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THE ANALYSIS OF THE EFFECTIVENESS OF REGIONAL DEVELOPMENT MANAGEMENT

Abstract: The desire of countries to integrate into the global financial and economic space causes the intensification of the influence of destabilizing factors of the external environment on their socio-economic development. The existing problems of regional development aggravate the processes of instability of their effective functioning and the formation of management mechanisms. This study aims to substantiate the theoretical and applied principles of the study of the specifics of the regional development management effectiveness' analysis and evaluation of its trends in the regional dimension. The study uses general scientific and unique methods of economic analysis, in particular: analysis and synthesis, comparison and analogy, generalization and systematization, graphical and tabular methods, and grouping and cluster analysis based on the use of a k-means method. As for the study results of the specific features of the regional development management effectiveness' analysis and assessment of its trends in the regional perspective, it was found that among the European Union and the Eastern Partnership countries there are three groups, characterized by standard features of the regional development: highly developed countries (Sweden (GSDG: 85-86), Denmark (GSDG: 85), Finland (GSDG: 83–86), Germany (GSDG: 81– 83), France (GSDG: 81–82), Austria (GSDG: 80–82), Netherlands (GSDG: 80-82), which have considerable resource potential and manage it effectively; mid-developed countries (Belgium (GSDG: 79–82), Estonia (GSDG: 78–82), Ireland (GSDG: 78-81), Slovenia (GSDG: 79-82), Czech Republic (GSDG: 79-81), Belarus (GSDG: 76-78), which have significant resource potential, but measures for effective management of development in the region need review and improvement; developing countries (Bulgaria (GSDG: 73-75), Romania (GSDG: 71–75), Greece (GSDG: 71–75), Cyprus (GSDG: 70-75), Ukraine (GSDG: 72-75), Moldova (GSDG: 73-74), Azerbaijan (GSDG: 70-72), Georgia (GSDG: 68-72), and Armenia (GSDG: 68-71), characterized as depressive regions and classified as transition-type countries, where transformation and modernization processes are not completed.

Keywords: Geopolitization, Management, Effectiveness, Regional Development, Sustainable Development

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1. Introduction

deepening of the geopolitization processes has 1ed to a significant stratification of the world countries in terms of the provision of the necessary resources and the allocation among them of such groups, which are formed by geographical location into regions structure and characterized by standard features of development and requiring effective The management measures. main approaches' means and tools of regional development management need systematic modernization since they should meet the criteria of sustainable economic development and innovative trends of the socio-political system. At the present stage, the analysis of the management effectiveness of regional development acquires particular relevance because its level significantly the level of socio-economic affects development of the country. At the same time, it provides an opportunity to identify existing regional problems, the solution of which requires a timely adjustment of the appropriate regional policy. The analysis model of the management effectiveness of regional development is formed under the influence of the dynamics and structure of regional development and predetermines the management goals and the criteria and indicators of its effectiveness. The mentioned actualizes the research direction requires deepening scientific and developments in this sphere.

2. Literature review

The problems of the management effectiveness of regional development have long been the focus of scientists and practitioners who study it both from the global and the regional perspectives. Indeed, the main efforts aim to find ways to ensure sustainable regional development, but, as Veskalne & Tambovceva (2022) note, the present achievement of sustainability depends on the coordinated interaction of the

economy, society, and the environment. At the same time, scientists argue that the analysis of the effectiveness of regional development management should be based on a program-targeted approach with the use of methodological tools for determining the integral indicators of such development.

Artelaris (2021) attaches great importance to the multidimensional empirical study of regional development trends. In particular, in the works of the scientist, the emphasis is put on the analysis of the effectiveness of regional development management conditions of sustainable regional inequality, united in regional alliances, and functioning within the framework of a standard regional development policy. In addition, Artelaris (2020) adheres to the position assuming the consideration of the effectiveness of regional development management not only from the economic point of view but also taking into account factors of social, political, and cultural nature. Correctly remarks about the little scientific work in the context of considering the regional characteristics of the development of the world's countries, most scientists focus on conducting exploration at the national level.

The opinion of Artelaris (2020) is shared by Spilanis et al. (2016), who determined the management effectiveness of regional development in the example of Greece and essence found that the of regional development is multi-level governance. Therefore, the scientists propose to consider the management of regional development in the context of the highest (European regional and national) level, the lowest (beneficiaries) level, and the intermediate (regional within a single country) level.

Percoco (2013) argues that the effectiveness of regional development management significantly depends on their cohesion policy, and the presence of a single common development strategy enhances the positive effect. An example of such cohesion is the European Union, which has formed strategic guidelines for sustainable development within its regional formation, and the

effectiveness of regional development policy correlates with the chosen regional strategy to which the country belongs. The confirmation of this hypothesis is reflected in the Sustainable Development Reports, 2018–2022, according to which ensuring the sustainable development of regions depends on the possibility of establishing interstate cooperation.

The concept of the development of regional strategies was developed by Jasińska-Biliszak & Malik (2020). They prove that the analysis of the management effectiveness of regional development is advisable based on the use of a set of special measures, which should be designed per the mission objectives and implemented as efficiently as possible. Of particular importance in this context is intellectual capital management, which, according to Laihonen & Lönnqvist (2013), is an integral component of regional planning and development, which falls in the works of Soboleva (2015).

In this context, Kūhne & Weber (2022) link the level of effectiveness of regional development management to the territory's resource capabilities. In particular, studying the regional development of Germany, scientists concluded that the favorable geographical location of the region and the availability of minerals create additional opportunities for the development of its territories, and Kachniy (2018) considers it insufficient and convinces that the grave importance is acquired by cooperation with the world community countries of regional development state management.

Meanwhile, Ionescu (2018), while examining the effectiveness of regional development management in Poland and Romania, highlighted a pattern, which is that the stimulator of development is the tangible financial support of the European Union in the framework of operational programs and the EU Strategy. However, the problem of inefficient use of funds and ineffective management of beneficiaries and intermediaries remains unresolved.

A similar position is held by Novikova et al. (2021), who established a correlation between the effectiveness of regional development management and the methods, mechanisms. and tools of development. In addition, the scientists argue that it is the ranking of regions according to the general features and criteria of current and strategic effectiveness of territorial development that allows analyzing the influence of factors to reveal the potential and maintain the stability of economic growth.

Zeibote et al. (2019) focused their scientific research on determining the state and trends of Latvia's regional development management in the context of the regional development of the European Union. They emphasized the need to consider the dynamics of the regional competitive advantages of the European region as a whole and each member state in particular. Esty & Charnovitz (2013) shared the scientists' opinion, who note that the determining factor is the interrelation of sustainable development of regions with their competitiveness and the ability to ensure the country's productivity from a strategic perspective.

It is evident that there is still no unified approach to the analysis of the effectiveness of regional development management, and most scientific views are focused on ensuring the sustainable interaction of the economy, society, and the most efficient use of environmental resources.

3. Research tasks

This study aims to substantiate the theoretical and applied foundations for studying the specifics of the regional development management effectiveness' analysis and evaluation of its trends in the regional perspectives.

4. Materials and methods

The study uses general scientific and unique methods of economic analysis, in particular: analysis and synthesis to determine the essence of the effectiveness of regional development management, comparison and analogy to analyze the state and trends of regional development management generalization effectiveness, systematization to formulate hypotheses and draw conclusions and research results, graphical and tabular methods to reflect the results, grouping and cluster analysis based on the use of the k-means method for grouping the European Union and the Eastern Partnership countries according to the indicator of the Global Sustainable Development Index.

We chose the countries of the European Union (27 countries) and the Eastern Partnership (Azerbaijan, Belarus, Armenia, Georgia, Moldova, and Ukraine) to conduct the research.

The informational background of the study is based on the reports for 2018–2021: Sustainable Development Report by the Global SDG Index, Statistical Factsheet European Union: Agriculture and Rural Development by the real GDP growth rate indicator.

5. Results

Under the conditions of aggravating globalization, internationalization, and geopolitization, the problems of macroeconomic stability, socio-political instability, and ensuring sustainable regional development are exacerbated. It is evident that regional development is a multidimensional socio-economic concept, the effective implementation of which requires the definition of a set of parameters, namely:

- 1) the availability of sufficient natural resources.
- 2) ensuring the quality of the labor

force.

- 3) the availability of adequate volumes of capital and investment.
- 4) a sustainable business culture.
- 5) the availability of innovation and technological infrastructure, etc.

We should note that among the tools of the regional capability of the European Union, there is an identification of the competitive advantages of the region and consideration of local conditions. Therefore, carrying out empirical studies of the effectiveness of regional development management should include these aspects. Furthermore, at the international level, the calculation of a complex integral index - the Global Sustainable Development Index (Global SDG Index), systematizes the system of sustainable development indicators and allows to conclude the state and trends of regional development. Therefore. consider it reasonable to research the effectiveness the management οf development of such regions as European Union and Eastern Partnership countries to receive possibilities of comparison of the basic tendencies of regional development in them.

Figure 1 shows the dynamics of the Global index of sustainable development in the European Union countries in 2018–2021.

The study results show the absence of a clear sustainable development tendency in the European Union countries. However, the detailed analysis allows us to state that highly developed countries get more opportunities for access to resources and accordingly show better meanings of the considered indicator (Sweden (85–86), Denmark (85), Finland (83–86), Germany (81–83), France (81–82), Austria (80–82), Netherlands (80–82), which indicates a higher level of management effectiveness in regional development that is formed on their territory.

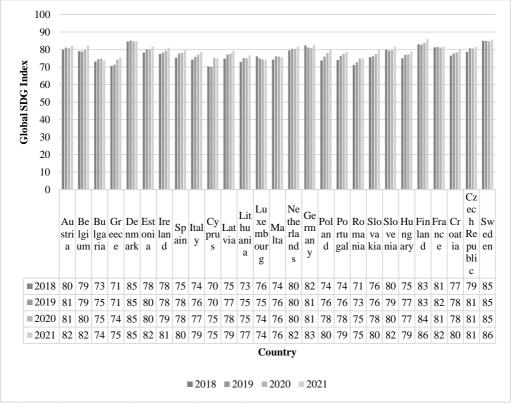


Figure 1. Dynamics of the Global index of sustainable development in the European Union countries in 2018–2021.

Calculated according to: Sustainable Development Report, 2018–2022.

The countries with an average level of socioeconomic development have sufficient resource potential but use it inefficiently and cannot achieve high development indicators (Belgium (79–82), Estonia (78–82), Ireland (78–81), Slovenia (79–82), Czech Republic (79–81). Besides, some countries of this group are characterized as countries of transitional post-socialist type, which have passed the way of modernization and are not fully provided with their resources and require support from highly developed countries.

The countries with a low level of socioeconomic development are not able to overcome on their own the challenges, dangers, and threats of financial and economical, and socio-political character. As a result, there are several problems in ensuring sustainable development of their regions (Bulgaria (73-75), Romania (71-75), Greece (71–75), and Cyprus (70–75). Therefore, this group of countries is characterized as depressive regions of the European Union. Moreover, we should note that the lowest positions according to the sustainable development indicator among the European Union countries are taken by Greece (71-75), Romania (71-75), and Bulgaria (73–75). At the same time, these countries are characterized as countries with low effectiveness of management measures and a high level of regional inequality, confirming the study results regarding the countries' GDP of the selected group (Figure 2). Therefore, it is considered the most used indicator of regional development

and simultaneously the main criterion of regional policy effectiveness, taken into account when deciding to finance the European Union countries.

As we can see, the dynamics of real GDP growth rates in the European Union in 2018–2021 do not show a stable tendency either. Moreover, in 2020 there was a rapid drop in

GDP in all countries without exception. It happened due to the intensification of the financial and economic crisis caused by the outburst of the COVID-19 pandemic. At the same time, we should note that the most tangible impact was in Spain, with a drop in real GDP of 12 %, Italy 9,9 %, Croatia 9,6 %, France 9,4 %, and Portugal 9,3 %.

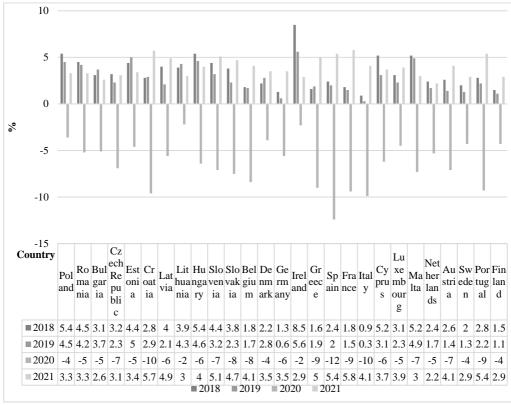


Figure 2. Dynamics of Real GDP Growth Rates in the European Union in 2018-2021. Calculated according to: Statistical Factsheet European Union: Agriculture and Rural Development 2021.

However, we believe that it is not advisable to limit oneself to the GDP indicator to evaluate the effectiveness of regional development management. Instead, it is necessary to consider the meaning of the Global Sustainable Development Index since this indicator is more complex and implies the calculation of the country's security level, human development level, and life quality assessment. Also, it is focused on ensuring such regional development, which

can balance contemporary human needs and their protection, achieving stable economic growth and sustainable development.

At the same time, a study of tendencies in the effectiveness of regional development management in Eastern Partnership countries (Figure 3) shows an even lower meaning of the Global Sustainable Development Index than in the European Union depressive regions. Among this group of countries, the highest indicators are recorded in Belarus (76–78), Ukraine (72–75), and Moldova (73–74).

Similar tendencies are observed in the dynamics of real GDP growth rates in the

Eastern Partnership countries in 2018–2021 (Figure 4), where a significant drop in GDP in 2020 is also recorded.

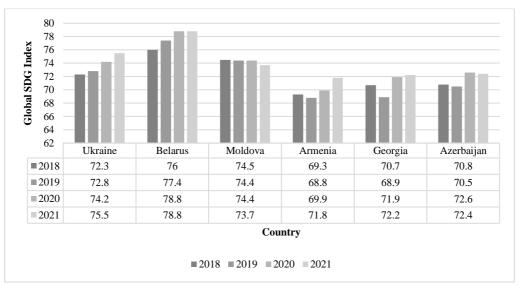


Figure 3. Dynamics of the Global Sustainable Development Index (Global SDG Index) in the Eastern Partnership countries in 2018–2021.

Calculated according to: Sustainable Development Report, 2018–2021.

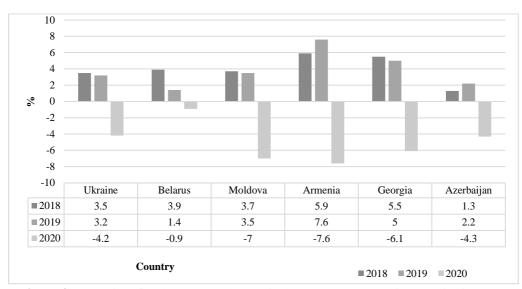


Figure 4. Dynamics of real GDP growth rates in the Eastern Partnership countries in 2018–2021.

Calculated according to: Statistical Factsheet European Union: Agriculture and Rural Development 2021; Statistical Yearbook of Ukraine, 2020.

We consider it reasonable to deepen the research in a particular direction and to group the European Union and the Eastern Partnership countries by the Global

Sustainable Development Index indicator in 2018–2021, using the cluster analysis technology based on the method of k-means (Table 1).

Table 1. Classification of European Union and Eastern Partnership countries according to the Global SDG Index in 2018–2021

2018		2019		2020		2021	
Country	Cluster number	Country	Cluster number	Country	Cluster number	Country	Cluster number
Austria	1	Austria	1	Austria	1	Denmark	1
Belgium		Denmark		Belgium		Finland	
Denmark		Estonia		Denmark		Sweden	
Estonia		Netherlands		Estonia		Austria	
Netherlands		Germany		Netherlands		Belgium	
Germany		Slovenia		Germany		Estonia	
Slovenia		Finland		Slovenia		Ireland	
Finland		France		Finland		Spain	
France		Czech Republic		France		Italy	
Czech Republic		Sweden		Czech Republic		Latvia	
Sweden		Belgium		Sweden		Netherlands	
Ireland	2	Bulgaria	2	Ireland	2	Germany	2
Spain		Ireland		Spain		Poland	
Italy		Spain		Italy		Portugal	
Latvia		Italy		Latvia		Slovakia	
Malta		Latvia		Malta		Slovenia	
Poland		Lithuania		Poland		Hungary	
Portugal		Luxembourg		Portugal		France	
Slovakia		Malta		Slovakia		Croatia	
Hungary		Poland		Hungary		Czech Republic	
Croatia		Portugal		Croatia		Belarus	
Belarus		Slovakia		Belarus		Bulgaria	3
Bulgaria	3	Hungary		Bulgaria	3	Greece	
Greece		Croatia		Greece		Cyprus	
Cyprus		Belarus		Cyprus		Lithuania	
Lithuania		Moldova		Lithuania		Luxembourg	
Luxembourg		Greece	- 3	Luxembourg		Malta	
Romania		Cyprus		Romania		Romania	
Ukraine		Romania		Ukraine		Ukraine	
Moldova		Ukraine		Moldova		Moldova	
Armenia		Armenia		Armenia		Armenia	
Georgia		Georgia		Georgia		Georgia	

Calculated according to: Sustainable Development Report, 2018–2021.

The received clustering results of the chosen regions allow us to assert that among the European Union and Eastern Partnership countries, there are three groups characterized by common signs of regions' development:

 highly developed countries (Austria, Belgium, Denmark, Estonia, the Netherlands, Germany, Slovenia, Finland, Sweden, France, and the Czech Republic);

- mid-developed countries (Ireland, Spain, Italy, Latvia, Malta, Poland, Portugal, Slovakia, Hungary, Croatia, and Belarus);
- 3) developing countries (Bulgaria, Greece, Cyprus, Lithuania, Luxembourg, Romania, Ukraine, Moldova, Armenia, Georgia, and Azerbaijan).

We should note that during the whole analyzed period, the third group steadily included all the Eastern Partnership countries, except Belarus, which positioned itself as a country with an average level of sustainable development. Certain European Union countries, considered depressive regions, were in the third cluster among the transition-type countries. These countries have not completed their transformation processes, which testifies to the low level of effectiveness of regional development management among them.

6. Discussion

The research results on the features of the regional development management effectiveness' analysis and evaluation of its trends in the European Union and the Eastern Partnership countries allow us to identify three groups of countries that were formed as a result of the standard features of the regional development management and are characterized by similar methods of ensuring sustainable regional development.

Group 1. Highly developed countries (Sweden, Denmark, Finland, Germany, France, Austria, and the Netherlands) with considerable resource potential provide high indicators of the effectiveness of regional development management and support those regions that cannot achieve an adequate level of sustainable development on their own.

Group 2. Mid-developed countries (Belgium, Estonia, Ireland, Slovenia, Czech Republic, and Belarus) have significant resource potential, but the effectiveness of regional development management is assessed as satisfactory, as most of these countries have unsolved problems of post-transformation restructuring.

Group 3. Developing countries (Bulgaria, Romania, Greece, Cyprus, Ukraine, Moldova, Azerbaijan, Georgia, and Armenia), which did not complete the process of structural adjustment, have many problems of economic, social, and sociopolitical nature and are not able to overcome the challenges and threats of external and internal environment effectively. Therefore,

most regions of such countries are classified as depressive and need constant comprehensive support.

Considering the outlined problems of ensuring the effectiveness of regional development management, formed within framework of such international associations as the European Union and the Partnership, Eastern the regional development policy in some European Union countries requires immediate revision. In particular, in those parts of the former USSR that have not yet completed transformational changes and in all EaP countries, which position themselves as depressive regions. At the same time, it would significantly increase the effectiveness of regional development management by establishing international cooperation of the Eastern Partnership countries with the highly developed European Union countries to take over the positive experience of regional development management.

7. Conclusions

The impact of the world globalization and integration processes has led to an increasing role of regional development in the sustainable development of the economy and society. Regional development is positioned as the formation of unified, homogeneous, and complex features of the territories functioning, allocated depending on their natural-geographical location, socioeconomic, environmental, national-cultural, demographic formation factors. Therefore, their management effectiveness depends on the balanced and transparent regional development policy and the overall level national socio-economic of development where they are located. Three groups of countries are found among the European Union and Eastern Partnership countries, which have common signs of regional development:

1) highly developed countries (Sweden (GSDG: 85–86), Denmark (GSDG: 85), Finland (GSDG: 83–

- 86), Germany (GSDG: 81–83), France (GSDG: 81–82), Austria (GSDG: 80–82), and Netherlands (GSDG 80–82);
- 2) mid-developed countries (Belgium (GSDG: 79–82), Estonia (GSDG: 78–81), Slovenia (GSDG: 79–82), Czech Republic (GSDG: 79–81), and Belarus (GSDG: 76–78);
- 3) developing countries (Bulgaria (GSDG: 73–75), Romania (GSDG:

71–75), Greece (GSDG: 71–75), Cyprus (GSDG: 70–75), Ukraine (GSDG: 72–75), Moldova (GSDG: 73–74), Azerbaijan (GSDG: 70–72), Georgia (GSDG: 68–72) and Armenia (GSDG: 68–71).

The first group of countries has the highest effectiveness in regional development management, while the third group has the lowest.

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