EDUCATION LEVEL AND STANDARD – AN IMPORTANT FACTOR IN NATIONAL COMPETITIVENESS

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The competitiveness of a national economy is an important determinant in its international standing. In addition, the degree of competitiveness achieved determines the chances of each national economy for lasting and stable growth and development. The level achieved, the success generated and the framework for its distribution determines, among other things, the possible level of personal and public consumption.

The standard of education, both formally and in terms of up-to-date useful knowledge and skills is one of the basic factors that affect the ability to create new wealth.

Croatia, for a long time, as a result of the war and post-war conditions, and also because of its specific degree of (self-imposed) isolation, has ceased to concern itself with this factor. The present level of economic openness, and the undoubted process of moving towards the European Union, has drastically intensified the need for a catch-up strategy for in the process of education development at the national level.

Key words: competitiveness, economic growth and development, standard of education, (un)employment, regional and global standing of the state.

Introduction

It is without doubt that the accelerated process of the globalisation of the world economy means that processes that during the period after the Second World War took decades now happen in a matter of years.

Croatia has only been concerned with the systematic measurement of its relative competitive position in the last three years.[1] Starting from this basis, several trends can be seen over the last two years that give very strong warnings about the way in which the state is systematically falling behind, particularly in comparison with those transition countries that have joined the European Union, and those preparing to be fast-tracked.

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1 Since 2002. Croatia has been included in the «Global Competitiveness Report» of the World Economic Forum, which every year since 1979 has published a report in Geneva. The current methodology for measuring competitiveness was established and developed upon by leading international eonomists: Michael Porter, Jeffrey Sachs, John McArthur, Augusto Lopez Claros, Xavier Sala i Martin, Klaus Schwab and others.

The competitiveness of the national economy in all its aspects is the common concern and responsibility of the business sector, trade unions, scientists and government organisations. This is because it is the foundation for creating new wealth, the distribution of which we can all participate in. At the same time, it is the only stable basis for survival in an increasingly interconnected international economy.

It is vital to closely examine the parameters connected to general education and the level of knowledge and skills of the working population in the various components for measuring competitiveness. It can be confidently stated that this factor influences all other parameters of competitiveness, as levels of knowledge and skills are important in determining the quality of management of all other resources and processes.

The state, which means the most important executive authority, must recognize and introduce measures that will stimulate all forms of education. This is because sufficient education and adequate levels of knowledge and skills are one of the important factors in attracting investment capital. In turn, increased employment creates a much broader tax base; from companies to individuals it creates the opportunity to strengthen the competitiveness of fiscal policy at the national level.

I. COMPETITIVENESS AND ITS IMPORTANT COMPONENTS

In accordance with standard internationally accepted methodology, competitiveness is measured and weighted by two basic indicators.[2]

A. Growth Competitiveness Index

This index consists of three key areas of appraisal: a) macroeconomic environment; b) technological development; c) quality of public institutions.

The weighted values of these indicators are a combination of hard and soft data, analysis of statistical sources, and detailed guided interviews with sample representatives of the business community.[3]

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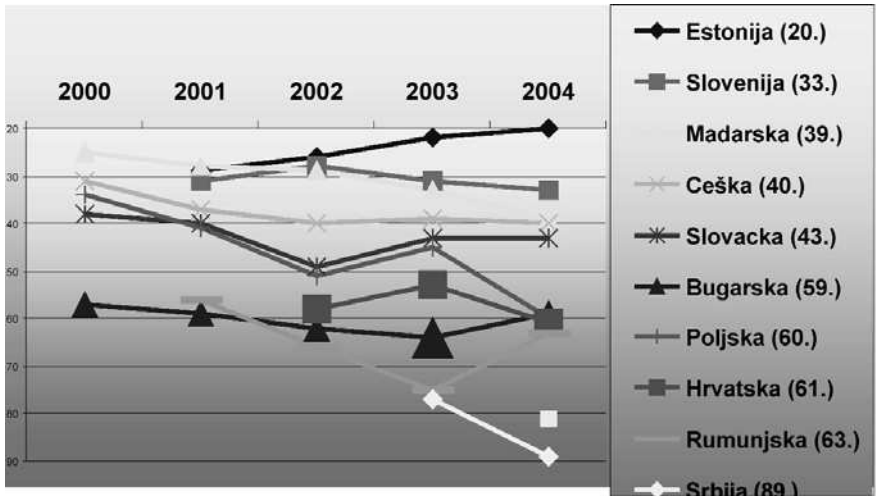
2 The methodology of the World Economic Forum is currently used in a total of 104 states with a combined value of almost 98% of the world's GDP. From 2004, an experimental third index was introduced – the Global Competitiveness Index, which consists of three main elements: current economic development, transitions in economic development, and twelve competitiveness levers. This index gives an aggregate assessment of microeconomic and macroeconomic bases of competitiveness, and their statistical outcome. The idea of this index is eventually in the long-term to combine the current two indices – the Business Competiveness Index and the Growth Competitiveness Index.

3 The research on the opinions of managers is a questionnaire that is used once year on managers of companies and institutions in the country in question, based on a sample that reflects the economy of that country (in general, the parameters are activity, size of company, region and ownership.) This is carried out in accordance with the rigorous methodology of the World Economic Forum. In a comprehensive interview, managers give their appraisal of the current environment in which they operate. The questionnaire has a total of 11 sections: on the

Figure 1.
GROWTH COMPETITIVENESS INDEX: PRESENTED BY YEAR



Source: Documents of the National Competitiveness Council, Zagreb 2004.

The application of this index to the case of Croatia in comparison with the group of transition countries gives the following results.

It can be seen that the absolute and relative position of Croatia has oscillated but the overall trend observed is a downward one. For a more precise assessment, it is important to analyse the positions of the individual sub-indicators.

Croatia again holds a relatively satisfactory position with regard to the quality of technology and the teaching of its application (46). As far as the quality of the macroeconomic environment is concerned, the position (59) is almost identical to the total (61). By far the worst sub-indicator is the assessment of the structure, quality and functions of public institutions (76). This position is far weaker than the ratings of Slovakia (28) and Estonia (15). Croatia's rating is behind two states that are candidates for entry into the EU, i.e. Bulgaria (59) and Romania (47).

Such a position requires urgent analysis, both in terms of the (in)stability and the activities of individual public institutions, and measures to tackle the situation need to be drawn up.

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trcompany of the respondee, general perception of the economy of the country, technology, government and public sector, public institutions, infrastructure, human resources, finance and ansparency, domestic competition, business activity and strategy, protection of the environment and social responsibility, and additional questions on the most problematic factors in doing business in the country. In this way, the research gathers valuable information on a broad range of variables for which sources of hard data are rare or inconsistent.

Table 1.

GROWTH COMPETITIVENESS INDEX:TOTAL AND SUB-INDICATORS

State	Total	Macroeconomic environment	Public institutions	Technology
CROATIA	**61**	**59**	**76**	**46**
Estonia	20	30	26	15
Slovenia	33	39	31	26
Slovakia	43	54	49	28
Bulgaria	**59**	**60**	**56**	**59**
Romania	**63**	**71**	**74**	**47**

Source: Documents of the National Competitiveness Council, Zagreb 2004.

B Business Competitiveness Index

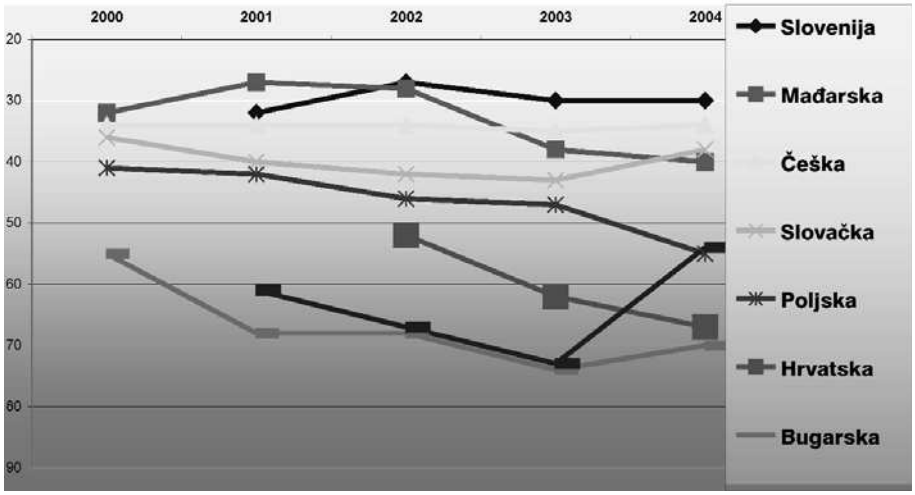
This index consists of two important components: a) the quality of the business environment; b) business activity and strategy.

The material, collected by means of a survey, shows the weighted data collected by researchers on the opinions of managers of companies and institutions on their perception of the entire environment in which they work.

The application of the index in the case of Croatia compared to the above-defined group of states gives the following results.

Figure 2

BUSINESS COMPETITIVENESS INDEX: RATING BY YEAR



Source: Documents of the National Competitiveness Council, Zagreb 2004.

The data clearly show the progress made by Slovakia, Estonia and Romania. An effort to raise the level of their competitiveness is also shown by Bulgaria, the Czech Republic and Slovenia. Croatia, however, is the exception with a worrying downward trend in recent years.

Table 2

BUSINES COMPETITIVENESS INDEX: TOTAL AND SUB-INDICATORS

STATE	TOTAL	BUSINESS ACTIVITY AND STRATEGY	QUALITY OF BUSINESS ENVIRONMENT
CROATIA	**67**	**68**	**65**
SLOVENIA	30	27	32
ESTONIA	27	33	24
SLOVAKIA	38	40	37
BULGARIA	70	79	67
ROMANIA	54	58	55

Source: Documents of the National Competitiveness Council, Zagreb 2004.

It can be seen that Croatia is lagging behind those transition countries that have entered the EU (2004), but also in comparison to the current candidates for accession into the European Union (Romania and Bulgaria.)

II. EMPLOYMENT AND EDUCATION STANDARDS AS A FACTOR OF COMPETITIVENESS

It is vital for Croatia's present position, and even more so for her future position and competitive capacity that she can compete within the environment of the European Union. As far as the next three to five years are concerned, subjective factors are going to be as important as objective ones (the war and post-war costs.) These are the adequacy of macroeconomic policy and the efficiency of public institutions (administrative, judicial, etc.) However, the factor that largely determines the above positions is the level of employment and the quality of those in work or seeking employment in the labour market.[4] The chart below provides a comparative illustration.

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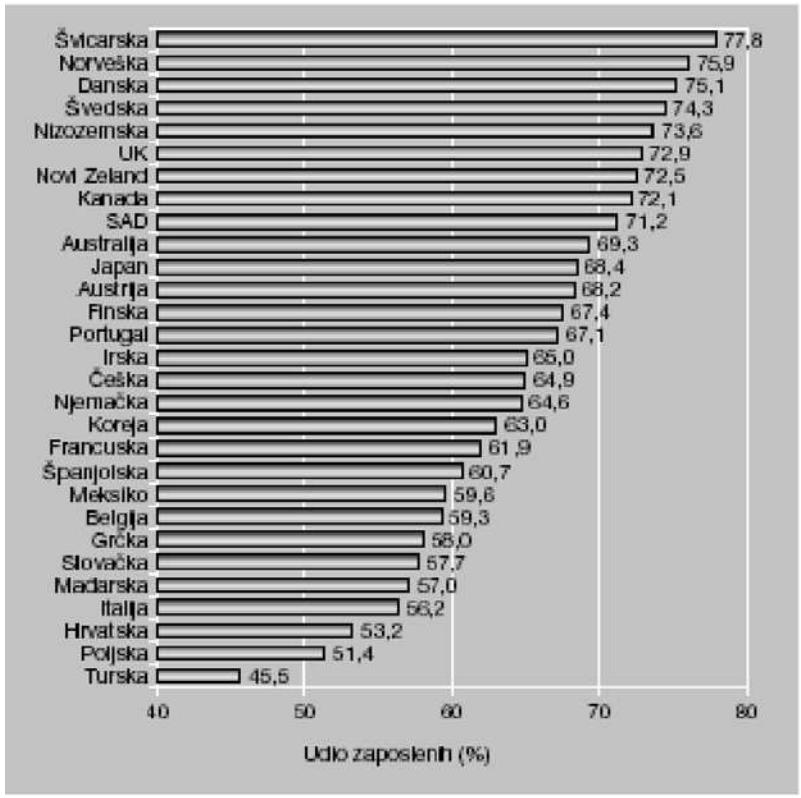
4 Full membership of the European Union implicitly includes the ability to meet the Copenhagen Criteria, which were adopted at a meeting of the Council of Europe in 1993. These are as follows:

1. stable institutions that guarantee democracy, the rule of law, and respect for human rights and minorities;
2. *the existence of an effective market economy;*
3. *the ability of businesses to compete within the market of the EU;*
4. the ability to meet the obligations resulting from membership, including the implementation of political, economic and monetary union.

Figure 3
PART OF THE POPULATION IN EMPLOYMENT



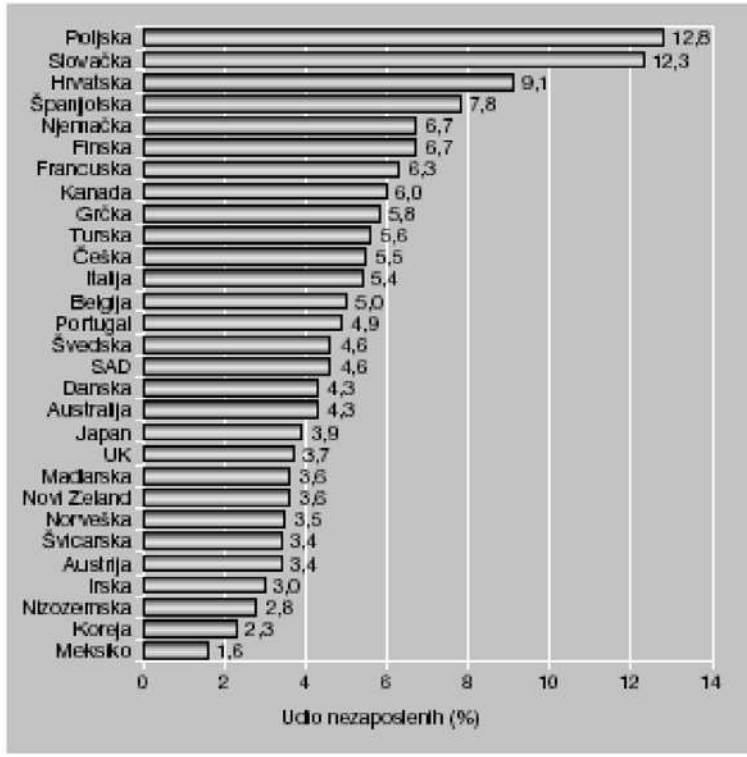
Source: Analytic Bulletin no. 2, Croatian Employment Service 2004, Zagreb, based on the OECD 2004 and State Bureau for Statistics 2003.

It can be seen that among the developed countries of the OECD, as well as among the transition countries surrounding her, Croatia is near the bottom of the table in terms of the portion of the population in employment. At the top of the table are the Scandinavian countries, and then Switzerland and the Netherlands. Mediterranean countries (Portugal, France, Spain) perform solidly, while Slovakia and Hungary are making progress. Croatia, however, is positioned ahead of only Poland (*a very high agrarian proportion of the population*), and Turkey (*an exceptionally high proportion of the population is young*.)[5]

[5] The 25 to 54-year-old age group of men in employment, an important element of the working population, was the lowest in Croatia among comparable countries, excluding Poland.

When data on the portion of the population that is unemployed in the above-mentioned countries are compared, the following situation emerges:

Figure 4.
PART OF THE POPULATION THAT IS UNEMPLOYED



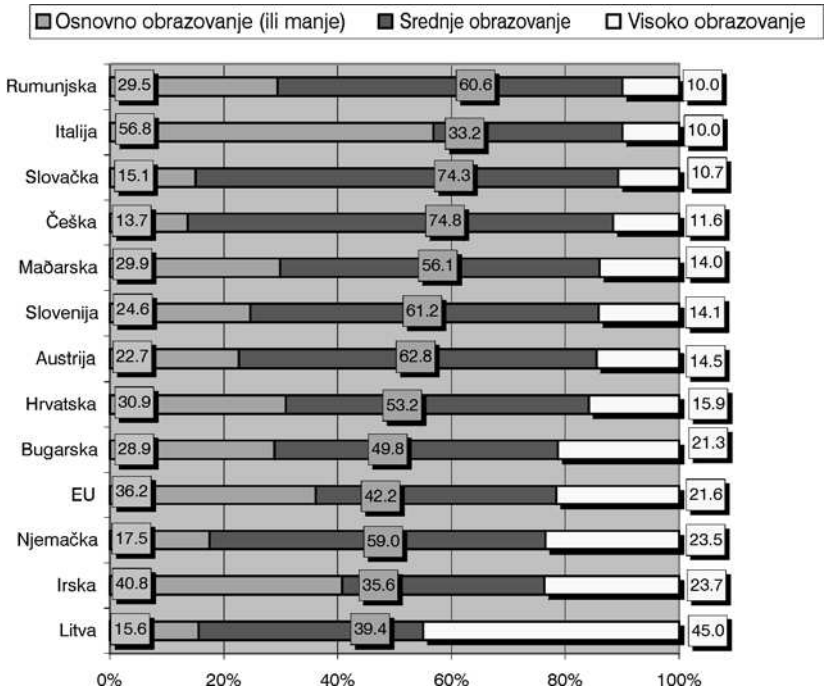
Source: Analytic Bulletin no. 2, Croatian Employment Service 2004, Zagreb, based on the OECD 2004 and State Bureau for Statistics 2003.

The data show two states behind Croatia that are currently engaged in the transfer of the working population from the agricultural sector to the industrial and services sector (Poland and Slovakia.) Croatia appears in a high third place, with nearly a tenth of the population out of work.[6] The consequences of having such a significant part of the population not participating in the process of creating new wealth are clear.

6 The portion of employed or unemployed is not identical to the unemployment rate, which is the share of the unemployed in the workforce, i.e. the sum of the employed and unemployed.

As far as education is concerned, it is important to analyse what happens inside the education process. This has again been done comparatively.

Figure 5.
STRUCTURE OF EDUCATION AMONG PEOPLE IN THE 25-64 AGE GROUP



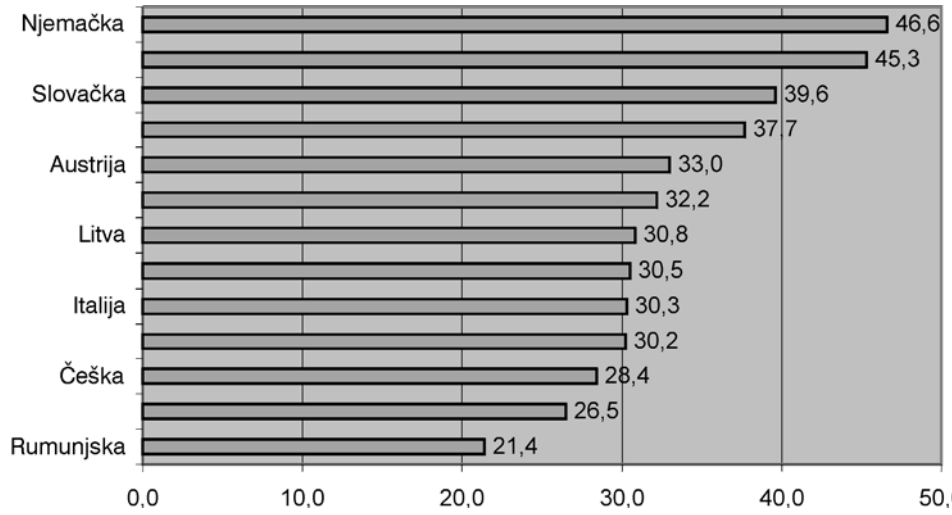
Source: Annual Report on Croatia's Competitiveness 2002, National Competitiveness Council 2003.

It can be seen that Croatia is behind in comparison to the EU average, particularly as far as participation in higher education is concerned (15.9% against 21.6 %), though it is slightly stronger than Austria (14.5%) and Slovenia (14.1%), and much stronger than Slovakia (10.7%) and Romania (10%). However, it is significantly behind Bulgaria (21.3%), and lags far behind Lithuania (45%).

The part of the population leaving education after high school (53.2%) is higher than the EU average (42.2%), but lower than the indicators for Austria (62.8%), Slovenia (61.2%), and Slovakia (74.3%.)

In terms of the proportion of natural and technical science students in the total number of students, Croatia has a relatively low ranking, but still performs better than the Czech Republic, Bulgaria and Romania. However, its ranking is less sati-

Figure 6.
SHARE OF NATURAL AND TECHNICAL SCIENCE STUDENTS IN THE TOTAL NUMBER OF STUDENTS



Source: Annual Report on Croatia's Competitiveness 2002, National Competitiveness Council 2003, Zagreb.

sfactory than those of Slovakia, Slovenia, Austria, Hungary, and that of the particularly highly placed Turkey, whose share of students in this category is 50% higher than the comparable indicator for Croatia.[7]

Whether, and to what extent, there are tendencies towards changes in the analysed situation, is to be assessed through a comparative insight into the assessment of the quality of education, or, from a wider perspective, investment in human resources.

[7] In the period 1992-2002, the largest growth in the number of graduates was recorded in the social sciences and humanities. In the same period, their share in the total number of graduates increased from 45.6% in 1992 to a high 62.5 % in 2002. The share of graduates in the technical sciences decreased from 31% in 1992 to 21.8% in 2002. There were similar significant decreases in medical and biotechnical sciences.

The assumption is that the reduced proportion of students graduating from the area of technical and natural science is a consequence of many years of stagnation in employment in certain technical areas (for example, mechanical engineering), which when it comes to selecting a subject area might have a significant influence.

Source: based on the documents of the National Competitiveness Council, Annual Report on Croatia's Competitiveness 2002, 2003, Zagreb, pp57-58.

Table 3. Results of the Global Competitiveness Survey Report 2002-003.

Survey questions	*Croatia*	*EU*	*Ireland*	*Slovenia*	*Czech Republic*	*Slovakia*	*Hungary*	*Bulgaria*	*Romania*
Average appraisal score *Average ranking*	*3.77* *60*	*5.19* *22*	*5.29* *18*	*4.64* *17*	*5.01* *32*	*4.54* *23*	*4.76* *26*	*3.53* *59*	*3.78* *51*
Standard of state schools	*4.57* *67*	*5.43* *33*	*6.15* *6*	*5.53* *18*	*5.89* *11*	*5.44* *20*	*5.1* *25*	*4.17* *41*	*4.5* *35*
Numerousness of scientists and and engineers	*5.01* *45*	*5.44* *25*	*5.26* *31*	*4.32* *56*	*5.28* *29*	*6.17* *3*	*5.73* *11*	*5.19* *38*	*6.13* *5*
"Brain drain"	*2.49* *69*	*4.79* *19*	*4.85* *18*	*4.1* *31*	*4.91* *15*	*3.19* *51*	*3.8* *38*	*2.21* *76*	*1.95* *78*
Accessibility of special facilities for research and training	*4.14* *43*	*5.19* *17*	*4.73* *24*	*4.92* *20*	*5* *19*	*4.33* *36*	*4.6* *27*	*3.9* *51*	*3.73* *56*
Investment in human resources	*3.19* *67*	*5.06* *18*	*5.22* *14*	*4.4* *30*	*4.32* *33*	*4* *39*	*4.68* *23*	*2.63* *74*	*2.79* *70*
Standard of business schools	*3.17* *70*	*5.21* *20*	*5.52* *12*	*4.57* *35*	*4.67* *29*	*4.13* *49*	*4.65* *33*	*3.08* *72*	*3.58* *59*

Source: Annual Report on Croatia's Competitiveness 2002, National Competitiveness Council 2003.

The average appraisal score for education and technical training of 3.77 (out of a possible score of 1 to 7) and an average ranking of 60 indicate the weakness of Croatia's national competitiveness.[8]

There is an additional matter of concern connected with the individual indicators of the standard of education, and that is the data on financial investment in the education process.

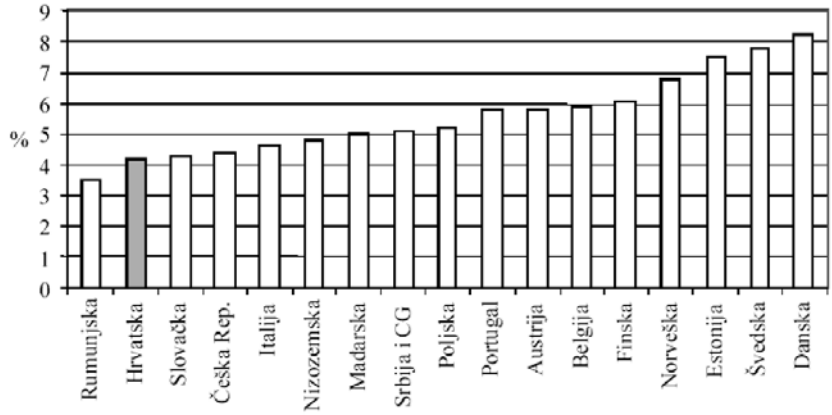
It can be seen that Croatia allocates little more than 4% of its GDP on education (2001), which is only slightly better than the situation in Romania, but which is significantly behind the group of comparable states, both established EU members (Portugal, Italy and Austria) and new members (Slovakia, Czech Republic, and Hungary.) Even more significant is the drastic gap behind those states at the top of the competitiveness table (Finland, Norway, Estonia, Sweden, and Denmark.)

It is a solidly built financial basis that allows the population to participate in education in particular periods of their life or career.

It can be seen that there is a significantly lower participation in education in all age groups, and once more there is a noticeable lagging behind those states which

[8] Of the countries appraised, Croatia lags behind practically every one. In terms of the overall average appraisal score, only Romania and Turkey are close to Croatia, and just Bulgaria has a weaker score. The most negative aspect of the education and technical training system evaluated by employers is the standard of business schools, for which Croatia was ranked second from last (70) among the evaluated countries.

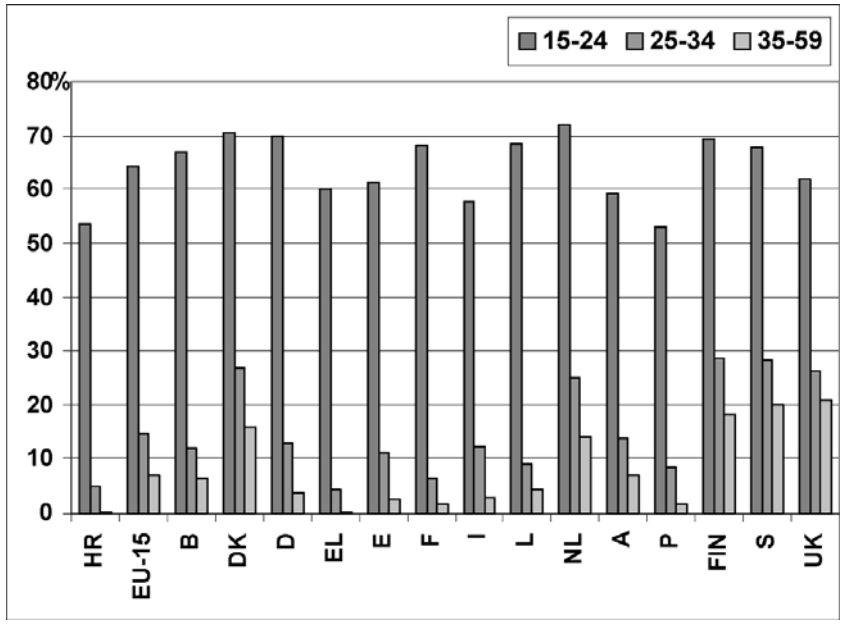
Figure 7. – Public expenditure on education as percentage of GDP



Source: Alka Obadić; Comparison of Basic Macroeconomic Indicators on the Labour Market of Selected Countries; the Competitiveness of the Croatian Workforce, the Standard of the Croatian Formal Education System, Public Finance Institute 2004, Zagreb, p 18.

Figure 8.

POPULATION IN EDUCATION (2001.)



Source: Vedran Šošić: Paying for Investment in Education in Croatia: the Return on Investment in Human Capital as a Human Resources Competitiveness Factor; The Competitiveness of the Croatian Workforce, Public Finance Institute 2004, Zagreb, p 33.

head the competitiveness table in both indicators (the growth competitiveness index and the business competitiveness index.)

Of particular concern is the absence of any kind of educational process in the 35 to 59 age group.[9] Additional new expertise within the work process often provides the basis for remaining in employment and contributing effectively to the creation of new wealth in the workplace and the company where the employee is located.

KEY CONSIDERATIONS

The level of competitiveness of a national economy determines the standard of living of the nation and virtually every individual. The ever-present and ever-stronger process of globalisation accompanied by the creation of a network of international institutions, with ever-greater intensity and immediacy of participation (WTO, IMF, World Bank, and European Union, etc.), makes all nostalgic attempts to live life behind one's own walls unreal and untenable.

The active role of the state in creating the conditions for economic growth are connected to: a) creating an adequate framework with the help of an efficient public administration and a quality judicial system; b) the adoption of macroeconomic policies and the carrying out of economic policies that create a fair and stimulating environment for the business sector; c) the building of effective physical infrastructure (energy, telecommunications, roads, and railways, etc.); and d) an education system that educates all levels and areas (universities, vocational schools, ongoing training, post-graduate studies, centres of excellence, and co-operation between educational institutions and the business sector.

Investment in education must be carried out with the perception that financing it is an investment and not an individual or corporate expense. Ongoing training throughout one's working or professional life is an imperative. New developments and up-to-date knowledge are one of the most important prerequisites for attracting investment and turning round high levels of unemployment.

Competition has a strong role to play in the education process, which, as in the services sector as a whole, must liberalise and orient itself towards providing knowledge and skills that allow survival on the labour market and not just a specific job within a narrow field of activity.

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[9] In the 21st century, employees in all sectors need to learn throughout their entire lives, continuously coming to terms with changes in working environment, organisation and practices, and in technology and administration. In Croatia, the level of participation in life-long learning is very low, particularly in comparison with the countries of the EU. This shows that employees are unable to follow technological developments or changes in the work place.

Source, based on: The Competitiveness of the Workforce, Public Finance Institute 2004, Zagreb, p 20.

It is essential to use the period of time until full membership of the EU to improve the qualitative components of growth – to establish an adequate education system, and an efficient process for acquiring new and up-to-date knowledge and skills.

This is important both for young people during the regular education process, but also for those who are currently unemployed and seeking work on the labour market, and whose chances of obtaining employment will significantly increase with the acquisition of new knowledge and skills.

Education is the principal basis for the innovative capacity of a business, and in the final analysis the national economy. The ability to use new technologies, improve existing products and services, and create new ones to survive on the domestic market and to enter overseas markets determines the position of every individual, business and, naturally, the national economy as a whole.

Globalisation has brought a new dynamic that has removed the possibility of long-term job security for each individual. This new context replaces the former security of the workplace as something stable and static, which had been ever-present for virtually half a century since the time after the Second World War right up to the last decade.

The creation of institutional and material (financial) change, and the recognition and stimulation of the value of learning and acquiring knowledge and skills, which means the form and content of education, is a conditio sine qua non of Croatia's competitive capability in the regional, European and world environment.

Summary

Economic growth, both its maintenance and acceleration is the fundamental issue and challenge of the economic policy of every state. In conditions where there is a noticeable process of globalisation, and ever-greater degrees of openness of national economies, the issue of competitiveness, or efficacy, is the basic criterion that separates the successful from the rest.

Besides the traditional importance attached to an established and well-functioning and ordered legal system and public administration, the existence of effective physical infrastructure and the implementation of a sound macroeconomic policy, the general level of the education of the population, in terms of both vocational and specialist skills and knowledge, and the continuous acquisition of new ideas and skills by all employees, is the basic factor underlying the success of individuals, businesses, regions and the national economy as a whole.

Croatia’s position, because of the war and post-war burdens, necessitates the adoption of a catch-up growth strategy in the near future that is based on two areas: the evaluation and the development of education in all levels of the population. This is the prerequisite for accelerating general economic development and the satisfactory realisation of Croatia’s potential.

These points have additional significance in view of the medium-term expectation of entry into the European Union, an environment that is very demanding and competitive.

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