



Original article

Economic Mechanisms to Overcome the Vulnerability of the Economy and Social Sphere of Strategically Important Settlements of Kazakhstan

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Abstract

In Kazakhstan, there is an urgent need to develop depressed settlements, which have their own characteristics associated with the historically established heterogeneity of the location of industries and deep differentiation in terms of socio-economic potential. Urban agglomerations, city centers, regions with raw material extractive industries, whose products are in demand on the global market, have best adapted to a market economy. As a result, many settlements in Kazakhstan turned out to be, as a rule, less developed and competitive, and even worse socially vulnerable. In addition, the COVID-19 pandemic has significantly changed the structure and level of their development, revealed potential vulnerability issues, especially in small communities where there are no resources and materials to manage these consequences. The severity of these shocks will depend on the development of effective measures to address inequalities in strategically important communities. The main purpose of this article is to provide economic mechanisms to overcome the vulnerability of the economy and the social sphere of strategically important settlements in Kazakhstan. Estimated indicators in this study are based on the socio-economic indicator of Zhambyl, North Kazakhstan, East Kazakhstan, West Kazakhstan, Atyrau and Mangystau regions for 2009-2020. The results of this study show that there is a significant disparity between settlements in the regions of Kazakhstan in terms of such factors as the level and quality of life. Most of the regional problems faced by the most vulnerable communities are widespread and systemic. Socioeconomic problems, lack of resources, low level of industrial production and lack of state support are the main reasons for the vulnerability and depression of the studied settlements.

Keywords: Regional Economy, Economic Mechanism, Economic Vulnerability, Social Sphere, Settlements

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1. INTRODUCTION

Vulnerability is the ability of a system to be permanently breached. When an ecosystem in a certain area suffering from severe disturbance will take place in that area, and the entire regional ecosystem will move into a vulnerable state. Based on the relationship between man and the environment, guided by ecological economics, environmental economics and theories of sustainable development focused on human economic activities, covering the incompatible development process between the economy and the environment in ecologically ecological vulnerable regions (Heping et. al., 2006).

In many countries, there is an urgent need to stimulate socio-economic development, overcome crises and more effectively use the potential of regions for which special mechanisms of regional policy are applied. A regional policy aimed at balancing the activities of any regions, from large areas to small settlements, is considered successful. Since this can contribute to the solution of many important tasks, increasing the efficiency of the use of aggregate regional resources, creating conditions for increasing the efficiency of each region, increasing labor productivity, solving social problems, etc. At the same time, one of the main goals of regional policy is to overcome the vulnerability and depression of the economy, which is achieved by resolving the problems of many regions. Moreover, at the regional level, the tasks of ensuring the integrated development of the territory can be solved, specific measures and mechanisms for linking them to problem regions can be concretized and developed.

In general, the development of economic mechanisms to support strategically important settlements is important from the point of view of smoothing out interregional differences, which can only be achieved by considering the application of measures to a specific region. In addition, the need to reform the policy of regional development of Kazakhstan is caused by several basic prerequisites.

First, the economic situation of different social groups in the regions differs, which can have a significant impact on the social well-being and protest moods of the population. Unfortunately, in this recent period, significant changes have taken place in Kazakhstan related to political issues and social instability in society, especially in problem regions. Yes, in January 2022. mass protests began in the western regions of Kazakhstan and spread to other regions and cities, which indicates the presence of social disproportions in society. As a result, there is an urgent need to support problem areas, since social disunity has significantly changed their structure and potential, revealed problems in vulnerability, especially in regions where there are no resources and materials to regulate these consequences.

Secondly, there is an inadequacy of the territorial distribution of productivity associated with the concentration of production and population in the most favorable regions of the country. This largely determined the depth and duration of problem processes, the stability of the depressive state in a significant number of regions of Kazakhstan. Many developing countries are experiencing similar problems, like Kazakhstan, which is a consequence of the vulnerability of the economy and the social sphere. Therefore, given the scale of the problem, it is necessary to especially raise the issue of a significant difference between regions, cities and villages in terms of socio-

economic and demographic indicators, and, consequently, a differentiated approach to equalizing social development.

Thirdly, the current regional policy of Kazakhstan, pursued in relation to backward regions, is selective in nature, i.e., it is associated with the development of a set of measures applied in relation to a particular region. In addition, the sample of regions does not consider social, economic, infrastructural and environmental factors. Some regions are developing steadily, independently solving emerging problems, others cannot solve problems on the way of their development and need support from the state. Such territories in the theory of regionalists are usually called problematic, that is, vulnerable and depressive.

In this regard, a very balanced and thoughtful regional policy is needed. For the successful implementation of the regional policy, it is necessary to create a system of organizational and economic mechanisms to overcome the vulnerability and depression of the economy and the social sphere of strategically important settlements in Kazakhstan.

2. LITERATURE REVIEW

A review of the literature on the topic of the vulnerability of the economy and the social sphere at the global level shows the comprehensiveness and long history of this economic concept, as countries always seek to protect themselves from internal and external fluctuations. In this regard, many scholars have conducted extensive research in the field of economic vulnerability. According to these studies, vulnerability means exposure to damage and instability. This concept became popular in the field of economics when studies were made of some small countries with low economic power and high risk in terms of economic performance (Amiri et. al., 2018).

The representation of regional risk using a systems approach (Holling 2001) has led to the identification of two descriptive categories of this concept: vulnerability and resilience, where risk is positively and negatively correlated (Graziano 2013). Recent studies on economic vulnerability show that countries' vulnerability in some economic characteristics is related to the degree of economic openness (Farrugia 2004), export concentration (Briguglio 1997) and dependence on strategic imports (Briguglio & Galea 2003).

Vulnerability studies play an important role in disaster research, which highlights the relationship between human society and the consequences of disasters, as well as measuring the ability to cope with disasters in different regions with different economies (Liu et. al., 2010).

The future development of the economy is facing serious challenges of the traditional way of development, so only building a well-coordinated relationship between the eco-environment and the development of the regional economy will avoid unsustainable development behavior, which was achieved at the cost of degrading the eco-environment and realize the harmonious development between the economy and the environment (Heping et. al., 2006).

The difficult conditions of the modern economy reduce the effectiveness of traditional tools of economic regulation. The debt burden of the regions is growing, forcing them to

cut spending on medicine and education, thereby reducing investment in human capital (Silvestrov et. al., 2018). The ideas of equalizing the levels of socio-economic development of regions have always been important and are regularly raised in modern conditions (Kireeva & Nurlanova 2018). At present, considerable attention is paid to the substantiation and deepening of the conceptual foundations for the implementation of the state policy of regional development. The modernization of the public administration system entails a redistribution of tasks, powers and resources at the central, regional and local levels, which will contribute to the effective interaction of regions and communities, increase the initiative and responsibility of public authorities in the region (Kolosovska et. al., 2020). A reasonable pragmatic state policy is needed to harmonize the system of regional economic interests (Koshanov 2011). It is necessary to understand whether and how effective policies can be formulated and implemented. However, policy development has often failed to consider the causal chain representing the actual driving force behind policy outcomes, and thus misunderstand the potential effectiveness of policy development for regions (Capano & Howlett 2021).

The regional economy must balance economic initiative and autonomy in terms of methods and means of its implementation (Gizatullin et. al., 2018). The regional development strategy should not be developed according to the model of the national strategy but taking into account the characteristics of the region (Bogoviz et. al., 2017). To do this, we offer appropriate economic mechanisms that allow selected localities of Kazakhstan to adapt to new modern challenges and get out of vulnerability.

3. METHODOLOGY

A number of foreign countries have already accumulated significant experience in classifying problem regions and choosing mechanisms to overcome their vulnerability within the framework of territorial policy. At the same time, the implementation of the policy of regional alignment of territories involves the development of a typology of strategically important settlements. Traditional vulnerability analysis methods calculate sub-indices based on disaster frequency, losses, economic impact, and population of each region, and then use the sub-indices to derive a composite regional vulnerability index (Liu et. al., 2010).

In Kazakhstan, the levels of vulnerability of the regions have not yet been determined, which determined the need for research in this area. We used system-structural and functional approaches, methods of empirical research, including observation, comparison, generalization, systematization, methods of analysis and synthesis, logical analysis, methods of regional studies, cluster analysis. To analyze the state, main trends in the development or decline of settlements in Kazakhstan and assess the influence of the main factors on the vulnerability of their economy and social sphere, we proposed an original methodology and algorithm for its application. The methodology was developed taking into account the peculiarities and difficulties of obtaining information in settlements, the algorithm for applying the methodology consisted of four steps using the SPSS program for data normalization and for cluster analysis.

Initial data for 2009-2020 for analysis by settlements of Kazakhstan were obtained from the statistical data of the Bureau of National Statistics, regional departments of

statistics, various electronic resources, etc. Based on the results of the analysis, development indicators were obtained: Zhambyl, North Kazakhstan, East Kazakhstan, Mangistau, Atyrau and West Kazakhstan regions, and depressive and vulnerable territories were identified.

The sample does not include large cities and agglomerations as the main "points of growth" and the least vulnerable to the influence of negative factors. The choice of these regions is due to the following:

- 1) the demographic situation is characterized by negative trends (decrease in population density, negative balance of migration, etc.);
- 2) these regions, according to a set of development criteria, are classified as depressive (the volume of industrial production per capita is below the average republican level, low incomes of the population, depletion of the resource base, high unemployment);
- 3) a high degree of deterioration of engineering and social infrastructure, unfavorable ecology;
 - 4) the selected regions are border, geopolitically and strategically significant.

The construction of gradations of strategically important settlements on a scale of gradations was carried out based on data collection, sampling and processing. Thus, when developing economic mechanisms and measures to overcome the vulnerability of the economy of the settlements of Kazakhstan, we will consider the features of the types of regions identified taking into account economic, social, infrastructural and environmental factors.

4. FINDINGS AND DISCUSSION

According to our analysis, it was clear that in many settlements of Kazakhstan there are enough unresolved problems that require immediate solutions. One of such decisions is the policy of regional development. Regional policy is aimed primarily at achieving the goals and objectives of the socio-economic policy of the state. At the same time, part of the socio-economic policy of the state is aimed at the rational use of the country's resources, the distribution of productive forces, the development of the economic potential and the potential of its territories, considering their characteristics. At the same time, there are common goals inherent in regional policy - this is the development of the positive aspects of the region, not only for the development of the region itself, but also for the country, in order to improve the well-being of the population. For example, for foreign countries, the current regional policy is a tool that minimizes inequalities arising from socio-economic conflicts that hinder development in general. Thus, to reduce the gap in the socio-economic level in strategically important settlements of Kazakhstan, the main directions of development for 2022–2050 are proposed. The directions are more clearly presented in table 1, broken down into three periods: 2022-2030, 2030-2040, 2040-2050.

The provided directions for the development of the regional policy of the settlements of Kazakhstan for the period 2022-2050 are aimed at reducing significant disparities in the development of the regions. In general, the presented directions were divided by us into short-term, medium-term and long-term ones. In the first place are short-term directions, on the basis of which the current goals and objectives are determined, aimed at improving the economic and social situation in the region.

TABLE 1. The main directions for the development of the regional policy of the settlements of Kazakhstan for 2022-2050

N₂	Impleme	Implementation period
	ntation period	
1	2	3
1	2022-2030 (short term)	Direction 1. Measures to overcome economic and social imbalances. This direction implies the creation of a nationwide system of support centers capable of organizing the implementation of economic and social policy in the territorial context. Direction 2. Creation of an economically efficient territorial organization of production. This direction implies the creation of an economically efficient territorial organization of production, especially industry, and the formation of economically full-fledged territorial economic units. Direction 3. Search and activation of internal resources of strategically important settlements. This direction is intended for the specialization of the region, i.e. on the features of the area that need to be developed, which will contribute to increasing competitiveness and further development of the settlement.
2	2030-2040 (medium term)	Direction I. Economic independence of the regions. This direction implies that the regions will independently make decisions of a different nature, which are aimed at improving the welfare of the population, as well as the development of the regions. Direction 2. Creation of funds for the development of regions, industries, as well as for improving the social conditions of citizens living in settlements. This direction implies the creation of funds by the state, as well as with the participation of other developed countries to improve the economic situation, the social sphere of regions and settlements. For example, it is proposed to create a fund for financial support of regional entities that may have their own sub-funds. Sub-funds of the regions will be designed to reduce and eliminate differences in development in the regions. The Fund will provide financial resources to complement and pool existing development flows in designated areas to: - fill critical gaps in local infrastructure and other development needs that are not adequately met by existing inflows, - to strengthen municipal governance to this end through better capacity building to facilitate participatory planning, decision-making, implementation and monitoring, taking into account local needs, - provide professional support to local authorities in planning, implementing and monitoring their plans, - increase the efficiency and performance of the critical functions entrusted to municipalities and counteract possible losses in efficiency and equity due to insufficient local capacity. Direction 3. Stimulation of the internal potential of strategically important settlements through government programs, business representatives and established development funds. This direction is intended to improve the economic and social situation of the settlements through the stimulation of internal potential, for which business investments will be used, as well as support from the state through targeted development programs.

1	2	3			
3	2040-2050	Direction 1. Maximize the income gap between urban and rural populations			
	(long	This direction is intended to increase the incomes of depressed localities			
	term)	through the support and development of SMEs, creating highly paid jobs.			
		Direction 2. Creation of a Crisis Management Agency in strategically			
		important settlements			
		This direction implies the creation of an Agency that will analyze and monitor			
		situations in settlements that are strategically important for the state. To prevent			
		crisis situations in them, where they will also train the specialty of regional anti-			
		crisis managers.			
		Direction 3. Stimulation of production, support for the development of high-			
		tech and competitive products.			
		This direction is intended to develop productivity, support promising start-up			
		projects and research projects in cooperation with research institutes,			
		businesses and governments in communities to develop products and services			
		that will be in demand in world markets.			
Note.	Note: Compiled by authors				

The second place is occupied by medium-term directions of development carried out in the process of preparing government development programs for the medium term. At the last stage, there are long-term directions that are worked out and adjusted during the implementation of the first two stages, where the main, large-scale directions for improving the regional system are determined. The purpose of this policy is to improve the quality of life with the help of tools and mechanisms of selective leveling regional policy and its priority areas. In this regard, the development of production and the formation of territorial economic units will not only increase the economic significance of the region, but also improve the standard of living of the population. It will also give a big boost to the realization of domestic resources, both human capital and natural resources.

The main goal of the state is not only to reduce the gap in the socio-economic indicators of depressed settlements, but also that today these settlements are sources of economic growth. Because, they have significant resources that are not used or used for other purposes or inefficiently. Therefore, the development of depressed settlements is not only a part of social policy, but also a stimulating element of economic growth policy. The new regional policy of Kazakhstan should be based on market mechanisms, the purpose of which is to stimulate and encourage domestic growth. This implies that it is necessary to use the resources of depressed settlements to the maximum. Today, state support should be directed to:

- development of local enterprises that are able to compete;
- formation of regional clusters;
- exchange of knowledge between small and medium-sized companies for the development of innovation in the locality.

Based on the study, the following areas with depressed and vulnerable settlements were identified: (1) in the Mangistau region: Karakiya, Beineu districts, and the city of Zhanaozen; (2) in the Atyrau region: Makhambetsky, Isataisky, Kzylkoginsky, Indersky and Makatsky, Kulsary; (3) in the West Kazakhstan region: Taskalinsky, Chirlatausky, Karatobinsky, Syrymsky, Zhangalinsky, Bokeyorda, Zhanibeksky and Terektinsky; (4)

in the East Kazakhstan region: Abay, Katon-Karagay, Kokpektinsky, Kurchumsky districts, Ridder and Semey cities; (5) North-Kazakhstan region: Akzhar, Mamlyut, Shal Akyn, Ualikhanov districts, Sergeevka and Mamlyutka; (6) in the Zhambyl region: Sarysu, Talas, Moyinkum, Zhambyl districts, Zhanatas and Karatau. Socio-economic problems, lack of resources, low level of industrial production and lack of state support have led the listed settlements to vulnerability and depression.

There is a significant disparity between settlements in the regions of Kazakhstan on factors such as the level and quality of life. Most of the regional problems faced by the most vulnerable communities are widespread and systemic. To solve such problems, a general overcoming mechanism is needed, then the package of measures will be narrowed depending on the locality. However, one should not forget about the peculiarities of settlements, therefore, the specific mechanisms of complementarity, which are described in Table 2, should be further considered.

TABLE 2. A package of system proposals, recommendations and forecast development scenarios

№	Region group	A package of system proposals, recommendations and
		forward-looking development scenarios
1	2	3
1	Mangistau region (Karakiyansky, Beyneusky districts, and Zhanaozen city)	- stimulation of investment activity through state support for small and medium-sized businesses, property support for medium-sized businesses; -development of bioeconomy in the agro-industrial complex sector; -integration of higher education with the private sector; - provision of targeted social assistance; - launch of large infrastructure projects; - increasing the availability of credit resources, regional special programs and state guarantees. **Development forecast:** The development of small and medium-sized businesses will create new jobs. Integration of the scientific environment with employers will increase employment opportunities and help reduce the negative dynamics of migration in the region. Employment among the population will increase, which will improve the socio-economic condition of the region.
2	Atyrau region (Makhambet, Isatai, Kzylkoginsky, Inder and Makat)	 investing in small business; support for start-up projects; provision of targeted scientific grants; commercialization of scientific results. relaxation of regulatory requirements. Development Forecast: The development of entrepreneurship will help increase employment among the population and influence the industrial development of the economy in the region. Increasing the attractiveness of universities through close cooperation between the private sector and universities will help to solve the shortage of specialists in various fields. The use of targeted grants will help develop individual sectors of the economy that are specific to each region.

1	2	3				
3	West Kazakhstan	- stimulating investment activity through state support for small and				
	region	medium-sized businesses;				
	(Taskalinsky,	-development of bioeconomy in agriculture;				
	Chirlatausky,	- provision of targeted scientific grants;				
	Karatobinsky,	- opening of technical universities;				
	Syrymsky, Zhangalinsky,	- relaxation of regulatory requirements; -regional specialization: development of the agro-industrial complex.				
	Bokeyorda,	-regional specialization, development of the agro-industrial complex.				
	Zhanibeksky and	Development forecast: Investing in small and medium-sized				
	Terektinsky)	businesses, the development of bioeconomy will increase economic				
	, , , , , , , , , , , , , , , , , , ,	activity in the region, increase the attractiveness of universities. The				
		development of the economy will be observed in two main sectors:				
		agro-industrial complex and agriculture.				
4	North Kazakhstan	- regional specialization: development of the agro-industrial complex;				
	region (Akzharsky,	- targeted scientific grants;				
	Mamlyutsky, Shal	- partial decentralized management of the local budget;				
	Akina,	-integration of higher education with the private sector;				
	Ualikhanovskiy	- increasing the availability of credit resources, regional special				
	districts, Sergeevka	programs and state guarantees;				
	and Mamlyutka)	- relaxation of regulatory requirements.				
		Development forecast: There will be an active development of the agro-				
		industrial complex through the development of a key sector of the				
		economy, inclusion in the processes of stable industrial development.				
		1				
5	East Kazakhstan	- assistance in the formation and development of small businesses;				
	region (Abai,	- provision of targeted social assistance;				
	Katon-Karagai,	- regional specialization: development of the agro-industrial complex;				
	Kokpekta,	integration of higher education with the private sector;				
	Kurchum districts,	- partial decentralized management of the local budget.				
	Ridder and Semey)	Development forward, Chable industrial accords will be 1				
		Development forecast: Stable industrial growth will be observed, thanks to the development of such key sectors of the economy as				
		livestock breeding, the agricultural sector of the economy, livestock				
		breeding, and biotechnology. There will also be a decrease in the budget				
		deficit.				
6	Zhambyl region	- investing in small businesses and developing business incubators;				
	(Sarysu, Talas,	- targeted scientific grants;				
	Moyinkum,	- regional specialization: development of agriculture.				
	Zhambyl districts,					
	Zhanatas and	Development forecast: New jobs will be created. Depending on the				
	Karatau)	regional policy, the key sector of the economy of the Zhambyl region				
		will develop - this is agriculture. This allows the development of				
		various branches of agriculture: crop production and animal husbandry.				
Note	Note: Compiled by authors					

The main package of system proposals, recommendations and predictive scenarios for the development of important settlements is proposed to be comprehensive. First, in many regions there is a decline in industrial production. Secondly, there is a decline in the quality of life of the population, which is caused by several factors: a lack of jobs, an underdeveloped economy in the regions, and migration. Thirdly, the low growth of the local budget, which is the basis for the development of the area.

To overcome the above difficulties, the following regional mechanisms are proposed. In strategically important settlements of North and East Kazakhstan, there is an acute shortage of the budget. The budget regulation system should be aimed at increasing the budget fund, within the framework of sustainable development, which in turn will ensure the growth of economic potential. Sustainable development and an increase in the local budget can be achieved through the development of the economy in the regions. In this direction, it is necessary to develop entrepreneurship, namely small business. This will ensure the implementation of human capital and increase the economic activity of the population. In addition, it is necessary to introduce a partial decentralized management of the local budget. It is recommended to provide for the direction of tax payments for small businesses and entrepreneurship to the local budget. And also, to direct funds for the development and improvement of local infrastructure and for the needs of the region. Thus, the interdependence of social and economic prosperity appears. This will increase the transparency of doing business.

Considering the fact that in some settlements of the West Kazakhstan, East Kazakhstan, North Kazakhstan and Mangytsau region there is a negative dynamic of migration among the local population, it is necessary to increase the attractiveness of the region. It may also depend on a poorly developed system of higher education. It is necessary to develop the scientific environment in the regions by allocating targeted grants. This will increase the attractiveness of higher education in localities and improve the quality of human resources, and thus will have an impact on the professional qualifications of the local population. It is necessary to use the experience of developed regions in the country and increase the collaboration of local universities. Also, the possibility of opening branches of the country's technical universities in West Kazakhstan region to prevent the migration of young people to other cities. And in the North Kazakhstan region, the opening of an agricultural university, since this region has a great potential for the development of the agricultural industry. There is also a need to retrain existing labor resources.

The development of new technologies and innovations based on scientific research and the attraction of business, depending on demand, will enable the invention and production of products in industrial regions that will be globally competitive. Thus, attracting foreign capital to strategically important settlements.

5. CONCLUSIONS

In order to cover a large proportion of the population with social protection in vulnerable regions, accelerated and expanded growth in employment and benefits in the formal sector, as well as an effective health care and education system, is required. As practice shows, in developing countries and countries with economies in transition, there is a limitation in the formal sector of employment. Since vulnerable segments of the population are more often unemployed, they are either part-time (not full-time) or self-employed. Here we can note the impact of economic crises that are a consequence of

various situations in the world, such as the COVID-19 pandemic. Therefore, many countries are striving to solve the problems of not only indirect and direct impacts that provide income and protection for the population, but also regional problems on the ground. In several countries, and primarily in Europe, significant experience has already been accumulated in stimulating and leveling the level of social development of the territory by providing selective support to individual regions.

Based on the foregoing, we can summarize the following, that the same mechanisms do not always work in the same place. To overcome the identified problems, it is necessary to consider all the nuances of the settlement, for each settlement individual mechanisms for the short, medium and long term should be formed. And there should be clear control and monitoring of the implementation of these mechanisms to correct it in time if a failure is detected. Also, the country's development programs provide for different mechanisms to achieve the goal, and they must complement each other in different indicators, that is, there must be points of contact. Only interaction between programs and state, regional, local authorities with the participation of representatives of the private sector and the public, as well as the scientific community, can achieve positive results.

The implementation of these mechanisms will enable strategically important settlements to develop and improve the well-being of the population. It will also ensure the country's food security, which is a particularly topical issue due to the difficult geopolitical situation in the world.

References

- 1. Amiri, H., Pirdadeh Beyranvand, M., Norouzi Amogin, F., & Alizadeh, S. (2018). Estimation Vulnerability and Resilience Indicators in Iran Economy. *Quarterly Journal of The Macro and Strategic Policies*, 6(23), 434-455. https://doi.org/10.32598/JMSP.6.3.434
- 2. Bogoviz, A. V., Semenova, E. I., & Alekseev, A. N. (2017). New challenges for regional economy at the modern stage. In International conference on Humans as an Object of Study by Modern Science (pp. 574-580). Springer, Cham. https://doi.org/10.1007/978-3-319-75383-6_73
- 3. Briguglio, L. (1997). Alternative economic vulnerability indices for developing countries. New York: *Report prepared for the Expert Group on Vulnerability Index, United Nations Department of Economic and Social Affairs-UN (DESA)*.
- 4. Briguglio, L., & Galea, W. (2003). Updating and augmenting the economic vulnerability index. Occasional paper, Islands and Small States Institute of the University of Malta, 4, 1-15.
- 5. Capano, G., & Howlett, M. (2021). Causal logics and mechanisms in policy design: How and why adopting a mechanistic perspective can improve policy design. *Public Policy and Administration*, 36(2), 141-162. https://doi.org/10.1177%2F0952076719827068

- 6. Farrugia, N. (2004). Economic vulnerability: Developing a new conceptual framework and empirically assessing its relationship with economic growth [PhD. dissertation]. Msida, Malta: University of Malta.
- 7. Fleischmann, K., Daniel, R., & Welters, R. (2017). Developing a regional economy through creative industries: innovation capacity in a regional Australian city. *Creative Industries Journal*, 10, 119 138. https://doi.org/10.1080/17510694.2017.1282305
- 8. Gizatullin, K.G., Garipov, F., & Garipova, Z. (2018). Management of the Structural Transformation of Regional Economy. *Economy of region*, 1, 43-52.
- 9. Graziano, P. (2013). Vulnerability and resilience of the economic, social and environmental dimensions of Italian provinces. *Regional studies association European conference*. 1-28.
- 10. Heping, T., Pan, G., & Xianghao, Z. (2006). A Study of Regional Eco-Environment Vulnerability—A Case of "One-River-Two-Tributaries", Tibet. *Journal of Mountain Science*, 24(6), 761-768.
- 11. Holling, C. S. (2001). Understanding the complexity of economic, ecological, and social systems. *Ecosystems*, 4(5), 390-405. https://doi.org/10.1007/s10021-001-0101-5
- 12. Kireeva, A. A., & Nurlanova, N. K. (2018). Organizational and economic mechanisms for the implementation of technological modernization of the regions of Kazakhstan [Organizatsionno-ehkonomicheskie mekhanizmy realizatsii tekhnologicheskoi modernizatsii regionov Kazakhstana]. *Problemy razvitiya territorii*, 4 (96), 168-180. https://doi.org/10.15838/ptd.2018.4.96.11 (In Russian)
- 13. Kolosovska, I., Zachepa, A., & Dzyana, H. (2020). Strategic planning for socioeconomic development of communities as a tool of regional policy implementation. *Fundamental and applied researches in practice of leading scientific schools, 37*(1), 4-8. https://doi.org/10.33531/farplss.2020.1.1
- 14. Koshanov, A. K. (2011). Globalization and the system of regional economic interests [Globalizatsiya i sistema regional'nykh ehkonomicheskikh interesov]. *Reforma, 1*(17), 4-9. (In Russian)
- 15. Liu, Y., Huang, J. Y., & Ma, L. (2010). The assessment of regional vulnerability to natural disasters in China based on DEA model. *Geographical Research*, 29(7), 1153-1162.

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