

Nada Denona Bogović, Ph.D., Full Professor

Faculty of Economics in Rijeka
51000 Rijeka, Ivana Filipovića 4
nada@efri.hr

Saša Čegar, MBA, Assistant

Faculty of Economics in Rijeka
51000 Rijeka, Ivana Filipovića 4
051/ 353 111
scegar@efri.hr

ECONOMIC CHARACTERISTICS AND DEVELOPMENTAL PROSPECTS OF EAST CROATIA¹

GOSPODARSKA OBILJEŽJA I RAZVOJNE PERSPEKTIVE ISTOČNE HRVATSKE

ABSTRACT

According to the current territorial constitution, East Croatia occupies approximately 22% of the national territory, and approximately 19% of the Croatian population lives in its five counties. Although it used to be an important economic region, it is presently burdened with numerous social and economic problems. Previous studies of regional disparities indicate a long-term lag of East Croatia as a specific economic, cultural, and social region. Therefore, the objective of this study is to examine key economic characteristics of the region, as well as the possible causes of economic trends. Macroeconomic and structural characteristics of the economy were analysed on the basis of the selected development indicators. Results of the analysis indicate continuous deterioration of economic conditions in all the respective counties after 2008, as well as the increase in regional disparities in this area compared to the Republic of Croatia. The authors identified extremely negative demographic trends as one of the key factors of negative economic trends and increase in development divergence. In this sense, creation of a successful model of national regional policy is a precondition for efficient use of all development resources, and encouraging investments in comparative primary activities is an important factor in the revitalisation of East Croatia.

Keywords: East Croatia, economy, regional disparities, demographic trends

SAŽETAK

Prema aktualnom teritorijalnom ustroju Istočna Hrvatska zauzima cca 22% ukupnog nacionalnog teritorija, a u njenih pet županija živi blizu 19% stanovništva Hrvatske. Iako nekada važna gospodarska regija, danas je opterećena brojnim društvenim i ekonomskim problemima. Dosadašnja istraživanja regionalnih nejednakosti upućuju na dugoročno zaostajanje Istočne Hrvatske kao specifične ekonomske, kulturne i društvene regije. Cilj rada bio je istražiti ključna gospodarska obilježja ove regije, kao i moguće uzroke gospodarskih kretanja. Temeljem odabranih razvojnih pokazatelja analizirana su makroekonomska i strukturna obilježja gospodarstva. Rezultati analize ukazuju na kontinuirano pogoršanje ekonomskog stanja u svim pripadajućim županijama nakon 2008. godine, kao i na povećanje regionalnih nejednakosti ovog

¹ This work has been supported by the University of Rijeka under the project number 13.02.1.2.04.

područja u odnosu na Republiku Hrvatsku. Izrazito negativne demografske tendencije autori prepoznaju kao jedan od ključnih činitelja i negativnih gospodarskih kretanja i povećanja razvojne divergencije. Kreiranje uspješnog modela nacionalne regionalne politike pretpostavka je efikasnog korištenja svih razvojnih resursa, a poticanje ulaganja u komparativne primarne djelatnosti važan je činitelj revitalizacije Istočne Hrvatske.

Key words: *Istočna Hrvatska, gospodarstvo, regionalne nejednakosti, demografska kretanja*

1. Introduction

Problems of regional development and regional disparities have been for a long time the focus of research carried out by economists, sociologists, geographers, and scientists from other fields of scientific research. How do the regions grow, why some grow faster than others, why there are regional disparities in the social and economic sphere; these are some of the central issues of regional development theories and regional policies. Literature provides many answers and reflections on key issues and factors of regional development (Dawkins, 2003). For example, in the framework of the classical theory of economic development, regional growth and increase in regional disparities are explained by the growth poles i.e. location centres which attract investments and labour force from other areas due to their comparative and competitive advantages (Boudeville, 1966). In the neoliberal economic theory and the theory of convergence, location is not a significant factor for regional growth and regional disparities, since, according to their interpretation, there will be balanced development of the regions in the long run due to the effects of the market.² Given the real constraints of the market as a regulatory mechanism, there are many cases of the opposite kind recorded in practice, i.e. rise of divergence despite overall economic growth. Many theoretical and empirical research that followed failed to offer an effective model of regional policy, which would ensure a long-lasting and continuous development of depressed or underdeveloped areas and reduce their development disparities.³ Although, for example, some studies referring to the entire European Union prove the presence of conditioned regional convergence, studies of regional differences in the new EU Member States indicate a significant increase in disparities (Poland, Hungary, Estonia). These results confirm that the process of EU accession and catching up with developed Member States is closely linked with increasing regional differences. Therefore, the process of convergence at the level of countries is followed by the process of divergence within the countries (Puljiz, 2011). These findings may be of great importance for Croatia as the last accessed EU Member State, regarding the existing problems of significant regional disparities, and with respect to an adequate regional policy.

The area of Central Europe has a long tradition of regionalism, as well as Croatia, where there have always been significant cultural and economic centres, among which is also the area of East Croatia with its particularities (Blagojević, 2008). Unfortunately, Croatia has been facing high levels of regional disparities for a long time, and certain aspects of regional imbalance⁴ have been going on for about 50 years (Karaman Aksentijević & Denona Bogović, 2001). In the period of the Croatian War of Independence (1990-1995), additional difficulties were created resulting from the destruction of certain areas, forced displacement and resettlement of the population, and lack of resources for material reconstruction of the territories devastated by the war. In the second half

² Solow, R. M. (1956) and Swan, T. M., (1956) are considered authors of the theory; Solow-Swan growth model is well-known.

³ After the theories of convergence, other theories of regional development and regional disparities followed; from the theory of endogenous growth, Romer (1986, 1990), Lukas (1998) and many others; new economic geographies, Krugman (1998), Fujita and Mori (2005); to the concept of spatial innovation system, Cherhire and Malecki (2005).

⁴ The most significant consequences of the unbalanced regional development are reflected in rapid reduction and depopulation of underdeveloped areas, with concurrent migrations and pressures on large urban centres, as well as reduction of agricultural land and decomposition of family farms, devitalisation and further lagging behind certain regions.

of the 20th century, the poles theory was applied in Croatia with the objective of polycentric development based on industrialisation, which resulted in the regional economic structure dependent on industrial capacities as development drivers. In regions where such a structure was more pronounced, due to its inelasticity to transition processes and the war, the 1990s saw a dramatic decline in production, employment, and income (Čavrak, 2002).

Regional problems have been present in Croatia for a long time. Theoretically, a regional problem exists if a region deviates from the national average: low level and slow pace of GDP growth, high and continuous unemployment, a high degree of dependence on the narrow industrial base, a sharp decline in production, insufficient infrastructure, high level of migrations out of the region etc. (Griffiths & Wall, 2004). Previous studies of regional disparities in the Republic of Croatia (RC)⁵ indicate that East Croatia is constantly below the national average according to most indicators of measurement, and some of its counties have been for a long time in the last place of development ladders (Singer et al., 2014). At the same time, the underdevelopment gap increases at the expense of most East Croatian counties (Ministry of Regional Development and EU Funds, 2013).

2. Macroeconomic and Structural Characteristics of East Croatian Economy

For the assessment of the economic situation of a national economy, region, or lower administrative levels, the usual starting point is the realised value of gross domestic product (GDP) and gross domestic product per capita (GDP/PC). Both indicators are an important indicator of economic strength of the locality and living standard of the population, and they are thus suitable comparative instruments of economic performance and economic policy in different regions. Moreover, they are used as a criterion for the allocation of financial grants⁶ in the framework of regional policies.

East Croatia consists of five counties: County of Osijek-Baranja, County of Vukovar-Srijem, County of Brod-Posavina, County of Požega-Slavonia, and County of Virovitica-Podravina. The indicators of GDP trends from 2008-2012 (cf. Table 1) reveal several negative trends: a significant reduction in the value of produced goods and services by as much as 12,5%, decrease in purchasing power of the population at an average annual rate of 1,1%, and increase in regional disparities in relation to Croatia of 4 percentage points. The increase in regional disparities in the period under analysis, measured in purchasing power of the population, is present in all five counties. The greatest lag is evident in the County of Brod-Posavina, and the least in the County of Osijek – Baranja.

Table 1 GDP and GDP/PC Trends 2008-2012

| Counties | GDP in mil. HRK | | Change in GDP 2012/2008 (%) | GDP/PC in HRK | | Change in GDP/PC 2012/2008 (%) | Deviation Index GDP/PC RC = 100 | |
|----------------------------|-----------------|----------------|-----------------------------|---------------|---------------|--------------------------------|---------------------------------|-------------|
| | 2008 | 2012 | | 2008 | 2012 | | 2008 | 2012 |
| Osijek-Baranja | 20.545 | 18.429 | -10,3 | 64.079 | 60.835 | -5,1 | 83,0 | 78,6 |
| Vukovar-Srijem | 9.520 | 8.006 | -15,9 | 48.010 | 45.077 | -6,1 | 62,2 | 58,2 |
| Brod-Posavina | 7.754 | 6.919 | -10,8 | 44.661 | 43.999 | -1,5 | 57,9 | 56,8 |
| Požega-Slavonia | 4.025 | 3.518 | -12,6 | 48.754 | 45.866 | -5,9 | 63,2 | 59,2 |
| Virovitica-Podravina | 4.774 | 3.908 | -18,1 | 54.064 | 46.599 | -13,8 | 70,1 | 60,2 |
| East Croatia | 46.618 | 40.780 | -12,5 | 53.995 | 51.110 | -5,3 | 70,0 | 66,0 |
| Republic of Croatia | 342.159 | 330.456 | -3,4 | 77.158 | 77.407 | 0,3 | - | - |

Source: Authors' calculation based on statistical reports Pr. 12.1.6. and Pr. 12.1.2. published at the website of the CBS (Central Bureau of Statistics)

⁵Numerous Croatian economists (Bogunović, Borozan, Cini, Čavrak, Denona Bogović, Filipić, Frohlich, Grčić, Jurlina-Alibegović, Karaman Aksentijević, Maleković, Puljiz, Starc, Šimunović, Turčić, etc.) contributed to research in the field of regional development and policy as well as specific problems of regional disparities.

⁶ For example, in the framework of the EU's Regional Policy, funds from the Cohesion Fund are allocated according to the criterion of regional development; thus, "less developed regions" imply those whose GDP per capita is lower than 75% of the EU average.

Unemployment is a burning issue of the Croatian economy and cause of a number of other recession trends, as well as a factor of the current economic imbalance. High level of unemployment indicates inefficient use of labour as a production factor, and increase in the gap between the realised and potential production value. Long-term high unemployment leads to a reduction of production capacity of the economy and reduction in demand for products. The area of East Croatia is particularly „marked“ by high, above-average level of unemployment (cf. Table 2). In the period between 2008 and 2013, the unemployment rate increased from the high 22,4% to as much as 32,3%.

Table 2 *Employment and Unemployment Rates in 2008 and 2013*

| Counties | Employment rate (%) | Employment rate (%) | Unemployment rate (%) | Unemployment rate (%) |
|---------------------------------|---------------------|---------------------|-----------------------|-----------------------|
| | 2008 | 2013 | 2008 | 2013 |
| Osijek-Baranja | 45,3 | 41,4 | 20,7 | 30,2 |
| Vukovar-Srijem | 35,5 | 34,5 | 26 | 34,7 |
| Brod-Posavina | 37,2 | 33,9 | 23,2 | 33,9 |
| Požega-Slavonia | 38,9 | 35,4 | 18,2 | 28,2 |
| Virovitica-Podravina | 41,7 | 35,7 | 24,1 | 34,3 |
| East Croatia | 40,5 | 37,3 | 22,4 | 32,3 |
| Republic of Croatia | 52,3 | 47,9 | 13,2 | 20,2 |
| Deviation Index (RC=100) | 77,4 | 77,9 | 169,7 | 159,9 |

Source: Authors' calculation based on the Yearbook of the Croatian Unemployment Service in 2008 and 2013.

With the increase in the unemployment rate and total unemployment (about 40%) in all counties, a decrease in the employment rate and employment was recorded simultaneously. Given that demographic trends indicate a decrease in working population, but at a slower pace than reduction of total employment (E), it is to assume that in East Croatia there is a rapid reduction of human resources as a development factor, which certainly contributes to the rise of regional divergence. The unemployment rate was in 2008 almost 70% above the national average. Although figures for 2013 indicate reduction of the gap, the cause is primarily rapid emigration of the population, which is confirmed by the results of the analysis presented below. Namely, East Croatia has approximately 30% higher migration balance rate than the Croatian average (cf. Table 8).

Labour productivity is one of the key indicators of macroeconomic efficiency of human capital. On this basis, it is possible to establish growing economic lag of East Croatia compared to the national average (cf. Table 3). In 2008, deviation in relation to the Croatian average amounted 8,8%, and in 2012, it increased to 15,4%. Although rates of change in GDP and employment⁷ in the period under analysis indicate greater elasticity of employment at the national level in relation to the Eastern region, more rapid pace of GDP reduction in relation to the decrease in employment in East Croatia resulted in a decline in labour productivity by 0,2%, while at the national level, due to the present reverse trend, there was an increase in labour productivity by 7,6%.

With all the above-mentioned negative trends, rapid decline in investments is a special reason for concern, because they are a key driver of the upward economic cycle. In the five-year period of analysis, the value of realised investments in fixed assets in East Croatia decreased by approximately 44%, while the investment rate fell from 17% to 11% (cf Table 4). Unfortunately, a negative trend in investment activity is the characteristic of the entire Croatian economy, and the absence of investments in underdeveloped regions such as East Croatia further deepens their developmental lag.

In the economic structure of East Croatia, analysed on the basis of realised gross value added (GVA) of specific activity or groups of activities, there is a dominant share of the processing

⁷ The number of employees in East Croatia decreased by 12,3%, while the decrease in Croatia was 10,3%.

sector (B, C, D, E), and within it of the manufacturing industry (C), approximately 80% in 2012⁸. The most significant capacities of the manufacturing industry relate to the production of food and beverages, wood and textile products, paper and paper-based products, and chemicals. It is a production structure based on comparative advantages of this area.

Table 3 Labour Productivity in 2008 and 2012

| Counties | Labour productivity in HRK (GDP/E) | | Change rate 2012/2008 (%) | Deviation index RC=100 | |
|----------------------------|------------------------------------|----------------|---------------------------|------------------------|-------------|
| | 2008 | 2012 | | 2008 | 2012 |
| Osijek-Baranja | 209.758 | 210.179 | 0,2 | 95,3 | 88,7 |
| Vukovar -Srijem | 204.349 | 190.587 | -6,7 | 92,9 | 80,5 |
| Brod-Posavina | 183.059 | 194.602 | 6,3 | 83,2 | 82,2 |
| Požega-Slavonia | 192.777 | 195.090 | 1,2 | 87,6 | 82,4 |
| Virovitica-Podravina | 195.985 | 192.521 | -1,8 | 89,1 | 81,3 |
| East Croatia | 200.828 | 200.318 | -0,2 | 91,2 | 84,6 |
| Republic of Croatia | 220.066 | 236.866 | 7,6 | - | - |

Source: Authors' calculation based on statistical reports *Pr. 12.1.6.* and *Pr. 12.1.2* published on the website of the CBS and Yearbook of the Croatian Employment Service for 2012

Table 4 Investment Activity, Realised Investments in New Fixed Assets

| Counties | Investment rate Investments/GDP (%) | | Value of investments mil. HRK | | Change in 2012/2008 (%) |
|----------------------------|-------------------------------------|-------------|-------------------------------|---------------|-------------------------|
| | 2008 | 2012 | 2008 | 2012 | |
| Osijek-Baranja | 20,9 | 11,3 | 4.293 | 2.091 | -51,3 |
| Vukovar - Srijem | 14,8 | 11,1 | 1.412 | 888 | -37,1 |
| Brod-Posavina | 13,9 | 12,2 | 1.075 | 840 | -21,9 |
| Požega-Slavonia | 15,5 | 7,6 | 625 | 269 | -57,0 |
| Virovitica-Podravina | 11,7 | 9,9 | 560 | 386 | -31,1 |
| East Croatia | 17,1 | 11,0 | 7.965 | 4.474 | -43,8 |
| Republic of Croatia | 21,3 | 11,9 | 73.056 | 39.374 | -46,1 |

Source: Authors' calculation based on statistical reports *SI 1424* and *SI 1531* published on the CBS's website

Given the comparative advantages of East Croatia, its economic structure is characterised by a very high share of agricultural activities in the total realised GVA, as much as 9,8 percentage points more than in Croatia in 2012. Group of activities consisting of public administration, education, and health care (O, P, Q) also has a high share in the structure of the economy. Other significant activities are trade, transport, and tourism and hospitality services (G, H, I). All other activities only contribute one third to the realised GVA (31,2% in 2012), and their share did not change significantly in the period under analysis. These activities are also dominant in the economic structure of all East Croatian counties individually.

3. The Assessment of Regional Development

Based on the conducted analysis, the conclusion is derived that East Croatia tends to further increase in regional disparities. Although, in statistical terms, indicators of employment and unemployment tend towards reduction of regional disparities in relation to the Croatian average, they are, as will be presented below, primarily the result of above-average negative demographic trends in this area, and therefore cannot be interpreted as a positive trend.

Based on the selected indicators, within the region of East Croatia in the period under analysis the best results were recorded in the County of Osijek-Baranja, while the County of Vukovar-Srijem and Brod-Posavina were on the last place according to total ranking (cf. Table 6).

⁸ Authors' calculation based on the statistical report *Pr. 12.1.6* published on CBS's website

Table 5 *Trend of Regional Disparities in East Croatia in Relation to the Republic of Croatia*

| Selected indicators | Value at the beginning of the period* | Value at the end of the period* | Change |
|--|---------------------------------------|---------------------------------|------------|
| GDP/PC (index, RC=100) | 70 | 66 | Increase ↗ |
| Employment rate (index, RC=100) | 77,4 | 77,9 | Decrease ↘ |
| Unemployment rate (index, RC=100) | 169,7 | 159,9 | Decrease ↘ |
| Labour productivity (index, RC=100) | 91,2 | 84,6 | Increase ↗ |
| Investment activity** (index, RC=100) | 73,1 | 77,9 | Decrease ↘ |
| Total income per employee*** (index, RC=100) | 73,5 | 77,0 | Decrease ↘ |
| Share in total employment in Croatian entrepreneurship (%) *** | 11,2 | 10,1 | Increase ↗ |

Source: Authors' calculation and processing based on tables 1-4 and FINA's data; Note: * refers to the initial and final year of analysis; ** investments per employee, *** data relating to business results of entrepreneurs in 2008 and 2013

Table 6 *Development Rank of East Croatian Counties according to the Criterion of Developmental Disparity*

| Indicators \ Counties | Osijek-Baranja | Vukovar-Srijem | Brod-Posavina | Požega-Slavonia | Virovitica-Podravina |
|---|----------------|----------------|---------------|-----------------|----------------------|
| GDP/PC | 1-1 | 4-4 | 5-5 | 3-3 | 2-2 |
| Employment rate | 1-1 | 5-4 | 4-5 | 3-3 | 2-2 |
| Unemployment rate | 2-2 | 5-5 | 3-3 | 1-1 | 4-4 |
| Labour productivity | 1-1 | 2-5 | 5-3 | 4-2 | 3-4 |
| Investment activity | 1-2 | 3-3 | 4-1 | 2-5 | 5-4 |
| Total income per employee | 1-1 | 2-2 | 4-4 | 5-5 | 3-3 |
| Share in employment in entrepreneurship | 1-1 | 2-2 | 3-3 | 5-4 | 4-5 |
| Total ranking within East Croatia | 1-1 | 4-5 | 5-3/4 | 2/3-2 | 2/3-3/4 |

Source: Authors' calculation and processing based on tables 1-4 and FINA's data; Note: The first value refers to the ranking of individual counties at the beginning of the period under analysis, and the other to its ranking at the end of the period. The lowest ranking indicates the least negative deviation of individual indicators from the Croatian average and is in the context of this paper the indicator of the best development result in East Croatia.

Although the counties' position within the region can also be analysed by other indicators, the analysis pointed to two important facts: East Croatia is one of the underdeveloped regions, and has experienced growing regional divergence since 2008. These findings are also verified by other recent studies of regional development in Croatia. For example, according to the regional competitiveness index (Singer et al., 2014), all five East Croatian counties are in the lower half, from 11th place onwards, where the County of Osijek-Baranja achieved an increase in competitiveness and moved up three places (from the 14th to 11th) in the period from 2007 to 2013. According to this study, counties of Vukovar-Srijem and Požega Slavonia were in the last two places (20th and 21st), Baranja-Posavina was in the 16th place, and Virovitica-Podravina in the 18th place in 2013. Research conducted by the Institute of Public Finance (Bajo et al., 2014), in which all Croatian counties were ranked on the basis of the set of 12 demographic and economic indicators, also proves below-average development of East Croatia. According to this analysis, only the County of Osijek-Baranja is in the upper half, in the 9th place, and all others are among the last six counties. Ranking and assessment of the counties for 2013 by the Ministry of Regional Development and EU Funds also confirm the findings of this study regarding the increase in developmental lag of East Croatia compared to the Croatian average. Namely, according to the indicators used by the Ministry, the level of development of all East Croatian counties decreased in comparison with the previous reporting period (MRDEUF, 2010 & 2013).

4. Demographic Trends – A Possible Cause of Development Problems of East Croatia?

There are many reasons for development problems and lagging behind of some regions, and some of the most important ones are certainly depopulation processes that, among other things, may have an extremely negative impact on the ability of economic revitalisation, revival of

entrepreneurship, and hence the attraction of investments to a particular area. Without going into other causes and effects of depopulation, the authors believe that it is, on the one hand, a result of insufficient economic development, but in the long run, it also becomes a key limiting factor for development, i.e. cause of further stagnation or lag of a certain locality or region. This is also the reason why demographic trends are separately analysed below as a significant cause of the economic situation in East Croatia.

Although negative demographic trends are present in the entire Croatia, deviations in its eastern part are much higher than the national average. Between 2001 and 2011, the population of the Republic of Croatia decreased by 3,4%, and in East Croatia by as much as 9,6%, i.e. 6,2 percentage points over the national average. Above-average population decline occurred in all the counties: in the County of Vukovar-Srijem the most (12,3%), and in Osijek-Baranja the least (7,7%). This also resulted in an increase in negative difference compared to the average population density: in 2001, population density in East Croatia was 71,4 inhabitant per km², i.e. 8,9% less than RC, and in 2011, 64,5 inhabitants per km² or 14,7% less than Croatian average.⁹ In the same decade, there was also a decrease in the share of the population in this area in the total Croatian population, from 20,1% to 18,8%. Although indicators of population ageing (cf. Table 7) are somewhat more favourable than the Croatian average, they are far above the limit values and deteriorate faster than the Croatian average, which additionally indicates extremely negative demographic trends in East Croatia. In the last Census period, the average age limit in this area increased by 6,8% (RC by 6,1%), the ageing index by 33,5% (RC by 26,8%), and age coefficient by 9% (RC by 11,6%). Thus, two of three indicators of population ageing grow at a faster pace than the national average. Recognising the importance of human resources in economic development, it can be concluded that these tendencies represent a real threat and limitation to future economic development of East Croatia.

Table 7 Population and Ageing Indicators in 2011 and 2011

| Counties | Population | | Ageing indicators of the population in 2001 | | | Ageing indicators of the population in 2011 | | |
|----------------------------|------------------|------------------|---|--------------|-----------------|---|---------------|-----------------|
| | 2001 | 2011 | Average age | Ageing Index | Age coefficient | Average age | Ageing Index | Age coefficient |
| Osijek-Baranja | 330.506 | 305.032 | 38,7 | 84,1 | 20,8 | 41,2 | 106,3 | 22,8 |
| Vukovar-Srijem | 204.768 | 179.521 | 37,8 | 76,5 | 20,3 | 40,6 | 98,3 | 23 |
| Brod-Posavina | 176.765 | 158.575 | 37,8 | 77,5 | 21 | 40,6 | 96,5 | 23,1 |
| Požega-Slavonia | 85.831 | 78.034 | 38,2 | 81 | 21,8 | 40,9 | 99,2 | 23,6 |
| Virovitica-Podravina | 93.389 | 84.836 | 38,9 | 87 | 22,1 | 41,2 | 103,3 | 23,1 |
| East Croatia | 891.259 | 805.998 | 38,3* | 81,2* | 21,2* | 40,9* | 100,7* | 23,1* |
| Republic of Croatia | 4.437.460 | 4.284.889 | 39,3 | 90,7 | 21,6 | 41,7 | 115 | 24,1 |

Source: Authors' calculation based on the Census 2001 and 2011 published on CBS's website; Note: * average values by counties; **The ageing index** is a percentage calculated as the ratio of the number of persons aged 60+, and the number of persons aged 0-19 years. The index greater than 40% indicates that the population of the area is in the process of demographic ageing. **Age coefficient** shows the proportion of persons over 60 years of age in the total population. It is an indicator of the level of ageing, and after reaching the value of 12%, it is considered that the population in the analysed area is in the process of demographic ageing.

Indicators of natural and mechanical population movement indicate worrying demographic trends (cf. Table 8).

⁹ Authors' calculation based on data on the counties' surface taken from the Statistical Yearbook of the Republic of Croatia 2014 and the Census 2001 and 2011 published at the CBS's website.

Table 8 Indicators of Natural and Mechanical Movements of the Population 2001-2013

| Counties | Vital coefficient* | | | Migration balance rate** | | |
|------------------------------|--------------------|--------------|-------------|--------------------------|---------------|----------------|
| | 2001 | 2011 | 2013 | 2001 | 2011 | 2013 |
| Osijek-Baranja | 83,7 | 72,4 | 72,8 | 1,85 | -0,69 | -1,95 |
| Vukovar - Srijem | 97,6 | 74,8 | 70,5 | 2,02 | -2,57 | -3,94 |
| Brod-Posavina | 94,2 | 82,5 | 78,9 | 5,07 | -0,49 | -3,07 |
| Požega-Slavonia | 85,8 | 66,1 | 69,7 | 3,69 | -4,57 | -2,10 |
| Virovitica-Podravina | 70,8 | 65,5 | 67,4 | 1,00 | -1,91 | -2,04 |
| East Croatia | 86,4 | 72,26 | 71,9 | 2,62 | -1,57 | -2,64 |
| Republic of Croatia | 82,7 | 80,7 | 79,3 | 3,81 | -0,97 | -1,15 |
| Deviation from RC (%) | 4,5 | -10,5 | -9,3 | -31,2 | -61,90 | -129,60 |

Source: Authors' calculation based on statistical reports Pr. 7.1.1. 2002 and 2014, Pr. 7.1.2. 2003, 2012 and 2014, and Pr. 7.1.4. 2014 and the Census 2001 and 2011 published on CBS's website; Note: *Vital coefficient shows the number of births to 100 deaths; **Migration balance rate is the **general net migration rate**, and it is calculated as the ratio of migration balance and mid-year population, expressed in per thousands.

Although national natural increase is negative in the entire analysed period, the decrease pace is considerably faster in East Croatia compared to the Republic of Croatia: the natural increase declined at an annual rate of 1,4%, while the average annual decline rate at the national level amounted 0,34%. Additional reason for concern and indisputable indicator of the increase in regional disparities is the fact that in 2001, in East Croatia and all its counties (except in Virovitica-Podravina), the vital coefficient was more favourable in comparison with RC (positive deviation amounted to 4,5%), and in 2011 and 2013, the deviation turned negative. Thus, in 2011, the vital coefficient of all the East Croatian counties was below the national average, and in terms of the entire region, the value of the vital coefficient in East Croatia in the same year was as much as 10,5% lower.

Since 2009, the migration balance has been negative, and deviation in comparison with Croatia increased by over four times! The general net migration rate in 2013 amounted to -2,6 per thousand, which is 129,6% more than the national average, and is a relevant indicator of regional inferiority. As a result of extreme dynamics of negative population trends, from 2001 to 2013, there were over 99 000 „lost“ inhabitants, which represents 54,8% of the total decrease in the Croatian population in the same period! The average annual rate of population decline in this period was -0,9%, i.e. 2,7 times more than the Croatian average! As a result of the long-term economic crisis, devitalisation of the population of East Croatia after 2009 has been even more rapid: the average annual rate of change for the period 2009-2013 is -1,96%.

Considering that population, in terms of availability of human resources, is a precondition and the key factor of overall development of a country, it turns out that demographic trends in East Croatia are one of the key factors of current development trends and regional disparities, but also a serious developmental constraint and threat to future aspects of development. Continuation of the present demographic trends may in the future further increase the existing regional lag and developmental divergence of this part of Croatia in relation to national socio-economic trends.

5. Instead of Conclusion – What Is the Perspective of East Croatia?

The conducted analysis on the example of East Croatia confirmed that regional disparities that have been long present in Croatia do not reduce, but rather increase. It is established in this paper that in the period after 2008, economic strength and purchasing power of the population have been continuously decreasing, at a faster pace than the national average, and unfavourable economic situation and developmental lag of East Croatia are substantiated by the relatively high rate and dynamics of unemployment growth, indicators of low level of efficiency of human capital, and „halved“ investments. In addition, negative demographic processes, especially migration trends, have reached the critical stage, with a tendency to become a key factor in the „poverty cycle“, so

they represent a serious threat and limitation to development opportunities and „upward perspective“ of this Croatian region.

At this level of research, it is difficult to propose concrete measures and activities, as well as their potential agents, in view of changing the current negative trends. For the authors, this will certainly be a challenge to continue the research, especially in order to analyse other causes of increase in developmental divergence. However, at the end of this paper, it is important to point out that the area of East Croatia represents an invaluable potential for development, for the entire Republic of Croatia as well as its local and regional population. In this regard, the creation of a successful model of horizontal regional policy of the Republic of Croatia which will allow optimal use of all East Croatian development factors, especially human and natural resources, but also the existing production capacities, is imposed as the key „pillar“ of future development of this region. Since primary activities constitute a significant part in the economic structure of this region, promoting investments in primary sector activities, whose resources are undoubtedly the key comparative advantage of East Croatia, is one of the priority activities for its revitalisation. Development of the primary sector will initiate multiplicative macroeconomic effects on other economic activities, especially those whose raw material base is based on primary sector products. This primarily applies to specific manufacturing activities, and a part of the tertiary sector, such as tourism.

REFERENCES

- Bajo, A. et al. (2014): *Učinci decentralizacije u Republici Hrvatskoj na ekonomski i fiskalni položaj Istarske županije*, Institute of Public Finance, Zagreb
- Blagojević, A. (2008): *Zemljopisno, povijesno, upravno i pravno određenje istočne Hrvatske–korijeni suvremenog regionalizma*, Papers and Studies of the Faculty of Law, University of Rijeka, Vol. 29, No. 2, pp. 1149-1180.
- Boudeville, J.R. (1966): *Problems of Regional Economic Planning*, Edinburgh: University Press
- Capello, R., Nijkamp, P. (Eds.) (2010): *Handbook of Regional Growth and Development Theories*, Edward Elgar Publishing
- Censuses 2001 and 2011 http://www.dzs.hr/default_e.htm (accessed on 15 March, 2015)
- Čavrak, V. (2002): *Strategija i politika regionalnog razvoja Hrvatske*, Ekonomija, Vol. 9, No. 3, pp. 645-661.
- Dawkins, C.J. (2003): *Regional Development Theory: Conceptual Foundations, Classic Works and Recent Developments*, Journal of Planning Literature, Vol. 18, No. 2, pp. 131-172
- FINA <http://www.fina.hr/> (accessed on 12 March 2015)
- Yearbooks of the Croatian Employment Service 2008 and 2013. <http://www.hzz.hr/default.aspx?id=10055> (accessed on 5 March, 2015)
- Griffiths, A., Wall, S. (Eds.) 2004): *Applied Economics*, Pearson Education, New York
- Karaman Aksentijević, N., Denona Bogović, N. (2001): *Industrijska politika u koncepciji regionalnog gospodarskog razvitka* in Sundać, D. (Ed.): *Kakav regionalni razvitak treba Hrvatskoj*, Faculty of Economics, Rijeka, pp. 65-80
- MRRFEU, *Vrijednost indeksa razvijenosti 2010 i 2013* <http://www.mrrfeu.hr> (accessed on 2 March, 2015)
- Puljiz, J. (2011): *Theories of regional development in the economic literature*, TITIUS Yearbook: Yearbook for Interdisciplinary Research of the Krka River Basin, Vol. 3, No. 3, pp. 63-82
- Singer, S. (Ed.) et al. (2014): *Regionalni indeks konkurentnosti 2013*, NVK, UN Development Programme (UNDP) Croatia, Zagreb
- Solow, R. M. (1956): *A Contribution to the Theory of Economic Growth*, The Quarterly Journal of Economics, Vol. 70, No. 1, pp. 65-94
- Swan, T. W. (1956): *Economic Growth and Capital Accumulation*, Economic Record, Vol. 32, No. 2, pp. 334-361.