






Modeling the Planning of the Potential for Sustainable Development of the Region in the System of Public Administration of Social Security



Myroslav Kryshchanovych^{1*}, Oleg Polovtsev², Mariana Liubetska³, Ulyana Lukashevskaya⁴, Dmytro Dubin⁵

¹ Department of Pedagogy and Innovative Education, Lviv Polytechnic National University, Lviv 79000, Ukraine

² Department of Public Administration, Kherson National Technical University, Kherson 73000, Ukraine

³ Departments of Marketing and Management, Khmelnytsky Cooperative Trade and Economic Institute, Khmelnytsky 29015, Ukraine

⁴ Department of Administrative and Financial Management, Lviv Polytechnic National University, Lviv 79000, Ukraine

⁵ Faculty of Public Administration, Kherson National Technical University, Kherson 73000, Ukraine

Corresponding Author Email: kryshchanovych.lpnu@gmail.com

<https://doi.org/10.18280/ijstdp.180311>

ABSTRACT

Received: 23 October 2022

Accepted: 25 February 2023

Keywords:

sustainable development, region, planning, potential, social security

The problems of sustainable development of the region in the system of public administration of social security have become especially relevant in a difficult and unstable period of transformation of social, political and moral-spiritual relations, determining the need to study the nature of the social structure of planning regional economic systems. The main purpose of the article is to develop conceptual approaches to form sustainable development of the region in the public administration system. In accordance with the goal, it is necessary to solve the following tasks: to determine the properties of the functioning of regional socio-economic systems as objects of modeling, to develop a diagram for constructing a model for planning the potential for sustainable development of the region, to calculate a two-level matrix for planning the potential for sustainable development of the region. The research methodology includes a number of economic and mathematical modeling methods and matrix methods for achieving goals. According to the results of the research conducted in the article, two levels of the matrix of sustainable development of the selected regions were presented. The level of potential for the growth of key indicators for planning the sustainable development of the region in the system of public social security administration is calculated.

1. INTRODUCTION

In the context of world globalization, the role of regions that differ from each other in the presence of industrial, agricultural, social, financial and investment potential is increasing. Their features determine the use of a certain set of tools and incentives, with the help of which, as the experience of the developed countries of the world shows, in the conditions of the transfer of a number of powers to local authorities and management, administrative and public services are brought closer to the population, the ability of territorial communities to solve their own local problems is enhanced. Regional and local authorities and administrations are becoming key in organizing the sustainable development of territories.

In modern conditions of world globalization, due to the achievements of scientific and technological progress, the socio-economic development of the regions determines the increase in competitiveness at the international level and ensuring the public welfare of the population. It is known that territories are united into a region according to common demographic, national, natural-geographical, functional, infrastructural, administrative, political, economic, social, historical and cultural features.

Speaking about the sustainable development of the region, it should be noted that it itself is characterized by a high level

of uncertainty of incoming information. Distinguish between internal and external uncertainty [1]. Internal uncertainty is a combination of those factors that are not controlled by the person who makes the decision completely, but can influence them (for example, internal socio-economic circumstances, risk factors). External uncertainty is determined by the nature of interaction with the external environment - these are the factors that are under the weak control of the decision maker (environmental, demographic, foreign policy situation, the supply of resources to the region from outside). This negatively affects the system of public administration of sustainable development of the region.

The need to improve the public administration of socio-economic processes in the region is now due, on the one hand, to the intensification of global competition of territories to attract and preserve various resources, and on the other hand, to the increasing role of territories in terms of their socio-economic status and security. Creation of a favorable business environment at the local level, partnership between government and business, targeted programs and projects for local and regional development, territorial marketing, etc. These are areas that require new approaches on the part of regional authorities. However, if for an enterprise the introduction of innovation is associated primarily with economic risks, then for the regional management system any

innovative solutions will have economic, social and administrative-legal consequences, which hinders their development and necessitates a thorough analysis of the application. Planning for the development of the potential of the system of public administration is the ability of regional authorities and its officials to develop new non-standard ideas for solving the problems of sustainable development. The potential is formed by people living and working in the region [2].

The main purpose of the article is to develop conceptual approaches to form sustainable development of the region in the public administration system. In accordance with the goal, it is necessary to solve the following tasks: to determine the properties of the functioning of regional socio-economic systems as objects of modeling, to develop a diagram for constructing a model for planning the potential for sustainable development of the region, to calculate a two-level matrix for planning the potential for sustainable development of the region.

The innovativeness of the study lies in the fact that we have made an attempt to form a clear model for the formation of sustainable development of the region in the public administration system, which would allow us to better understand all the features of this process. To do this, we have formed a two-level matrix for planning the potential for sustainable development of the region.

Our research has differences and its own signs of scientific novelty. The results of our research do not pretend to be the total formation of a new approach to assessment and modeling. We aim to improve this by involving new mathematical approaches. We want to show with our research results how it is possible to analyze the planning and development potential of any region in a different way. Of course, there is still place to move forward and most regions have their own, individual specifics that should be taken into account.

2. LITERATURE REVIEW

The sustainable development of the region is a long-standing scientific problem that scientists and practitioners around the world are trying to solve. There is probably no scientist who would not want to try to find ways to improve the sustainable development of their own region. Of course, each of them has his own vision of the essence of the sustainable development of the region and in what direction it is necessary to move in order to achieve this. Nevertheless, it is possible to generalize the vision of many of them [1-3] and say that sustainable development is understood as a process of change in which the exploitation of resources, the direction of investment in order to meet human needs and aspirations. The transition to sustainable development of the country can be possible only when the sustainable development of all regions is ensured. Formation of a strategy for sustainable development of regions is a difficult task. To determine sustainable development, systematic work is required to monitor and assess the social, economic and environmental situation, analyze and diagnose the factors influencing these processes.

Skačkauskienė and Bytautė [4] spoke more than once about social policy and its role in sustainable development. Threats and problems of social security are regional in nature and affect everyone in the region. It is important to properly take care of regional social capital. Jankauskas and Šeputienė [5]

considered the social aspects of public administration in the regions of Europe. It is noted that there are a number of key indicators that allow characterizing the state of sustainable development of the region through the social component. We also believe and agree that the European regions have an interesting character for sustainable development and a certain dependence on the social policy of the state.

Often in the scientific literature one can find an opinion about the importance of social security and the system of public administration in the sustainable development of the region [6-8]. Currently, regional development is the main priority of the state's domestic economic policy. Naturally, without the development of individual regions, without the full and effective involvement of available natural and economic resources in economic circulation, it is impossible to achieve sustainable, dynamic and long-term development of the national economy as a whole. In this aspect, it is important to carry out appropriate measures in the direction of regional development, identify the potential opportunities of the regions and develop scientifically based proposals and recommendations for the implementation of these opportunities.

As noted by Yousef et al. [9], social policy can greatly change the level of competitiveness of the region and contribute to its development. COVID-19 has had a great impact on the sustainable development of the region, and therefore it is through social instruments that it is possible to return the course for improvement.

As noted by most scientists [10-12], in general, the transition to sustainable development of the country will be possible only when the sustainable development of all regions is ensured. The transition to the model of sustainable territorial development involves the formation of such conditions and the use of such mechanisms under which the natural base of this development is not destroyed, and the environment suitable for human existence is preserved and reproduced. The sustainable development of a country is development that meets the needs of the present generation and does not jeopardize the ability of future generations to meet their needs.

We partially agree with the opinions of other scholars regarding the essence of sustainable development, however, we believe that the issues of this process have not been well considered through the prism of a complex social security and public administration planning system.

3. METHODOLOGY

The model of sustainable development of the region in the system of public administration should be understood as a complex probabilistic dynamic system covering the processes of production, exchange, distribution and consumption of material and other benefits. It belongs to the class of cybernetic systems, that is, controlled systems. In addition, such a system is characterized by three features: the integrity of the system, that is, the fundamental irreducibility of the properties of the system to the sum of the properties of its constituent elements; the presence of a larger, external in relation to this, system (the so-called "environment"); the possibility of separating interconnected parts (subsystems) in this system.

Our main methodology involves the use of mathematical modeling methods. The mathematical model of sustainable development of the region turns out to be the main means of experimental research of the regional economy, as it has the

following properties: it imitates a real economic process (or the behavior of an object); can be reused; takes into account different conditions for the functioning of the regional economic system. The process of public administration of sustainable development of the region using the model can be considered in this case as a method of finding the best solutions for the development of the real economic system of the region without direct, most often "painful" experiments with the system itself (Figure 1).

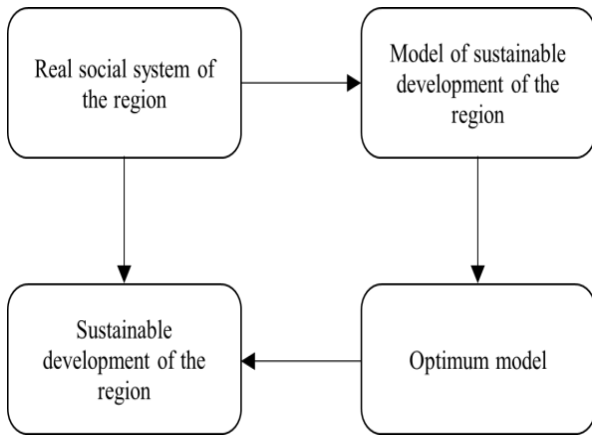


Figure 1. Use of the model of sustainable development in the system of public administration of social security (developed by the authors)

We put forward the hypothesis of building a model of sustainable development of the region - investments in regional economic complexes should be focused on social security and maximize the growth of the population's welfare. In other words, the model of sustainable development of the region in the system of public administration should show a functional relationship between the volume of investment in the regional social system and the level of well-being of the population.

We believe that the construction of a mathematical model of sustainable development of the region should take place in the context of two levels, for a better representation of functional relationships, interdependencies between the volume of investment in the region and its population.

Several key indicators should be selected for calculations, taking into account the system for ensuring the social security of the region. Taking into account the existing forms of official statistical reporting as a complex indicator characterizing the flows of capital investments in the regions, it is advisable to use the volume of investments in fixed capital, counting it per capita. Calculations of investments in fixed assets per person are based on the average annual number of resident population. The state of development of the regional production complex can be fully characterized due to the indicator of gross regional product per capita, and the level of well-being of the population most objectively reflects the volume of income per capita for the corresponding period of time.

It is these two interdependencies (volume of investments and production volumes of the gross regional product) that play one of the key roles in building the model and ensuring sustainable development (Figure 2).

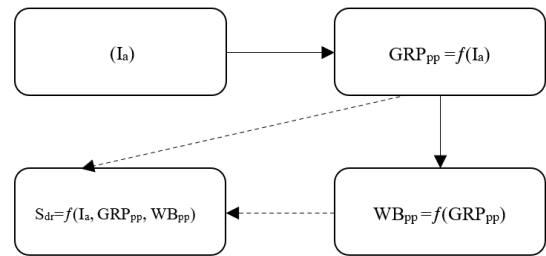


Figure 2. Graphic representation of obtaining a model of sustainable development of the region (developed by the authors)

where, (I_a) – Investments in fixed assets; GRP_{pp} – gross regional product; WB_{pp} – level of well-being of the population; S_{dr} – sustainable development of the region.

It should be noted that in order to obtain the most reliable data, we selected the regions of our country (data until 2022, since it is impossible to obtain accurate data after the start of the war in Ukraine).

4. RESULTS OF RESEARCH

Thus, we will try to describe the results of modeling our study in as much detail as possible. First of all, let's start with the results of calculating the volume of investment in fixed assets per capita in Ukraine for the period 2016-2021. We have not selected all regions of the country due to the lack of real data for some regions. It was decided to cover only the western regions of the country (Table 1).

Table 1. Volumes of investment in fixed capital per capita in the western regions of Ukraine, thousand UAH

Regions	2016	2017	2018	2019	2020	2021
Lviv	1.27	1.75	2.18	2.35	2.61	3.23
Ternopil	0.55	0.76	0.91	1.07	1.29	1.8
Ivano-Frankivsk	1.32	1.5	1.84	1.6	2.17	2.89
Volyn	1.14	1.28	1.63	1.5	2.08	2.76
Rivne	1.11	1.63	2.55	1.32	2.17	2.54
Khmelnysky	0.97	1.18	1.95	1.39	1.76	2.31
Chernivtsi	0.74	1.14	1.25	1.17	1.95	2.58
Zakarpattia	0.95	1.6	1.5	1.22	1.89	2.12

The volumes of gross regional product per capita for the period 2016-2021 are presented in Table 2. It should be noted that the growth in investment leads to an increase in the gross regional product.

Table 2. Volumes of gross regional product per capita, thousand UAH

Regions	2016	2017	2018	2019	2020	2021
Lviv	8.07	9.09	9.61	9.46	10.28	10.91
Ternopil	5.11	5.62	6.02	6.21	6.89	7.51
Ivano-Frankivsk	7.35	8.44	9.11	9.68	9.95	10.05
Volyn	6.49	6.69	8	8.33	8.65	9.71
Rivne	6.76	7.43	8.44	8.64	9.26	9.69
Khmelnysky	6.29	6.91	7.86	8.25	8.68	9.11
Chernivtsi	0.74	1.14	1.25	1.17	1.95	2.58
Zakarpattia	5.83	6.94	7.4	7.32	7.81	8.45

For the first level of the model of sustainable development of the region, it is necessary to determine the level of return on investment in fixed assets for a particular region. This can be done through the methodology of mathematical modeling (econometric regression of the form) (1):

$$GRP_{pp} = b_0 + b_1(Ia) \quad (1)$$

where, b_0 – is the free regression parameter; b_1 – represents the regression coefficient, which is characterized by the level of return on investment in fixed assets (Table 3).

Table 3. Elements of the first level of modeling sustainable development of regions of Ukraine

Regions	R ²	t(S)b ₀	t(S)b ₁	Relative error of the B	The satisfactory accuracy of the model
Lviv	0.96	19.46	9.96	3	+
Ternopil	0.97	23.69	12.45	3.3	+
Ivano-Frankivsk	0.58	5.59	2.34	13	-
Volyn	0.86	6.88	5	9.4	+
Rivne	0.53	4.92	2.11	11.5	-
Khmelnysky	0.73	5.43	3.31	9.4	+
Chernivtsi	0.86	14.33	5.04	6.7	+
Zakarpattia	0.8	6.01	3.96	8.5	+

Note that the statistical accuracy of the regression model is determined through the determinations (R²), Student's coefficient (t(S)b₀), (t(S)b₁) and the coefficient of relative error of the model. We mark the model as B. If B<10%, then we can talk about the satisfactory accuracy of the model. According to our results, Ternopil and Lviv regions can boast of such accuracy.

For planning the public administration of the system of sustainable development of the region, the Ternopil region demonstrates the best potential (Figure 3).

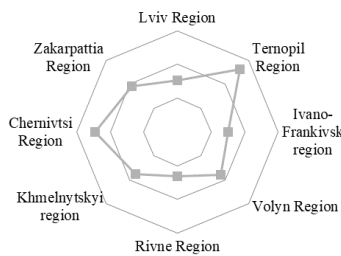


Figure 3. Model of the potential for growth of regional production through investment in the context of sustainable development (developed by the authors)

The next step will be the formation of the second level of the model of sustainable development of the region, which demonstrates such indicators of social security as the interdependence of the level of development of regional production and the level of income of the population in certain regions (Table 4).

Table 4. Volumes of income per capita in the western regions of Ukraine, thousand UAH

Regions	2016	2017	2018	2019	2020	2021
Lviv	4.34	5.8	5.96	7.8	8.9	9.6
Ternopil	3.6	4.5	5.1	6.8	7.9	8.2
Ivano-Frankivsk	3.9	4.5	5.2	6.8	7.8	8.5
Volyn	4.3	5.5	5.95	7.7	6.5	8.99
Rivne	4.5	4.8	5.5	6.8	7.8	8.4
Khmelnysky	4.67	4.95	5.9	7.8	8.2	8.99
Chernivtsi	3.6	4.3	5.2	6.8	7.4	7.9
Zakarpattia	3.5	3.9	4.9	5.9	6.9	7.5

The goal of the second level of the sustainable development

model is to determine the potential of the region through the growth of the well-being of its population based on the development of regional production complexes due to econometric regressions (Eq. (2)):

$$WB_{pp} = c_0 + c_1(GRP_{pp}) \quad (2)$$

where, c_0 – is the free regression parameter; c_1 – represents the regression coefficient, which is characterized by the level of influence of the gross regional product on the amount of income of the population (Table 5).

Table 5. Elements of the second level of modeling sustainable development of regions of Ukraine

Regions	R ²	t(S)b ₀	t(S)b ₁	Relative error of the B	The satisfactory accuracy of the model
Lviv	0.85	-2.99	4.79	17.03	-
Ternopil	0.93	-3.83	7.28	12.07	-
Ivano-Frankivsk	0.86	-2.99	4.97	17.25	-
Volyn	0.9	-2.25	6.07	17.46	-
Rivne	0.89	-2.62	5.76	18.15	-
Khmelnysky	0.92	-3.26	6.83	16.8	-
Chernivtsi	0.94	-4.60	7.92	10.57	+
Zakarpattia	0.86	-2.73	4.86	19.22	-

For the second level, there is a lower statistical accuracy and this indicates a low level of relationship between the results of the development of the industrial complex and the standard of living of the population. In general, the threat to social security is the low implementation of the social function of the regional production policy by the public administration system. Although Ternopil and Lviv regions show a certain potential for sustainable development planning (Figure 4).

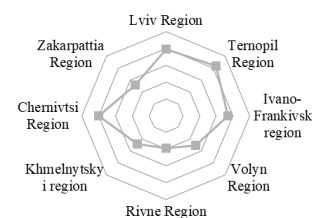


Figure 4. Model of income growth potential in the context of sustainable development (developed by the authors)

According to the results of building a model of sustainable regional development, unfortunately, we can state that the concept of sustainable development of regions is not yet sufficiently developed and substantiated. There are practically no stable and effective development strategies in the regions, and the strategies being implemented are poorly adapted to the real conditions of the state of the regional economy.

5. DISCUSSIONS

Discussing the results of the study, it should be noted that the issues of methodology and methods of this problem have always been the attention of most scientists. Summarizing their opinion [13-15], it should be noted that the improvement of the methodological foundations and methods for analyzing the state and sustainability of the development of regional systems is a necessary condition for improving the quality of management decisions based on a more reliable analysis, forecast and objective justification. ecological spheres of territories Various authors [16, 17] offer different methodological bases and methods for assessing the sustainability of the development of regional socio-economic systems at various levels.

Ziolo et al. [18] came to the conclusion that the social security system of sustainable development of the region cannot be isolated. Social phenomena and processes occurring in regional economic systems are too dependent on the environment.

For example, Bilan et al. [19] considered an emergent approach to the sustainable development of the region. It was noted that Emergence is the result of the emergence of so-called synergistic relationships between the elements of the system, which ensure an increase in the overall effect to a value greater than the sum of the effects of the elements of the system acting independently. Therefore, it is necessary to study and model regional socio-economic systems as a whole.

Navickas and Kontautienė [20] considered social security and its impact on sustainable development. The results of the study showed that the social component can be an active reaction to the emergence of new factors, the ability of regional social systems to active, not always predictable actions depending on the relationship of the system to these factors, ways and methods of their influence.

Discussing the results of the research of our predecessors, it is better to understand the novelty of the research obtained. As can be seen from the discussion of other results, our results have a number of differences. In general, when discussing our results, one should highlight the emphasis on the regions of a particular country and orientation, and those regions that are known to the authors.

6. CONCLUSIONS

In conclusion, I would like to note that today, in many countries of Eastern Europe, the need and relevance of planning work for the sustainable development of the region is no longer in doubt. Of course, this does not mean that it is necessary to revive the old traditions of planning, which no longer correspond to today's needs. Currently, new approaches to planning the sustainable development of the region are being actively developed and implemented. At the same time, the functions implemented during the planning process are

modified, the very role of planning in the public administration system is undergoing changes. The social component is taken into account. It is increasingly becoming a tool for increasing the competitiveness of territories and regions, a means of bringing together various subjects of regional sustainable development around new values and long-term priorities.

According to the results of the research conducted in the article, two levels of the matrix of sustainable development of the selected regions were presented. The level of potential for the growth of key indicators for planning the sustainable development of the region in the system of public social security administration is calculated. The study has a number of limitations and, first of all, they relate to the selection of regions of one particular country. It is difficult to cover the regions of more than one country, and even not all of them, for the demonstration of the matrix and modeling. Therefore, further research should include the analysis of a larger number of regions and neighboring countries.

One of the problems that should be further explored is the need to train specialists in regional sustainable development and management, since the implementation of an effective public policy is associated with accelerating the dynamism of regional social development through a more complete and effective involvement in the economic circulation of the resource potential of the regions, using the advantages of territorial division and labor cooperation on the basis of expanding the powers and increasing the responsibility of regional and local authorities for solving current problems and shaping the prospective tasks of the territories. This will require fundamental knowledge of the system of public administration on issues of regional and local development, practical application of new forms and methods of territorial management. In addition, to date, none of the higher educational institutions provides targeted training of specialists in this specialty, the need for which is growing. This may need further research.

The article raises a number of problems related to ensuring the sustainable development of the region in the system of public administration of social security. The way out of the problems that arise when planning the sustainable development of the region can be in various directions. Nevertheless, one of the most important proposals can be given - this is the analysis and evaluation of data in order to better understand the current state of sustainable development of a particular region.

REFERENCES

- [1] Boggia, A., Cortina, C. (2010). Measuring sustainable development using a multi-criteria model: A case study. *Journal of Environmental Management*, 91: 2301-2306. <https://doi.org/10.1016/j.jenvman.2010.06.009>
- [2] Dushi, I., Iams, H., Trenkamp, B. (2017). The importance of social security benefits to the income of the aged population. *Social Security Bulletin*, 77: 1-12.
- [3] Bryson, J.M., Quick, K.S., Slotterback, C.S., Crosby, B.C. (2013). Designing public participation processes. *Public Administration Review*, 73(1): 23-24. <https://doi.org/10.1111/j.1540-6210.2012.02678.x>
- [4] Skačkauskienė, I., Bytautė, S. (2012). Social capital definition and measurement problems. *Business: Theory and Practice*, 13(3): 208-216. <https://doi.org/10.3846/btp.2012.22>

- [5] Jankauskas, V., Šeputienė, J. (2007). The relation between social capital, governance and economic performance in Europe. *Business: Theory and Practice*, 8(3): 131-138. <https://doi.org/10.3846/btp.2007.19>
- [6] Hafer, J., Ran, B. (2016). Developing a citizen perspective of public participation: Identity construction as citizen motivation to participate. *Administrative Theory & Praxis*, 38(3): 206-222. <https://doi.org/10.1080/10841806.2016.1202080>
- [7] Aspinall, N.G., Jones, S.R., Mc Neill, E.H., Werner, R.A., Zalk, T. (2018). Sustainability and the financial system. Review of literature 2015. *British Actuarial Journal*, 23: e10. <https://doi.org/10.1017/S1357321718000028>
- [8] Čiegis, R., Grundey, D., Štreimikiene, D. (2005). Economic aspects of cities sustainable development strategic planning. *Technological and Economic Development of Economy*, 11(4): 260-269. <https://doi.org/10.3846/13928619.2005.9637706>
- [9] Yousef, I.A., Kilani, H.A., Bataineh, M.F., Al-Nawayseh, A., Al-Za'abi, A., Belghali, M., Alnuaimi, J., Shaheen, W.M., Liftawi, S.M. (2022). Social issues during the COVID-19 quarantine period: Interaction of physical activity and mental state. *International Journal of Sustainable Development and Planning*, 17(3): 777-785. <https://doi.org/10.18280/ijstdp.170308>
- [10] Kostel, M., Leus, D., Cebotarenco, A., Mokrushina, A. (2017). The sustainable development goals for Eastern partnership countries: Impact of institutions. *SocioEconomic Challenges*, 1(3): 79-90. [https://doi.org/10.21272/sec.1\(3\).79-90.2017](https://doi.org/10.21272/sec.1(3).79-90.2017)
- [11] Gataūlinas, A., Zabarauskaitė, R. (2013). Subjective well-being in EU countries in the context of economic development and social policy. *Business: Theory and Practice*, 14(2): 147-156. <https://doi.org/10.3846/btp.2013.16>
- [12] Jovovic, R., Draskovic, M., Delibasic, M., Jovovic, M. (2017). The concept of sustainable regional development – institutional aspects, policies and prospects. *Journal of International Studies*, 10(1): 255-266. <https://doi.org/10.14254/2071-8330.2017/10-1/18>
- [13] Gupta, J., Vegelin, C. (2016). Sustainable development goals and inclusive development. *International Environmental Agreements: Politics, Law and Economics*, 16: 433-448. <https://doi.org/10.1007/s10784-016-9323-z>
- [14] Kryshchanovych, M., Antonova, L., Filippova, V., Dombrovska, S., Pidlisna, T. (2022). Influence of COVID-19 on the functional device of state governance of economic growth of countries in the context of ensuring security. *International Journal of Safety and Security Engineering*, 12(2): 193-199. <https://doi.org/10.18280/ijssse.120207>
- [15] Ginevičius, R., Gedvilaitė, D., Bruzge, Š. (2015). Assessment of a country's regional economic development on the basis of Estimation of a Single Process (ESP) method. *Entrepreneurial Business and Economics Review*, 3(2): 141-153. <https://doi.org/10.15678/EBER.2015.030210>
- [16] Kondyli, J. (2010). Measurement and evaluation of sustainable development: A composite indicator for the islands of the North Aegean region, Greece. *Environmental Impact Assessment Review*, 30: 347-356. <https://doi.org/10.1016/j.eiar.2009.08.006>
- [17] Kryshchanovych, M., Petrovskiy, P., Khomyshyn, I., Bezena, I., Serdechna, I. (2020). Peculiarities of implementing governance in the system of social security. *Business, Management and Economics Engineering*, 18(1): 142-156. <https://doi.org/10.3846/bme.2020.12177>
- [18] Ziolo, M., Bak, I., Cheba, K. (2021). The role of sustainable finance in achieving Sustainable Development Goals: Does it work? *Technological and Economic Development of Economy*, 27(1): 45-70. <https://doi.org/10.3846/tede.2020.13863>
- [19] Bilan, Y., Vasilyeva, T., Lyeonov, S., Bagmet, K. (2019). Institutional complementarity for social and economic development. *Business: Theory and Practice*, 20: 103-115. <https://doi.org/10.3846/btp.2019.10>
- [20] Navickas, V., Kontautienė, R. (2015). The implementation of social responsiveness initiatives: Case of Lithuania. *Business: Theory and Practice*, 16(1): 45-52. <https://doi.org/10.3846/btp.2015.526>