impact economy. This is needed, as by 2050, the global economy would need to grow to 15 times its current size for the global population to meet its aspirations of OECD levels of consumption (Rayment, 2009).

The aim of the EU regional policy - *cohesion policy* - is to strengthen the EU's economic, social and territorial cohesion, particularly to reduce disparities between the levels of development of the various regions and the backwardness of the least favoured regions (Art. 175 Treaty on the Functioning of the European Union - TFEU). The EU supports the achievement of these objectives by actions taken through its financial instruments, mostly the so-called Structural Funds (Cohesion policy is financed by the European Regional Development Fund (ERDF), European Social Fund (ESF), Cohesion Fund (CF), European Agricultural Fund for Rural Development (EAFRD), European Maritime and Fisheries Fund (EMFF), and through other financial instruments, e.g. European Investment Bank). During the present financial period (2007-2013) and in preparation of the next one (2014-2020) the EU regional/cohesion policy is going through a considerable reorientation in order to enable its contribution to the EU sustainable development goals and to the Europe 2020 strategy for smart, sustainable and inclusive growth, particularly its flagship initiative "Resource Efficient Europe" (Commission, A resource-efficient Europe – Flagship initiative under the Europe 2020 Strategy, 2011). Success in putting the EU economy on the path to sustainable and job creating growth will largely depend on decisions taken at local and regional level. The EU regional policy must serve to mobilise the potential of EU regions and cities to decouple growth from resource overuse, to change current patterns of consumption and production and to lead the way in developing innovation technologies. Thus, the EU regional policy plays an essential role in orientation of investments towards activities to support smart and sustainable growth, to tackle climate change, energy and environmental issues (Commission, DG for Regional Policy, *Regional Policy Contributing to Sustainable Growth in Europe* 2011).

### 3. Croatian Citizen's Attitudes on Environmental Protection

Since the aim of this paper was not only to provide a theoretical framework for understanding the key concepts related to the environmental responsibility segment but to help in creating a clearer picture of Croatia's population on attitudes and preferences on environmental protection, analysis of Croatia's population direct responses related to environmental protection was conducted.

#### 3.1. Methodology Overview

Analysis was done using backdate<sup>175</sup> of eight research waves through 4 years, two waves per year for years: 2010 (n=4029), 2011 (n=4015), 2012 (n=4077), and 2013 (n=4075). Data

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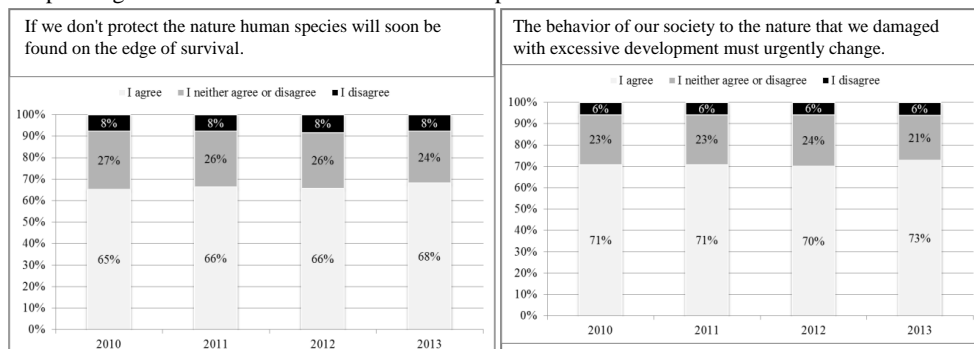
<sup>175</sup> BRANDpuls is a research project of IPSOS Puls market research agency, created in Croatia in 2006 in response to advertiser and agency dissatisfaction with other offerings in the market. By early 2011, BRANDpuls was running in seven countries: Croatia, Serbia and Bosnia/Herzegovina in Europe and Egypt, the Lebanon, Saudi Arabia and the United Arab Emirates in the Middle East. BRANDpuls blends four key aspects of consumer markets in order to build a comprehensive picture of consumers: attitudes, brand analysis, demographics, and media. BRANDpuls collects data by means of self-completion surveys placed by interviewers, who train respondents how to complete the surveys. IPSOS Puls agency gave us permission to use environmental part of data for purpose of this study.

collection was done using self-completion method, and data set related to environmental protection was a part of wider research project. Sample was representative for Croatian population aged from 15 to 65 years, meaning that sample represents around 2.970.000 Croatian inhabitants. Controlled variables were gender, age, and region and settlement type. Selected segment of measurement instrument was consisted of 4 statements plus questions related to socio-demography. Statements were evaluated using predefined answers of ordinal Likert scale (1 to 5, while analyzing recoded to 1 to 3 point scale: agree, nor/neither, disagree).

### 3.2. Research Results

First observed statement was evaluating importance of nature protection, related to survival of human species. In year 2013, with statement: “If we don’t protect the nature human species will soon be found on the edge of survival” agrees 68% of adult Croatian population, while 24% of them are without attitude. There are 8% of populations who disagree. Stated did not changed through time: it is almost on the same level from 2010 to 2013. Although the biggest proportion of population is aware of importance of nature protection in relation to human species, rather “green agenda” – promotion and education of nature protection importance did not result in converting those 25% of population with no attitude. Rather similar situation can be detected when observing statement: “The behavior of our society to the nature that we damaged with excessive development must urgently change” (Graph 1). One small but determined segment (6% to 8% of population) is not aware of seriousness of the problem.

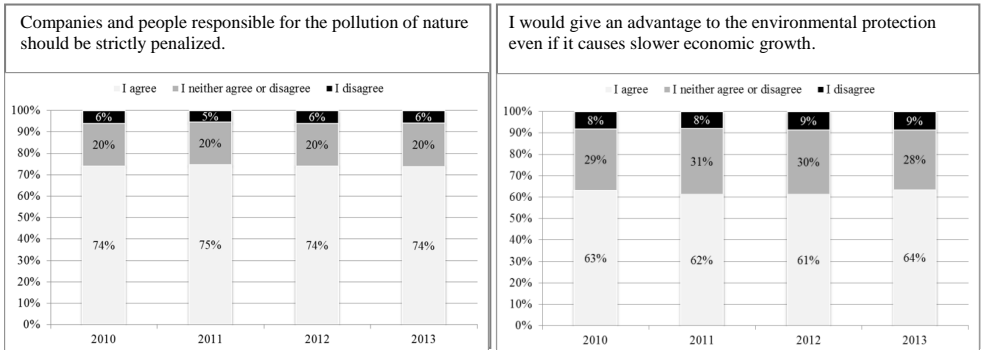
Graph 1 Agreement with statements about nature protection



Source: Made by authors based on data from BRANDpuls project, 2014.

That those segments are rather strong can be confirmed through analysis of next two statements related to responsibility (Graph 2). Three quarters of Croatian adult citizens thinks that companies and people responsible for the pollution of nature should be strictly penalized, while again, 20% doesn’t have the attitude, and 6% are against. When it comes to personal responsibility, trend is the same, somewhat smaller proportion of those who would give an advantage to the environmental protection even if it causes slower economic growth. Again, stability through 4 years period can be recognized.

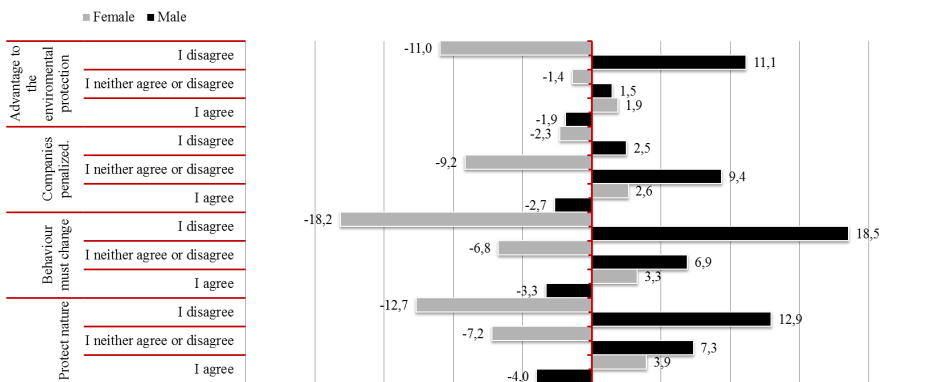
## Graph 2 Agreement with statements about responsibility



Source: Made by authors based on data from BRANDpuls project, 2014.

After overall “attitude scan” of Croatian population, differences between demography groups were measured through affinity index = target's affinity toward particular answer (null point = 100, affinity reference - total sample). Since there are no changes in trend through observed years, further analysis is done based on 2013 results. Regarding gender differences (Graph 3), female are more aware importance and responsibility than men. The affinity is strongest on need that behavior of our society to the nature, must urgently change.

## Graph 3 Affinity index difference rates - by gender

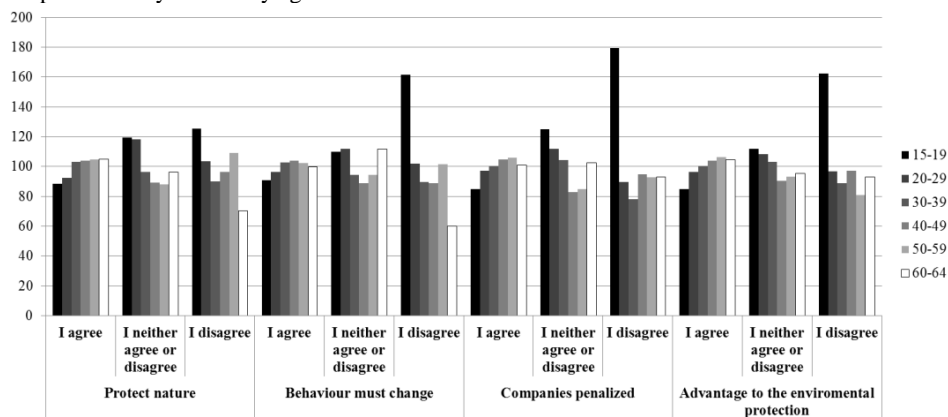


Source: Made by authors based on data from BRANDpuls project, 2014

Regarding age differences (Graph 4), youngest target group 15-19 are fully unaware of nature protection relevance, relation to human species and responsibility behavior. Although differ on every measured statement, it can be conclude that they are more familiar with general thinking about nature protection than responsibility since they although can accept that we need to protect the nature human or species will soon be found on the edge of survival, they cannot relate to personal responsibility (behavior should change or giving advantage to the environmental protection even if it causes slower economic growth). It can be understood since this is “young adult” category, but on the other hand, it is a crucial period for setting those values in minds of “future” generation.



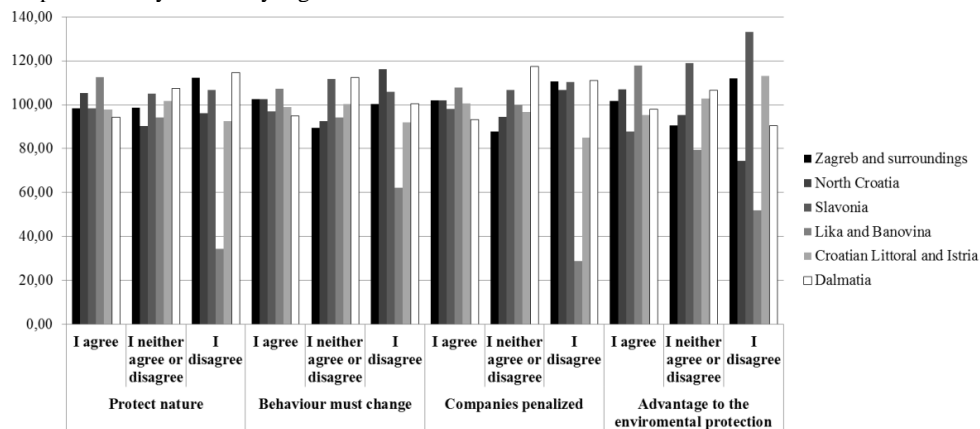
Graph 4 Affinity index - by age



Source: Made by authors based on data from BRANDpuls project, 2014

When observing regions in Croatia (Graph 5), there are some differences but the one that is continuous through observed years relates to Slavonia region that is not ready to give an advantage to the environmental protection even if it causes slower economic growth.

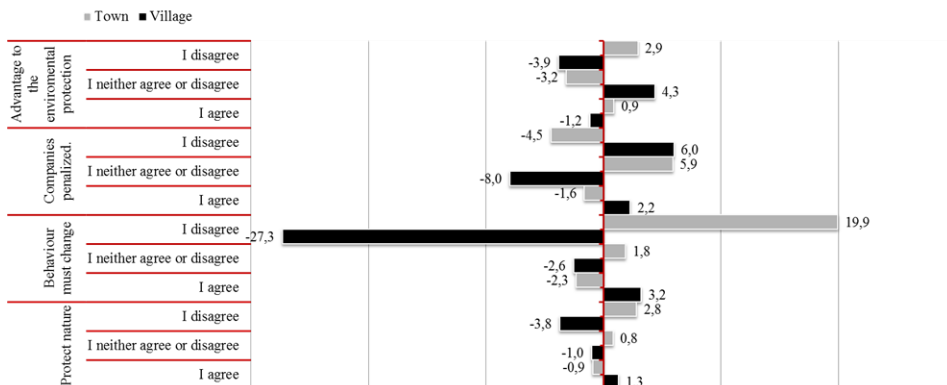
Graph 5 Affinity index - by region



Source: Made by authors based on data from BRANDpuls project, 2014

Last socio-demographic variable was type of settlement, where people from smaller rural settlements were compared to urban settlements (Graph 6.). People from villages are not aware of need that “The behavior of our society to the nature that we damaged with excessive development must urgently change.” Since significant differences cannot be found on other statements, it can be discussed that people in villages are living more in harmony with nature and from that perspective not aware on need for global change in behavior.

Graph 6 Affinity index difference rates – by settlement type



Source: Made by authors based on data from BRANDpuls project, 2014

All commented differences can be tracked through time.

#### 4. Conclusion

The environment is an integral part of the broader economic and social development of virtually every country in the world. All those who wish to preserve their environment and contribute to the overall protection and conservation of biodiversity are committed to developing its legal system and installed it to those normative values that can help the environment and sustainable development. Europe 2020 is a new strategy of the European Union, which succeeds the Lisbon Strategy, indicates the need for smart, sustainable and inclusive growth, and leads to high levels of employment, productivity and social cohesion which main priorities are: smart growth - development of an economy based on knowledge and innovation; sustainable growth - promoting a more resource efficient, greener and more competitive economy; inclusive growth - fostering a high-employment economy delivering social and territorial cohesion. Base of society “environment change” are people. Their attitudes are basis for their behavior. Croatia can be seen as rather nature oriented country since around 70% of adult population is aware of importance of nature protection and nature protection relation to survival of human species, as well as relation of personal and general responsibility toward environmental protection. Still, there are no changes within last four years, there are around 20% of people without attitudes, meaning that they need to be educated and converted to “environmentally conscious” segment, because they are open/available for changes (more than negatively oriented segment consisted out of 6% to 8% of Croatian population). In order to ensure smart, sustainable and inclusive growth, raising awareness of environmental importance must be done within segment of young adults in Croatia.

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**PHOTOVOLTAIC POWER PLANTS IN SLAVONIA AND BARANJA:  
EXPERIENCES IN THE DESIGN AND OPERATION**

**ISKUSTVA U IZGRADNJI I EKSPLOATACIJI FOTONAPONSKIH  
ELEKTRANA U SLAVONIJI I BARANJI**

**ABSTRACT**

*The paper describes the basics of converting solar energy into electricity. Furthermore, the application possibilities of solar energy conversion according to insolation maps of eastern Croatia are analyzed. The positive and some negative experiences in the construction of photovoltaic (PV) power plants in Slavonia and Baranja are notified. Cooperation of the Faculty of Electrical Engineering in Osijek and Solar Projects Ltd, one of the leading companies in Croatia in the field of solar power plants, began with the first non-integrated PV power plant on the ground SEGI, rated power of 30 kW. This was followed by the rapid development of the company Solar Projects Ltd. in the field of design, construction and maintenance of PV power plants. Until today, the company has performed more than 70 projects of the solar power plants with various rated power, from smaller 10 kW, 30 kW up to high rated power such as 120 kW, 180 kW and 300 kW PV power plants. In this paper, the total electricity produced from these PV power plants so far, as well as significant savings in carbon emission due to electricity produced using solar energy are shown. Furthermore, application of modern ICT and web technologies for distance measuring, monitoring and diagnostics of PV power plants, and technical specifications and diagrams of power production for a typical PV power plant are presented.*

**Key words:** Solar energy, Photovoltaic power plants, Electrical energy, Carbon emission, ICT technology, Sunny Web portal

## SAŽETAK

*U radu će biti prikazane osnove pretvorbe sunčane energije u električnu energiju. Opravdnost primjene energije sunca kroz prikaz insolacijskih karata za područje istočne Hrvatske će biti u radu naznačene kao i iskustva u izgradnji fotonaponskih elektrana u Slavoniji i Baranji. Suradnja Elektrotehničkog fakulteta u Osijeku i jedne od vodećih tvrtki u Hrvatskoj na području sunčanih elektrana započela je s prvom FN elektranom snage 30 kW na tlu SEG 1. Nakon toga je uslijedio nagli razvoj tvrtke Solarni projekti d.o.o u području projektiranja, izgradnje i održavanja fotonaponskih elektrana. Sada tvrtka ima izvedenih preko 70 sunčanih elektrana različitih snaga od manjih 10 kW, 30, kW sve do većih snaga 120 kW, 180 kW i 300 kW. U radu će biti prikazana ukupno proizvedene električna energija iz tih elektrana do sada, kao i ušteda u emisiji CO<sub>2</sub> u tonama koja je značajna, temeljem proizvedene električne energije korištenjem energije sunčeva zračenja. Prikazati će se primjena suvremenih informacijskih i WEB tehnologija za mjerenje, nadzor i dijagnostiku rada FN elektrana na daljinu, te tehničke značajke i dijagrami proizvodnje električne energije za jednu karakterističnu fotonaponsku elektranu.*

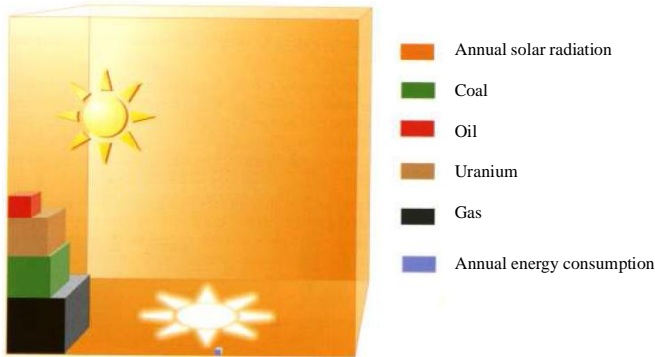
**Ključne riječi:** energija sunca, fotonaponske elektrane, električna energija, emisija CO<sub>2</sub>, IT tehnologija, Sunny Web portal

## 1. Introduction

### 1.1. Energy of the Sun

Solar radiation received at the top of the atmosphere is terminated extra-terrestrial radiation or potential insolation. For a mean Earth-Sun distance, the intensity of solar radiation is 1367.7 W/m<sup>2</sup> (Geiger, 2003). Passing the atmosphere, potential insolation decreases depending on atmospheric condition. Maximal Sun radiation on Earth surface vertical to radiation is approximately 920 W/m<sup>2</sup>. Due to Earth rotation, solar radiation distributes on Earth surface in average up to 230 W/m<sup>2</sup> daily, which is resulting in average of 5.52 kWh/m<sup>2</sup> of energy, depending on the insolation duration (geo. width, season, atmosphere...). (Sljivac, 2013). Fig. 1. shows the annual solar radiation at the Earth's surface, compared with an annual consumption of energy in the world and fossil (coal, oil, gas) and nuclear fuel (uranium) reserves (Majdandzic, 2010).

Figure 1 Comparison of energy obtained by annual solar radiation and energy consumption as well as fossil reserves

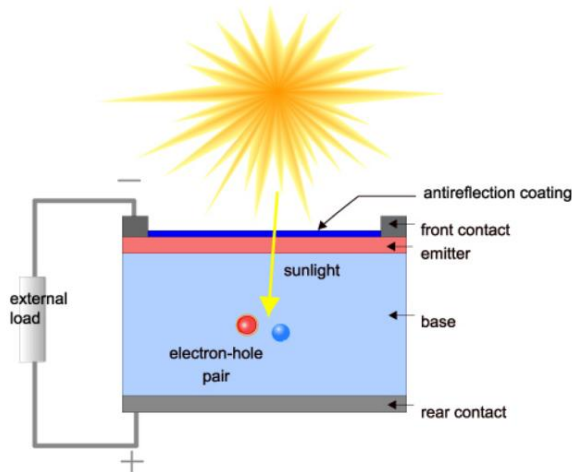


Source: Majdandzic, 2010

### 1.2. The basic of solar cell

A solar cell is a solid-state electrical device that converts the energy of light directly into electricity using the photovoltaic effect.

Figure 2 Cross section of solar cell (Honsberg et al. 2014)

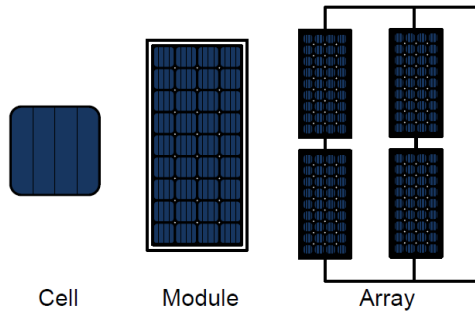


Source: Honsberg et al. 2014

The process of conversion first requires a material which absorbs the solar energy (photon), and then raises an electron to a higher energy state, and then the flow of this high-energy electron to an external circuit (Honsberg et al. 2014). A PV module consists of a number of interconnected solar cells encapsulated into a single, long-lasting, stable unit. The key purpose of encapsulating a set of electrically connected solar cells is to protect them and their interconnecting wires from the typically harsh environment in which they are used. A bulk silicon PV module consists of multiple individual solar cells connected, nearly always in

series, to increase the power and voltage above that from a single solar cell. Combinations of modules are referred to as an array. Figure 3 shows this distinction between cells, modules, and arrays (Sljivic et al. 2014).

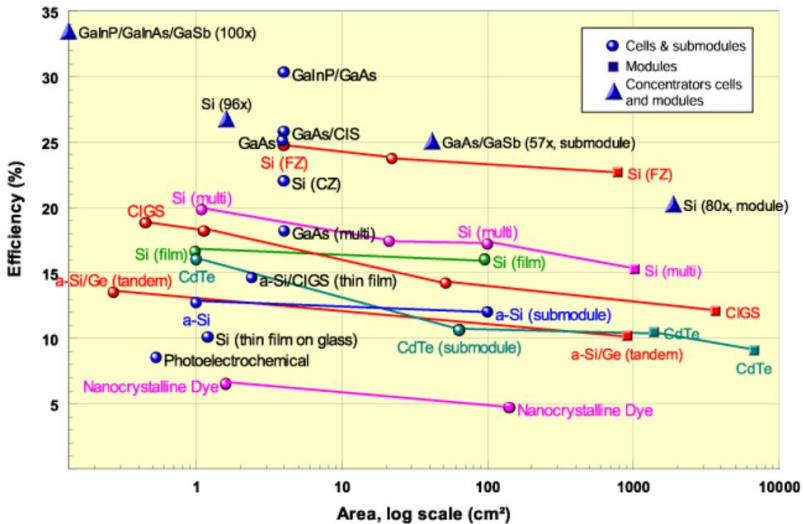
Figure 3 Photovoltaic cells, modules, and arrays



Source: Sljivic et al. 2014

The efficiency is the most commonly used parameter to compare the performance of one solar cell to another. Efficiency is defined as the ratio of energy output from the solar cell to input energy from the sun. Larger cells and modules tend to have a lower efficiency. The efficiency of different solar cell technology as a function of cell area is presented in Fig. 4.

Figure 4 The efficiency of different solar cell technology as a function of cell area (Honsberg et al. 2014)



Source: Honsberg et al. 2014

Three most commonly encountered configurations of PV systems are (Sljivic et al. 2014):

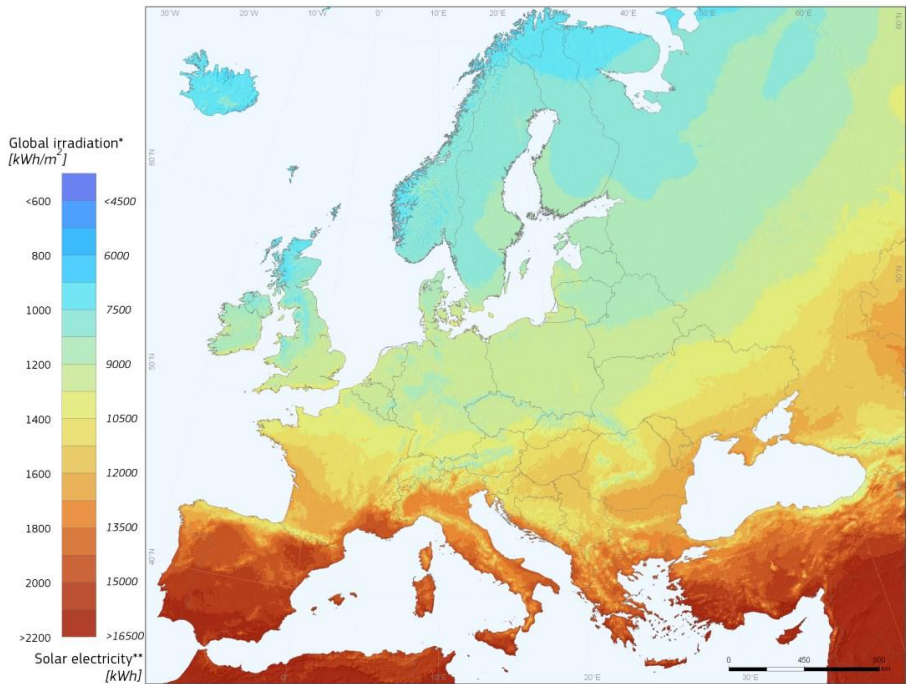
- Systems that feed power directly into the utility grid
- Stand-alone systems that charge batteries, perhaps with generator back-up,

- Applications in which the load is directly connected to the PVs as is the case for most water-pumping systems.

## 2. Solar radiation and photovoltaic electricity potential

The European solar radiation database was developed using a solar radiation model and climatic data integrated within the Photovoltaic Geographic Information System (PVGIS). In Fig. 5, yearly sum of global irradiation on optimally inclined surface for European countries is presented. Over most of the region, the data represent the average of the period 1998-2011, however, north of 58° N, the data represent the 10-years average of the period 1981-1990. All data values are given as kWh/m<sup>2</sup>. The same colour legend represents also estimated solar electricity [kWh] generated per year by a PV power plant with rated power of 10 kW<sub>p</sub>, with photovoltaic modules mounted at an optimum inclination.

Figure 5 Photovoltaic solar electricity potential in European countries (Huld et al. 2012)



\* Yearly sum of global irradiation incident on optimally-inclined south-oriented photovoltaic modules

\*\*Yearly sum of solar electricity generated by optimally-inclined 10kW<sub>p</sub> system

© European Union, 2012  
PVGIS <http://re.jrc.ec.europa.eu/pvgis/>

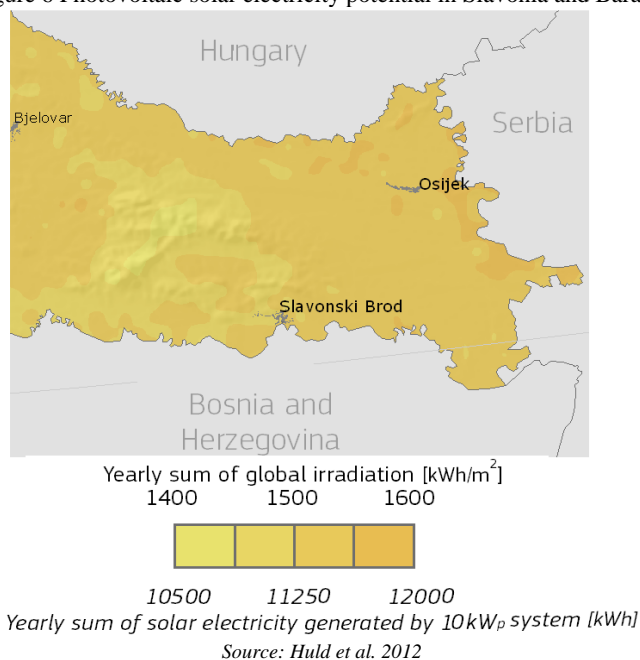
Authors: Thomas Huld, Irene Pinedo-Pascua  
EC - Joint Research Centre  
In collaboration with: CM SAF, [www.cmsaf.eu](http://www.cmsaf.eu)

Source: Huld et al. 2012

In Fig. 6 yearly sum of global irradiation on optimally inclined surface for Croatian region Slavonia and Baranja is presented. As can be observed in Fig. 5, the value of insolation in region Slavonia and Baranja is less than in Southern part of the Croatia. But, in comparison to Germany and other countries that are north of Croatia and well known by the use of PV, the region of Slavonia and Baranja has greater photovoltaic solar electricity potential.



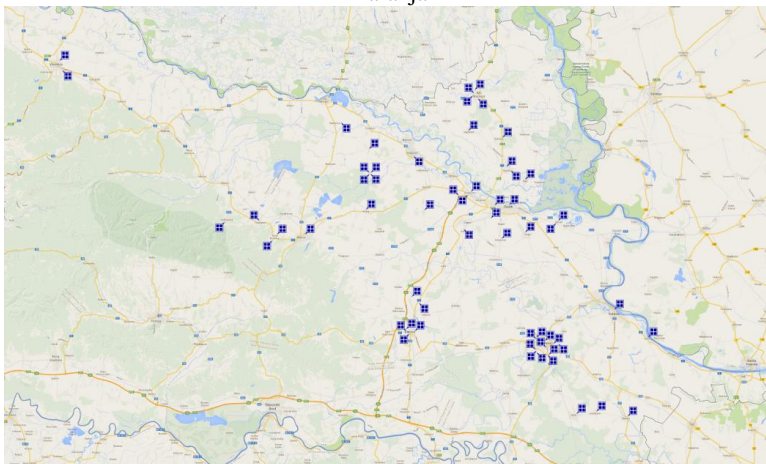
Figure 6 Photovoltaic solar electricity potential in Slavonia and Baranja



### 3. PV systems installed by “Solar projects Ltd”

Solar Projects Ltd. is a company specialized in the development of projects in the field of renewable energy, with special emphasis on the exploitation of solar energy. At this point, the company Solar Projects has successfully connected 78 solar power plants in the distribution network, and in the next few months it is planned commissioning of another 40-50 solar power plants. In 2013, the company received “Green Mark-sign of Excellence, given by Croatian Association for Energetics. Locations of 61 PV power plants installed by company Solar Projects in Slavonia and Baranja are presented in Fig. 7.

Figure 7 Locations of 61 PV power plants installed by company Solar Projects in Slavonia and Baranja



Source: Solarni projekti d.o.o.

Web application with a database of PV power plants characteristics and associated location on Google Map is made. In Fig. 8 PV power plant Photovoltaica 1 in Virovitica with rated power of 120 kW is presented.

Figure 8 Location of PV power plant Photovoltaica 1 in Virovitica



Source: [www.solarniprojekti.hr](http://www.solarniprojekti.hr)

Table 1 shows total installed capacity and the production of PV power plants installed by Solar Projects company in Slavonia and Baranja until February 2014. Furthermore, CO<sub>2</sub> emission reduction is calculated. If total production of 732 840 kWh was produced in the coal power plants in Croatia, the amount of 636,11 tons of CO<sub>2</sub> would be emitted in atmosphere. If the average emission of CO<sub>2</sub> per kWh produced power for generation mix of different power plant technology in Croatia is taken into account, total emission reduction equals 218,39 tons. Average emission for coal power plants and average emission for power plant generation mix in Croatia in period of 2008-10 are taken from literature (IEA 2012).

Table 1 Total installed capacity and production of PV power plants installed by Solar Projects company, and estimated CO<sub>2</sub> emission reduction

Rated power	Number of PV power plants	Total production [kWh]	CO <sub>2</sub> emission reduction [tons] (average emission in Croatia for coal power plants in period of 2008-10 equals 868 g/kWh)	CO <sub>2</sub> emission reduction [tons] (average emission in Croatia for power plant generation mix in period of 2008-10 equals 298 g/kWh)
10 kW	33	260 544	226,15	77,64
25 - 30 kW	27	434 440	377,09	129,46
over 30 kW	1	37 856	32,86	11,28
<b>Total:</b>	<b>61</b>	<b>732 840</b>	<b>636,11</b>	<b>218,39</b>

Source: Authors' calculation

#### 4. Sample case of PV power plant Photovoltaica 1

##### 4.1. Technical data

An example of one of the 61 power plants installed in Slavonia and Baranja is solar power plant Photovoltaica 1, which is located on the roof of the storage building in Virovitica. The power plant is divided into 32 rows, with 10, 15, 20, 21 PV modules in each row. A total of 576 photovoltaic modules is installed, with individual power of 240 W. The total peak of PV arrays is 138.24 kW and the maximum output power is 120 kW. The modules are placed directly on the tin roof, with a roof pitch of about 6° in the north side of the roof and part of the roof on the south side of the building with a roof pitch of 30°. Modules are type Ecoline 60/LX-240P German manufacturer Luxor, consisting of 60 series connected polycrystalline silicon cells measuring 156 × 156 mm. Dimensions modules are 1640 × 992 × 45 mm and weight of the module is 21 kg. Other characteristics of the photovoltaic modules are given in Table 2.

Table 2 Characteristics of the photovoltaic module Luxor EcoLine 60/LX-240P

Short circuit current	I <sub>sc</sub> (A) = 8,49 A
Open circuit voltage	U <sub>oc</sub> (V) = 37,76 V
Rated current	I <sub>mpp</sub> (A) = 7,95 A
Rated voltage	U <sub>mpp</sub> (V) = 30,38 V
Max. system voltage	U (V) = 1000 V
Nominal operating cell temperature	t (°C) = 47 ± 2 °C
Efficiency	η = 14,85/14,30 %
Temperature range	- 40 °C - + 85 °C
Max. pressure load	5400 Pa

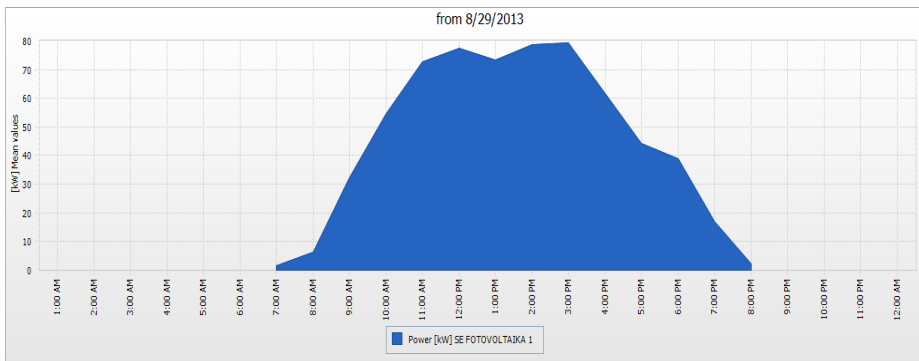
Source: Authors' calculation

Inverter covers entire operating range of the photovoltaic field in all conditions. 8 inverters of manufacturer SMA, type SUNNY Tripower 15000TL are installed. The inverter has the power rating of 15 kW and maximum efficiency 98.2% with an embedded security systems to protect the isolated operation, and overcurrent and overvoltage protection, and has a wireless Bluetooth connection.

## 4.2. Electricity generation monitoring

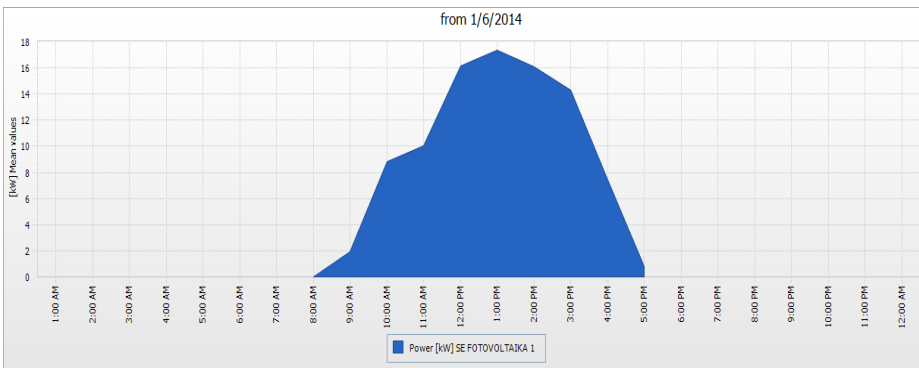
As the central communication interface, the Sunny WebBox connects the PV plant and its operator. The Sunny WebBox collects and documents all data of the connected devices, thus permitting interruption-free monitoring of the PV plant. The operator can access all the data stored in the Sunny WebBox via an Internet connection or a GSM modem. The Flashview presentation software and the Sunny Portal website can be used to edit data or graphically display stored data. This means that operators can see the yields from their plant both in the local network and via the Internet at any time using Flashview and the Sunny Portal. Using Sunny WebBox remote control system, all relevant daily, monthly, annual parameters of the electric power generation can be monitored. In Figures 9. and 10. examples of the daily production of electricity in summer and autumn day are presented.

Figure 9 Production of PV power plant in summer day (29th August)



Source: [www.sunnyportal.com](http://www.sunnyportal.com)

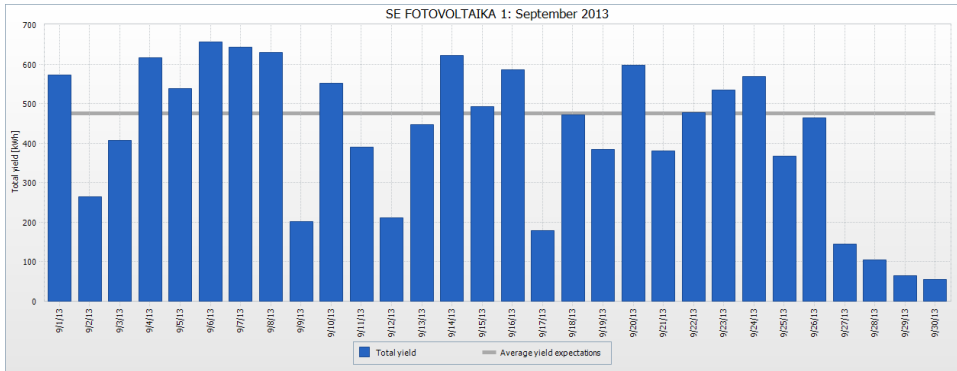
Figure 10 Production of PV power plant in winter day (6th January)



Source: [www.sunnyportal.com](http://www.sunnyportal.com)

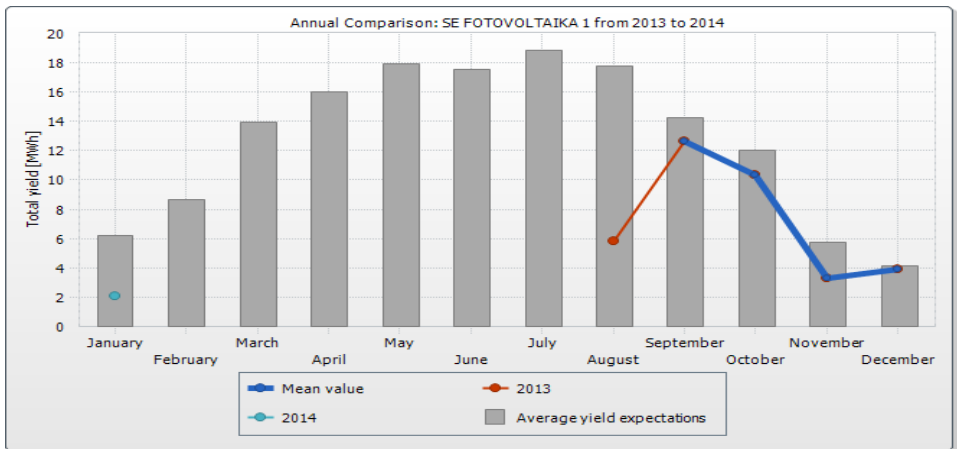
Electricity production in kWh for each day in September is presented in Fig. 11. In Fig. 12 monthly yield expectations and actual generation are presented.

Figure 11 Production of PV power plant in September (2013)



Source: [www.sunnyportal.com](http://www.sunnyportal.com)

Figure 12 Monthly yield expectations and actual generation



Source: [www.sunnyportal.com](http://www.sunnyportal.com)

## 5. Conclusion

In this paper, the basics of converting solar energy into electricity are described. Furthermore, the application possibilities of solar energy conversion according to insolation maps of Eastern Croatia are analysed. Due to its position in Europe, the region of Slavonia and Baranja has greater photovoltaic solar electricity potential than some of the northern European countries that are well known by the use of PV. Producing electricity from PV power plants causes significant savings in carbon emission due to reduction of generation in thermal power plants. In this paper, sample case of PV power plant is presented. Furthermore, application of modern ICT and web technologies for distance measuring, monitoring and diagnostics of PV power plants, and technical specifications and diagrams of power production for a typical PV power plant are presented.

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**GREEN LIBRARIES: LIBRARIES' CONTRIBUTION TO ENERGY EFFICIENCY**

**ZELENE KNJIŽNICE: KNJIŽNIČNI DOPRINOS ENERGETSKOJ UČINKOVITOSTI**

**ABSTRACT**

*This paper describes the foundation of Green Libraries of Energetic Efficiency (or Green EE Libraries) in Croatia, with a special emphasis on the Green EE Library founded at the Law Faculty Library in Osijek. Green Libraries of Energetic Efficiency have been founded as a result of a project "Removing Barriers to Energy Efficiency in Croatia" (EE project) with a goal to disseminate and make visible the information and publications created within the Project to wider Croatian public. The EE project, initiated in 2005, aims at removing barriers for the implementation of economically feasible, energy efficient technologies and measures in residential and public sectors in Croatia while implementing the principles of systematic energy management in the public sector.*

*An important facet of the project is its focus on citizens, which is evident from media campaigns, multi-media publications, brochures, various lectures and the network of Info points for energy efficiency. Among those Info points are currently ten Green Libraries situated at public and academic libraries in nine Croatian cities (Zagreb, Pula, Osijek, Križevci, Prelog, Sisak, Rijeka, Split, and Zadar). This paper focuses on the everyday education activities, types of customers, their expectations and needs of those Green EE Libraries. The paper also gives the findings of the survey conducted among ten Green EE Libraries in Croatia about their experience in the project as well as the expected impact of the Green EE Library materials on their customers.*

**Keywords:** *Green EE Library, libraries, energetic efficiency, EE project, Removing Barriers to Energy Efficiency, Croatia*

## SAŽETAK

Ovaj rad opisuje osnivanje Zelenih knjižnica energetske učinkovitosti (ZeeK) u Hrvatskoj, s posebnim naglaskom na Zelenu knjižnicu pri knjižnici Pravnog fakulteta u Osijeku. Zelene knjižnice energetske učinkovitosti nastale su kao rezultat projekta „Poticanje energetske efikasnosti u Hrvatskoj“ (EE projekt) s ciljem širenja i povećanja vidljivosti informacija i publikacija kreiranih u okviru EE projekta. Sam EE projekt, pokrenut još 2005. godine, za cilj ima uklanjanje prepreka za implementaciju ekonomski isplativih, energetski efikasnih (EE) tehnologija, materijala i usluga, kako u javnom sektoru tako i u kućanstvima, a sve kako bi se smanjila nepotrebna potrošnja energije i emisije štetnih stakleničkih plinova u atmosferu. Izuzetno važna faseta projekta je njegova usmjerenost prema građanima, a to je razvidno kroz medijske kampanje, multi-medijske publikacije, brošure, razna predavanja i radionice, te kroz mrežu Info-puntova za energetske učinkovitost. Među tim Info-puntovima nalazi se trenutačno devet Zelenih knjižnica smještenih u narodne i visokoškolske knjižnice u osam hrvatskih gradova (Zagreb, Pula, Osijek, Križevci, Prelog, Rijeka, Split, and Zadar). Ovaj rad svoj naglasak stavlja Zelenu knjižnicu Pravnog fakulteta u Osijeku - na njene svakodnevne obrazovne aktivnosti, vrstu korisnika, njihova iščekivanja i potrebe. Istovremeno, rad donosi rezultate istraživanja provedenog među svih devet Zelenih knjižnica u Hrvatskoj na temu njihovih iskustava u projektu, ali i očekivanog učinka materijala Zelene knjižnice na njihove korisnike.

**Ključne riječi:** Zelena knjižnica, energetska učinkovitost, EE projekt, Poticanje energetske efikasnosti, Hrvatska

### 1. Introduction

Sustainability and going green seem to be applicable in every context. They focus essentially on the aim of social responsibility and consideration for future generations by reducing the ‘ecological footprint’. The importance of environmental matters can be seen in the fact that in 1998 the United Nations Economic Commission for Europe (UNECE) adopted the *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* in the Danish city of Aarhus (also called Aarhus Convention). It came into force in 2001 and its primary objective was to protect the right of every person of present and future generations to live in an environment adequate to his or her health and well-being. In order to make this possible, the Convention, among other things, insists on the rights of access to information and public participation in decision-making (Convention, 1998, Article 1).

The phrase ‘green library’, prevalent in information and library science literature, usually refers to a library building that is certified as an environmentally friendly building (e.g. Antonelli, 2008 or Wescott Loder, 2010). This trend implies that it is necessary to have a green library building in order to be considered ‘green’ (Aulisio, 2013, 1). In the USA, the U.S. Green Building Council (USGBC) issues Leadership in Energy and Environmental Design (LEED) certifications and in 2013 there were thirteen LEED certified academic libraries in the United States (AASHE, 2013). However, the green library is not an exclusive club for those fortunate enough to have new, sustainable, library buildings and certificates such as LEED and similar. The phrase ‘green library’ should refer to any library that promotes sustainability through education, operations, and outreach.



Authors Jankowska and Marcum (2010) identified four major areas of environmental and sustainable issues in the library literature: “(1) Sustainability of scholarship and collections; (2) Green library operations and practices; (3) Green library buildings; and (4) Measuring and improving sustainability” (p. 161). In addition, authors Le Ber and Gregory (2004) stress out that librarians can become role models and influence their institutions to start or maintain the greening process (p. 266). There are many ways in which libraries contribute to sustainable practices, one of which is disposal of: packaging (cardboard, polystyrene plastic, plastic) from serials, books, software, computers, etc.; unneeded gifts; weeded materials; office paper waste generated from printing and copying; outdated computers, etc. Additional ‘greening’ activities include utilities such as water, electricity, gas, heating, and cooling; and buildings and grounds (Le Ber, Gregory, 2004, 266). Kathryn Miller in her publication on public libraries stresses out the educational role of public libraries in promoting sustainability and environmental issues (2010, 63-75) while another library manual gives instructions how to become ‘green’ (McBane Mulford and Himmel, 2010, 145-168).

Libraries have found the idea of sustainability to be quite interesting. Therefore, the leading international body representing the interest of library and information services and their users, International Federation of Library Associations and Institutions (IFLA), initiated the publication of a book that mirrors the current efforts of libraries to create sustainability through varied solutions for the particular challenges of library architecture and related services. This book brings examples and case-studies on ‘green’ activities of libraries all-over-the-world (Hauke, Latimer and Werner, 2013).

This paper focuses on libraries in Croatia and their efforts to promote sustainability and energy efficiency among their customers through their main task: ensuring free access to the environmental information.

## **2. Green libraries in Croatia**

In Croatia, libraries are starting to adopt the idea of sustainability and environment protection. The ‘green library’ initiative is still in its infancy, but there are several worthy initiatives that deserve to be mentioned. One of them is the Green Library project of the Library Association of Istria launched in 2011. The goal of that project was to educate the public and to raise the awareness about the environment protection. Up to 2012 the project involved the active participation of nine libraries and fifteen other institutions and it consisted of lectures, workshops, and public discussions. Seventeen educational documentaries were shown to wider public within the project. The project had an excellent reception and all of its programmes were well attended (Kraljević, 2013, 199-200).

The next green project connected with libraries in Croatia is the one regarding the government project *Removing Barriers to Energy Efficiency in Croatia*” (EE project), which is also the main topic of this paper. The project was launched in July 2005 and is still active. Initially, the partners on this programme were Croatian Ministry of the Economy, United Nations Development Programme (UNDP Croatia), Environmental Protection and Energy Efficiency Fund and Global Environmental Facility (GEF). Today, the new partner is Croatian Ministry of Construction, and Physical Planning. As its name implies, the project’s main goal was removing barriers for the implementation of economically feasible, energy efficient technologies and measures in residential and public sectors in Croatia while implementing the principles of systematic energy management in the public sector. It has developed in three national components: the "Systematic Energy Management in Cities and Counties in Croatia"

(SEM Project) for the local and regional level; the Croatian Government Programme "House in Order" (HiO Programme) for the central government, and systematic informing and education of Croatian citizens (Poticanje). Since 30% of energy consumption in Croatia is attributed to the housing sector, the effect that EE measures can have when they are applied in Croatian households is significant (Informiranje). The educational component of the project is extremely important, and it includes the encouragement for usage of energy efficient products, materials and systems on local and national level. Educational activities include: clarifying the basic concepts of energy efficiency, educating on the ways and the products to save energy, as well as the getting the information directly from energy advisors on a telephone info-line or by 128 info-points in 52 cities and 12 counties in the Republic of Croatia. Among them, there are also schools and libraries.

Within the project, a number of educational and informative materials (leaflets, booklets, publications) were created and they make the Green Library of Energetic Efficiency (Zelena knjižnica energetske učinkovitosti or ZeeK). Although all the materials are available in electronic form, they also exist in physical and as such are available to anyone interested in the increase of energetic efficiency. The goal of EE Library is to make this information accessible to experts, members of academic community, students and citizens. All libraries that house the Green EE Library were donated the shelf together with three packets of all EE materials. The first Green EE Library was launched at the National and University Library in Zagreb in 2012 (Nacionalna). Next to the National and University Library, there are nine other libraries with the Green EE materials. Those libraries are: University Library in Pula, City Library Franjo Marković Križevci, City of Prelog's Library and Reading Room, Public Library and Reading Room Vlado Gotovac Sisak, City and University Library in Osijek, Faculty of Law Library in Osijek, University Library in Rijeka, University Library in Split, and Public Library in Zadar. The Green EE Libraries at those libraries were founded later, during 2013.

This paper looks into the experience and views of librarians in charge of the Green EE Libraries on usage and outcomes of those libraries and materials on their customers and library in general.

### **3. Research**

#### **3.1. Methodology, instrument and sample**

As already mentioned in the previous chapter, there are ten libraries in Croatia with Green EE Library. Our paper is based on the data received from all ten libraries. Due to the size of the sample, we decided on a qualitative research method. We drew up eight tentative interview topics on the foundation of the Green EE Library, benefits for the host library, impact on usage and customers, customers' interest for the topic, other library's environmental activities, other environmental projects of the library, the responsibility for educational and promotional activities regarding environmental issues, etc. During March 2014 the ten libraries were contacted by phone and invited to cooperate in the research. Consequently, the librarians in charge of the Green EE Libraries were e-mailed interview questions and asked to set the appropriate time for the phone interviews. Optionally, they were offered the opportunity to write their answers and mail them back to us. Librarians in nine out of ten libraries chose to write the answers and mail them back to us. The only phone-interview was conducted with the librarian from the Zadar Public Library. Content analysis of the answers

was performed and the results are presented in this paper. Libraries were coded (L1-L10) in order to make the analysis easier<sup>176</sup>.

## 3.2. Results

### 3.2.1. The way the Green EE Library was initiated

The Green EE Libraries in the sample were initiated in various ways. In one library it was the result of joint efforts of both the library and the UNDP office (L1), in four libraries it was initiated by the library itself (L3, L4, L5, L8), and in the last five it was initiated by the UNDP office (L2, L6, L7, L9, L10). In cases when it was initiated by the library, it was usually the case that the library itself was involved in 'green' issues through some other projects. L3 was for instance involved in the 2011 project of the Library Association of Istria entitled 'The Green Library'<sup>177</sup> and the launch of the Green EE Library was a logical continuation of that library's 'green' efforts. L5, on the other hand, was involved in the 6-month project of the primary school Prelog. During that project, the library contacted the UNDP office. Yet another library, L8, was involved in the project entitled Deepening University Cooperation Osijek-Pecs (DUNICOP). Within the project, the law faculties from both sides (Osijek and Pecs) analysed various aspects of cross-border development and environment protection (Župan and Vinković, 2013). L8 was involved in the project through EU-info centre service of the library<sup>178</sup> and the opening of the Green EE Library seemed as a natural continuation of the DUNICOP project and the EU-info centre. In cases when the initiation came from the UNDP office, sometimes it was provoked by some of library's activities – for instance, when L7 received the energy certificate, it put the billboard with the image of the certificate on the library wall. The manager of the UNDP project was passing through Zadar, saw that billboard and stopped by the library to offer future cooperation. In the case of L2 the initiation came from the manager of the EE office of the city of Križevci. L10 was visited by the UNDP office representatives at the beginning of 2012 (however, it took a whole year to actually launch the EE Library - it was launched on February 19, 2013). They offered the library the project materials, and it was that particular library that actually proposed that those materials were displayed on a specially designed shelf (they initially suggested the form of a tree). The idea of a tree was later abandoned, but the idea of a specially designed shelf was not. Later, all the materials donated to the libraries came together with that specially designed shelf.

### 3.2.2. Benefits for the library and marketing of the Green EE Library

The launch of the Green EE Library was in all libraries accompanied by extensive media coverage (local and/or national television and radio, tv's teletext, newspapers, environmental portals, library's web pages, posters). Two libraries (L4, L7) stressed out that the mayors of those two cities were present at the launch. Two libraries connected the launch with some significant dates (L8 with the Day of Europe, 9<sup>th</sup> May, and L6 with the Night of books, 23<sup>rd</sup> April 2013).

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<sup>176</sup> L1 – National and University Library in Zagreb, L2 - City Library Franjo Marković Križevci, L3 - University Library in Pula, L4 - Public Library and Reading Room Vlado Gotovac Sisak, L5 - City of Prelog's Library and Reading Room, L6 - University Library in Rijeka, L7 - Public Library in Zadar, L8 - Faculty of Law Library in Osijek, L9 - University Library in Split, L10 – City and Public Library Osijek.

<sup>177</sup> More about the project can be found at Zelena knjižnica, <http://www.zk.dbi.hr/>, (accessed 29 March 2014)

<sup>178</sup> In 2011 Paul Vandoren, the representative of the European Commission in Croatia, gave the Faculty of Law in Osijek the status of the European information centre (EU i), and it was positioned at the faculty's library.

All libraries are convinced that there are many benefits of having the Green EE Library. For some it is the issue of image because the library becomes recognized as environmentally sensitive (L1, L7, L9). L8 stresses out that the Green EE Library, which originally was not intended to be the part of the DUNICOP project, ended up adding value to the overall project's goals. L10 had some organizational problems connected with EE materials. First of all, the shelf itself was too big and could only be positioned in the library hall. This also dictated the way the materials were used – monographs were catalogued and placed in the reference and lending departments, while the informational materials and leaflets were left unmonitored on the shelf in the library hall. Consequently, this library thinks that it would have had the benefits if all the EE materials were on one place, under the supervision of the librarian who could also give information about the topic. This library publicized the Green EE Library as long as the new EE materials were coming (they stopped at one point).

### 3.2.3. Impact of the Green EE Library on library and its services; impact of the Green EE Library materials on customers

Two libraries in the sample reported the increase of the number of library customers as well as the attraction of new customer groups (L1, L2). L1 reports organized customer groups that have been visiting the library especially to get in touch with the Green EE Library materials. L2 points out that many people who were present at the Green EE Library launch immediately became new library customers: entrepreneurs, construction workers, designers, officers of the local town-planning department, craftsmen, etc. These were all new customer groups for this public library. A few academic libraries in the sample confess not to have attracted new customers to the library (L6, L8). In some libraries the Green EE Library's materials were used more at the Library's opening (L1), in some the EE materials became popular in time (L4), and some libraries confess that the materials are in general rarely used (L3, L10). Some libraries do not have the data about the usage of the materials because one part of the materials is placed in the area of reading rooms (unsupervised) (L9) or in a library hall (L10).

### 3.2.4. Customers' interest for materials on environment protection and energetic efficiency

The type and the interest of customers for the Green EE Library materials depends a lot on the type of the library. Customers in the public libraries are usually experts interested in professional topics, (employed) people interested in learning about the energy efficiency certificates, the retired interested in reducing their energy costs, young couples building their new house, students and schoolchildren for their school assignments. Customers in academic libraries are usually students and university teachers, fourth-year high-school students working on their graduation papers, but also journalists (L1). For L8 customers are experts and professionals interested in energy efficiency, but also teachers from the nearby Faculty of Economy. Also, the customers are kindergartens who borrow educational films on ecology and environment protection. Five of our respondents (L1, L2, L4, L5, L6) monitor the usage and circulation of EE materials, the rest of the libraries do not or only partially (L10).

### 3.2.5. 'Green' activities of the library prior to the foundation of the Green EE Library

Four public (L2, L4, L5, L7, L10) and several academic libraries (L3, L8) report extensive activity on environmental issues prior the launch of the Green EE Library. Public libraries often organize various workshops, especially for kindergarten and primary-school children (L2, L5, L7), but also exhibitions, lectures, public discussions, radio-programmes in which they present the new 'green' titles. L5 is also included in the Prelog's primary school project

Light Saving City of Prelog, while the L2 was part of several projects: “Together for better”, the project of the National Foundation for Civil Society Development; it cooperated with schools in marking the Earth Day; was part of the educational project for children “Orange bin” on waste sorting in cooperation with the Križevci communal services system; organized a workshop on picture-book creation out of recycled paper that took place at the local craft fair, etc. In their activities, the L7 cooperates with several other associations and institutions in Zadar area, e.g. Eko Zadar, and the local communal services system Čistoća. The academic library L3 has been involved in the aforementioned project The Green Library (Library Association of Istria), and ever since 2011 the library organizes two times a month various lectures and documentary film evenings on environmental issues. The project actively involves also students, especially the students of the Faculty of Economy and Tourism “Dr. Mijo Mirković” and some environmental lectures are even integrated into three courses at that faculty. Two libraries reported only the collections on environmental topics as a prior activity – L1 has a collection of official documents (UNDP, EPA, European Commission - The Directorate-General for the Environment, European Environment Agency, and the Croatian Ministry of Environmental and Nature Protection), and the L8 built the collection for the course Environmental law, as well as for the seminar and diploma papers on environment protection and sustainability. Through the local library association’s project The Green Library L3 has made connections and cooperated with over 20 institutions in the area (various institutions, universities, schools, cinemas, associations, etc.) L8 has also been very active in promoting environmental issues – the chief librarian was a member of the DUNICOP project and in 2013 took part in an international scientific conference Law – regions – development with a presentation on the role of information and education in environment protection, with a special emphasis on regional efficiency. Furthermore, this library was invited by the Regional Development Agency of Slavonia and Baranja to take part in a public discussion on the *Action plan of the energy sustainable development of the city of Osijek*. One of the measures included in this action plan for a reduction of CO2 emission in the area of Osijek is also the Green EE Library. Also in 2013 the library took part in a workshop on a network of renewable energy sources within the CHREN project (Croatian Hungarian Renewable Energy Network) in Osijek. In future, the library is planning to establish the cooperation between the library’s EU-i info centre and the Regional Agency. L9 reports not to have had any prior ‘green’ activities, while L6 organized workshops on environment protection within the Science Festival a few years ago.

### 3.2.6. UNDP workshops in the library

Within the project *Removing Barriers to Energy Efficiency in Croatia* numerous educational workshops were organized for Croatian citizens. However, only four libraries in the sample (L2, L3, L7 and L10) reported that workshops were organized within the premises of their library. Two libraries organized the workshops at the same day of the Green EE Library’s launch (L3 and L7). L2 has had even two workshops and reported of a great interest of workshops participants for topics connected with solar collection. In some of the libraries workshops were organized for adult customers (L2), in some for children (L7), and in some for librarians (L10). Two libraries made preparations for the workshops, however, they never took place due to some organizational issues within the project itself (L6, L8).

### 3.2.7. Libraries as agents in promoting environmental issues (education, partnerships, etc.)

Libraries in the sample are unanimous that libraries have a social responsibility and should have a proactive role in promoting socially responsible actions and activities. First of all, the

library's primary role is to collect, preserve, organize and secure access to all the materials and information in its possession. Besides those primary tasks, libraries also have an educational component which is realized in the organization of various workshops, exhibitions, public discussions, etc. L8 stresses out the importance of partnerships with other institutions and associations, whereas L1 points out that librarians should gain additional knowledge and competences necessary for all the issues connected with environment protection. L10 emphasizes that public libraries are better suited to offer environmental information than other types of libraries due to their openness to various customer groups.

### 3.2.8. 'Green' processes in the library

All the libraries in the sample act in accordance with the environment protection. They are making pro-environment decisions and adopting pro-environment practices: energy-efficient light bulbs, use e-mails instead of the paper, if they need to print, they do it on both sides of the paper, they sort waste, reduce the number of lighting objects in some areas of the building, close windows if the air-conditioner is on, have labels around the building ('Turn me off', 'Save paper', 'Save water', etc). When the L6 library did the reconstruction of their heating system, they installed a new low temperature oil boiler, which can achieve up to 15% of energy saving annually.

Several libraries in the sample have got the energy certificates (L3, L6, L7, L9), while two libraries (L4, L8) complained that they cannot obtain this certificate because they do not own the library buildings and are not even allowed to make any alterations (that would improve the energy efficiency of the building) (L4 in particular).

## 4. Discussion and conclusions

This paper presents the findings of the interviews with ten librarians in charge of the Green EE Libraries about the way those Green EE Libraries were launched, the impact they had on libraries, the usage of EE materials, and the library's role in promoting and practicing pro-environment practices.

The initiative for the installation of the Green EE Library shelf in libraries came from both sides – in 40% it was initiated by the library and in 50% by the UNDP officers (in the case of the National and University Library in Zagreb, which was the first library with the Green EE Library, it was the result of joint efforts). In many cases, when the initiative came from the side of the library, as was the case with libraries in Pula, Prelog or law library in Osijek, those libraries had already been involved in some other 'green' projects and the installation of the Green EE Library seemed as a logical continuation of libraries' pro-environment efforts and engagement. In four libraries the UNDP officers delivered a workshop on EE efficiency, usually to the library customers and in one case to librarians.

All the libraries in the sample publicized the launch of the Green EE Libraries and the EE materials that can be accessed in those libraries. Many libraries (in Sisak and in Zadar) invited their mayors to the launch, which also emphasized the significance of the manifestation for the library, but also for the community itself. Public libraries usually think that their image benefited from this new service, while for the law library in Osijek this new service meant the additional value to some of the pro-environment projects it was already working on.

A few libraries in the sample have attracted new customer groups (National and University Library in Zagreb and Križevci public library), but other libraries do not really report about

either the increase or the new customers. It seems that public libraries were more successful in reaching out to the wider audience, especially because they organized a number of workshops, lectures, exhibitions, etc. As one respondent pointed out, those libraries cater to the needs of wider customer groups and are more open and easier accessible to the public than other types of the libraries. Also, those libraries (e.g. Zadar, Prelog or Križevci library) partnered with some other institutions, schools, communal services, etc. in trying to communicate the 'green' message to their local community. However, some academic libraries were also very active (e. g. University library in Pula or law library from Osijek), especially in combination to some other earlier environmental activities of those two libraries (The Green Library project in Istria, or DUNICOP project, EU-info centre, partnering with the Regional Development Agency of Slavonia and Baranja of the law library in Osijek).

The EE materials attracted new customer groups such as energy experts, (employed) people interested in learning about the energy efficiency certificates, the retired interested in reducing their energy costs, young couples building their new houses, students and schoolchildren for their school assignments. Unfortunately, the data about the circulation of the EE materials has only the half of the sample (National and University Library in Zagreb, Križevci, Sisak, Prelog and Rijeka library). Some libraries either catalog and monitor only monographs (as is the case with Split or Osijek City and University Library), while the rest of the sample does not have the information about the usage. We are convinced that the UNDP office would be very interested to learn more about the impact of the EE materials (e.g. to find out about the type of customers interested in EE topics as well as the most popular topics for the citizens). However, most of the libraries have to cope with space and insufficient staff and therefore a part of those data are lost (especially for the materials, which are only of informative nature and are neither catalogued nor monitored).

Libraries have traditionally served as vehicles for societal progress within their communities. Now, in the twenty-first century, libraries have the role of teaching environmental awareness through library programming and services. Environmental education is yet another way that libraries help their communities take steps toward the progress. This paper gave example of ten Croatian libraries that have claimed that role and are well aware of their significance in raising the level of their communities' environmental sensitivity. Those libraries have also adopted the pro-environment practices and are themselves role-models for their communities.

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## **RESEARCHING THE INFLUENCE OF ENERGY CONSUMPTION ON ENERGY POVERTY IN EASTERN AND ADRIATIC CROATIA**

### **ISTRAŽIVANJE UTJECAJA POTROŠNJE ENERGIJE NA ENERGETSKO SIROMAŠTVO U ISTOČNOJ I JADRANSKOJ HRVATSKOJ**

#### **ABSTRACT**

*The consumption and energy costs affect the competitiveness of industrial branches as well as business in general. The implementation of an effective energy policy encourages the economic growth and prevents significant energy poverty. Development of energy systems depends on many factors, among which the energy price and the rate of return on invested funds should be emphasized. Long-term use of real energy prices will result in a reliable supply of energy in the future. The price of energy for households depends significantly on production costs and energy consumption. Households consume energy for heating, cooling, cooking, domestic hot water, lighting and household appliances. In fact, the biggest item is the cost of heating which depends significantly on the climatological conditions and specific habits of consumers. Developed societies tend to use a variety of devices. As a consequence, energy consumption and price increase continuously. Hence, the cost of energy becomes a significant part of the total costs of an average household. The number of people who cannot pay the cost of energy will inevitably increase in the future in line with rising energy bills and energy poverty. The complex energy poverty issues must be studied in depth because there are many countries in which energy poverty is a major social problem. However, in Europe, only the United Kingdom and Ireland have determined the criterion for energy poverty. This research is focused on the energy consumption in households. The energy needs are presented and the energy costs in relation to the available household income are considered. Furthermore, the influence of energy consumption on energy poverty in Eastern and Adriatic Croatia is researched.*

**Key words:** *Adriatic Croatia, Eastern Croatia, Energy poverty, Households, Energy consumption*

## SAŽETAK

*Potrošnja i troškovi energije utječu na konkurentnost industrijskih grana i poduzetnika općenito. Provedba učinkovite energetske politike potiče gospodarski rast i onemogućuje znatnije energetske siromaštvo. Razvoj energetskih sustava ovisi o mnogim čimbenicima, od kojih treba naglasiti cijenu energije i stopu povrata na investirana sredstva. Dugoročna primjena realne cijene energije rezultirat će pouzdanom opskrbom energijom u budućnosti. Cijena energije za kategoriju kućanstva ponajviše ovisi o troškovima proizvodnje i potrošnji energije. Kućanstva troše energiju za grijanje, hlađenje, kuhanje, zagrijavanje potrošne tople vode, rasvjetu i rad kućanskih aparata. Pri tome, najveću stavku predstavlja trošak grijanja koji značajno ovisi o klimatološkim uvjetima i navikama potrošača. Razvijeno društvo sve više upotrebljava različite uređaje. Stoga potrošnja i cijena energije kontinuirano rastu. Troškovi utrošene energije imaju značajan udio u ukupnim troškovima prosječnog kućanstva. Broj ljudi koji ne mogu podmiriti račune za energiju rast će se u budućnosti sukladno rastu iznosa na računima i energetskeg siromaštva. Kompleksnu problematiku energetskeg siromaštva treba studiozno razmatrati budući da upravo energetske siromaštvo predstavlja krucijalan socijalni problem u velikom broju zemalja. U Europi, samo su Ujedinjeno Kraljevstvo i Irska utvrdili kriterij za energetske siromaštvo.*

*Istraživanje u radu usmjereno je na potrošnju energije za kategoriju kućanstva. Predočene su potrebe za energijom i razmotreni troškovi energije u odnosu na raspoloživ prihod kućanstva. Nadalje, istražen je utjecaj potrošnje energije na energetske siromaštvo za područja istočne i jadranske Hrvatske.*

**Ključne riječi:** *energetske siromaštvo, istočna Hrvatska, jadranska Hrvatska, kućanstva, potrošnja energije*

## 1. Introduction

The scientific and professional communities, political and public organizations, and media address poverty issues. In Croatia, the at-risk-of-poverty rate in 2011 was 21.1%. The at-risk-of-poverty threshold for a one-person household amounted to HRK 24,240 in 2011, while for a household consisting of two adults and two children it amounted to HRK 50,904 per year. Furthermore, for a household consisting of two adults without children, the poverty threshold amounted to HRK 36,360 per year<sup>179</sup>. The at-risk-of-poverty rate in Croatia in 2006 was 19%, which means that the level of poverty was high even in the period of a high economic growth.

The possibility of access to energy is a prerequisite for acting against poverty. Without energy there is no economic growth, there is no dynamism, and there is no opportunity, said the World Bank Vice President Rachel Kyte.<sup>180</sup> On the other hand, the rise in energy prices significantly increases the number of those households that have difficulties settling these costs, or they deny other basic needs, such as food and health. This presents a huge problem in modern society, so the issues of energy (fuel) poverty should be considered closely. In general, the problem of poverty occupies economists, politicians, sociologists, social workers,

<sup>179</sup> Croatian Bureau of Statistics, Poverty Indicators, 2011– Final Results, First Release No. 14.1.3., 1 February 2013, ISSN 1330-0350.

<sup>180</sup> <http://news.nationalgeographic.com/news/energy/2013/05/130529-surprising-facts-about-energy-poverty/>, 2 April 2014.

psychologists and historians. According to the significance of the regulation of energy activities (Banovac, 2009, 178-189), the regulatory experts should also be informed about these important issues. In fact, energy poverty is a growing problem.

Within the EU, the strict criterion of an energy-poor household at the national level was determined only in the UK and Ireland. In the UK, for instance, a household is deemed to be fuel poor if it requires to spend 10% or more of its income on essential energy services (which is adequate for health and comfort). According to 2009 findings of the European Fuel Poverty and Energy Efficiency Project (EPEE) between 50 and 125 million people suffer fuel poverty in Europe. This number could easily double due to the economic crisis and the expected rise in energy costs (Zametica, 2011, 41).

Consumption depends on structure (heating, cooling, cooking, domestic hot water – DHW, appliances and lighting). Heating causes the biggest cost which depends on the climatological conditions and specific habits of consumers. The possibility of paying prices of energy depends on the total household income and share of the cost of energy in the total household expenditure. In Croatia, the climatological conditions in Eastern Croatia differ from Adriatic Croatia in such a way that the winters are colder (when heating is required) in Eastern Croatia, while summers are hotter (when cooling is needed) in Adriatic Croatia. A real temperature compared to the project temperature (pleasant to live) is far higher in winter than in summer, so it is expected that the energy consumption for heating and air conditioning is higher in Eastern Croatia than consumption in Adriatic Croatia. On the other hand, the salaries in Adriatic Croatia are slightly higher than salaries in Eastern Croatia. Taking into account the total household income and energy costs, it is expected that there is a larger number of energy-poor households or those which have more difficulty paying their energy bills in Eastern Croatia compared to Adriatic Croatia.

## **2. Poverty and energy poverty**

Although there is no unique and universally accepted definition of poverty, according to the Scottish Poverty Information Unit (BBC, 2005), people live in poverty if they do not have enough money for their material needs and if these circumstances exclude them from taking part in common activities in that society (Bejaković, 2005, 113). The United Nations consider people poor if they are deprived of comfort and dignity, which is considered common in the society in which they live. The fact that they cannot actively participate in common activities leads to a lack of social contacts, which, along with poverty and unemployment, are a major element of exclusion. According to the United Nations<sup>181</sup>, about 21,000 people in the world die every day of hunger or hunger-related causes. Even though there is an abundance of food in the developed world, a significant portion of the world's population is underfed, thus suffering severe health issues, which consequently lead to work incapability, resulting in even higher levels of poverty. Although previous reports about poverty blamed the poor people for their own failure, and the lack of motivation is taken as a cause, the recent researches show that poverty directly impedes cognitive function, so the poor often behave in less capable ways, which can further perpetuate poverty (Mani, 2013, 976). Scientists argue that financial worries cause an IQ reduction of 13 points, which is equivalent to the decline in intellectual abilities as in the case of a whole sleepless night or chronic alcoholism. Therefore, poor people's ability to pay the rent and overhead costs is worsened, as they are less focused and more likely to make inadequate decisions. As a result, their working ability is reduced.

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<sup>181</sup> <http://www.poverty.com/>, 2 April 2014.

It is estimated that 10% of the population (440,000 people) is socially excluded in Croatia, with an additional 5% (220,000 people) with the risk of social exclusion (Šućur, 2006, 7).

The comparison of the poverty indicators for EU Member States and for the Republic of Croatia was given in Table 1. These indicators were calculated on the basis of data collected through the SILC (Social Inclusion and Living Conditions) Survey.

Based on a comparison of data shown in Table 1 it can be concluded that Bulgaria, Greece, Romania and Spain have a higher rate of poverty than Croatia. Croatia has a significantly higher rate of poverty than the average EU-27. In the case of Croatia, the at-risk-of-poverty or social exclusion rate in 2011 amounted 32.7% and is higher by 55% than the at-risk-of-poverty rate, which is 21.1%.

In Europe, energy is not considered a public good. The traditional energy subsidies are eliminated which results in high energy prices as well as energy unavailability for poor consumers. Energy costs are a significant amount of income expenditure of households and they cause serious problems. Thus, households switch to unhealthier ways of heating or compromise spending on food and even health care. Due to this, many people are faced with the "eating or heating" dilemma (Zametica, 2011, 6).

Table 1 Poverty indicators, comparison of EU countries and Republic of Croatia, 2011

	Stopa rizika od siromaštva, % <i>At-risk-of-poverty rate, %</i>	Stopa rizika od siromaštva, prije socijalnih transfera, % <i>At-risk-of-poverty rate, before social transfers, %</i>	Stopa rizika od siromaštva, nisu uključene mirovine i socijalni transferi, % <i>At-risk-of-poverty rate, pensions and social transfers excluded, %</i>	Stopa rizika od siromaštva ili socijalne isključenosti, % <i>At-risk-of-poverty or social exclusion rate, %</i>	
EU-27	16,9 (s)	26,1 (s)	44,0 (s)	24,2 (s)	EU 27
Austrija	12,6	24,9	43,6	16,9	Austria
Belgija	15,3	27,8	42,0	21,0	Belgium
Bugarska	22,3	27,1	41,5	49,1	Bulgaria
Cipar	14,5	23,3	33,3	23,5	Cyprus
Češka	9,8	18,0	37,8	15,3	Czech Republic
Danska	13,0	28,4	40,4	18,9	Denmark
Estonija	17,5	24,9	41,1	23,1	Estonia
Finska	13,7	27,4	41,3	17,9	Finland
Francuska	14,0	24,7	44,2	19,3	France
Grčka	21,4	24,8	44,9	31,0	Greece
Irška	:	:	:	:	Ireland
Italija	19,6	24,4	44,9	28,2	Italy
Letonija	19,3	27,3	45,7	40,1	Latvia
Litva	20,0	31,8	49,4	33,4	Lithuania
Luksemburg	13,6	27,2	43,8	16,8	Luxembourg
Mađarska	13,8	28,9	51,8	31,0	Hungary
Malta	15,4	22,9	36,9	21,4	Malta
Nizozemska	11,0	20,9	36,9	15,7	Netherlands
Njemačka	15,8	25,1	44,6	19,9	Germany
Poljska	17,7	24,1	43,4	27,2	Poland
Portugal	18,0	25,4	42,5	24,4	Portugal
Rumunjska	22,2	29,1	49,8	40,3	Romania
Slovenija	13,6	24,2	40,2	19,3	Slovenia
Slovačka	13,0	19,5	38,3	20,6	Slovakia
Španjolska	21,8	29,8	44,8	27,0	Spain

	Stopa rizika od siromaštva, % <i>At-risk-of-poverty rate, %</i>	Stopa rizika od siromaštva, prije socijalnih transfera, % <i>At-risk-of-poverty rate, before social transfers, %</i>	Stopa rizika od siromaštva, nisu uključene mirovine i socijalni transferi, % <i>At-risk-of-poverty rate, pensions and social transfers excluded, %</i>	Stopa rizika od siromaštva ili socijalne isključenosti, % <i>At-risk-of-poverty or social exclusion rate, %</i>	
Švedska	14,0	27,9	42,4	16,1	Sweden
Ujedinjena Kraljevina	16,2	30,5	43,4	22,7	United Kingdom
HRVATSKA	21,1	30,7	46,7	32,7	CROATIA

Source: Eurostat – *Income, Social Inclusion and Living Conditions*

Croatian Bureau of Statistics, *Poverty Indicators, 2011 – Final Results, First Release No. 14.1.3., 1 February 2013, ISSN 1330-0350*

The World Health Organization (WHO) estimates that more than 1.45 million people per year die too early due to inefficient combustion of biomass in the household, and the most important part are children who spent most hours in the houses next to such a cookstove. Today, the number of too early deaths as a consequence of air pollution exceeds the number of too early deaths as a consequence of malaria or tuberculosis (for more than 4,000 people per day)<sup>182</sup>. Cooking on a traditional cookstove has a far greater risk factor than bad water and sanitary conditions. According to the WHO, the annual deaths due to cookstove pollution is 2 million which has declined compared to 4.6 million in 1990, but remarkably higher than the annual deaths attributed either to malaria (1.2 million) or to HIV/AIDS (1.5 million).<sup>183</sup>

The EU doesn't set out a clear definition of fuel poverty. For example, fuel poverty can be generally defined as the inability to keep the home adequately warm at an affordable cost. Fuel poverty is treated differently by each Member State, although it disproportionately affects those on low household incomes, such as retired people, those out of work or with poorly paid jobs, and those dependent on social security benefits. For instance, fuel poverty has been treated as a problem of general poverty in France. The incidence of fuel poverty in France is estimated at between 2 and 5 million households. Hence, a range of measures have been developed to help vulnerable households but they are not well directed towards addressing the causes of fuel poverty. Furthermore, there is a considerable degree of social support in Belgium. Based on the aforementioned criterion for fuel poverty, there are currently about 5.1 million fuel-poor households in the UK (almost 20% of all households). A social tariff has been established for electricity consumers (5 million vulnerable households) in Italy and a similar mechanism for the gas market is considered. Finally, there is no perception of fuel poverty as a compelling social problem in Spain (EPEE European Fuel Poverty and Energy Efficiency, Intelligent Energy Europe, Tackling Fuel Poverty in Europe, Recommendations Guide for Policy Makers).<sup>184</sup>

<sup>182</sup> <http://www.worldenergyoutlook.org/resources/energydevelopment/energypoverthyhealthwhocollaboration/>, 20 August 2013.

<sup>183</sup> <http://energyblog.nationalgeographic.com/2012/12/13/cookstove-smoke-is-largest-environmental-threat-global-health-study-finds/>, 12 September 2013.

<sup>184</sup> [http://www.fuel-poverty.org/files/WP5\\_D15\\_EN.pdf](http://www.fuel-poverty.org/files/WP5_D15_EN.pdf), 12 September 2013.

**Table 2 Material deprivation indicators, 2011**

Postotak osoba koje žive u kućanstvu koje:		Percentage of persons living in household that suffers from:
- nije u mogućnosti priuštiti si adekvatno grijanje u najhladnijim mjesecima, %	9,7	- Inability to keep home adequately warm during the coldest months, %
- nije u mogućnosti platiti tjedan dana godišnjeg odmora izvan kuće,%	69,3	- Inability to afford paying for one week annual holiday away from home, %
- nije u mogućnosti priuštiti si svaki drugi dan obrok koji sadrži meso, piletinu, ribu ili vegetarijanski ekvivalent, %	16,9	- Inability to afford a meal with meat, chicken, fish or vegetarian equivalent every second day,%
- nije u mogućnosti podmiriti neočekivani financijski izdatak, %	64,5	- Inability to face unexpected financial expenses, %
- kasni s plaćanjem računa za režije, %	26,4	- Being in arrears with utility bills, %
Mogućnost spajanja kraja s krajem,%		Ability to make ends meet, %
- vrlo teško	19,6	- With great difficulty
- teško	32,4	- With difficulty
- s malim poteškoćama	35,8	- With some difficulty
- uglavnom lako	9,2	- Fairly easily
- lako	2,6	- Easily
- vrlo lako	0,4	- Very easily
Financijsko opterećenje ukupnim troškovima stanovanja, %		Financial burden of total housing cost, %
- znatno financijsko opterećenje	58,0	- With heavy financial burden
- s financijskim opterećenjem	38,5	- With financial burden
- bez financijskog opterećenja	3,4	- Without financial burden
Stopa materijalne deprivacije (3 ili više stavki), %	34,0	Material deprivation rate (three or more items), %
Intenzitet materijalne deprivacije, prosječan broj stavki	3,7	Intensity of material deprivation, mean number of items
Stopa teške materijalne deprivacije, %	14,8	Severe material deprivation rate, %

Source: Croatian Bureau of Statistics, *Poverty Indicators, 2011– Final Results, First Release No. 14.1.3., 1 February 2013, ISSN 1330-0350*

In Croatia, the concept of energy poverty is not defined officially. Previously, the energy prices were treated as a part of a broader social policy, which is reflected in consumption, which is higher if the gas price is lower (Pudić, 2013, 147-157). However, Croatia will determine the energy prices in accordance with the rules of the European Union because it became a member of the European Union in 2013. An appropriate regulation of energy poverty could lead to paying the energy costs for those who really need it, instead of the broader scope of subsidies.

Material deprivation refers to indicators showing material conditions affecting the quality of life of the households. Table 2 presents the material deprivation indicators. Using the data shown in Table 2 it is evident that 9.7% of the population are not able to keep home adequately warm during the coldest months, and that 26.4% of the population late with paying utility bills.<sup>185</sup>

### 3. Comparison of energy consumption

#### 3.1. Energy consumption for heating

Energy consumption for heating is higher in Eastern Croatia than in Adriatic Croatia. Taking into account the average monthly air temperatures in Split and Osijek (Table 3) it is apparent that the average temperatures in Osijek are significantly lower especially during the winter

<sup>185</sup> [http://www.dzs.hr/Hrv\\_Eng/publication/2012/14-01-03\\_01\\_2012.htm](http://www.dzs.hr/Hrv_Eng/publication/2012/14-01-03_01_2012.htm), 19 March 2014.

months. Therefore, it is necessary to spend significantly more energy to heat households during the winter months in Eastern Croatia than in Adriatic Croatia. Even during March and November the temperatures in Osijek are lower than in Split during the coldest months (January and December). The difference in temperatures (outdoor and indoor) during the winter months is significantly greater than the difference in temperatures during the summer months. Consequently, the amount of energy consumed for heating during the winter months is larger than the amount of energy consumed for cooling during the summer months.

Table 3 Average monthly air temperatures in Split and Osijek

	January	February	March	April	May	June	July	August	September	October	November	December
Split	7,9	8,2	10,7	14,2	19,1	23,1	25,9	25,6	21,5	17,1	12,5	9,2
Osijek	-0,7	1,2	6,2	11,5	16,5	19,8	21,6	20,8	16,7	11,2	5,7	1,3

Source: State Weather Bureau<sup>186</sup> (the table is made by the authors).

Table 4 shows the heat consumption in Eastern Croatia in 2012, while Table 5 shows the heat consumption in Adriatic Croatia in 2012. Tables show all cities in Eastern and Adriatic Croatia where there are companies for district heating and for which there is evidence of consumption.

Table 4 Heat consumption in apartments heated through the local plant in Eastern Croatia

City	Energy* (MWh)	Surface (m <sup>2</sup> )	Number of apartments	The average floor area (m <sup>2</sup> )	The average consumption (kWh/m <sup>2</sup> year)
Slavonski Brod	28,579	201,820	3,770	53.53	141.61
Vinkovci	10,550	89,616	1,698	52.78	117.72
Požega	2,421	19,840	417	47.58	122.03
Vukovar	16,002	206,079	3,713	55.50	77.65
Virovitica	3,629	30,052	482	62.35	120.76
<b>Total</b>	<b>61,181</b>	<b>547,407</b>	<b>10,080</b>	<b>54.31</b>	<b>111.77</b>

\* Thermal energy is delivered to heat the apartments.

Data source: Croatia Energy Regulatory Agency (the table is made by the authors).

Table 5 Heat consumption in apartments heated through the local plant in Adriatic Croatia

City	Energy* (MWh)	Surface (m <sup>2</sup> )	Number of apartments	The average floor area (m <sup>2</sup> )	The average consumption (kWh/m <sup>2</sup> year)
Split**	10,700	222,539	3,264	68.18	48.08
Rijeka	58,913	580,685	10,010	58.01	101.45
<b>Total</b>	<b>69,613</b>	<b>803,224</b>	<b>13,274</b>	<b>60.51</b>	<b>86.67</b>

\* Thermal energy is delivered to heat the apartments.

\*\* Data for Split in 2011 (since 2012 a large number of apartments is not warming due to difficulties in business supplier of thermal energy).

Data source: Croatia Energy Regulatory Agency (the table is made by the authors).

It can be seen in tables 4 and 5 that thermal energy consumption for apartments' heating (without DHW) is 29% higher in Eastern Croatia than in Adriatic Croatia. It pertains to apartments that are located in buildings and for such apartments the average price of thermal energy is 0.35 HRK/kWh (the natural gas prices after conversion into thermal energy without

<sup>186</sup> <http://klima.hr/klima.php?id=mjes>, 19 March 2014.

VAT). An average-sized apartment in Eastern Croatia has an annual cost of heating in the amount of HRK 2,655 (including VAT), while a comparative same-sized apartment in Adriatic Croatia has an annual cost of heating in the amount of HRK 2,059 (including VAT).

### 3.2. Electricity consumption

Table 6 shows the electricity consumption of the HEP-ODS distribution areas in Eastern Croatia and Adriatic Croatia (2012).

Table 6 Electricity consumption for distribution areas of HEP-ODS, 2012

Distribution area	kWh	Number of m.p.	kWh/m.p.
DA Osijek	426,777,017	140,694	3,033.37
DA Vinkovci	248,063,605	74,918	3,311.13
DA Slavonski Brod	176,268,467	58,332	3,021.81
DA Požega	72,929,623	24,654	2,958.13
DA Virovitica	75,285,658	26,700	2,819.69
<b>Total</b>	<b>999,324,370</b>	<b>325,298</b>	<b>3,072.03</b>
	<b>kWh</b>	<b>Number of m.p.</b>	<b>kWh/m.p.</b>
DA Split	968,042,178	254,605	3,802.13
DA Zadar	348,545,540	107,938	3,229.13
DA Šibenik	215,227,369	78,014	2,758.83
DA Dubrovnik	203,238,059	46,422	4,378.05
DA Rijeka	618,376,619	188,867	3,274.14
<b>Total</b>	<b>2,353,429,755</b>	<b>675,846</b>	<b>3,482.20</b>

*Source: Annual Report of HEP-ODS for 2012 (the table is made by the authors).*

The households in Adriatic Croatia spend 13% more electricity per measurement point (m.p.) than households in Eastern Croatia. It follows that the average household in Eastern Croatia, spends HRK 3,225 per year, while the average household in Adriatic Croatia spends HRK 3,656 per year (the calculation is based on the electricity price of 1.05 HRK/kWh). Generally, when considering the number of measurement points for electricity it should be noticed that the number of measurement points per capita in Adriatic Croatia is considerably higher than in Eastern Croatia. Obviously, there is a large number of apartments used only for tourism purposes or as occasional (summer) residence of the owners who have primary residence in the continental part of Croatia. Furthermore, a significant number of apartments in Adriatic Croatia use electricity for heating. It is possible for these apartments that there are no additional heating costs, but such costs are included in the costs of the consumed electricity.

Summing the costs for electricity and heating, the average household in Eastern Croatia spent HRK 5,880 per year, while the average household in Adriatic Croatia spent HRK 5,715 per year. It follows that the average household spent 2.9% more for electricity and heating in Eastern Croatia than in Adriatic Croatia. However, taking into account that many households in Adriatic Croatia use electricity for heating (they do not use any other energy source for heating) would lead to even greater differences in the costs for energy.

Table 7 shows the average monthly net income (the average net salary) per employee for Croatian counties for the period from 2002 to 2011. Based on a comparison of these data it



can be concluded that the average salary per employee in Adriatic Croatia is 11.1% higher than the average salary per employee in Eastern Croatia. Furthermore, the net income of the average employee in Eastern Croatia amounted to HRK 57,024 per year, while the costs for electricity and heating of the average household in Eastern Croatia amounted to HRK 5,880 per year.

Table 7 Average monthly net income per employee

County	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Osiječko-baranjska	3.299	3.540	3.674	3.881	4.034	4.309	4.600	4.707	4.774	4.892
Vukovarsko-srijemska	3.403	3.633	3.755	3.892	4.006	4.203	4.501	4.563	4.630	4.748
Brodsko-posavska	3.223	3.564	3.670	3.826	3.981	4.161	4.464	4.599	4.649	4.761
Požeško-slavonska	3.265	3.488	3.615	3.719	3.901	4.088	4.457	4.603	4.605	4.794
Virovitičko-podravaska	3.136	3.459	3.531	3.639	3.843	3.986	4.267	4.349	4.415	4.563
The average monthly net salary in 2011 →										<b>4.752</b>
County	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Splitsko-dalmatinska	3.549	3.830	3.997	4.197	4.394	4.656	4.947	5.002	5.089	5.170
Zadarska	3.628	3.960	4.133	4.327	4.423	4.659	4.996	5.105	5.137	5.280
Šibensko-kninska	3.554	3.761	3.907	4.047	4.234	4.474	4.889	4.963	5.031	5.172
Dubrovačko-neretvanska	3.519	3.789	4.047	4.246	4.481	4.690	5.055	5.155	5.240	5.348
Primorsko-goranska	3.725	3.993	4.182	4.414	4.591	4.823	5.193	5.285	5.312	5.418
The average monthly net salary in 2011 →										<b>5.278</b>

Source of data: State Bureau of Statistics (the table is made by the authors).

The annual net income of the average employee in Adriatic Croatia amounted to HRK 63,336, while annual costs for electricity and heating of the average household amounted to HRK 5,715. From these indicators, with the criterion that the energy-poor households are those which consume 10% of their disposable incomes to cover the costs of energy that they use in their households, it follows that the average household in Eastern Croatia suffers from energy poverty if the household has one employee who earns an average net salary, while the average household in Adriatic Croatia with one employee and an average annual income is not in the category of energy poor households. It should be noted from the data presented in Table 8 that, compare to the total population, there are more people in Eastern Croatia whose main source of income is a social assistance or even those who have no income in relation to Adriatic Croatia.

Using the data presented in Table 8 it is calculated that the social fee is the main source of income for 6.25% of the population in Eastern Croatia, while in Adriatic Croatia this

percentage is 3.66%. Furthermore, in Eastern Croatia, 37.3% of the population has no income, while in Adriatic Croatia this percentage is lower and it is 32.81%.

Table 8 Number of residents who have no income or their main source of income is social fee, 2011

County	Total population	Number of recipients of social fees	Population without income
Osiječko-baranjska	305.032	17.002	107.786
Vukovarsko-srijemska	179.521	10.850	70.124
Brodsko-posavska	158.575	11.467	63.556
Požeško-slavonska	78.034	4.259	29.338
Virovitičko-podravska	84.836	6.785	29.872
<b>Total</b>	<b>805.998</b>	<b>50.363</b>	<b>300.676</b>
Splitsko-dalmatinska	454.798	16.858	161.436
Zadarska	170.017	6.717	58.936
Šibensko-kninska	109.375	6.714	35.809
Dubrovačko-neretvanska	122.568	3.566	40.861
Primorsko-goranska	296.195	8.293	81.204
<b>Total</b>	<b>1.152.953</b>	<b>42.148</b>	<b>378.246</b>

Source data: State Bureau of Statistics (the table is made by the authors).

#### 4. Conclusion

The results of this preliminary study for energy poverty for Eastern Croatia and for Adriatic Croatia show that, by applying the criterion that the energy-poor households are those which consume 10% of their disposable incomes to cover the costs of energy that they use in their households, the average household in Eastern Croatia would belong to the category of energy-poor households (provided that the household has one employee with an average annual income), while it would not be the case with a compatible average household in Adriatic Croatia.

Furthermore, the average salary is higher in Adriatic Croatia than in Eastern Croatia. Hence, due to the lower energy costs, employers from Adriatic Croatia have an advantage in the labor market in relation to employers from Eastern Croatia. Therefore, there is more potential for the population to migrate from Eastern Croatia to Adriatic Croatia than in the reverse direction, which presents an opportunity for future research.

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**FINANCING THE ENTREPRENEURIAL ECO-PROJECT  
RECYCLING OF WASTE OILS**

**FINANCIRANJE PODUZETNIČKOG EKOLOŠKOG PROJEKTA  
RECIKLAŽA OTPADNIH ULJA**

**ABSTRACT**

*The purpose of this paper is to emphasise the importance of investments in ecological projects, that is, in the environmental protection and processing of waste materials which cause pollution. With the accession of Croatia in the European Union, environmental protection policies gained further significance. A swift increase in the number of inhabitants worldwide leads to faster depletion of natural resources, so the protection and restoration of natural resources, which are limited, are necessary.*

*Based on the aim of the paper, we used (1) qualitative research method – analysis of the secondary data base (2) financial projection of project feasibility.*

*The results of abovementioned research point to the fact that investments in ecological projects have multiple beneficial effects in the sense of: a) environmental protection, b) employment, c) implementation of technological innovation, d) stimulus to growing entrepreneurial business.*

*This paper can prompt new entrepreneurs to enter the field of ecology which has the support of the Croatian Bank for Reconstruction and Development (HBOR) via various programmes (the Programme for preparation of renewable energy projects and the Programme on funding environmental protection projects, projects on energy efficiency and renewable sources of energy) and to cooperate with foreign participants through Funds for environmental protection, for example, the Fond Green for Growth for South-Eastern Europe.*

**Key words:** *ecology, processing waste materials, restoration of natural resources, financial projection of ecological projects*

## SAŽETAK

Cilj ovog rada je ukazati na važnost ulaganja u projekte ekologije tj. zaštitu okoliša i preradu otpadnih materijala koji zagađuju okoliš. Ulaskom Hrvatske u Evropsku Uniju (EU) politika zaštite okoliša je dodatno dobila na važnosti. Brz porast broja stanovnika u svijetu vodi do ubrzanog trošenja prirodnih resursa te je neophodna zaštita i obnavljanje prirodnih resursa koji su ograničeni.

Imajući u vidu cilj ovog rada korištena je (1) kvalitativna metoda istraživanja- analiza sekundarne baze podataka (2) financijska projekcija isplativosti projekta.

Rezultati navedenih istraživanja ukazuju da ulaganje u ekološke projekte ima višestruke pozitivne efekte: a) zaštitu okoliša; b) zapošljavanje; c) primjenu tehnoloških inovacija; d) poticaj napredovanja rastućeg poduzetničkog poduzeća.

Ovaj rad može potaknuti ulazak novih poduzetnika u oblast ekologije koja je podržana od strane Hrvatske banke za obnovu i razvitak (HBOR) putem različitih programa (Program za pripremu projekata obnovljivih izvora energije i Program kreditiranja projekata zaštite okoliša, energetske efikasnosti i obnovljivih izvora energije), te kooperacija s inozemnim dionicima kroz Fondove zaštite okoliša kao npr Fond Green for Growth za jugoistočnu Europu (GGF).

**Ključne riječi:** ekologija, prerada otpadnih materijala, obnova prirodnih resursa, financijska projekcija ekološkog projekta

### 1. Small and Medium Entrepreneurship in Croatia

Small and medium enterprises form 99.5% of the total number of registered businesses in Croatia and those have a significant share of GDP. In 2010 this share was 51.6% (CEPOR, 2011, p.14). From 2001 to 2010 their part in the Croatian economy grew by 71%. In 2011, the contribution of SMEs in total GDP was 50.2%, presenting a decrease of 1.8% compared to 2010 (due to the reduction of GDP in small enterprises). (CEPOR, 2013, p.13)

As a result of adverse conditions in the environment and general deterioration in economy, during 2011, there was a decline in the number of business subjects, but the structure of the economy due to the size of the company remained unchanged. The largest decline was in the category of medium-sized enterprises (6.3%), then small firms (5.7%). In the category of large companies the decline was 4.3%. (CEPOR, 2012, p.13).

The criteria for classifying subjects in the sector of small and medium enterprises are defined in the Accounting Act and the Act on Promotion of Small Business (CEPOR, 2011, p.11).

Table 1 Criteria for defining the company according to the Accounting Act

Criteria	Total assets/000 HRK	Total Income/000 HRK	Average No of employees
Small	32.500	65.000	50
Medium	130.000	260.000	250
Large	≥ 130.000	≥ 260.000	≥ 250

Source: CEPOR, 2013

Table 2 Criteria for defining the Economy subjects according to the Act of Small Business Promotion

Criteria	Fixed Assets/000 EUR	Total Income/000 EUR	Average No employees
Micro	<2.000	<2.000	< 10
Small	<10.000	<10.000	<50
Medium	10.000 – 43.000	10.000-50.000	50 - 250
Large	≥ 43.000	≥ 50.000	≥ 250

Source: CEPOR, 2013

This is a segment which is extremely important for employment, but also a sector that is burdened with above-average risk. For example, in the United States less than 30% of start-ups operate more than 10 years after its establishment (HUB, 2010, p.2). In Croatia, small and medium enterprises are the ones affected to the fullest extent by the influence of underground economy, where labor costs are a special problem. The above-mentioned problem, in the opinion of the leading Croatian bankers, can be solved only by increasing income tax allowances (HUB, 2010). Furthermore, SMEs are more vulnerable and sensitive to the present bad regulation and other difficulties with the institutional environment (e.g. corruption). They face higher interest rates and a short list of possibilities for financing than larger companies. Because of that they are a subject to major growth restrictions comparing to large enterprises (Bartlett and Bukvič, 2001 cited in HUB, 2010, p.2). Productivity of SME is frequently lower than productivity in large companies due to the economy of scale, and because of the mentioned restrictions there are doubts regarding their innovativeness. (Shane, 2008 cited in HUB, 2010, p.2).

## 2. The Role of Mega Trends in the Development of Small and Medium Entrepreneurship

In the last 50 years, hyper production exists in all areas and levels of society, through the rapid development of economics, engineering, technology and enormous population growth. In the last 35 years the world population has doubled. Now, the world holds more than 6.7 billion people with an average of 50 people per square kilometer of land area. The reason for this lies in technological progress and the possibility of creating the necessary conditions needed for life to such a large population, such as food, clothing, housing conditions, etc. (Delač, 2010, p.16).

However, the rapid increase in the population in the world is followed by the rapid exploitation of natural resources. Statistical indicators point to a worrying fact which says that in ten years, the number of key resources which people need to produce energy will be nearly exhausted. Some rare metals are already running out, and oil and gas resources have been consumed more than half. Due to pollution and over-fishing world's fish stocks are seriously threatened. Deforestation due to urbanization and expansion of living space leads to soil erosion (Delač, 2010, p.16).

Therefore, there is a large population in the world that is constantly growing and there are scarce and polluted natural resources to which the community is disposed. Unenviable position indicates the need for the development of environmental projects that will synthesize all the elements of the progress of human civilization and take advantage of the positive aspects of overproduction, which we are facing.

Following the observed global trends, in Croatia, it is becoming increasingly important to receive the investments that strengthen competitiveness through energy savings, as well as investments in environmentally sustainable market of renewable energy sources. Return on investment in these activities is multiple: it reduces the share of imported energy, strengthens

the independence of the energy market and also promotes environmental protection (HBOR, 2012).

### **3. Environmental Projects within the Small and Medium Entrepreneurship**

With the government stimulus programs and subsidized credit lines, primary sources of financial support for the development of small and medium-sized enterprises in Croatia are (CEPOR, 2011, p.31):

- The banking sector;
- Credit Union;
- Venture capital funds;
- Informal forms of financing (business angels)

Different sources of financing SME sector significantly support and facilitate the implementation of environmental projects. Thus, the Croatian Bank for Reconstruction and Development is the forefront of funding through different programs (Program for the preparation of renewable energy projects and Loan Programme for environmental projects, energy efficiency and renewable energy), and cooperation with foreign stakeholders through EU pre-accession programs - IPA (HBOR, 2012).

In accordance with the Law on Fund for Environmental Protection and Energy Efficiency, in 2003, the Fund for environmental protection and energy efficiency as well as non-budgetary legal entity with public authority was established. The aim of the Fund is to provide additional resources to finance activities in the areas of environmental protection and energy efficiency.

The resources to finance the activities of the Fund are usually provided from revenues from environmental polluters, and the selection of projects for funding is made on the basis of public tenders published by the Fund ([www.fzoeu.hr](http://www.fzoeu.hr)). In the period from 2004 to 2011 out of 1345 projects and programs, with a total value of more than HRK 2 billion, more than 491 mil. were approved. On the basis of FZOEU investments in renewable energy resources projects and energy efficiency projects which were realized by the end of 2010, significant annual savings in energy and money were achieved: 363 GWh / year (1,306 PJ / year); HRK 250 mil / year (EUR 33.5 million / year); 480 tons of CO<sub>2</sub> per year (FZOEU, 2012).

FZOEU co-financed the implementation of environmental projects by loan funds to HRK 1.4 million (187,000 EUR) and not more than 40% of eligible costs with interest rate of 0% for a period of 7 years (2 years of grace period + repayment period of 5 years) with the necessary instruments of collateral. Interest subsidies (non-refundable) allows reduction of the contractual interest rate by 2 percentage points to HRK 800,000 (107,000 EUR); subsidies for the development of studies to HRK 200,000 (26,500 EUR) and not more than 40% of eligible costs (FZOEU, 2012).

The funds for these types of support are often used over the IPA program and the HBOR.

By Croatian accession to the EU, the available funds from the Structural and Cohesion Funds for the financial period 2014-2020 will amount to about EUR 8 billion (Structural Funds, 2014). The programming documents will be made on the principle of partnership, and include all relevant institutions to cover and identify needs and development priorities of Croatia. The funds will be divided into seven (7) thematic objectives/working groups, and the Ministry of Entrepreneurship and Crafts is responsible for thematic objectives intended for the small and medium enterprises to strengthen the competitiveness of small and medium-sized enterprises, the agricultural sector and the fisheries and aquaculture. Ministry of Nature and Environment is responsible for activities in environmental projects (Structural Funds, 2014).

Within the 3rd working group, 6th goal is "Protecting the environment and promoting resource efficiency", the key focus is (Structural Funds, 2014):

- Resolving the need for significant investment in the waste sector;

- Resolving the need for significant investments in the water sector;
- Protection, promotion and development of cultural heritage;
- Conserving of biodiversity, soil protection and promotion of ecosystem services, including Natura 2000 sites and urban infrastructure;
- Action to improve urban environment, including regeneration of abandoned or unused land and reduce air pollution.

#### **4. Business Projects Recycling of Waste Oil**

One of the major sources of pollution are used industrial oils. Contamination by waste oils, a current issue, which is especially expressed when the owners (cars, trucks, agricultural machinery, etc.) themselves uncontrollably change and dispose used oil (Čizmić et al., 2004). Concentration of oil in water of only 1-2 mg per liter, makes the water unsafe and harmful to health. Also, used oils contain additives based on sulfur, nitrogen, phosphorus and heavy metals and their combustion gases are very harmful to human health (Čizmić, et al., 2004, P.280).

Waste oils are classified as hazardous waste and their disposal is of great importance to environmental protection. However, in the EU, about 13%, and in America, about 32% of waste oils end up in more or less modified form in the environment (Čizmić, et al., 2004, P.280). There are great opportunities to recycle waste oil and therefore it is essentially recovered as much as possible to preserve the environment and optimize consumption of natural resources (Environmental Protection Agency, 2010, p.14).

European Union adopted the Directive on waste oils which should establish a system for the collection and proper disposal of waste oils. This directive has been transposed into Croatian legislation through Regulation on Waste Oil Management (NN 124/06), which prescribes the way of managing and introducing fees for waste oils (www.rudarstvo.com, 2012). The objective of the Regulations is to establish a system of collecting waste oil for their recovery and/or disposal, and to protect the environment and public health. Managing of waste oil is a set of measures that include the collection of waste oil for material recovery or use for energy purposes or otherwise disposal when they can not be recovered. Regulation on the Waste Oils Management (2006), used oil is defined as any mineral and synthetic lubricants, industrial, insulating (oil used in power systems) and/or thermal oil (oil that is used in heating systems and cooling systems), especially motor, machine oil from gearboxes, mineral and synthetic lubricating oil, heat transfer oil for turbines and hydraulic oil, apart from oil which is admixed with gasoline two-stroke internal combustion engine.

Recovery of oil means the procedures to obtain the new products, or allows re-use, or the use of waste oil for energy purposes. Recovery of oil, according to the Regulation on Waste Oil Management, include the procedures for *material recovery* and *thermal processing* or the use of waste oil for energy purposes. (Regulation on Waste Oil Management, 2006).

Material recycling is a process, which creates a new product or oil that can be reused. This process refers to the removal of impurities and additives from used oil to give the base oil which can be used as raw material for the production of fresh lubricating oil (Regulation on Waste Oil Management, 2006). Thermal processing implies the exploitation of waste oil as fuel in plants with installed capacity more than 3 MW (Regulation on Waste Oil Management, 2006). Material recycling of waste oil has an advantage over other methods of recovery. In case the waste oil is not recycled by material recovery than thermal recovery, the procedure must be carried out according to established regulations in the energy and manufacturing plants with installed power of 3MW and more. Also, the thermal processing of waste oils or usage of waste oils as fuel must be done in a way that complies with the emission limit values prescribed by a special regulation (Regulation on Waste Oil Management, 2006).



Oilrecycling is a set of activities which enable the reuse of waste materials. Recycling is applied on the basis of three principles of the three letters R (RRR): Reduce; Reuse; Recycle (Pajalić, 2012, p.11).

Table 3 Recycling of waste lubricating oils and their usage

TYPE OF WASTE	PROCEDURE	OIL PRODUCTS
A bit contaminated waste oil	Purification for reuse as a lubricant	Hydraulic oils, gear oils, machining oils
Motor oil and other	Re-refining	Base oil
All types of oil	Thermal cracking	Diesel fuel, fuel oil
Mixed waste	Gasification	Synthetic gas
Heavily contaminated and degraded oil	Reprocessing	Fuel for marine engines, for heating plants, for cement plants, asphalt mixing plants

Source: VELEUČILIŠTE U RIJECI, SPECIJALISTIČKI DIPLOMSKI STRUČNI STUDIJ, ODJEL SIGURNOSTI NA RADU, 2012

During the production or importing and delivery of lubricating oil on the market, the manufacturer or importer shall pay a fee for disposal of waste lubricating oil. So in 2009, FZOEU was paid by manufacturers and importers of fresh lubricating oil a fee of HRK 38 475 677.50, while the FZOEU paid HRK 10,187,018.92 fees to licensed collecting of waste oils (Environmental Protection Agency, 2010, p.4) .

According to data from FZOEU, in the year 2009, it produced and imported or placed on the Croatian market 26.734.967,58 L (24.061,47 t) of fresh lubricating oil. Of this amount is expected emergence of 13.367.483,79 L (12 030,74 t) of waste lubricating oil. It has collected on 7.538. 299,98 L (6.784,47 t) of waste lubricating oil, and 2.383.413,35 (2.145.07 t) of waste cooking oil. Recovered was 7.602.773, 13 L (6 842.50 t) of waste lubricating oil and 1 674.717.00 L (1 507.25 t) of waste cooking oil (Environmental Protection Agency, 2010).According to the data from FZOEU for the 2010 on the Croatian market was placed 22.764 448,45 L (20.488.00 t) of fresh lubricating oil. It is expected that 11.382.224,23 L (10.244.00 t) of waste lubricating oil will be collected. We collected 7377 561.08 L (6 639.81 t) of waste lubricating oil, and recovered 7261 362.16 L (6 535.23 t) (Environmental Protection Agency, 2011, p.3).

From the above-mentioned it is evident that in 2010 slightly less waste lubricating oil (2.13%) was collected, compared to 2009.However, in 2010, fresh lubricating oils wereplaced on the market less, indicating an upward trend of collected quantities of waste lubricating oil in relation to the expected quantity produced waste lubricating oil (collected 65% of the estimated quantities of produced waste lubricating oil). The collected quantity of waste lubricating oil was given to authorized operators who recycled it.Out of total amount of recycled waste lubricating oil, more than 90% were thermically processed by five companies.(Environmental Protection Agency, 2011, p.3).

The right to perform the activity of waste oils shall be acquired pursuant to Waste Management Permits obtained in accordance with the Waste Law. Ministry of Environmental Protection, Spatial Planning and Construction, awarded the companies concessions for the collection, recovery and recycling of waste oils and lubricants. Then, the company concessionaires signed a contract with the Fund for Environmental Protection and Energy Efficiency, which defines the conditions for activity of collecting and recycling waste oils and lubricants (Regulation on Waste Oil Management, 2006).

National Waste Management Strategy adopted by the Croatian Parliament in 2005 under the Waste Act, provided for the establishment of centers for the management of hazardous waste, which would enable the reception of of waste oils. The basic aim of the centers is to provide recovery 90% by average weight of waste oil collected during the year. Adoption of the

Strategy and Plan of Waste Management Strategy is of vital importance for Croatia, because it triggered changes that would gradually solve existing environmental problems and direct the RH towards sustainable waste management harmonized with EU standards (Kalambura, 2006, pp.267-268).

"Waste oils are hazardous industrial waste," according to the the Waste Law, which categorized all participants into three groups, namely: the producer of hazardous waste (collects, sorts and transports) and processor wastes (temporarily stored and processed hazardous waste). The provisions of the law specifically bind the manufacturer of waste oil (consumer, customer lubricant) on the care of waste oils, in terms of controlled waste, which means separate collection by type, all the customers represent a huge burden financially. Therefore, the users expect assistance in removing spent lubricant (Čizmić, et al., 2004, pp.282-283).

In order to improve the overall process, the goal is to inform the manufacturer of lubricants about the waste management, and further on, by selecting collectors and processors of waste to comply with the obligations of all the participants in the supply chain of hazardous waste disposal. If getting information about a used lubricant, is carried out by a manufacturer of lubricants, it represents a special quality of service, because the lubricant manufacturer knows what the market offers and gives the best advice for dealing with the used lubricant (Čizmić, 2008, pp.156-160).

These activities are the characteristics of socially responsible businesses. The concept and practice of corporate social responsibility are related to the whole range of their work, and in all the relations that they establish. Corporate social responsibility can improve sales, or business, develop human resources and build confidence in the company as a whole.

The consumers want products and services that meet their intended purpose, and have a good price, but at the same time they do not want companies that behave irresponsibly. No company can afford deficiencies in terms of complying with the legal provisions relating to the environment, occupational health and safety, human rights (Čizmić, 2008, p.154).

It is extremely important to see how corporate social responsibility is not only correct, but also useful for the job, regardless if these are small or large companies. Every company should be encouraged to develop seven areas of social responsibility: basic principles, mission and values, human resources, human rights, market, environment, community (Čizmić, 2008, p.155).

## **5. Business plan for entrepreneurial eco project to enterprise "ECO SERVIS"**

### **5.1. Name and business of the company**

The company ECO SERVIS Ltd. was founded in 2002. It deals with the activities of collection, production and transport of secondary raw materials and waste materials. Collecting motor and hydraulic oils, grease, oil and petroleum products is done in special containers which are protected from a possible ignition source. The company performs the RECYCLING of the emulsion for cooling plants with the following procedure:

- At the invitation of suppliers, dirty emulsion is transported in barrels and put on the stock within company boundaries on the the specified place;- ---- Processing of emulsions is done using the method of pretreatment in a device KLEENOIL where surface oil is removed;
- After pretreatment the obtained emulsion is pumped into the tank for processing;
- The process of refining generated recycled concentrate and water;
- The water is discharged into the public sewer system if its physical-chemical properties meet the requirements of the Regulations of limited values of dangerous and harmful substances in industrial water, so it is not harmful to the environment;

- The emulsion is sent for further burning in Austria where, currently, is the nearest factory for burning emulsion.

The Collecting of secondary raw materials is carried out by natural and legal persons. The suppliers are large industrial producers in the automotive industry, generally.

The activity of the company has the following adopted standards and licenses: - ISO Standard 14001:2004 issued by SGS;

- The permission for waste management and the disposal, issued by the Ministry of Planning, Transport and Communications No. 12-23-5412/10;
- An environmental permit No. 12-233002/10 issued by the Ministry of Planning, Transport and Communications and Environment;
- The Decision on water permit issued by the Agency for the Sava River Basin.

## 5.2. Management and Employees

The company employs 15 people.

Table 4 Calculation of employee salaries EUR

<b>Total</b>	<b>102.400</b>	<b>15</b>	<b>505.600</b>
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## 5.3. Planning of Development the Enterprise

The company has recognized the importance of control and recycling of liquid waste planned purchase:

- Tanks for extraction of oily water from the supplier;
- Incineration plant for recycled concentrate;
- Laboratory for control after the cleaning process of the oil.

## Sources and uses of capital

Table 5 The items resources-capital (own and other sources) EUR

		Amount	Structure in %
<b>1</b>	<b>OWN FUNDS</b>	<b>300.000</b>	<b>38,69</b>
	A Investments of owner	200.000	25,79
	B Other- grants for ecology	100.000	12,90
<b>2</b>	<b>EXTERNAL CAPITAL</b>	<b>475.350</b>	<b>61,31</b>
	A Bank Loan	475.350	61,31
<b>3</b>	<b>TOTAL CAPITAL</b>	<b>775.350</b>	<b>100</b>

Table 6 The items of fixed and working capital EUR

		Amount	Structure in %
<b>1</b>	Fixed capital	624.000	80,48
<b>2</b>	Working capital	151.350	19,52
<b>3</b>	<b>TOTAL CAPITAL</b>	<b>775.350</b>	<b>100,00</b>

Table 7 The calculation of depreciation and the residual value EUR

TOTAL CAPITAL	DEPRECIATION	RESIDUAL VALUE
<b>775.350</b>	<b>353.000</b>	<b>422.350</b>

The calculation of depreciation is done on the basis of the estimated value of planned investment and the estimated useful life of buildings and equipment.

Table 8 Calculation of working capital EUR

Annual amount	Net working capital
873.600	151.350

The amount of working capital is calculated based on the relationship of the annual required funds and turnover ratio. Days of binding were determined based on the potential flow of funds through the business cycle of enterprises.

Table 9 Loan Repayment Plan

<b>Loan Amount</b>	<b>475.000 EUR</b>
Interest rate	7%
No of Annual payment	4
No of installments of loans	28
Year of beginning repayment	2
Date of taking of loan	15.09

The amount of the quarterly annuity is 21.620 EUR. The total amount of interest during the loan repayment is 130.010 EUR. Total amount of repayment and interest is 650.360 EUR.

Table 10 Projections of income during the loan repayment (EUR)

Types of Income	Sale of products	Sale of services	Commercial goods	Other Income	TOTAL
Amount	1.200.000	7.267.500	193.600	117.000	8.778.100

Income from product sales relates to the sale of collected secondary raw materials. Income from the sale of services relating to collection and transport of secondary raw materials; preparation for recycling; collecting waste oil, waste water and their processing in plants; goods transport services for third legal entities; laboratory services for third parties. Revenue from the sale of commercial goods refers to the goods that the client receives by compensation for its services.

Table 11 The projection of expenses EUR (materials, energy, transport ,marketing, salaries, depreciation,loan)

<b>TOTAL EXPENSES</b>	<b>5.565.617</b>
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Table 12 Projection of the income statement during the loan repayment (EUR)

Total Income	Total expenses	Total profit	Tax	Profit after tax	Required reserves	Net profit
7.847.500	5.588.437	3.189.663	637.933	2.551.731	224.822	2.326.908

## 6. Analysis of other financial indicators\*

On the basis of the projections of the financial flows of the project, in the assessment of liquidity the following was found:

The project has an acceptable liquidity if negative net inflow was not shown in the year of investment. During the years of the planned operation, a positive balance of cash inflow is shown. The project shows the liquidity in the investment phase, and later on in doing business achieves an increase in the financial strength of the investor.

The projection of cash flow shows the positive effects of net receipts in the first year after the investment. The reason are already diversified activities of the presented enterprise ECO-SERVIS Ltd. This project is an upgrade of the existing activities in accordance with the

requirements of the environment. Cumulative net inflows is positive in the second year after the investment. The period or term return of investment is the time it takes to get revenue from the project to cover all the costs of the investment. In case of the company ECO-SERVIS Ltd. ROI was in the third year of the project, which is within the established project duration. This project demonstrated profitability and it is acceptable for investment. The discounted return period is 1.24188.

The internal rate of return indicates the maximum acceptable interest rate if the investment was solely from the loan proceeds.

In the above-mentioned example, the IRR = 48% which is a very high return, the reason for which is current monopoly position of clients in this sector and the possibility of price formation which the environment accepts. IRR is the discount rate at which NPV equals 0.

Net Present Value (NPV) is the sum of the net positive effects of the project from its economic flow, reduced to the present value, interest rate of 7% (IR from the conditions of the loan). These are integrated and absolute indicators for the assessment of economic profitability and acceptability of the project. To make the project acceptable to NPV must be higher than zero, which means that the positive effects of the project outweigh the cost of the investment. In the presented case, it is a highly acceptable project.

\* For more information, contact the authors

## 7. Conclusion

The investment in ecological projects has multiple significance for Croatia. By accessing the EU, Croatia has been given the ability to access European funds for the improvement of environmental protection. The development and implementation of projects in this field leads to reduction of pollution, increase in the number of employees, increase in technological equipment of enterprises and increase in gross domestic product (GDP) of the country.

The justification of investment in the project is shown through the presented business plan. In the above mentioned study it can be concluded that there is a potential for the project and that the investment is acceptable to investors.

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## **THE ROLE AND IMPORTANCE OF WOOD BIOMASS IN CROATIAN ENERGETICS**

### **ULOGA I VAŽNOST DRVNE BIOMASE U HRVATSKOJ ENERGETICI**

#### **ABSTRACT**

*Renewable sources, regenerative or alternative energy sources are sources which are within the human horizon practically inexhaustible or they are relatively quickly restored. Today, they are increasingly in use for its safety for environment. With wind, solar and geothermal energy, one source of this kind is biomass consisting of various products of flora and fauna, such as wood waste in forestry, manufacturing remains in wood industry, various vegetable oils, straw, corn stalks, animal faeces and residues from livestock, municipal and industrial waste, etc. Of all forms of biomass, the widest use occupies wood biomass. In this work is briefly explained the concept of biomass with a detailed focus on wood biomass as one of renewable source of energy. Aim of this work is to present the role and importance of wood biomass in Croatia as one of the most important energy sources in the near future. Use of wood biomass (in the form of firewood) has a long tradition in the Republic of Croatia. The Republic of Croatia has significant potential of wood biomass for energy production, which confirms the fact that forest and woodlands cover 47% of Croatian land surface. The role of wood biomass is multiply, both in environmental protection and in terms of sustainable development. Besides, it is important to highlight social and economic contribution of biomass whose exploitation creates independence from imported energy, creates new working positions, and opens the chances to export, strengthen the regions and promote environmental protection. These are important factors because of which biomass in the energy strategy of Republic of Croatia represents an important role as evidenced by international collaboration in this field as well as organizing traditional international scientific meetings. Croatian Ministry of Economy is on of the key subjects that with its not just short-term but also long-term energy policy and energy development strategy can greatly contribute that biomass in the Croatian energy sector according to its potential take the place in the politics of sustainable which belongs to her.*

**Key words:** *renewable energy sources, wood chips, wood biomass, sustainable development, ecology*

## SAŽETAK

*Obnovljivi izvori, regenerativni ili alternativni izvori energije su takvi izvori koji u okviru ljudskog horizonta praktički neiscrpnii ili pak se razmjerno brzo obnavljaju. U današnje se vrijeme sve više koriste zbog svoje neškodljivosti prema okolišu. Uz vjetar, sunčevu i geotermalnu energiju, jedan od takvih izvora je i biomasa koju čine različiti proizvodi biljnog i životinjskog svijeta kao što su drveni otpad u šumarstvu, proizvodni ostaci u drvenj industriji, razna biljna ulja, slama, kukuruzovina, životinjski izmet i ostaci iz stočarstva, komunalni i industrijski otpad i drugo. Od svih navedenih oblika biomase najširu primjenu zauzima drvena biomasa. U radu je ukratko pojašnjen pojam biomase s detaljnijim naglaskom na drvenu biomasa kao jednog od obnovljivih izvora energije. Cilj rada je prikazati ulogu i važnost drvene biomase u Hrvatskoj kao jednog od važnijih energenata u skoroj budućnosti. Korištenje drvene biomase (u obliku drva za ogrijev) ima u Republici Hrvatskoj dugu tradiciju. Republika Hrvatska raspolaže s značajnim potencijalom drvene biomase za proizvodnju energije što potvrđuje podatak da je 47% kopnenih površina Republike Hrvatske pokriveno je šumom i šumskim zemljištima. Uloga drvene biomase višestruko je očita; kako u zaštiti okoliša tako i u funkciji održivog razvoja. Uz to svakako valja istaknuti i socijalno-ekonomski doprinos biomase čija eksploatacija stvara neovisnost o uvoznj energiji, otvara nova radna mjesta, otvara šanse izvozu, jača regije i unapređuje zaštitu okoliša. To su važni čimbenici zbog kojih biomasa u Energetskoj strategiji Republike Hrvatske predstavlja važnu ulogu što dokazuju međunarodna poslovna suradnja na tom području kao i organiziranje tradicionalnih međunarodnih znanstveno-stručnih skupova. Ministarstvo gospodarstva Republike Hrvatske jedan je od ključnih subjekata koji svojom ne samo kratkoročnom već i dugoročnom energetskom politikom te strategijom energetskog razvoja uvelike može doprinijeti da biomasa u hrvatskoj energetici sukladno svom potencijalu zauzme ono mjesto koje joj u politici održivog i pripada.*

**Ključne riječi:** obnovljivi izvori energije, peleti, sječka, drvena biomasa, održivi razvoj, ekologija

### 1. Introduction

Today, for a number of reasons, because of environmental, economic and political nature an increasing attention is focused on the renewable energy sources. Some of these reasons are placed for the reduction of the carbon dioxide emissions, the independence of the generating energy system, the limited reserves and the day after day rising costs of the fossil fuels, competitive prices and others. On a long – term period, the electric energy policy will be more focused on the energy that is obtained from renewable sources, and one of them is the wood biomass, which from all the available forms of biomass has the widest usage. The wood biomass (in the form of a firewood corn wood) in our country has a long tradition of use. The Republic of Croatia has considerable potential for the wood biomass production, for the production of energy as evidenced by the fact that nearly half of the Croatia's land area is covered by the forests and the forest lands. This work is structured of the five chapters. The first chapter contains a brief introduction. In the second chapter were sets out the basic information's about renewable energy, and of the biomass in general. The third section discusses the wood biomass in the Republic of Croatia and its share in the primary energy production. In the fourth chapter, the comparison of production and consumption of energy derived from renewable energy sources in Croatia, Slovenia, Germany, Sweden and countries EU-28 was drawn upon. The fifth chapter brings to a conclusion.



## 2. Renewable energy sources

Renewable energy sources are such sources that in a given period of time are subjected to a self – renewable process, during human exploitation they cannot be exhausted, but it is possible to completely deplete their resources. Reproducibility of individual energy sources for us is the easiest way to perceive, if we say that the renewable source is such whose average reproducibility has repeated each year, without reducing its capacity - at least for the human perception of time. They are increasingly being used because of their safety to the environment. In the renewable energy sources are included: hydro power, biomass (and the biogas, including wood and the waste matters), solar energy and wind energy.

Part of the renewable energy sources cannot be stored or transport by any means in natural form (such as the wind and the sun radiation), and the part of such sources can be stored (watercourses, river water and accumulations, biomass and biogas) The energy sources that cannot be stored as such, it should be used at a time when they appear, or to convert them into another form of energy. The obvious advantages of the non-renewable resources are: permanency, they are better suited to adapt to our needs, the advantage of being storage and transport in natural form, less needs for the investment to build a processing plant for their production, conversion and usage, and also maintenance of the plant in a view of the installed power (Šljivac, Šimić, 2009, 5).

In the Republic of Croatia, renewable energy sources, in the case when the hydropower has not been included, gives only an inconsiderable part of the total energy required (only 1%). That share in the future should be significantly increased because, we found the existence of the non-renewable sources even in a lesser extent, and their harmful impact has significantly increased (Sušnik, Benković, 2007, 12)

The Government of the Republic of Croatia has recognized the importance and on the many ways encourages the use of biomass and other renewable sources. According to Sinčić (2011) the tangible aim in terms of replacing fossil fuels was set first by the European Directive 2003/30/EC, and by the Directive 2009/28 / EC, which were set on the promotion and use of renewable energy, has definitely changed the situation in the area, since it's moved away from the previous recommendations. Specifically, it referred to mandatory targets and they require from the each country the specific plan for their implementation. These are popularly called 20-20-20 order that requires:

- To increase energy efficiency and save 20% of energy,
- To reach 20% of the produced renewable energy in total energy consumption,
- Reduce the greenhouse gas emissions by 20%,

and, in particular to reach the goal of replacing 10% of the fuel consumption in transport by the same amount of biofuels (Sinčić, 2011, 331)

### 2.1. About biomass in general

When mentioned in broader terms, the biomass includes all the organic substances (i.e. those substances containing carbon). Accordingly, the biomass includes all the living world found in nature (plants and animals), the remnants of plants and animal world, extinct (but not yet fossilised) plants and animals, in further terms, all of the matters that were made by the use of the technological processes or the materials usage (for example, paper and cellulose pulp, slaughter – houses waste, organic garbage, vegetable oil, alcohol).

The border line between biomass and fossil fuels makes the peat<sup>187</sup>, the secondary product that occurs during the putrefaction process (Kaltschmitt, 2009, 2)

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<sup>187</sup> Peat - the youngest fossil fuel, formed during a long process of decomposition of marsh plants.

Biomass in the strict sense is a renewable energy source that includes firewood, branches and wood waste from forestry and also the sawdust, bark and wood waste, chips from the wood industry, as well as the straw, corn stalks, sunflower stalks, remnants as a result of the pruning of vines and olives, cherries pits and apples peel from the agriculture production, animal dung and remains from livestock, municipal and industrial waste. It's the only renewable energy source that can be used for unlimited production of electricity and heat, and as liquid fuels for the vehicles. The main advantage of biomass when compared to the fossil fuels, is its renewability and sustainability. Lately, more and more it becomes obvious that the current approach to the energy consumption is unsustainable. From all the renewable energy sources, the largest contribution in the near future is expected from the biomass itself. Biomass and its products - liquid biofuels and biogas are not only potentially renewable, but also sufficiently similar to fossil fuels that can directly substitute (Working Group on Biomass, 2005, 5)

There are two main modes of biomass distribution:

1. In accordance to their origin:
  - a. Forest or wood biomass
    - i. Residues and waste from forestry and wood processing industry
    - ii. Products that resulted from targeted breeding (fast-growing trees and so-called energy crops)
  - b. Non-wood biomass
    - i. Products of targeted breeding (fast-growing algae and grasses)
    - ii. Residues and waste from the agriculture production
  - c. Biomass of animal origin
    - i. Animal waste and scrap
    - ii. Animal waste and scrap
2. In accordance to the final manifestation of the matter
  - i. Solid biomass
  - ii. Biogas
  - iii. Liquid biofuels (alcohol, biodiesel)

The final forms of biomass those were generated by different processes of transformation and processing from the initial raw materials: plants, residues from forestry, wood processing and agricultural production and waste (Labudović, 2012, 36)

Biomass can be viewed as the most complex form of a renewable energy source with several aspects: it forms all three states of matter, it covers a wide range of raw material, from the biomass can be produced all three forms of useful energy, usable wide range of the conversion technologies, from the same types of biomass can be produced various forms of useful energy using different conversion technologies, and others. In comparison to other renewable energy sources, biomass has several significant advantages, its use is limited by the criteria of sustainability, energy from the biomass can be stored, the primary energy obtained from biomass can be used on a distance from the place of its production, the production of energy from the biomass enables continuous process similar as with the conventional energy (for instance, the cogeneration plants), and also bring the multiple benefits to the local community (Vorkapić, 2010, 11).

## **2.2. Obtaining energy from biomass**

Energy from the biomass can be obtained in different ways. Biomass is the only renewable energy source that can be used for unlimited production of electrical and heat energy, and for the purpose as the liquid fuels for vehicles (Working Group on Biomass, 2005, 4)

The most common processing method of directly converting biomass into energy is simply combustion, when the superheated steam for heating in industry and households is produced,

or to generate electricity in small thermo - power plants. Oilseed rape and some other oilseeds provide biodiesel, which can be directly used in diesel engines. Biogas methane is produced using an anaerobic fermentation process from the biomass. Biogas is produced by the use of fermentation in the atmosphere without the presence of oxygen, and contains methane and carbon and therefore can be used as a fuel. So far, the biomass fermentation into alcohol is the most advanced chemical conversion of biomass matter. Such treatment consists of raw materials preparation, fermentation and distillation of ethanol. Ethanol can be produced from sugar (sugar cane), starch (corn) and cellulose (from wood and agricultural residues) (Šljivac, 2008, 9).

The most cost-effective way of producing electricity from the biomass is done in the cogeneration plants (when simultaneously combined heat and power), for which there are plentiful of examples that can be found in various countries. As a typical example of the possibilities for a successful cogeneration of biomass material, we can take the wood industry - wood processing companies have a need for heat (drying and steaming of wood, rooms central heating) and for the electrical energy, and by the process of wood processing occurs sufficient quantity of wood waste and chips that can be used as a fuel.

### **2.3. The advantages of biomass usage**

The advantage of using wood chips when compared to the fossil fuels is in less CO<sub>2</sub> emissions and other air pollutants, and it's convenient from the standpoint of a CO<sub>2</sub> balance in nature, since the forest during growth has accumulated carbon dioxide (the so-called biomass circular cycle) During the combustion process of the wood chips, results solid residues (slag and ash) and flue gases containing combustion products (nitrogen and sulphur oxides, and solid particles) Emissions of sulphur oxides during combustion of biomass are very small (<0.01% of sulphur in the total wood weight), while the emissions of solid particles can be reduced by installing a flue gases purification system (Lovrić, 2013, 281)

Except for the environmental reasons, Gotovac and Dundović (2013) also recognize the economic and social benefits of biomass. The economic benefits of biomass from the forestry, wood and agriculture industry are reducing the imports of fossil fuels and the security of energy supply, which is one of the strategic problems of every country. According to forecasts, the dependence of the Republic of Croatia on energy imports will rise from the current 55% of imports to over 70% in 2030. Social benefits of using biomass will generate opportunities for the creating a large number of new jobs, which shall contribute to the rural development and that, is an imperative of the Croatian economic and social policy. In accordance to the European recommendations and empirical data, in the production of 1 MWh of thermal energy from the renewable biomass, works on average six people (Čikić, 2012, 42), while according to the data of the Austrian Biomass Association<sup>188</sup> there are 15 times more jobs provided by the use of wood as an energy source, when compared to the fossil fuels, because the biomass usage, except its production, involves creating the need for a new jobs in the plant production, production equipment and various supporting activities.

### **3. Wood biomass in Croatia**

Energy utilization from the forest biomass, mainly fuel wood, has a long tradition in the Republic of Croatia, especially in rural parts of the country, so in 1965, from the forest biomass had been satisfied nearly a quarter of a then total energy needs. Although Croatia today has significant potential of biomass for the energy production (heat, electricity,

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<sup>188</sup> Österreichischer Biomasseverband, Franz Josefs-Kai 13, 1010 Vienna, Austria

biofuels), because of a lack of market and replacement with the other energy sources that are imported (gas, oil-fuel oil, electricity) as well as the lack of the environmental awareness on the benefits of renewable energy sources, the usage of such sources has come down to as low as 4,3% (Sušnik, Benković, 2007, 13).

For a long-term forest management program (2006 - 2015) it is estimated that only Croatian Forests Ltd. could dispose of 2,6 million m<sup>3</sup> of forest biomass for energy, which would double the current share of biomass as an energy source (Dundović, 2010, 1)

The annual cut of 6,5 million m<sup>3</sup> constitutes 30% of logs, 10% of pulpwood, 20% of firewood and the remaining 40% represents the thinner wood, that as a waste remains unused in the woods. Today, from the aforementioned waste, 62,5% could be used for energy production, but 37% of a waste would remain in the forest. If that amount will join the amount of firewood, we'll get the total amount of a wood for generating the energy that today could be placed on the energy market, i.e. 45% share of the total annual harvest (Pašičko, Kajba, Domac, 2009, 426).

It is worth mentioning that in the Republic of Croatia the beech is not only the most widespread species, but also the first wood species per share in the fund. The growing stock of Croatian beech accounts for approximately 36% (Potočić, et al, 2009, 289).

Nearly 47% of the total territory covered with forests is the great Croatian potential for the biomass usage. Total annual increment amounted to total of 9,6 million m<sup>3</sup>, together with the developed wood industry and a significant share of agriculture and animal husbandry in the economy are also an excellent basis for the production of energy from biomass, particularly in Slavonia and Gorski Kotar regions, where is especially pronounced the potential for using agricultural biomass. When considered geographically, the continental part of Croatia has a much higher biological potentials than the seaside, because a large part of the coast is consisted of a very rocky and a poor soil. Total consumption of energy derived from biomass is still used on the most ineffective way - for home heating (Šljivac, 2008, 19). The fact is that the wood sector export is positive because it's more export oriented than focused on imports, but the structure of exported goods shows that are exported mainly products of a lower values. An export encompasses only 3% of furniture, and even 63% of fuel and untreated wood (Čupin, 2012, 158).

### **3.1. The share of biomass in primary energy production**

The structure of primary energy production in the Republic of Croatia highlights the constant increase of fuel wood and other renewable energy sources in the total production, so in 2002 the firewood was involved with 6,7% in the total primary energy production.

This value is constantly growing and in 2011 has reached 14,3%. The same trend was observed in the total energy consumption in the Republic of Croatia. The share of consumption of firewood in total energy consumption during 2002 was 3,3%, and by the 2011 it has reached 19,23% (Statistical Yearbook, 2013, 313)

Total production of primary energy in the 2012 was reduced by 5,6%, when compared to the previous year. Production of energy from the fuel wood and other solid biomass has been increased by 9,1%. The largest increase in production was achieved for the other renewable energy sources (wind and solar energy, biogas, liquid biofuels and geothermal energy) what amounted to 90,7%, as shown in Table 1.

Table 1 Primary energy production in the Republic of Croatia

	2007.	2008.	2009.	2010.	2011.	2012.	2012./11.	2007.-12.
	PJ						%	
Fuel wood and Biomass	15,42	17,01	17,97	19,96	26,74	29,17	9,1	13,6
Crude Oil	37,27	35,42	33,07	30,69	38,37	25,62	-9,7	-7,2
Natural Gas	100,12	94,05	93,50	93,88	85,02	69,19	-18,6	-7,1
Hydro Power	42,21	50,19	65,77	79,71	42,59	45,45	6,7	1,5
Heat	1,01	1,25	1,48	1,76	1,68	1,71	2,1	11,2
Renewables	0,82	1,01	1,30	2,63	2,97	5,66	90,7	47,0
<b>Total</b>	<b>196,86</b>	<b>198,93</b>	<b>213,09</b>	<b>228,62</b>	<b>187,36</b>	<b>176,79</b>	<b>-5,6</b>	<b>-2,1</b>

Source: Energy in Croatia 2012 Annual Energy Review, the Ministry of Economy, p. 41

During the six year period, from 2007 to 2012, the primary energy production in Croatia decreased at an average annual rate of 2,1 %. Also, the trend of reduction was achieved in the production of crude oil and natural gas, while the production of other primary energy sources has achieved an upward trend. Production of crude oil and natural gas have been decreasing at an average annual rate of 7,2 % and 7,1 %, respectively. Hydrological conditions in the 2012 were such that during the six-year period, an increase was realised at an average annual rate of 1,5 %. The fastest growing energy production was from the renewable sources and annual growth rate of as much as 47 % has been achieved. Thermal energy from the heat pumps, during the observed time interval has recorded an increase an average annual rate of 11,2 %, while the production of fuel wood and other solid biomass grew at an average annual rate of 13,6 %. (Energy in Croatia, 2012, 2013, 42)

### 3.2. The realization of the project for energy use of forest biomass in Croatia

In their presentation that was held on the Eight Days of Biomass in Croatia in Našice, Pavelić and Kurić (2013) has quoted that during September of 2013, in the Register of projects run by the Ministry of Economy, was reported 97 projects with plants for biomass utilization of total power of approximately 240 MW. From those, for the 32 projects has received energy approval and are entering the phase of realization.

Up today, several smaller plants and several power plants have been realised to meet the needs of technological processes for thermal energy, which uses wood biomass as a fuel, as well as numerous small sources of heat (fireplaces, furnaces and boilers) by which it's covered the heat demand for heating and preparation of hot water in buildings intended for different purposes. Some of the completed projects of biomass plants in the Republic of Croatia are the following (Labudović, 2012, 262):

- Strizivojna Hrast Ltd - cogeneration plant.
- Đuro Đaković Elektromont joint – stock company, - cogeneration plant.
- Centrometal Macinec - heating of the production halls.
- Heating plant in Ogulin, built in 1995.
- Heating plant in Gospić, built in 2002 and others.
- Lika Energo Eko - cogeneration plant, in active operation since of May 2012.

### 4. Comparison of the production and consumption of energy derived from the renewable energy sources in Croatia and the EU

The consumption of energy derived from the renewable sources is constantly increasing and it is approaching the target values as shown in Table 2.

Table 2 Display of energy derived from the renewable energy sources in total energy consumption

	2008	2009	2010	2011	2012	Target value
	%					
EU-28	10.5	11.9	12.5	12	14.1	20
Croatia	12.1	13.1	14.3	15.4	16.8	20
Slovenia	15.0	18.9	19.2	19.4	20.2	25
Germany	8.5	9.9	10.7	11.6	12.4	20
Sweden	45.0	48.2	47.2	48.8	51	49

Source: Own data preparation (data downloaded from Eurostat March 28, 2014)

The primary energy production from the renewable sources from one year to another maintains constant growth, what is represented by the data shown in Table 3. However, in the 2011, when compared to the previous year (in all countries except in Germany) there was a noticeable slight decrease in the production, resulting from unfavourable economic situation.

Table 3 Primary energy production from the renewable sources

	2007	2008	2009	2010	2011	2012
	2007 = 100					
EU-28	100	106.0	112.2	125.3	124.7	136.4
Croatia	100	116.7	139.0	166.5	144.4	159.5
Slovenia	100	115.1	135.6	138.0	131.1	136.3
Germany	100	99.0	104.2	122.1	128.2	141.4
Sweden	100	102.1	103.4	111.1	108.2	121.0

Source: Own data preparation (data downloaded from Eurostat April 3, 2014)

The trend of primary energy production from the solid biomass is similar to the trend of primary energy production from the renewable sources. This means that the constant annual growth was observed, with a slight decline during the 2011, when compared to the previous year. It is worth noting that Croatia and Slovenia did not record this fall; energy production from the solid biomass in Croatia almost doubled in the 2012, when compared to 2007.

Table 4 Primary energy production from the solid biomass (without charcoal)

	2007	2008	2009	2010	2011	2012
	2007 = 100					
EU-28	100	103.5	108.4	120.7	118.3	125.7
Croatia	100	109.7	118.5	131.1	176.9	192.1
Slovenia	100	109.3	125.1	123.8	131.9	130.6
Germany	100	98.9	109.2	133.7	125.7	134.3
Sweden	100	98.4	102.1	112.5	105.8	113.3

Source: Own data preparation (data downloaded from Eurostat April 3, 2014)

## 5. Conclusion

Bearing in mind the fact that almost half of the entire of the land area of the Republic of Croatia is covered by forests, which represents a huge potential for energy recovery from the forest biomass, it could replace more expensive and less accessible fossil fuels. Renewable energy still lacks a significant role in the energy policy of the country, and because they cover only a small part of the needs for energy. Apart from the fact that we do not use our own available resources, the non-use of biomass leads to the direct environmental burdening with permanently damaging consequences. For the greater and wider use of biomass matter, there

are still many obstacles, one of which is still low environmental awareness of the population, which will give priority to the 'contemporary' (and often more expensive) solutions - natural gas or the fuel oil. In addition, in the Republic of Croatia there is still no significant support for the implementation of small heat sources for the single family houses, residential, public and commercial buildings, small plants, etc. that were fuelled on renewable sources, as it is the case in some other European countries. An increased interest in such energy solutions confirms that forest, i.e. wood biomass certainly represents a significant potential for energy usage. As it was noted in previous considerations, 97 projects with a total capacity of about 240 MW, that were registered in the Register of projects, and plants for the use of renewable energy sources and cogeneration and also the privileged producers by the Ministry of Economy - are the best proof for this claim. Nevertheless, it is still a relatively small number of projects active so far, that on one hand shows how these projects are technically demanding and relatively expensive, and on the other hand how much still a complex the whole administrative procedure is for their achievement, and obtaining an approval for acquiring the status of the privileged energy producer. It is reasonable to expect that the wood biomass in the Croatian energy sector in the coming years shall take place that it deserves, as was the case in the past, but this time with the use of the utterly modern and efficient technology solutions, and that the use of biomass as an energy source in the future achieve significant universal benefits, in terms of sustainable development.

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## **CULTURAL ATTRACTIONS IN THE FUNCTION OF DEVELOPMENT OF CULTURAL TOURISM IN THE TERRITORY OF THE CITY OF ORAHOVICA**

### **KULTURNE ATRAKCIJE U FUNKCIJI RAZVOJA KULTURNOG TURIZMA NA PODRUČJU GRADA ORAHOVICE**

#### **ABSTRACT**

*Nowadays, a cultural tourism market is being rapidly expended, and cultural tourism is categorized among the fastest-growing tourism sectors. Cultural contents of a tourist destination, as a motive for tourist travels, encompass specific elements representing a reflection of culture of a nation, consisting of culturohistorical monuments, archeological sites, cultural institutions, cultural manifestations and various anthropogenic factors inciting a motivation for an acquaintance with the customs, tradition, popular art, traditional crafts and trades, gastronomy and other cultural characteristics of a region. The recognition of cultural contents as tourist motives centralizes an issue of structuralization of cultural offer and its adjustment to an overall tourism offer of a receptive area, and thereby also the issue of promotion of cultural tourism as a specialized tourism form, which should satisfy a cultural tourists' need for an active vacation through versatile forms of selective offer and through an enrichment of knowledge and cultural experiences. The purpose of this paper is directed toward an analysis of realistic and potential cultural attractions in the function of cultural tourism development in the territory of the City of Orahovica. As a protected monument of the highest category among numerous culturohistorical monuments and profane and sacral edifices of the City of Orahovica, to which history has left an abundance of historical and cultural legacy of various stylistic features, especially emphasized is the Ružica Citadel, one of the largest medieval fortification complexes in Croatia created toward the end of the 14<sup>th</sup> and at the beginning of the 15<sup>th</sup> century. The results of an analysis of culturohistorical resources of the City of Orahovica direct toward a conclusion that the authenticity of destinations based on a culturohistorical heritage of the City of Orahovica represents a solid tourist attraction basis, whereby a tourist valorization of culturohistorical artefacts and localities should be based upon a sustainable management of cultural resources as the realistic or potential cultural attractions and an efficacious coordination of all the factors comprising a cultural offer spectrum of the City of Orahovica as a cultural tourist destination.*

**Key words:** *culturohistorical monuments, cultural resources, tourist attraction basis, cultural tourist destination, cultural tourism*

## SAŽETAK

Tržište kulturnog turizma u današnje se vrijeme naglo širi, a kulturni turizam ubraja se među najbrže rastuće turističke sektore. Kulturni sadržaji turističke destinacije kao motiv turističkih putovanja obuhvaćaju specifične elemente koji predstavljaju odraz kulture nekog naroda koju čine kulturno – povijesni spomenici, arheološki lokaliteti, kulturne ustanove, kulturne manifestacije te raznovrsni antropogeni čimbenici koji potiču motivaciju za upoznavanjem običaja, tradicije, narodne umjetnosti, tradicionalnih obrta, gastronomije i drugih obilježja kulture određenog područja. Prepoznavanje kulturnih sadržaja kao turističkih motiva u centar pozornosti dovodi pitanje strukturiranja kulturne ponude i njenog uklapanja u ukupnu turističku ponudu receptivnog područja, a time i pitanje promicanja kulturnog turizma kao specijaliziranog oblika turizma koji bi kroz raznovrsne oblike selektivne ponude trebao zadovoljiti potrebu kulturnih turista za aktivnim odmorom kroz obogaćivanje znanja i kulturnih iskustava. Cilj rada usmjeren je na analizu realnih i potencijalnih kulturnih atrakcija u funkciji razvoja kulturnog turizma na području grada Orahovice. Među brojnim kulturno – povijesnim spomenicima te profanim i sakralnim građevinama grada Orahovice, kojemu je povijest u nasljeđe ostavila bogatstvo povijesne i kulturne baštine različitih stilskih obilježja, kao zaštićeni spomenik multe kategorije osobito se ističe Ružica grad, jedan od najvećih srednjovjekovnih fortifikacijskih kompleksa u Hrvatskoj nastao krajem 14. i početkom 15. stoljeća. Rezultati analize kulturno – povijesnih resursa grada Orahovice upućuju na zaključak da autentičnost destinacija temeljenih na kulturno – povijesnom nasljeđu grada Orahovice predstavlja solidnu turističku atrakcijsku osnovu, pri čemu bi se turistička valorizacija kulturno – povijesnih objekata i lokaliteta trebala temeljiti na održivom upravljanju kulturnim resursima kao realnim ili potencijalnim kulturnim atrakcijama i učinkovitim koordiniranjem svih čimbenika koji čine spektar kulturne ponude grada Orahovice kao kulturne turističke destinacije.

**Gljučne riječi:** *kulturno – povijesni spomenici, kulturni resursi, turistička atrakcijska osnova, kulturna turistička destinacija, kulturni turizam*

## 1. Introduction

Tourism, as the most massive and dynamic socioeconomic phenomenon of the modern world, has been recently increased. The transformation of the “hard” tourism into a “soft” form thereof, oriented toward an individual, environmental protection, as well as to the local population and local culture protection, has significantly influenced the tourist offer and demand, resulting in an increase in tourism offer versatility and a continuous work on an improvement of quality, impelling the betterment of productivity (Kušen, 2002). Unlike massive tourism, the selective tourism forms place special emphasis on the importance of communal identity preservation and satisfaction of primarily local and then global interests (Jadrešić, 2001). Due to an accelerated development of the tourist market, new necessities emerge in tourist demand, while special attention is devoted to the planning and development of selective aspects and types of tourism on a local, regional, and national level, whereby culture and cultural heritage construe significant cultural resources.

The recognition of cultural contents as tourist motives centralizes the issue of consideration about a tourist offer adjustment to an overall tourist offer of a receptive area, as well as an

issue of promotion of cultural tourism as a specialized tourism type that could satisfy the tourists' need for an active relaxation through the enrichment of existent knowledge and cultural experiences (Mihoković, 2010) via versatile forms of selective offer. With regard to the fact that culture becomes touristically attractive, but not sooner than it is specially formulated, presented, and offered to the market at certain price, whereby cultural attractions become a medium of visitors' attraction to a destination, a destination for the development of cultural tourism has to have a tourist attractiveness, an existent image, and a realized tourist turnover. The existence of a cultural image and atmosphere in a destination implies an adequate locality layout, i.e., their attractions (Geić, 2011), whereas a visit to a tourist destination within a natural surroundings enables a vision and a realization of the past and the present cultural creativity, as well as richness of cultural and artistic wealth in the museums, historical edifices, and localities (Vrtiprah, 2006).

In that sense, the assurance of a high-quality cultural-touristic offer presupposes an intensive cooperation between a tourist and a cultural sector, based upon the knowledge of cultural tourism, supply and characteristics, and an adjustment of cultural resources to the visitors' needs (Tomljenović, 2006). Concerning the fact that cultural tourism primarily has to fulfill the requirements of a content-rich and active vacation while providing the tourists with the new cultural experiences, sacral monuments, burghs, citadels, castles, museums and galleries, archeological sites, ethno localities and monumental complexes are opined as the basic elements of a cultural tourism offer (Ružić, 2009). Cultural contents of a tourist destination as a tourist travel motive also relate to all specific elements representing a reflection of culture of a nation, which also encompass various anthropogenic factors that are reflected in a desire to get acquainted with the customs, tradition, popular art, traditional crafts and trades, gastronomy and other features of a receptive area culture, except cultural monuments and localities, sacral edifices, cultural institutions and cultural manifestations.

## **2. Cultural Tourism: Toward Tourism of Experience**

Nowadays, a cultural tourism market is being rapidly expanded, whereas the tourist trends demonstrate an increase in interest in cultural tourism, categorized among the fastest-growing tourist sectors, and the cultural tourism's interest focus is being increasingly and pronouncedly transferred from an interest in cultural monuments and localities to a significantly broader interest in various cultural aspects, wherefore the cultural tourism offer is not limited to the purposeful cultural locality sightseeing any more but becomes a part of a destination "atmosphere," jointly created by both the tourists and local populace (Jelinčić et al., 2010). It is exactly a possibility to jointly create a destination "atmosphere" that represents an opportunity to participate in new cultural experiences and a chance for an encounter, approximation, and cross-fertilization of cultures through a relationship toward the "other" and the promotion of their cultural diversity as a basis of cultural learning and mutual enrichment.<sup>189</sup>

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189 In globalization conditions, small-sized countries and their cultures are placed under a special pressure, while the largest obstacle to globalization on a cultural level is construed by a cultural identity such as language, art, and tradition (Jadrešić, 2010). The recognition and exploitation of specificities of one's own through the expression of unity of various attractions in a local area is considered an opportunity for their defense from disappearance. A basic objective thereby should be directed to an enforcement and valorization of proper specificities and differences, while harmonization of all the offer aspects of a cultural tourist destination should be directed to an acquaintance with and an acceptance of cultures.

In this context, the designations that define cultural tourism as “a form of tourism of a specific interest wherein culture represents a basis for the attraction of tourists and a basic travel motivation” (Jelinčić, 2009, qtd. in McIntosh and Goeldner, 1999; Zeppel, 1992), i.e., as “an experience or a contact of various intensity with a unique social heritage and specific locality character” (Jelinčić, 2009, qtd. in Blackwell, 1997; Schweitzer, 1999), are emphasized among numerous definitions of cultural tourism. Some of cultural tourism definitions coincide with the definitions of tourism of heritage (and are used as equivalents), whereby the one that defines the tourism of heritage as “a phenomenon focused on visitor’s motivation and perception, not a local specificity” is being emphasized (Jelinčić, 2010, 38, qtd. in Zeppel and Hall, 1991, 49). The tourism of heritage in this sense contributes to an emphasis laid on identity and cultural heritage preservation, whereby culture serves as a medium of understanding among people of various ethnicities, cultures, religions and weltanschauungen. It is exactly the emphasis on culture as a medium of understanding, approximation, and acceptance of various cultures that provides cultural tourism with a dimension of “a tourism of experience,” whereby the number of international visitors is also increased by virtue of an increase in travel, what centralizes the issue of a specific way of interpretation and presentation of local cultural artefacts, which the visitors of various cultures “feel” and specifically experience on localities that become the hubs of various cultures (Jelinčić, 2010).

### 3. Cultural Attractions in the Territory of the City of Orahovica

The first known historical writings on the City of Orahovica date back to 1228, and the name of the city of Orahovica is derived from the historical names *Raholcha*, *Raholecza*, *Rachowcha* and *Rahowza*. The historical sources circumstantiate that the Romans, Tatars, and Turks sojourned in this area, whereas Orahovica experienced a great flourishing as a medieval town toward the end of the 14<sup>th</sup> century, having seen its largest economic expansion toward the end of the 19<sup>th</sup> and at the beginning of the 20<sup>th</sup> century connected with the Gutmann family, which began its exploitation of natural resources and the development of industry in that period. Concerning its urban features and a rich culturohistorical heritage, Orahovica obtained the status of a city in 1997, while 12 suburban neighborhoods comprise its municipal area nowadays (Mažuran, 2008).

The area of the City of Orahovica belongs to the eastern Croatian tourist region, and an abundance of culturohistorical landmarks is divided in cultural heritage artefacts and historical localities and cultural manifestations in this paper. The potential of cultural resources is possible to be utilized for the purpose of cultural tourism, and their analysis is performed with regard to a tourist attraction basis, a possibility of tourist valorization, and affiliation with certain category, whereby the cultural heritage edifices and historical sites are evaluated by the 1 to 5 grades and classified into realistic and potential cultural attractions (Table 1).

Table 1 Survey of real and potential attractions of the City of Orahovica

Number	Title	Description	Tourist attraction basis	Tourist valorization possibility
1	Ružica Citadel	one of the largest medieval fortification complexes in Croatia, located on the Papuk, erected toward the end of the 14 <sup>th</sup> and at the beginning of the 15 <sup>th</sup> c, a symbol of the City of Orahovica, a highest-category monument	real attraction	very good, with an additional road arrangement and an adequate fortification repair
2	Noblemen	erected in the 15 <sup>th</sup> or the 16 <sup>th</sup> c.,		good, with regard to the

Number	Title	Description	Tourist attraction basis	Tourist valorization possibility
	Curia	represents a rare example of a self-sustained profane late Gothic and early Renaissance edifice in the territory of Slavonia, comprising a unique monumental entity with the Ružica Citadel	potential attraction	connection of the Ružica Citadel with the Curia, but requiring an access road arrangement
3	Old Oršulić Town	a noblemen town or fortification located on the Papuk, assumed to be older than the Ružica Citadel, categorized as an early medieval burgh according to the erection type	potential attraction	good, with additional brochures and an access road arrangement
4	Mihalović Curia	a noblemen court, a grounded castle of the Orahovica-based nobility located in a municipal park, erected in the 18 <sup>th</sup> c., nowadays housing the Municipal Library and Museum	potential attraction	very good with regard to its location, but with an adequate presentation
5	St. Nicholas Monastery	erected in the 16 <sup>th</sup> c., one of the oldest Orthodox monasteries in Croatia, a highest-category monument built in the style of the Moravian school, representing the only example of architecture of that type in the territory of Slavonia	real attraction	excellent, with an appropriate presentation and a better sightseeing possibility
6	St. Cross Church	built in 1756, represents the oldest preserved and the most valuable baroque architectonic monument of the City of Orahovica	potential attraction	very good regarding its location, but requiring an adequate presentation
7	St. Lawrence Church	erected in the Gothic style in the 13 <sup>th</sup> c., the Church and its inventory are inscribed in the Republic of Croatia's Cultural Artefacts Registry, and a series of strata discover the existence of several churches and a cemetery at a locality surrounding the Church	potential attraction	excellent regarding its archeological value, with an adequate presentation
8	Watermill	built at the beginning of the 20 <sup>th</sup> c. as a common watermill for the families of Orahovica region, located in a municipal park, a unique example of preserved monuments of the type in Slavonia	real attraction	excellent regarding its location, design, and accessibility
9	Ružica Citadel Hotel	erected in 1906, represents an example of Secession architecture in Orahovica, subject to various adaptations through restoration but saved from ruination and returned to its original function	potential attraction	very good, with a more adjustable working hours and better information access
10	Municipal Museum	housing a permanent exhibition on the Ružica Medieval Citadel, presenting an archeological material from the early medieval period collected while exploring the Ružica Citadel	real attraction	very good, with a more adjustable working hours and better information access
11	Čiro Engine	Krauss' narrow-gauge engine built in Munich in 1939, a unique example of an engine of this type in the world, exhibited in a small park of the former Train Station in downtown Orahovica	real attraction	excellent regarding its location, arrangement, uniqueness and presentation
12	Municipal Park	first mentioned in chronicles in 1862, domineered by the high old trees, large-	real	excellent concerning its location and arrangement

Number	Title	Description	Tourist attraction basis	Tourist valorization possibility
		area lawns, ornamental shrubs and a promenade decorated by flowerbeds	attraction	

Source: auctorial research

The first phenomenal forms of everyday life culture of an area may be considerably interesting concerning tourists' attention. In that sense, cultural manifestations comprise an important part of tourist offer, representing an inseparable part of tourist identity and serve as a valuable and significant supplement to the visitors' sojourn in an area. As cultural manifestations, with an offer of cultural abundance, tradition, and nonmaterial heritage of the Orahovica region are oriented to the visitors and public, i.e., to tourist visits *per se*, they are classified in the categories of manifestations having a local, regional, national or international character, with an accompanying list of their characteristics (Table 2).

Table 2 Survey of manifestations in the territory of the City of Orahovica

Number	Title	Description	Time	Category
1	Legend of Ružica	a manifestation that would like to illustrate the Middle Ages and the period of the Ružica Citadel erection, with an emphasis laid on a knightly orders' parade, old crafts and trades fair, archers' tournament, a Ružica Citadel battle reconstruction, a chivalric tournament for the hand of a maiden named Ružica and a knightly supper	Aug./Sept.	regional
2	Orahovica Spring	a cultural-entertaining manifestation, with an emphasis laid on sports, social, cultural and entertainment events at various locations, with a Floral Promenade and a Folklore Review being the central ones	first weekend in Jun.	regional
3	Crkvarac Spinning Bee	a traditional cultural manifestation, with an emphasis laid on a presentation of traditional rustic customs, jobs, games and popular events	last Sun. prior to Christmas	regional
4	Ferragosto Jam	an urban music festival held at the Orah Recreational Area	first weekend in Aug.	national/ international
5	1.1.2 Slavin	an international viticultural, enological, and pomological fair, with an emphasis laid on educative programs, traditional Slavonian specialty-making contests, wine and alcoholic beverage evaluation and a Wine Ball	Mar.	national/ international
6	Green Silvanac Festival	a festival organized within an IPA-financed project titled <i>Hungarian-Croatian Wine Story</i> , with an emphasis laid on wine tasting and gastronomic offer	Aug.	national/ international
7	Golden Nut	an international confectioner championship pertaining to the confection-making from the autochthonous Slavonian foodstuffs, with an emphasis laid on nuts as a food recognizable in the Orahovica region	Jun.	national/ international

Source: auctorial research

#### 4. Developmental Perspectives of Cultural Tourism in the Territory of the City of Orahovica

An analysis of realistic and potential cultural tourist attractions and cultural manifestations in the territory of the City of Orahovica (Tables 1 and 2) direct to a conclusion pertaining to an



existence of cultural resources that can be valorized and utilized for the purpose of cultural tourism development, as well as for a supplementation of an overall tourist offer of the City of Orahovica. The possibility of their tourist valorization is evaluated as very good and excellent, with a stipulation for the additional conditions to be fulfilled, whereby it is deemed significant to emphasize that an authenticity of destination based on cultural heritage may realize a competitive advantage with regard to other destinations, with an appropriate cultural resource management (Vrtiprah, 2006) and additional investment in their conservation, as to make everyone aware of their historical, cultural, and tourist value for potential visitors.

The majority of tourist activities in Orahovica is directed to its most known natural resource, the Orahovica Lake located within the Orah Recreational Area. Beside the lake, many attractive amenities, sports grounds, camping sites and catering facilities are located. On the basis of an analysis of annual cultural manifestation taking place in the territory of the City of Orahovica, one may conclude that the majority of manifestations, among which the Legend of Ružica, Orahovica Spring, Crkvarac Spinning Bee, Ferragosto Jam Urban Music Festival, Green Silvanac Festival and the Golden Nut are specially emphasized, take place at the Orah Recreational Area, what significantly contributes to the promotion of cultural tourism, in addition to the promotion of a natatorial one. Most of the analyzed manifestations has a regional character, they take place generally in estival months, and it is necessary to excogitate an additional cultural context offer that can be offered annually as to avoid their seasonal character.

A basic presupposition for the development of tourism encompasses an adequate quantity of similar attractions or those compatible to the culture, an existent destination image, tourist attractiveness and a destinational tourist turnover (Demonja, 2006), whereby the assurance of its tourist availability is considered a significant presupposition for the transformation of a potential into a realistic tourist attraction. In that sense, in 2012 the City of Orahovica Tourist Board issued the brochures that promote municipal landmarks and possibilities to spend an active vacation while visiting cultural manifestations. Information panels with recognizable tourist photographs and catering facility data, information panels at the Orah Recreational Area, as well as brown-colored signalization, were installed at certain spots in the city.

As to purposefully and economically use the cultural resources in cultural tourism, it is necessary to adapt the resources' physical attributes as well as their contents (Tomljenović, 2006). The Watermill and the Ćiro Engine are the examples of cultural resources that can be used even better touristically. In other words, by restarting and appropriately representing the watermill, the attractiveness of the very facility would be higher. Also, with regard to the fact that a railroad track transporting the passengers to the Orahovica Lake was existent in Orahovica, by relaunching the engine or by remaking a similar one the two localities would be creatively reconnected, the engine would acquire necessary presentation, and the attractiveness of this unique motive monument would be increased, while the historical development of Orahovica and its tourism industry would be simultaneously adequately presented.

Equally, the facilities and sites such as the Ružica Citadel, the Old Town, the Noblemen Curia, and the Mihalović Curia are still lacking a high-quality information on historical characteristics of edifices and localities. Concerning the Ružica Citadel location, a more pronounced recognizability of not only the Citadel but also of the entire City of Orahovica would be achieved by Citadel's illumination, while the medieval fortifications on the Papuk Hill necessitate an additional access road design and repair due to potential landslide

danger.<sup>190</sup> Concerning the fact that cultural heritage can be promoted through various legends, historical persons, and the introduction of contemporary interpretational modalities involving historical costumes and multimedia (Vrtiprah, 2006), the Legend of Ružica is a specific example of combining a manifestation with an immobile cultural artefact, contributing to a better recognition and an increase in interests pertaining to the Citadel's tourist sightseeing. In that sense, the presentation of the Ružica Citadel as a unique Croatian medieval locality is facilitated by the establishment of the Order of the Ružica Citadel Knights' Association, whose potential lies in its history.

## 5. Conclusion

A performed analysis of realistic and potential cultural tourist attractions directs toward a conclusion that the City of Orahovica, thanks to its landmarks that have been touristically exploited throughout history, has a tourist tradition. The existent cultural resources can still attract a major number of tourists, accompanied by an adequate developmental strategy of the area, with a special emphasis laid on cultural-touristic offer that could supplement as well as a significant component of an overall tourist offer.

In that sense, the development of cultural tourism in the territory of the City of Orahovica necessitates an enrichment of the existent and a design of the new attractions, a continuous improvement and creative enrichment of the existent manifestation and event programs, an elevation of the degree of knowledge and skills necessary for the development of authentic and recognizable cultural products, an improvement in the information system, a promotion and distribution of cultural-touristic products, as well as an upgrade of their interpretational standards. The realization of these requirements presupposes the existence of a stimulating legislature and an adequate financing, a high-quality marketing approach with regard to its design and structure, as well as human resources necessary for an efficacious management of the aforementioned processes.

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190 Culturohistorical and artistic routes represent one of the basic cultural resources (Pančić Kombol, 2006), and an additional cultural attraction, encompassing various monumental sites and historical facts interesting to the visitors, would be created while thematically combining the medieval Papuk fortifications.

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## **CLASSICAL MUSIC AND HISTORICAL HERITAGE**

### **UMJETNIČKA GLAZBA I POVIJESNO NASLJEĐE**

#### **ABSTRACT**

*The historical heritage is of priceless meaning for a certain milieu, population and society which constitutes this milieu and finally represents the wealth of every nation. First of all, the acquired heritage has to be recognized, truly valued, protected and presented in a successful way. This work brings a review on Slavonian traditional music, on the historical segment, but also the cultural identity of east Croatia.*

*Traditional music certainly represents a significant form of historical legacy. In this context the role of authentic Slavonian folk music should be observed. This work will especially try to emphasize the compatibility of Slavonian traditional music with the classical music creation. The works' goal is to present compositions of classical music composers, whose origin lies on the Slavonian traditional music elements. Under these compositions we mean vocal, vocal-instrumental, instrumental, chamber and orchestra compositions. This works' subject will present specific pieces from the Croatian musical literature, but also compositions of foreign authors, who found their creation impulse in the Slavonian folk music expression.*

*The basic methodological approach in working on the mentioned theme will imply the collecting of existing materials, composers and compositions listing and cataloguing. The mentioned approach will be performed by gathering materials through several sources: different legal subjects, whose activities are closely connected to the music-art field (like HDS- Croatian society of composers, HRSK- Croatian parliament of culture and etc.), archives and individual libraries of amateur societies. This work will contain a paragraph which brings the most important characteristics of Slavonian traditional music which were used during the composing process.*

*Finally, from this work it will be possible to conclude that the classical music expression, implemented with Slavonian traditional music, without any doubts has a significant place in the field of art. With a well conceived, planned and directed affirmation of this kind of cultural wealth, there are truly significant possibilities in the economy development of east Croatia. Of course, it is up to us to fulfil it.*

**Key words:** *Slavonian traditional music, classical music, the history of music, Croatian composers*

#### **SAŽETAK**

*Povijesno nasljeđe od neprocjenjivog je značaja za određenu sredinu, populaciju i društvo, koji čine tu sredinu te u konačnici predstavlja i bogatstvo svake nacije. Prije svega, stečeno nasljeđe potrebno je prepoznati, istinski vrednovati, zaštititi i nastojati ga uspješno*

prezentirati. Ovaj rad donosi osvrt o slavonskoj tradicijskoj glazbi, segmentu povijesnog, ali i kulturnog identiteta istočnog dijela Hrvatske.

Tradicijska glazba predstavlja doista značajan oblik povijesne ostavštine. U tom kontekstu treba promatrati i ulogu izvorne slavonske narodne glazbe. Ovim radom nastojat će se posebno istaknuti kompatibilnost slavonske tradicijske glazbe s umjetničkim glazbenim stvaralaštvom. Cilj rada je prikazati kompozicije skladatelja umjetničke glazbe, čije ishodište leži na elementima slavonske tradicijske glazbe. Pod tim skladbama podrazumijevamo vokalne, vokalno-instrumentalne, instrumentalne, komorne i orkestralne skladbe. Predmet ovoga rada predstavljat će konkretna djela iz hrvatske glazbene literature, ali i skladbe stranih autora, koji su poticaj za stvaralaštvo pronašli u slavonskom narodnom glazbenom izričaju.

Osnovni metodološki postupak u obrađivanju spomenute tematike podrazumijevat će prikupljanje postojeće građe, popis skladatelja i njihovih kompozicija te katalogizaciju istih ostvarenja. Navedeni postupak provodit će se prikupljanjem materijala kroz nekoliko izvora: različiti pravni subjekti, čija je djelatnost usko vezana za glazbeno-umjetničko područje (poput HDS - Hrvatsko društvo skladatelja, HRSK - Hrvatski sabor kulture i dr.), arhivi i knjižnice pojedinih amaterskih društava i sl. Odlomak ovoga rada donijet će i najznačajnije osobine slavonske tradicijske glazbe, koje su primjenjivane u postupku skladanja.

Iz ovoga rada, u konačnici, moći će se zaključiti da klasični glazbeni izričaj, prožet slavonskom tradicijskom glazbom, neupitno zauzima značajno mjesto na umjetničkom polju. Dobro smišljenom i planski usmjerenom afirmacijom ovog vida kulturnog bogatstva pružaju se uistinu značajne mogućnosti u razvoju gospodarstva istočnog dijela Hrvatske. Na nama je da to svakako i ostvarimo.

**Ključne riječi:** Slavonska tradicijska glazba, umjetnička glazba, povijest glazbe, hrvatski skladatelji

## 1. Introduction

Composers, artists often find different sources as their inspiration in the creating process. Some authors sometimes, in their composer opus, look for inspiration in the historical heritage and therefore use the folklore heritage. Traditional music, as a segment of this heritage, takes a very significant place in that process.

It is important to emphasize that not all composers have the same interest in folk music. Some composers do not have anything in common with the traditional expression. Some of them occasionally use certain traditional musical elements, while a precise number of composers are recognised by using them. A more intense leaning on traditional music in the past is caused by certain social-political circumstances so the usage of folk motives becomes an eligible form during the period of the national revival. Also, a large interest, meaning a greater production and reproduction is noticed during the period between two world wars, by renewing the national music direction.

How much are classical compositions represented which were made on the basis of Slavonian traditional music? Certain knowledge is written down in some works, so in the description of the most important Yugoslav authors Krešimir Kovačević (Kocil et al., 1980, 11) alleges Croatian composers and compositions made under the influence of Slavonian music. Writings about the usage of Slavonia's musical folklore in vocal music are in the work under the title "Choral music composed on Slavonian folklore motives". The author (Hamzić, 1996, 30) distinguishes compositions made on the motive of Slavonian traditional music and compositions, made as arrangements of traditional melodies. The author of this text

(Drenjančević, 2011, 139-154) showed in his master thesis the Slavonian melody characteristics present in choral works of Croatian composers.

In order to talk about the usage of the Slavonian traditional music expression it is important to recognise its basic characteristics.

## 2. The characteristics of Slavonian traditional music

Prof. Jerko Bezić (Bezić, 1974, 168-175) dealt with the characteristics of Slavonian traditional music and he says: *Slavonia and Baranja are characterised by diatonic pentachordal and hexachordal tone structure: 1-1-1/2-1-1, that is f g a b c d. Two-part singing, somewhere three-part singing, with an added perfect fifth under the finished tone g' forms a special mode with major scale characteristics with a large major third above the basic tone f' where the leading, higher, voice ends on the second scale degree (g').*

During the research of tone characteristics in Slavonian traditional vocal melodies, the author (Drenjančević, 2013, 124) also alleges some characteristics which arise inside the tone lines. As a more important characteristic he alleges the variability of degrees: *This appearance implies the performance of more tones on one scale degree. In Slavonian melodies we talk about the performance of two different tones on one scale degree.* As the most changeable scale degree the author alleges the fourth degree, tones F and F#. More emphasized is also the third degree (tones E and E), while in a smaller amount represented are the changeable second degree (tones D and D#), the seventh degree tones (Bb and B), the fifth degree (tones G and G#) and the sixth degree (tones Ab and A). The changeable first degree (tones C and C#) can be met very rarely.

Studying the interval relations, which appear in melody lines of Slavonian folk tunes, the author alleges the characteristic intervals: minor, major and augmented second; minor and major third and a diminished fifth.

The melody's tonal structure is connected to specific scales so the most represented scale is the heptatonic (scale of seven tones). According to the representativeness of the scale also emerge the octatonic (scale of eight tones), the hexatonic (scale of six tones) and the nonatonic (scale of nine tones). It is important to emphasise that most of the tone scales contain major scale characteristics. Beside the major scale characteristics, registered are also minor scale characteristics, as well as phrygian, lydian and mixolydian characteristics. Oriental characteristics are also recognisable in Slavonian folk tunes. Especially interesting examples of tone scales represent scales combining more scale forms (example major-minor scale, mixolydian-oriental scale and others).

Besides the harmony-melody component, the rhythm component is also very important. Out of significant rhythm forms the following are emphasised:



## 3. Classical compositions inspired by Slavonian melody

The opus with compositions which were created on the basis of Slavonian traditional music is rich. Inside this opus a selection is necessary in order to distinguish compositions of modest artistic level from creations which are, with their structure and usage of different composition

procedures, classified as very valuable artistic creations. Because of the comprehensiveness of the matter, this work will be more focused on significant classical compositions and will show some of the most important examples in Croatian music literature.

The works' continuation brings an overview of composers and their creations inspired by the Slavonian music heritage.

1. ALBINI, Srećko  
BaronTrenk : Der Pandur : Operettein 3 Aktenvon A.[Alfred] M. Willnerund R. Bodanzky / Musikvon Felix Albini.-Wien : LudwigDoblinger, cop. 1908.– 146 pages: notes ; 30 cm.
2. BRADIĆ, Zvonimir  
Rondo slavonico: tamburica orchestra / Zvonimir Bradić.- S.l.: s.n.,s.a. – 13 pages: notes; 28 cm.
3. DOBRONIĆ, Antun  
Slavonska vokalna rapsodija: iz Slavonije : mixed choir / Antun Dobronić.: notes, handwriting ; 35 cm.
4. DUGAN, Franjo ml.  
Šest srijemskih: mixed choir / Franjo Dugan ml.- Zagreb : Muzičko nakladno-prodajno poduzeće Saveza muzičkih udruženja, [1952.]. – 11 pages: notes ; 35 cm.
5. GOETZ, Adolf  
Slavonska rapsodija: accordiorchestra / Adolf Götz.- Berlin: Apollo- Verlag, 1982. – 28 pages: notes; 30 cm.
6. GOTOVAC, Jakov  
Bunjevačka igra op. 34: symphony orchestra / Jakov Gotovac.- S.l.: s.n., s.a. – 27 pages: notes; 35 cm.
7. HATZE, Josip  
Slavonska rapsodija, mixed choir,in: Od Triglava do Vardara: jugoslavenske rapsodije za mješoviti zbor / Josip Hatze .- Zagreb: Prosvjetni savez hrvatske, 1979. – 54 pages: notes; 30 cm.
8. HATZE, Josip  
Hrvatska rapsodija: mixed choir, in: Od Triglava do Vardara: jugoslavenske rapsodije za mješoviti zbor / Josip Hatze .- Zagreb: Prosvjetni savez hrvatske, 1979. – 54 pages: notes; 30 cm.
9. HATZE, Josip  
Kolo: mixed choir/ Josip Hatze.- S.l.: s. n., s.a. –p.1: notes, handwriting, 23 cm.
10. JOSIPOVIĆ, Ivo  
Drmež za Pendereckog: tamburica orchestra / Ivo Josipović.- S.l.: s.n., s.a. – 26 pages: notes, 27 cm.
11. KAPLAN, Josip  
Pjesma i ples br. 10: tamburica orchestra / Josip Kaplan.- S.l.: s.n.,s.a. – 14 pages: notes; 22 cm.
12. KRNIC, Boris  
Slavonska zemljo, ljubim te: mixed choir/ Boris Krnic.- Zagreb: Sklad, cop. 1945.– 8 pages: notes; 32 cm.
13. KRNIC, Boris

- Žetalačka, po motivima iz Djakovštine: mixed choir (a cappella) / Boris Krnic.- S.l.: s.n., 1944. – 12 pages: notes; 31 cm.
14. MAKAR, Marijan  
Slavetnonija: clarinet and string quartet/ Marijan Makar.- S.l.: s.n., 2013.–2 pages.: notes; 23 cm.
15. MARKOVIĆ, Adalbert  
Na slavonski način: tamburica orchestra / Adalbert Marković.- S.l.:s.n., s.a. – 14 pages: notes; 22cm.
16. MIRK, Vasilij  
Bogata sam: mixed choir, in: Zbori: revija nove zborovskeglasbe, IV (1926) 2, p. 20.
17. MIRK, Vasilij  
Kolo: mixed choir, in: Zbori: revija nove zborovskeglasbe, IV (1926) 2, pp. 21-22.
18. PAPANDOPULO, Boris  
Treći gudački kvartet: narodni / Boris Papandopulo.- Zagreb : Muzički informativni centar Koncertne direkcije, 2012.–43 pages: notes; 32 cm
19. PAPANDOPULO, Boris  
Kvintet za klarinet i gudački kvartet : partitura / Boris Papandopulo.- Zagreb : Savez kompozitora Jugoslavije, 1960.–68 pages: notes; 32 cm.
20. PAPANDOPULO, Boris  
Vanjkušac: troublechoir, in: JERKOVIĆ, Josip: Osnove dirigiranja III Literatura, Osijek: Sveučilište Josipa Jurja Strossmayera Pedagoški fakultet, 2001., pp.100-111
21. PIBERNIK, Zlatko  
Slavonska rapsodija: symphony orchestra / Zlatko Pibernik.- S.l.: s.n., s.a. – 89 pages: notes, handwriting; 28 cm.
22. PIBERNIK, Zlatko  
Simfonijske metamorfoze (jedne narodne pjesme iz Slavonije): tamburica orchestra, tenor trombone and cymbals / Zlatko Pibernik.- S.l.: s.n., s.a. – 43pages: notes, handwriting; 28 cm.
23. UHLIK, Tomislav  
AllaSlavonica: wind orchestra/ Tomislav Uhlik .- S.l.: s,n., s.a. – 14 pages: notes; 23 cm.
24. UHLIK, Tomislav  
Mala slavonska rapsodija: string quartet/ Tomislav Uhlik .- S.l.: s. n.,2010. –8 pages: notes; 23 cm.
25. VIDOŠIĆ, Tihomil  
Narodni ples br. 5: tamburica orchestra, in: Tamburaški orkestri / Tihomil Vidošić .- Zagreb, 1971. – 100 pages: notes; 24 cm.
26. VIDOŠIĆ, Tihomil  
Slavonski scherzo br.2: tamburica orchestra/ Tihomil Vidošić .- S.l.: s. n., 1972. – 40 pages: notes; 24 cm.
27. VIDOŠIĆ, Tihomil  
Slavonski scherzo:na temu „Sitna kiša“: tamburica orchestra/ Tihomil Vidošić.- Zagreb: Tisak Saveza muzičkih društava i organizacija Hrvatske ; 1967.–16 pages: notes;



## 28. VIDOŠIĆ, Tihomil

Slavonka, Uvertira za tamburaški orkestar / Tihomil Vidošić.- S.l.: s. n., s.a. – 64 pages: notes; 24 cm.

The listed compositions contain the exact elements which are specific for the traditional music expression from Slavonia. Even more emphasised associations to Slavonian traditional music are noticeable in the usage of music citations during the composing act. Composers, using music citations (which beside music can also imply a text), that is, using certain recognisable parts, themes of a certain traditional melody or dance (even the whole melody or dance), directly connect the composition to the origin of the citation. So as an example Tomislav Uhlík's composition "The small Slavonian rhapsody" contains nine different parts, where every part brings a new traditional theme which was taken from songs and dances of Slavonia and Baranja ("Lipo ti je ranouraniti", "Sitne bole", "Prediteprelje", "Bečarac" and others).

The interest for Slavonian traditional music is not only recognised with Croatian composers. The above mentioned list also brings two choral compositions of the Slovenian composer Vasilij Mirk ("I am rich" and "Kolo"). The Austrian composer Adolf Götz, inspired by the Slavonian melody, wrote a composition for the accordion orchestra entitled "Slavonian rhapsody".

## 4. Conclusion

This reflection shows that there really is a significant interest of composers in Slavonian traditional music. This interest was present in the past, but it is also recognized today in newer composer creations. This work brings a reflection of those music creations which were inspired by the Slavonian music heritage. The final number of compositions is much bigger, especially if we take into consideration a large number of existing adaptations of traditional melodies and dances.

It is important to emphasize that traditional music, as a part of Slavonia's historical heritage, kept a continuity of presence in the field of classical music. Thereby, indirectly, the process of its preservation and further tending is continued.

It is very important to recognize and truly value the rich and very significant composer opus, which represents a deposit of a successful promotion of Slavonia's traditional heritage. The gained potential has to be, first of all, adequately directed and systematically developed, which opens (or would open) large possibilities of a cultural, touristic, and finally economic affirmation for east Croatia. The organisation of different cultural-educational projects (concerts, symposia, public discussions and others), connected to the artistic expression inspired by Slavonian traditional music, represents a way in that direction.

This region would contribute to Croatia's perception as a recognisable cultural factor inside European and world borders by promoting and popularising its cultural-historical wealth.

With a more distinguished contribution in this process Slavonia would position itself in a place where it truly and undoubtedly belongs.

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## **KONTESA SLAVONIJA - INTEGRATED MARKETING OF SLAVONIAN CULTURAL AND NATURAL ATTRACTIONS**

### **KONTESA SLAVONIJA - INTEGRIRANI MARKETING KULTURNIH I PRIRODNIH ZNAMENITOSTI SLAVONIJE**

#### **ABSTRACT**

*Leisure activities offered to tourists in continental tourism have much greater importance than in sea tourism. Inland tourism offer needs to be better filled with leisure activities. Cultural heritage and natural environment in continental tourism are just as significant as the accommodation of tourists. Continental tourism should offer high-quality travel activities; tourists have to be motivated to engage in better quality leisure activities and greater daily consumption. The current concept of tourist information supply and the marketing of tourism facilities in Slavonia and Baranja are inadequate and do not contribute to development, which results in a small percentage of (direct) tourist arrivals in the region. In this paper we propose a marketing concept for the cultural and natural heritage of Slavonia as a framework of a macro entrepreneurial project in continental tourism, which should offer quality activities to tourists in a European setting and, ultimately, result in increasingly higher daily spending by tourists in the region.*

**Key words:** *Continental tourism, cultural attractions, integral marketing, natural attractions*

#### **SAŽETAK**

*Sadržaj slobodnog vremena turista u kontinentalnom turizmu ima mnogo veći značaj nego na moru; turistički boravak na kontinentu treba u sadržaju biti kvalitetnije ispunjen. Kulturna baština i prirodni ambijent u kontinentalnom turizmu isto su toliko važni koliko i smještaj. Kontinentalni turizam treba kvalitetnu ponudu sadržaja boravka; turisti moraju biti motivirani za kvalitetnije sadržaje i veću dnevnu potrošnju. Postojeći koncept ponude turističkih informacija i marketinga turističkih sadržaja u nas nije kvalitetan i nije u funkciji razvoja; zato je i mali postotak (direktnog) turističkog dolaska u regiju. U radu se predlaže novi koncept promocije turizma u Slavoniji i Baranji - integrirani marketing slavonskih kulturnih i prirodnih znamenitosti pod nazivom KONTESA Slavonija.*

**Ključne riječi:** *Integralni marketing, kulturne znamenitosti, kontinentalni turizam, prirodne znamenitosti*

#### **1. Marketing of tourism facilities in Slavonia and Baranja**

The content of tourists' leisure time in continental tourism has much greater importance than at sea; Inland tourist visits need to be better filled with content. Cultural heritage and natural environment in continental tourism are just as significant as accommodation. Continental tourism should provide a variety of contents on offer for visitors; tourists need to be motivated

to seek higher quality contents and engage in greater daily consumption. The existing concept of tourist information supply and the marketing of tourist attractions in Slavonia are inadequate and failing to serve the function of development. This has resulted in a small percentage of (direct) tourist arrivals in the region and has been discussed in the Croatian Tourism Development Strategy until 2020: [8]

*- Economic development, rising levels of education and general well-being contribute to a transition toward the post-materialist social values of the experience economy. 'The new tourist' is a purchaser of life experiences, adventures and stories, physically and intellectually active, looking to be a participant by seeking journeys that will contribute to his personal development. (pp. 25)*

*- A further growth of cultural tourism is predicted and a great importance is placed on this product for the future growth of the overall tourism sector. In particular, predictions advocate the growth of 'creative tourism', which in some way allows visitors a more active involvement in a local culture. (pp 26)*

### **1.1. The existing concept of marketing tourism in the region**

The existing concept of marketing tourism in the region of Slavonia is framed by the borders of its counties; each county has its own tourist board and their tourism offer is formed on that principle. [12]- [16] This is essentially the basis on which all of the local travel agencies do business. Therefore, Slavonia as a regional destination of continental tourism - with significant natural, historical and cultural attractions – does not exist here. For the sake of truth, it needs to be noted that the Croatian National Tourist Board (CNTB) and the Association of Croatian Travel Agencies (ACTA) do offer Slavonia as a tourist destination via their websites, but only to again provide links to the websites of county tourist boards (CTB). [5] [11] A separate issue, however, are the contents of this marketing offer - from cultural, historical and other attractions to the style of presentation, language and graphic and video formats.<sup>191</sup>

With this kind of approach, a tourist staying in Vukovar (Vukovar-Srijem County) has no information about the home of world-renowned scientist and climatologist Milutin Milanković – his birthplace and Museum being located in Dalj (Osijek-Baranja County) – only 10 kilometres from Vukovar [17]. Likewise, tourists in Đakovo (Osijek-Baranja County) will receive no information on the Ivan Mestrovic Memorial Gallery (world famous sculptor) – only ten kilometres away in Vrpolje, just because it is in another (Brod-Posavina) county. [14] We should point out that the list of famous personalities (in the marketing offer) has no global framework, but only the local horizon. It should also be noted that there are no thematic tourist attractions - for example, castles in Slavonia, Nobel laureates and world-renowned scientists, or artists and galleries, or religious heritage of Slavonia, etc.

## **2. New approach to the marketing of cultural and natural heritage: the project "KONTESA Slavonia"**

The "KONTESA Slavonia" (Countess = continental tourism in European's ambient) project offers an integrated marketing of continental tourism sights in a regional concept to achieve:

- a) Better hotel occupancy,
- b) Increasing numbers of visitors to cultural contents (museums, galleries, etc.),
- c) Increasing numbers of visitors to traditional ceremonies;

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<sup>191</sup> While CNTB offers travel programmes on its website in more than a dozen languages, the websites of CTBs in the region are available in 2 or 3 languages (but not all of them, because some TB are available only in Croatian). Videos (e.g. of destinations in Baranja) are showing tourist sites without living beings (restaurants, wineries, villages are eerily deserted as if they were hit by cholera - no living creature on the recordings).

This will allow tourists to visit Slavonia and Baranja and fully experience their atmosphere in an EU format. In doing so, they will increase their consumption and spread the word of the values of Slavonia upon return to their domicile environments.

Basically, through this marketing concept Slavonia will be offered as a "nobility" tourist destination (association to the region's historical heritage) in continental tourism, providing high quality services at a European level.<sup>192</sup>

This project would be implemented in the area of five counties of eastern Croatia (Osijek-Baranja, Vukovar-Srijem, Brod-Posavina, Požega-Slavonia and Virovitica-Podravina). The Slavonia region (22.1% territory of Croatia) has over 800,000 inhabitants, 998 villages, 22 towns and 105 municipalities, and their tradition and natural resources represent a significant - and underused - potential for development of inland tourism. [6]

### **2.1. The starting points of the project "KONTESA Slavonia"**

The project is based on a modern approach to: (1) tourists and (2) presentation of cultural contents;

- The modern tourist is: (a) knowledgeable and (b) mobile, and will not be satisfied by merely staying in a local hotel alongside the performance of their professional work (if it is a business trip) or just by taking walks and trying out local food (if on vacation). [4] [7]
- A regional cultural offer is required consisting of: (a) events and (b) facilities which will animate tourists; offering only local attractions (within a few kilometres from the hotel) is not enough.
- Cultural institutions in local communities must be prepared for tourists visiting their cultural capacities. This includes: (a) a modern display of exhibits, (b) adjusted working hours of institutions, (c) special access for tour groups and (d) staff who speak several major European languages.
- Hotels are not just overnight stay (or catering) services; hotels have to become promotional centres for local attractions (along with local tour guides) and managers of visitors' leisure time as well as selling points for services of local cultural institutions. This includes: (a) a (modern) setup of notifications on regional sites, (b) special access for tourists, (c) adjusted working hours and (d) staff who know the cultural sites and (e) speak several major European languages.

### **3. The concept of the project "KONTESA - Slavonia"**

The "KONTESA Slavonia" project is based on the so-called meet planning (interdependence approach of the base and top) during the implementation of the key settings of the project – which has the following elements:

1. Map of Slavonia's attractions in hotels - in several European languages,
2. "KONTESA" model of communication with tourists,
3. Workshop on culture marketing and preparation of institutions for a strong tourism offer,
4. Adjustment of local cultural institutions to regional tourism industry,
5. Manufacture (and sales) of printed souvenirs displaying the landmarks of Slavonia,
6. Electronic offer of cultural events in the region,
7. Preparation and application of EU projects for the valorisation of cultural heritage for tourism purposes.

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<sup>192</sup> The "KONTESA Slavonia" project was applied to the tender of the Ministry of Tourism (March 2014).

### 3.1. KONTESA Slavonia - sights folder at hotels

In hotel (motel, etc.) lobbies, a KONTESA folder is to be placed containing:

1. "KONTESA Slavonia" logo,
2. "KONTESA Slavonia" project poster,
3. Regional folder with geo-locations of cultural and natural attractions, (Table 1)
4. Local folder with detailed information on local cultural attractions,
5. Stand with "KONTESA Slavonia" promotional materials,
6. Sale of printed souvenirs and leaflets about the attractions:
  - Flyer: famous people, sacred objects, monuments, castles, traditional festivals, parks, nature reserves and arboreta, etc.
  - Printed souvenirs (book-markers, postcards, posters, booklets)
  - Electronic souvenirs (CD, DVD, USB)

City of Osijek (with rich sacral heritage and monuments) does not even have a regular flyer with a list of churches, nor a list of monuments to famous people; Therefore, the author of this paper launched projects titled "Religious Heritage of the City of Osijek" and "Monuments of the City of Osijek", which will result in two leaflets and 2 luxury publications - as well as city guides and commemorative souvenirs. The projects were accepted by the Tourist Board of Osijek in 2014<sup>th</sup>. [1] [2]

Table 1 Scheme of "KONTESA Slavonia" folder

<b>OUR HERITAGE</b>	<b>Culture</b>	<b>Religion</b>	<b>Science</b>	<b>Nature</b>
<b>Famous personalities</b>	Architects	Dignitaries	Scientists	Reserves
	Sculptors	...	...	Lakes
	Painters			Rivers
<b>Buildings</b>	Archaeological sites	Sacred objects	Birthplaces	Forests
	Castles	Cemeteries	Memorial rooms	Mountains
	...	...	...	.....
<b>Events</b>	Traditional meetings	Processions	Conferences	...
	...	...	.....	
<b>Institutions</b>	Museums	Dioceses	University	...
	Galleries	Parish offices	Faculties	
	...	...	...	

<b>SERVICES</b>	<b>Travel</b>	<b>Accommodation</b>	<b>Gastronomy &amp; enology</b>	<b>Leisure time</b>	<b>Health</b>
	Bus	Hotels	Restaurants	Bicycle routes	Hospitals
	Railroad	Hostels	Wine cellars	Fishing	Spa resorts
	...	...	...	...	...

Each of these sections in the KONTESA folder contains brief information about a famous person (object, event or location) at the regional level - and sights that are located in hotel surroundings have more information accompanied by illustrations. This criterion will be supplemented by the appropriate choice of leaflets and souvenirs for hotels and locations.

Similar "KONTESA Slavonia" folders will be placed in: tourism offices, railway and bus stations, river ports, airports, border crossings and the seats of regional and local government - as shown in Table 2.

Table 2 Locations for "KONTESA Slavonia" folder placement

N <sup>o</sup>	Category	N <sup>o</sup> of locations
1	Tourist offices and information points	ca 150
2	Hotels (hostels, motels, campgrounds)	ca 200
3	Railway stations	ca 30
4	Bus terminals	ca 30
5	River docks	6
6	Airports	1
7	Border crossings	14
8	Seats of regional and local administration	127
Total		ca 560

The "KONTESA Slavonia" folders are to be made available (in multiple European languages) on the tourist office websites of counties, cities and municipalities in the region of Slavonia and Baranja.

### 3.2. Implementing the "KONTESA" model of communication with tourists

In association with hotel (motel, camping, ...) managers and tourist guides, appropriate models of communication with tourists will be implemented among reception, sales and marketing staff to include: (a) basic knowledge of the cultural sites of Slavonia, (b) basic education about communication with tourists and (c) ability to communicate in several European languages. If necessary, there will be workshops with staff that is in direct communication with tourists.

### 3.3. Workshops on culture marketing

In association with cultural institutions, workshops will be held to provide training on marketing culture and preparation of these institutions for a strong tourism offer, which includes: (a) basic awareness of tourist visits in the region, (b) basic education about marketing and communicating with tourists and (c) adjusting existing and/or preparing thematic setups of exhibits with information in a number of European languages, (d) establishing the framework of investment projects by institutions – seeking to apply for EU funding, aimed at strengthening the tourism offer.

### 3.4. Adjusting cultural institutions for regional tourism offer

The workshops on marketing culture and preparation of these institutions for a strong tourism offer will be followed by their adaptation to regional tourism offer (if need for such activities is pointed out during analysis).

### **3.5. Manufacture (sales) of printed souvenirs of Slavonia's cultural heritage**

Within the project "KONTESA Slavonia" – and only in its initial stage – printed souvenirs (book markers, postcards, posters, booklets) related to the cultural heritage of Slavonia will be created and made available in several European languages, with multiple levels of quality (grayscale and colour printing) and at affordable prices. In this way, the tourism offer will be complete and these will at the same time serve as promotional materials for future visitors. Also, such souvenirs will provide additional revenue to hotels and cultural institutions.

### **3.6. Electronic offer of cultural events in the region**

An electronic version of the "KONTESA Slavonia" folder will be made available on the tourist office websites of counties and cities (municipalities) in the region of Slavonia with appropriate texts and illustrations and will also be accessible via smartphones.

### **3.7. EU projects for the valorisation of cultural heritage for tourism purposes**

In cooperation with county development agencies, tourist boards and cultural institutions as well as hotels, investment projects aimed to enhance the availability of cultural heritage for tourism purposes will be prepared (where needed) for EU funding.

\* \* \*

Conceptually, contextually and spatially, the project "KONTESA Slavonia" is in full compliance with the implementation of the objectives of the Croatian Tourism Development Strategy until 2020 and tourism development plans in the five counties of eastern Croatia.

### **4. Implementation of the project "KONTESA – Slavonia"**

Joint action towards an investor or suppliers, or joint work to find solutions to legal, economic or technical issues are the most common triggers for considerations about merging businesses. Economic practice has created a variety of forms of business association, among which very significant at this time is - consortium. [3]

The "KONTESA Slavonia" project is set up conceptually, and during its implementation it will be further developed and supplemented based on the bottom-up approach, and, taking into account local specificities, a promotional mix will be elaborated. [6] [10] For the purposes of the implementation of this project, a consortium of small companies has been established, currently comprised of:

1. Panon - Institute for Strategic Studies, Osijek
2. Alberta Ltd. Osijek
3. Biroprint Ltd. Osijek
4. Ladarice Ltd. Čepin
5. Geoprem Ltd. Osijek

These companies have signed a letter of intent on the implementation of the project; the consortium is open to other participants (hotels, tourist associations, development agencies, etc.) from Slavonia and Baranja. The project includes 11 groups of activities, its estimated time of completion being 10 months, and its total cost (excluding VAT) amounting to 440,000 HRK.

### **5. Conclusion**

This paper discussed the importance of marketing in continental tourism on the example of the Slavonia and Baranja region. Continental tourism should offer quality contents to visitors; tourists need to be motivated to seek higher quality contents and engage in greater daily consumption.



Our analysis showed: In the current concept of its tourist information supply and marketing of tourist attractions, Slavonia as a regional continental tourism destination (with significant natural, historical and cultural attractions) is not present in the region's tourism marketing since all programmes are restricted by the borders of counties. Each county has its own tourist board and their tourism offer is essentially based on this principle. A separate issue are the contents of this marketing offer – from the cultural, historical and other attractions to the style of presentation, language and graphic and video formats - scores cannot be satisfactory.

The paper presents the project "KONTESA Slavonia" that offers an integrated marketing of continental tourism sights in a regional concept, allowing tourists to visit Slavonia and Baranja and fully experience their atmosphere in an EU format. Basically, through this concept Slavonia is offered as a "nobility" tourist destination (association to the region's historical heritage) in continental tourism, providing high quality services at a European level.

This project has been proposed for implementation as part of a Ministry of Tourism call and will be carried out in the area of the five counties of eastern Croatia (Osijek-Baranja, Vukovar-Srijem, Brod-Posavina, Požega-Slavonia and Virovitica-Podravina). The Slavonia region (22.1% of the territory of Croatia) has over 800,000 inhabitants, 998 villages, 22 towns and 105 municipalities and its tradition and natural resources are a significant - and underused - potential for development of inland tourism.

The implementation of the project "KONTESA Slavonia" is to achieve: a) improved hotel occupancy, b) increasing numbers of visitors to cultural events, and c) increasing numbers of visitors to traditional ceremonies. In this way, tourists are expected to increase their consumption and, at the same time, spread the word of the values of Slavonia on return to their domicile environments.

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## **RESTORATION OF SACRAL OBJECTS IN THE FUNCTION OF TOURISM DEVELOPMENT: CASE STUDY THE CATHEDRAL OF ST. PETER'S IN ĐAKOVO**

### **OBNOVA SAKRALNIH OBJEKATA U FUNKCIJI RAZVOJA TURIZMA, CASE STUDY KATEDRALA SVETOG PETRA U ĐAKOVU**

#### **ABSTRACT**

*Once the cathedral of Đakovo or Bosnia and Sirmium diocese, today the cathedral of Đakovo-Osijek archdiocese, the Cathedral of St. Peter's in Đakovo is one of the most significant historic monuments in Eastern Croatia, the centre of religious practice in the Bishopric, and a popular tourist destination. It was built at the initiative of its most prominent bishop, Josip Juraj Strossmayer (1849-1905). The blueprint for the Cathedral was ordered from Karl Rösner, a famous Viennese architect, who signed a construction contract on 17 April 1866. Although it had been planned to build the Cathedral within a five-year period, the construction lasted until 1882, and the Cathedral was consecrated on 1 November of the same year.*

*Early severe damage to the Cathedral was inflicted by the earthquake in 1884. Its renewal began in 1933 after more destruction caused by the fire on the choir of the Cathedral. At the beginning of World War II, the Cathedral suffered minor damage but this was followed by massive destruction in the last year of the war, 1945, when serious damage was incurred to the roof and façade. Essential repairs were carried out after the War (truss, glass rose windows), whereas other repairs were indefinitely suspended in the next 15 years due to a lack of financial means. They were resumed thanks to bishop Stjepan Bäuierlein, who turned to the Cathedral Chapter for help in finding means for vital repairs. In line with financial resources available some repairs were made in the next three years, but in 1964 both the Cathedral and the whole of Đakovo region were struck by a new disaster. On 13 April 1964 the East of the Socialist Republic of Croatia was hit by an earthquake measuring 5.6 on the Richter scale, and subsequent damage to the Cathedral ran into 12 million Yugoslav dinars. This paper is an attempt to reconstruct the process of the Cathedral renovation in 1960s, and to explain the role of bishop Bäuierlein, of the authorities and government of the Republic of that time, as well as of the engagement of numerous parishes and dioceses in the Republic in raising money for the earthquake stricken area.*

**Key words:** Đakovo, cathedral, Strossmayer, World War II, earthquake, restoration, Bäuierlein

## SAŽETAK

*Katedrala Svetog Petra u Đakovu, stolna crkva tadašnje Đakovačke ili Bosanske i Srijemske biskupije, danas Đakovačko-osječke nadbiskupije, predstavlja jedan od najznačajnijih povijesno-kulturnih spomenika istočne Hrvatske, ishodište vjerskoga života Biskupije, ali i nezaobilaznu turističku destinaciju. Izgrađena je na inicijativu znamenitog đakovačkog biskupa Josipa Jurja Strossmayera (1849.-1905.), koji je nacrtu za katedralu naručio u Beču, kod vrlo poznatog arhitekta Karla Rösnera s kojim je 17. travnja 1866. potpisan ugovor o gradnji. Iako je plan bio katedralu završiti u roku od pet godina, radovi su se odužili sve do 1882., da bi na koncu bila svečano posvećena po biskupu Strossmayeru 1. listopada 1882.*

*Prva veća oštećenja na katedrali nastala su uslijed potresa 1884., no njihova obnova započela je tek 1933. nakon novih oštećenja nastalih kao posljedica požara koji je izbio na koru katedrale. U prvim godinama Drugog svjetskog rata katedrala je zadobila nekoliko manjih oštećenja, da bi u posljednjoj godini rata, 1945., pretrpjela veća oštećenja krovništva i fasade. Nakon završetka rata pristupilo se samo najnužnijim popravcima (krovište, stakla u rozetama), dok su ostali radovi, zbog pomanjkanja novčanih sredstava, tijekom idućih 15 godina u potpunosti obustavljeni. Nastavak radova na obnovi katedrale inicirao je tadašnji biskup Stjepan Bauerlein, koji je krajem 1959. od Stolnog Kaptola zatražio pomoć i posredovanje u prikupljanju potrebnih sredstava za izvedbu nužnih radova. Tijekom iduće tri godine, u skladu s financijskim mogućnostima, izvršeni su određeni radovi, da bi 1964. katedralu, kao i cijelo područje Đakovštine zadesila nova nesreća. Naime, 13. travnja 1964. Istok SR Hrvatske pogodio je potres jakosti 5,6 po Richteru, pri čemu su nastala nova oštećenja na katedrali procijenjena na 12 milijuna dinara.*

*U radu će se na temelju dostupnog arhivskog gradiva pokušati rekonstruirati tijekom obnove katedrale tijekom 1960-tih godina, objasniti ulogu biskupa Bauerleina, nadležnih lokalnih i republičkih vlasti, kao i veliki angažman brojnih župa i biskupija na području SR Hrvatske u prikupljanju pomoći za potresom stradalo područje.*

**Ključne riječi:** *Đakovo, katedrala, Strossmayer, Drugi svjetski rat, potres, obnova, Bauerlein*

### 1. Building of the Cathedral

#### 1.1. Previous Cathedrals

In the place of today's cathedral of St. Peter in Đakovo there were two Cathedrals during history, gothic Cathedral from 13th century, and the other one, more modest, erected at the beginning of 18th century in the period of bishops Juraj (Đuro) Patačić and Petar Bakić. The original data about the first Đakovo Cathedral is mostly not researched so there are no exact data about who first built the cathedral and how did it look like. Certain archive documents refer to the conclusion that the bishop's Palace and the chapel for orderly conduction of religious rites were built in the time of Bosnian bishop Ponsa (1235-1272?), and that it was of „appropriate size“. Nevertheless, some more recent interpretations, based on writings of former bishop Lovro Lorandij and the pope Klement VI, the building of the cathedral is dated in the later period, in fortieth years of 14th century (Damjanović, 2009., 11-13). In the period of Ottoman rule medieval Cathedral didn't suffer any major devastation and it is believed that it served as a mosque in the first half of the 17th century, and later as one of the rooms for the army, but it can surely be stated that in that period it wasn't used as a Christian sacral space. Based on the drawing from 1697, made shortly after the liberation from the Turks, which represents the only imagery of Đakovo at the turn of the century from 17th to 18th, it can be determined that the medieval Cathedral was without the truss at that period, but there is no

reliable proof when it was ruined. With the stabilization of political and economic conditions in Slavonija at the beginning of 18th century bishop Juraj Patačić (1703-1716) started numerous construction works in Đakovo and among others also on the medieval Cathedral church. For the accommodation of Bishop's residence he used preserved walls, penetrated the windows in them, built the sacristy and wooden tower in which he put three bells. New church was quite smaller than the medieval one and it only occupied its altar part. As soon as he came to Đakovo, the successor of bishop Patačić, bishop Petar Bakić (1716-1749) started working on finishing the construction works on new Cathedral, so the biggest part of the second, baroque Cathedral in Đakovo was his work- the entire nave of the cathedral from the main entrance to the sanctuary was annexed, the interior was partly decorated, works were done on the rest of the episcopal city. Consecration of the restored Cathedral was conducted by his successor Franjo III. Thauzy (1749.-1751.) When it comes to interior decoration of the baroque Cathedral the biggest credit goes to bishop Josip Čolnić (1751. -1773.). He set up four new altars (to Saint Peter, Blessed Virgin Mary, Saint Ilija and Saint Ivan Nepomuk), he bought pulpit decorated with marble, rostrum, 12 oak benches for the people, liturgical clothes, ciborium, chalice, silver lamps for the main altar and for the altar of Blessed Virgin Mary. Besides interior decoration the period of bishop Čolnić is also important for building of Bishop's Palace, or its east wing, which even today represents one of the most important examples of late baroque architecture in Croatia (Damjanović, 2009., 18-28)

## 1.2. Strossmayer Cathedral

Since the other Cathedral, built after the departure of Turks, had a very weak construction and was irreparable, building of a new cathedral was already in plans of bishops Antun Madić (1806-1815), who founded „the trust fund for building a new cathedral“, then his successor Emerik Raffy (1816-1830), who ordered plans for the new Cathedral, but Viennese constructionist refused it, and bishop Josip Kuković (1834-1849), who got the approved implementation plan and the expenses covered from the government, and he also had quite a trust fund for the new Cathedral, but he decided not to start the work on the Cathedral. Bishop Josip Juraj Strossmayer (1848-1905). (<http://www.djos.hr>) finally carried out the wish of his predecessors. After three project proposals of Viennese architect Karl Rosner, made in the period between 1853 and 1866 and one proposal from Aleksandar Brdarić (around 1860) bishop Strossmayer accepted the third project from Rosner and on April 17th 1866 they signed a contract about building a new Cathedral.<sup>193</sup> (Damjanović, 2009., 129). Parallel with the start of digging of foundations for new Cathedral they started to tear down the complex of previous baroque Cathedral, but the church itself served as a sacral area till 1880, when they started to tear it down because it started to represent a threat for the security of congregation because the choir stalls with organs collapsed. (Damjanović, 2009, 31)

After the sudden death of Viennese architect Rosner in July of 1869, raised a question of his successor and current problems which appeared during the construction of Cathedral (delay of detailed projects, disagreement of Rosner and Strossmayer about certain design solutions, deficiency of stone, bad quality brick) were not so important any more. Solution to that problem came almost a year and a half after Rosner's death, mostly because Strossmayer was occupied with church and secular policy. At the end of 1870 all supervision of construction was given to Friedrich Schmidt from Vienna. (Damjanović, 2009., 185-191)

That same year Strossmayer made a contract for interior imaging of the cathedral. That job was given to German painters who lived in Rome, father and son Alexander-Maximilian Seitz

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<sup>193</sup>The following year, 1867 Rosner made new, fourth project for Đakovo Cathedral in which the biggest changes were made on the church portals. (Damjanovic, 2009, 156).

i Ludwig Seitz. It was agreed for 36 frescos to be made, but in the end they made 43 frescos with motives from the Old and New Testament. Although the initial plan was to finish the Cathedral in the period of five years, the works extended till 1882, and it was finally consecrated on 1st October 1882. The interior equipment of the cathedral was not even then completely done so certain objects were being ordered for the whole decade and longer. But, bigger architectural work, after Srossmayer's death in 1905 was not done. When it comes to interior decoration, besides the above mentioned frescoes, cathedral has 7 altars (including one more in the crypt) and ceremonial pulpit on which there are stone statues and relief of saints. The main altar is a masterpiece of architecture dedicated to Cathedral patron St. Peter the apostle. The choice of saints on the side altars is connected with the history of the diocese, the ideas of the bishop who built it and the general piety of the people. All the walls in the Cathedral are decorated with painted ornaments of various shapes. In the big space under the main altar and the transverse nave is a crypt that you can enter from two sides: from the Cathedral and from the street. The exterior of the Cathedral is made of 7 million red facade bricks baked in bishop's brickyard in Đakovo, while stone and all other construction materials were shipped from Istria, Austria, Hungary, Italy and France.. The way to the Cathedral is a wide stairway, and in three naves the entrance is through three solemn portals. In the front church is ornamented with two bell towers, and in the back with the dome. The Cathedral in Đakovo has kept the look that it got shortly after the canonization in 1882, till the present days, and it represents the biggest sacral newly erected building of Croatian historicism, but also one of the most important sacral buildings of the central Europe in 19th century. (Damjanović, 2009, 5, 413; <http://www.djos.hr>)

## **2. Restoration of the Cathedral in Đakovo in the 1960s**

Early severe damage to the Cathedral happened in 1884, only two years after the canonization and it happened in the earthquake, when the front, roof and lantern of the dome were damaged. The worst damage was done on three cross shaped roses on the towers and the dome, and one of those fell on the roof of the apse and the side ship and damaged them. Reparation of the damage was necessary if they wanted to prevent the decay of wall paintings inside the church. Josip Vancaš, Schmidt's pupil, was chosen to conduct the reparation, and he started it in 1887. The reparation was finished next year, 1888, with the complete restoration of the lantern on the dome, which was covered in copper and certain gilded parts. (Damjanović, 2008., 176-178). New damage was made in 1933 when there was a fire on the core of the cathedral, which ruined the organs, big part of ceiling decoration, side paintings and the rossets near the core. During next three years all the damage including the one from the earthquake was repaired with the cost of 3 million dinars. During the first years of Second World War cathedral in Đakovo got just a few minor damages on the wall of the northern apse, which were repaired while the war was still on with the original bricks. In the last year of war Cathedral suffered bigger damages, especially on the facade and on the roof. From all the damages the roof was provisionally fixed, the broken glasses in the rosettes were replaced and the fresco of the baptism of Christ was restored. Other reparations because of the lack of funds were not done and with time the condition only got worse. (Archdiocesan Archive Đakovo-NAD, fund of Episcopal office-BK, 300/1965)

After the fifteen year break Stjepan Bäuerlein who was a bishop at that period, initiated the continuance of works on restoration of the Cathedral, and at the end of 1959 he asked Cathedral Chapter for help and mediation in collecting the funds needed for implementation of essential repair. In his memo Bäuerlein states that the damage on the cathedral, besides „ruining its beauty“, is also becoming more and more dangerous every day, and he is asking

Cathedral Chapter to consider this „burning question“ on its conferences, and to try to find the way to ensure needed funds for the most necessary repairs. Cathedral Chapter accepted the suggestion of bishop Bäuerlein and next month, with the aim of raising funds, they referred to the Commission for the nationalization in Đakovo and the National Commission for nationalization in Zagreb, with a request that during the implementation of the Law on Nationalization of leased buildings and building land from the 1958., they exclude from nationalization three single-story houses in Đakovo, the only ones remaining in the property of the Cathedral. With their sale, according to the lowest estimate, they would be able to provide 6 million Yugoslav dinars, which would be enough to start work on the reconstruction of the Cathedral. (NAĐ, BK, 1511/1959)

Since the authorized institutions have approved the request of Cathedral Chapter in terms of three choralistic houses, which were then given to free sale, they started drafting the cost estimate and expert studies on the state of the Cathedral on 14<sup>th</sup> November 1960 with the proposals for repair. According to the study it was proposed to divide the work into three groups: emergency interventions (repair coverings, towers, dome and annex, regulation of drain metal ware, control and repair of drainage system), necessary interventions (reparation of damage to the outer walls and on the vault of the main nave and northern apse) and final works (taking care of damp walls, stone work implementation, the restoration of frescoes and final decorations of the inner environment) (NAĐ, Fond BK, 300/1965)

During the 1961 and 1962 they started the works from the group “emergency interventions”, but the funds obtained by selling denationalized houses were spent before the realization of all assigned work. (NAĐ, Fond BK, 400/1963) While taking down of the roof and removing roof tiles it has been noticed that more than 60% of the boards were completely rotten and useless which resulted in unexpected costs, amounting to over 500,000 dinars, so obtained funds were not sufficient even to repair the roof. In regard to this, Msgr. Josip Sokol, chairman of the Committee for the repair of the Cathedral, addresses bishop Bäuerlein with a request that with his reputation, petitions and personal requests to foreign charities he tries to obtain financial support for the continuation of work on the construction of the cathedral. Since Bishop Bäuerlein was about to go to Rome at the beginning of the first session of the Second Vatican Council (October-December 1962), he promised that during his visit he will do everything in his power and he requested that they make one petition in Latin about the history of the cathedral and its sufferings, which he will submit to Caritas Internationalis in Rome. (NAĐ, Fond BK, 120/1962) From the report of Bishop Bäuerlein on the results of his stay in Rome during the Council, we learn that Pope John XXIII himself interceded for the cathedral, and in his conversations with Australian bishops he said that the cathedral in Đakovo was “the most beautiful and the most amazing church between Constantinople and Venice”. Thanks to this statement, many Bishops who were in Rome at that time became interested in the Cathedral in Đakovo, as well as for its reconstruction, and they promised to send their donations, if they are sent a justified petition and a request for this purpose. In addition to that, a large public interest was aroused by an article published in *L'Osservatore Romano*, February 1, 1963., in which over an entire page was described the history of the cathedral, its suffering, especially during World War II, as well as its need for renovation. In order for possible donations from abroad to be fully used, the next step of bishop Bäuerlein was a demand addressed to Secretariat for Finance of Federative National Republic of Yugoslavia in Belgrade in February 1963, for the purpose of exemption from tax of all donations received from abroad for the reconstruction of the Cathedral. In the petition Bishops especially emphasized that the Cathedral in Đakovo was made a cultural monument in December 1962, and thus protected by the state, and that it represents “a monumental legacy of

great Đakovo Bishop Josip Juraj Strossmayer”, and because of that it deserves a positive resolution of his appeal. (NAĐ, Fond BK, 400/1963, 2350/1963). With the decision from 27 April 1964, Federal Secretariat for Finance freed all foreign donations amounting to 10,000 dollars from paying taxes. (NAĐ, Fond BK, 1152/1964)

During following months Bishop Bäumlein and Cathedral Chapter decided to further boost the diocesan clergy to be more actively involved in raising funds for the restoration of the cathedral. For that purpose, at the beginning of May 1963, a conference was held with all the diocesan deans, during which they received all the relevant information required to organize the collection actions in the parishes.

In the beginning of July of the same year, all the parishes of the diocese of Đakovo were sent the notice about the beginning of collection for the purpose of continuing work on rebuilding the Cathedral. Parishes were also sent propaganda leaflets with note that they are given to all those who donated at least 10 dinars for the cathedral and thus tried to further popularize the action. Thank-you notes to the donors were also anticipated. Particular emphasis was on organizing “cathedral day” in parishes and in the instructions it states that it is the best to organize it during the autumn and winter months, and that the congregation should be informed about it a few weeks in advance and thus make them aware of the need of their active participation in the reconstruction of the Cathedral. (NAĐ, Fund BK 400/1963)

Work on the Cathedral was continued on 8 of July 1963, by signing a contract with a carpenter-craft shop “Standard” from Novi Sad for repairing the roof of the dome at a cost of 455 thousand dinars. (NAĐ, Fund BK 400/1963). That way by the end of the 1963 planned work from the group “emergency interventions” was completed, it was anticipated that during 1964 works from the second and third category (necessary and final interventions) will be started, and it was estimated that it could cost around 20 million dinars. (NAĐ, Fund BK, 2350/1963). However, the planned work was stopped by the new earthquake that hit east of Socialist Republic Croatia on April 13th 1964. The severity of the earthquake was 5.6 on the Richter scale with its epicenter near Slavonski Brod, causing the biggest damages to former municipality of Slavonski Brod, Đakovo, Slavonska Požega, Našice and Vukovar. As far as religious objects the biggest damage was made to Brod, Đakovo, Sibinj and Osijek deanery. Material damage to religious buildings in Đakovo was estimated at 26 million, while the amount of damage through out the diocese exceeded 300 million dinars. Damage to the Cathedral was as follows: from the top of the north tower 500kg heavy stone rose fell down, and with its weight it broke through the roof, smashed and destroyed clockwork on the towers of the cathedral and broke thick six meter beam, on which there was a mechanism. A few decorative towers were demolished on the west side of the Cathedral and a part of the repaired roof was damaged (tiles, sheet metal, wooden construction). Inside the cathedral damaged areas from the second World War suffered additional damage, and new cracks in the walls and the vault appeared. Decorative plaster fell off from several places. Images and altars remained intact, except for the main altar, where one of the four angels that adorned the top of a baldachin fell and broke. Damage was estimated at 12 million Yugoslav dinars. (NAĐ, Fond BK, 900/1964) Due to the new situation, the Episcopal authorities were forced to organize a new, this time more intense collecting action, and help was again required from Caritas headquarters in Rome. Its secretary-general gave instructions to the bishop Bäumlein to open a bank account for the purpose of receiving gifts from abroad. Since for its opening he needed approval of the Secretariat for finance of Federative National Republic of Yugoslavia in Belgrade, Bishop Bäumlein on June 3rd 1964 sends a request for opening an account and a possibility of a discount for the purchasing of goods and materials. (NAĐ, Fund BK, 1152/64) His request probably got positive response, since during 1964 numerous monetary donations



from parishes and dioceses in FNRJ and abroad arrived in the Diocesan ordariate in Đakovo. In addition to donations from the congregation, priests and bishops, Bishop Ordinariate received a help in the form of a loan in the amount of two million dinars approved by the Municipal Fund for the construction in Đakovo and 3 million dinars donations by the Federal Commission for Religious Affairs in Belgrade. (NAĐ, Fond BK, 900/1964, 935/1965) Thanks to received donations and loans, as well as the efforts of Bishop Bäumlein and the Board for Reconstruction of the Cathedral led by Msgr. Sokol, it was decided that during the 1965 the interrupted work on the cathedral is continued, as well as reparation of damage caused by the earthquake. For this purpose, the Conservation Institute in Zagreb was sent the request for issuing a license for construction works at the Cathedral and works finally started in September of 1965. First they signed a contract with the company "Industry of engines and tractors Belgrade" for purchasing, delivering and setting up scaffolding on the towers of the Cathedral. The main task of the first stage of work was setting the stonework to the top of the left tower, after which brickmaking, plumbing and other work should be done. Repair of the clockwork and its posting on the towers of the Cathedral was also anticipated after placing the stonework, in order to avoid any possibility of its damage. New clocks were ordered from the company Philipp Horz from Ulm in Germany. The completion of reconstruction of the Cathedral in Đakovo was difficult to predict, mainly due to the complexity of the job (installation of scaffolding, moving and reinstalling it on the second tower), but also because of the weather conditions, but it was expected that the work could be done in a few months and that the Cathedral will shine in the full splendor for the celebration of the 100th anniversary of the beginning of construction on April 17, 1966. (NAĐ, Fond BK, 300/1965; Đakovo economic newspaper, 1965., 4)

### 3. Conclusion

Restoration of Đakovo Cathedral during 1960s was a time consuming process marked by many difficulties, especially when it comes to the lack of financial resources, but also unforeseen natural disasters that have hampered and further extend the planned renovation. In efforts to rebuild the cathedral most distinguished was former Bishop Stjepan Bäumlein, as the main initiator and the Committee for the restoration of the Cathedral led by Msgr. Josip Sokol and other members of the Cathedral Chapter. They have with their effort, work and contacts with government representatives and local and international charities enabled the works on the cathedral to be successfully brought to an end after number of years. Finally, one should not forget the numerous donations of the congregation, priests and bishops from home and abroad, which arrived in Đakovo especially after the earthquake in 1964, and which greatly contributed that the Cathedral in Đakovo gets the look that one of the most representative religious buildings of the 19th century.

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## **THE ART HERITAGE OF NOBLE FAMILIES OF SLAVONIA AND SRIJEM IN THE CONTEXT OF THE EUROPEAN LEGACY**

### **LIKOVNA BAŠTINA SLAVONSKIH I SRIJEMSKIH PLEMIČKIH OBITELJI U KONTEKSTU EUROPSKOG NASLJEDA**

#### **ABSTRACT**

*In the Gallery of Fine Arts, Osijek the art heritage of the European nobility is being kept and researched, and it is a part of the once copious art collections belonging to both foreign and domestic noble families which were living and working in Slavonia and Srijem from the beginning of the 18<sup>th</sup> to the middle of the 20<sup>th</sup> century (Odescalchi, Eltz, Pejačević, Hilleprand-Prandau, Normann-Ehrenfels). These are Italian, Austrian, German, Hungarian and Croatian noble families whose reputation was based on their political, economic or ecclesiastical power and influence in the Habsburg Empire. Their arrival in today's eastern Slavonia and Srijem is associated with the retreat of the Ottoman Empire and the integration into the Habsburg Empire, as well as the overall restoration. Introducing the material and the history of the family in the national cultural institutions is a challenge and an opportunity to connect with foreign cultural institutions and to present the family history and their artwork in the context of the European legacy. The Gallery of Fine Arts in Osijek plans to research, estimate and present the artworks (ca 800 pieces) of the Slavonian noble families in one large international and multi-annual project named *TheHidden Treasure of the European Nobility*. In this megaproject, each family and their extant art heritage will be given a separate section which is to be linked with the countries from which these families originate, and which are associated with the history of each family (Italy, Germany, Austria, Hungary, Bulgaria, and Serbia). The realization of such exhibition projects can also be accomplished through financial support of the European cultural funds and cooperation with the museums from the abovementioned European countries.*

**Key words:** Gallery of Fine Arts, Osijek, Slavonia and Srijem, collections of noble families, art heritage, European legacy

#### **SAŽETAK**

*U Galeriji likovnih umjetnosti, Osijek čuva se i istražuje likovna baština europskog plemstva, dijelovi nekadašnjih bogatih umjetničkih zbirki, stranih i domaćih velikaških obitelji koje su živjele i djelovale od početka 18. do sredine 20. st. na prostorima Slavonije i Srijema (Odescalchi, Eltz, Pejačević, Hilleprand-Prandau, Normann-Ehrenfels). Riječ je o talijanskim, austrijskim, njemačkim, mađarskim i hrvatskim plemićkim obiteljima koje su svoj ugled temeljile na političkoj, gospodarskoj ili pak crkvenoj moći i utjecaju u Habsburškom carstvu. Njihov dolazak na prostor današnje istočne Slavonije, Srijema vezan je na uzmak*

*Osmanskog carstva i integraciju u monarhijski sustav te cjelokupnu obnovu. Predstavljanje građe i povijesti obitelji u nacionalnim kulturnim ustanovama izazov je i prilika za povezivanjem sa stranim kulturnim institucijama i predstavljanje povijesti obitelji i njihovih umjetnina u kontekstu europskog nasljeđa. Galerija likovnih umjetnosti u Osijeku planira istražiti, valorizirati i prezentirati likovnu građu (oko 800 jedinica) slavonskih velikaških obitelji u jednom velikom međunarodnom i višegodišnjem projektu pod nazivom Skriveno blago europskog plemstva. U mega-projektu svaka će obitelj sa sačuvanom likovnom baštinom dobiti zasebnu dionicu koja će se pokušati povezati sa zemljama iz kojih obitelji potječu i koje su vezane uz prošlost svake obitelji (Italija, Njemačka, Austrija, Mađarska, Bugarska, Srbija). Realizacija ovakvih izložbenih projekata moguća je i uz financijsku potporu europskih kulturnih fondova i suradnje s muzejskim institucijama, iz spomenutih europskih zemalja.*

**Ključne riječi:** Galerija likovnih umjetnosti, Osijek, Slavonija i Srijem, plemićke zbirke, likovna baština, europsko nasljeđe

## 1. Introduction

Modern research of art heritage of the noble families in Slavonia and Srijem is related to the activity of the Gallery of Fine Arts in Osijek (GLUO). Its holdings contain a great number of artworks which originally belonged to these families, and therefore it is the initiator of a large international and multiannual exhibition project *The Hidden Treasure of the European Nobility*. The project aims to explore and present the valuable collections of artworks that were once housed in the palaces located in the area between Virovitica and Ilok.

They are the domestic and foreign families: the Counts Pejačević (Virovitica, Našice, Retfala, Podgorač), the Princes Odescalchi (Ilok), the Counts Eltz (Vukovar), the Barons Hillebrand von Prandau and the Counts Normann-Ehrenfels (Valpovo).

The above-mentioned Croatian, Italian, German, Austrian and Hungarian noble families based their reputation on their political, economic or ecclesiastical power and influence in the Habsburg Empire. Their arrival in today's Slavonia and Srijem is associated with the decline of power of the Ottoman Empire and the integration into the Habsburg Empire and its restoration.

## 2. About the family history

The history of these families during the two and a half centuries (from the end of the 17<sup>th</sup> century until World War II) is inextricably linked to their estates in Slavonia and Srijem where they had impressive palaces, manors, mausoleums and villas. Over that time, thanks to their great economic power, they played an important role in the political, social and cultural development not only of this part of Croatia, but also Europe. They carried out a number of state, military and ecclesiastical functions, and they were awarded important medals. Economic power also influenced the cultural level in which they followed the Central European trends in the construction of architectural complexes, interior design, fashion, music, literature and acquisition of artworks.

The Pejačević Family came from Bulgaria in the late 17<sup>th</sup> century and in the second half of the 18<sup>th</sup> century they divided into Virovitica, Našice and Ruma-Retfala family branches. On the territory of the former Habsburg Empire (Našice, Sopron, Budapest, Vienna, Virovitica, Podgorač, Retfala, Ruma) they had a series of castles, town palaces, mansions and other buildings. One of the most prominent Pejačević family members in the Croatian

historiography is most definitely Count Teodor Pejačević, who was ban and a member of the Našice branch. (Picture 1)

Picture 1 Vlaho Bukovac, Ban Count *Teodor Pejačević*, 1903



Source: Archive of Gallery of Fine Arts, Osijek

The Odescalchi Family came from Rome in the late 17<sup>th</sup> century to the Srijem area. Their rise was based on the ecclesiastical power of Pope Innocent XI who was born into the Odescalchi family (Picture 2). He played a key role in helping Emperor Leopold to defend Europe against the Ottoman Empire and to form the Holy League. The princely family had many estates and palaces in Italy, from Como in the north to Bracciano in the south. However, a part of their great economic power came from the estate on the fertile slopes of Fruška Gora in Srijem.

Picture 2 Unidentified sculptor Pope *Innocent XI Odescalchi*, ca 1688



*Source: Archive of Gallery of Fine Arts, Osijek*

The German Counts Eltz came in the early 18<sup>th</sup> century from the Rhine area to Vukovar on the Danube. The most significant family seat, next to Eltville, was the famous Eltzburg castle. Their reputation was based on the medieval knight tradition, as well as on performing a very respectable function of archbishop and prince-electoral of Mainz, responsible for the election of the emperor of the Holy Roman Empire. The most significant family member was Phillip Karl von und zu Eltz (Picture 3), who received the title of count and the right to purchase the Vukovar estate.

Picture 3 Unidentified painter Archbishop and Prince-elector Count Philipp Karl Eltz, ca 1734



*Source: Archive of Gallery of Fine Arts, Osijek*

The Austrian Baron Petar II Antun Hillebrand von Prandau (Picture 4) held the high court office in Vienna and in the early 18<sup>th</sup> century he was awarded the Valpovo estate along the Drava River. In the 19<sup>th</sup> century the Barons Prandau formed marital ties with the German Counts Normann from Ehrenfels, who administered the Valpovo estate until the World War II.

Picture 4 Ephraim Hochhauser King's secret advisor *Baron Petar II Antun Hillebrandvon Prandau*, ca 1748



Source: Archive of Gallery of Fine Arts, Osijek

### 3. About the history of art collections

After building the palaces on their new estates (in the 18<sup>th</sup> and early 19<sup>th</sup> century) they started buying artworks from foreign artists, usually from the areas where they traveled and lived (Austria, Germany, Italy, Hungary). In the later periods, in their collections there were more

and more works from the domesticated foreign and local artists. In the late 19<sup>th</sup> and early 20<sup>th</sup> century they were commissioning and buying works from domestic artists. This strongly encouraged the development of Croatian art of the period. In their art collections the so called *galleries of ancestors* particularly stand out; they are the graphic or pictorial representations of important people, and through them every noble family demonstrated their historical and social status. Most of the preserved artworks are portraits commissioned from the late 17<sup>th</sup> to the mid-20<sup>th</sup> century. The other genres were preserved to a much lesser extent, namely still lifes, landscapes, allegories, religious paintings and prints covering different themes. By studying the formal and stylistic characteristics of the preserved artworks, by putting them in a time perspective and by understanding the family history and genealogy, it is possible to reconstruct the commissioners and the occasions with regard to which particular works were created, and to identify the direct or indirect influence on the works of fine art outside the family collections. This mainly refers to the architecture of their palaces, mansions, mausoleums, chapels and churches which were under their patronage, but also to the impressive portraits of the prominent family members. These works were commissioned for various institutions and organizations in which these people had a significant role. The role of certain family members as patrons of fine art was particularly explored.

After World War II the art collections of the noble families from Slavonia and Srijem ceased to exist in their original setting. Thanks to the efforts of the staff of a special commission at the then Ministry of Education (the so called KOMZA), the artworks were rescued from physical destruction and assigned to the Croatian museum institutions (Gallery of Fine Arts in Osijek, Našice Local History Museum, Museum of Slavonia in Osijek, Vukovar Town Museum, Virovitica Town Museum, Valpovo Regional Museum, Ilok Town Museum, Museum of Arts and Crafts in Zagreb, Strossmayer Gallery and Department of Prints and Drawings of the Croatian Academy of Sciences and Arts in Zagreb, Croatian History Museum in Zagreb, Modern Gallery in Zagreb, Zagreb City Museum).

A large part of the materials was submitted without proper documentation, and afterwards the artworks were not systematically processed nor considered in the context of their creation or provenance. It was a kind of DAMNATIO MEMORIAE process over the heritage of a social class which became undesirable, given the new political circumstances after World War II. Therefore, the job of indentifying the scattered materials from the collections of noble families lasted for years. The identification was based on the relatively poorly preserved pre-war archival materials (e.g. lists or inventories of the manors, wills, surviving photographs of the interiors of palaces) and the post-war lists of materials compiled by KOMZA.

#### **4. Modern research of the heritage of nobility**

Intensive research of the art heritage of the nobility in Slavonia and Srijem began in 2001. That is when the Pejačević family's heritage in the holdings of the Gallery of Fine Arts in Osijek was explored, and the results were presented in the master's thesis of Jasminka Najcer Sabljak titled *The Art Heritage of the Pejačević Family in the Gallery of Fine Arts in Osijek*. The field of research was expanded to several other families, resulting in a doctoral dissertation by the same author titled *The Art Collections of the Landowning Families in Slavonia and Srijem*. The results of this research were included in the realization of the exhibition project *The Art Heritage of the Pejačević Family*, led by Jasminka Najcer Sabljak from the Gallery of Fine Arts in Osijek and Silvija Lučevnjak from the Našice Local History Museum. They managed to identify most of the artworks which had been transferred after World War II from the Slavonian palaces of the Pejačević family to the National Museum in Osijek (today the Museum of Slavonia Osijek), and afterwards to the Gallery of Fine Arts in Osijek and other Croatian museums.



At the end of 2013 a big study and thematic exhibition *The Art Heritage of the Pejačević Family* was set up in the Gallery of Fine Arts in Osijek. The exhibition was set up in the Art Pavilion in Zagreb at the beginning of 2014, and it will be transferred to Našice and Virovitica. The possibility of its presentation in Ruma (Serbia), Sofia (Bulgaria), Sopron (Hungary) and Vienna (Austria) is also being considered. Intensive work on further research and opportunities for presenting the art heritage of other noble families is being carried out. As part of the permanent display of the Vukovar Town Museum in the newly renovated Eltz Manor the heritage of the Counts Eltz is displayed, and it is linked to the museums in Eltville, Eltzburg and Aschafenburg.

The permanent display of the Ilok Town Museum contains the scarce heritage of the Odescalchi family which has been preserved, and it needs to be associated with their palaces and manors in Rome and the rest of that region.

The Valpovo Regional Museum has in its permanent display a part of the rich art heritage of the Hillebrand von Prandau and Normann-Ehrenfels families, and their history needs to be associated with their heritage in Vienna and Rothenthurm (Austria), Athens (Greece) and Ehrenfels in Germany.

## 5. Conclusion

After examining the background of the families presented, as part of the project *The Hidden Treasure of the European Nobility*, it is possible to associate the materials researched with the culture of the countries the families originate from. These artworks have been preserved and handed over as legacy to future generations representing the prime evidence of our cultural history, directly linked to the European legacy. With these exhibitions the Gallery of Fine Arts in Osijek will present the most significant part of its holdings and also demonstrate how artworks from the collections of noble families can be presented as part of our cultural identity. This research is not only aimed at presenting the artworks in museums, but also at including this knowledge in the process of revitalization of the palaces of noble families in this area, as a vital part of cultural tourism. With such presentation of its heritage the eastern part of Croatia will be included in the map of the common European cultural heritage.

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## **CULTURAL INSTITUTIONS IN EASTERN CROATIA IN THE FUCTION OF THE CROSS-BORDER COOPERATION**

### **KULTURNE INSTITUCIJE U ISTOČNOJ HRVATSKOJ U FUNKCIJI PREKOGRANIČNE SURADNJE**

#### **ABSTRACT**

*Along with the accession into the European Union, Croatia gains substantial chances for gaining the financial aids from the European Funds. The importance of the human and institutional resources the Croats can modulate, apply for and conduct the projects is rather big both for the individuals, institutions, as well as the whole society.*

*The cultural institutions, whose main consumers are the national budget users or which depend on the donations of private companies, as well as business subjects, with the accession into the European Union are getting new opportunities for financing, consequently, the boost of their own potentials, as well as they getting their projects started. It is well know that the advantage of cultural institutions lies in the ability of popularization of the crucial social subject, as well as expanding the communication forums and the dialogues where there is a lack of cooperation, or where it's rather insufficient. So having in mind the new potential sources of financing the cultural institutions on the one hand, and the advantages of culture in initiating the cooperation, networking different subjects on the social scene on the other, culture can contribute to the cooperation in the border areas where it is either non-existent or insufficiently developed, with the obvious difference compared to the know practices used to date. It would not depend on the state's or local sources of financing.*

*This paper will show the potential areas of cooperation where culture can achieve results in the cross-border cooperation, alongside the possibilities of networking both the cultural institutions, and other active participants on the social scene; from the business people, to the civil institutions. It will also elaborate on the results in the cross-border cooperation to date together with the advantages that such projects offer. Finally, the steps in initiating the collaboration between the cultural institutions and the legislative framework that is necessary to accomplish as the pre-condition of such form of cooperation.*

**Keywords:** *culture, cross-border cooperation, European Union, European Funds*

#### **SAŽETAK**

*Ulaskom u Europsku Uniju Hrvatskoj se otvaraju velike mogućnosti za povlačenje značajnih finansijskih sredstava iz europskih fondova. Važnost ljudskih i institucionalnih resursa koji mogu napisati, aplicirati i provesti projekte od iznimne je važnosti kako za same pojedince i institucije tako i za društvo u cjelini. Kulturne institucije koje su uglavnom korisnici državnog proračuna ili ovisе o donacijama privatnih ili poslovnih subjekata, ulaskom u Europsku Uniju dobivaju nove mogućnosti za financiranje a time i razvoj vlastitih potencijala kao i pokretanje različitih projekata. Poznato je da prednost kulturnih institucija leži u sposobnosti*

*popularizacije važnih društvenih tema i otvaranju prostora komunikaciji i dijalogu na onim područjima gdje je suradnja ili nepostojeća ili nedovoljna. Imajući tako s jedne strane u vidu nove potencijalne izvore financiranja za kulturne institucije, kao i s druge strane prednosti kulture u pokretanju suradnje i umrežavanju različitih aktera na društvenoj sceni, kultura u novim okolnostima može doprinijeti suradnji u graničnom području gdje je ona nepostojeća ili nedovoljno razvijena, s tom razlikom prema dosadašnjoj praksi, da više ne mora ovisiti o oskudnim državnim ili lokalnim izvorima financiranja. Ovaj rad prikazat će područja suradnje na kojima kultura može postići rezultate u prekograničnoj suradnji kao i mogućnosti umrežavanje ne samo između kulturnih institucija nego i drugih aktera na društvenoj sceni, od privrednih subjekata do civilnih institucija. U radu će biti prikazani dosadašnji rezultati u prekograničnoj suradnji i prednosti koje takvi projekti otvaraju. Također, analizirat će se potrebni koraci u poduzimanju suradnje između kulturnih institucija i zakonodavni okvir koji je potrebno ispuniti kao preduvjet suradnje.*

**Ključne riječi:** kultura, prekogranična suradnja, Europska Unija, europski fondovi

## **1. Introduction**

The area of Eastern Croatia encompasses three historical units: Slavonija, Baranja and Srijem. Although each of them comes with its own peculiarities, due to the mutual cultural heritage and historical dynamics that has shaped their evolution, they are considered as a unique and coherent unit. In the past the area of Eastern Croatia was connected to the regions that nowadays belong to Hungary, Serbia, and Bosnia and Herzegovina, and makes a related cultural space together with them. The similarities in traditions and lifestyle have survived to date, but with the delineation of national borders and struggles in the 20th century the old connections have become weaker, or have rather vanished. In the contemporary society where communication and interconnectedness of the social factors present the foundation of prosperity of a certain space, reviving and strengthening of the relations Eastern Slavonia had with its neighbouring regions presents a grand opportunity for future development and prosperity, and establishing social connections and networking can be done by the cultural institutions.

## **2. The condition of the cultural institutions of Eastern Croatia and their perspectives**

The cultural institutions of Eastern Croatia, as museums, archives, theatres and libraries have been facing great problems when it comes to financing their primary activities which are rather substantial especially in terms of their enterprises as embarking infrastructural projects necessary for the future development of their activities. Their financing almost completely comes from the funds of the public financing. The expenditures of the staff and the activities of that institutions are coming mostly from the state's, province's or municipality's budget. The donations in culture in Croatia are rather humble and are mostly allocated to a specific project, but substantial investments in infrastructure or systemizing application of the appropriated programmes barely exist. The profit from entrance fees or memberships is too little to cover the aforementioned expenses and to guarantee making profit in the future, whilst the need for extra funding is never-ending.

Table 1 Annual budget of the Ministry of Culture, 2008 - 2014

Year	Budget in kuna
2008	1,192.705.911
2009	1,115.790.997
2010	1,012.210.480
2011	953.564.151
2012	833.206.812
2013	817.829.426
2014	770.808.161

Source: [www.ministarstvokulture.hr](http://www.ministarstvokulture.hr)

Combining the potential of the cultural institutions in overcoming the national borders on the one hand, and the need for additional financing sources the culture institutions in the East have, the sources from the funds of the European Union present a great opportunity in achieving both goals. With their use, we can make culture a bridge between states, and also facilitate great culture funding problems in Croatia. The country will have substantial financial means at disposal in the future and this will be of crucial importance for the social actors to attract them to Croatia. The crucial element for that will be the human resource – the group that will write and pursue such projects, as well as the elaborate strategies of cultural development of the level of state, provinces and municipalities, which are the political bodies the projects are to be based on.

With the potentially new sources of financing, a new space is created for the cultural institutions to intensify their activity. This is extremely important if one considers the growing role of culture in the economic growth of an economy in developed countries (Yuwen 2012., 2.)<sup>194</sup> The results of researches in the European Union show that culture and the creative department in the total European GDP take more than 4.5%, and that those employed in the culture division make 4% of all the employed (8.5 million employed in culture, and indirectly even more).<sup>195</sup> Although Croatia, and especially its Eastern area, is in the economic crisis, the development of the cultural institutions would guarantee the creation of the cultural infrastructure that would guarantee hiring and creating new contents, and offers to the citizens of Eastern Croatia in the future, under the condition the economy grows. Good interregional relations with the neighbours to which culture can contribute are also important for the trade of with the surrounding countries. It is a law of economics that trading is the most active between related and neighbouring countries, so establishing good connections with neighbours has an economic justification (Krugman 2009., 15.) The development of the cultural infrastructure is also important for the enrichment of the offers in tourism.

Without a good infrastructure and contemporary contents that it offers, there is no real perspective. Finally, those countries with a high GDP allocate more means to culture, both from the state's budget, and on the level of private needs, so it is appropriate to expect a similar trend to happen in Croatia.

<sup>194</sup> [http://www.culturaldiplomacy.org/academy/content/pdf/participant-papers/2012-03-biec/On\\_the\\_Cultural\\_Economy-\\_Yuwen\\_Dai.pdf](http://www.culturaldiplomacy.org/academy/content/pdf/participant-papers/2012-03-biec/On_the_Cultural_Economy-_Yuwen_Dai.pdf) (accessed 17 April 2014)

<sup>195</sup> [http://europa.eu/rapid/press-release\\_MEMO-13-1009\\_en.htm](http://europa.eu/rapid/press-release_MEMO-13-1009_en.htm) (accessed 20 April 2014)

Table 2 Evolution in per capita contributions to culture in selected EU member states 2000 – 2010/2011

	2000	2005	2009	2010/2011
Austria	225	250	274	273
Denmark	290	352	294	300
Croatia	/	/	77	72
Italy	101	112	134	117
Netherlands	256	298	331	338
Romania	/	/	50	41

Source:

[http://www.asoulforeurope.eu/sites/www.asoulforeurope.eu/files/media\\_pdf/ASFE%20Public%20Expenditure%20on%20Culture%20as%20a%20Percent%20of%20GDP.pdf](http://www.asoulforeurope.eu/sites/www.asoulforeurope.eu/files/media_pdf/ASFE%20Public%20Expenditure%20on%20Culture%20as%20a%20Percent%20of%20GDP.pdf) (accessed 17 April 2014)  
(The original tabular display was shortened for this article)

### The European Funds

Finds Europe can have multiple significance in the development of that part of Croatia, and due to them culture can overcome the marginal position that it had so far. The advantage is surely the existing infrastructure of the cultural institutions that is a good starting point for the development of the cross-border cooperation, but the significant lack is the insufficient corpus of qualified individuals, especially those competent to work in these projects.

### 3. Cultural institutions in Eastern Croatia and neighbouring regions

Museums directly communicate with the public through exhibits, workshops and seminars, as they are constantly focused on the public. Due to that, they have the biggest ability among the cultural institutions to popularize the cross-boarder cooperation and topics through public action. Yet, considering the area of action, museums differ among themselves and are not always capable to participate in all the projects. A smaller number of museums is specialized in a certain area. They are mostly established around significant historical locations (as Vučedol, dedicated to the Vučedol culture), some are dedicated to the traditional culture (the county museum Zmajevac), some to a certain theme (The Museum of Forrestry Bošnjaci), whereas some are dedicated to an event or an individual (for instance, the Memorial museum of Josip Juraj Strossmayer in Đakovo). Yet most of the museums are not thematically organized which means they are accumulating materials from their area of action and they are not limited to a certain theme, which suggests the possibility of different types of collaboration in the context of different project themes. In the area of five Slavonian counties, there are twenty nine museums and galleries, according to the Museum Documentation Center. There are individual collections alongside, which make forty two museums, galleries and collections all together.<sup>196</sup> The biggest number is to be found in the Osijek-Baranja County, namely eighteen of them. Seven are in the Brod-Posavina County, nine in Vukovar-Srijem County, and Virovitica-Podravina and Požega-Slavonija four, respectively. Due to such distribution, the museums make the most potent cultural institutions for getting the funds from Funds Europe, so together with the Tourist Boards they should be the carriers of the initiatives of creating, writing and applying the propositions. Museums from across the border are, therefore, put forth as logical partners in establishing the collaboration. Most of them are to be found in the Republic of Serbia, namely AP Vojvodina, the Republic of Hungary, and significantly less in the Republic of Bosnia and Herzegovina. Those museums are to be found in the neighbouring regions with which Croatia used to share the cultural traditions, and have some overlapping points so that the historical heritage in this case makes a good foundation

<sup>196</sup> <http://www.mdc.hr/hr/muzeji-u-hrvatskoj/hvm-pregled-muzeja/>, (accessed 16 April 2014)

for establishing the cross-border cooperation. The social actors from those areas could collaborate with the institutions of Eastern Croatia during the implementation of the IPA Programme, so a certain experience of the cross-border collaboration already exists.

The IPA Programme was a pre-accession fund of the European Union for Croatia during the period 2007-2013. It was initiated as an aid to the candidate countries and potential candidate countries in their adjustment and implementation of the *acquis communautaire*, as well as the preparation for the usage of the Cohesion Fund and Structure Funds. Apart from these objectives, the programme has enabled the establishing of cooperation and communication in the border areas between Croatia and the neighbouring countries, and the creating the network of partnership.

The administrative units which were set close to the border and were considered the joint areas had the possibility to partake in the projects. Considering that the counties of Eastern Croatia could participate in the IPA Programme, those areas in the neighbouring countries that have participated in the programme are put forth as the ones the cultural institutions of Eastern Croatia would collaborate with in the future.

Figure 1 Program area for Program IPA Croatia - Hungary



Source: <http://www.hu-hr-ipa.com/>

Figure 2 Program area for Program IPA Croatia - Serbia



Source: <http://www.croatia-serbia.com/>

Figure 3 Program area for Program IPA Croatia - BiH



Source: <http://www.cbc-cro-bih.net/>

A research about the frequency of the museums with which the Eastern Croatian museums could have collaborated was conducted for the purposes of this work. The results have shown the museum potentials in the neighbouring countries that could have partaken in the projects. It has been established that in three Hungarian counties could have taken part in the IPA Programme (Zala, Somogy i Baranya) there are thirty two museums.<sup>197</sup> In five Serbian districts (North Bačka District, South Bačka District, West Bačka District, Srem and Mačva) there have been thirty seven museums erected,<sup>198</sup> while there are eighteen eligible museums in the municipalities and counties of Bosnia and Herzegovina.<sup>199</sup> The results have clearly shown that there is potential for the cultural cooperation between the museums of Eastern Croatia and the neighboring countries, and that the main institutional precondition for the collaboration is filled.

Alongside the number of museums in Eastern Croatia, the number of other cultural institutions of the region was investigated. It has been established that there are nine theatres in Eastern Croatia. Most of them are in the Osijek-Baranja County, namely four. In Vinkovci, in the Vukovar-Srijem County there are two, two as well in Brod-Posavina County (Slavonski Brod), and one in Požega and Virovitica in Virovitica-Posavina County, respectively.<sup>200</sup> Of all

<sup>197</sup> <http://www.ace.hu/ceicom/hungary/vlmp.html> (accessed: 17 April 2014)

<sup>198</sup> <http://muzejirade.com/muzeji/> (accessed 17 April 2014)

<sup>199</sup> <http://www.icombih.org/> (accessed 17 April 2014)

<sup>200</sup> <http://www.min-kulture.hr/kazalistapopis.aspx> (accessed 19 April 2014)

the cultural institutions, archives are the fewest. They exist in Osijek, Vukovar, Požega and Virovitica.<sup>201</sup> Libraries are the most numerous institutions, but most of them are to be found in primary and secondary schools. Considering that their activity does not exceed the boundaries of schools, and that they are mostly related to education, they were not included in this research, but rather the specialized libraries like the public libraries and those tied to certain institutions are taken into consideration. It has been established that there are twenty three such libraries in Osijek-Baranja County, fifteen in the Vukovar-Srijem County, seven in the Brod-Posavina County, and five in the Požega-Slavonija and Virovitica County, respectively.<sup>202</sup>

Table 3 Number of museums, theatres, archives and libraries in Osijek-baranja county, Vukovar-Srijem county, Brod-Posavina County, Požega-Slavonia County and Virovitica-Podravina county

	<i>OBC</i>	<i>VSC</i>	<i>BPC</i>	<i>PSC</i>	<i>VPC</i>
<i>Museums</i>	18	9	7	4	4
<i>Theaters</i>	4	2	2	1	1
<i>Archives</i>	1	1	1	0	1
<i>Libraries</i>	23	15	7	5	5

Sources: [www.ministarstvokulture.hr](http://www.ministarstvokulture.hr); [www.mdc.hr](http://www.mdc.hr), [www.lib.irb.hr](http://www.lib.irb.hr)

The results show that Eastern Europe possesses enough of institutional potentials and that they ought to be used to get funding from the Funds Europe. However, the main lack that is pointed out is the mentioned deficit of qualified experts who could make, write and implement the project proposals; something all the related institutions should work on in the future. A list of forty three project partners who got funding during the Programme Culture 2007-2013 contribute to that. 3,780.084,04 kuna has been approved for the partners in the Republic of Croatia. Among the users of the approved funding culture associations dominate, while other institutions are less covered. Only two museums, namely the Ethnography Museum of Zagreb and the Museum of Contemporary arts have managed to get funding. The approved sum for those museums is 260.624,00 kuna, which makes 0.7% of the total approved funding for the projects in Croatia. None of the cultural institutions from Eastern Europe has participated in the application for the funding by the Culture Programme 2007-2013.<sup>203</sup>

The accession into the European Union offers a great opportunity to Croatia. The cultural institutions will not only be able to embark on a collaboration with all the European Union institutions in the following period, but also via the new culture programme initiated by the European Commission named „Creative Europe Programme 2014-2020“. From the arguments explained earlier in the text, it is clear that there is potential in the neighbouring countries of Eastern Croatia, but the aforementioned cooperation effects in the region and the real contribution to the economic development based on the established partnership have to be taken into consideration.

<sup>201</sup> <http://www.min-kulture.hr/default.aspx?id=207> (accessed 19. April 2014)

<sup>202</sup> [http://lib.irb.hr/web/hr/knjiznice/itemlist/category/34-knjiznice\\_u\\_hrvatskoj.html](http://lib.irb.hr/web/hr/knjiznice/itemlist/category/34-knjiznice_u_hrvatskoj.html) (accessed 19 April 2014)

<sup>203</sup> [http://www.min-](http://www.min-kulture.hr/userdocsimages/Odobreni%20programi%20u%202013.%20godini/Sufinanciranje%20po%20Pravilnik)

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#### 4. Creative Europe Programme 2014 – 2020

In 2014 the European Commission started a new cultural programme, Creative Europe 2014 – 2020. It is designed for cultural projects and one of the most important goals is establishing cross-border collaboration and the cooperation of cultural institutions across Europe. The proposed budget in the period from 2014 to 2020 is 1.46 billion Euro, which represents the world's biggest support for culture and creative industry. Numerous artists, cultural employees and institutions will be included in the programme. The European Commission estimates that during the period between 2014 and 2020 approximately 8000 cultural organizations, 300.000 artists, cultural employees and their products will receive cross-border cooperation support. The programme consists of two basic parts or subprogrammes, Culture and MEDIA. The "Culture subprogramme" is intended for cultural institutions and artists, while MEDIA is intended for the European film and audiovisual industry. The programme will also be dedicated to translating European literature with more than 4500 books and literary works. The goal is to help the distribution of more than 1000 European films and allow the field employees to improve and develop an international career. In addition, all small cultural operators will be given the possibility of financial guarantee with the total funding of 750 million Euro in the form of bank loans, which will make access to their project funding easier.<sup>204</sup>

Although the "Creative Europe Programme 2014-2020" is designed primarily for the EU member countries, other European countries will also be able to participate. However, it is important to keep in mind that only some biddings will be open for non-member countries, while in some areas they won't be able to apply for the programme's resources. This is especially important for the cultural institutions in Eastern Croatia, considering that the two regions with which eastern Croatia museums can cooperate are a part of non-member countries.

Table 4 Eligibility of organisations from non-EU countries

Country	Eligible to apply to Culture Sub-programme?	Eligible to apply to MEDIA Sub-programme?
Serbia	Yes	No
Bosnia and Herzegovina	Yes	Yes

Source: <http://ec.europa.eu/culture/creative-europe/documents/calls/eligible-countries.pdf> (accessed 20 April 2014)

(The original tabular was shortened for this article)

#### 5. Conclusion

In order to fulfill their social role, cultural institutions in Eastern Croatia have a permanent need for financial resources. Most of the current resources for financing cultural activities come from public sources and, since they are becoming scarce due to the economic crises, it is necessary to find new possibilities for financing cultural needs. By entering the European Union, significant possibilities for acquiring EU funds resources are presented in Croatia for all social employees, including cultural institutions. Cultural institutions activities can overcome national borders and develop cooperation between related institutions in other countries and European funds resources can be of great help. Considering that one of the basic goals of the EU is overcoming national borders and establishing regional cooperation networks, cultural institutions in Eastern Croatia can have a significant role in that process. It

<sup>204</sup> [http://ec.europa.eu/culture/creative-europe/index\\_en.htm](http://ec.europa.eu/culture/creative-europe/index_en.htm) (accessed 20 April 2014)

is clear that an institutional network exists in Eastern Croatia as well as its neighbour regions. On the other hand, cooperation doesn't only benefit cultural institutions and audiences, but also directly benefits national economy. The development of cultural infrastructure and supply creates conditions for developing a region's tourist attractions and possibilities for further growth of cultural industry and employment. However, a significant problem lies in the fact that the Eastern Croatia cultural institutions either lack qualified experts, or have none who would be able to devise, write and carry out projects. That is why all the institutions in charge are to put in significant efforts for overcoming the current state so that the conditions for cultural institutions to use the possibilities of EU funds could be created as soon as possible. Eastern Croatia cultural institutions can become a bridge between their and the neighbours' regions and significantly improve their infrastructure and project activities through European resources. A stimulus for human potential development should also be the opening of the new EU programme "Creative Europe 2014-2020", which will provide the cultural institutions with 1.46 billion Euro.

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**BANKING BUSINESS INDICATORS IN CROATIAN ECONOMIC SURROUNDINGS****POKAZATELJI BANKOVNOG POSLOVANJA U EKONOMSKOM OKRUŽENJU REPUBLIKE HRVATSKE****ABSTRACT**

*In European and developing countries banks are dominant financial institutions in the process of financial intermediation, especially seen on smaller, less developed territorial counties. The paper analyses banking indicators according to counties in Croatia and compares them with indicators of economic development in each county. Recent data on mentioned variables have been collected from official sources and analysed using exploratory data analysis tools for outliers detection, various concentration indicators and using correlation and cluster analysis. The findings in this paper reveal high values for certain indicators in bank business for certain counties in Croatia and relatively significant concentration for most indicators. Clusters of similar counties are recognised after a multivariate cluster analysis was applied. The research results gained might be a useful tool for government structures in forming regional policies, as well as for financial institutions, primarily banks, in shaping market approach and re-examining market potential of a particular county. In the analysis conducted, the position of County of Osijek-Baranja has been stressed out.*

**Key words:** banking intermediation, economic surroundings, concentration measures, cluster analysis, dendrogram, County of Osijek-Baranja

**SAŽETAK**

*U europskim financijskim sustavima i zemljama u razvoju, u financijskom posredovanju*

*prednjače banke kao dominantne financijske institucije, a ukoliko se mehanizam financijskog posredovanja promatra na užim teritorijalnim jedinicama nižeg stupnja ekonomskog razvoja, dominacija banaka još je izraženija. U radu se analiziraju podaci o poslovanju banaka po županijama Republike Hrvatske i uspoređuju se s pokazateljima ekonomske snage po županijama. Recentni podaci spomenutih varijabli prikupljeni su iz službenih izvora te su analizirani primjenom metoda statističke eksplorativne analize otkrivanja outliera, izračunom niza koncentracijskih omjera te uporabom korelacijske i klaster analize. Nalazi u radu otkrivaju netipično velike vrijednosti pojedinih indikatora bankovnog poslovanja za pojedine županije te relativno značajnu koncentraciju po većini indikatora. Multivarijantnom klaster analizom razdvojeni su klasteri županija sličnih karakteristika. Zaključci u radu korisni su nositeljima ekonomskih politika u oblikovanju razvojnih regionalnih politika, kao i financijskim institucijama, prvenstveno bankama, u oblikovanju tržišnog pristupa i preispitivanju tržišnog potencijala pojedine županije u Republici Hrvatskoj. U provedenoj analizi posebno je istaknut položaj Osječko-baranjske županije.*

**Ključne riječi:** bankovno posredovanje, ekonomsko okruženje, mjere koncentracije, klaster analiza, dendrogram, Osječko-baranjska županija

## 1. Introduction

Financial intermediation of banks and other financial intermediaries is a key form of channelling and allocating surplus funds. Certain functions and advantages resulting from financial intermediation are decreased transaction and information costs, liquidity, risk sharing, asset transformation, diversification, reduction in information symmetry, etc. (Mishkin and Eakins, 2012, 62-67).

Significance of banks, institutional investors or other financial intermediaries depends on the type of financial system. Financial literature and research differentiate two types of financial systems: bank-based and market-based. In a bank-based system, banks and credit financing is the core of this kind of financial system. Since other, more or less developed nonbanking financial institutions exist together with the above mentioned ones, the level of intermediation in this type of system is high. In this kind of financial system, bank and savings association's deposits are the most important investment opportunity, while the corporations and households are dependent on bank financing. Financial systems in Europe, Japan and in developing countries are bank-based financial systems. Market-based financial systems, such as ones in the USA and partially the UK, are based on highly developed capital markets and nonbanking financial institutions with a strong and well diversified banking sector. The efficient capital allocation results in a developed, open, efficient and a competitive financial market (Leko, 2012, 5-6).

Numerous researches have considered the influence of financial structure on economic growth (Allen and Gale, 1999, Levine, 2002, Demirgüç-Kunt and Levine, 2001, Areatis et al, 2005). Levine claimed that the structure of financial sector is irrelevant and has no influence on the economic growth. Nor bank-based or market-based financial systems could not be entirely related to economic growth. Instead, the research showed that the total significance of financial services, banks and financial market combined is relevant for the economic growth. The overall development of financial system is strongly related to economic growth, however no evidence point to superiority of either bank or market-based financial system (Levine, 2002, 398).

Badun has done a thorough review and research analysis of the influence of banks' financial intermediation on economic growth. The paper gives no definite conclusions. It concludes that, together with the prevailing opinion of the positive influence of financial intermediation on economic growth, additional research need to be conducted (Badun, 2009, 138).

Papers on this topic are represented in the research done on the topic of financial and economic integration and its consequent influence on financial intermediation and economic growth. Aziakpono concludes that the development of financial system and financial intermediation with a consequent economic growth is a prerequisite for achieving positive effects on monetary, financial and economic integrations (Aziakpono, 2003).

Though papers and research on influence of banks and financial intermediation on economic growth on the sample of different countries are numerous, regional analyses are inadequate. Valverde et al. investigated the influence of financial intermediation on economic growth on the example of territorial units – Spanish regions. They emphasize that such an approach in this analysis is more relevant since regional data are more homogeneous, legal framework is the same, while the financial system is unambiguous and defined. The results obtained using the method of dynamic panels on the example of regions in Spain, confirm a positive and significant connection between bank intermediation and regional growth (Valverde et.al., 2007, 311-326).

This paper analyses and compares selected banking and economic indicators according to counties in Croatia. Recent data on mentioned variables have been collected from official sources. For the purpose of this paper the desk-research of the official data for 21 counties of Croatia for 2010, and statistical analysis methods appropriate for such cross-sectional data are applied. The descriptive exploratory analysis, using variability and concentration measures, correlation analysis methods, and finally cluster analysis are conducted.

The aim of this paper is to analyse the scale of bank intermediation on the county level, to re-examine the level of concentration of banking indicators and compare bank indicators to specific economic indicators. The findings in this paper reveal high values for certain banking indicators for certain counties in Croatia and relatively significant concentration for most indicators. Clusters of similar counties are recognised after a multivariate cluster analysis was applied. Position of County of Osijek-Baranja has been pointed out in particular chapter.

## **2. Data and research methods**

### **2.1. Banking and economic indicators according to counties in Croatia**

The paper analyses banking and economic indicators according to counties in Croatia. Bank indicators according to counties are: bank's net assets, nonperforming loans<sup>205</sup>, number of bank branches, number of banks with branches in certain county and number of ATMs. The GDP, number of inhabitants, GDP *per capita*, registered unemployment (number and rate) and the net salary are economic indicators used for counties. The data mentioned above are either publicly available or can be obtained at request from the CNB, CBS and CPII. The data on net assets and nonperforming loans refer to counterparties from Croatia with headquarters or residence in a certain county. The total net assets of banks at the end of September 2013 was 362.4 billion HRK, nonperforming loans were 43.4 billion HRK, while banks had 1,251

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<sup>205</sup> Loans categorised in risk category B1, B2, B3 and C according to methodology of CNB

branches and 4,083 ATMs on Croatian territory. The City of Zagreb participates in this structure with 59.2 % of bank's net assets, 40.5% nonperforming loans, and together with County of Zagreb makes up to 23.6% of all branches and 28.4% off all ATMs. The share higher than 5% in the bank's net assets have only County of Split-Dalmatia with 5.5% and County of Primorje-Gorski kotar with 5.0%. The share of nonperforming loans higher than 5% is present in more counties: Split-Dalmatia with 8.9%, Osijek-Baranja with 6.6%, Istria and Zagreb with the same share of 5.5% and Primorje-Gorski kotar with 5%. Table 1 shows the values of banking indicators according to counties in Croatia on September 30th, 2013.

Table 1 Selected banking indicators according to counties in Croatia on September 30th, 2013

County of	Net assets (thous. HRK)*	Nonperforming loans*** (gross amount, thous. HRK)*	Bank branches*	Banks with branches in certain county**	ATMs**
Bjelovar-Bilogora	3,669,243	738,324	25	11	70
Slavonski Brod-Posavina	4,642,279	969,297	32	14	76
Dubrovnik-Neretva	6,365,843	1,273,670	61	13	175
City of Zagreb	214,383,735	17,592,728	-	-	-
Istria	13,326,926	2,402,374	107	17	343
Karlovac	3,601,401	476,797	32	12	93
Koprivnica-Križevci	4,519,059	534,055	33	12	68
Krapina-Zagorje	4,155,778	774,206	29	8	97
Lika-Senj	1,616,954	254,289	19	8	56
Medimurje	3,589,874	820,700	30	12	86
<b>Osijek-Baranja</b>	<b>14,390,857</b>	<b>2,855,380</b>	<b>76</b>	<b>17</b>	<b>202</b>
Požega-Slavonija	2,306,342	296,461	24	13	51
Primorje-Gorski kotar	18,259,722	2,185,434	106	23	374
Sisak-Moslavina	5,535,925	813,292	35	10	109
Split-Dalmatia	19,969,930	3,873,650	151	20	466
Šibenik-Knin	4,495,508	919,494	41	11	144
Varaždin	7,604,702	1,594,110	39	15	132
Virovitica-Podravina	2,672,419	465,495	27	11	44
Vukovar-Sirmium	5,031,069	1,108,237	31	13	112
Zadar	8,204,218	1,092,554	58	18	227
Zagreb	14,085,680	2,399,673	295	31	1158
<b>Total</b>	<b>362,427,465</b>	<b>43,440,221</b>	<b>1,251</b>	<b>31</b>	<b>4,083</b>

Remarks: \* Data on net assets and nonperforming loans refer to counterparties from Croatia with headquarters or residence in a certain county, \*\* Data for City of Zagreb are included in County of Zagreb, \*\*\*Loans categorised in risk category B1, B2, B3 and C according to methodology of CNB.

Source: CNB, data obtained at request

Economic indicators shown data from year 2010, due to limitations of data collected. The dominance of the City of Zagreb is less obvious. The share of City of Zagreb in the total GDP is 33.3% in total population 17.9 % and in registered unemployment 12.5 %, GDP per capita in Zagreb makes up for 221.2% of the average GDP per capita, 127.3% of net salary in relation to the average salary, and 152.6% of bank assets in relation of the GDP to the average value in Croatia. Table 2 shows indicators of economic surrounding in 2010.



Table 2 Selected economic indicators according to counties in Croatia, 2010

County of	GDP, thous. HRK	Inhabitants in thous.	GDP per capita, HRK	Registered unemployment	Net salary	Net assets / GDP
Bjelovar-Bilogora	6.052.965	124	48.966	12.415	4.498	62.5
Slavonski Brod-Posavina	6.696.884	172	39.030	16.297	4.649	77.0
Dubrovnik-Neretva	9.739.922	128	76.189	7.459	5.240	72.7
City of Zagreb	107.699.671	793	135.853	37.712	6.245	170.8
Istria	20.199.996	215	93.968	7.949	5.269	63.3
Karlovac	7.044.337	131	53.946	11.894	5.119	54.0
Koprivnica-Križevci	7.010.189	119	58.918	7.375	4.874	61.8
Krapina-Zagorje	6.017.586	136	44.338	6.835	4.549	73.3
Lika-Senj	2.957.902	49	60.315	3.305	4.923	52.2
Međimurje	6.774.139	118	57.450	7.088	4.251	62.4
<b>Osijek-Baranja</b>	<b>17.457.779</b>	<b>318</b>	<b>54.929</b>	<b>32.723</b>	<b>4.774</b>	<b>86.5</b>
Požega-Slavonija	3.573.539	81	44.105	5.795	4.605	66.9
Primorje-Gorski kotar	27.312.057	304	89.936	17.878	5.312	74.0
Sisak-Moslavina	10.326.890	170	60.924	18.454	5.014	55.8
Split-Dalmatia	28.404.837	483	58.814	37.871	5.089	88.9
Šibenik-Knin	6.491.838	113	57.469	7.742	5.031	70.4
Varaždin	10.759.218	180	59.811	9.716	4.345	76.4
Virovitica-Podravina	3.699.194	87	42.761	9.242	4.415	69.4
Vukovar-Sirmium	7.870.330	196	40.224	18.748	4.630	72.2
Zadar	10.523.022	177	59.612	10.672	5.137	74.8
Zagreb	17.194.672	329	52.202	15.256	5.085	93.1
<b>Total</b>	<b>323.806.969</b>	<b>4.419</b>	<b>61.417</b>	<b>302.425</b>	<b>4.907</b>	<b>111.9</b>

Source: CBS and HZZ

## 2.2. Position of County of Osijek-Baranja

County of Osijek-Baranja is the fourth largest county in Croatia with 4,149 m<sup>2</sup> and a share of 7.34% in the total Croatian territory. According to data from 2010, County of Osijek-Baranja had a population of 318,000 or 7.2% of total population, taking the fourth place among Croatian counties. Its GDP was around 17,458 million HRK with a 5.4% share in the national GDP, being the fifth county according to GDP size. According to registered unemployment in 2010 and 2012, it was the third county in Croatia with the share of 10.8% and 10.6%. County of Osijek-Baranja was 13th in 2010 according to GDP per capita and net salary, fourth according to bank net asset and GDP ratio.

Table 3 Position of County of Osijek-Baranja according to selected indicators

	Share in 2010 (%)	Share in 2012. (%)	Rank in 2010 (No. 1 is largest)	Rank in 2012 (No. 1 is largest)
Net assets (thous. HRK)	4.4	4.1	5	5
Nonperforming loans (gross amount, thous. HRK)	6.9	6.4	4	3
Bank branches	6.7	6.2	5	5
Bank with branches in certain counties	51.5	58.1	6	4
ATMs	4.9	4.8	6	6
GDP, thous. HRK	5.4	-	5	-
Inhabitants in thous.	7.2	-	4	-
Registered unemployment	10.8	10.6	3	3

	Share in 2010 (%)	Share in 2012 (%)	Rank in 2010 (No. 1 is largest)	Rank in 2012 (No. 1 is largest)
GDP per capita, HRK	-	-	13	-
Net salary, HRK	-	-	13	-
Net assets / GDP	-	-	4	-

Source: Author's calculations

According to banking indicators, County of Osijek-Baranja had 14,691 million HRK in net assets, which made around 4.1% of total bank assets, taking the fifth place among Croatian counties according to bank's net assets. According to nonperforming loans, County of Osijek-Baranja is on third place in 2012, with a share of 6.4% in total nonperforming loans and with an absolute amount of 2,478 million HRK. In 2012 58.1% of all banks in Croatia were doing business in County of Osijek-Baranja, while the share of bank branches in this County was 6.2% and for ATMs 4.8%.

### 2.3. The research methods applied

In this paper the results of statistical analysis applied on official data for large number of banking and economic indicators for Croatia in 2010 are presented. Firstly, descriptive exploratory analysis of data for all 21 counties of Croatia was done with the purpose of discovering the main patterns of data, as well as with the aim of discovering outliers, such as data for the strongest economy of the City of Zagreb, which is typical for the monocentric urban development. Secondly, the study of concentration of selected variables indicating banking intermediation and economic development, over the counties of Croatia is developed based of several measures of concentration (Šošić, 2004). And, finally, cluster analysis was used with the aim to discover the position of counties, especially of County of Osijek-Baranja, in relation to all other counties of Croatia, and in the situation when the City of Zagreb, as an outlying one, is excluded.

### 3. Cluster analysis and concentration measures

For the purpose of analysing the concentration of banking and economic indicators over the counties of Croatia the concentration ratios of different orders are used, as well as the Gini and the normalised Gini coefficients (more in Dumičić et al., 2012). Concentration measures for banks assets, nonperforming loans and GDP in thousands HRK are presented in table 4.

Table 4 Gini and the normalised Gini coefficients and concentration ratios for selected variables for counties of Croatia

	Net assets (thous. HRK)*		Nonperforming loans (gross amount, thous. HRK)*		GDP, thous. HRK
	2010.	2012.	2010.	2012.	2010.
Gini coefficient (G)	0.6627	0.6851	0.4959	0.5773	0.5053
Normalised Gini coefficient (G*)	0.6958	0.7193	0.5207	0.6062	0.5305
Concentration ratio C <sub>1</sub>	0.5336	0.5805	0.3704	0.4033	0.3326
Concentration ratio C <sub>4</sub>	0.7119	0.7319	0.5889	0.6132	0.5671
Concentration ratio C <sub>6</sub>	0.7928	0.8089	0.6929	0.7162	0.6741
No. of counties (N)	21	21	21	21	21

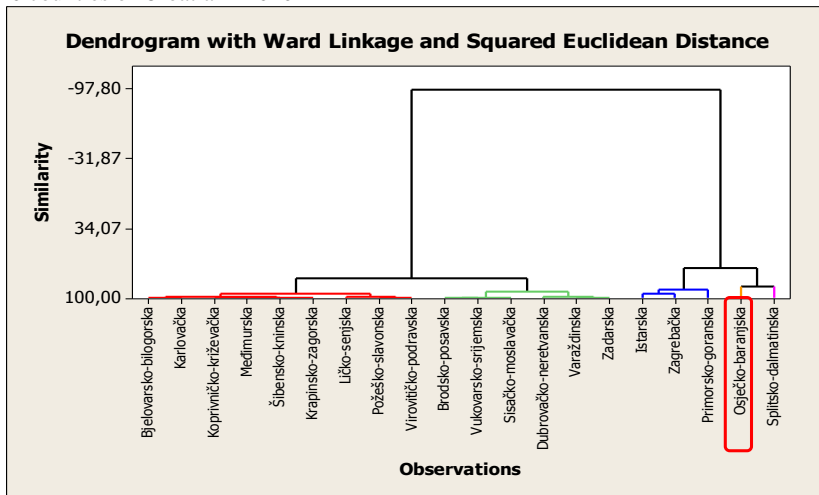
Source: Author's calculations

The Gini coefficient  $G$  and the normalised Gini coefficient  $G^*$  both show an important concentration of bank's net assets by counties of Croatia. In the year 2012 it increased compared to 2010. So, Gini coefficient  $G$  from value of 0.6627 increased up to 0.6851, and normalised  $G^*$  was moved from 0.6958 to 0.7193. Concentration ratios  $C_1$ ,  $C_4$  and  $C_6$  indicate an increase of concentration in 2012 compared to 2010, too. Quite high value of concentration ratio of the first order  $C_1$  of 0.53 in 2010 and 0.58 in 2012 resulted from very high bank's net assets concentration in only one county (City of Zagreb). Concentration of nonperforming loans by counties of Croatia slightly increased in 2012 compared to 2010 which is shown through all considered concentration ratios, and value of the concentration ratio  $C_1$  (City of Zagreb) is lower for this variable than for net assets, with value of 0.37 in 2010 and 0.40 in 2012. The Gini coefficients  $G$  and  $G^*$  indicate moderately high concentration of nonperforming loans by counties of Croatia. In the year 2012 this coefficients increased,  $G$  from 0.4959 to 0.5773, and  $G^*$  from 0.5208 to 0.6062. Gini coefficients  $G$  and  $G^*$  ( $G=0.5053$  and  $G^*=0.5305$ ) show moderately concentration of GDP by counties of Croatia. Concentration ratios of the order one, four and six for GDP had lower values than for banking indicators, and in 2010 they equals  $C_1=0.33$ ,  $C_4=0.57$  and  $C_6=0.67$ .

Considering the clustering approach in this research, firstly, a cluster analysis was applied based on Ward linkage and squared Euclidean distances using five clusters for all 21 counties of Croatia. Since, the City of Zagreb appeared to be an outlier considering very high value of bank's net assets, GDP *per capita*, as well as high values of some other variables, it was excluded from the secondly conducted cluster analysis. So, using only 20 remaining counties of Croatia, a new cluster analysis was conducted based the same approach, as described above.

There are two groups of variables based on banking and economic indicators for Croatia in 2010 used for cluster analysis, the former given in absolute, and the latter in relative measurement units. The first group of five absolutely given variables used for  $n=21$ , and afterwards for  $n=20$ , counties for 2010 are: GDP in thous. HRK, banking assets in thous. HRK, nonperforming loans in thous. HRK, number of registered unemployed people and number of inhabitants. The second group of five variables, all expressed relatively, used for  $n=21$ , and afterwards for  $n=20$  counties, for 2010 are: GDP *per capita* in HRK, unemployed rate, share of nonperforming loans in bank's net assets, banks' assets *per capita* in HRK and net salary in HRK.

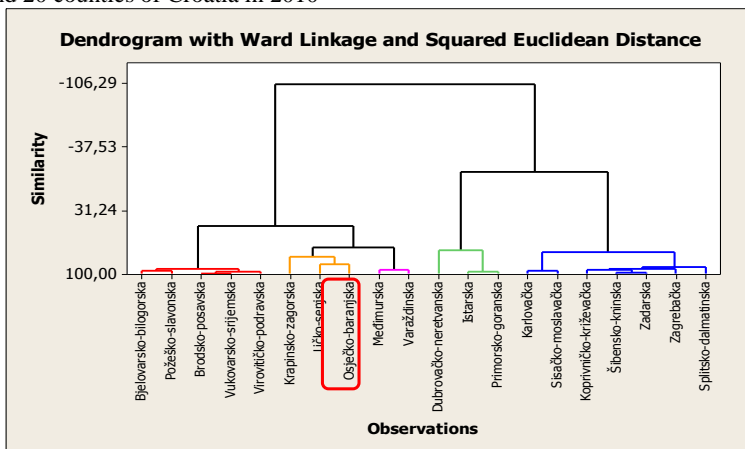
Figure 1 Dendrogram based on the first group of variables (in absolute measurement units) and 20 counties of Croatia in 2010



Cluster analysis based on Ward linkage and squared Euclidean distances for the first group of five variables and 21 counties of Croatia in 2010 gave the five clusters solution and in that case County of Osijek-Baranja was in the same cluster as County of Split-Dalmatia. When clustering was applied for 20 counties only (after excluding City of Zagreb), the position of County of Osijek-Baranja was changed, and it became a single unit cluster of its own, as it is shown in figure 1.

More visible rearranging of clusters followed when cluster analysis was applied firstly for 21 and later for 20 counties based relatively expressed five previously mentioned variables.

Figure 2 Dendrogram based on the second group of five variables (in relative measurement units) and 20 counties of Croatia in 2010



The five clusters solution based on Ward linkage and squared Euclidean distances for 21 and 20 counties based on the second group of five relatively given variables showed visibly different results compared to the usage of absolutely given variables. After excluding City of Zagreb from the cluster analysis, the County of Osijek-Baranja moved from the seven-member cluster, where it was together with the counties of: Bjelovar-Bilogora, Požega-Slavonija, Slavonski Brod-Posavina, Vukovar-Sirmium, Virovitica-Podravina and Sisak-Moslavina to the three-members cluster with the counties of Krapina-Zagorje and Lika-Senj, as it can be seen in figure 2. This means that the presence of City of Zagreb with extremely high values of bank's net assets, GDP *per capita* and outlying values of some other variables highly influences the position of remaining counties of Croatia, and especially of County of Osijek-Baranja, so rearranging and new clustering of 20 counties based on five variables resulted.

#### 4. Conclusion

Developed mechanism of financial intermediation is essential for achieving economic development. Numerous studies researched this relationship with a prevailing conclusion of positive influence of financial intermediation on economic growth. Due to limited availability of data, especially longer time series of selected indicators, in this paper methodology is limited to descriptive exploratory analysis, concentration and cluster analysis of selected banking and economic indicators. The findings in this paper reveal high values for certain banking indicators for certain counties in Croatia and relatively significant concentration for most indicators. The City of Zagreb appeared to be an outlier considering very high concentration ratio  $C_1$  especially for bank's net assets. Clusters of similar counties are recognised after a multivariate cluster analysis was applied. Cluster analysis including and excluding Grad Zagreb gave different results. Cluster analysis on first group of indicator which represented indicators in absolute values combining economic and banking indicators excluding City of Zagreb positions Counties in five clusters and County of Osijek-Baranja was cluster for itself. Cluster analysis on banking and economic indicators of relative value excluding City of Zagreb formed five clusters and County of Osijek-Baranja was in the cluster together with counties of Krapina-Zagorje and Lika-Senj. Cluster analysis indicates that the County of Osijek-Baranja is in cluster of medium or less developed counties according to used banking and economic indicators. The research results and further research in this field might be a useful tool for government structures in forming regional policies, as well as for financial institutions, primarily banks, in shaping market approach and re-examining market potential of a particular county.

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## **BY SPIRITUALITY MANAGEMENT AGAINST STUPIDITY MANAGEMENT IN A FUNCTION OF ACCELERATED DEVELOPMENT**

*Spirituality is awareness and application of basic human values, and stupidity management is blocking of such value manifestation in business-economic domain.*

*Author*

## **MENADŽMENTOM DUHOVNOSTI PROTIV MENADŽMENTA GLUPOSTI U FUNKCIJI UBRZANOG RAZVOJA**

*Duhovnost je svjesnost i primjena temeljnih ljudskih vrijednosti, a menadžment gluposti je sprječavanje manifestacije tih istih vrijednost u poslovno-ekonomskoj domeni.*

*Autor*

### **ABSTRACT**

*Contemporary organizations becomes more stupidity intensive with domination of stupidity management. Stupidity management deals with limitation of unsuitable „smart“, with limitations in intellectual and/or emotional-motivational functional area. The deficit of critical thinking, deeper thinking, creativity and passion most often arise not because of intelligence deficit but because different emotional-motivational blockages which generate stupidity management (fear, uncertainty, power mechanism, domination, coercion, „higher“ politics, lack of curiosity...), but also because of partial knowledge and/or pseudoknowledge as dominant management „modus operandi“. This paper by insight method inquires the problem of stupidity management which retard the development by inhibiting the cognitive capacities of organizational human resources. The central mediation factor of stupidity management „ideology“ is marginalization of spiritual values. Without spiritual management no one potential valuable organizational/economic solution regardless of its vision or strategic fundation can not vivify, because it will be distoreded or canceled by opportunism of privileged actors which characterize essential lack of spirituality. Developmental and organizational crisis is dominantly result of spirituality (value) crisis which do not promote collectively good and the greatest good for all, but only for privileged groups and individuals. In minimizing the stupidity management and economic stagnation substantially can help only nonmaterial resources, this means spirituality management which implement the value categories such as: truth, correct behaviour, love, serenity and nonviolence which are the basis for realization the vision of spiritual, productive, intelligent, creative and happy enterprises. The goal of this paper is to research how to deminish stupidity management which is seen as a cause of business-economic stagnation by means of spirituality management and his value categories.*

**Key words:** *stupidity management, spirituality management, key spiritual categories (truth, correct behaviour, love, serenity, nonviolence); human resources, organizational pathology, organizational and economic development.*

## SAŽETAK

*Moderne organizacije postaju sve više glupošću intenzivne s dominacijom menadžmenta gluposti. Menadžment gluposti bavi se ograničavanjem nepoćudnog „pametnog“, s ograničenjima u intelektualnom i/ili emocionalno-motivacijskom funkcionalnom području. Manjak kritičkog promišljanja, dubljeg promišljanja, kreativnosti i strasti najčešće nastaje ne zbog manjka inteligencije već različitih emocionalno-motivacijskih blokatora koje stvara menadžment gluposti (strah, nesigurnost, mehanizmi moći, dominacije, prisile, „više“ politike, manjak znatiželje...), ali i nepotpuno i/ili pseudo znanje kao dominantni menadžerski „modus operandi“.*

*Ovaj rad metodom uvida istražuje problem menadžmenta gluposti koji usporava razvoj na način kočenja kognitivnih kapaciteta organizacijskih ljudskih resursa. Glavni medijacijski čimbenik „ideologije“ menadžmenta gluposti je marginalizacija duhovnog. Bez duhovnog menadžmenta niti jedno potencijalno vrijedno organizacijsko/ ekonomsko rješenje ma koliko bilo vizionarski i strateški fundirano ne može zaživjeti, jer će biti iskrivljeno ili poništeno oportunistom privilegiranih aktera, koje karakterizira suštinski manjak duhovnosti. Razvojna i organizacijska kriza je dominantno rezultat duhovne (vrijednosne) krize koja ne promiče zajedničko dobro i najveće zajedničko dobro za sve, već samo za privilegirane skupine i pojedince.*

*U smanjenju menadžmenta gluposti i ekonomske stagnacije suštinski mogu pomoći samo nematerijalni resursi, odnosno duhovni menadžment koji primjenjuje vrijednosne kategorije kao što su: istina, ispravno ponašanje, ljubav, mir i nenasilje koji su osnovica za realizaciju vizije produhovljenih, produktivnih, inteligentnih, kreativnih i sretnih poduzeća. Cilj ovog rada je istražiti kako smanjiti menadžment gluposti koji se vidi uzrokom poslovno- ekonomske stagnacije uz pomoć duhovnog menadžmenta i njegovih vrijednosnih kategorija.*

**Ključne riječi:** *menadžment gluposti; menadžment duhovnosti; temeljne duhovne kategorije (istina, ispravno ponašanje, ljubav, mir, nenasilje); ljudski resursi, organizacijska patologija; organizacijski i ekonomski razvoj.*

## 1. Introduction

In contrary to the common assumption that contemporary organizations characterize „smartness“, intense with informations, knowledge, competence, intelligence, wisdom, talent learning with rhetoric persuasion that they maximalize the mobilization of cognitive capacities of his members, the organizational reality (facts and experience) shows also the reverse of organizational life, i.e. widely present phenomenon of functional stupidity and stupidity management. Because the functional stupidity and stupidity management can sharply reduce intelligent use of organizational resources, disturb organizational harmony, create hipocrisis (duality) and undermine human relationships and productivity, it is important to research the ways how this managerial problem can be minced or resolved. The main problem of functional stupidity and management who support organizational stupidity is in absence or blocked managerial awareness that organizational development and growth is primarily in nonmaterial (spiritual) resources and that only by promotion of basic spiritual values can be created long-term high-quality business result. Functional stupidity and stupidity management can be reduced by spirituality management and his value categories

implementation, which enable the management function on a higher spiritual level. Namely, management is often in lack of spiritual dimension which consist of values, moral and ethics, so if such spiritual elements are ignored, the consequence is the violation of individual, institutional and social health (Sikula, 1996, 31). By means of spiritual (humanistic) value principles can be diminished functional stupidity and stupidity management on the minimum possible level and improve organizational spirituality (create productive, intelligent, creative and happy organizations). Spirituality management is contrary to the functional organizational stupidity, stupidity management, pagan values (cf. Žitinski-Šoljić, 1996, 6&101) and values of technical (scientific) management (cf. Lukšić, 1995) which excuse the use of every mean if the goal is valid. In essence the process of really spiritual awakening of management refers to the:

- a) determination to the truth and unblocking the truth flow in an organization;
- b) awakening and promotion of correct behavior (doing);
- c) awakening and promotion to the higher sense (love in organization);
- d) achieving the internal peace and equanimity in a function of cognitive capacities activation what is also means the prevention of stress state;
- e) awakening the pathology of violence and non-toleration of any kind of violence in organization (mobing etc.)

This paper deals with seeking the way by which can be overcome the functional organizational stupidity and how to limit stupidity management. In this work this is done by means of spirituality (value) management, which can act as efficacious corrective in almost every disfunctional and pathological organizational state. The main hypotheses in this paper were:

H1: Because of stupidity and stupidity management organizations can not develop, develop slow or even can not survive

H2: Because of spiritual lack organizations becomes stupid and promotes stupidity management

H3: Introducing the spiritual management can resolve the main problem of organizational stupidity and stupidity management

All these three hypotheses are confirmed, by means of insight method methodology who use reflection about empirical evidence, literature review, own personal experience and synthesis the facts about organizational stupidity and stupidity management problem.

## **2. Functional stupidity and stupidity management**

Functional stupidity is lack of ability or willingness to actively process the knowledge. This is inability or non-motivation to use his own cognitive resources or intelligence. Functional stupidity characterize situation when the organization support lack of reflexivity, substantive reasoning and justification (why is doing on the way is doing). It depicts refusal of using intellectual resources out of „narrow“ and „secure“ sphere. Functional stupidity helps to remain and strengthen organizational order, often is followed by manipulative untruth, uncorrect handling, so if „it comes to the surface“ result in organizational disharmony (Alvesson&Spicer, 2012). Although refusal of using full organizational capacity can facilitate organizational functioning, promote power and domination relationships and emphasise existing organizational conformity, it can also create the feeling of hypocrisy (falsity) because of discord between rhetorical and real what can disturb good organizational functioning, especially by information and knowledge intensive organizations. Typical example of persevering in functional stupidity is when management allow to talk only desirable and good about organization. Functional stupidity also create irrational belief in complex economic and

financial models and disadaptation of managerial praxis, i.e. when the most of managerial praxis is adapted from wrong opinion, general adopted wisdom and with totally lack of empirical evidence- what is very frequent and classic case. So when partial and/or pseudo-knowledge of management become dominant „modus operandi“ organization is in organizational stupidity. Management is also stupid when it becomes totally abstract, not connected with reality, and adapt/respect only „science“ of pure economy as his main input. Functional stupidity promotes stupidity management, for which are characteristic following deficits (cf. Alvesson&Spicer, 2012):

- a) **Lack of reflection** about dominant rules, beliefs, expectations (e. g. for employees is correct to follow the command higher in hierarchy, regardless of sense and content of the command);
- b) **Lack of reason explanation** which are founded on arguments, lack of explanation for decision and action, abstaining from question, explanation in managers edicts, tradition and fashion (key aspect in forming of functional stupidity);
- c) **Lack of independant reflexion** in manner that nearsightednessly are applied instruments for effective accomplishment a goal, without knowledge about broader independant questions what is in fact the goal, is the goal correct and have this goal a sense, and which are appropriate means for accomplishment a goal;
- d) **Motivational lack**, e.g. lack of curiosity, lack of openmindedness, the personality of „organizational man“ who is uncritical obeying, or professional (knowledge worker) which organizational paradigm see undoubtful, because it should be like that;
- e) **Emotional lack** because of fear, uncertainty, power mechanisms, domination, coercion in organization.

The main mechanisms of stupidity management are blocking or marginalization of doubts, blocking the information about doubts, structuring the organizational communication on the way that are facilitated and encouraged positive and easily understandable stories, negative and ambiguous stories are marginalized even prohibited. Stupidity management deals with limiting unsuited „smart“ in organization, limiting the staff in intellectual or motivational-emotional area. The main supporting factors of stupidity management are:

- a) **Limited rationality** (because lack of time, informations, cognitive capacities, lack of knowledge about problem etc.);
- b) **Competency in one area uncritically is enlarged on the competency in other area** (but nobody can be universally competent, if someone think like this, is in stupidity);
- c) **Imprudence** (acting before thinking and reflection);
- d) **Absence of intellect** (e.g. in emotional demanding situation, when is primary acting on the ground of powerful emotions and passion);
- e) **Dany of his own ignorance** (relying on incomplete knowledge or pseudo-knowledge by which very important mediation factor is managerial vanity);
- f) **Fear and anxiety**;
- g) **Uncertainty** (existential or psychological);
- h) **Reluctance to disturb organizational harmony and existing way of organizational functioning**;
- i) **Mechanisms of power and politics** (regulators of non-using the intellectual resources).

From this short review it can be noted that if mentioned factors that facilitate functional stupidity are presented in an organization, especially if management actively work on its promotion, organization can not perform optimal smart and is in some state of organizational stupidity. Organizational stupidity and stupidity management is widely present in contemporary organization, social and political life. Good example of organizationals

stupidity is Dilbert principle and Dilbert comics (cf. Adams, 2000). So in contrary to the opinionion that modern organizations are more and more smart there is large evidence of reduced smartnes and organizational stupidity. So, it can be concluded, that H1 (Stupidity is blocking organizational development) can be confirmed.

### 3. Spirituality management

Different managements plunged in the same context produce totally different decisions which brings the organizations in totally different directions, what means that leadership and management on this today level of knowledge and understanding can not adapt pure science in resloving the problem of leading, so it should have support in intuition, inner truth and spiritual values which reflect quality of manager (leader) awareness. Namely, nowadays it is much clear that improving the organizational performances should be searched in the sphere of nonmaterial and non-palpable (spiritual!). Spirituality belongs to the value categories which are important to every man like: understanding, luck, love, truth, peace (equanimity) of mind, sense, gentleness toward other people, mercy, integrity, personality... - this means the functional principles out of material world (cf. Hawley according Lučić, 2013). Spirituality primary become clear in basic human values which some organization represent or neglect. Human values are key ingredient of organizational culture which determine „personality“ of each organization. For this paper needs can be told that spirituality can be achieved by five basic human values/virtues implementation:

- a) **Truth** (as harmony or the equality in the sense of judgement and being);
- b) **Correct behaviour/handling** (noble acting which is not only for selfish benefit, but also on the benefit for all);
- c) **Love** (appreciation and deep respect to all living beeing);
- d) **Peace** (inner equanimity and composure);
- e) **Non-violence** (to anybody or anything).

Organizational facts of many contemporary organizations are:

- a) Blocked truth;
- b) Ethical/correct behavior is not awaked;
- c) Higher sence (e.g. love) is not awaked;
- d) Stress and hectic organizational life is higher valued than peace and equanimity;
- e) Organizational pathology (management by fear, threat, coercion, mobbing) is not enough awaked.

So it can be concluded, that H2 (Spiritual lack brings to the organizational stupidity and stupidity management) can be confirmed.

In extension spirituality management is elaborated in manner how every value category can help in preventing and deminishing stupidity management (H3) through units: a) By truth against stupidity management; b) By correct behaviour against stupidity management; c) By love aganst stupidity management; d) By peace against stupidity management; e) By non-violence against stupidity management.

#### 3.1. By truth against stupidity management

Ability and motivation to accept and communicate the truth (harmony between the reality and reflection about them) is crucial human value. According Jack Hawley (Hawley according Lučić, 2013, 49-50), truth is for organization the most important thing, because when any system is in the truth, every problems resolves automatically (alone with himself) on natural

way. Because of that, truth is fundamental for survival of any system, so it can be considered more important than capital, work, strategy, or anything else. Managerial reaction on truth is in fact crucial problem of management and leadership. If for example management do not accept the truth, hide the truth, distort the truth, organization is quite in problem and there are arising opportune condition for stupidity management. So, good way to achieve awareness about organizational truth is free conversation with the question: „What is our truth?“ (Lučić, according Hawley, 2013, 51). The organizational pathology can not be eliminated, if the truth in organization is blocked or distorted. Untruth or suppressed truth is deeply incorporated in contemporary organizational life, because untruth or hiding the truth is often the means for achieving somebody's goal. Also untruth or missing the truth are the means of manipulations by which is wanted to achieve domination under other people- what is misuse of the truth. In fact stupidity management as his main mechanism uses the leverage of truth manipulation, to achieve the people (employees) are manipulated and achieve his own goal. In spite of that fact for management evolution it is necessary the awareness in the truth and internalization of truth as key value category – not only in business organization but also on the civilization level. In the internalization of the truth value it is needed the inclusion of institutional system. The key managerial question is how to block that untruth or eliding the truth become the key principle of managerial acting and behaviour, because it often brings to the managerial benefit, but damages the organization and society. The truth should be educated by known behavioral principles and create the situation that untruth/lie is not beneficial („In lie are the short legs“!), but also is punished if it brings to the damages for other employees and/or other shareholders (cf. Pastuović, 1999, 217). Only by truth is possible the real battle against stupidity management.<sup>206</sup>

### 3.2. By correct behaviour against stupidity management

Integrity, justice in achieving the goals, not making damage to the other, is also important in prevention and fight against stupidity management. Behaviours such as raven the resources from the other, discreditation of other to achieve some personal gains or advantage, also are „fertile soil“ for stupidity management. Correct behaviour is deep morality in human thoughts, feelings and behaviour. This means that to the employee/shareholder should behave maximal human and to the benefit of man, regardless of his material, social, educational and/or other status. It is pathology of management if it thinks that it makes a great good only by the fact that it do no damages and evil. Doing things right can be clearly seen in relationships with the work, coworkers, clients. For example in the work with other people when individuals can say that with someone was „wonderfull“ to work, or e.g. in harmonious teamwork when every teammember work on the group benefit on the best way.<sup>207</sup> Correct behaviour is behaviour which do not delay, do not complicate and do not harm to others. All the behaviours according to criterion of correct behaviour can be divided into (cf. Pastuović, 1999):

- 1) **Correct moral (prosocial) behaviour** is behaviour that produces positive consequences for other people.

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<sup>206</sup> In the real praxis when something for management is not appropriate, management can use the strategy „Proclaiming the truth for stupidity!“. Of course, if speech of the truth is stupidity, than this managerial constatation is correct, although it refers on the existence of stupidity management in such a organization.

<sup>207</sup> Service management today is more valuable because it seems to be universally acceptable. This noted even Mary Parker Follet 1924 in his book *Creative Experience*, where she perceived the three determinants of the leadership of the future: the leading with the serving function, the power of diversity and selforganized teams (Buble, 2012, 5).

- 2) **Amoral (asocial) behavior** is behavior which refuse to help to the people or group of people to whom is help necessary, by which is „price“ of helping much less then damage which arise to other person or group of person (without helping).
- 3) **Antimoral (antisocial) behaviour** is purposely (aimed) making damage to other person or group of persons. Psychopathological individuals also enjoy in making damages to other people or group of people in organizations.

Therefore in organization should strive only to the correct, moral or prosocial behaviour, in order to achieve optimal performanse of business system, and without loosing energy of „game of thrones“/ „of stage games“, and in the same time creating the harmful stupidity management. Misusing of „correct doing“ value principle often depicts unethical organizational situation, mobbing, miserable interpersonal relatinoshps, low quality and productivity, misantropism and alienation (other people are perceived as enemies) what is extremely favourable milieau for stupidity management.

### **3.3. By love against stupidity management**

Although love is value category, it is also the fundamental human need. Love include care for others, nobility, agency, sharing, joy, attraction, commitment, assistance, spontaneity. Where is the love, everything is easy, where is love not present everything is difficult. When is someone or something loved, to the loved person is joyful served, to this person is „giving the wings“. Love is noble virtue because they manage selfish interests to the interests and good of others which are loved. Spirituality management emphasize the need of creating the organizational culture which characterize simpahty, love, tolerance, trust, pleasure, courage, readiness to risk, satisfaction and happiness in subjective experience and behaviour of employees (Gerken, 1993). Namely, without „soft“ communicative and partnership employee behavior, this means without „love“ it is not possible to develop such atmosphere where is possible the optimal functioning of organization. Love learn the people serving and desire to be others on their benefit. Manager/leader who serves (love manager) manage interests of organization and interests of his co-workers who develop, above his own interests, so avoid stupidity management. Internalization of love value (noble serving) also is important in prevention of stupidity management.

### **3.4. By peace against stupidity management**

In contemporary business world which prefere haste, many and intensive information as limitet human being, people often do not reach to process many contents to which they are daily exposed. Because of accelerated life rithm and greater need for competition activities (on all levels) the important human activities like play, friendship, free time for himself, become reduced. Because of that fact, this situation become “fertile soil” for stupidity management (occur limited rationality because lack of time, information, cognitive capacities, tiredness...). In such a world, although employees becomes educated, they emotionally and valuably often degrades. So, there is need to adapt to such tempo of life and permanent stressfull working time, so relaxation and equanimity becomes more important. “The richest is who has peace!”, not someone who has much money- it is the old sentence. To respect himself and others is not achivable if there is not internalized the value of peace and relaxation (meditation) as basic strenght for realocation and better use of psychophysical resources. Value of peace can be realized by peaceful siting/lieing in silence, so it can be transferred emotionality and experience. Also it is need the desire that peple respect each other (peace in relationship). Peaceful can be one who can abnegate of his egoistic impulses

(compromise is base for peace and respect), peace also means allowing other people to say everything without experience assault. The goal of appeasing e.g. by means sitting or lying in peace is inner appeasing, than the people lighter can separate important from unimportant, resolve his anxiety, perceive/experience himself, collect energy, contemplate on higher emotional level, process things and events. Because of fact that in modern hectic life the events and life contents „fly away“ (lack of time for active processing) peace becomes extremely important. Stress becomes the main enemy of intelligence, critical mind so by means of peace/equanimity it need to be reduced on minimum level. By minimizing the stress level in organizations it is automatically reduced stupidity management.

### **3.5. By non-violence against stupidity management**

Nonviolence is behaviour that do not damages to others, neither physically nor reputation of the person. Violence is aggressive tendency of organization management, where the main tool is punishment and fear. Where is fear there is regularly stupidity management by which is trying to excuse such a situation. Management who excuses, encourage or tacitly accept violence (e.g. mobbing) stimulate manipulative behaviours and stupidity management. Self-control, goodness, altruism, solicitude for others are important moral attitudes in 21. century, because from the organization of fear and coercion, it should be created organization which is more human and happy. For such a managerial transformation the key value is non-violence. Namely, in the value of nonviolence there can not exist punishment or vengeance. In contrary, to the nonviolence we learn through positive things with positive thoughts and by expressing positive words. Therefore gossip and hate speech in an organization should be forbidden categories. Also, elimination of violent working climate (mobbing) can result with numerous organizational benefits (cf. Goić&Bogdanović, 2012, 69-70). By means of humanistic values (truth, correct behaviour, love, peace, nonviolence) it is possible to internalize key values of honest, justice, authenticity, confidence, collectiveness (social cohesion), relaxation, goodness, altruism, creativity and social responsibility which all of them are prevention from stupidity management.

According to this short explication can be stated that spiritual management by means of functional principles out of material world (truth, correct/ethical behavior, love, peace/equanimity, nonviolence) can resolve the main problem of organizational stupidity and management stupidity, so the H3 can be confirmed.

## **4. Conclusion**

On the ground of observation that contemporary organization becomes more stupidity intensive with domination of stupidity management, this paper presented definition, characteristics and supporting elements of functional stupidity and stupidity management. Stupidity management limits „unappropriate smart“ in limitations in intellectual and/or emotional-motivational functional area. Lack of critical thinking, deeper thinking, creativity and passion arise most frequently not because lack of intelligence but because of different emotional-motivational blocks which creates stupidity management (fear/anxiety; uncertainty; mechanisms of power, domination, coercion; „higher“ politics; lack of curiosity...), but also partial and/or pseudo-knowledge as dominant managerial „modus operandi“. Existence of organizational stupidity and stupidity management look for solutions how to diminish him and how to prevent him. In that goal by further explication it is shown how the problem of very present stupidity management can be resolved by using spirituality



management and his key value categories (truth, correct behaviour, love, peace and nonviolence). On the ground of explicated topic the main three hypotheses are confirmed:

H1: Organizational stupidity and stupidity management is blocking organizational development in many organizations

H2: Spiritual lack brings to the organizational stupidity and stupidity management

H3: To diminish organizational stupidity and stupidity management we need to change our values such as:

- a) Truth is for organization the most important resource, because when organization (system) is in the truth all problems are resolved by means of himself, on natural way. So, truth is key resource for survival of every system it can be considered more important than capital, work, strategy or everything else. Truth is „poison“ for stupidity management.
- b) Integrity, fairness in achieving goals, so the others are not damaged, also is very important in the prevention and fight against stupidity management. In organizations should strive to correct, moral or prosocial behaviour, and this is such behaviour that produce positive consequences for other people. Integrity is strong means in stupidity management prevention.
- c) Love learn the people serve and desire to be others on their benefit. Without love can not be developed the atmosphere in which is possible optimal organization functioning. Internalization the value of love (noble serving) also is important value in stupidity management prevention, because it reduces selfishness and vanity.
- d) Stress is the main enemy of the mind, critical thinking, so it should be diminished on the minimum by means of peace/equanimity. High stress level in organizations support stupidity management.
- e) Nonviolence as value eliminate punishment, vengeance, speech of hate, gossip, so eliminate organization who are managed through punishment and fear. Where is fear there is standardly stupidity management by which such a situation is striving to excuse. From organization and management of fear and coercion should be created more human, happier organization, and only elimination of violence results not only in reducing of stupidity management but also with numerous organizational benefits.

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**APPLICATION OF INTEGRATED MANAGEMENT  
SYSTEMS IN ENTREPRENEURSHIP**

**PRIMJENA INTEGRIRANIH SUSTAVA UPRAVLJANJA U  
PODUZETNIŠTVU**

**ABSTRACT**

*Quality can be defined as a degree of authenticity when using a product or service. By development of technology there has been a development in system quality. By all general globalization the demands of consumers and the number of competitors have grown, there for initiation of system quality isn't considered a competitive advantage any more. By development of management system there was a need to merge more management systems in to one system – integrated management system. Integrated management system can be a combination of two or more management systems: Quality Management System (ISO 9001), Environmental Management System (ISO 14001), Health and Safety Management System (OHSAS 18001), Information Security Management System (ISO 27001), Energy Efficiency Management System (ISO 50001) and others. One of the most important fact for every organization is ensuring the quality and reliability of products, health, safety and satisfaction of employes, compliance of enviromentally friendly standards for environment, proving the safety of classified data and reducing energy consumption. Primary goal of paper is to show the frequency application of integrated management systems in Croatian companies practice. The other goal of paper is to show which are the management systems that are most often integrated in Croatian business practice. Qualitative research methodology was used in work while the informations were collected combined from primary and secondary sources. Two working hypotheses were set up based on analysis of the literature. First hypoteses is that the most companies in the Republic of Croatia with the instaled management system have implemented an integrated management system. The second hypoteses is that the most companies integrate Quality Management System (ISO 9001) and the Environmental Management System (ISO 14001). Introductory part of the work shows the short theoretical*

*review on the most important management systems and the second part shows the research result of application of integrated management systems in the Republic of Croatia.*

**Keywords:** ISO 9001, ISO 14001, ISO 27001, ISO 50001, integrated systems, information security

## SAŽETAK

*Kvaliteta se može definirati kao stupanj izvrsnosti prilikom korištenja nekoga proizvoda ili usluge. Razvojem tehnologije došlo je do razvoja sustava kvalitete. Sveopćom globalizacijom rasli su zahtjevi potrošača i broj konkurenata, tako da se uvođenje sustava kvalitete ne smatra više konkurentskom prednošću nego jednim od osnovnih zahtjeva koje poduzeće mora ispunjavati. Razvojem sustava upravljanja javljala se potreba spajanja više sustava upravljanja u jedan sustav – tzv. integrirani sustav upravljanja. Integrirani sustav upravljanja može biti kombinacija dvaju ili više sustava upravljanja kao što su npr. sustav upravljanja kvalitetom (ISO 9001), sustav upravljanja zaštitom okoliša (ISO 14001), sustav upravljanja zdravljem i sigurnošću na radu (OHSAS 18001), sustav upravljanja informacijskom sigurnošću (ISO 27001), sustav upravljanja energetskom učinkovitošću (ISO 50001) ili kombinacijom nekih drugih ISO normi. Jedan od najvažnijih činjenica za svaku organizaciju u današnjim globaliziranim uvjetima poslovanja je osiguravanje kvalitete i pouzdanosti proizvoda, zdravlje, sigurnost i zadovoljstvo zaposlenika, udovoljavanje ekološki prihvatljivih normi za okolinu, dokazivanje sigurnosti povjerljivih podataka te smanjenje potrošnje energenata. Primarni cilj rada je provjeriti kolika je učestalost primjene integriranih sustava upravljanja u praksi hrvatskih poduzeća. Drugi cilj rada je prikazati koji su to sustavi upravljanja koji se najčešće integriraju u hrvatskoj poslovnoj praksi. U radu je korištena kvalitativna istraživačka metodologija dok su podaci prikupljeni kombinirano iz primarnih i sekundarnih izvora. Na temelju analize literature postavljene su dvije hipoteze rada. Prva hipoteza je da većina poduzeća u RH s uvedenim sustavom upravljanja imaju implementiran integrirani sustav upravljanja. Druga hipoteza je da većina poduzeća integrira sustav upravljanja kvalitetom (ISO 9001) i sustav upravljanja zaštitom okoliša (ISO 14001). Uvodni dio rada prikazuje kratki teorijski osvrt na najznačajnije sustave upravljanja, dok su u drugom dijelu rada prikazani rezultati istraživanja primijenjenosti integriranih sustava upravljanja na području RH.*

**Ključne riječi:** ISO 9001, ISO 14001, ISO 27001, ISO 50001, integrirani sustavi, informacijska sigurnost

## 1. Introduction

With the development of national economies and networking of world economy, certain advantages are gained, but also some problems appear. According to that, the concept of quality is changing, the goals and tasks which are associated with the management of quality are increasing and changing. The importance of quality control of products, processes and overall business and enterprise management is of great importance for survival of enterprise in the market. Today, when there is a great struggle for survival, the company will achieve competitiveness and become a leader in its field, only if business quality is in the first place in all segments of company work. Customers more often require from suppliers (and more often inversely) very high level of quality as well as safe and environmentally friendly product or service. Companies in order of convincing their customers that they are working according to the highest standards of quality, environmental, occupational safety and social

sensitivity implement, and after, certify their management systems by accredited international authorities. The certificate is a confirmation that companies use to convince their business partners and stakeholders they are operating according to the requirements of certain ISO standards. The subjects in this paper are integrated quality management systems. The introduction part of the work includes the stages of development of quality management systems and integrated systems. The second chapter defines the ISO standards which are mostly used in practice (according to ISO<sup>208</sup> organization data). In the third chapter methodology is described, while in the fourth chapter there is a discussion about the research results.

## **2. Introduction about management systems**

### **2.1. Stages of development management system**

The first phase of quality management system development refers to a period when demand was higher than supply. Capacity, quality and design is defined by the producers without the involvement of the consumer because he had to be satisfied with what he gets. In that kind of situations management is oriented to the production and to securing quantity. In that kind of environment, innovations and education of employees are not the primary goal. Increasing the amounts of manufactured goods over time, resulted in balancing supply and demand, and that represents the second phase. This allows the manufacturer and seller to pay more attention to product designing, and that means to fulfill basic requirements for quality. Then comes the adjustment of acceptable quality level between those who provide and those who demand the products or services. The result to that are the first systematic measures to test quality (Lazibat, 2003).

The third phase indicates an increase in supply, relatively moving the intersections of supply and demand. By increasing the supply, the customer is enabled to chose products with as few errors. In this way the customer does not determine only the quality of the product, but he is also interested in the quality system of the supplier, in order to prevent any possible errors. There has been a conclusion that the independent system of quality management needs to be defined in order to increase the quality of products and services. From the above reasons in 1987 standard ISO 9000 is created, which allows independent certification and comparability of the quality assurance system from the third point of view. ISO 9000:1987 provided a competitive advantage and creates trust between the supplier and the buyer (Lazibat, 2003).

The fourth phase is significant by the changes and by expanding products, and the current situation in modern organizations oriented to long-term. The buyer sets conditions on the market, demands quality service and excellent product quality. The supplier is compelled to offer additional services in the area of concern for the costumer. Certification of quality management systems is turning to companies in the area of services. The product is no longer available in material form, the product becomes a combination of goods and services. Customer satisfaction becomes more important measure for the quality of services, and it is based on motivation and increased awareness in the company on the human resource. ISO 9001 standard since 1987 to 2008 has experienced three revisions in which have been significant changes in content and requirements of the standard. It is expected that the fourth revision of the standard will be completed and put into use during 2015. The main task of management becomes to define structure of the company, and that refers to setting goals and

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<sup>208</sup> ISO – abbreviation of International Organization for Standardization

strategies of companies with divisions, on the leadership and organization model (Lazibat, 2003).

The fifth phase is characterized by connecting the customer and the supplier, the quality of service, the importance of environmental protection and guidance to the future and sustainability of the business. First comes common planning of customers requirements and suppliers for quality, as well as linking different companies to create products for system optimization. Globalization plays a significant role in expanding introduction of the concept of quality. By appropriate documentation and certification of the quality management system, a connection between customers and suppliers can be achieved. Modern quality management must include important aspect of environmental protection, protection of employee health, safety in the food chain, social sensitivity, information security, and energy efficiency. Because of these requirements this standards are created: ISO 14001, OHSAS 18001, ISO 22000/HACCP, ISO 26001, ISO 27001 and ISO 50001. By combining two or more of the above system managements, organization creates an integrated control system.

## **2.2 The most common management systems**

According to official data, the ISO organization issued 19,573 international standards to the date 31.12.2012.g (www.iso.org, 2013). Between the specified number of ISO standards, ISO organization quotes several popular ISO standards: ISO 9001:2008; ISO 14001:2004; OHSAS 18001:2007; ISO 22000:2005; ISO 27001:2013; ISO 50001:2011.

### **2.2.1. ISO 9001:2008**

The basic norm of an integrated quality management system is considered to be ISO 9001:2008 - Quality Management System. The above standard is based on the process approach. ISO 9001:2008 defines requirements for the process approach in developing, implementing and improving the effectiveness of the quality management system, in order to increase customer satisfaction by meeting their demands. The term process is defined in the ISO 9001:2008 as a set of interrelated or interdependent activities that transform inputs into outputs. Establishing processes and interactions, and managing processes in organizations are the main tasks of each organization. It should be noted that often an output from one process is a direct input into another process. For easier functioning, all of the processes can be applied with the methodology known as PDCA matrix. Each action within the process can be performed by the PDCA principle that is constantly trying to improve (Milčić, Donevski, Banić, 2008).

### **2.2.2. ISO 14001:2004**

The purpose of standards dealing with issues of environmental management is to provide organizations with an effective and meaningful environmental management system that can be merged with other management requirements. Under the environment implies the air, water, sea, land, climate, animal life and their mutual action as a part of the human environment. Protection of the environment is based on respect for international and domestic laws and regulations related to the environment and generally accepted principles. Environmental quality is possible to analyze from different aspects, so that the quality can be expressed through physical, chemical and aesthetic indicators. International Organization for Standardization have established in 1993 a special technical committee called TC 207, whose main task was to standardize the world's environmental management systems (Lazibat, 2009). Although in that time there were already a large number of national standards and regulations

related to environmental aspects because of the cultural specificities, regulations like that often represented a slowdown of international trade. Because of these reasons there is a need for a unique international standard which would eliminate these problems, for the new ISO 14000. Generally there are two basic types of ISO standards:

1. Normative: sets out the requirements that must be met, and the verification of the fulfillment of such requirements is carried out by audit.
2. Information: only give some certain guideline, such as that they don't offer certification and are not subject to audit.

ISO 14001 - Environmental management systems - Specification with guidance for use is the only normative standard of the ISO 14000 family. All other standards of this "family" norms are informative (Lazibat, 2009).

### 2.2.3. OHSAS 18001:2007

The purpose of the safety at work is the prevention of injury, occupational diseases and other diseases related to work and protection of the work environment. Safety at work is an integral part of the organization of work, and safety at work is the employers responsibility. The objective of the management of safety at work is to achieve a high level of safety by a systematic approach to reduce the risk, hazard and effort that occur during work. Specification OHSAS 18001:2007 (Occupational Health and Safety Assessment Series Specifications) is a specification for introduction and certification system for managing health and safety for persons in professional activities (Milčić, Donevski, Banić 2008). "Norms/specifications OHSAS 18001, ISO 14001 and ISO 9001:2008 are mutually compatible and in some parts they fully match" (Lazibat, 2009:408).

### 2.2.4. ISO 22000:2005

Hazard Analysis and Critical Control Points (HACCP) is a systematic approach that cares about food and health security, which deals with the physical, chemical and biological hazards, and the control is implemented by certain points during the production. HACCP is used in the food industry, so it can identify potential food safety hazards. The system is used in all stages of food production, including packaging and distribution. The application of HACCP - is expanding to all kinds of industries, except for the production of food products, it is beginning to be used in the manufacture of pharmaceuticals and cosmetics (www.iso.org, 2014).

### 2.2.5. ISO 27001:2013

ISO 27001:2013 is an international standard that defines the requirements for establishing, implementing, operating, monitoring, grading, maintaining and improving a documented Information Security Management System. It is based on the standard BS 7799 which has been added with some new controls, such as incident management related to information security. The standard is applicable to all types of organizations (commercial, government, non-profit, etc.), and to all sizes of organizations from small organizations to the global ones (Osmanbegović, 2010). "Standard consists of five parts: 1. The system for the protection of information; 2. The responsibility of people in the management; 3. Procedure of internal control systems for the protection of information; 4. Procedure validation system for the protection of information; 5. Procedure related to the improvement of the system for the protection of information" (Osmanbegović, 2010:7).

### 2.2.6. ISO 50001:2011

The increasing demand for energy, the limited availability of fossil fuels and the harmful impact of these fuels on the environment, seeks a new solution in the field of energy, and that is how standard ISO 50001:2011 is developed. This standard is used to control the system power management. ISO 50001:2011 is a standard which supports organizations in developing systems to increase energy efficiency and the possibility of finding ways for the efficient and responsible use of energy. ISO 50001:2011 is a generic standard, as well as all other ISO standards, which means that it applies to all types of organizations, regardless of the size of the organization or the organization's activity. Energy management systems are focused on broad national economic sectors, and they could have an impact on 60% of world energy consumption (www.iso.org, 2014).

### 3. Methodology of research

Lazibat in year 2009. states that the combination of ISO 9001 and ISO 14001 occurs most common in practice under the integrated management system. He also states that the ISO organization acceded to built all standards with the idea that they will often be used together in practice, and made them compatible. In modern business there is a whole range of management systems that can be integrated into a single system called IMS (Lazibat, 2009). Accordingly to studied literature the objectives of work are defined. The primary objective of this paper is to check how frequently is the application of the integrated management systems in practice in Croatian companies. The second objective of this paper is to show which are the management systems that are commonly integrated in the business of Croatian companies.

Based on the analysis of literature, two hypotheses were set up. The first hypothesis is that the majority of companies in Croatia with the management system introduced have a implemented integrated management system. The second hypothesis is that most companies integrates quality management system (ISO 9001) and environmental management system (ISO 14001).

For the purpose of data collection a qualitative research methodology is used, while the data are collected from primary and secondary sources combined. The first step has been to collect othe secondary data that was used as research samples. Secondary data were collected using a web portal [kvaliteta.net](http://kvaliteta.net). In the database portal [kvaliteta.net](http://kvaliteta.net)<sup>209</sup> a sample of 300 organizations has been selected which are certified according to ISO 9001:2008 from all over Croatia, and which are certified in the range of 1995. up to 2014. Primary data were collected through a structured questionnaire, which is shown in picture 1. A questionnaire was sent to a selected sample via e-mail, collecting completed questionnaires conducted in part by e-mail, and partly by fax. The questionnaires were collected in a time span of 30 days and there was a total of 210 questionnaires correctly completed.

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<sup>209</sup> Web portal [Kvaliteta.net](http://kvaliteta.net) (www.kvaliteta.net) is unique data base of certified organizations in Croatia. Certification bodies continuously deliver to the portal new data on monthly base.



## Picture 1 Questionnaire

**ANKETNI UPITNIK**  
**ISTRAŽIVANJE PRIMJENE INTEGRIRANIH SUSTAVA UPRAVLJANJA U PODUZETNIŠTVU**

Poštovani,  
molimo Vas da popunite ovaj anonimni upitnik koji će služiti isključivo u svrhu istraživanja za stručno-znanstveni rad.

1. Koje ISO standarde imate implementirane u Vašoj organizaciji:

a) ISO 9001:2008 – godina implementacije \_\_\_\_\_

b) ISO 14001:2004– godina implementacije \_\_\_\_\_

c) OHSAS 18001:2007– godina implementacije \_\_\_\_\_

d) ISO 22000:2005/HACCP– godina implementacije \_\_\_\_\_

e) ISO 27001:2013– godina implementacije \_\_\_\_\_

f) ISO 50001:2011– godina implementacije \_\_\_\_\_

2. Ukoliko imate implementiran integrirani sustav upravljanja molimo Vas navedite koje ISO norme su međusobno integrirane:  
\_\_\_\_\_  
\_\_\_\_\_

3. Norme su međusobno integrirane odmah prilikom početne implementacije? (zaokružuju oni koji imaju implementiran integrirani sustav upravljanja).

a) DA

b) NE

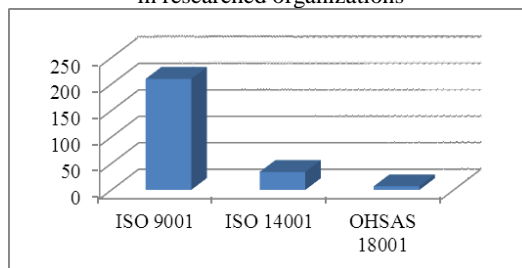
Molimo vas da popunjeni upitnik vratite na e-mail: [josip.brivic@vsmti.hr](mailto:josip.brivic@vsmti.hr) ili na fax: 033/492-276  
Zahvaljujemo se na vremenu i angažmanu!

*Source: Made by authors*

## 4. Results and discussion

The collected questionnaires show that the organizations most commonly implement ISO 9001:2008. All 210 organizations surveyed by questionnaire, have the ISO 9001:2008 standard implemented, which is expected because the Implementation of International Standard ISO 9001:2008 itself represented a criteria for inclusion in the research. Also, the existing literature and data of ISO organization suggest that the mentioned norm is the most commonly implemented standard in practice. ISO 14001:2004 has been implemented in 34 organizations, while OHSAS 18001:2007 is implemented in 7 organizations. Chart 1 shows the market shares of implemented standards in a sample of 210 researched organizations.

Chart 1 Market shares of implemented standards  
in researched organizations

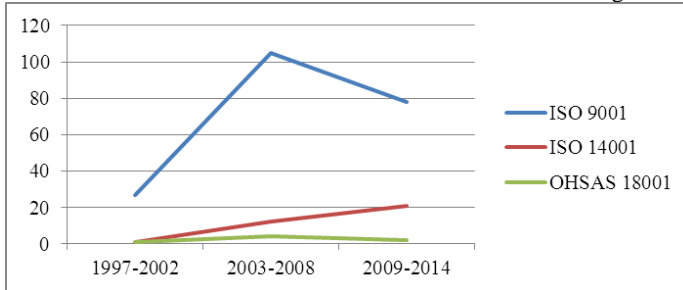


*Source: Made by authors*

Process of the data collected on a sample of 210 organizations indicates a significant annual increase in the number of implementations of ISO 9001 standard in the period between the 1997 till 2008. After the 2008 there has been a significant decline in the annual number of implementations of ISO 9001. It is not the case with the ISO 14001 standard that since 1997

sees a constant, but significantly slower, growth in the number of annual implementation compared to standard ISO 9001. Specification OHSAS 18001:2007 recorded a small increase in the annual number of implementations since 1997 till 2008, followed by a decline in the number of annual implementation of OHSAS 18001:2007. Stated is shown on the chart number 2.

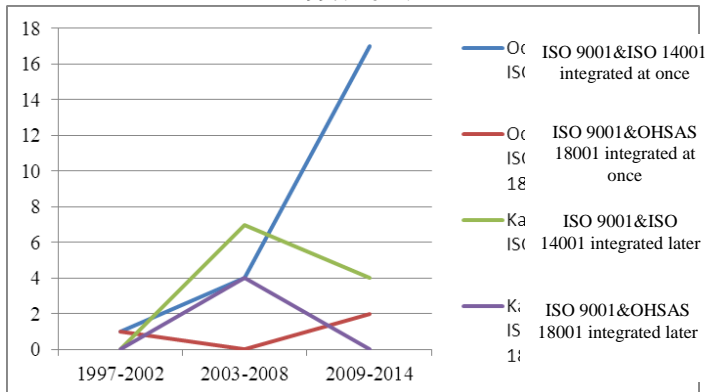
Chart 2 Trends of market share of ISO standards in researched organizations



Source: Made by authors

Process of the collected data indicates that organizations that were "pioneers" in the implementation of ISO standards in Croatia usually implemented only standard ISO 9001. Since 2008 there are more often implementations of the integrated system, usually a combination of ISO 9001 and ISO 14001 standards, while the number of implementations of ISO 9001 as an independent norm decreases. The stated is shown on chart number 3.

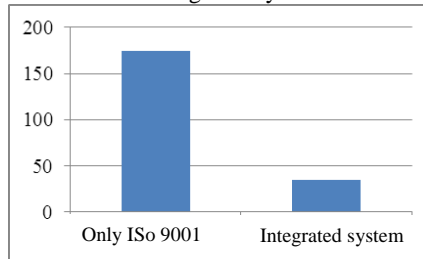
Chart 3 Trend of implementation of integrated standards in period 1997.-2014.



Source: Made by authors

The study results do not support the first hypothesis, the claim that the majority of organizations in the Republic of Croatia with the management system introduced have implemented an integrated management system. The research results showed that 175 organizations have implemented only the standard ISO 9001, while 35 organizations have implemented an integrated management system and a combination of ISO 9001, ISO 14001 and specification OHSAS 18001. Stated is shown on the chart number 4.

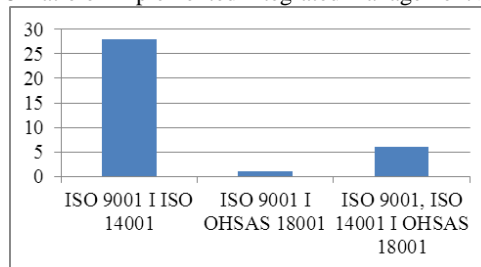
Chart 4 Number of organizations only with ISO 9001 and with integrated system



Source: Made by authors

The research results confirm the second hypothesis, that the most organizations integrates quality management system (ISO 9001) and environmental management system (ISO 14001). The research results shows that in 35 organizations with an integrated management system 28 of them have implemented integrated quality and environmental management system, ISO 9001 and ISO 14001. Six organizations have an implemented integrated management system for quality, environment and safety at work, ISO 9001, ISO 14001 and OHSAS 18001. Only one of the 210 organizations surveyed have an implemented integrated quality management system and safety at work, ISO 9001 and OHSAS 18001. The stated is shown on chart 5.

Chart 5 Ratio of implemented integrated management systems



Source: Made by authors

## 5. Conclusion

The management systems is becoming more important with the growth of international trade integration and cooperation. The modern way of business between companies and organizations is becoming hard to imagine without a standardized management systems. Literature consulted and conducted research shows tendencies of integration management systems. A more often appearance is the implementation of integrated management systems, usually a combination of ISO 9001 and ISO 14001, which confirms the second hypothesis. However, standard ISO 9001 is still most commonly implemented as an independent management system which denies the first hypothesis. By further study of the literature is was determined how the ISO 9001 is a basic (fundamental) standard, and that the implementation of that norm is foundation for creating a good foundations for further development of the management system and eventual integration. The authors concluded that the main goals are achieved, therefore to check the frequency of applied integrated management systems in practices of Croatian companies and also provide an answers to the question which are the management systems that are most commonly integrated in Croatian business practice. The authors concluded that this study indicates that there is a need for further research. Carrying

out these studies should reveal the reasons for the implementation of integrated management systems and monitoring trends of standard integrations examined in this paper. The study should also include monitoring the implementation trends of new ISO standards. Monitoring trends and comparisons with other economies would indicate a degree of awareness in Croatian managers and business owners about the importance and benefits that standardized management systems bring.

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**REVALUATION OF TANGIBLE AND INTANGIBLE ASSETS –  
ACCOUNTING AND TAX IMPLICATIONS IN CROATIA**

**REVALORIZACIJA DUGOTRAJNE NEMATERIJALNE I  
MATERIJALNE IMOVINE – RAČUNOVODSTVENE I POREZNE  
IMPLIKACIJE U REPUBLICI HRVATSKOJ**

**ABSTRACT**

*The aim of this paper was to research revaluation of tangible and intangible assets with special emphasis on accounting and tax treatment in the Republic of Croatia. Authors have done literature review and they investigated relevant accounting standards that regulate this area. According to that, this paper describes two different accounting models for recognition of revaluation gains and losses in case of tangible and intangible assets. Furthermore, this paper presents tax implications for revaluation of assets in the Republic of Croatia for the last twenty years. Moreover, authors have investigated application of fair value model for Croatian companies on a sample of 54 companies using simple random selection procedure and those results were compared with similar survey that the European Commission has done. Obtained data have indicated that most of Croatian companies is still using cost model for subsequent measure of tangible and intangible assets and the situation is the same in the European Union. The contribution of this paper is in the research of accounting and tax implications for revalued tangible and intangible assets as well as in the research of application of fair value model for mentioned types of assets.*

**Keywords:** *Revaluation, tangible assets, intangible assets, International Accounting Standards, cost model*

## SAŽETAK

*Cilj ovog rada je bio istražiti revalorizaciju dugotrajne nematerijalne i materijalne imovine s posebnim naglaskom na računovodstvenom i poreznom tretmanu iste u Republici Hrvatskoj. Autori su napravili pregled literature, te su istražili relevantne računovodstvene standarde koji reguliraju ovo područje. Shodno navedenom, kroz ovaj rad se opisuju dva različita računovodstvena modela za priznavanje dobitaka i gubitaka proizašlih iz revalorizacije dugotrajne nematerijalne i materijalne imovine. Nadalje, u radu su prezentirane porezne implikacije revalorizacije imovine u Republici Hrvatskoj za proteklih 20 godina. Pored navedenog autori su istražili primjenu koncepta fer vrijednosti u hrvatskim poduzećima na primjeru 54 poduzeća koristeći proceduru slučajnog uzorka, te su dobiveni rezultati komparirani sa sličnim istraživanjima koje je provela Europska komisija. Dobiveni podaci ukazuju na činjenicu da se u hrvatskim poduzećima i dalje prvenstveno koristi model troška za naknadno vrednovanje dugotrajne nematerijalne i materijalne imovine, a takva praksa postoji i u zemljama Europske unije. Stoga se doprinos ovoga rada ogleda u istraživanju računovodstvenih i poreznih implikacija revalorizacije dugotrajne nematerijalne i materijalne imovine, te u istraživanju primjene modela fer vrijednosti za istu imovinu.*

**Ključne riječi:** revalorizacija, materijalna imovine, nematerijalna imovina, Međunarodni standardi financijskog izvještavanja, model troška

### 1. Introduction

Measurement of assets has a big impact on financial position of every company. Even though, most of companies are still mainly using cost model for measurement of assets, in recent times this model is more often replaced with revaluation model. Revaluation model is model that can be used for subsequent measurement of assets and is determined as a current market value of asset. In this paper focus is put just on tangible and intangible assets in order to investigate in detail measurement model for these types of assets. First of all, this paper deals with accounting treatment related to the revaluation of tangible and intangible assets. The aim is to investigate accounting effects of revaluation of tangible and intangible assets in the subsequent process of valuing assets using the revaluation model and in the process of impairment. Furthermore, authors present tax implication of revalued tangible and intangible assets in the Republic of Croatia. The main research question is “*Do companies in Croatia use revaluation model for subsequent measurement of tangible and intangible assets?*” The answer on this question is provided through survey that is conducted on the sample of 54 Croatian companies using simple random selection procedure. Those results were compared with the similar research that was conducted in the European Union in order to reveal how Croatian companies follow the European trends in measurement of assets.

### 2. Background and literature review

In the balance sheet fixed assets appear in four types: tangible assets, intangible assets, financial assets and receivables. In this paper focus is put just on tangible and intangible assets that can be also divided on: property, plant and equipment and investment property as tangible assets and intangible assets (such as computer software, patents, copyrights, licenses, franchises, marketing rights, etc.). Accounting treatment for before mentioned assets for big companies in the Republic of Croatia is regulated by following standards: International Accounting Standards (further in the paper abbreviation IAS will be used) 38 Intangible assets, IAS 16 Property, plant and equipment, IAS 36 Impairment of assets (tangible and

intangible assets), IAS 40 Investment property. While on the other side there are small and medium companies that are using following Croatian Standards of Financial Reporting (further in the paper abbreviation CSFR will be used): CSFR 5 Intangible assets and CSFR 6 Tangible assets. Mentioned standards defined how tangible and intangible assets should be measured after initial recognition. Thus, IAS 38 *Intangible Assets* requires that intangible assets should be recognised initially at cost and subsequently measured at each balance sheet date at either: cost less any accumulated amortisation and any write-down for impairment (**cost model**); or fair value less any subsequent accumulated amortisation and any write-down for impairment (**revaluation model**). Furthermore, IAS 16 *Property, Plant and Equipment* requires that property, plant and equipment should be recognised initially at cost and subsequently measured at each balance sheet date at either: cost less accumulated depreciation and any write-down for impairment (**cost model**); or fair value less any subsequent accumulated depreciation and any write-down for impairment (**revaluation model**). IAS 16 allows upward revaluations provided that: the revaluations are made to fair value; the revaluations are kept up to date such that the carrying amount does not differ materially from fair value at the balance sheet date; all the items in the same class of property, plant and equipment are revalued at the same time; and revaluation surpluses are credited to the revaluation reserve. IAS 40 *Investment Property* defines investment property (land or a building – or part of a building – or both) requires that investment property should be recognised initially at cost and subsequently measured at each balance sheet date at either: fair value (**fair value model**); or cost less accumulated depreciation and any write-down for impairment (**cost model**). CSFR 5 Intangible assets is in fact short version of IAS 38 and CSFR 6 Tangible assets is short version of IAS 16 and IAS 40. Therefore, further in the paper authors will present just accounting treatment of revaluation model according to IAS.

Many authors have written papers about revaluation model for financial assets but just few of them have written about the revaluation of tangible and intangible assets. For instance, Holt G. and Georgiana Holt A., 2008. in their paper give theoretical issues related to the revaluation of fixed assets. More precisely, they present in their paper examples of fiscal and accounting mechanism of recognition the current property/ assets revaluation. Furthermore, Paik, G. in the year 2009 deals with the value relevance of fixed asset revaluation reserves in international accounting. He investigated the effect of adopting the IFRS standard for fixed asset revaluation. His study contributes to the international accounting literature by suggesting that the effect of adopting new IFRS rules, such as IAS 16, may differ in each country due to various legal, economic, cultural and social forces. Another relevant paper that deals with revaluation of assets is the paper from Aljinović Barać, A. and Šodan, A. (2011). This paper research manager's motive of accounting policy choice for long-term non-financial assets. The contribution of this paper is the research of motives and determinants of asset revaluation policy choice in bank-oriented economies with inactive markets like Croatia. Therefore, their paper play an important role because their findings prove that companies with growing debt, low liquidity ratio and low cash flow ratio are more likely to perform upward revaluations.

### **3. Accounting issues related to the revaluation of tangible and intangible assets**

After initial recognition an entity shall choose either the cost model or the revaluation model (fair value model) as its accounting policy and shall apply that policy to an entire class of tangible or intangible assets. For the purpose of this paper focus is on revaluation model. After recognition as an asset, an item of tangible and intangible assets whose fair value can be measured reliably shall be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated

impairment losses (IAS 16, paragraph 31). Revaluations shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the balance sheet date. Revaluation assumes re-evaluating or in other words re-determining the value of asset. According to the currently applicable accounting standards, the amount of the revaluation of asset is the fair value of the asset at the date of revaluation. Moreover, the subsequent revaluation of fixed assets where the standards prescribed the value adjustments of assets by reducing the historical cost or the amount that it replaces on the fair value describes the process of revaluation.

Further in the paper, authors present accounting effects of revaluation of tangible and intangible assets in the subsequent process of valuing assets using the revaluation model, or the fair value model, and in the process of impairment. Differences that appear relative to historical cost or other amount that it replaces due to value adjustment of assets can be positive or negative or in other word gains or losses can appear from the value adjustments. Before gains and losses from value adjustments are realized we have unrealized gains and losses. However, the procedure of recognition of unrealized gains and losses is not solved on the same way in all international accounting standards (IAS). In fact, some IAS recognizes unrealized gains as a revaluation surplus directly in the equity while some IAS recognizes this immediately in profit and loss account.

Recognition of revaluation gains and losses in case of tangible and intangible assets can be divided into two basic models that are shown in the table below:

1. Recognition of revaluation gains/ losses in the equity as a reserve and transference directly to retained earnings out of profit and loss account;
2. Recognition of revaluation gains/ losses directly in the profit and loss account;

Table 1 Recognition of revaluation gains/ losses in the equity as a reserve and transference directly to retained earnings out of profit and loss account

IAS	Moment of fair value Measurement	Initial recognition of revaluation gains	The transferred moment to retained earnings	Transferred to retained earnings
IAS 16 – PROPERTY, PLANT AND EQUIPMENT  and  IAS 38 INTANGIBLE ASSETS	Subsequent measurement and application of the revaluation model	Revaluation reserve (surplus)	When revalued assets is derecognized; When revalued asset is disposed of; Some of the surplus may be transferred as the asset is used by an entity. In such cases, the amount of the surplus transferred would be the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost.	Whole surplus decreased for corporate income tax

Source: IAS 16, IAS 36, IAS 38, IAS 40, IAS 40, Belak, V., 2006a: 17



Table 2 Recognition of revaluation gains/ losses directly in the profit and loss account

IAS	Moment of fair value Measurement	Initial recognition of revaluation gains/ losses	The transferred moment to retained earnings	Transferred to retained earnings
IAS 36 – IMPAIRMENT OF ASSETS (TANGIBLE AND INTANGIBLE ASSETS)	On the reporting date	Directly in the profit and loss account for the assets for which revaluation reserve (surplus) is not formed in the process of revaluation	For the reporting period	Recognize as expense
		For assets for which revaluation surplus is formed – charged to reserves to the extent of reserves (surplus)		It is not carried through profit and loss account
		Reversal of losses from impairment	Reporting period	Recognize as revenue
IAS 40 – INVESTMENT PROPERTY	Subsequent measurement under revaluation model	Directly in the profit and loss account	Period in which gain appear	Recognized as a revenue from revaluated gains

Source: IAS 16, IAS 36, IAS 38, IAS 40, IAS 40, Belak, V., 2006b: 17

The model of deferred recognition of unrealized gains and subsequent losses from adjustments to fair value applies to property, plant and equipment as well as intangible asset. When accounting value of property, plant and equipment increase as a result of revaluation then this increase should be recognized in the equity as a revaluation surplus (reserve). In these cases it comes to the delay of recognition of unrealized gains until the moment of realization. Revaluation surplus that is included in the equity and that refers on the property, plant and equipment could be transferred directly to retained earnings when:

- revalued assets is derecognized;
- revalued asset is disposed of;
- the asset is used by an entity. In such a case, the amount of the surplus transferred would be the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost.

From the Table 1 and 2 it is obvious that transfer of unrealized gain to the retained earnings is almost the same for all tangible and intangible assets. Moreover, transference of revaluation surplus on the retained earnings by tangible and intangible assets is done directly, not through profit and loss account.

If an asset's carrying amount is increased as a result of a revaluation, the increase shall be recognized in other comprehensive income and accumulated in equity under the heading of revaluation surplus (IAS 16, paragraph 39). However, the increase shall be recognized in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognized in profit or loss.

If an asset's carrying amount is decreased as a result of a revaluation, the decrease shall be recognized in profit or loss. However, the decrease shall be recognized in other comprehensive income to the extent of any credit balance existing in the revaluation surplus in respect of that asset (IAS 16, paragraph 40). The decrease recognized in other comprehensive income reduces the amount accumulated in equity under the heading of revaluation surplus. The value of the impairment loss of tangible assets is recognized immediately in profit and loss account, unless the asset is carried by its revalued value in accordance with another Standard (e.g. in accordance with the revaluation model under IAS 16). Any impairment loss of value, revalued assets, is treated as a revaluation decrease under that other Standard.

Measurement after initial recognition for investment property could be done under cost model or revaluation model. If entity chose revaluation model (fair value model) then all gains and losses that are arising from a change in the fair value of investment property shall be recognized in profit or loss account for the period in which it arises (IAS 40, paragraph 35). It is important to emphasize that under the IAS 40 Investment property authors assume tangible assets like land and building that are prescribed under IAS 16 Property, land and equipment. However, due to the different uses of these assets, the revaluation model is different.

#### **4. Tax treatment of revalued tangible and intangible assets**

As it was mentioned in the chapter before, IAS permit or require certain assets to be carried at fair value or to be revalued (for example, IAS 16 *Property, Plant and Equipment*, IAS 38 *Intangible Assets*, IAS 39 *Financial Instruments: Recognition and Measurement* and IAS 40 *Investment Property*). In some jurisdictions, the revaluation or other restatement of an asset to fair value affects taxable profit (tax loss) for the current period. As a result, the tax base of the asset is adjusted and no temporary difference arises. In other jurisdictions, the revaluation or restatement of an asset does not affect taxable profit in the period of the revaluation or restatement and, consequently, the tax base of the asset is not adjusted. Nevertheless, the future recovery of the carrying amount will result in a taxable flow of economic benefits to the entity and the amount that will be deductible for tax purposes will differ from the amount of those economic benefits (IAS 12, paragraph 20). The difference between the carrying amount of a revalued asset and its tax base is a temporary difference and gives rise to a deferred tax liability or asset. This is true even if (IAS 12, paragraph 20):

- a) the entity does not intend to dispose the asset. In such cases, the revalued carrying amount of the asset will be recovered through use and this will generate taxable income which exceeds the depreciation that will be allowable for tax purposes in future periods; or
- b) tax on capital gains is deferred if the proceeds of the disposal of the asset are invested in similar assets. In such cases, the tax will ultimately become payable on sale or use of the similar assets.

In general, problematic of recognition revenues/ expenses from value adjustments for tangible assets are not defined by the Croatian Corporate Income Tax Law. So, in most cases tax treatment will be in accordance with accounting treatment. In accounting treatment there are some specifics and because of that in certain situation temporary differences will appear with revaluation of assets. For property, plant and equipment as well for intangible assets it is characteristic that adjustments on fair value that are higher than accounting value are recognized in reserves and are transferred on retained earnings outside of profit and loss account. Formed revaluation reserves are included in tax base in that tax period when

revaluation reserve is realized and it is determined in amount of increased depreciation that appears because of revaluation. The rest of revaluation reserve is included in tax base after the asset that is revalorized is sold, destroyed or disposed on some other way (Cindori, 2009). The exception, from above mentioned, appears when revaluation reserve is formed for period from 1991 until 2000. Subject revaluation reserve was taxed and after taxation the taxpayer was able to manage with it on the way he decides. That means, if some entrepreneur has in his balance sheet revaluation reserve from that period, in actual financial statements, this reserve is not subject to taxation, because taxation is passed at the time when it was formed (Cindori, 2009).

Revaluation of property, plant and equipment as well as revaluation of intangible assets in the procedure when revaluation reserve is formed results with taxable temporary differences. The reason for this lies in the fact that there is unrealized profit that increase equity and that impose the obligation to form the deferred tax liability related to the revaluation of these types of assets. So, there are features of taxable temporary differences (unrealized gains and deferred tax liabilities). However, unrealized capital gain is not the increase of equity as income through profit and loss account, rather than an increase in the revaluation reserve outside the profit and loss account and because of that it cannot be used for distribution to the owners. Furthermore, a deferred tax liability has not been established due to reduction in accounting results for the amount of the unrealized gains through the corporate profit tax return. Because of mentioned specificities in the context of these types of long-term assets it could be talk about hidden temporary difference (Anić Antič and Idžojić, 2009).

Moreover, in the Republic of Croatia there is one more basis for the formation of temporary differences on revalued property, plant and equipment and revalued intangible assets. This time it is a deductible temporary difference. This basis reflects in the fact that the tax treatment of depreciation on the revalued portion depends on whether the part of the revaluation reserve, which reflects spending of assets, is transferred to retained earnings or not. Specifically, the accounting rules do not require entrepreneurs execute such transfer so it can happen that after calculating depreciation such transfer fails. In this case, the increased cost of depreciation of these assets will be excluded from the tax base not until the realized part of the revaluation reserve is transferred to retained earnings (Anić Antič and Idžojić, 2009).

The value of property, plant and equipment as well as intangible assets could decrease below an accounting value. Also, subsequent increases in value are possible. In this paragraph, the focus is put on increase in value till the accounting value that does not exceed already recognized loss. Such value adjustments are recognized in accounting trough the profit and loss account if they are compatible with a realistic estimate. In accordance with the Corporate Income Tax, the initial decrease in value below accounting value, which is higher than the maximum tax allowable depreciation rate, it is considered non-deductible.

This provision is found that, due to described value adjustments, there are differences between the accounting result and the tax base and because of that the temporary differences arise. At the same time, there is an opinion that the expense from value adjustments, in described case, is tax allowable in the period when the adjustment is done regardless of whether the asset was sold, destroyed or otherwise used (Cirkveni, 2009). So according to that opinion there is no difference between accounting result and tax base and because of that there is no temporary differences.

The gain or loss that arises from changes in fair value of investment properties and the fair value of biological assets is recognized in the profit and loss account in the period when incurred. Revenue or expense from the value adjustment on the fair value is tax allowable during the period when the adjustment is completed, regardless of whether the property was sold, destroyed or otherwise used. In these cases temporary differences do not exist because in such value adjustments there is no difference between accounting result and the tax base.

## **5. Research on measurement of tangible and intangible assets at fair value**

In the context of the problem of fair value application, well as the principles of assessment of assets either at initial or subsequent measurement, hereafter author's present results of research on the use of fair value for the valuation of certain forms of assets. This research was conducted from the side of the Institute of Chartered Accountants in England and Wales in the year 2007. as a part of the report for the European Commission under the title "EU implementation of IFRS and the fair value Directive". Further in the paper authors present just results on the use of fair value for the valuation of tangible and intangible assets. As a contrast to mention research authors also present their empirical research on the use of the fair value by Croatian companies.

### **5.1. The use of fair value accounting in the European Union**

The European parliament and the Council have adopted the IAS Regulation (EC)/ 1606/ 2002 of 19 July 2002 on the application of International Accounting Standards. This Regulation directly requires the use of International Financial Reporting Standards (IFRS) in the consolidated financial statements of publicly traded companies established in EU members. It applies after 1 January 2005. Also, each member state may extend this application through national law system on non-publicly traded companies.

In the year 2006 on the request of the European Commission, the Institute of Chartered Accountants in England and Wales has conducted detailed research concerning requirements that are set in IFRS. Research was focused on the evaluation of the implementation of IFRS's in the industries represented in the European Union, the assessment of the application in some markets, and by individual member states. In October 2007 the research results were published ([www.icaew.com](http://www.icaew.com)). In this paper authors will present just part of this research that was focus on application of fair value accounting. This research was conducted on a sample of 200 EU publicly traded companies.

Research has shown that use of fair value accounting under IFRS is much less extensive than it is sometimes assumed to be the case, and is in fact very limited overall. In particular, where companies are given an option as to whether to use a cost or a fair value model, they typically choose a cost model.

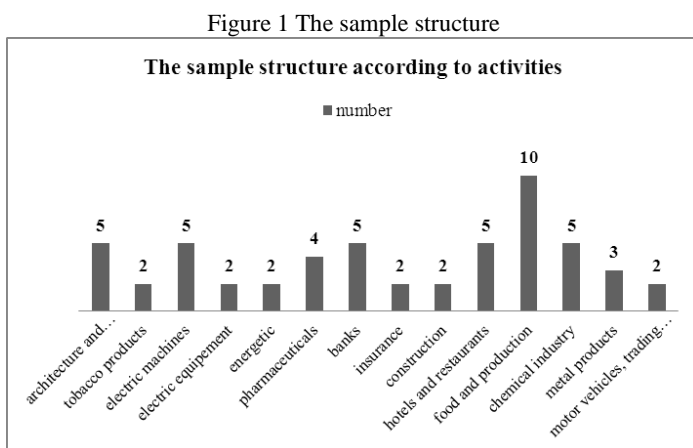
Research on the sample of 200 companies found that ([www.icaew.com](http://www.icaew.com)):

- **IAS 16 PROPERTY, PLANT AND EQUIPEMENT:** 199 from 200 of analyzed companies held an item property, plant and equipment. 8 from 199 companies respectively 4% companies used revaluation model (fair value model) for property but none of the companies used it for plant and equipment.
- **IAS 38 INTAGIBLE ASSETS:** none company used revaluation model for intangible assets.
- **IAS 40 INVESTMENT PROPERTY:** 81 companies held an item investment property but just 23 of them used revaluation model.

Furthermore, research has shown that accounting profession was concern because of the subjectivity of fair values in the absence of active and liquid markets, at the volatility that fair value can introduce in reported income and at possible moves towards much greater use of fair value. Recent reports from users and surveys of users' and preparers' views show a significant level of opposition to more extensive use of fair values in IFRS.

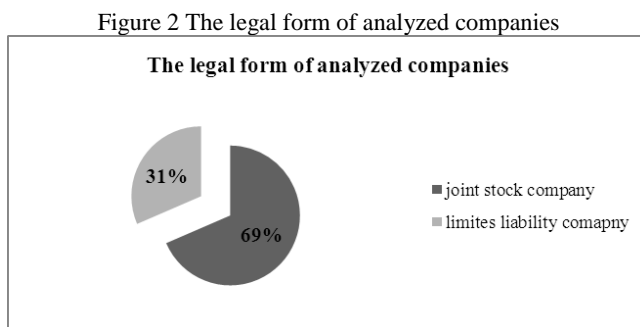
• **5.2. The use of fair value accounting in the Republic of Croatia**

Authors have conducted an empirical research with the goal to determine the use of fair value accounting in the Republic of Croatia. Research was done by examining financial statements more precisely balance sheet and notes to financial statements of companies in the sample for the year 2010. The research was conducted on a sample of 54 Croatian companies using simple random selection procedure. The sample structure according to activities is presented in the figure below.



Source: authors

According to the legal form, the analyzed sample of companies includes 37 or 69% joint stock companies (JSC) and 17, or 31%, limited liability companies.



Source: authors

Considering the application of CFRS or the application of IFRS on the analyzed sample of 54 companies results are following: 3 companies (6%) apply CSFR while 51 companies (94%) apply IFRSs. From this it is obvious that this sample is mainly formed from big size companies.

Figure 3 Grouping of companies according to applied standards



Source: Empirical research

Research on the sample of 54 Croatian companies has given following results:

- **IAS 16 PROPERTY, PLANT AND EQUIPEMENT:** all analyzed companies (54) held an item property, plant and equipment but just 5 companies respectively 9% companies used revaluation model (fair value model) for property and just 4% companies used this model for plant and equipment.
- **IAS 38 INTAGIBLE ASSETS:** 46 companies from the sample held in its balance sheet and notes an item intangible assets. Nevertheless, just 1 company used revaluation model for intangible assets and all other companies used cost model.
- **IAS 40 INVESTMENT PROPERTY:** 13 companies respectively 24% companies held a item investment property on the active side of balance sheet and notes but just 5 of them used revaluation model for subsequent recognition.

This research has shown that the application of fair value model in Croatia is very rare. Very small percentage of analyzed companies is using fair value model for subsequent measurement of tangible and intangible assets. The situation is almost the same in the European Union. So, it can be concluded that in situations where the companies have options that they can optionally use cost or revaluation model, typically companies chose cost model. The authors are assuming that the reasons for that kind of subsequent measurement in Republic of Croatia could be find in simplicity of cost model, that there are no benefits for Corporate Income Tax return and it is cheaper for the companies. Depreciation is accounting policy that is often used in order to reduce Corporate Income Tax liability and companies often manipulate with depreciation. Revaluation gains or losses has no impact on Corporate Income Tax liability and in order to get fair value measurement for their asset companies should have elaborated it from entitled person for evaluation and that is very expensive. Limitations and restrictions of these research is in smaller sample of companies but the authors believed that taking into consideration all the features of Republic of Croatia (i.e. size, number of citizens, number of active large companies and etc.) the number is satisfying for analysis.

## 6. Conclusion

With this paper the authors have showed that revaluation model is very complex and not very often used in practice for subsequent measurement of tangible and intangible asset in financial statement. Revaluation means a reassessment (evaluation) of tangible and intangible asset. Furthermore, under determining a financial position of a company asset has been mentioned as one of the factors that affect the financial position. From that it can be concluded that the change in the value of assets of a company affect its financial position. However, the impact of the revaluation on the financial position depends on the method of accounting treatment of the value of the asset and its disclosure in the financial statements. If the change in the value of assets accounted reported directly in equity as a revaluation reserve, that change will directly impact on the financial position of a company. At the same time, if the change in the value of assets accounted through profit or loss, the subject changes will directly affect the profit or loss for the accounting period of observation, which in other words means that will directly affect the performance evaluation. This situation will indirectly affect the financial position, since the operating results is reported in the balance sheet under the items of capital.

The paper highlights the neutrality of the revaluation in circumstances where unrealized gains and losses revaluation are not recognized for tax purposes until the moment of realization. This claim about tax revaluation neutrality applies to the level of profit for the period in which the revaluation is conducted, and at the level of the entire asset lifecycle within the company. Further, there is also the lack of neutrality of the tax revaluation profit of the current period in circumstances where the unrealized gains and losses are recognized for tax purposes prior to implementation. Finally, it can be concluded that, at the level of the entire asset lifecycle within a company, the tax revaluation is neutral regardless of whether they arise or not arise temporary differences because of the valuation with fair value.

The research question was answered through conducted research from which it is visible that still most of the companies in EU but also in Republic of Croatia are using cost model as a subsequent measurement for tangible and intangible asset.

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## **INDICES OF SUSTAINABILITY OF HORSE TRACTION IN AGRICULTURE**

### **POKAZATELJI ODRŽIVOSTI KONJSKE VUČE U POLJOPRIVREDI**

#### **ABSTRACT**

*Aim of the research was to find and evaluate the indices of horse traction sustainability in agriculture. The research was done by means of compilation of results of previously published researches and conducted interviews which were subjected to logical analysis and*

*synthesis, and conclusions were brought upon a logical induction and deduction. The research has revealed that, despite the complete shift to machinery traction in Croatia more than 30 years ago, the use of horse traction is still characterized by many important sustainability indices.*

**Key words:** Sustainability, Horse traction, Energy, Agriculture

## SAŽETAK

*Cilj istraživanja bio je pronaći i vrednovati pokazatelje održivosti konjske vuče u poljoprivredi. Istraživanje je provedeno kompiliranjem rezultata iz prethodno objavljenih istraživanja i provedenih intervjua koji su podvrgnuti logičkoj analizi i sintezi, a zaključci su doneseni metodama logičke indukcije i dedukcije. Istraživanjem je ustanovljeno da, unatoč provedenoj potpunoj smjeni konjske vuče u hrvatskoj poljoprivredi traktorskom prije više od 30 godina, upotrebu konjske vuče još uvijek karakterizira mnogo, iznimno važnih, pokazatelja održivosti.*

**Ključne riječi:** održivost, konjska vuča, energija, poljoprivreda

### 1. Introduction

There can be found many titles in Croatian newspapers recently warning about a contraction of national economy, about a foreign debt going unsustainable and an increasing unemployment rate during the last few years. Besides, the environmentalists emphasize the need to protect natural resources and to rely on renewables to ensure a sustainable development of society. The aim of this research is to provide the public with an idea that can offer an economically viable and sustainable way of farming which can at least partially contribute to meet the a.m. warnings. The idea comes from an article by Kollodge (1993) who found that at a time when many conventional farmers across the US are in desperate financial straits, traditional Amish farms are still making money and realising profit with a cautious disregard for get-big-or-get-out modern technology and refusing any direct government subsidies, other than those built into market prices, which they can't avoid. Maybe, such traditional way of farming, relying mainly on horse traction, may in some respects really help small Croatian farmers to survive the current crisis? Maybe it can help the society to come up to a healthier environment and a more resilient economy? The paper will try to give an answer.

### 2. Materials and methods

The research was done by means of compilation of results of previously published researches and conducted interviews which were subjected to logical analysis and synthesis, and conclusions were brought upon a logical induction and deduction.

### 3. Results

#### 3.1. Use of renewable energy resources

The majority of agricultural production of industrialized economies is currently driven by diesel fuelled tractors. Thus, the agriculture currently relies on distant oil sources used to

produce diesel fuel. Moreover, the oil is deemed an exhaustible resource. Namely, the Hubbert's peak oil production is estimated to occur prior 2015 a.d. (Almeida and Silva, 2009) and after that the consistent decline of production is expected. Simultaneously, the world's demand is estimated to continue rising consistently (Hall and Day, 2009) and so will do the prices for oil and its derivatives. The growing importance of non-conventional oil (oil shale, natural bitumen, extra-heavy oil, biofuels and other synthetic conversion of liquids: coal to liquids and gas to liquids) is not forecasted to cease the shortage of oil and its derivatives, and their price will continue to rise due to higher costs of production (Castro et al., 2009; Murphy and Hall, 2011). Moreover, non-conventional oils are coming from exhaustible sources too, except for biofuels. Accordingly, Jurčić et al. (2013.) stress the imperative for every nation to develop renewable energy resources. Biofuels are offering renewable energy but in very limited amounts under current technological achievements, while competing for resources that are normally being used for food production (Demirbas, 2008; Rathmann et al., 2010). Under such circumstances the reintroduction of animal traction in agriculture may look, at least, consolatory, if not reasonable. At the time of emerging energy crisis we have a method for efficient transformation of sunlight energy into mechanical work in agriculture, being widely used since ancient times until some 30 to 40 years ago - namely the horse. Horses are fuelled with cheap and broadly available fodder like hay, straw and little of grain (Harris, 1998.). The renewability of fodder production for draught horse is doubtless since such a plant production requires only the natural sunlight, at least low fertile soil and sufficient rainfall, available in the great majority of terrestrial environments of the Earth. Fitting of horse traction into a renewability scheme accords with findings of Rydberg and Jansen (2002).

### **3.2. The production of fodder for draught horses would not seriously compete with the production of food for humans**

Biofuel production often competes with food production on arable land (Rathmann et al., 2010). Thus an important issue to consider is: What would be the share of land needed for the feeding of horses in the total cultivated area they work? The question can be answered by ratio of land area used to produce horses' fodder and bedding to the total land area horses can work. According to Morrison (1936, cit. Courteau, 2007), the farms using two teams of no more than three horses (in total 4 to 6 horses) cultivated an average of 137 acres (55 ha) of cropland, those using a tractor and four horses farmed 196 acres (79 ha), but those using only horses — eleven horses in big hitches of four or more — tilled an average of 252 acres (102 ha). The a.m. findings came out of a research carried out for USDA and which was conducted on 735 Corn Belt farms in 1929 a.d. Apparently, about 9 ha of arable land could be worked per working horse. But how much of this area is required to produce the horses' fodder? Horses normally can be fed with fodder of poorer quality than that needed for any other modern productive livestock. While the modern milking cows need the average protein content of about 16 % in their fodder and about 35 % of expensive concentrates (grains and processed soybeans), on a dry matter basis (Broderick, 2003), the working horses need only about 9 % protein and 15 to 25 % grain (oats or barley) when working, on a dry matter basis for a whole day, and about 8 % protein and no grain when idle (derived from recommendations of Fouts, 2008). The required fodder dry matter intake is about 2 % calculated from a draught horse's body weight (600 to 900 kg, depending on the breed), while the milking cow needs about 3 % dry matter intake of its body weight (600 to 700 kg). In principle, the total annual need for the horses fodder depends on the expected number of working days which may vary significantly among the farms. Based on an interview conducted with Mr. Antun Mandić, of the Vuka village of Croatia (age 81, experienced horse keeper, not published interview), a pair of working horses was efficiently used to till about 14

ha of cropland. Horses were engaged in agricultural works and transportation about 140 days per year, with an average of about 40 medium-work days and about 100 light-work days. The remaining 225 days in a year they were considered idle (kept in stall, or grazed on the village's roadside vegetation, or grass under plum orchard, etc.). There was no real heavy work for the horses in agriculture, except when they were used for logging in forestry. The total annual need for horse's fodder according to a.m. work load is about 500 kg of oats (grain), 2000 kg of lucerne hay or grass hay, and 2000 kg of straw (byproduct of cereals production) per animal. An arable land area needed to produce the required fodder can be calculated from average crops' yields reported in the official gazette for the Pannonian Croatia during the period 2005 to 2008: 2.0 to 3.4 t/ha of oats (grain) and 6.3 to 8.5 t/ha of lucerne hay (Central Bureau of Statistics, 2009.), and from reported wheat straw yields 2.3 to 7.1 t/ha (Teklić et al., 1994). Thus, for a pair (a team) of work horses about 0.6 ha of lucerne crop, 0.5 ha of oats and 0.5 ha of wheat for straw would be required. If we exclude the area for wheat straw (since the wheat is primarily grown for grain for human's food) the total required area can be estimated to 1.1 ha for a team of two working horses, traditionally used to cultivate about 14 ha of cropland. Thus the share of land used to produce fodder for the horses may be estimated at 7 to 8 % (depending on the productivity of a farmer's land and agronomy practices) in the region of Pannonian Croatia. This estimate is slightly greater than 6 % estimated by De Decker (2008), probably because of lower expected yields of fodder per hectare used in calculation, and because of a poorer utilization of horses on smaller farms. Namely, the above presented needs were calculated for a farm with a lower horse utilization (7 ha per a horse) compared to US average of 1929 a.d. (9 ha per horse). It may be interesting to mention that officially reported yields for Pannonian Croatia are somehow pessimistic, e.g. conscientious farmers realize about 30 to 50 % higher yields, thus diminishing the required area to 0.8 ha, i.e. 6 % of the total area. It's worthy to bear in mind that in lower yielding environments (low fertile soils, acidic soils in arid climate, cold climates) the share of land needed to feed the horses would be greater due to lower fodder production per area unit. Changes in the annual working load has a direct impact on the total annual needs: increasing the number of working days will increase the amount of required grain feeds only (oats, barley or maize), while the needs for roughages (hay and straw) will be kept constant. On traditional farms in Pannonian Croatia, the working horses were kept idle in winter and were often fed considerably less than in the above presented calculation. They were often fed mainly on by-products of grain crops, like pure cereal straw, maize stover and few meagre maize cobs, thus allowing to further minimize the share of land needed to produce fodder for them (Mr. Dušan Balić of the village Dalj of east Croatia, age 60, personal communication, not published data).

Therefore, the share of arable land area required to "fuel" the draught horses may be similar to the area required to fuel the diesel-engine tractor fuelled with rapeseed 1<sup>st</sup> generation biodiesel (DeDecker, 2008).

### 3.3.CO<sub>2</sub> and GHG neutrality

The production and use of biofuels, like bioethanol and biodiesel, are increasingly stimulated by many national governments because of environmental concerns, namely to reduce the CO<sub>2</sub> emissions to atmosphere, since the CO<sub>2</sub> released from fossil fuels combustion is considered a global warming contributor – as a gas with green house effect (GHG, Rathmann et al., 2010). Regarding the production of fodder for horses, it is a function of recent photosynthesis, and all of the carbon comprised in the fodder, and subjected to biological combustion in the animal, is just shortly before "caught" from the atmosphere by crop plants. Thus the *fodder crop – horse* system features the atmospheric carbon neutral function. Despite the reduction of net

CO<sub>2</sub> emissions by the use of bioethanol and biodiesel, there are strong doubts nowadays regarding their green house gas (GHG) neutrality. According to Crutzen et al. (2008), those agricultural crops most commonly used at present for biofuel production and climate protection can contribute to enhanced greenhouse warming by N<sub>2</sub>O emissions. The main cause for N<sub>2</sub>O emissions to atmosphere is the application of nitrogen fertilizers to such crops. Considering the horses' fodder, a great part of it belongs to roughages, like various hays, which are mostly produced as legume mono-crops or crop mixtures of grasses and legumes, regarded as independent of the application of artificially fixed nitrogen fertilizers (Bukvić et al., 2013), thus avoiding the contribution to N<sub>2</sub>O emissions. Moreover, any other horse fodder may be produced organically, where the most of nitrogen is delivered to crops by biological fixation, thus further reducing the amount of N<sub>2</sub>O emissions. Therefore, the forage-horse system of fuelling the agricultural traction may be considered as more GHG beneficial than majority of biofuels based on arable food-crops. Additionally, relatively minor soil compaction imposed by working horses (Herold et al., 2009) provides for better physical properties of the soil thus further lowering the GHG emissions from soil (Horn et al., 1995).

### **3.4. Soil fertility and compaction issues**

Soil's fertility i.e. its capacity to produce a yield, is a complex trait conditioned by several determinants, which are related to the soil's ability to provide a favourable environment for plants. Among the most important determinants of the soil's fertility are: bioavailability of plant nutrients, capacity to hold water and nutrients, proper drainage and aeration to roots, and richness of soil biota (Stockdale et al., 2002). Soil compaction is one of the major problems faced by modern agriculture (Hamza and Anderson, 2005) since it threatens all a.m. determinants of the soil's fertility (Soane and Ouwerkerk, 1995; Horn et al., 1995). It is well documented that one of the main causes for soil compaction is the overuse of machinery (Hamza and Anderson, 2005). The problem becomes more pronounced along with the trend to heavier wheel loads (Van den Akker et al., 2003). The increased consciousness of the soil's crucial role in environment comes from the realization that soils are a part of soil-watershed systems acting as a buffer in cases of excessive rainfalls thus mitigating or even preventing floods (Harper, 2014), and storing the water for periods of lack of rainfall, thus mitigating drought effects on yields.

Fortunately, the policy makers in the EU and worldwide recognize soil as a vital resource under increasing pressure (Van den Akker et al., 2003) and encourage the research for mitigating the soil compaction. The research is mainly focused on highly mechanized solutions and findings provide guidelines for a better management: reduce pressure on the soil, work at optimal soil moisture, reduce the number of passes by farm machinery, confine traffic to certain areas of the field (tramlines), increase soil organic matter, impose crop rotations that include plants with deep, strong taproots, and maintain an appropriate base saturation (Hamza and Anderson, 2005). Despite these all holds true, one historical option is overlooked. Namely, horses provide a tried and tested solution to prevent soil compaction (Herold et al., 2009). Although horses can under certain circumstances impose a higher ground pressure than tractor tyres, the compaction effect is limited to the top few centimetres of the soil profile because of the comparatively lower weight (Wyss, 1999) compared to modern tractors, which in the case of a light model of 54 kW (73 hp) weights as much as 3,560 kg (Filipović et al., 2011). Moreover the pression caused by the horse's hooves is limited to spots whereas tractors cause pressure stripes. And the compression effects of agricultural machinery penetrate to much deeper zones, causing subsoil compaction (Van den Akker et al., 2003) which may occur even when the soil is very dry (Trautner and Arvidsson, 2003).

Contribution of horse traction to soil's fertility is recently confirmed through the increased yield of vegetable crops after switch to horse traction from previously mechanized one (Pinney, 2003).

Contribution via horse manure production used as a fertilizer is relatively minor (about 8 t annually per 7 to 9 ha worked, Smith and Swanson, 2013), but not to neglect since our soils chronically suffer from the lack of high quality organic matter addition.

### **3.5. Depreciation costs**

Depreciation costs of mechanical tractors strongly depend on the total area of cropland worked. E.g. a small farm producing field crops needs a tractor of at least 40 kW (i.e. 54 HP), a farmer cultivating 30 ha of cropland needs a tractor of 60 kW (80 HP), and for a 100 ha farm two tractors are required: one of 40 kW and one of 80 kW (107 HP) (Mago, 2008). The annual depreciation for a 105 HP tractor working 450 hours/year is estimated 3,096 USD/year (Lazarus and Selley, 2005) what equalled to 2,288 EUR/year (according to exchange rate of 2005) or 17,523 HRK/year. When the annual depreciation for the 105 HP tractor is calculated in relation to the area the tractor is tilling (100 ha, Mago, 2008), the depreciation rate per hectare amounts for 22.88 EUR/ha/year or 175.23 HRK/ha/year.

Regarding the horses, the depreciation can be estimated as follows: the market price for a two year old stallion or mare of the Croatian Coldblood breed is calculated by 11 HRK (about 1.5 EUR) per kg of liveweight (Mr. Vedran Vuković of Beničanci village of Croatia, a horse-breeder for meat, personal communication, unpublished data) which is in average about 600 kg, what equals to about 6,600.00 HRK (about 900 EUR) for a head, or 13,200.00 HRK (about 1,800 EUR) for a pair (i.e. team). This meat market price is estimated to represent the costs for bringing up the horse from his birth to the age of two years when matured to agricultural work. The costs of training horses for work are not included in this price since the authors were unable to estimate them. When the purchase price is divided by 12 years of employment (Randall, 2004), the depreciation of a pair of horses equals to 1,100.00 HRK annually (about 150 EUR/year). This estimation is very close to the Randall's (2004) who estimated 91.67 USD per horse annually what equals to 1,111.00 HRK for a pair (about 145 EUR) according to exchange rates in 2004. The annual depreciation rate per hectare of cropland should thus be about 79.00 HRK/ha/year (about 10.40 EUR/ha/year) for a farm example of 14 ha (Mr. Antun Mandić of Vuka village of Croatia) or about 61.00 HRK/ha/year (about 8.04 EUR/ha/year) for the Morrison's (1936, cit. Courteau, 2007) horse/area ratio of one horse per 9 ha of cropland. The presented calculus shows the draught horses annual depreciation per hectare equals to one-third to one-half of the diesel-powered tractor of 105 HP tilling 100 ha of cropland.

Nowdays, when Croatian farmers are faced with lower prices for agricultural products due to openness to the international market, with growing prices for inputs and equipment, and with poor subsidies, the horse traction may look economically reasonable to small holders, mainly due to lower depreciation, fuel and maintenance costs.

### **3.6. Farm-level sustainability and organic farming issues**

In Croatia small farming agriculture is still very important. Farms cultivating below, or up to 10 ha of land, hold about 377,000 ha, i.e. about 37 % of a total of one million ha of cultivated land (MPRR, 2009). Small farmers are generally facing relatively high machinery costs per unit of land area (Mago, 2007) since they are over-equipped with tractor power due to their ambition to own at least a tractor and basic equipment, even when this is economically irrational. Morrissey (2009.) has concluded that horse traction under modern conditions is still

suitable for small farms since it meets more sustainability criteria than the use of a diesel-engine tractor. The sustainability criteria in favour of the working horse pointed out by Morrissey (2009) were: it offers the farmers a better economic viability, it increases their self reliance, it reduces their vulnerability when facing adverse natural and socio-economic factors and it improves the quality of life of farmers who enjoy working with horses and in a natural environment. The shift to horse traction perfectly suits organic farming systems which stress the importance of a farmers' self-reliance, of natural resources, of environment protection and long term sustainability of production and society development (Rigby and Caceres, 2001). Moreover, the use of working horses is expected to improve the profile of organically produced goods, giving them a traditional image when delivered to a farmers market by a horse wagon, which is appreciated by many urban consumers. Considering the ratio of amount of added value created on-farm and off-farm in the total value of production, the horse traction enables a farmer to participate with greater share than conventional farmer, mainly by avoiding most of the off-farm expenses which the conventional farmer has to cope with.

### **3.7. Work capacity and employment rate**

As presented above, a pair of horses may efficiently provide all the required traction for the cultivation of 18 ha of arable crops according to USA standards of 1929 (Morrison, 1936, cit. Courteau, 2007), or 14 ha of arable crops of east Croatia in the first half of the 20th century (Mr. Antun Mandić). Work capacity of a draught horse is thus estimated at about 7 to 9 ha per animal. In order to ensure the required ratio of land area per a horse, the number of animals needed increases if the cultivated area of the farm does. A similar relation applies to tractors: the bigger the farm, the more powerful the tractor (more HP). The working capacity of a horse does not limit the production capacity of agriculture. Though, using horses instead of tractors requires more human labour, since each team of horses should be lead by one man – a teamster. This statement brings another question: does the increased use of human labour benefit a nation's welfare or not? How does it correspond to Croatian employment needs? In times of increasing unemployment in Croatia, emerging employment opportunities may look promising, since unemployment has serious psychological and social consequences. For instance, unemployment brings anxiousness, depression, discontentment with life, lowered self-respect and hopelessness to affected people (Matko, 2002), and may even lead to criminal behaviour and delinquency (Nekić, 2002). If the increased employment rate is considered beneficially than the use of horses certainly would contribute to the nation's welfare.

### **3.8. Trade balance and foreign debt**

It is well known that negative foreign trade balance, if not financed from foreign currency reserves, may lead to increased foreign debt, even to a critical level concerning the sustainability of economy. Despite the Croatian ratio of public external debt to GDP (about 30 % in 2010, derived from Statistical Yearbook 2011, Croatian Bureau of Statistics, 2012) is considered quite sustainable (when below 60 % according to Mihaljek, 2003), the ratio of gross external debt to GDP (about 100 %) may be considered as a vulnerable trait of the Croatian economy (when above 80 %, according to Mihaljek, 2003).

Croatian agriculture driven by diesel-engine tractors contributes to national foreign trade misbalance due to its diesel fuel and lubricants consumption and to imports of tractors and spare parts. At the same time, the horse traction operates without imported fuels, lubricants and spare parts, thus relieving the foreign trade misbalance. Moreover, the use of draught horses can further contribute to foreign trade balance by attracting tourists to the rural

countryside what has the same effect as exports of goods and services. The attractiveness of rural landscape for agro-tourism purposes may be efficiently improved by the appearance of horses in carriage and field works. A significant number of North-East Brandenburg farms are offering horse-boarding facilities and farm holiday activities (Lange et al., 2013), and a frequent appearance of a horse-keeping and equine service provision represents a typical urban consumer-oriented farm adaptation strategy in peri-urban areas of Berlin and Copenhagen (Zasada et al., 2011, cit. Lange et al., 2013). Thus, a partial shift to horse traction may contribute to the enhancement of rural tourism as a component of regional and national economy as well.

#### 4. Conclusions

It appears from this research that horse traction in agriculture shows several very important indices of sustainability, even in the 21<sup>st</sup> century, and even for developed economies, what is in line with findings of Morrissey (2009), Randal (2004) and Rydberg and Jansen (2002). The most important indices of sustainability are: use of renewable energy sources for fuelling, minimization of GHG emissions, conservation and improvement of soil fertility, enabling arable soils to buffer water excesses through preventing soil compaction and thus mitigating or preventing extreme consequences like floods and crop losses due to drought, use of locally produced fodder to fuel the traction, use of locally produced “engines” since horses are self-replicating, unlimited work capacity achieved simply by adding more horses in order to keep the required land area per animal ratio, preventing adverse social consequences of unemployment through a growing need for human labour, equalizing currently negative foreign trade balance through expected increase in sales of goods and services in agro-tourism and decrease of imports of fuels, tractors and spare parts, relatively minor depreciation cost per ha of cultivated land compared to tractorised farming and improving farm economics by reducing the operation costs and off-farm expenses. The required percentage of cultivated land that has to be confined to horse fodder production, and thus excluded from cash-crop production, may be compensated by improved soil fertility and yield stability over the years in sequence of weather extremes like droughts and excessive moist. Considering farm-level economics, the obvious minor loss of area for cash-crop production may be balanced by the farmers’ increased share in the added value of farm products.

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**CORPORATE SOCIAL RESPONSIBILITY THROUGH THE LENS OF  
ACCOUNTING**

**DRUŠTVENO ODGOVORNO KORPORATIVNO UPRAVLJANJE S  
ASPEKTA RAČUNOVODSTVA**

**ABSTRACT**

*Corporate social responsibility is an imperative for participants in the modern business environment. In addition to achieving the substantial business goal of today's corporations i.e. profit, companies do devote considerable attention to the environment and the community where they carry out their activities. The implementation of all activities requires a good information base, thus a socially responsible conduct of business operations with its basis lying in accounting. This paper will analyse the main characteristics of corporate governance, corporate social responsibility and the importance of accounting as information support to corporate social responsibility, focusing on green accounting, as a representative example of the accounting support to socially responsible governance. The aim of the study is to show the importance of building awareness of corporate social responsibility as a corporate strategy aiming at achieving the company's business goals.*

**Keywords :** *corporate governance, corporate social responsibility, accounting, green accounting*

**SAŽETAK**

*Društveno odgovorno poslovanje predstavlja imperativ savremenih poslovnih subjekata. Pored ostvarivanja vrhunskog cilja poslovanja današnjih korporacija – profita, značajnu pažnju kompanije posvećuju i brizi za životnu sredinu i društvenu zajednicu u kojoj obavljaju svoju delatnost. Realizacija svih aktivnosti zahteva dobru informacionu osnovu, pa tako i realizacija društveno odgovornog poslovanja, a ta osnova leži u računovodstvu. U radu će se analizirati osnovne karakteristike korporativnog upravljanja, društveno odgovorno poslovanje i značaj računovodstva kao informacione podrške društveno odgovornom poslovanju sa fokusom na zeleno računovodstvo, kao reprezentativni primer računovodstvene podrške društveno odgovornog poslovanja. Cilj rada je prikazati značaj izgradnje sveti o društveno odgovornom poslovanju kao vidu korporativne strategije kojom se ostvaruju poslovni ciljevi kompanija.*

**Ključne reči:** korporativno upravljanje, društveno odgovorno poslovanje, računovodstvo, zeleno računovodstvo.

## **1. Introduction**

The modern business environment in which business entities exist today is characterized by intense competition, continuous scientific and technological advances and the need for continuous pace-keeping with innovations as well as focusing on customers' needs. Customers and consumers are becoming the central concern of any business entity since they are the ones that dictate its business activities. The desire for profit as the ultimate goal of a business is the most important premise of the focus of interest of every business entity. By realizing this ultimate goal, business entities lose their sense of social responsibility i.e. care for the environment in which they exist. This fact has negative implications, especially when business entities with so-called "dirty technologies" are concerned, those that destroy or degrade the environment in which they operate, all with a view to making profit. All this points to the need for the development of corporate social responsibility as the ultimate intention of today's business entities. Through profit-making, businesses should allocate a portion of the funds for a number of socially responsible projects since this will provide multiple benefits both for their business and the community in which they operate.

Corporate governance, as the ruling paradigm of modern management, in addition to focusing on achieving business goals, should pay considerable attention to the corporate social responsibility aspect of their activities. An important role is given to accounting, which should be the information support to management in the implementation of corporate social responsibility and its major driving force in the administration of projects of this nature. A particularly important role in this segment has been taken by green accounting, which follows all activities relating to the protection and improvement of the environment, as the basic category of corporate social responsibility.

## **2. The main determinants of the modern process of corporate governance**

The analysis of problemacy of corporate governance, including its determinants and contemporary trends, the need for a definition of its notions, becomes evident. We will accept the definition set forth in Cadbury's report back in 1992, according to which corporate management is a system by which companies (business entities; authors' note) are managed and monitored. Management via the process of corporate governance determines the strategic goals of business operations, implements them and monitors the activities of all employees towards achieving the goals defined.

Corporate governance should create conditions for attracting human and financial resources into business entities i.e. create conditions for effective operation and long-term sustainable development. This objective of corporate governance is particularly important in present circumstances when market competition is becoming all the more intense and ruthless, where an entity is almost daily faced with the struggle for survival. Today, a proactive approach by the management is required in decision making i.e. there is a need for management actions aimed at preservation of existing and winning new market positions. It is in no way an easy target.

From its appearance in the currently most powerful market economy of the United States, until the present day, a number of problems have been identified, which have presented a

burden to the smooth development of the system of corporate governance. The main problem in the development of corporate governance, both in the United States and other states, primarily in the UK, is focused on criticism of the enormous powers which CEOs have had, which could be misused to promote personal interests, neglecting the interests of the company. This is best evidenced by scandals in companies such as "Maxwell " and "Polly Peck International". As a product of these facts a number of issues in corporate governance framework have emerged, which primarily relate to the establishment of a balance of power within the board of directors, denouncement of individual executives to dominate the decision-making process, making effort to secure fair compensation for all directors, creating conditions for external auditors to remain independent and free from the influence of the company and increase the level of responsibility of the Board of Directors in monitoring and managing risk. In addition to these questions other issues may be set forth as well, such as promotion of business ethics and corporate social responsibility awareness and prevention of mobbing at the workplace .

With the development of corporate governance, certain models of it have become more distinct. Two important variables were involved in the identification of different models of corporate governance as follows: structure of shareholder and its stability. The first variable involves various structures of shareholders starting from uniform and monolithic (one person or one family), to complex (joint stock companies) and heterogeneous, a structure that includes a large number of participants, such as depositors, institutional investors, managers, employees, and the like. The other variable in turn implies stable shareholding or variable shareholding, which is subject to constant change due to the sale of shares. Interaction of these two variables the following models of corporate governance were found, namely (Cantino, 2009, 6):

- ✓ businesses with dispersed ownership and public companies which are characterized by complex and variable share capital structure,
- ✓ businesses with a limited number of owners or private businesses that bind a unique and stable structure and shareholders
- ✓ businesses with a limited circle of ownership or partnerships that are characterized by a complex structure and stable shareholders.

For ease of understanding the same model of corporate governance will be graphically displayed in the following table:

Table no. 1 Models of Corporate Governance

<b>Ownership structure</b>	<b>Durable structure</b>	<b>Variable structure</b>
<i>Unique</i>	<i>Private business entity</i>	
<i>Complex</i>	<i>Partnership</i>	<i>Public business entity</i>

Source: Cantino, 2009, 6

Analyzing table 1, it becomes clear that ownership structure of business entities can be unique and complex. A stable shareholder structure is characteristic of private businesses and partnership businesses, while the variable structure can be related to public businesses.

Corporate governance can be divided into two basic models relating to the outsider i.e. the Anglo-Saxon, Anglo-American or liberal model and the insider, continental or coordinated model. In recent theoretical debates, a third model of corporate governance emerges, better known as the Japanese model whose characteristics are much closer to the continental model of corporate governance. Basic characteristics of the outsider model of corporate governance

are reflected in the dispersion of ownership, extremely active capital market, the existence of a high degree of equality among shareholders as well as in the fact that the majority within the board of directors are non-executive directors. In the outsider model the main shareholders belong to sophisticated institutional investors. In the insider model of corporate governance dominant shareholders are families, banks and the state. Among other characteristics of the insider model, we can point out the existence of concentrated ownership, underdeveloped market of corporate control, as well as the existence of inadequate protection of minority shareholders .

### **3. Corporate Social Responsibility - investment in a better future for all of us**

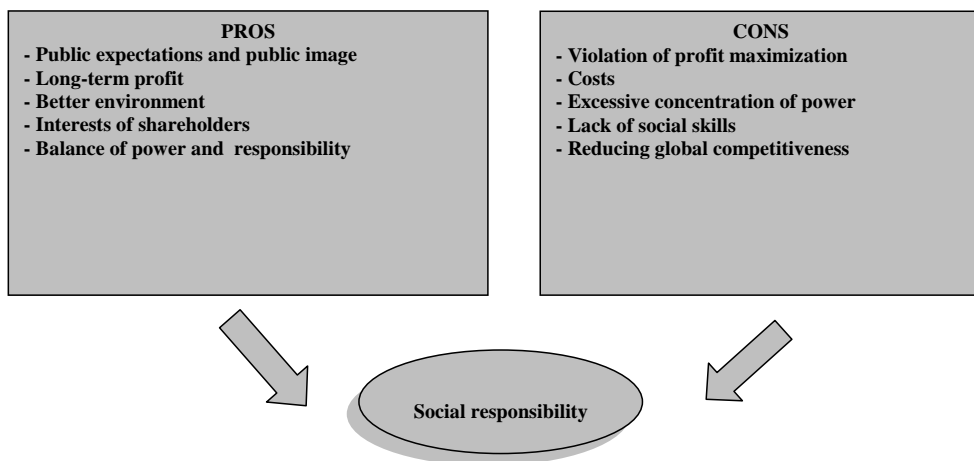
The lack of morality, self-interest and concern for profit characterize current time, which is increasingly gaining the features of an arena where modern gladiators - the global corporations wage a war where every error is paid by one's own demise. These circumstances have introduced the need for any modern corporation to be primarily oriented towards their own development, while the concern for public interest is tossed to the background. Although the impact of these hazards and obstacles in today's circumstances is more intense, there are companies that, despite all this, pay considerable attention to the social environment in which they exist. In fact, through corporate social responsibility companies build their corporate image, creating a positive image of their business within the society, thus creating a favorable opinion of direct consumers about their business and their concern for the welfare of the society. All in all, it can be concluded that profit remains the main interest of companies, even if they are socially responsible. Profit represents the crucial and supreme goal of every company. By achieving that goal the company proves the reason of its own existence.

With the aim of contributing to the community in which they operate, companies try to incorporate into their strategy the concept of social responsibility or CSR. These activities are realized through the company's environmental projects, promotion of human rights, granting scholarships for gifted students, promotion of healthy lifestyles and creating better conditions for health care and many other activities. In implementing CSR, companies build it into their marketing strategy, thus making these activities available on the open market i.e. making them transparent.

Promoting the concept of social responsibility, companies try to make their businesses more competitive by improving their market position by providing higher customer loyalty, enhancing the reputation of their business with financial institutions and a number of other benefits. In the implementation of these projects socially responsible companies cooperate with representatives of civil societies, including various non-governmental organizations, state agencies, higher education institutions etc. In order to promote their socially responsibility business activities the company must create such a system of promotion of their activities which will create appropriate social perception and represent a mechanism for the implementation of their own corporate marketing strategy.

It can be concluded that social responsibility in today's business world has become imperative, which no longer represents a cost but an investment in the business by building one's own corporate identity. It is a major decision that is valorized on a range of social and economic effects increasing benefits to both the corporate business and the whole of the society. Like any other economic category, corporate social responsibility is subject to challenge. In the figure, the pros and cons of corporate social responsibility are presented:

Figure no. 1 Pros and cons of corporate social responsibility



Source: Bahtijarević – Šiber, Sikavica, Pološki Vokić, 2008, 563

Analyzing Fig. 1, it can be seen that, despite the generally accepted concept that corporate social responsibility is rather an investment than operative cost, in theoretical debates about social responsibility there are numerous dilemmas on whether or not to opt for corporate social responsibility. As part of the commitment to social responsibility, we find a number of arguments, such as the realization of long-term profits, realization of the rights of shareholders (shareholder), providing a better environment etc. On the other hand, there are also numerous arguments against the concept of corporate social responsibility, such as violation of the concept of maximizing profits, excessive concentration of power, absence or lack of social skills and the ultimate negative effect is, in fact, reduction of global competitiveness of the corporation.

If we consider the trends in the development of corporate social responsibility, three basic concepts of social responsibility may be identified, namely: the concept of corporate citizenship – it means awareness of the management of the need for corporate responsibility for active and equal involvement in solving current social problems and focusing on the creation of quality living conditions for the citizens; environmental or green management – it includes management responsibility for environmental protection and performance of business activities towards providing ecologically successful business results and social entrepreneurs – a term referring to business leaders who intend to change the world and whose priority is not making profit, but improvement of social conditions. Their main philosophy is that the world should be made a better place to live for all.

At the end of the discussion on the concept of social responsibility we will focus on corporate social responsibility in Serbia. With a growing involvement in the global market trends, companies in Serbia should strive to increase the level of social responsibility. Although significant progress may be felt in the concept of corporate social responsibility the level of development is still at a rather low level. Leading domestic companies have got involved in CSR realizing its importance for their overall social development. In the future, the following



measures should be taken in order to improve corporate social responsibility in Serbia: to encourage launching a large number of media campaigns and hold meetings and seminars in order to highlight the importance of corporate social responsibility, to pass a legal act that will promote socially responsible business activities in the Republic of Serbia and encourage active implementation of existing legislation governing the issue of corporate social responsibility and building a system of incentives that would allow development of corporate social awareness in domestic businesses. For the implementation of these activities in the future a greater role of the state is required.

#### **4. Corporate Social Responsibility – The Accounting Aspect**

Modern management, within the focus of its own interest, sets profit making for its priority and considers it the most important performance indicator of corporate performance in modern market conditions. Too often, in achieving this goal companies forget the society where they exist. Fortunately, in recent years, the concept of corporate social responsibility is increasingly and extensively promoted, which apart from profit making, takes into consideration the interests of the community in which corporations operate. The question of how these tendencies aimed at raising socially responsible operations reflect in accounting i.e. within the system of financial reporting. In the discussion on the social responsibility via the accounting aspect, attention will be paid to reviewing accounting issues of the environment, as the fastest developing segment that follows the CSR of companies.

Contemporary socio - economic development has caused the need to develop new forms of accounting that need to respond to an increasing number of demands that are placed in front of the accounting information system, and one of the most pressing demands relates to the accounting scope aimed at preservation of the environment, resulting in the development of environmental accounting or green accounting.

Accounting for the environment or "environmental accounting and reporting", as it is often referred to at national level, has the task of providing relevant and reliable information required for effective and efficient environmental management at state level. This kind of accounting might also be called macro green accounting. On the other hand, we have green accounting at the level of the business system, usually at company level, which is recognized as a segment of financial and management accounting. In fact, the overall attitude of the society towards this very important issue depends on efficient and environmentally responsible business systems in the field of environmental protection. In the contemporary socio - economic reality, business entities are expected to show a high degree of social responsibility where environment protection is its integral part. The so-called "Green accountant" is required to pay considerable attention to assessing the ecological value at the level of the social system since it is the precondition for preserving the environment as well as for our existence on planet earth.

There are many theoretical approaches to the observation of green accounting and reporting, but one of the most accepted and applicable accounting model looks at the accounting of the environment as a whole made up of five parts (Knežević, 2011, 49):

- ✓ ***Environmental hazard*** - means that the environment is in constant danger and threat;
- ✓ ***Social or corporate responsibility*** – the actions of numerous industries inflict significant damage to the environment endangering its survival, leading to its degradation and causing substantial pollution. For these reasons, in the next period,

attention should be paid, both at the level of the company the individual, to environmental protection, in order to avoid drastic changes and enable business activities in accordance with the generally accepted principles of social responsibility;

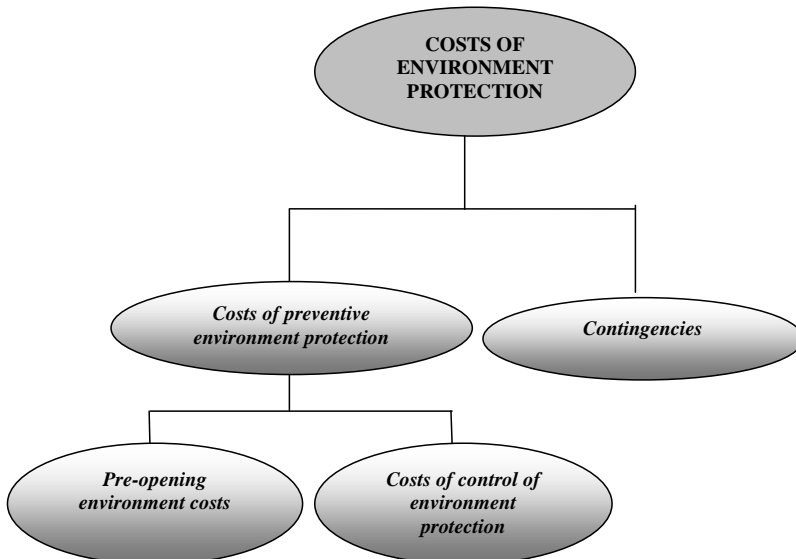
- ✓ ***Establishment of a new and better relationship*** between the industry and the environment in order to preserve natural resources, achieve sustainable development and prevent negative climate changes such as global warming and improve the quality of biodiversity;
- ✓ ***The need for quantification of both positive and negative impacts*** of industrial activities on the environment, and reporting on this, and
- ✓ ***Long-term orientation of industry*** towards environmental preservation as a crucial aim of future activities of modern global companies.

The accounting policies of the business entity may establish the obligation of ecological report making aiming at preservation of the environment. These reports may define the following<sup>2</sup>:

- ✓ Financial indicators to measure economic - environmental effects;
- ✓ The need for standards of environmental accounting;
- ✓ The savings and investment in environmental protection;
- ✓ The development of ecological processes and products and
- ✓ Identification of information required to estimate the costs of environmental protection.

Aiming at better identification of the structure of the costs of environmental protection the previous classification may also be represented graphically<sup>2</sup>:

Figure no. 2 Costs of environment protection (as per ISO standards 14001 and 14031)



As you can see from the attached Fig. 2, the cost of preventive environment protection includes pre-opening environment costs as well as control costs of environment protection. Within the pre-opening environment costs different types of costs may be distinguished, such as costs of production factors incurred by market research, cost of production factors caused by implementation of environmental policies etc. On the other hand, within the framework of the costs of the control of environment protection a number of costs may be distinguished, such as the cost of control of input and output production factors, cost of transport of hazardous raw materials etc. Unforeseen costs include various types of costs, which occurred primarily as a result of untaken ecological measures and within them we may differ: the cost of emergency response to eliminate harmful effects on the environment, costs of stopping or closing manufacturing processes, damages caused to natural resources and people, etc. In fact, all the costs of environment protection can be classified into four basic groups of costs that are reported in a separate report on environment costs (Berber, Dorđević, 2011, 53):

- ✓ The cost of prevention aimed at preventing pollution and waste;
- ✓ Costs of detection of environment protection;
- ✓ The cost of failure of internal environment protection and
- ✓ The cost of failure of external environment protection incurred in cleaning up the environment in case of release of pollutants.

Cost accounting in general, as well as cost accounting of environment protection consists of all parts that make up management accounting and one part of financial accounting. From this, it is safe to conclude that it is actually accounting of environment protection or Green Accounting composed of environmental financial accounting and management accounting of the environment, and thus it is the most important area of monitoring of this part of cost accounting of the environment .

Traditional financial statements do not provide adequate and clear information about costs aimed at conservation of the environment. This imposes the need, in current modern business environments, to make statements of environmental efficiency (profit and loss of the environment) that should indicate the benefits that a business entity felt in its operations on the basis of raising environmental awareness and increasing eco-efficiency of its operations.

When measuring environmental efficiency, the management of the business entity have different instruments and indicators. One of these indicators is (Knežević, 2011, 52):

**FACTOR OF ECO-EFFICIENCY =**

*SERVICES (new products/old products)*

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*LOAD ON THE ENVIRONMENT (new products/old products)*

**ECO-EFFICIENCY OF BUSINESS ALTERNATIVES =**

*ECONOMIC BENEFIT + REDUCED SOCIAL COSTS*

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*COSTS OF ENVIRONMENT CONSERVATION*

These indicators are used for measuring the efficiency of a business entity in environmental conservation, and the ecological efficiency of business activities. This is a particularly interesting indicator of the ecological efficiency of various business alternatives.

The problemacy of accounting follow-up of corporate social responsibility could be approached from a much wider perspective, but it would be out of the scope of this paper. In any case, the next period should yield increasing importance of corporate social responsibility and development of accounting methods that will allow their monitoring.

## 5. Conclusion

Corporate social responsibility is a growing challenge for companies if they want to secure their market survival. Those corporations that are ready to realize the need for corporate social responsibility will gain a significant competitive advantage by building a corporate image and reputation in the public. If a socially responsible business aims to achieve an adequate pace of development, it also requires the state to take an active role, which will, through its instruments, work towards encouraging and implementing the concept of corporate social responsibility within each company. Also, it is necessary to carry out continuous promotion of this type of business so that companies may realize its importance and the benefits that it brings, since it is the only way to impose this business concept in a profit-oriented society.

Accounting as the most important database of every company should provide a stable information base for monitoring projects of socially responsible business activities. The financial reporting system should be set up in such a way that considerably more attention is paid to projects of corporate social responsibility i.e. businesses shall report on their corporate social responsibility activities. Green accounting, as a separate segment of accounting, which follows activities for conservation and protection of the environment, has been gaining momentum recently. The future will positively contribute to the development of socially responsible business activities and their accounting follow-up i.e. development of new segments of accounting may be expected in the future, which will deal with the said trends.

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**IMPORTANCE OF TRIPLE (QUADRUPLE) HELIX CONCEPT FOR  
REGIONAL DEVELOPMENT – CASE STUDY: FACULTY OF  
ECONOMICS IN OSIJEK**

**ZNAČAJ TRIPLE (QUADRUPLE) HELIX KONCEPTA SURADNJE ZA  
RAZVOJ REGIJE – PRIMJER EKONOMSKOG FAKULTETA U  
OSIJEKU**

**ABSTRACT**

*The conception of Triple Helix concept happened during the 1990s, with a purpose of encouraging cooperation between three institutional domains (university – industry – government), thus contributing to productivity of a knowledge-based society, where the role of innovations was crucial for creating economic growth and maintaining it. Facing with global economic issues and changes, the risk and challenges of a growing, insecure and complex environment, a need arose for a new role and function of universities. Instead of the traditional role of teaching, the emphasis has been put on universities as socially responsible subjects in social and economic development of every country. Adapting to market needs, J. J. Strossmayer University in Osijek is developing programs and participating in projects which are in demand, thus contributing to both the economy and society as a whole.*

*One of those projects is project A.C.T.I.V.E. – Activity and Creativity Through Ideas and Ventures = Employment, started by Faculty of Economics in Osijek in cooperation with Center for Entrepreneurship, Osijek and Croatian Employers' Association, Osijek Regional Office, BIOS d.o.o. - business incubator in Osijek, four high schools, Osijek-Baranja County and Croatian Employment Institute, Osijek Regional Office, with the main goal of this project being to improve prerequisites for employability and self-employability of young people in*

*Slavonia and Baranja, especially college and high school graduates as well as inexperienced unemployed people.*

*The goal of this paper is to highlight the significance of Triple Helix concept in the process of transformation into a knowledge-based society, with a goal of increasing competitiveness, productivity and employment, and together with that ensuring a stable and sustainable economic growth.*

**Keywords:** *Triple Helix concept, innovations, cooperation between sectors, project A.C.T.I.V.E., job market, sustainable development*

## SAŽETAK

*Idejni začetak koncepta Triple helix nastao je 1990-ih godina sa svrhom poticanja suradnje između tri institucionalne sfere (sveučilište-industrija-vlada) doprinoseći tako produktivnosti društva utemeljenog na znanju, pri čemu je uloga inovacija ključna u stvaranju ekonomskog rasta i održavanju istoga. suočavajući se sa problemima globalne ekonomije te promjenama, rizikom i izazovima rastućeg, nesigurnog i složenog okruženja, pojavila se potreba za novom ulogom sveučilišta. Umjesto tradicionalne uloge podučavanja, sve više ističe se uloga sveučilišta kao društveno odgovornog subjekta u društvenom i ekonomskom razvoju svake zemlje. Prilagođavajući se potrebama tržišta, Sveučilište J.J. Strossmayera u Osijeku, Ekonomski fakultet u Osijeku razvija programe i sudjeluje u provedbi projekata za kojima postoji potreba doprinoseći tako razvoju ekonomije i društva u cjelini. Jedan od takvih projekata je i projek A.C.T.I.V.E. – Activity and Creativity Through Ideas And Ventures = Employment kojim Ekonomski fakultet u Osijeku u suradnji sa Centrom za poduzetništvo, Osijek; Hrvatskom udrugom poslodavaca, Regionalnim uredom u Osijeku; Poduzetničkim inkubatorom BIOS d.o.o., Osijek; četiri srednje škole, Osječko-baranjskom županijom i Hrvatskim zavodom za zapošljavanje, Područnim uredom u Osijeku ima za cilj poboljšati preduvjete za zapošljivost i samozapošljavanje mladih ljudi u Slavoniji i Baranji, posebno studenata i učenika kao i nezaposlenih osoba bez radnog iskustva.*

*Cilj ovog rada je ukazati na važnost koncepta Triple helix u procesu transformacije prema društvu znanja s konačnim ciljem povećanja konkurentnosti, produktivnosti i zapošljavanja, a sukladno tome, ostvarenja stabilnoga i održivoga ekonomskog rasta.*

**Ključne riječi:** *koncept Triple Helix, inovacije, međusektorska suradnja, projekt A.C.T.I.V.E., tržište rada, održivi razvoj*

## 1. Introduction

The Triple Helix concept was set up in 1990s, in a time when high politics encouraged a narrow cooperation between universities and industry, all for the greater good. The concept was found as a result of long-term study of the relationship between universities and industry, made by Henry Etzkowitz, and Loet Leydesdorff's interest in evolutionary model in which communications between several different and independent domains overlap. Etzkowitz and Leydesdorff published their first paper in 1995, titled "The Triple helix - University-Industry-Government Relations: A Laboratory for Knowledge-Based Economic Development." According to Etzkowitz (2002), Triple Helix represents a spiral model of innovations reflecting trilateral relationship within the capitalization of knowledge. Ranga and Etzkowitz (2013) define the Triple Helix concept (in relation to the system theory) as a set of:

- components (institutional domains of university – industry – government)

- relationship between the components (cooperation and conflicts, management, interchangeability and networking)
- functions (knowledge, innovations, consensus).

In last 20 years Triple Helix developed into a widely accepted conceptual framework which brings together knowledge, consensus and innovations of three (or four) major social factors: university - government - industry (and civil society) and provide better cradle for social and economic development (Etzkowitz & Leydesdorff, 2000).

Dr. Alan Paić (2014), acting Head of Investment Compact for South East Europe, OECD, defines the Triple Helix concept in this manner: *“It's a model which derives from a traditional role of three main factors of the innovative system: science, which creates new knowledge, economy which transforms this knowledge into products and services, and of course the government, which is responsible for the legislative and infrastructural part. However, these roles are shifting nowadays: the university can create a spin-off enterprise and thus become an “entrepreneurial university”, the government can finance an innovation and become a financier, whereas a company can invest in new knowledge. This, therefore, represents the manner in which the dynamics of Triple Helix is created.”*<sup>210</sup>

The Triple Helix concept is based on these three elements<sup>211</sup>:

- the role of the university regarding the innovations – universities, along with research and development institutions which create technological innovations, work together with the industry and the government, thus contributing to the knowledge-based productivity of the society,
- cooperative relationships between three institutional domains (university – industry – government) – whose interaction contributes to the innovative policy, which is crucial for creation of economic growth, and its management,
- assuming roles – besides carrying out their usual roles, each of these institutional domains should assume and carry out the roles of the other two, thus contributing to directing its innovative potential into creation of new innovations.

According to the Triple Helix concept, universities, industry and government equally contribute to attracting innovations in a knowledge-based society (Etzkowitz et al, 2007).

The unique feature of this concept is deepening of relationship (isolated, bilateral, trilateral and multilateral) between the three institutional domains – university, industry, government. At the beginning, the circulation of knowledge between the three institutional domains of Triple Helix was conducted individually, and later, during the process of capitalization of knowledge, these connections would become more complex and intense, and in the end they would represent a set of complex organizational connections between mutually overlapping domains, thus gradually diminishing the boundaries that separate them. Each institutional domain increasingly assume the role of another – in a way that universities take up some entrepreneurial characteristics and found their own companies, while the companies develop some academic characteristics, exchanging knowledge between themselves and training and developing their employees internally.<sup>212</sup> The Triple Helix concept thus becomes an instrument of influencing public opinion that is creating awareness of the importance of

<sup>210</sup> <http://www.vecernji.hr/gospodarstvo/konkurentnost-treba-graditi-pojednostavljenjem-propisa-i-ulaganjem-u-inovacije-934850> (accessed on 24 April 2014)

<sup>211</sup> Paraphrased <http://tha2014.org/concept> & [http://www.techmonitor.net/tm/images/7/7d/07jan\\_feb\\_sf1.pdf](http://www.techmonitor.net/tm/images/7/7d/07jan_feb_sf1.pdf) (accessed on 30 April 2014)

<sup>212</sup> Paraphrased <http://tha2014.org/concept> (accessed on 1 May 2014)

knowledge and the role of universities and other research and development institutions in relation with the economy.

Although the Triple Helix concept is not a recent invention, such form of cooperation is still in its early stages of development in Croatia. The importance of this new approach to solving social, economic, ecological and other problems in Croatia reflects in the fact that cooperation is the only sustainable approach to creation of a successful society.

Even though the strategic plan made by the Ministry of Entrepreneurship and Crafts for the period of 2013-2015 sets up a goal of: *“stronger linking and networking of scientific-research institutions with small and medium businesses with the aim of creating synergy between new knowledge and commercial potential, together with the improvement in implementation of Triple Helix concept (relationship between the economy, scientific institutions and the government)”*, it is necessary to create conditions to put such an approach into practice. According to Borozan and Miličević (2009), it is necessary *“to make a change regarding the government’s attitude, whose role is to create a convenient, encouraging, transparent and honest general and entrepreneurial business framework, to initiate active cooperation with business and non-profit sector, academic as well as public sector (to develop a so-called quadruple helix interaction), and also improve quality of its services offered and provided to other sectors (such as education, research and development etc.). The government needs to act as a catalyst and create such a business surrounding which will be encouraging for individuals and businesses to continually improve their efficiency, productivity and performance.”*

It’s been proven in practice that the individual approach to development gives unsatisfactory results, and that successful, productive and innovative society based on hybridization of knowledge can only be achieved by involving as many members of the society as possible into transforming themselves by strengthening the relationship between three institutional domains (university – industry – government).

## **2. The role of universities in implementation of Triple (Quadruple) Helix cooperation model**

The Triple Helix concept is based on a fact that the innovativeness and economic development in a knowledge-based society are reflected in a significant role of university and hybridization of universities/industry/government in generating new institutional and social framework for production, transfer and implementation of knowledge (Ranga and Etzkowitz, 2013). The role of universities in a knowledge-based society is multiplex. The first and foremost is participation in social and economic development – together with the existent role of teaching and research – comparable with a second academic revolution (Etzkowitz, 2003). The second role relates to a continuing ability of universities to “produce” students carrying new ideas, skills and entrepreneurial talent, the base values in a knowledge-based society. The third one is tied to the ability of generating technology, thus changing the role of university – from a traditional source of human resources to a source of creating and transferring technology. *“Institutions of higher education are assuming ever larger role in innovations process. Even though the main institutions responsible for building modern society were industry and the government, in a knowledge-based society, the academic institutions need to take the leading role. The reason for that is quite simple – the circulation of young and creative generation of people. The Triple Helix concept recognizes the potential of institutions of higher education and encourages them to assume a more important role, not just in*



*education and research, but also in creating new values – education of future entrepreneurs, setting up of business incubators, founding new companies etc. The government together with the business sector need to accept this new division of power and by that make this cooperation more effective and efficient.*"<sup>213</sup>, said prof. Etzkowitz.

*Facing with global economic issues and changes, the risk and challenges of a growing, insecure and complex environment, a need arose for a new role and function of universities. Instead of the traditional role of teaching, the emphasis has been put on universities as socially responsible subjects in social and economic development of every country. According to Hughes (2007), young people today are faced with inexhaustible source of opportunities and choices on one, and changes, risk and challenges of a growing, insecure and complex environment on the other side. Since people are the main source and carriers of ideas, information, knowledge and skills, motivation and diversity of education opportunities are a key factor in the process of creating intellectual capital. Intellectual capital is the strategic basis of a modern society and economy.*

Unlike Wesheimers (2008) assertions that most educational institutions do not understand their role in creating "good citizens", Faculty of Economics in Osijek surely recognized its part and contribution to economic development as well as the fact that the academic education alone is not enough. Adapting to market needs, Faculty of Economics in Osijek is developing programs which are in demand with a goal of increasing competitiveness, productivity and employment, and together with that ensuring a stable and sustainable economic growth, thus contributing to both the economy and society as a whole, and to the fact "*that universities are capable of recognizing the changes and developments in their community and actively taking part in the development of culture where socially responsible behavior of all members of the society is the very basis of their existence.*" (Perić, 2012)

### **3. Triple (Quadruple) Helix cooperation model presented through project A.C.T.I.V.E., by Faculty of Economics in Osijek**

In February 2014, Faculty of Economics in Osijek started the implementation of project A.C.T.I.V.E. - *Activity and Creativity Through Ideas and Ventures = Employment* in Osijek-Baranja County, where more than 50% of its area is classified as an Area of Special State Concern. Osijek-Baranja County belongs to one of the lagging-behind regions in Croatia, with registered unemployment rate of 33.3% in March 2014, which represents a 10.7% share in total number of unemployed persons in Croatia.<sup>214</sup> Besides that, this project has a goal of solving some other burning issues existing in Osijek-Baranja County, such as<sup>215</sup>:

- lack of communication and soft skills among young people (presentation skills, communication skills, preparing personal presentations etc.),
- insufficient level of education in the field of entrepreneurship,
- employers rarely hire young people with no work experience,
- insufficient informing of target groups concerning available jobs, possibilities for involvement in the work of civil society organizations, possibilities of involvement in periodical jobs, various forms of education,

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<sup>213</sup> <http://www.vern.hr/novosti/zacetnik-triple-helix-koncepta-prof.-henry-etzkowitz-odrzao-predavanje-na-vern> (accessed on 1 May 2014)

<sup>214</sup> Croatian Employment Service, Regional Office Osijek: *Radna snaga Osječko baranjska županija*, March 2014

<sup>215</sup> Project A.C.T.I.V.E. – Local employment development initiatives Grant application form, 2012. Project A.C.T.I.V.E is co-financed from EU funds under the tender "Local employment development initiatives."

- insufficient counselling of target groups concerning a proactive approach to the labor market.

Therefore, the main goal of this project is to improve prerequisites for employability and self-employability of young people in Slavonia and Baranja, especially college and high school graduates as well as inexperienced unemployed people, while the specific goals of the project are: a) to contribute to increase in employment and self-employment of young people in Slavonia and Baranja, through informing, counseling and education about the pro-active approach to job market and self-employment, encouragement and development of entrepreneurial skills and b) to create prerequisites for continuous assistance to young people – college and high school graduates in Osijek-Baranja County as well unemployed young people with no work experience with a goal of motivating, strengthening and assisting startup of new enterprises within the Student Incubator – business incubator for young people.

In order to achieve these goals, several activities will be carried out within this project: educational activities for students of J. J. Strossmayer University in Osijek, educational activities for students in four high schools, debate club involving college and high school students and unemployed persons, “Best business idea” contest for young people, fair and presentation of best new business ideas, startup and equipment of Student Incubator – business incubator for young people, mentoring and counseling of young people willing to start up their own business or find a job, monthly business forums involving entrepreneurs and members of target groups, linking employers’ databases with databases of target groups, and various dissemination and PR activities.

Primary results of project implementation include:

- increased competence and “soft” skills of college and high school students and inexperienced unemployed persons, their inclusion in job market, increased level of self-employment and motivation;
- encouragement of debaters and strengthening of their stance toward finding arguments and insights into contemporary topics;
- stimulation of development of creative ideas within the target groups as well as their capability to elaborate, stimulation of young people’s motivation;
- presented ideas and better exposure of best and most creative ideas;
- higher level of employment and self-employment and increased awareness among young people;
- young people are informed and advised enough to start up their own businesses, find and reach potential employers as well as self-employ;
- new business networks involving employers and target groups are created;
- easier networking and identifying new employment opportunities.

Participants in this Quadruple Helix cooperation concept include:

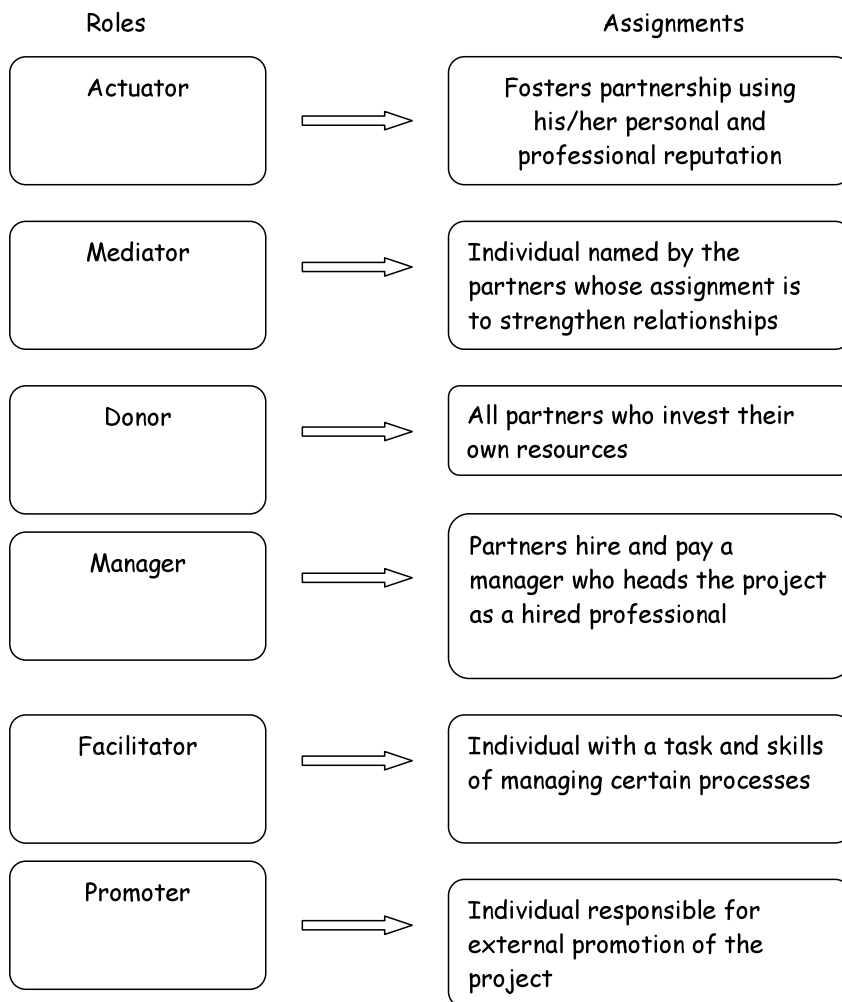
- Josip Juraj Strossmayer University in Osijek, Faculty of Economics in Osijek (university),
- BIOS d.o.o. - business incubator in Osijek, various entrepreneurs (industry),
- Osijek-Baranja County and Croatian Employment Institute, Osijek Regional Office (government),
- Center for Entrepreneurship, Osijek and Croatian Employers’ Association, Osijek Regional Office (public sector)

Project partners include four high schools: *Davor Milas* commercial school in Osijek, Vocational school in Osijek, Hospitality school in Osijek and 2<sup>nd</sup> High school in Beli

Manastir, which, besides participating in implementation of scheduled activities, co-finance the project.

According to EU standards, cooperative partnership is identified as one of key prerequisites of sustainable regional development, whereas in Croatia it is still a fairly new model of cooperation. The very term “partnership” has this meaning, according to Economic Thesaurus: “Partnership or cooperative, civil rights association, contractual obligation by which parties involved vow to associate their work and/or property, partially or in whole, with a purpose of achieving some common goal, without creating a new subject.” While defining the roles of participants in Quadro Helix cooperation concept, it is important to highlight various roles that one can assume within a cooperative partnership (Picture 1).

Picture 1. Roles and assignment of participants in cooperative partnership



Source: Group of authors: *Vodič kroz međusektorsku suradnju*, Udruga Slap, Osijek, 2003.

Each participant's role within the Quadruple Helix model in project A.C.T.I.V.E. is described below.

For the Faculty of Economics in Osijek, project A.C.T.I.V.E. – *Activity and Creativity Through Ideas and Ventures = Employment* represents a continuance of activities which have a goal to increase the number of participants in entrepreneurship education in schools and universities, improve the image of entrepreneurs in the society and the attractiveness of entrepreneurship as a career choice, as well as fostering creativity and innovation in education

and training. By leading the project, the Faculty is responsible for the entire implementation of the project, as well as for co-financing activities and salaries of members of the project team.

The role of BIOS d.o.o., business incubator, Osijek, the representative of business/industry sector, is to provide space for startup and equipment of Student Incubator – business incubator for young people, and also to contribute to the project via its experts who can use their knowledge and experience to help implement project's scheduled activities. Besides that, entrepreneurs can perform as guest speakers in educational workshops and, with practical examples, transfer their knowledge and experience in startup and management of business to participants. Project also specifies implementation of monthly business forums where members of target groups (college and high school students and inexperienced unemployed persons) will have a chance to present themselves to potential employers and investors. Also, representatives of small and medium businesses are expected to participate in "Best business idea" fair, where workshop participants will present their business ideas to entrepreneurs, investors and business angels.

Associated partners - Croatian Employment Institute, Osijek Regional Office and Osijek-Baranja County have a significant role in the promotion and dissemination of the project. In addition to the media, informing the unemployed about educations and other project activities will be carried out through employment counsellors who are in direct contact with the unemployed and the organization of info workshops in Croatian Employment Institute regional offices. Osijek-Baranja County will contribute to the promotion and dissemination of project activities through various county activities.

Representatives of public sector - Center for Entrepreneurship, Osijek and Croatian Employers' Association, Osijek Regional Office have a task of creating business networks between members of target groups and employers, and providing technical assistance for implementation of scheduled activities within the project.

#### **4. Conclusion**

The Triple Helix concept explains the connection between the three institutional domains (university – industry – government) that is the way in which they should cooperate to make sure that the educational system accommodates demands of the job market and to encourage innovational policy which ensures sustainable economic growth and development.

Although the Triple Helix concept is not a recent invention, such form of cooperation is still in its early stages of development in Croatia. The importance of this new approach to solving social, economic, ecological and other problems in Croatia reflects in the fact that cooperation is the only sustainable approach to creation of a successful society. In accordance with that, Faculty of Economics in Osijek, as an integral element of J. J. Strossmayer University in Osijek, continues its work on pro-active approach to the market, with a goal of achieving sustainable regional development.

Even though the strategic plan made by the Ministry of Entrepreneurship and Crafts for the period of 2013-2015 recognizes implementation of Triple Helix concept as its main goal, it is necessary to create conditions to put such an approach into practice. The government needs to help create a convenient, encouraging, transparent and honest general and entrepreneurial business framework, which will encourage individuals and businesses, as well as universities to continually improve their efficiency, productivity and performance.

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## **INSTITUTIONS AS A FACTOR OF (REGIONAL) GROWTH AND DEVELOPMENT**

### **INSTITUCIJE KAO ČIMBENIK (REGIONALNOG) RASTA I RAZVOJA**

#### **ABSTRACT**

*Regional differences have become a frequent problem in all countries regardless of their development level. However, there are significant disproportions between level differences of a specific country. Many European Union Member States are concerned with significant regional differences as well as differences at their national levels.*

*Determination of regional differences is usually performed according to economic criteria (e.g., GDP, unemployment rate of working-age population, revenues within local government, investments, extraction for education in GDP, foreign direct investments, etc.). However, taking into consideration just the economic indicators most of the time does not give a unique response when considering causes of the differences created. Therefore, the aim of the paper is to determine the institutional impact as a noneconomic indicator in growth and development differences – within-country and between-country differences. In this paper, institutions are considered to be comprised by North's definition (2003, 13), according to which "institutions are the rules of behaviour in a society, or more formally speaking, the restrictions on which man has figured out how to shape human interaction".*

*Focus on economic criteria of monitoring the differences is usually expressed by economic growth. But, development comprises a wide variety of indicators reflecting the welfare of a specific country. Examples of differences within and between a certain country (countries) are going to be the frame for displaying a de facto situation. Besides, as growth and development are sine qua non components of every country, research and contribution of institutions are a necessity.*



*Institutional performance of formal and informal institutions differs significantly.*

*According to the predominance of a specific institutional form, it is possible to outline different guidelines of institutional impact. The purpose of this paper, according to the institutional activity framework in a specific country, is to record the influence on economic development of a specific territory (region) or economy as a whole.*

**Key words:** *formal institutions, informal institutions, economic growth, economic development, regional disparities*

## SAŽETAK

*Regionalne razlike ustalile su se kao učestala problematika zemalja svih razina razvoja. No, značajne su disproporcije stupnja utvrđenih razlika u pojedinoj zemlji. U mnogim zemljama unutar Europske unije prisutne su značajne razlike među regijama, a identična kretanja su zabilježena i na nacionalnoj razini.*

*Utvrdjivanje regionalnih razlika najčešće se vrši prema ekonomskim kriterijima (primjerice, BDP, postotak nezaposlenih u radno sposobnoj populaciji, prihodi unutar lokalnih jedinica, investicije, izdvajanje za obrazovanje u BDPu, strana izravna ulaganja). Međutim, istraživanja samo ekonomskih pokazatelja često ne upućuju na jedinstven odgovor oko uzroka postojećih stvorenih razlika. Ciljem rada se, stoga, nameće utvrđivanje utjecaja institucija kao neekonomskog čimbenika na stvaranje razlika u rastu i razvoju unutar i između zemalja. U ovom radu se pod pojmom institucije podrazumijeva definicija Northa (2013:13) prema kojoj se „institucije odnose na utvrđena pravila ponašanja u određenom društvu, ili formalnije rečeno, restrikcije temeljem kojih se oblikuju ljudske interakcije“.*

*Usmjerenost ekonomskim kriterijima praćenja razlika obično izražava ekonomski rast. No, razvoj uključuje širi spektar pokazatelja ujedno prikazujući i blagostanje pojedine zemlje. Primjeri razlika – između i unutar - pojedinih zemalja bit će okvir za prikazivanje de facto stanja. Osim toga, s obzirom da su rast i razvoj cine qua non komponente napretka svake zemlje, proučavanje i doprinos institucija nalaže se kao potreba.*

*U načinu djelovanja institucija, značajno se razlikuje okvir formalnih u odnosu na neformalne institucije. S obzirom na prevlast vladavine pojedinog institucionalnog oblika, moguće je izvesti različite smjernice utjecaja institucija. Svrha rada je, s obzirom na institucionalni okvir djelovanja u pojedinim izabranim zemljama, evidentirati postojanje utjecaja na ekonomski razvoj pojedinog područja ili gospodarstva u cjelini.*

**Ključne riječi:** *formalne institucije, neformalne institucije, ekonomski rast, ekonomski razvoj, regionalne razlike*

## 1. Introduction

In contemporary economics, institutional economics has been put in the centre of interest of many scientists<sup>216</sup> as a factor that may move the boundary of economic growth and

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<sup>216</sup> E.g., North, 2003; Acemoglu, Johnson & Robinson, 2005; De Soysa & Jütting, 2006; Voigt, 2007; Casson, Della Giusta & Kambhampati, 2010. For more information on the impact of institutions on sustainable economic development, see: Mijiyawa, A. G. (2008): **Economic Growth Sustainability: Do Institutions Matter, and Which One Prevails?**, The Cato Journal, Vol. 28, No. 3, [http://www.isnie.org/ISNIE06/Papers06/05.2%20\(no%20discussant\)/Mijiyawa.pdf](http://www.isnie.org/ISNIE06/Papers06/05.2%20(no%20discussant)/Mijiyawa.pdf), (accessed 15 February 2014).

development (Nelson, 2008). The foundation of institutional economics rests on the view that leading institutions “skilfully” could result in significant progress recorded by economic growth rates and overall well-being of a certain nation shown by the level of development achieved. During the development of economic theory, views of the impact of exogenous factors on economic growth and development have shifted to the endogenous growth theories and impacts. Endogenous variables cover institutional activities intensified in the late eighties of the last century. According to Acemoglu, Johnson and Robinson (2005), institutions were singled out as one of three fundamental causes due to which there are differences between countries. In addition to institutions, the impact of geographical location and culture can also be singled out, but the biggest differences between countries are caused by the institutional framework activity. The authors also provide empirical examples of the impact of institutions on economic progress citing for example the division of Korea and the differences such a division led to. The colonisation of large parts of the world is also mentioned that started in the fifteenth century. There are also numerous other examples of differences conditioned by institutions, as pointed out e.g. by Barković and Lucić (2010); the examples in question refer to the north and south of Italy and the west and east of Germany. We have an interesting example of Switzerland, which is a country that despite its existence outside of the strong institutional framework and institutional activity of the European Union, and due to extremely powerful institutions it owns, it ranks high in developed countries. North (2003, 1) emphasizes institutions as *incentive systems that structure human interaction*. Furthermore, it is important to know institutions to be able to solve problems encountered on a daily basis effectively since everyday life situations are not imbued exclusively with economic activities, but also with political and social aspects, whose efficiency is evident from a successful combination of all the aforementioned spheres.

The definition of institutions and their activity is multidimensional, as can be seen from a number of different aspects of the notion of institution. The paper accepted the definition of institutions provided by Nobel Laureate North (2003,13), according to whose definition *institutions are the rules of behavior in a society, or more formally speaking, the restrictions on which man has figured out how to shape human interaction*. Although this definition offered by North is widely accepted, Voigt (2007) points out that many scientists under institutions imply a simplified definition of institutions encompassing them as determined by the rules of the game.

The paper is organised as follows. The chapter after the introduction focuses on clarifying the differences between formal and informal institutions and the impact on economic growth and development as well as cases and examples referring to the formal and the informal institutional activity. Chapter 2 provides an overview of the impact of formal versus informal institutions with reference to levels other than just national, i.e. focus on the regional level. Given that regions are becoming the central focus of economic policy makers in the implementation of some form of authority, it is necessary to determine the effect of the institutional framework at lower territorial levels as well. Chapter 3 gives concluding remarks about different institutional activities and the impact such activity has on economic growth and development. Thus, the conclusion provides a link of a single institutional framework to the degree of economic growth as a determinant of economic performance. In addition to the earlier demarcation referring to activities of formal and informal institutions, the issue of measuring the impact of institutions is also introduced - norms, morals, values and behaviours.

## 2. Formal and informal institutions: impacts on economic growth and development

Achieving economic growth recorded by quantitative macroeconomic indicators, and then reaching qualitative indicators of well-being or quality of life, is surely one of the fundamental objectives of any economy. The impact of institutions on economic growth is possible and can be determined given the prevalence of formal or informal institutions. Thus, the ratio of representation of one or the other institutional framework can either improve or worsen the performance of the economy as a whole or certain parts of the national economy.

Numerous studies have confirmed the influence that institutions have on economic growth and development (North, 1991; Acemoglu, Johnson and Robinson, 2004; Acemoglu, Johnson and Robinson, 2005; Valeriani and Peluso, 2011; Ferrini, 2012). Some authors, such as Valeriani and Peluso (2011) believe the quality of institutions is an important component of the impact on economic growth and test it based on three institutional variables. In relation to economic growth, the domain of economic development has much wider impact and it is often very difficult to make a clear-cut distinction between them. Economic growth represents a quantitative component of economic progress usually expressed by GDP data, while development is a subjective component that in addition to quantitative indicators also includes well-being within a particular economy.

Voigt (2007, according to North, 1990) highlights North's classification of institutions in formal and informal institutions, and expresses his personal attitude that there are external and internal institutions, as well as economic and political institutions. Barković and Lucić (2010) point out that there are several classifications in institutional economics mentioning the following as a criterion: i) the degree of formality, ii) the hierarchy, and iii) an area they "govern".

The paper will be focused on a more detailed overview of institutional activity by the level of formality, i.e. formal and informal institutions (Table 1). De Soysa and Jütting (2006) point out that formal institutions usually base their activities on official entities (such as courts and police), while informal institutions refer more to self enforcing through mechanisms of obligation.<sup>217</sup> According to De Soysa and Jütting (2006; according to Helmke and Levitsky 2003; Pejovich 1999), informal institutions are defined as *a behavioral regularity based on socially-shared rules, usually unwritten, that are created, communicated, and enforced outside of officially-sanctioned channels.*

Table 1 Classification of institutions by the level of formality

Formal institutions	Informal institutions
Constitution, statutes, common law, regulations and other government decisions. Formal rules are straightforward – they are specific and defined precisely.	Tradition, customs, moral values, religious beliefs and all other standards of conduct adopted over time. Informal norms are ways of doing things.

*Source adapted according to: Barković, I., Lucić, N. (2010): Uloga institucija u ekonomskom razvoju: prirodni (povijesni) eksperimenti, Pravni vjesnik, Vol. 26, No 2, pp. 69-87; North, D. C. (2003): The Role of Institutions in Economic Development, UNECE Discussion Paper Series No. 2.*

North (2003) demonstrated the interaction of mutual influence of formal and informal institutions quite credibly by using the example of Latin American countries that took over the Constitution of the United States of America in the time of their independence (early nineteenth century), considering them extremely structured. However, given the very different

<sup>217</sup> Classification of institutions by the level of formality is shown in Table 1.

historical development of informal institutions of Latin American countries, the implementation of formal institutions has not been successful.<sup>218</sup>

In order to determine the degree of impact of institutions on economic development, Voigt (2007) proposes the necessity of measuring such impact. In addition to that, he also stresses the difficulties in measuring the impact of institutions and proposes some of the possibilities for their measurement. There are several basic assumptions regarding contributions of Voigt's studies to measuring the impact of institutions. They refer to the following assumptions: i) when measuring institutions, specific institutions that are covered should be clearly defined since otherwise measures remain too broadly defined and do not provide any meaning, ii) objective measures are preferred to subjective measures, iii) the impact of institutions is measured with respect to formally executed legislative specification (*de jure*) and as part of the impact realised practically (*de facto*), and iv) the ability to measure the institution does not imply the possibility of creating and measuring institutions at will. By examining Table 2, we get a clearer picture of the need for measuring institutions. The dark cell presents the most effective combination of measurements, while the cell shaded gray requires most resources, but it is necessary to take them into account since only knowledge of the data of these two cells enables their comparison.<sup>219</sup>

Table 2 Matrix of types of institutions and ways to measure

		Way to measure:	
		subjective	objective
Type of institution:	<i>De jure</i>		
	<i>De facto</i>		

Source: Voigt, S. (2007): *How (Not) to Measure Institutions*, <http://siteresources.worldbank.org/DEC/Resources/voigtfinal.PDF>, (accessed 6 February 2014)

In addition to differences appearing due to the dominance of either the formal or the informal institutional framework, the institutional framework may be a holder of various forms of social power. Acemoglu, Johnson and Robinson (2004) point out that economic institutions determine the incentives and constraints to economic holders and determine the final economic outcomes. For example, different groups and individuals realise the benefits of various economic institutions whose benefits are typically focused on groups with greater political power. Furthermore, the distribution of political power is determined by political institutions and the distribution of resources; and in accordance with the aforementioned, it follows that political institutions possess and allocate political power *de jure*, while groups with greater economic power possess more *de facto* political power. In addition to the differences and the desire for achieving power on the *de facto* and *de jure* level, effective performance of institutions can indeed provide the desired response in determining the question of differences between individual economies.

Given the different conditions prevailing in a particular economy, it is impossible to establish a unified scheme of the institutional framework activity. An authentic example of the transfer of the economic impact to the institutional framework are transitional processes conducted by

<sup>218</sup> For an overview of different standpoints referring to the interaction of formal and informal institutions, see: Marošević, K., Jurković, Z. (2013): **Impact of informal institutions on economic growth and development**, in: Barković, D., Runzheimer, B. eds.: *Interdisciplinary Management Research IX*, pp. 701-717.

<sup>219</sup> Only mutual comparison yields the objectivity of data.

various dynamics and scope, but also countries of Central and Eastern Europe covered by various degrees. Redek and Sušjan (2005) provide a review of the institutional framework activity in transition economies and establishing changes towards the capitalist system that followed in relation to the previously existing system. The authors focus on the analysis of the importance of the quality of institutions in economic performance in transition economies. By reviewing the status and trends within ten transition economies in Eastern Europe, Cernat (2001), for example, explores how institutional factors have an impact on economic growth. Results of this research confirm the former view and suggest a correlation between the quality of the established institutional framework and economic growth.

Significant differences that appear between countries are usually expressed by indicators of economic growth achieved or by a degree of economic development achieved. However, the differences that occur at national level - between economies - are considerably less than the gap that has been recorded between the regions of the national economy. Globalisation effects within the European Union have been achieved by developing regions as territorial units, and the creation of the single market has significantly contributed to the removal of borders and led to the establishment of the region as the basic territorial unit. Regional division harmonised with the *Nomenclature of Territorial Units for Statistics* (in French: *Nomenclature des unités territoriales statistiques, NUTS*) in all European Union Member States has resulted in easier management and comparison of the existing differences. Therefore, recording the difference at regional level has become imperative, and management in regions lagging behind has been adapted to specific requirements of the territorial area.

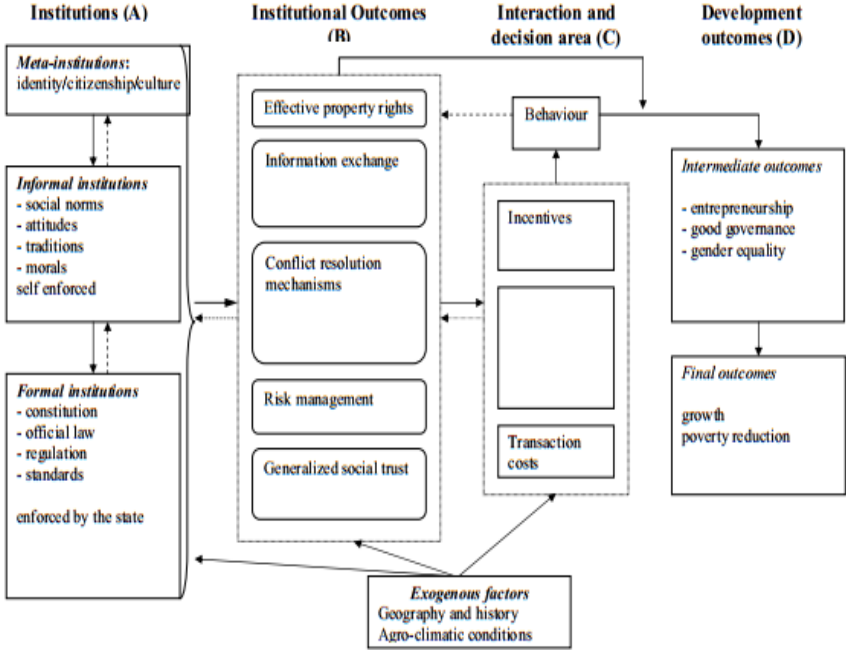
As already exemplified by various studies on the impact of institutions on economic growth and development, the identical direction of the impact is also expected to be recorded at lower territorial units, e.g., regions.

Given the significant differences between the formal and the informal institutional activity and their impact on economic growth and economic development, Figure 1 additionally clarifies the impact of both exogenous and endogenous variables. As pointed out by De Soysa and Jütting (2006, according to Hechter and Opp, 2001), the formal institutional framework does not act in isolation with respect to the informal institutional framework shaped in social culture, but the view of accepting such influence is neglected due to the difficulty of expressing the quantitative impact of informal institutions.

As outlined by *Applied Knowledge Services*, if the state has weak formal institutions, it is not uncommon for informal institutions to prevail over informal institutions and thus complement the specific functions expected from the state. Skoog (2005; according to Kasper and Streit, 2008) highlights an important role of not only the relationship between formal and informal institutions, but also of a dual relationship that exists between the holders of a certain type of the institutional framework (or human behaviour) and institutions. Mutual influence is reflected in the following way: the rules affect holders and restrict or encourage certain kinds of behaviour. Thus, a particular institutional framework stimulates human behaviour and activities. But, the institutional framework is also subject to constant change - and it is clear that people determine and govern the rules. Therefore, feedback confirms that the rules are made and determined by human behaviour. Holders should be brought into interaction with the institutional framework since institutional activity is always in interaction with the holders.

In addition to interaction at this level, numerous other influences are also possible. Figure 1 emphasizes possible interactions of institutions, institutional outcomes, interaction and decision areas and development outcomes. Indicators in institutional settings are visible in economic growth and poverty reduction. Institutional development can certainly have a positive effect on development outcomes, and according to Skoog (2005), institutional development includes institutional changes that promote sustainable economic, political and social development and a positive value. It is often identified with institutional changes, which is by no means identical – they involve a change or modification of existing rules or the creation of entirely new rules regardless of the final outcome of the change (positive or negative). However, the term institutional change applies to effective changes. There are two types of institutional changes - formal (consciously created and applied) and informal (spontaneous, occurring in unintended outcomes of individual and social interactions) - directed by activity of two types of institutions.

Figure 1 Effects of exogenous and endogenous factors on development outcomes



Source: De Soysa, I., Jütting, J. (2006): *Informal Institutions and Development – What do we know and what can we do? Informal Institutions and Development: Think Local, Act Global?*, OECD, <http://www.oecd.org/dac/governance-development/37790393.pdf> (accessed 11 February 2014)

Williamson & Kerekes (2011) emphasize the need for additional research into contributions of institutions to the process of economic development. Using culture as an indicator of informal institutions, we establish a positive and significant effect on property rights while formal institutions do not have a significant effect on the security of property. This fundamentally changes the view of the contribution of informal institutions to securing property rights, which enhances the development of developing countries. Even in his earlier

papers, Williamson (2009) highlights the necessary mutual interaction between formal and informal institutions in achieving economic growth. However, she stresses that the presence of informal institutions is a strong determinant of development and that the formal institutional activity can be successful only if they comply with informal constraints, which corresponds to the popular phrase “*Getting the Institutions Right*”. Looking at institutions with regard to the strength of formal and informal institutions, the author has made the division by four categories: i) strong formal and strong informal institutions, ii) weak formal and strong informal institutions, iii) strong formal and weak informal institutions, and iv) weak formal and weak informal institutions. Best results in terms of the progress of a country expressed by GDP were recorded in countries that have strong informal institutions, regardless of the strength of formal institutions (Table 3). The values in Table 3 are expressed as indices for formal and informal institutions. The larger the index in formal and informal institutions columns, the greater the strength of that institution in a particular country.

Table 3 Index of formal and informal institutions of selected countries

Country	Formal	Informal	Ratio
Austria	0.38	5.90	0.06
Belgium	0.46	4.24	0.11
Denmark	0.62	9.25	0.07
France	6.23	5.05	1.23
Germany	4.91	5.42	0.91
Greece	4.68	3.06	1.53
Italy	1.54	4.69	0.33
Netherlands	0.52	9.34	0.06
Norway	0.62	6.62	0.09
Spain	4.75	4.21	1.13
Sweden	0.96	10.00	0.10
Switzerland	5.09	5.88	0.87
Turkey	0.96	2.52	0.38
United Kingdom	10.00	3.89	2.57

Source according to: Williamson, C. R. (2009): *Informal institutions rule: institutional arrangements and economic performance*. Public Choice 139, pp. 371-387, [http://www.claudiawilliamson.com/Claudia\\_Williamson/Research\\_files/Williamson%20Public%20Choice%202009.pdf](http://www.claudiawilliamson.com/Claudia_Williamson/Research_files/Williamson%20Public%20Choice%202009.pdf), (accessed 13 February 2014)

Formal institutions govern political, legal, economic and social components and they are usually given in writing (i.e. a legal text or a constitution). On the other hand, factors that influence human behaviour that are not given in writing because they are conditioned by norms, values, habits and traditions belong to informal institutions. Since informal institutions are determined by social behaviours and beliefs, they form the basis of the creation of formal institutions (Dobler, 2009). Shikida, de Araujo Jr. & Sant’Anna (2011) also confirm the position mentioned earlier as to an increased contribution of informal institutions to defining better management, while Pitlik & Kouba (2013) are oriented more toward identifying the key components as determinants of an informal institutional framework that include stable cultural and social norms, agreements, moral values and other.

De Soysa & Jütting (2007) suggest ways in which informal institutions influence the development and causes of changes of the activity of informal institutions. People rely on informal institutions as drivers of prosperity in countries of different stages of development - that is, in both poor and rich countries. However, informal institutions are much more important in poor countries and in less traditional societies and communities where formal institutions are less developed - which suggests that formal rights and state power are rather less developed. Furthermore, identical informal institutions in different environments can lead

to completely different institutional and development outcomes due to different reactions with regard to the existing formal institutions. An example of the reverse influence are the governments, which as part of formal institutions, can extend their influence to informal institutions – the government sets the rules of the game.<sup>220</sup>

Although all the aforementioned research examples specifically refer to the national level, it is assumed that the impact of informal institutions achieves equally valuable and positive effects on economic growth on lower levels as well, e.g. a regional level. The next subsection gives an overview of attitudes and trends of institutional effects on economic development at regional level.

## **2.1. Regional impact of formal and informal institutional framework**

Although the issue of the impact of institutions on economic growth and development in modern economy is significantly more prevalent in the scientific milieu as it used to be before, studies on the same issue are almost completely ignored at regional level. The same view is confirmed by Degirmenci (2011) claiming that the results of the impact of institutions on economic growth vary at regional level in relation to the national level of the same economy – regardless of the fact that economic regions include the same national space as well as the overall economy. Thus, although formal institutions are specific to the national level embracing in this way all formal institutions at regional level, their density and quality varies greatly in different regions. It is therefore crucial to include institutions in the generators of regional economic growth and regional development policies. In order to determine the current impact of institutions at the level of European regions, certain measurements of the impact of culture on economic development were carried out, such as research conducted by Tabellini (2005).

Ascani, Crescenzi & Iammarino (2012) emphasize a regional approach to development as a solution to regional specificity - the accepted norms, a combination of rules and social relations - which also represent the factors that create differences and gaps in the development of the region. A typical application of policies is top-down, but a bottom-up approach is considered a considerably better management policy in relation to top-down policies that have been frequently used so far. Decentralised management of power and resources is formed in this way, and the central management database is made up of regions as central territorial units. Therefore, decentralisation is an opportunity offered to heterogeneous regions to become the framework of economic growth adapted to specific requirements and needs.

Adapting to the specific needs creates the possibility of creating appropriate strategies. Rodriguez-Pose (2010) gives suggestions of the possible impact of institutions on regional development and the integration of institutions by means of regional development strategies. He identifies not exactly defined effective institutions in regional development strategies as a barrier to implementing institutions and ensuring economic growth. At regional level, he also highlights the problem with the ratio of the activity of formal and informal institutions and the strategies developed at national levels to suit all regions of a particular economy that are very

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<sup>220</sup> An example of mutual influence is the implementation of a specific norm that would be applied much easier and simpler by means of the decision and help by the Government, e.g. smoking in public places. For a more detailed view of examples of the effects of mutual influence of formal and informal institutions, see: Pejovich, S. (1999): *The Effects of the Interaction of Formal and Informal Institutions on Social Stability and Economic Development*, Journal of Markets & Morality 2, No. 2, 164-181.



difficult to implement. It is therefore necessary to adapt development strategies to the conditions of various regional institutions to ensure maximum effectiveness of their activity.

### 3. Conclusion

The impact on economic growth that can be achieved by the institutional activity is unquestionable. However, various forms of institutional activity lead to different rates of economic growth. Since in this paper the degree of formality is taken as a determinant of the division of institutions, the activity of formal and informal institutions and their impact on economic growth are studied accordingly. Although by its scope economic growth denotes a narrower component in relation to economic development, it is not a necessity, but it can be a good assumption in achieving economic development.

In order to determine the impact of institutions on economic growth, it should be measured. Measuring the impact of formal institutions is much simpler compared to the impact achieved by informal institutional activity. However, although it was recorded that informal institutions achieve a greater positive impact on economic growth, significantly less research is focused on the activity and measurement of the impact of informal institutions. Therefore, it is necessary to deepen and increase the number of studies focused on the study of the impact of informal institutions.

When it comes to the strength of formal and informal institutions, research results suggest a classification based upon four categories (strong formal and strong informal institutions; weak formal and strong informal institutions; strong formal and weak informal institutions; weak formal and weak informal institutions). Furthermore, such categorisation has confirmed the view outlined earlier referring to the need for placing informal institutions at the centre of research in promoting economic growth.

Institutional activity differs at national and regional level. As regions have become drivers of economic growth and development in economies, due to the effects of globalisation and the removal of national borders, the need has arisen to form and monitor institutions at levels other than national. Since strategies for institutional management mostly refer to national levels, it is very difficult to adapt them to the conditions prevailing in each region. It should be noted that in recent years authorities are trying to delegate powers to a lower territorial level in relation to the national, i.e. regional, and by bringing their own knowledge about a particular region economic power holders affect the spread of prosperity in regional areas.

Hence it is necessary harmonise institutional activity with the needs of the respective region. However, regardless of the difficulties and specificities of a given area, institutional management at regional level is an open opportunity of generating economic growth whose potential must not be neglected.

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**HOW EFFICIENT IS CROATIAN GOVERNMENT MEASURE FOR  
REDUCTION OF YOUTH UNEMPLOYMENT: EXAMPLE OF  
INFORMATION AND LIBRARY SCIENCE SECTOR**

**KOLIKO JE UČINKOVITA MJERA VLADE REPUBLIKE HRVATSKE  
ZA SMANJENJE NEUPOSLENOSTI MEĐU MLADIMA: PRIMJER  
KNJIŽNIČNOG SEKTORA**

**ABSTRACT**

*In 2011 the Croatian Government issued the National Plan for Employment 2011-2012 (continued to the end of 2013) whose aim was to increase the employment and decrease the unemployment rate. One of its target groups are young people. Consequently, the Croatian Employment Service has, as a part of this plan, initiated the program entitled "Work, work experience and transport" whose aim was to enable young people, without professional experience, the possibility to gain the professional experience in the area of their education, pass the state exam and become more competitive at the work market.*

*This paper presents the findings of the online survey conducted in the period of November and December 2013 among the young people who took part in this Program working in either an academic or a public library in Croatia. The sample comprised of 59 respondents between 24 and 38 years of age who answered questions about their satisfaction with the library they were professionally trained within the Program, but also with the Program itself. Although majority of the respondents (85%, n=57) claims that they would recommend this Program,*

*there is a long list of negative comments the Program received that will be elaborated in the paper.*

**Key words:** *unemployment, Croatia, Government measure, Croatian Employment Service, libraries*

## SAŽETAK

*Hrvatska je Vlada 2011. godine donijela Nacionalni plan za poticanje zapošljavanja za 2011. i 2012. godinu (nastavljeno i do kraja 2013. godine) s ciljem da se smanji postotak neuposlenih i poveća postotak onih koji rade. Jedna od ciljnih skupina ovog plana su i mladi. U skladu s time, Hrvatski je zavod za zapošljavanje u okviru tog plana provodio program „Rad staž i prijevoz“.*

*Program „Rad, staž i prijevoz“ odnosi se na stručno osposobljavanje za rad bez zasnivanja radnog odnosa. Cilj je navedenog programa da se nezaposlenim osobama omogući stručno osposobljavanje za rad u zanimanju za koje su se školovale, stjecanje radnog iskustva, polaganje stručnog ispita za zanimanja za koje je to propisano zakonom, a time i lakši ulazak na tržište rada.*

*Ovaj rad donosi rezultate online istraživanja koje se provodilo u studenome i prosincu 2013. godine na uzorku od 67 mladih (između 24 i 38 godina) koji su sudjelovali u ovom Programu radeći ili nekoj od narodnih ili u nekoj od visokoškolskih knjižnica u Hrvatskoj. Većina ispitanika završila je studij iz područja informacijskih i komunikacijskih znanosti u Osijeku (28,36%, n=19), Zagrebu (26,87%, n=18) ili Zadru (10,45%, n=7). Ispitanici su u upitniku odgovarali na pitanja o zadovoljstvu knjižnicom u kojoj su odrađivali Program, ali i samim Programom kao mjerom. Iako je većina ispitanika ((85%, n=57) iskazala svoju spremnost da ovaj Program preporuči drugima, zamjetan je značajan popis primjedbi i negativnih strana Programa koje sudionici navode i koji će se detaljnije obraditi u radu.*

**Gljučne riječi:** *neuposlenost, mladi, Hrvatska, Vladine mjere, Hrvatski zavod za zapošljavanje, knjižnice*

### 1. Introduction

Financial crisis caused by the bankruptcy of the American investment bank Lehman Brothers in 2008 paralysed first the American financial system only soon to turn into the global economic crisis (Obadić, 2010, 4). The economic crisis resulted in the decrease of the consumption which in turn resulted in the decrease of production and consequently in the decrease of the employment rate. Croatia entered the recession at the end of 2008 (Jurčić, 2009). The need for work is one of the basic human needs and ever since the start of the recession many in Croatia have been deprived of that basic human need. One of the particularly vulnerable target groups are young people who are just embarking on the work market.

Employment has a tremendous importance and a fundamental role in every society. In addition, employment (labour market), together with financial poverty (income), health and education, make four dimensions that influence the instigation of poverty and social exclusion (Stubbs and Zrinščak, 2005, 167). Social exclusion is understood primarily as exclusion from the labour market. For an individual, labour does not only mean economic security, it is also a source of self-esteem and the desire for advancement (Poverty, 2006, 12). Among social groups that are experiencing an increased risk for social exclusion are: the unemployed

(exclusion based on economic status) and young adults aged 15-29<sup>221</sup> (exclusion based on age) (Poverty, 2006, 14). The rate of unemployment among people aged 15 to 24 has, in certain periods, been nearly two and a half times higher (more precisely, 2.4) than the general unemployment rate (only Romania and Belgium with 2.5 and Italy with 2.9 have it worse than Croatia) (Ilišin and Radin, 2002, 235). Unfortunately, the more recent data show that the situation in Croatia has deteriorated. Namely, in 2013 the highest rate of youth unemployment was recorded in Greece (57.3%), which was followed by Spain (56%) and Croatia (52%). The lowest rate has Germany with only 7.7% of youth unemployment (European Commission, 2013). In Croatia, there are two main reasons for the exclusion of the young people: an unstable position at the labour market and dropping out of school (Poverty, 2006, 21). Following their studies, the majority of young people are forced to wait, usually for a long time, for their first job. Consequently, one of the main reasons young people were unable to find their first job was the lack of experience. This grim situation for young people in Croatia motivated Croatian Government to think of the possible implementation measures that would help Croatian youth increase their employability at the market. One of the ways to do so was to help young people gain necessary experience prior looking for the first job. This paper discusses the effects of the government's measure "Work, work experience, and transport" on young people looking for a job in Croatia in the area of information and library science.

## 2. Croatian national employment measures

At the beginning of 2008 the Republic of Croatia issued a Conclusion to adopt the *Joint Assessment of the Employment Policy Priorities of the Republic of Croatia – JAP*. Later that year the JAP was signed in Bruxelles by the representatives of the European Commission and the Government of the Republic of Croatia (Republic, 2011, 4). The JAP identified the challenges of the labour market in Croatia and named the key priorities of the Government's employment policy. Among those priority groups, besides prime-age women (especially those with low or inadequate skills) and older people, are also young people (Republic, 2011, 5). The document National Employment Promotion Plan for 2011 and 2012 offered measures for key priorities, and one of the measures for the increase of employability and participation of young people was the measure 3.3.1.13. *Provide employment subsidies for young, firsttime job -seekers who are unemployed and have no employment record or work experience*. This particular measure (along with others) was then taken on by the Croatian Employment Service and is now known as the measure "Work, work experience, and transport".

In 2012 the number of young unemployed people (between 15-29 years of age) in Croatia was 107.508 or 33% of the total number of the unemployed (324.324) (Hrvatski, 2013, 13). Croatian Employment Service recorded in 2012 the increase of the number of unemployed people across all age groups, but the lowest increase was recorded for the group with the lowest level of education. On the other hand, the biggest unemployment rate was noticed for the group with highest levels of education. Consequently, the increase of unemployment for the group with finished primary education increased only 0.4% in relation to 2011 whereas the increase of unemployment for the group with a finished first level of higher education (HE) (undergraduate level) increased for 20.6%. Similarly, for the group with a finished

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<sup>221</sup> When speaking about young people one usually refers to those aged between 15 and 24. However, since in many cases the period of youth is prolonged due to the longer education and/or inability to find employment (which makes it impossible for young people to become independent and leave parental home), the period of youth is prolonged to 29 years of age (The State Institute, 2003, 11).

graduate level of HE, master or PhD level the unemployment increased for 18% (Zavod, 2013, 13).

As we can see, the situation regarding the employment of young people in Croatia is a difficult one. Government measures for the increase of the employment, especially the one that gives the young educated professionals the opportunity to gain experience and take the State Exam is gaining popularity and more and more young people decide to use that opportunity. Table 1 shows the number of participants of that measure since its start in 2010. The data clearly show that very soon after its start, the measure gained popularity among the young (2011 records over 900% increase of the number of the participants in relation to the previous year). Every following year recorded the increase, although not as huge as the year 2011. This trend will obviously continue in 2014 (till 27 February there were already 14.800 recorded participants)<sup>222</sup>.

Table 1 Number of participants of “Work, work experience, and transport” measure

Year	Number (%)	Change (%)
2010	448 (0.9%)	
2011	4760 (9.7%)	962.5%
2012	9583 (19.6%)	101.3%
2013	19.322 (39.5%)	101.6%
<b>TOTAL:</b>	<b>48.913 (100%)</b>	

This paper describes the research conducted among the participants of this measure in the area of information and library science in the Republic of Croatia.

### 3. Research

#### 3.1. Research methodology, instrument and sample

The goal of the research was to find out how effective this measure was among young people with educational background in the information and library science sector (ILS) who spent one year within this measure in one of the Croatian academic or public libraries. We wanted to find out how satisfied those young people were with the library they were with as well as how satisfied they were with this government measure in general.

The research was carried out in the period between October<sup>223</sup> and December 2013. The call for cooperation in the research was sent out via e-mail to the directors of 362 Croatian academic and public libraries (87 academic and 269 public libraries). They were asked to forward the URL of the online survey to the current and former participants of this government measure in their library.

The online survey had altogether 20 questions. Next to the demographic data, the respondents were asked about their experience during the duration of the measure (type of library activities were they involved in, their satisfaction with the supervisor from the library, their satisfaction with the library in general), as well as about their opinions about the measure itself (the purpose and value of the measure, benefits of the measure).

Altogether, we received 67 responses, but only 59 valid ones. Slightly more than a half of our sample (33 respondents or 55.9%) came from public, and the rest (26 respondents or 44.1%) came from academic libraries. Unfortunately, it was impossible to find out the number of

<sup>222</sup> On April 3<sup>rd</sup>, 2014 Croatian government was forced to temporarily abolish this measure due to the budget deficit. This is, however, expected to be only temporarily.

<sup>223</sup> In this period two calls were issued in order to increase the response rate.



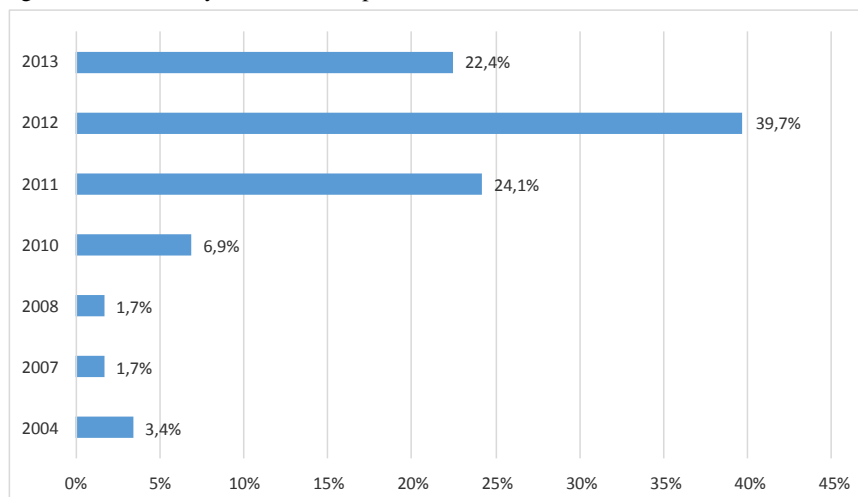
participants of this measure only for the area of ILS sector from the Croatian Employment Service, which obviously does not keep records of that kind. The results were analysed by the SPSS+ software.

### 3.2. Results

The age of our respondents varied between 23 and 37. The biggest age group is the one between 25-29 years of age (38 respondents or 64.4%), it is followed by the age group 30-37 (14 respondents or 23.7%), and finally 23-24 years of age (7 respondents or 11.9%). Majority of the respondents were female (44 respondents or 74.6%).

Majority of our respondents graduated in 2012 (23 respondents or 39.7%). They were followed by those who graduated in 2011 (14 or 24.1%) and those who graduated in 2013 (13 or 22.4%) (Fig. 1)

Figure 1 Graduation years in the sample



The highest number of respondents graduated from the Department of Information Sciences in Osijek (Faculty of Humanities and Social Sciences) (19 respondents or 32.3%). They were followed by those from the Department of Information and Communication Sciences in Zagreb (Faculty of Humanities and Social Sciences) (18 respondents or 30.5%) and those who graduated from the Department of Information Sciences in Zadar (University of Zadar) (7 respondents or 11.9%). One respondent (1.7%) graduated from the library school in Rijeka (Faculty of Humanities and Social Sciences) and one (1.7%) from the Department of Culturology (Librarianship) (University of Osijek). 13 respondents (22.0%) graduated from various, usually non-library related, higher-education programmes of study<sup>224</sup>.

<sup>224</sup>One respondent graduated from the information and library science programme in Serbia, but the rest of the sample had little connection with ILS sector. The other programmes included for instance Croatian language and literature, history, Italian language and literature, business economy, maritime logistics and management, etc.

Half of the sample (28 respondents or 50.9%) spent between 10 and 12 months in the library, and the other half spent less. 10 respondents (18.2%) spent between 4-6 months, 9 respondents between 7-9 months, and 8 respondents less than 3 months (5 answers were missing). Most of our respondents (17 or 28.8%) were accepted by the first or second library they applied to. However, there were those who had applied to several institutions before they were accepted (one applied to 10, one to 25 and one even to 35 institutions).

Figure 2 illustrates the respondents’ agreement with various statements regarding the library where they did their professional education. We can see that almost all statements received a mean of over 4 (on the scale of 5, where 5 indicated the highest level of agreement). The only two statements with means under 4 were “After the State Exam I plan to look for a job in EU” (mean 3.19), and “Library functions in accordance to what I learned at the University” (mean 3.93). The highest level of agreement was noticed for the statements “I would like to be employed by this library” (mean 4.56) and “I am satisfied with the professional education in this library” (mean 4.47). The statement “Library has the plan of professional education and my supervisor is following it” had a mean of 4.07. Only two respondents in the sample (3.4%) indicated that the library did not assign them a supervisor.

Figure 2 Respondents’ attitudes regarding the library of their professional education

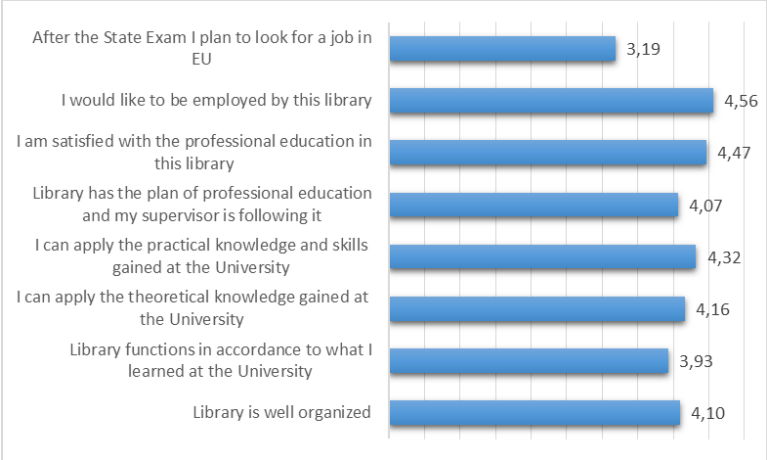
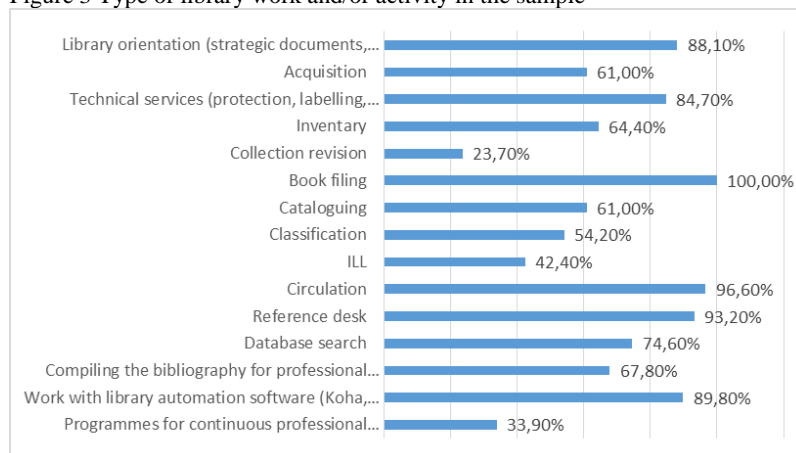


Figure 3 shows the type of library work and activities respondents were involved in during their professional education. The most represented activities in the sample were book filing (all 59 or 100%), work at circulation (57 respondents or 96.6%) and reference desks (55 respondents or 93.2%), work with library automation software such as Koha, Aleph, CROLIST, ZaKi, Metel, etc. (53 respondents or 89.8%), and material preparation (labelling, book protection, barcoding, writing call numbers, etc.) (50 respondents or 84.7%). Almost all respondents (52 or 88.1%) went through library orientation and got familiar with most important library documents (mission statement, rulebooks, manuals, etc). Activities that were underrepresented in our sample were collection revision (only 14 respondents or 23.7%), attendance of programmes of continuous professional education (20 respondents or 33.9%), and interlibrary loan (ILL) with 25 respondents (42.4%)

Figure 3 Type of library work and/or activity in the sample



Respondents in our sample were satisfied with this government programme (mean 4.41), even more with the work of their supervisors in libraries (mean 4.49)<sup>225</sup>. In addition, they also liked the atmosphere in the library (mean 4.24). 57 respondents (96.6%) would recommend this programme to their colleagues, whereas 56 respondents (94.9%) would recommend that particular library.

Respondents were also asked to point out positive and/or negative experience they had during their work in the library. Altogether, there were 100 comments, but they were more on the positive side (69 or 69%). However, there were also negative comments and they should be taken into consideration. Some of the negative comments are:

- this measure is nothing more than an exploitation of high-qualified workers
- all the work in the library was routine and monotonous. There was no proper plan of professional education and no chance of working on a higher-level work tasks (e.g. cataloguing).
- either no supervisor or supervisor in another library (another town)
- understaffing of libraries (respondents have to work on other 'pressing' work tasks and cannot follow their plan of professional education)
- financial compensation is too small
- library space is too small
- bad human relations
- inability to take part in the programmes for continuous professional education
- too short a period for in-depth familiarization with library work

Positive comments were mostly directed toward the good reception of the library staff (their friendliness, professionalism, etc.), but also many respondents recognized the unique opportunity to learn about all the segments of library work that this programme offers. Also, in some cases supervisors were praised, but also their Alma Maters which prepared them well for their future jobs.

<sup>225</sup> However, 4 respondents (6.8%) were extremely dissatisfied (chose 1 on the Likert scale). This level of dissatisfaction was recorded neither for satisfaction with the programme nor for the atmosphere in the library.

No statistically significant differences were spotted in the sample. However, this should be attributed to the size of the sample, and does not mean that the sample is necessarily homogeneous.

#### **4. Discussion and conclusions**

Croatia has a huge problem with the unemployment of its citizens in general, but in particular with the unemployment of the young population. This is supported by the very age structure of our respondents. Namely, the 'Work, work experience, and transport' measure is aimed at young people up to 29 years of age, but in our sample we had a few respondents who were almost 10 years older (the oldest participant was 37). The biggest age group in the sample is still the 25-29 age group (38 respondents or 64.4%), but there were even 14 respondents (the second largest group) who were older than the specified age limit. This also means, unfortunately, that those people were unable to find work in their area of education even 9 after their graduation from the University (2004 was the earliest year of graduation in our sample).

As expected, the highest number of respondents came from the three biggest ILS schools in Croatia (from Zagreb, Osijek, and Zadar). However, there were also respondents that did not come from the ILS educational background, which we found puzzling.

Most of our respondents had no problems in finding the appropriate institution for their professional education. However, Osijek and Zadar students seem to have had it slightly easier than the students from Zagreb: Osijek and Zadar students have more often (83.3%) found the institution after the first or second application, whereas with Zagreb students it was the case in 53.3%. This might be so because the competition in Zagreb may be bigger than in Osijek and/or Zadar.

Also, almost half of our sample had spent between 10 and 12 months in the library, which means that they were able to get a good impression of the institution.

Our respondents seem to be quite satisfied with both the government's measure, and with the library as the place of their professional education. They were satisfied by the training received by the library and most of them would like to continue working in that library. Libraries turned out to respond well to the task at hand and they usually prepared a plan of professional education, which supervisors assigned to younger colleagues later followed during their mentoring work. Respondents usually felt that they could apply theoretical knowledge and practical skills gained at the University, but at the same time they thought that the library as an institution slightly less often functioned in accordance to what they had learned at the University. Our respondents do not seem to have a burning desire to leave Croatia and look for a job within the EU.

As far as the type of library activity is concerned (and which is consistent with some of the negative comments of our respondents) the majority of our sample seem to have been employed at lower-level activities in the library, activities that do not require a university education (filing of books, barcoding, labelling, circulation). Higher-level activities (such as cataloguing, classification, acquisition, etc.) were not that often present in the sample. The comments about exploitation and dissatisfaction in one part of the sample can be therefore well understood. All employers and institutions (in this case, libraries) must constantly be aware that this measure is primarily introduced in order to help the young, unemployed, people to find jobs, and the institutions that participate in that programme have a responsibility to professionally train young people and prepare them for future jobs. This

measure was not created so that our libraries (chronically understaffed) get cheap and educated young workers (although, one wonders sometimes).

The reasons for dissatisfaction in the sample are attributed to simple, routine and monotonous tasks, low monetary compensation, feeling of exploitation, etc. However, positive comments outweigh the negative and the majority of our respondents recognized this unique opportunity to gain experience in the real library and get a proper start in looking for a future job.

Our sample seemed to have been satisfied with both the Government measure and the libraries and the majority would recommend both to other colleagues, which is a strong confirmation of the level of their satisfaction.

One additional problem with this measure is that the librarians that are appointed supervisors for the young professionals that come to their libraries are not trained as teachers or instructors and some think that they should be offered appropriate training in that regard. Next to that, their supervisor activities usually come on top of their everyday work duties and their work has doubled, for the same pay. In the contract between the institution and the Croatian Employment Service there is a stipulation that they should receive a monetary reward for their supervision, but so far, that has not happened.

In the end, we would like to stress out that the findings of this small study are indicative and that our sample, although small, gave implications that the libraries are doing well and that the young people that get professionally trained by them usually receive a good preparation for their future jobs. In future, it would be interesting to conduct a research about the number of those who took advantage of this measure in the ILS sector, and managed to find a job!

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**REFLECTIONS ON INFLUENCING STUDENTS EMPLOYABILITY:  
AN EXAMPLE OF STUDENT ASSOCIATION**

**POVEĆANJE ZAPOŠLJIVOSTI STUDENATA NA PRIMJERU  
AKTIVNOSTI STUDENTSKE UDRUGE**

**ABSTRACT**

*The contribution of higher education to social and economic prosperity can also be observed through the role of university in increasing the employability of its students, i.e. through university efforts to increase students' competitiveness on the labor market. The issue of employability is a complex one, and is, among others, dealt with by students' associations which are present at the university through various projects and initiatives. These associations raise the awareness about this issue among the student population. The term employability depends greatly on the context, and it is difficult to define. In this paper employability is defined as the continuous fulfilling, acquiring or creating of work through the optimal use of competences (Van Der Heijden et al., 2009.). Senior students possess distinct knowledge, skills and attitudes, and employability, in particular, deals with ways of including these students into the national and international labor market.*

*The objective of this paper is to present what university can do to increase the employability of its students. In the first part of the paper the role of university programs in it is examined. In the second part attention is given to a project of a students' association Entrepreneurs without borders (EWOB), active at the Faculty of Economics in Osijek. The project, during the Global Entrepreneurship Week 2013, dealt with the issue of youth employability and their competitiveness on the labor market after finishing formal university education.*

*Apart from the literature review of the topic, the paper presents a real-life example. For research purposes, a qualitative research method, an interview, is used, and attitudes and perceptions of participants of the EWOB project on the topic of employability and the role of university are analyzed and preliminary findings provided.*

**Key words:** employability, university, students' associations, labor market, competitiveness

**SAŽETAK**

*Doprinos visokog obrazovanja društvenom i ekonomskom blagostanju može se promatrati kroz ulogu sveučilišta u povećavanju zapošljivosti svojih studenata, odnosno kroz povećanje*

*njihove konkurentnosti na tržištu rada. Pitanje zapošljivosti je složeno i njime se pored ostalih bave i studentska udruženja koja kroz određene projekte i inicijative djeluju pri sveučilištu. Na ovaj način ona podižu razinu svijesti o ovom pitanju među studentskom populacijom. Pojam zapošljivosti uvelike ovisi o kontekstu i teško ga je definirati, a u ovom radu zapošljivost se definira kao kontinuirano ispunjavanje, stjecanje ili stvaranje poslovnih zadataka kroz optimalno korištenje kompetencija (Van Der Heijden et al., 2009.). Studenti završnih godina fakulteta posjeduju određenu razinu znanja, vještina i sposobnosti, a zapošljivost se bavi pitanjem kako takve studente uključiti u nacionalno ili internacionalno tržište rada.*

*Cilj ovog rada je prezentirati što sveučilište može napraviti u cilju povećavanja zapošljivosti svojih studenata. Prvi dio rada objašnjava ulogu sveučilišnih, odnosno fakultetskih programa u povećavanju zapošljivosti. U drugom dijelu rada predstavljen je projekt studentske udruge Poduzetnici bez granica (EWOB), koja djeluje pri Ekonomskom fakultetu u Osijeku. Projekt, u sklopu Globalnog tjedna poduzetništva, bazirao se na tematici zapošljivosti mladih i njihove konkurentnosti na tržištu rada nakon završetka fakulteta.*

*Osim pregleda relevantne literature, u radu je predstavljen primjer iz prakse. Korištena je kvalitativna istraživačka metoda intervjua, te su analizirani stavovi i percepcije sudionika projekta studentske udruge EWOB o temi zapošljivosti mladih i ulozi sveučilišta.*

**Ključne riječi:** *zapošljivost, sveučilište, studentske udruge, tržište rada, konkurentnost*

## **1. Introduction**

The aim of this paper is to develop a deeper understanding of the role of student associations in increasing students' employability. Different authors, who deal with the topic of employability of students, give different definitions of the term, but the guiding principle is the fact that employability is not easily defined, and that it includes a number of characteristics and interpretations such as proceedings of getting a (graduate) job, formal work experience, possession of "key skills" or such like, a mix of cognitive and non – cognitive achievements and representations etc (Yorke, 2006).

At present, employability is discussed primarily with senior students, and accordingly much research has been made on the connection between employability, higher education and activities of students during formal education. By analyzing the concept of employability, this paper will show the correlation between the role of universities and the role of extracurricular activities. The role of universities depends on the curriculum and the possibilities of the university to offer its students additional content in the form of seminars, educational workshops, practice, etc. For the purpose of this paper, the classification of possible activities of universities to raise the employability of their students will be made in accordance with the „Embedding employability into the curriculum manual (Yorke, Knight, 2006). In line with the above mentioned classification, the position of the Faculty of Economics in Osijek (EFOS), and the possibility of this higher education institution (HEI) to influence employability of students and increase their competitiveness in the labor market after graduation will be analyzed.

It is important to notice that the role of educational institutions and extracurricular activities in increasing employability intermix. Hence, the paper will illustrate the impact of extracurricular activities as a supplement to formal education in increasing employability and competitiveness of students. As a good example, the concept of student associations in influencing employability will be presented. By exploring the benefits of students' participation in student associations, the paper will highlight the importance of informal learning and the factors that influence the development of soft skills. All the above mentioned



will be discussed on the example of the student association Entrepreneurs without Borders (EWoB) and the project of the Global Entrepreneurship Week (GEW), which explored the topic of employment of students after finishing their studies, and which gathered students, teaching staff from EFOS and representatives from the business sector. Previous analysis will be reinforced with interviews with participants of GEW and teachers at EFOS, which will highlight the role of involvement in student associations.

## **2. Defining employability**

The connection between higher education and employability is becoming more and more important, and is often a subject of discussion in the academic community. It is extremely difficult to identify a single definition, which among other things, depends on the context, as well as the implementation of the term. Among others, a definition can be found in the literature, that defines employability as continuous fulfilling, acquiring or creating of work through the optimal use of competencies (Van Der Heijden et al., 2009).

Some authors have given their own interpretation of the term employability through a range of characteristics which it encompasses. So, Enhancing Student Employability Co-ordination Team (ESECT) founded by Higher Education Funding Council for England whose aim is to support the higher education sector in its effort to develop employable graduates, defines employability through the following phases: (1) getting a (graduate) job, (2) possession of vocational degree, (3) formal work experience, (4) good use of non-formal work experience and/or voluntary work, (5) possession of „key skills“ or such like, (6) skillful career planning and interview technique, (7) a mix of cognitive and non-cognitive achievements and representations (Yorke, 2006).

It is evident that employability represents a broad concept that includes three basic elements: it is demonstrated by the graduate actually obtaining a job, students being developed by his or her experience of higher education (curricular and extracurricular process) and possession of relevant achievements and, implicitly, potential (Yorke, 2006). Initially, a difference should be made between employment and employability, where employment relates to the actual acquisition of a job, and employability to the capacity of a graduate to function in a job. Furthermore, higher education, or relevant work experience, does not guarantee employability (Yorke, 2006). They certainly provide an opportunity to develop employability, but it actually derives from their own experience and the experiences of students who have been involved in the education or practice.

It is interesting that this concept, in addition to stressing the importance of formal learning and work experience, emphasizes the importance of involvement in extracurricular activities and voluntary work, which students can appreciate through involvement and work in student associations and thus increase their competitiveness in the labor market. Besides, employability is not a static category, but something that a person could develop throughout life, and this, in turn, denotes the importance and the necessary connection between the concept of employability and lifelong learning, i.e. the readiness to learn.

## **3. USEM account of employability**

As already mentioned, it is difficult to define the concept of employability, and accordingly specify all the factors that form or have an effect on it. According to the Skill plus project, which can be regarded as a kind of forerunner of ESECT, employability consists of a set of components. The so-called USEM account of employability includes four interrelated factors affecting employability: understanding, skills, efficacy beliefs, students' self-theories and personal qualities, and metacognition (Yorke, Knight, 2006)

First, subject understanding, or „knowledge", is the key outcome of higher education, and is related to the discipline which was the topic area of study. Next, core and key skills, as well as the generic or so-called transferable skills, are often mentioned when defining employability. Core skills and disciplinary area skills are developed as a product of participation in higher education. Generic skills, such as communication, teamwork and time-management skills, can support study in any discipline, and can be easily transferred from one context into another (Yorke, 2006). According to Bennett et al. (2000), the terminological problems occur when the core skill in one discipline is considered generic in the other. However, skills, either core or generic, constitute only one component of employability. Third, efficacy is defined as the disposition to see tasks as opportunities for learning rather than as performance-oriented opportunities to demonstrate competence (Yorke, Knight, 2006). In addition to that, it should be noted that a student should feel that he/she is able to make a difference, not every time but in probabilistic way. Finally, metacognition is the last element of the USEM account, and refers to the capacity for self-regulation, or in other words, it is defined as „knowing about knowing". It represents an inevitable item, because of the importance of self-awareness about the knowledge and the students' abilities, as well as their implementation.

#### **4. Role of Higher Education institutions in enhancing the employability of students**

The analyses of the starting points of the concept of employability reveals the positive correlation between the role of universities and the role of extracurricular activities, such as the participation in student associations. In other words, these two factors of employability mustn't be excluded. Therefore, if we do not define and monitor the role, the method, as well as the realized effects of HEI teaching and curriculum in increasing the employability of students, we will hardly be able to determine the contribution of students' associations to that. The way in which universities affect employability of our students varies from institution to the other, so there is no "ideal employability-oriented curriculum. "However, the manual" Embedding employability into the curriculum, "explains the existence of several" ideal types" of adapting the curriculum, being: (1) employability through the whole curriculum, (2) employability in the core curriculum, (3) work based or work related learning incorporated as one of components within the curriculum, (4) employability related modules within the curriculum, and (5) work based or work related learning parallel with the curriculum. It is important to note that certain types can interlace and that there is a possibility of simultaneous application of several of them (Yorke, Knight, 2006).

The first type of adaptation requires that aspects of employability are introduced into the whole curriculum. Such a practice was introduced at Alverno College in Milwaukee, where students had to demonstrate eight broad abilities: communication, analysis, problem solving, valuing in decision-making, social interaction, global perspective, effective citizenship, and aesthetic responsiveness in each course (Yorke, Knight, 2006). The second type, in contrast to the first one, highlights how curriculum changes should be introduced only in modules that form the core of the program, and not across the whole study program. The third type includes a period of work experience as an integral part of the curriculum. It is believed that this method increases the employability because employers themselves have declared so, but on the other hand it is difficult to evaluate practice, i.e. work experience, as a compulsory part of a curriculum. The fourth model emphasizes the introduction of such a curriculum which will encourage the development of skills (especially transferable skills) in students of lower academic years, i.e. from the very beginning of the study. It is believed that it will give greater support to career planning and job search strategies. The fifth model suggests part-time employment as a possibility to increase the employability of the students. Part-time employment can be seen as a learning opportunity, which provides the base for further

education in the employed-related disciplines (such as management, finance, psychology and so on). All models emphasize the role of universities in increasing the employability of students. Due to a number of reasons (the size of the university, resistance to change, etc.) this option may not be possible. In such a case, this function should be replaced by extracurricular activities, in particular through the activities of student associations.

Analyzing the current role of the Faculty of Economics in Osijek (EFOS) in increasing the employability of students, one single form of adaptation could not be determined with complete accuracy. All previously mentioned models of influencing employability of HEI often intermix, and this is also the case in the example of EFOS. Models that match the closest are employability in the core curriculum and employability related module (s) within the curriculum. From the very beginning of the study, the curriculum requires student engagement in the form of teamwork, research assignments, presentations in front of other students and professors that affects the formation transferable skills. Furthermore, every study direction is adjusted to students' interests, so that for example marketing major further encourages students to be creative through a variety of tasks, and the financial management major, for example, emphasizes developing skills of analytical thinking. However, the biggest problem that such skills are not developed sufficiently, remains, so, in order to improve, students turn to extracurricular activities. Each major provides students with an opportunity to acquire specific skills, which they will need later, through core courses. What is missing and what is a common criticism made by students is internship in which they can use the theoretical foundation gained through the curriculum in a real life situation. Because of the number of students it is often not possible to find a sufficient number of places for internship and it is extremely difficult to coordinate classes and the time for internship. Hence, one of the suggestions that can deal with this problem might be to introduce more case studies about the real problems of real companies. When working on case studies, students do the tasks more seriously, because they know the case is not fictitious, and they are further motivated because for the best solutions students are usually rewarded by business owners with additional training, internships or awards.

## **5. Role of student associations in increasing the employability of students**

Various factors affect employability: some of them are under the direct control of the HEI, such as student motivation, opening up opportunities for students to participate in educational projects through which they acquire additional knowledge and skills, through the process of formal learning (York, Knight, 2006). Student associations, which are an example of informal learning, present a good supplement of the formal education. According to many studies and theorists (Marsick, 2006), learning outside the formal environment greatly affects the performance and acquisition of knowledge. But HEI cannot force students to participate in extracurricular activities. What HEI can do is to support the work of associations that are substantially close to students' subject of study, and thus indicate the importance of the role of associations in increasing the employability of students and increasing their competitiveness in the labor market.

Literature often mentions the role of the organization, i.e. the working environment, in increasing the employability of its employees (Thijssen, Van der Heijden, Rocco, 2008). In order to explain the role of student associations in increasing employability, student associations can be considered a working environment that has all the characteristics of a work organization (organizational structure, hierarchy, organizational culture, policies, processes, etc.). Such an environment helps students in understanding the real working environment in which they will be one day, and thus prepare them for the labor market.

Through the involvement in student associations, students are faced with several factors that affect the employability, primarily as a result of the acquisition of new competences through informal learning. Therefore, one of the roles of student associations (and later working environment) is pointing to the importance of the hierarchy through the LMX model (Leader-Member Exchange [LMX]). According to this model, association members, who find themselves in a hierarchical structure, are engaged in tasks that require challenge and responsibility, and at the same time, they are supported by their leader in the execution of this task (Van Der Heijden et al., 2009). Such a relationship helps members acquire a positive work attitude as a consequence of high-quality supervisor-subordinate relationship. Members will adopt this pattern of behavior during their course of study which will later result in respect of authority, as well as proactive behavior, and the development of team spirit which greatly increases the employability and is one of the main demands of the labor market. In addition, due to demanding projects and dynamic changes, students in associations must develop the adaptability, initiative-taking and proactivity, which can contribute to individual and organization performance (Van Der Heijden et al, 2009). In this way, student associations not only provide students with the possibility of expanding their capabilities through challenging work assignments, but also stimulate the development of other skills such as time management, conflict management etc. Finally, the important role of student associations lies in the possibilities of the development of good networking skills, which form the basis for a high level of social capital, which can be seen as an aggregate of potential resources arising from group membership (Glover, Law, Youngman, 2006). This potential will reinforce a greater tendency to employability of graduate students, and later this can help in getting promoted and having a successful career in general.

Ultimately, due to the pronounced features of informal learning, student associations influence the development of generic or soft skills, i.e. the skills that most employers today value more than the disciplinary understanding (Yorke, 2006). There is no doubt that some of the major soft competences can be developed through the work of student associations. Besides the already mentioned, these are skills, such as verbal and written communication skills, leadership, negotiating, managing change, commitment, enhanced personal skills, development of self-confidence, or in other words, capability towards acquiring employability and entrepreneurship skills (Hal, Higson, Bullivant, 2009). Of course, learning and skills development through student associations is an individual decision and depends on student engagement and self-awareness of their current performance, but also the desire to constantly learn and improve the existing skills and knowledge.

If all the factors are observed together, it is obvious that student associations support the implementation of USEM model. Working in associations not only provides the opportunity to develop soft skills, but raises students' consciousness about their own knowledge and abilities (metacognition) and consequently awareness of their possibilities to influence the environment (efficacy beliefs).

## **6. Entrepreneurs Without Borders (EWOB) and project the Global Entrepreneurship Week (GEW)**

Entrepreneurs Without Borders (EWOB) is a non-government student-led organization founded at the University of Illinois at Urbana-Champaign in 2008, USA, with a sister chapter established in 2009 outside of the United States at Josip Juraj Strossmayer University in Osijek, Croatia. EWOB offers young people the opportunity to connect with communities around the world, develop business-based projects that solve local economic and social issues and to become a force for the public good, working towards social change, and integrating classroom learning into practice. Entrepreneurs Without Borders is an international

organization with the mission to harness diverse skills and resourcefulness of students, and work towards educating communities about entrepreneurship as a way of thinking and living. As a student organization, EWoB seeks to contribute to the promotion of entrepreneurial spirit, entrepreneurial thinking and action in all social contexts, development of entrepreneurial universities and collaboration with students, associations and entrepreneurs outside their home institution. Students develop different kinds of projects, such as the celebration of Global Entrepreneurship Week, cooperation with local entrepreneurs through student consultancy projects and business plan competitions, charity events and study trips to the USA and within Croatia. The study visits enable students to learn in a different cultural context, share and exchange knowledge and experience, identify opportunities for increasing their entrepreneurial activity, link American and Croatian entrepreneurs, analyze the application of U.S. business models in Croatia, and the Croatian ones in America, benefit communities in need, and ultimately change the human condition in areas of global concern. Every year this student association organizes a wide set of activities, discussions, workshops to mark Global Entrepreneurship Week (GEW). Main aims of last year's GEW 2013 was to indicate the importance of proactive behavior, generate ideas around issues that are important to society – youth employability, and stress out the role of entrepreneurship as the main actor of economic and social prosperity. Theme of Global Entrepreneurship Week was "Do it today-enjoy tomorrow,..". The whole concept points out proactivity as one of key factors in increasing employability of young people. The three-day workshop was attended by representatives of the real sector as future employers, who have pointed out what they expect from students when they finish their studies, and how they can increase their competitiveness in the labor market. The round table involved former students of J.J. Strossmayer University in Osijek. The purpose was to point out the importance of extracurricular activities and student associations in the establishment of students' portfolio of skills. Last day, associations which students can join, were presented. Student associations were presented as the most logical and the easiest start of proactive behavior.

## **7. Methodology**

During Global Entrepreneurship Week (GEW), the theme of employability was observed from several aspects: from the aspect of employers, teaching staff, student associations, i.e. students active in the association. In order to confirm the multidimensionality of employability and gain a deeper understanding of the concept a series of interviews was carried out, with four different groups of participants of GEW: with employers, members of student association EWoB, final year students of the Faculty of Economics who were not active in any student association, and teachers at EFOS.

The first round of semi-structured interviews included 14 students, members of EWoB out of 20 active ones. The interviews attempted to get students thinking about the usefulness of student associations in enhancing employability, the role of HEI, the readiness for the labor market, and what additional skills they developed through extracurricular activities and that they could not have developed during the educational process. The second round of interviews was conducted with 10 final year students from the Faculty of Economics who were not involved in the work of any student association or similar activities, and the interview was aimed at getting their assessment of employability and readiness for the labor market. The third round included three representatives from companies that have participated in GEW. Their experiences with the employment of students who have been proactive during the study were examined during the interviews. The last round of interviews included opinions of teachers at EFOS about the role of HEI and extracurricular activities in enhancing employability, as well as their attitudes and experience of working with student associations.

## 8. Discussion

The data obtained from interviews suggest a positive role of student associations in increasing the employability and competitiveness on the labor market. The results of the interviews conducted with 14 student members of the EWoB association showed that development of soft skills, including in particular, communication skills, presentation skills, teamwork, organizational skills, and skills to delegate tasks were the most often stated direct benefits of the membership. The positive effects of networking and knowledge sharing among members were also mentioned. For example:

*Participation in student associations encourages teamwork skills, as well as the development of leadership skills and taking initiative. Working in student associations, could be called a kind of non-formal learning in which students learn from each other, and it is proven that skills and knowledge can be developed much better in a non-formal, relaxed environment. (Ivana)*

Among other observations are the statements in which students put emphasis on networking, which is logical, and direct contact with employers, where they were able to gain insight into the current labor market requirements.

Association members did not deny the role of faculty in enhancing their employability. Their comments pointed to the importance of the teaching curriculum in providing the theoretical basics without which their practical work, which can be obtained by engaging in projects of the association, would present a major challenge and extra effort. Several observations indicate a connection of academic knowledge and skills gained in extracurricular activities:

*I think that the theoretical framework learned at the university is a great foundation, but it is through active engagement outside the faculty that we gain more specific and applicable knowledge (Dominik)*

As much as 78 % of the respondents (i.e. 11 of 14 interviewees) confirmed that they consider themselves better prepared for the job market, due to the membership in the EWoB association, namely the skills acquired through membership, and how they feel more competitive with respect to other students who have not had such experience.

Interviews with 10 senior students from the Faculty, who have not had experience working in student associations, confirmed the positive role of student associations in the development of skills that directly affect employability. All 10 respondents confirmed that what they learned at the university is not enough, and that they cannot rely exclusively on the skills developed through the curriculum:

*Formal education does not put enough emphasis on the knowledge required by the labor market or the development of practical experience. Therefore, I do not have a clear picture of what is expected at the first workplace. (Marina)*

As the major reason for not engaging in the activities these students listed under-developed communication skills and presentation skills. It is significant that the students who are active in the association stated that they have developed particularly these skills. The interviewees mentioned fear of failure, lack of confidence and fear of lack of time as the main reasons for their refusal to participate in the activities of the EWoB association. For example:

*What stopped me was the fear that I may be required to fulfill the tasks for which I am not competent. (Marija)*

These considerations precisely point to the importance of unawareness about the benefits of associations or similar activities because time management skills and self-confidence can be built through additional obligations, in this case, through involvement in student associations. The third round of interviews was conducted with employees and owners of companies that participated in GEW. A set of questions was selected in order to determine the employers' beliefs about employability of students. All three respondents believe that extracurricular activities are important because nowadays students must be able to distinguish themselves with practical knowledge, but also skills that they developed through work or activities in student associations.

*Through extracurricular activities can be seen, whether invested in themselves not only academically speaking, but they were willing to set aside more time and effort for a specific purpose and thus have gained a certain work ethic.(Klaudina N.)*

Furthermore, it is stated that the skills acquired through extracurricular activities give students a certain advantage in employment because they indicate he/she is a proactive student. In addition to the role of associations and extracurricular activities, employers also discussed the role of universities in enhancing employability. The role of the university, according to them, should be in monitoring the actual economic situation and highlighting the current market needs and educational curriculum through the introduction of mandatory internships, and workshops that will connect students with future employers. For example:

*Encourage students to actively participate in specific projects together with teachers, encourage them to participate in a variety of student activities, connect students with future employers through visits of guest speakers.(Mladen Š.)*

In studying the role of student associations in increasing employability it was important to collect the opinions of the teaching staff. Therefore, the interview was conducted with four teachers at EFOS. All four teachers agreed that students can enrich and expand their skills, especially generic skills, and knowledge, which are sometimes crucial in hiring and developing your own career through active participation in student associations:

*Any form of extra work, just like the work of in student associations, is a very good experience and a kind of „School of Life,, for students. (Julija Perić, PhD)*

With regard to previous opinion, these groups of respondents pointed out that students who are involved in any form of extracurricular activities are more focused and successful in carrying out the learning task. From the experiences of lecturers such students show proactive behavior in problem solving. They are serious, responsible, and willing to give concrete examples. Accordingly, teachers consider such students more competitive and better prepared for the job market. For example:

*It is the students who have the experience working in associations, but also as I mentioned earlier, in other forms of " joint action outside the classroom", students who want more and who motivate themselves for " more", invest in themselves (often at the expense of their own free time), are willing to deal with the " real life and the reality of the business world". If it is accompanied with good performance at the Faculty, we have a fully developed person ready for the job market. (Nataša Drvenkar, PhD)*

The survey showed that the interviewed teachers encourage their students to participate in extracurricular activities (including hobbies) because through them they can develop additional skills that may not be developed through the formal curriculum. At the same time, this is a good reference in students' CV.

## **9. Conclusion**

This paper has focused on the concept of employability as a multiple factor category that does not apply only to obtaining employment, but to the acquisition of crucial soft skills, and focus on constant improvement and advancement in one's field, as well. Besides the efforts of HEI in increasing the employability and competitiveness of their students in the labor market, extracurricular activities perform a very important role, specifically student associations.

In order to demonstrate the positive correlation of increasing employability through active work in student associations, interviews were conducted with four different groups of participants in the Global Entrepreneurship Week (GEW) project.

The interviews reveal interesting and original opinions of the respondents and support the initial assertion of the positive correlation between employability and participation in student associations. Members of the EWoB association indicated that they are aware of informal learning processes and how, through their engagement, they had the opportunity to develop soft skills such as presentation skills, teamwork, organizational skills, etc. The analysis of the interviews of the students who did not participate in student associations during their studies evidence their awareness concerning the lack of participation, as well as the awareness about the missed opportunities for additional training. The existence of such awareness is positive, and can ultimately lead to proactive behavior in the future. Both, employers and teachers at EFOS drew attention to the significant difference between students who were engaged in extracurricular activities and those who had no such experience. Also, they endorsed students' involvement in various projects, volunteering, participating in various associations outside the Faculty, and engaging in activities through which they could develop additional skills, become more competitive in the labor market and thus increase their employability.

Despite the obvious limitations, in both, scope and method of the research presented, the conclusion can be made that formal education acquired through HEI and informal knowledge gained through extracurricular activities intermix, and jointly help develop young people ready for the labor market. For this reason, increasing employability of students and raising their competitiveness is achieved by synergy of these two factors..

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**Umjesto  
zaključka**

**Instead  
of a conclusion**

## Umjesto zaključka

Treći Međunarodni znanstveni simpozij “GOSPODARSTVO ISTOČNE HRVATSKE - VIZIJA I RAZVOJ” u potpunosti je opravdao svoje postojanje, s posebnim naglaskom svih autora koji su u sudjelovali o potrebi njegovog kontinuiteta. Održava se u vrijeme gospodarske krize u Republici Hrvatskoj koja je posljedica jednim dijelom zbog loše provedene privatizacije, a većim dijelom zbog nedovoljnog i neodgovarajućeg prilagođavanja europskim kriterijima razvoja tržišta.

Znanstvenici i stručnjaci iz prakse pokazali su značajan interes na njegovom sudjelovanju kroz radove u kojima su na osnovu istraživanja i spoznaja dali svoju viziju razvoja ne samo istočne Hrvatske već i svih mikroregija RH.

Od svih tematskih područja koja su obrađena, posebni interes istraživača bio je na razvoju kontinentalnog turizma, (promocija događanja, kulturne atrakcije, zdravstveni, lovni i ribolovni turizam, spomenička baština slavonskih i srijemskih plemićkih obitelji, sakralni objekti, autohtoni ruralni proizvodi i dr.) postignuća enegetske učinkovitosti, te projektnih prijedloga s posebnim osvrtom na preradu poljoprivrednih proizvoda – voća i povrća.

No, nisu izostali radovi o poduzetništvu s prijedlozima novih suvremenih pristupa organizaciji za opstojnost tvrtke, kao i značaj i uloga društvenih mreža u procesu globalizacije s obzirom na mogućnost postignuća u kvaliteti ponude, respektirajući nove trendove u ekološkoj proizvodnji, tj. brizi o održivom ruralnom razvoju.

Kako sport ide u korak s razvojem ljudskih potencijala, ukazan je njihov značaj i utjecaj na gospodarski rast.

U prezentiranim radovima nisu izostale analize: bankovnog poslovanja, okoliša, primjena marketinga u promoviranju naših proizvoda, prekogranične suradnje, primjene cjeloživotnog obrazovanja s prijedlozima povezivanja visokogobrazovanja kao ključne uloge za regionalni razvoj. U radovima su naglašene nove mogućnosti kod izrade projektnih prijedloga za korištenje sredstava EU fondova kroz primjenu organizacije LAG-a, Triple Helix i Quadruple Helix pristupa.

Svi ovi radovi biti će dostupni na internetskoj stranici Simpozija tako da ih mogu koristiti kako potencijalni investitori, tako i Vlada RH u kreiranju poslovne politike za organizaciju turizma i poduzetništva kao i za primjenu poticajnih mjera razvoja kako istočne Hrvatske tako i cijele Republike Hrvatske.

Prema broju i kvaliteti objavljenih radova – može se naglasiti - Treći međunarodni znanstveni simpozij “GOSPODARSTVO ISTOČNE HRVATSKE –VIZIJA I RAZVOJ” u potpunosti je opravdao svoje postojanje.

Prof. dr. sc. Anka Mašek Tonković



## Instead of a conclusion

The third International Scientific Symposium “ECONOMY OF EASTERN CROATIA – VISION AND DEVELOPMENT” entirely justified its existence, with special emphasis of all the participating authors on the need for its continuity. It is being held in a time of economic crisis in Croatia, which is partially a consequence of a badly run privatization process, and mostly a consequence of inadequate and improper adaptation to European market development criteria.

Scientists and experts from this field showed high interest in participation through papers in which they, based on their research and conclusions, provided their own development vision of not only eastern Croatia, but all of the Croatia’s micro-regions.

Out of all covered topic areas, special attention of the researchers was given to the development of continental tourism (event promotion, cultural attractions, health, hunting and fishing tourism, monumental heritage of Slavonian and Syrmian patrician families, sacral buildings, indigenous rural products etc.), achieving energy-efficiency, together with project proposals with special emphasis on processing agricultural products – fruits and vegetables. However, there were still a lot of papers on entrepreneurship proposing new, contemporary organizational approaches to company viability, as well as on the role of social networks in the process of globalization related to achieving quality of supply, respecting new trends in ecologic production that is care for sustainable rural development.

Since the development of sport follows the development of human potential, emphasis has been put on its effect on economic growth.

The presented papers also gave analyses of: banking, environment, function of marketing in promotion of domestic products, cross-border cooperation, and function of lifelong education with proposals for linking higher education as the key part in regional development. The papers introduce new possibilities for drawing project proposals for receiving resources from EU funds by applying LAG, Triple Helix and Quadruple Helix organizational approaches.

All of these papers will be made available on the Symposium’s website so that all potential investors will be able to use them, including the government of Republic of Croatia, in creation of its business policy for tourism and entrepreneurship as well as in applying incentive measures for the development of not only eastern Croatia, but the entire Republic of Croatia.

By taking into account the quantity and quality of published papers, we can say that the third International Scientific Symposium “ECONOMY OF EASTERN CROATIA – VISION AND DEVELOPMENT” entirely justified its existence.

Prof. Anka Mašek Tonković, PhD



## **Anstatt des Fazits**

Dritte internationale wissenschaftliche Symposium „OSTKROATISCHE WIRTSCHAFT – VISION UND ENTWICKLUNG“ hat ihre Nützlichkeit wieder demonstriert. In diesem Zusammenhang stehen die Äußerungen der Teilnehmer, die die andauernde Kontinuität dieses Symposiums unterstützen. Das Symposium wird in Zeit der Wirtschaftskrise in Kroatien abgehalten, die eine Konsequenz des schlecht ausgeführten Privatisierungsprozesses und schlechter Anpassung zu europäischen Kriterien der Marktentwicklung ist.

Die Wissenschaftler und Fachexperte haben ein bedeutendes Interesse für die Teilnahme durch wissenschaftliche Arbeiten in den sie, basierend auf Forschung und Erkennung, ihre Vision der Entwicklung nicht nur von Ostkroatien sondern von allen Mikroregionen Kroatiens, darstellen können.

Von allen am Symposium bearbeiteten Gebieten, war ein Sonderinteresse der Forscher für die Entwicklung des Kontinentaltourismus (Event Promotion, kulturelle Sehenswürdigkeiten, Gesundheits- und Jagdtourismus, Denkmale der Slawonischen und Syrmischen Adlerfamilien, Religionsobjekte, Kontinentaessen usw.), Energieeffizienz, und Projekten die sich mit Bearbeitung von landwirtschaftlichen Produkten beschäftigten, zu merken. Betriebswirtschaftliche Arbeiten waren auch anwesend und die haben neue Ansätze zur Betriebsorganisation, sowie die Wichtigkeit und die Rolle der sozialen Netzwerken im Globalisierungsprozess analysiert.

Da Sport mit der Entwicklung der Humanpotenzial eng verbunden ist, wurde die Wichtigkeit und das Einfluss des Sports an wirtschaftliches Wachstum betont.

Unter der präsentierten Arbeiten waren auch Analysen von Bankindustrie, Umwelt, Marketinganwendungen, grenzüberschreitender Zusammenarbeit, Anwendungen von lebenslanger Bildung zu finden, mit Beispielen für Bindung der hochqualifizierter Personell als Hauptvoraussetzung für regionale Entwicklung. Die Arbeiten haben neue Möglichkeiten bei der Ausarbeitung der Projektvorschläge für die Verwendung von EU-Fonds durch die Anwendung der Organisationsformen LAG-a, Triple Helix i Quadruple Helix demonstriert.

Diese Arbeiten werden an der Webseite des Symposiums zur Verfügung gestellt, sodass sie von potenziellen Investoren und von kroatischer Regierung in der Ausarbeitung von Wirtschaftspolitik für Organisation des Tourismus und Organisation der Betrieben und auch für die Anwendung der Entwicklungsförderungsmaßnahmen für Ostkroatien sowie für ganze Republik Kroatien verwendet werden können.

Falls beurteilt nach der Nummer und Qualität der publizierten Arbeiten, könnte es betont werden, dass das Dritte internationale wissenschaftliche Symposium „OSTKROATISCHE WIRTSCHAFT – VISION UND ENTWICKLUNG“ seine Nützlichkeit vollkommen bestätigt hat.

Prof. dr. sc. Anka Mašek Tonković



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