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**ECONOMIC DEVELOPMENT OF SLAVONIA AND BARANJA - ANALYSIS  
OF INVESTMENTS, IMPORTS AND EXPORTS FOR THE FIVE COUNTIES  
IN EASTERN CROATIA**

**GOSPODARSKI RAZVOJ SLAVONIJE I BARANJE – ANALIZA  
INVESTICIJA, UVOZA I IZVOZA ZA PET ŽUPANIJA ISTOČNE  
HRVATSKE**

**ABSTRACT**

*All analyzes were done in the work, which are related to the analysis of the current situation and trends in the economic development of Slavonia and Baranja, and five of its counties, the analysis of investments in new fixed assets by location of objects and purpose of the activity and the analysis of imports and exports, arguably show disturbing data and trends that if they remain such, will hardly bring to the expected economic recovery and development of the economy and living standards Slavonia - Baranja residents. Analysis in this paper clearly demonstrate the necessity of urgent changes in strategic economic policy and economic trends of local government, especially when it comes to investment and industrial production, as well as the necessity of urgent consideration to each of the branches of activity observed Slavonia - Baranja County should target long-term development in order to achieve strategic and competitive advantage over other counties.*

**Keywords:** economic development, investments, import, export, Slavonia and Baranja

**SAŽETAK**

*Sve analize koje su u radu rađene, a koje se odnose na analizu postojećeg stanja i trendova gospodarskog razvoja Slavonije i Baranje, odnosno pet njenih županija, analizu ostvarenih investicija u novu dugotrajnu imovinu prema lokaciji objekata i namjeni po djelatnostima te analizu uvoza i izvoza, nedvojbeno pokazuju zabrinjavajuće podatke i trendove koji će, ostanu li takvi, teško dovesti do očekivanog gospodarskog oporavka i razvoja privrede te životnog standarda slavonsko –*

baranjskih stanovnika. Analize u radu nedvojbeno pokazuju nužnost hitnih promjena strateške ekonomske politike i ekonomskih tendencija lokalne uprave i samouprave, a posebno kada su u pitanju investicije i industrijska proizvodnja, kao i nužnost hitnog promišljanja koje grane djelatnosti svaka od promatranih slavonsko – baranjskih županija treba ciljano i dugoročno razvijati kako bi ostvarila strateške i konkurentske prednosti pred drugim županijama.

**Ključne riječi:** gospodarski razvoj, investicije, uvoz, izvoz, Slavonija i Baranja

## 1. Introduction

The work is divided into two parts. The first part gives an overview of investments in new fixed assets by location of objects and purpose of the Company for the five counties in eastern Croatian, as well as the display of exports and imports also separately for each of the five counties in eastern Croatian.

The second part shows the statistical analysis of the impact of variables of investments in new fixed assets, and the import and export of the variable Gross domestic product per capita (GDP p.c.), in the other words it presents the level of correlation of these variables related to variables which indirectly show the standard of living, and to try to explain to what extent the promotion of these variables can lead to economic growth and living standards.

## 2. Analysis of investment, imports and exports for the five counties of Eastern Croatian

Table 1 gives an overview of investments in new fixed assets by location of objects and purpose of the Company in the 2010th year in thousands of counties eastern Croatian and for activities: real estate, followed by professional, scientific and technical activities, then administrative and support service activities, public administration and defense, compulsory social security according to the following counties: Virovitica - Podravina, Pozega - Slavonia, Brod - Posavina, Osijek - Baranja and Vukovar – Sirmium.

Table 1 Investments by sectors and regions

GROSS FIXED CAPITAL FORMATION IN NEW FIXED ASSETS, BY LOCATION OF OBJECTS AND PURPOSE, ACCORDING TO NKD 2007. ACTIVITIES, 2010, BY COUNTIES				
County of	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Thousand kuna Public administration and defence; compulsory social security
Virovitica-Podravina	9751	1491	260	4057
Pozega-Slavonia	4949	628	2034	1495
Brod-Posavina	41823	1223	4427	13431
Osijek-Baranja	337707	17463	15364	19285
Vukovar-Sirmium	13361	475	11055	15525
Republic of Croatia	3316791	567943	652770	742145

Source: <http://statistika.hzz.hr/> (accessed: 07. 04. 2013.)

Table 2 gives an overview of investments in new fixed assets by location of objects and purpose of the Company in the 2010th year in thousands of counties eastern Croatian and for activities: education, followed by health care and social welfare, then arts, entertainment and recreation, and other services to the following counties: Virovitica - Podravina, Pozega - Slavonia, Brod - Posavina, Osijek - Baranja and Vukovar – Sirmium.

Table 2 Investments by sectors and regions

<b>GROSS FIXED CAPITAL FORMATION IN NEW FIXED ASSETS, BY LOCATION OF OBJECTS AND PURPOSE, ACCORDING TO NKD 2007. ACTIVITIES, 2010, BY COUNTIES</b>				
<b>Thousand kuna</b>				
<b>County of</b>	<b>Education</b>	<b>Human health and social work activities)</b>	<b>Arts, entertainment and recreation</b>	<b>Other service Activities</b>
<b>Virovitica-Podravina</b>	14 933	51 451	13 360	1 721
<b>Pozega-Slavonia</b>	10 452	21 078	9 772	1 214
<b>Brod-Posavina</b>	29 292	23 812	12 838	4 887
<b>Osijek-Baranja</b>	63 812	48 446	23 906	4 168
<b>Vukovar-Sirmium</b>	26 683	71 714	34 936	4 631
<b>Republic of Croatia</b>	1135639	1216341	1051776	190751

Source: <http://statistika.hzz.hr/> (accessed: 07. 04. 2013.)

As can be seen in Table 2, it is almost incredible fact that the rule in health care investing significantly more than in education, and in the arts, entertainment and recreation invests equally as in the education sector. It also stands out by the fact that the Osijek - Baranja and Brod – Posavina are leading to the size of investment in education.

Table 3 gives an overview of investments in new fixed assets by location of objects and purpose of the Company in the 2010th year in thousands of counties eastern Croatian and for activities: transport and storage, followed by accommodation providers and preparing meals, then information and communication, and financial and insurance activities under the following counties: Virovitica - Podravina, Pozega - Slavonia, Brod - Posavina, Osijek - Baranja and Vukovar – Sirmium.

Table 3 Investments by sectors and regions

GROSS FIXED CAPITAL FORMATION IN NEW FIXED ASSETS, BY LOCATION OF OBJECTS AND PURPOSE, ACCORDING TO NKD 2007. ACTIVITIES, 2010, BY COUNTIES				
Thousand kuna				
County of	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities
Virovitica-Podravina	1258	319	8577	10524
Pozega-Slavonia	59191	6589	10987	2044
Brod-Posavina	45716	20	32224	13818
Osijek-Baranja	442744	5174	74716	24703
Vukovar-Sirmium	32196	8365	30475	27734
Republic of Croatia	4039511	1436325	2401904	3133481

Source: <http://statistika.hzz.hr/> (accessed: 07. 04. 2013.)

As can be seen in Table 3, investment in information and communications recorded further significant growth, although still at not enough high rates when it comes to comparison with investments in transportation and warehousing and financial and insurance activities. This chart shows very clearly how the Osijek - Baranja County leads with the amount of investment in the transportation and warehousing sector and information and communication.

Table 4 gives an overview of investments in new fixed assets by location of objects and purpose of the Company in the 2010th year in thousands of counties eastern Croatian and for activities: Electricity, gas, steam and air conditioning, then the water supply, sewerage, waste management and remediation activities, followed by construction and wholesale and retail trade, repair of motor vehicles and the motorcycle according to the following counties: Virovitica - Podravina, Pozega - Slavonia, Brod - Posavina, Osijek - Baranja and Vukovar - Sirmium.

Table 4 Investments by sectors and regions

GROSS FIXED CAPITAL FORMATION IN NEW FIXED ASSETS, BY LOCATION OF OBJECTS AND PURPOSE, ACCORDING TO NKD 2007. ACTIVITIES, 2010, BY COUNTIES				
Thousand kuna				
County of	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles
Virovitica-Podravina	13108	37487	46919	27867
Pozega-Slavonia	7939	20793	26353	15780
Brod-Posavina	32181	30862	67133	46438
Osijek-Baranja	117049	86164	268533	110333
Vukovar-Sirmium	23051	53425	155635	67575
Republic of Croatia	2576617	1763237	6086532	4162507

Source: <http://statistika.hzz.hr/> (accessed: 07. 04. 2013.)

As can be seen in Table 4, the investment in the construction sector, despite a further rapid decrease, are much higher than the investment in the energy sector and the trade sector, and also a disturbingly low level of investment in the energy sector can be observed. Also, this table shows how the Osijek - Baranja considerably ahead in the height level of investment compared to other counties.

Table 5 gives an overview of investments in new fixed assets by location of objects and purpose of the Company in the 2010th year in thousands of counties eastern Croatian and the total value of investments as well as in agriculture, forestry and fishing, followed by mining and quarrying and manufacturing according to the following counties: Virovitica - Podravina, Pozega - Slavonia, Brod - Posavina, Osijek - Baranja and Vukovar – Sirmium.

Table 5 Investments by sectors and regions

GROSS FIXED CAPITAL FORMATION IN NEW FIXED ASSETS, BY LOCATION OF OBJECTS AND PURPOSE, ACCORDING TO NKD 2007. ACTIVITIES, 2010, BY COUNTIES				
Thousand kuna				
County of	Value of gross fixed capital formation	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing
Virovitica-Podravina	355089	23669	12853	75484
Pozega-Slavonia	284560	35375	119	47768
Brod-Posavina	512848	49346	654	62723
Osijek-Baranja	2424638	473318	4355	287398
Vukovar-Sirmium	1324428	469465	3488	274639
Republic of Croatia	42102373	1718368	804989	5104746

Source: <http://statistika.hzz.hr/> (accessed: 07. 04. 2013.)

As can be seen in Table 5, the total value of investments in the Osijek - Baranja County increased by several times compared to other counties. You can see that investment in manufacturing dominate in relation to the agricultural sector and the mining sector, as well as that of the Osijek - Baranja and Vukovar - Sirmium achieve significant growth rates of investment in the agricultural, forestry and fisheries, and it would be interesting to see what the social rate of return on such investments, or to what extent such investments are reflected in the standard of living for residents of these counties.

Table 6 gives an overview of exports and imports in the 2010th and 2011th year in thousands of euros and the counties of Eastern Croatian: Virovitičko - Podravina, Pozega - Slavonia, Brod - Posavina, Osijek - Baranja and Vukovar - Sirmium.

Tablica 6. Exports and imports by county

GROSS FIXED CAPITAL FORMATION IN NEW FIXED ASSETS, BY LOCATION OF OBJECTS AND PURPOSE, ACCORDING TO NKD 2007. ACTIVITIES, 2010, BY COUNTIES				
Thousand kuna				
County of	Export		Import	
	2010.	2011.	2010.	2011.
Virovitica-Podravina	735728 100 863eur	729343 97 944eur	735728 100 863eur	729343 97 944eur
Pozega-Slavonia	607332 83318eur	680124 91443eur	607332 83318eur	680124 91443eur
Brod-Posavina	931077 127 789eur	909327 122 436eur	931077 127 789eur	909327 122 436eur
Osijek-Baranja	2643653 362 441eur	3462485 465 406eur	2643653 362 441eur	3462485 465 406eur
Vukovar-Sirmium	1501391 206 552eur	1151711 154 880eur	1501391 206 552eur	1151711 154 880eur
Republic of Croatia	64891583 8905242eur	71234060 9582161eur	64891583 8905242eur	71234060 9582161eur

Source: <http://statistika.hzz.hr/> (accessed: 07. 04. 2013.)

As can be seen in Table 6, only the Osijek - Baranja and Pozega - Slavonia achieved the export growth in the 2011th year compared to 2010. year, and it is worrying that all five counties achieved a significant increase in imports in the period. Cheerful and encouraging information is that Virovitičko - podravska, Pozega - Slavonia, Osijek - Baranja have surplus in foreign trade.

If we consider only the Osijek - Baranja County most important partner countries in trade Counties are Germany (18.6%), BH (12.5%), Serbia (10.3%), Italy (9.9% share), and Slovenia (7.7%). It is a positive balance achieved with BiH, Serbia and Slovenia, while Germany and Italy with a negative trade balance. Of total exports of the county, which amounted to USD 406 million (a decrease of 3.5% compared to the same period last year) - Manufacturing industry accounted for 77.7% and production of machinery and equipment 19.3%, paper and paper products with 14.8%, food products 12%, production of chemical products 9.1%, wood processing 5%, manufacture of fabricated metal products, except machinery from 5.1%, manufacture of other non-metallic products to 5%.

To positive balance of trade with foreign countries contributed most manufacturing industry, which has made for \$ 105 million more exports than imports. Collection of waste and recycling of sorted materials also recorded a positive balance in the amount of \$ 23,000,000. The negative balance of trade recorded a trade in the amount of \$ 63 million, and agriculture (\$ 22 million), and construction (\$ 8.4 million) of the Osijek - Baranja County leads the size of investment, such as a significant discrepancy between the investment knowledge as opposed to investing in real estate and public administration

### 3. Analysis of the impact of the observed variables on the standard of living

In the analysis of the matrix of linear correlation observed the influence of variables: value of gross fixed capital formation, export and import on the dependent variable: GDP p.c.

Table 7 Matrix of linear correlation

**Matrix of linear correlation**

<i>variables:</i>	<b>value of gross fixed capital formation</b>	export	import	GDP p.c.
<b>value of gross fixed capital formation</b>	<b>1,00</b>	<b>0,28</b>	<b>0,16</b>	<b>0,95</b>
export	<b>0,28</b>	<b>1,00</b>	<b>0,23</b>	<b>0,76</b>
import	<b>0,16</b>	<b>0,23</b>	<b>1,00</b>	<b>- 0,43</b>
GDP p.c.	<b>0,95</b>	<b>0,76</b>	<b>- 0,43</b>	<b>1,00</b>

Source: authors

As can be seen in Table 7, the variable value of gross fixed capital formation has the largest and most significant positive impact on the dependent variable, GDP per capita and the standard of living five counties in eastern Croatian. Export variable has a significant positive impact, while import variable has a negative but not significant effect on the dependent variable, GDP per capita, and the financial situation of the inhabitants of Slavonia - Baranja County.

In the analysis of the matrix of linear correlation observed the influence of variables: value of gross fixed capital formation, export and import on the dependent variable: GDP p.c.

Table 8 Multiple linear correlation matrix

**Multiple linear correlation matrix**

constant:	1,16
square of coefficient:	0,89
standard error of regression:	1,4
number of observations:	4
degrees of freedom:	100
<b>dependent variable:</b>	<b>GDP p.c.</b>
<b>variables:</b>	<b>coefficient:</b>
value of gross fixed capital formation	<b>0,93</b>
export	<b>0,69</b>
Import	<b>- 0,24</b>

Source: authors

As can be seen in Table 8, the interaction of the observed variables, the variable value of gross fixed capital formation has again the largest and most significant positive impact on the dependent variable, GDP p.c. and the standard of living five counties in eastern Croatian. Variable export has a slightly smaller, but still significant positive impact, while import variable has the expected negative, still less an insignificant effect on the dependent variable, GDP p.c., and the financial situation of the inhabitants of Slavonia - Baranja County.

**4. Synthesis of research results**

All analyzes were done in the work, which is related to the analysis of the current situation and trends in the economic development of Slavonia and Baranja, and five of its counties, the analysis of investments in new fixed assets by location of objects and purpose of the Company and the analysis of imports and exports, arguably show disturbing data and trends that if they remain such, will hardly bring to the expected economic recovery and development of the economy and living standards Slavonia - Baranja residents. Analysis in this paper clearly demonstrate the necessity of urgent changes in strategic economic policy and economic trends of local government, especially when it comes to investment and industrial production, as well as the necessity of urgent consideration which of these observed branches of activity of Slavonia - Baranja County should target long-term development in order to achieve strategic and competitive advantage over other counties.



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