ENVIRONMENTAL ECONOMICS AND MODERN ENVIRONMENTAL ISSUES

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THE IMPORTANCE OF THE GREEN ECONOMY IN THE TRANSFORMATION OF THE REGION

A green economy is a prerequisite for economic growth based on sustainable development that can result in human well-being and social justice, and a significant reduction in environmental risks and ecological scarcities. It can be defined as low-carbon, resource-efficient and inclusive (UNEP, 2011a, 2011b). Rational management of depleting natural resources requires treating waste as a valuable resource that can be reused, recycled or, as a last resort, recovered from it (Poskrobko, 2007). The green economy is a response to global problems in both the environmental, economic and social spheres. The green economy is a path of economic development that will be possible in a sustainable manner, taking into account environmental constraints and criteria (Misztal, Dziekański, 2023; Drozdowski, Dziekański, 2022; Dziekański, Prus, Soltyk, Wronska, Imbrea, Smuleac, Pascalau, Blaszczyk, 2022). The green economy focuses on sustainable development without environmental degradation. The benefits of a green economy include improved resource efficiency, a smaller carbon footprint, and less dependence on fossil resources, among others. The concept focuses on the idea of recycling, reusing and maintaining a sustainable production process (Newton, 2011).

The concept of green economy includes three basic elements: elimination of environmental hazards and preservation of its values, rational management of natural resources and raw materials, and social

inclusion and economic efficiency. The green economy is one of the important tools for ensuring the sustainable development of any country. The environment is a natural barrier to economic growth. However, the quantitative expansion of this capital has certain limits (Boris, 2013). The green economy allows harmonious management of local resources. It is an economy that contributes to improving human well-being and increasing social justice, while significantly reducing environmental risks and resource scarcity. Green economy means restructuring economic activities and infrastructure to ensure greater returns on natural, human and economic capital. The essence of this approach is to create solutions to adapt the economy to the specifics of the environment (Cato, 2009; Dziekański, Prus, Maitah, Vronskaya, 2021).

The purpose of the article is to identify and assess the spatial differentiation of the green economy of counties in Poland in 2010–2020. A synthetic measure was used to rank and group the studied counties from the point of view of the main criterion. The Technique for Order Preference by Similarity to an Ideal Solution (TOPSIS) method was used to construct the synthetic measure. The selection of variables was determined by the availability of data collected in the Bank of Local Data of the Central Statistical Office (BDL GUS) for the years 2010–2020. The research was conducted in a dynamic manner taking into account the min and max values for the entire research period. The first stage of the research included the selection of research objects (counties), the selection of diagnostic variables and their verification in terms of statistics and content, the division of variables into stimulants and destimulants. The second stage involved the normalization of variables according to the method of zeroed unitarization, and the third aggregation of the value of the synthetic measure. The fourth stage linear ordering, evaluation of the relationship of the diagnostic variables with the synthetic measure, and assessment of the similarity and concentration of the phenomenon.

The nature of spatial differentiation of counties is changing. The synthetic measure method used shows the spatial differentiation of counties in the main criterion. Counties clearly differ from each other in the aspect of quality of life, a similar level is observed in the aspect of ecology and the environment and waste management, green economy. On the basis of the values of the quartiles, which were the threshold values for the following groups, a division of the studied collectivity was made. A dark color indicates a group characterized by a better state in the main criterion under study, the lighter the color, the units are weaker. The districts clearly differ from each other in both the degree of

development and the green economy. The differentiation is due to conditions of a natural and historical nature, as well as natural processes of socio-economic development. Spatial differentiation is additionally created by the influence of larger and medium-sized cities, with an indication of economic conditions. Sources of regional disparities result from: spatial differentiation of natural conditions, communication accessibility, distribution of large, medium, small, settlement centers, concentration of entrepreneurship, access to investment capital and access to knowledge

The synthetic measure of the green economy ranged from 0.42 to 0.55 in 2010 and from 0.43 to 0.56 in 2020. An increase in the value of the measure indicates that, compared to all objects, the situation of the studied unit is improving, a decrease informs that its situation is worsening. Measures of central tendency (mean, median, quartile) remain at the same level in subsequent years. In the case of measures of variability (striatum, standard deviation), we observe both no change in subsequent years and an increase in the measure (coefficient of variation). A decrease in kurtosis values indicates a greater spread of values, poor concentration and flattening of the abundance curve.

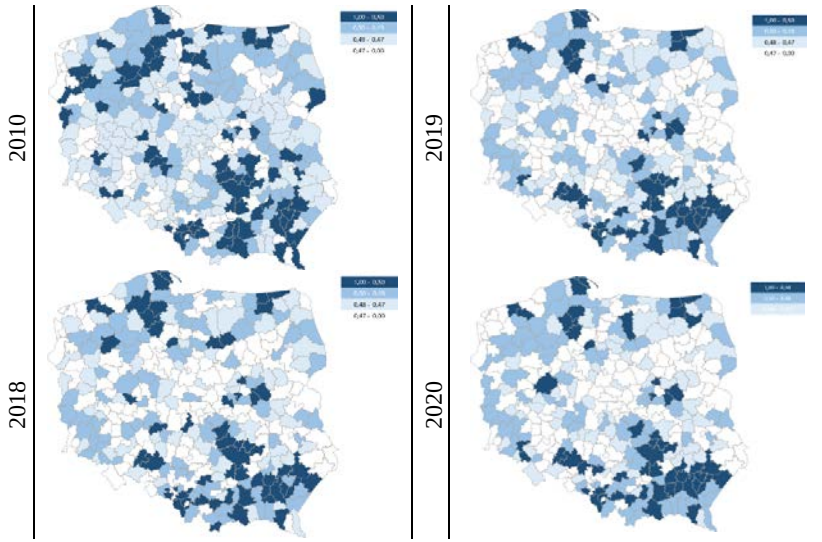

Figure 1. Spatial variation of the green economy in counties from 2010 to 2020

Source: own study

The green economy is a way of obtaining and using resources. It determines structural changes in the economy. The green economy includes green products and services, investments, green economic sectors, public procurement or jobs. The concept of green economy is becoming multidimensional indicating economic, social and environmental dimensions.

A systematic study of the green economy, as well as waste management, should provide the information necessary for authorities to evaluate and correct their policies. The increase or decrease in the synthetic measure must be considered as the basis for evaluating the effects of past management under the main criterion. The results obtained provide information on the variation occurring between territorial units – counties. For comparison between regions, the proposed methodology should include the same variables in the indicated study areas.

The results obtained can be an important source of information for local governments on the disparities occurring between units. They can allow changes in the directions of optimization of green economy and waste management. The results of the study make it easier for local governments to make comparisons with other territorial units – counties.

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