GREEN ECONOMY AS A DEVELOPMENT MODEL OF EASTERN CROATIA 1

ZELENA EKONOMIJA KAO RAZVOJNI MODEL ISTOČNE HRVATSKE

ABSTRACT

Previous studies of economic trends and developmental features of Eastern Croatia undoubtedly point to a continuous gap between the counties of this region in relation to the Croatian average. The results of the conducted analyses indicate an increase in developmental divergence, i.e. regional disparities, and extremely unfavourable population trends are identified as the key factor of negative economic developments. Aiming to create a successful development model, starting from the existing comparative advantages and specificities of Eastern Croatia, the authors analysed possible effects of implementation of the so-called „green economy” as an appropriate model of economic development based on the principles of sustainable development. Starting from the theoretical and methodological framework of green economy, the paper analyses necessary preconditions for its implementation in Eastern Croatia, and provides arguments for transformation of the current economic structure of the region towards strategic selection and implementation of development policies in line with the principles of green economy.

Key words: Eastern Croatia, development model, green economy

SAŽETAK

Dosadašnja istraživanja gospodarskih kretanja i razvojnih obilježja Istočne Hrvatske nedvojbeno ukazuju na kontinuirano postojanje svih pripadajućih županija ove regije u odnosu na prosjek Republike Hrvatske. Nalazi provedenih analiza argumentiraju povećanje razvojne divergencije, odnosno regionalne nejednakosti, a kao ključan činitelj negativnih gospodarskih kretanja detektiraju se izrazito nepovoljna demografska kretanja. U potrazi za kreiranjem uspješnog razvojnog koncepta, a polazeći od postojećih komparativnih prednosti i specifičnosti Istočne Hrvatske, autori su istražili moguće efekte implementacije tzv. “zelene ekonomije” kao primjereno...
modela gospodarskog razvitka, temeljenog na principima održivog razvoja. Polazeći od teorijsko-metodološkog okvira zelene ekonomije, u radu su analizirane nužne pretpostavke za njenu implementaciju na području Istočne Hrvatske, te su podastri argumenti transformacije sadašnje gospodarske strukture ove regije u pravcu strateškog opredjeljenja i provođenja razvojne politike prema načelima zelene ekonomije.

Kjučne riječi: Istočna Hrvatska, održivi razvoj, zelena ekonomija

1. Introduction

The area of Eastern Croatia occupies about 22% of the national territory inhabited by about 19% of the Croatian population. According to the territorial structure, this region comprises five counties: the Osijek-Baranja County, Vukovar-Srijem County, Brod-Posavina County, Požega-Slavonia County, and Virovitica-Podravina County. According to relevant macroeconomic indicators and structural features, all of the counties record significant developmental lag in relation to the Croatian average, and regional disparities have been increasing since 2008. This paper is a follow-up of the authors’ research on economic characteristics and development perspective of Eastern Croatia and is based on the obtained findings (Denona Bogović & Čegar, 2015). The cited analysis has undoubtedly proven that Eastern Croatia is one of the underdeveloped regions and that regional divergence has been increasing. There are many reasons for development problems and underdevelopment of regions, and among the most important ones are surely depopulation processes which can, among other things, have a very negative impact on the ability of economic revitalisation, revival of entrepreneurship, and thus on attracting investment to specific areas. The authors have identified negative demographic trends, which are significantly below the Croatian average, as one of the key factors of unfavourable economic situation in Eastern Croatia. Namely, depopulation in Eastern Croatia is a consequence of insufficient economic activity, but in the long run, it also becomes the key limiting factor of development, i.e. cause of further stagnation and underdevelopment.

How to revive Eastern Croatia, how to create preconditions for new employment and alleviate negative migration trends? Creating possible levers of a successful development concept of this Croatian region which, in the national framework, represents an invaluable development potential, is a great research challenge. Starting from the existing comparative advantages, human and natural resources, the paper proposes implementation of green economy as a modern development concept, adequate for the specificities of Eastern Croatia.

The second chapter of the paper presents the concept of green economy as a developmental paradigm, but also a concrete development policy at all levels, including local. Growing number of countries, regardless of their development level, try to design and implement the concept and instruments of green economy in their economic, social and ecological development plans and sustainable development strategies. These theoretical and applicable insights can be a valuable experience for the area of Eastern Croatia, especially in terms of creation of new jobs, reduction of unemployment and alleviation of negative demographic trends. Therefore, the third chapter of the paper proposes and arguments the implementation of green economy as a particularly adequate development pattern for the entire region of Eastern Croatia. The focus of the analysis are the necessary preconditions for the introduction of this development model and possible positive effects on the entire economy.

2. The Concept and Content of Green Economy

Firstly, it should be noted that, at international level, there is no single, unambiguous definition of green economy accepted by all institutions. For example, UNEP (2011) has defined the green
economy as “one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive”. According to the same source, in a green economy, growth in income and employment are driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services. Except for this definition, cited in many papers and documents, there are also other approaches to the concept of green economy, which the authors elaborate on below.

The term green economy was mentioned for the first time in 1989 in the Report of the London Environmental Economics Centre2. The document called Blueprint for a Green Economy was made by a group of the then leading ecological economists (Pearce, Markandya, & Barbier, 1989) for the needs of the British government in the field of environment management, i.e. creating appropriate environmental policies. The authors later published Blueprint 2 - Greening the world economy (Pearce et al., 1991) and Blueprint 3 - Measuring Sustainable Development (Pearce, et al., 1994). The findings provided in all these reports are based on the research of implementation of environmental policy in the period of several historical decades. In fact, the content of the first Blueprint deals the least with green economy as a development concept and a strategic tool, but rather places it very clearly into a theoretical framework of environmental economy and sustainable development. In this report, the authors problematise all of the basic determinants of environmental economics, starting from sustainability principle as a precondition for long-term economic development, relationship between economy and the environment, and environment evaluation methods. They point to the importance of maintaining an adequate level of stocks of natural capital, and of designing and implementing an anticipative environmental policy.

The findings of the Blueprint for a Green Economy indicate that green economy, in terms of concrete policy and strategic development tools, at all levels, including local, originate from the concept of environmental economics and sustainable development paradigm. Environmental economics is a multidisciplinary science which attempts to explain the relationship between man and the environment in the past, and predict the trends of these relationships in the future. It uses tools and insights, not only from ecology and economics, but also other sciences such as anthropology, sociology, philosophy in the process. The concept of environmental economics is important for the economy from the aspect of production and consumption possibilities in the circumstances of limited natural environment and its assimilative capacity. Based on the findings in the study The Limits of Growth (Meadows et al., 1972), representatives of environmental economics3 believe that unlimited linear growth of production and consumption is impossible (as implied by neoclassical growth models), when there are real, biophysical limits of the planet we inhabit. Although elements of sustainable development can be found in classic papers by Ricardo, Mill, and Malthus, this development concept obtained its distinctive framework in the 1970s, when it was proposed as a possible answer to rising global inequalities between economic activities and state of the environment. Later, specifically in 1987, in the today famous Brundtland Report4, the term sustainable development was defined for the first time. According to the cited source, sustainable development denotes forming and implementation of such patterns of present economic activities which will not lead to reduction of stocks of natural capital and quality of life of future generations. There are also numerous other definitions of sustainable development, although all of them are based on the holistic approach to development strategies and policies derived from these strategies. This means that, in the process of designing, e.g., local development strategies of specific

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2 London Environmental Economics Centre (LEEC) is a joint venture, established in 1988, by the International Institute for Environment and Development (IIED) and the Department of Economics of University College London (UCL).

3 The most important representatives of environmental economics are Robert Constanza, Herman E. Daly, Robert Goodland. For more about the postulates of environmental economics cf. Constanza et al. (1997).

4 The report Our Common Future, called after the Norwegian Prime Minister Gro Harlem Bratland who presided over the UN Commission for the Environment.
locations should be taken into account along with economic, social and environmental development dimensions.

After they had positioned green economy in the theoretical framework of environmental economics and sustainable development in the first Blueprint, David Pearce and his team focused on global environmental issues and threats in Blueprint 2. Starting from common goods as a conceptual model, they proved the importance of implementation of green economy as a strategic development tool on the examples of global warming, degradation of the environment in underdeveloped countries, destruction of tropical rainforests, etc. Blueprint 3 is based on the findings of the first two reports, but aims to examine the possibilities of sustainable development in the UK. For this purpose, the research offers a set of measurable environmental indicators for individual environmental constituents as well as economic operations characteristic for the implementation of green economy: agriculture, recycling and waste management, management of forest and water resources, etc.

After the implementation of green economy as a new development pattern and environmental policy instrument by Pearce and his team, the interest in this field has been growing again since 2008. The reasons are surely the extent and consequences of the global financial crisis. Namely, due to growing recession trends, UNEP advocated the so-called “green stimulus packages”, and special areas were defined in which it is possible to launch green economy through large public investments (UNDESA, 2012). This idea motivated governments from several countries to introduce „green incentives“ as an effective instrument of economic and environmental policy aimed at increasing employment, reducing poverty and harmful emissions, and boosting economic recovery. After 2008, there have been initiatives, primarily by UNEP, to stimulate green economy, such as the Global Green New Deal (GGND) from 2009. This initiative, coordinated by UNEP, was one of the nine Joint Crisis Initiatives undertaken by the Secretary-General of the UN and his Chief Executives Board in response to the 2008 economic and financial crisis (cf. UNEP, 2009). A UNEP report from 2011 explains in great detail the reasons for the necessary transfer from the so-called „brown economy” model to „green economy”, especially in less developed countries, which can also be applied to underdeveloped regions within national economies. The necessary preconditions for such a transition are defined in the Report, such as, for example, change of the institutional framework or environmental instruments. Transition towards green economy is especially focused on and applicable in sectors based on availability of natural capital such as agriculture, fishery, forest and water management, followed by activities from sectors which are traditionally characterised by brown economy, such as transport, energy industry, and processing industry, because by transferring to the green economy model, they can achieve significant energy savings and increase energy and resource efficiency.

After more then 25 years since the beginning of development of the concept of green economy, we can conclude that, despite different definitions of the term (cf. Table 1), it has been recognised as a powerful contemporary tool of long-term sustainable development planning. Considering its characteristics, the green economy model vs. brown economy model is an attempt to overcome growing inequalities between economic activities and state of the environment which are a consequence of traditional (i.e. brown) way of production and consumption. It is based on the use of fossil energy sources, high level of pollution, large quantities of waste, and decreasing efficiency in terms of possibilities of new employment, reduction of income inequalities, and poverty.

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1 It is not only about underdeveloped and less developed countries in the world, but also the most developed countries, such as European, which also successfully develop and implement the green economy model. See, e.g. http://www.wri.org/blog/2010/09/germanys-green-economy-strategy
http://stateofgreen.com/en/sectors/intelligent-energy
Table 1 Definitions of the Term „Green Economy“

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>One that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive. In a green economy, growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services (UNEP, 2011).</td>
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<td>2</td>
<td>A system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long term, while not exposing future generations to significant environmental risks or ecological scarcities. (UNEP, 2009).</td>
</tr>
<tr>
<td>3</td>
<td>An economy that results in improved human well-being and reduced inequalities, while not exposing future generations to significant environmental risks and ecological scarcities. It seeks to bring long-term societal benefits to short-term activities aimed at mitigating environmental risks. A green economy is an enabling component of the overarching goal of sustainable development (UNCTAD, 2011).</td>
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<td>4</td>
<td>Green economy is “a resilient economy that provides a better quality of life for all within the ecological limits of the planet.” (Green Economy Coalition, 2011)</td>
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<td>5</td>
<td>Green Economy is described as an economy in which economic growth and environmental responsibility work together in a mutually reinforcing fashion while supporting progress on social development. (International Chamber of Commerce, 2011).</td>
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<tr>
<td>6</td>
<td>The Green Economy is not a state but a process of Transformation and a constant dynamic progression. The Green Economy does away with the systemic distortions and disfunctionalities of the current mainstream economy and results in human well-being and equitable access to opportunity for all people, while safeguarding environmental and economic integrity in order to remain within the planet’s finite carrying capacity. The Economy cannot be Green without being Equitable (Danish 92 Group, 2012).</td>
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<tr>
<td>7</td>
<td>The green economy involves largely new economic activities and must provide an important entry-point for broad-based black economic empowerment, addressing the needs of women and youth entrepreneurs and offering opportunities for enterprises in the social economy (Government of South Africa, 2011).</td>
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<tr>
<td>8</td>
<td>Green economy can be seen as a lens for focusing on and seizing opportunities to advance economic and environmental goals simultaneously. (Rio+20 Objectives and Themes of the Conference - UNCSD, 2011)</td>
</tr>
</tbody>
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These inequalities are present at all levels within individual national economies; global as well as regional and local. Today’s concept of green economy enables the most developed countries to gain new competitive advantages, like, for example, the Republic of Germany and Scandinavian countries (cf. Buehler et al., 2011). The model of green economy as a powerful strategic tool can be especially important and applicable from the aspect of creating new jobs and reducing unemployment in the Republic of Croatia, especially Eastern Slavonia.

3. Green Economy – A Strategic Choice of Eastern Croatia?

Development problems of Eastern Croatia primarily relate to a relatively high rate and dynamics of unemployment growth, low efficiency of human capital, and halved investments in comparison with the Croatian average. Also, negative demographic trends, especially migration trends, have become critical, with a tendency to become the key factor of the „enchanted cycle of poverty“ (Denona Bogović & Cegar, 2015). Revitalisation of this region, which is very important for Croatia, is only
possible by creating a development concept that would enable optimal use of all the production factors and turn the existing comparative advantages into competitive strength. From that point of view, implementation of the green economy concept is imposed as a desirable development model of Eastern Croatia. The arguments in favour of such an approach arise primarily from the existing economic structure in which primary sector industries have a dominant role, and economic activities of the processing sector are based on outputs of the primary sector (cf. Table 2).

<table>
<thead>
<tr>
<th>Economic Activities</th>
<th>GVA (%)</th>
<th>Employment (%)</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>14.3</td>
<td>6.9</td>
</tr>
<tr>
<td>B,C,D,E</td>
<td>21.4</td>
<td>24.7</td>
</tr>
<tr>
<td>F</td>
<td>6.5</td>
<td>6.6</td>
</tr>
<tr>
<td>G,H,I</td>
<td>14.1</td>
<td>18.3</td>
</tr>
<tr>
<td>J</td>
<td>2.7</td>
<td>1.5</td>
</tr>
<tr>
<td>K</td>
<td>3.1</td>
<td>2.0</td>
</tr>
<tr>
<td>L</td>
<td>11.9</td>
<td>0.2</td>
</tr>
<tr>
<td>M,N</td>
<td>4.4</td>
<td>4.7</td>
</tr>
<tr>
<td>O,P,Q</td>
<td>19.3</td>
<td>33.1</td>
</tr>
<tr>
<td>R,S,T,U</td>
<td>2.3</td>
<td>2.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Authors’ calculation based on CBS’s statistical reports Pr. 9.2.4. (dated 27.03.2015) and Pr. 12.1.3. (dated 15.02.2016); for employment the data refer to year 2014 and for GVA the data refer to year 2013

It is evident from the theoretical and methodological green economy framework that such a development model, as well as strategic tools, are especially focused on and appropriate for secondary sector industries in which it is possible to significantly increase resource and energy efficiency. According to its structural characteristics, the economy of Eastern Croatia represents a real paradigm for development based on green economy principles. A segment of the tertiary sector in this region, especially tourism, also has all the necessary characteristics favourable for the implementation of the proposed concept.

4. The Necessary Preconditions for the Implementation of the Green Economy Concept in Eastern Croatia

Regarding state-level institutional framework, there are no major obstacles to the implementation of the green economy concept in Eastern Croatia. Namely, indications of such an approach are already included in Sustainable Development Strategy from 2009 (particularly in the Strategic Guidelines for Green Economy Development – „Green Development of Croatia” 2011) by the Croatian government. This strategic document introduces gradual remodelling and new focus of development policy, investments and consumption on sectors such as cleaner technologies, energy efficiency, green construction, renewable energy, green transport, water economy, waste management, sustainable agriculture and forestry, and sustainable tourism.

However, successful creation and implementation of the green economy concept for Eastern Croatia greatly depends on development strategies and policies at lower management levels, specifically at the levels of the respective counties, towns and municipalities. Local economic development (LED) is a strong instrument of regional policy directing the development of local communities based on the so-called „bottom-up management model”. Modern management of local development, as a specific concept and strategic tool, opens great opportunities for towns, municipalities and counties.

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of Eastern Croatia for creating conditions for strong development of green economy in accordance with the existing institutional framework, aiming at long-term sustainable development. This is why drafting of quality strategic documents, i.e. strategic planning in line with modern LED methodology, is of great importance for the area of Eastern Croatia. The importance of involving the private sector in the process of LED planning should be especially pointed out, because one of the objectives of such planning is ensuring favourable conditions for development and business activities of entrepreneurs, i.e. creating preconditions for the opening of new, „green“ jobs and revival of the local economy.

Naturally, strengthening of human and administrative capacities is one of the key preconditions for the transition to a model of green economy. Some of the reasons are source planning and ensuring financial resources necessary for the „greening“ of the economy of this region. Taking into consideration many years of weakening of budgetary capacity, possible sources of financing are to be found primarily through projects and EU funds, but also through different models of public-private partnerships. At the level of Eastern Croatia as a specific region, it is also necessary to initiate a change in the instruments of environmental policy directed towards a conceptual approach, as well as successful implementation and practice, especially from developed European countries.

5. Possible Effects of Implementation of the Green Economy Concept on Eastern Croatia

Adoption of the concept of green economy as a model of future development of Eastern Croatia opens opportunities for simultaneous solving of all of the above-mentioned development problems of this region, that towns and municipalities in this part of continental Croatia have been facing for years. Thus, the key to their economic and demographic revitalisation surely lies in quality and under-utilised natural resources which are abundant in Eastern Croatia, like, for example, fertile uncultivated land, water resources, renewable energy sources, and preserved natural heritage. A specificity of Eastern Croatia is that its development agents are not facing challenging problems of excessive environmental pollution or degradation of resources while maintaining positive economic trends, but quite the opposite, the question how to sustainably develop the entire regional economy with available natural capital. Strategically, preserved natural resources and good state of natural components of the environment are surely one of the key development potentials of Eastern Croatia, given that the activities that are oriented to maximising economic benefits of ecological services of a healthy environment, while minimising, or completely eliminating environmental externalities of production and consumption processes, make the backbone of economic development based on green economy principles.

An important step in initiating green economy development is the application of BAT (Best Available Technology) in the sectors that directly depend or affect the state, availability, and allocation of resources in the environment. This primarily refers to activities related to management and utilisation of natural goods and resources, waste management, energy production, construction, agricultural and industrial production, tourism, and transport. The implementation of BAT involves great infrastructure and capital investment and investment in human resources, which has proven to be the crucial obstacle to their more intensive utilisation. However, it is important to point out that, despite the fact that local and county budget funds are insufficient for serious funding of this type of investment projects, and the fact that regional enterprises do not have sufficient investment capacity for ecological modernisation and business expansion, through the inclusion of the concept of green economy in all strategic documents and plans relevant for development of regional economy of Eastern Croatia, it is possible to encourage new investment cycles in green technologies. Namely, given that green economy is one of the most important strategic determinants of economic development of the European Union (cf. EC, 2010), the concept of green economy is integrated in all EU policies, which is especially evident through the use of ensured funding from European structural and cohesion funds available to the Republic of Croatia in the EU financial framework.
2014-2020 (cf. Ministry of Regional Development and EU Funds). Therefore, in the process of developing local and county economic strategies and plans, it is important to define the objectives and measures in line with development priorities of the European Union in terms of transformation of European national and regional economies towards green economy, because it will thus enable green activity development agents to apply their projects for European grants and realise co-financing.

Taking into account significant competitive advantages of Eastern Croatia for the development of the agricultural and associated sectors, investment in sustainable agricultural production and energy-efficient and environmentally-friendly technologies in sectors that support or use agricultural outputs will result in positive multiplicative economic effects that could become long-term drivers of diversification and growth of the entire economy of Eastern Croatia. For example, development of green agriculture will lead to a better and more efficient use of biologically productive land, and thus to an increase in the yield of crops and reduction of the need for production inputs (e.g. energy, fertiliser, pesticides), which will contribute to the growth of profitability and productivity of agricultural activities and, consequently, to strengthening of production capacity and competitiveness of the agricultural sector of Eastern Croatia. This will directly stimulate the development of complementary activities related to transportation, storage, trade and processing of green agricultural products and reduce the deficit of foreign trade of agri-food products. Through the increase in the volume of production of high-quality local green agricultural products, opportunities will be created for the development of production chains of autochthonous food products of high added value which, among other things, can contribute to building gastronomic and cultural identity and recognition of Eastern Croatia in the international market, and, consequently, the development of different forms of selective tourism. Of course, most importantly, in the process of development of green economy and diversification of regional economic structure, many new jobs will be opened, which will reduce unemployment, stop negative demographic and migration trends, increase purchasing power of the local population and encourage private consumption throughout the year, which can ultimately induce new upward conjuncture in the economy of Eastern Croatia.

REFERENCES


Costanza et al. (1997): An Introduction to Ecological Economics, CRC Press, LLC


Strategija održivog razvitka Republike Hrvatske, 2009. (NN br. 110/07)


