

міграційних процесів; їх вплив на демографічні та соціально-економічні показники суперечливий і часто негативний. Що стосується структурних характеристик, то основними рисами є високий коефіцієнт старіння та низький показник молоді, що призводить до збільшення "навантаження" на працездатну частину.

Характерною особливістю нинішньої міграційної ситуації в Україні є тенденція до значного збільшення обсягів міжрегіональних міграцій, а також інтенсивних міждержавних міграційних переміщень населення, що пов'язано з масовими потоками біженців та економічних мігрантів, викликаних війною, етнічними особливостями та низьким рівнем економічного і соціального розвитку з країн Північної Африки та Близького Сходу (Сирії, Лівії, Алжиру та ін.). Серед іммігрантів, які прибувають до України, за національним складом домінують дві групи – українці та росіяни, третє місце займають кримські татари.

В процесі дослідження демографічних загроз та їх впливу на економічну безпеку, розглянуто морально-етичні аспекти формування демографічної ситуації та девіантні явища в Україні. Основними індикаторами, в даному випадку, виступають злочинність та вбивства, а також самогубства, алкоголізм та наркоманія.

Аналіз дав можливість визначити найбільш уразливі місця в демографічній сфері, показав, що в Україні спостерігається кризовий рівень демографічної небезпеки, який потребує розроблення певних стратегічних напрямків діяльності та зміну соціально-демографічної політики в країні. Тому, необхідним є створення на всіх рівнях управління програм підвищення економічної безпеки, які включали б результати досліджень реальних і потенційних демографічних загроз і критеріїв безпеки.

Ключові слова: демографічні процеси, міграція, депопуляція, економічна безпека.

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PROSPECTS FOR THE FORMATION OF THE POLARIZED ENERGY SPACE:

APPROACH TO DATA ANALYSIS

The study emphasizes the urgency of the formation of the polarized energy space in the context of globalization and threats to Ukraine's energy security. To study regional imbalances, a methodology has been developed for the analysis of the density of resources in the regions. A multi-resource model of fuel and energy resources for exploring the region's energy potential has been presented. The proposed approach to the analysis and assessment of concentration of the density of resources allows to characterize certain regional imbalances, which is instrumental in the formation of spatial polarization. The regions with the greatest concentration of fuel and energy resources have been identified on the basis of the comparative analysis. Among the advantages in the implementation of spatial polarization in terms of regional convergence is the possibility of reducing imbalances in the structures of various economic activities, which are one of the main socio-economic problems, since concentration of production and finance facilitates the redistribution of resources in their favor, leaving the periphery without a real chance of overcoming threats to economic development. The study has showed that the analysis of concentration of the density of resources and spatial polarization are two interdependent processes aimed at equalizing the development of territories.

Key words: fuel and energy resources, spatial polarization, growth poles, energy security, region, globalization.

Introduction. A qualitative assessment of existing and potential indicators of the territorial concentration of the economy is required to develop a strategy of regional growth in terms of the dominant market processes. Highest consideration should be given to specific features of the area, where the development of economic activity is to take place, with special focus on the analysis of certain types of natural mineral, social (especially labor force), production and other types of resources, economic and geographical position relative to areas of raw materials, energy, as well as outlets for finished products. The consideration of features of their placement on the territory of the regions contributes to the development of competitive forms of business organization at micro, macro and meso levels. Thus, (Schumpeter, 1989) viewed the creation of large-scale productions as an element of the long-term strategy of development and growth of the industry, where negative structural changes in the industry caused by the emergence of monopoly associations could be compensated by positive features of the monopoly. The result of the implementation of the concept of spatial polarization in the context of globalization is that industrial-territorial complexes are becoming more effective and competitive in terms of their specialization, concentration, and production capacity subject to the resource potential of the territory.

The density of resources is an important indicator in the formation of a polarized space since it indicates the potential for development of individual territories. With this indicator, it is possible to suggest ways of improving the policy of stimulating regional growth. Therefore, we propose to determine the indicator of the density of fuel and energy resources in order to create a resource frame of the polarized energy space that could represent the poles of economic growth and development of industry-specific polarization. Given the aforementioned, the subject of this study will be the process of analyzing the concentration of fuel and energy resources in Ukrainian regions from the perspective of the spatial development of Ukraine's energy market in the context of globalization and integration into the Common European Energy Space, which will enable to confront the risks and threats to the functioning of the energy sector by combining national energy potentials and capacities, and which affects the sustainable industrial growth and safety of citizens' life.

Since recent research into the concentration of resources is not considered in the context of the influence of globalization, where competitive advantages are formed by increasing the number of economic entities, the relevance of the approach to the analysis and assessment of concentration of resources is based on the fact that the attraction centers do not always and everywhere form such areas that are able to embrace the periphery that could provide said areas (growth poles) with resources.

The existence of a fact of the density of resources has a positive impact on the development and growth of the economic system as a whole and the possibility of implementing the economic potential. When examining the energy potential of the region, we will consider it from the perspective of the fuel and energy fossil resources available in the regional economy and the possibilities of implementing the polarized energy space on their basis. The integrity of economic potential is determined through strong interrelation of economic entities on the basis of the framework of available resources that are used in economic activities or can be used in it in the future; human potential, which is implemented through accumulated specialized knowledge; and capital in material and financial form, in the form of investment resource, ensuring the process of production and accumulation of funds for its renewal. The interrelation between the processes of concentration of production and concentration of capital becomes a prerequisite for increasing the number of economic entities, and, consequently, for structural changes of the markets.

Critical literature review. Nowadays, the problematics of research in the field of the formation of spatial polarization of the regional economy is poorly developed. Thus, (Ascani et al., 2012 [1]) addresses the issues of spatial inequality of the regions and suggests the concepts

of spatial polarization for the development of regions. In our opinion, however, it would be advisable to focus more on the theories of resource cycles, because the natural resources potential can significantly affect the regional economic advancement. (Vertakova et al., 2015 [15]) developed methodological foundations for the formation of the region's "growth poles" and proposed a system of indicators characterizing the industry as propulsive and dominant subject to the factors that produce a collateral effect. The authors proposed regression models for estimating the region's propulsive economic sectors, which can substantially rebuild the economy subject to their objective data. However, the models proposed by the authors do not consider the natural-resource factor, which is an objective prerequisite for the dominant growth of the industry. The author (Lu et al., 2015 [11]) proposed "the spatial field model" in order to achieve a comprehensive assessment and multivariate analysis of regional inequality. The model is based on the theory of growth poles and the theory of energy space. Given the authors' insight, we believe that the model does not adequately unleash the natural-resource potential, namely, no factor of the region's resource potential has been singled out for an integrated assessment of the prospects for regional growth. However, (Ye et al., 2017 [13]) emphasizes the issue of inequality of the sectoral structure among the issues of sustainable development and proposes a theory of spatial growth of the region, which, in our opinion, could be supplemented with the theory of resource cycles. (Li et al., 2014 [6]) examines the inequality of the regions using the methodology of an integrated assessment of the regional development factors, although little attention is paid to natural-resource factors that have a significant impact on the development of the regions. In addition, the regional aspects of the spatial inequality were considered by (Wei, 2017 [14]). Moreover, (Ezcurra, 2013 [5]) studied the region's polarization level through the per capita GDP distribution analysis and found that the degree of polarization is reduced due to the fact that the regional development factors neither function in a consistent manner nor are they combined into a single force field. With this in mind, the author suggests using the concept of polarized space. The author (Sekula, 2001 [10]) proposes a model of polarized development that allows to adapt the region to the current globalization context. The above opinion is shared by (Duan et al., 2009 [4]), who states that in the era of economic globalization, the concept of economic polarization is an effective means of agglomeration of economic elements and sustenance of the region's economic life. The findings of the research are that the region should be expanded as a qualification zone that is capable of meeting the challenges of globalization. The authors (Benedek and Moldovan, 2015 [2]) tries to combine two powerful concepts of polarization and convergence by emphasizing their relational and multi-scalar nature. On this basis, the author proposes a multidimensional concept of socio-economic polarization, which includes the processes of convergence and divergence, growth and mobility in the economic and social dimensions. The macroeconomic research by (Robles, 2013 [8]) showed that the polarization of the Latin American region contributed to an economic growth of industries as foreign direct investment and cash transfer flows to the region increased and various competitive business environments were created in Brazilian and Mexican clusters.

Thus, most of the theoretical and methodological approaches in the studies of spatial polarization processes are focused on an integrated study of economic activities of organizations, search for ways to improve their efficiency, as well as on the study of capital movements subject to globalization of economy. Theoretically, however, the feasibility of analyzing the concentration of the density of resources from the perspective of even territorial development within the country and the macroeconomic development of the market in the context of globalization has not been fully justified. If the analysis of the concentration of resources at the micro level is obvious, then the issue of concentration of the density of resources calls for an in-depth study from the perspective of the regions' interests. Taking this into account, the analysis of concentration of the density of resources requires further study since it has a direct bearing on the formation of the scope of energy potential of the territorial unit and its individual

components, and becomes especially acute in the face of growing threats to Ukraine's energy security. The need to address the aforementioned issues and the lack of research into the energy potential determined the choice of this paper, as well as defined its goals and objectives. Information on the existing energy potential will contribute to the development of new forms of business organization in the region, namely, increase the investment opportunities of the region and transparency of activities of the local authorities in the execution of operations with fuel and energy resources. Since Ukrainian scientific literature rarely uses economic density indicators to assess the concentration of economic activity at the regional and local levels, the development of such scientific thought is necessary from the perspective of multiplying the scientific results.

Objective, methodology and scientific novelty. The goal of this paper is to apply approaches to analyzing the density of fuel and energy resources in Ukrainian regions for managerial decisions on the prospects for concentration of economic activity in the context of the formation of the polarized energy space.

The methodological basis of this study is formed by a set of general scientific and special techniques and methods, namely, scientific abstraction - for theoretical generalization of findings of research into the issues of formation of polarized space; comparative analysis - for finding out the components of the region's energy potential; quantitative and correlation analysis - for determining the influence of factors on the formation of Ukraine's energy potential. The statistical and information bases of the study are formed by scientific works of domestic and foreign scientists and practitioners, legislative and regulatory acts, the State Statistics Service of Ukraine (Industry. State Statistics Service of Ukraine, 2017) [12], the State Service of Geology and Mineral Resources of Ukraine (Mineral resources of Ukraine. Mineral resources. Mineral Resources, 2012, 2013, 2014, 2015, 2016, 2017) [7]. The calculation in Tons Fuel Oils Equivalent was carried out in accordance with (Decree No. 63. July 21, 2011. On approval of the methodology for calculating the energy intensity of a gross regional product.

The scientific novelty of the study consists in theoretical and methodological substantiation of the basis of formation of the polarized energy space on the principle of development of the existing energy potential. The findings contain scientific novelty in terms of the assessment of density of fuel and energy resources based on economic and mathematical modeling, which allows to make strategic decisions and predictive estimates for the development of the energy market.

Empirical results. The process of concentration of resources in the economic science is considered with the aim of assessing the conditions for the formation of corporate organizational structures to enhance the region's competitiveness. However, concentration is considered as a form of non-commercial organization of production, as a process of concentration of production in larger enterprises or structural subdivisions, which are implemented both through the construction of new large enterprises and through the reconstruction, expansion of existing enterprises or creation of production associations and economic complexes. Representing the regional economic system as a set of economic processes taking place in it, it is possible to estimate the direct influence of its structures on the peculiarities of business activity of economic entities.

At the meso level, the effectiveness of the economic system is determined by the following elements: 1) Socio-economic relations between economic entities under the order of ownership and the order of title not only to economic resources and their distribution, but also rights to economic results of activities. 2) Forms of organization of activities of economic entities. 3) Methods and mechanisms of state regulation. 4) Economic relations between economic entities.

The interest of business entities in improving efficiency is the underlying motive for accumulation and concentration of capital. Since this process is related to the size of the return value or profit, which in turn depends on the size created by its economic resources, it becomes clear that the concentration means the concentration of an ever increasing share of capital and

economic resources in hands of owners of large capitals. The concentration of the density of resources is considered not only from the economic perspective, but also from the sociological and ecological one. Therefore, the concentration of the density of resources shall be understood to mean the process of convergence of various objects or subjects around a single center; the ecological process of accumulation of resources in the areas with the most favorable living conditions; the concentration of production, capital in one place or in one hands, the dominant position of one or multiple businesses in the market; increase in capital due to accumulation and capitalization of surplus value and income.

Thus, it may be concluded that if earlier the theory of placement of productive forces was geared either to the private interests of manufacturers (western school) or to the state interests (sociology school), then modern theories reflect the patterns of placement of production capacities and concentration of capital in terms of discrepancies among individual, group (corporate, regional) and state interests. It is very problematic to find a compromise in the settlement of interests.

In the context of differentiation of regions, the process of concentration of resources within individual territories is characterized by fewer obvious positive moments. In addition, there are no mechanisms for eliminating the negative trends in the socio-economic development of the regions due to their differentiation, where individual regions concentrate resources, while others begin to overcome their deficit through state measures.

Considering the influence of concentration of the density of fuel and energy resources on the concentration of industry, one can be assured of their joint territorial "attachment".

Table 1 shows the stocks of all fuel and energy resources concentrated in Ukrainian regions. Thus, the calculations for the regression model represented as $y=a*t+b$ with different parameters a and b for each region, and t standing for time, allowed to come up with the forecast for 2017.

When comparing regions with high concentration of the density of fuel and energy resources, it is seen that Dnipropetrovsk, Donetsk, Lugansk and Kharkiv regions are characterized by the highest concentration of the density of fuel and energy reserves. In general, the movement of stocks of fuel and energy resources (see Table 1 (1), (2)) indicates that Ukraine's average annual production of fuel and energy resources for own needs is 100 MTFOE.

Given the unchanged consumption rates of fuel and energy resources, the existing fuel and energy reserves can suffice for the needs of Ukraine for another 400 years. Taking this into account, the development of alternatives and renewables is becoming increasingly important and necessary.

This paper does not consider the full structure of Ukraine's energy potential, both recoverable and non-recoverable, but according to the State Statistics Service of Ukraine, it can be argued that the share of extractive industry is dominant in many Ukrainian regions. In addition to the extractive industry, the most important functional areas of Ukraine's energy market, which are suitable for the development of the polarized energy space, include oil and gas transportation and storage and power supply. However, each region has its own specific features, but the centers of capital attraction are still hierarchical ones, around which the service industry is activated.

Despite the fact that fuel and energy resources are considered as factors used for the production of economic goods, the most important assessment criterion is their natural scarcity. The concentration of resources and spatial polarization are two time interdependent processes. According to scientific insights, space boundaries are concentrated by specifically defined resource factors. However, the growth poles emerge at those space points for which currently the most favorable conditions arise given the totality of factors. As a rule, something new emerges in the environment that is free from system pressure and limitations, and that should be of a liberal nature. Spatial systemically important innovations and their inherent processes predetermine the overall configuration of space.

Concentration of the density of fuel and energy resources by Ukrainian regions, TFOE (1)

Indicators Years	Stocks of all fossil fuels in TFOE					Regression coefficients	Regression coefficients	FORECAST
	2012	2013	2014	2017	2016			2017
Ukraine	40,715,913,004	40,635,268,335	40,533,472,144	40,202,884,638	40,311,560,845	-105,030,552	252,049,507,215	40,202,884,638
Crimea	32,273,390	32,228,390	32,226,960	32,208,245	32,226,960	-9,429	51,226,538	32,208,245
Vinnitsia	4,658,100	4,495,800	4,495,800	4,430,880	4,495,800	-32,460	69,902,700	4,430,880
Volyn	106,781,960	99,891,880	97,217,680	93,166,280	97,426,920	-2,163,560	4,457,066,800	93,166,280
Dnipropetrovsk	10,334,192,399	10,317,529,669	10,293,325,579	10,206,396,940	10,220,922,839	-27,122,183	64,911,840,051	10,206,396,940
Donetsk	13,037,564,990	13,017,373,070	12,988,368,590	12,949,349,290	12,972,048,150	-16,680,604	46,594,127,558	12,949,349,290
Zhytomyr	12,166,248	11,249,148	10,646,748	9,958,308	10,624,248	-369,120	754,473,348	9,958,308
Transcarpathian	11,475,129	11,531,475	11,529,746	11,281,583	11,317,660	-51,700	115,561,088	11,281,583
Zaporizhyya	3,464,920	3,464,920	3,464,920	3,464,920	3,464,920	0	3,464,920	3,464,920
Ivano-Frankivsk	72,226,690	73,524,620	76,340,080	72,132,037	71,154,680	-330,181	738,107,114	72,132,037
Kyiv	24,520,500	25,348,200	23,201,400	22,459,080	23,201,400	-478,500	987,593,580	22,459,080
Kirovograd	195,132,223	195,237,939	195,237,939	195,280,225	195,237,939	21,143	152,634,391	195,280,225
Lugansk	12,881,321,770	12,878,606,940	12,852,359,450	12,827,863,193	12,844,320,750	-10,796,077	34,603,550,502	12,827,863,193
Lviv	1,077,009,260	1,079,527,650	1,067,860,590	1,060,477,842	1,070,593,310	-3,398,446	7,915,143,424	1,060,477,842
Mykolayiv	0	0	0	0	0	0	0	0
Odessa	7,916,670	7,916,670	7,916,670	7,916,670	7,916,670	0	7,916,670	7,916,670
Poltava	541,354,150	524,637,980	524,196,500	428,003,052	451,224,950	-24,251,788	49,343,859,448	428,003,052
Rivne	40,767,300	40,726,200	38,209,200	37,352,700	38,764,500	-657,420	1,363,368,840	37,352,700
Sumy	109,672,120	105,356,610	101,133,960	83,546,688	85,796,800	-5,493,332	11,163,597,332	83,546,688
Ternopil	9,938,700	8,892,300	8,779,800	8,304,990	8,779,800	-243,030	498,496,500	8,304,990
Kharkiv	2,048,407,245	2,037,544,625	2,037,890,685	1,998,010,086	2,008,004,815	-10,405,857	22,986,623,655	1,998,010,086
Kherson	743,100	743,100	743,100	743,100	743,100	0	743,100	743,100
Khmelnitskyi	7,720,200	7,720,200	7,138,800	6,785,940	7,061,100	-189,960	389,935,260	6,785,940
Cherkasy	27,400,160	25,858,919	25,854,737	25,225,811	25,843,214	-312,032	654,593,346	25,225,811
Chernivtsi	9,402,980	9,391,110	9,388,250	9,380,608	9,380,670	-3,828	17,101,684	9,380,608
Chernihiv	56,558,600	55,475,380	54,969,440	49,115,968	50,066,610	-1,597,982	3,272,245,662	49,115,968
Kyiv	0	0	0	0	0	0	0	0
Sevastopol	0	0	0	0	0	0	0	0

Reference: calculated by the author

Table 1.

Concentration of the density of fuel and energy resources by Ukrainian regions,
 TFOE (2)

Indicators	Density of stocks of all fossil fuels in TFOE per capita					Density of stocks of all fossil fuels in TFOE per 1 sq. km				
	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
Ukraine	893.81	894.53	893.81	894.53	893.81	894.53	893.81	894.53	893.81	894.53
Crimea	16.42	16.38	16.42	16.38	16.42	16.38	16.42	16.38	16.42	16.38
Vinnitsia	2.86	2.78	2.86	2.78	2.86	2.78	2.86	2.78	2.86	2.78
Volyn	102.68	95.93	102.68	95.93	102.68	95.93	102.68	95.93	102.68	95.93
Dnipropetrovsk	3,124.19	3,133.71	3,124.19	3,133.71	3,124.19	3,133.71	3,124.19	3,133.71	3,124.19	3,133.71
Donetsk	2,979.71	2,996.71	2,979.71	2,996.71	2,979.71	2,996.71	2,979.71	2,996.71	2,979.71	2,996.71
Zhytomyr	9.59	8.91	9.59	8.91	9.59	8.91	9.59	8.91	9.59	8.91
Transcarpathian	9.15	9.17	9.15	9.17	9.15	9.17	9.15	9.17	9.15	9.17
Zaporizhyya	1.94	1.95	1.94	1.95	1.94	1.95	1.94	1.95	1.94	1.95
Ivano-Frankivsk	52.27	53.20	52.27	53.20	52.27	53.20	52.27	53.20	52.27	53.20
Kyiv	14.24	14.69	14.24	14.69	14.24	14.69	14.24	14.69	14.24	14.69
Kirovograd	196.08	197.70	196.08	197.70	196.08	197.70	196.08	197.70	196.08	197.70
Lugansk	5,708.41	5,750.73	5,708.41	5,750.73	5,708.41	5,750.73	5,708.41	5,750.73	5,708.41	5,750.73
Lviv	423.90	425.27	423.90	425.27	423.90	425.27	423.90	425.27	423.90	425.27
Mykolayiv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Odessa	3.31	3.30	3.31	3.30	3.31	3.30	3.31	3.30	3.31	3.30
Poltava	368.81	359.78	368.81	359.78	368.81	359.78	368.81	359.78	368.81	359.78
Rivne	35.24	35.14	35.24	35.14	35.24	35.14	35.24	35.14	35.24	35.14
Sumy	95.93	92.99	95.93	92.99	95.93	92.99	95.93	92.99	95.93	92.99
Ternopil	9.23	8.28	9.23	8.28	9.23	8.28	9.23	8.28	9.23	8.28
Kharkiv	746.39	744.38	746.39	744.38	746.39	744.38	746.39	744.38	746.39	744.38
Kherson	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Khmelnitskyi	5.88	5.91	5.88	5.91	5.88	5.91	5.88	5.91	5.88	5.91
Cherkasy	21.59	20.52	21.59	20.52	21.59	20.52	21.59	20.52	21.59	20.52
Chernivtsi	10.37	10.34	10.37	10.34	10.37	10.34	10.37	10.34	10.37	10.34
Chernihiv	52.48	52.00	52.48	52.00	52.48	52.00	52.48	52.00	52.48	52.00
Kyiv	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sevastopol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Reference: calculated by the author

The links between the individual elements of space are the most potent and sustainable in terms of propagation of the breakthrough wave. At the macro level, this is indeed a completely filled space in the form of its specialization as part of the territorial division of labor. At the meso and micro levels, however, "all" this breaks up into a mosaic of highly differentiated spatial fragments, many of which remain an "innovative desert". Such "empty spaces" are the last to be filled, the more so with very little innovation or nothing at all. Having lost the competitive advantages due to obsolete fixed assets and technologies, the issue of development of peripheral regions remains open.

The developed regression model for the formation of Ukraine's energy potential, which has fuel and energy resources as its factors, determines the share of the energy potential. Thus, with reference to the method of correlation-regression analysis, the multiple regression model obtained the following form:

$$Y=2.74848E+13-151813.72*X_1+1908548.43*X_2-777357.76*X_3-9368902.17*X_4-3179.27*X_5+2645.44*X_6$$

Where y is the energy potential; X₁ is gas, million cubic meters; X₂ is gas condensate, thousand tons; X₃ is oil, thousand tons; X₄ is brown coal, thousand tons; X₅ is hard coal, thousand tons; X₆ is peat, thousand tons.

The next step in this model eliminates the parameters causing high multicollinearity. As a result of calculations, a multi-resource model of the following type is obtained:

$$y=2307174906.07+1347.81*X_1+1426.78*X_2+689.28*X_3+345.29*X_4$$

Where y is the energy potential; X_1 is gas, million cubic meters; X_2 is gas condensate, thousand tons; X_3 is hard coal, thousand tons; X_4 is peat, thousand tons.

The developed model of interrelation of energy resources shows that the factors of gas and hard coal are the most significant components of Ukraine's energy potential.

When considering the elasticity of impact of an individual factor, the gas factor is the most important since an increase in the gas production level by 1% increases the energy potential by 1.19%. At the same time, one of the largest volatilities of impact is observed, indicating a significant positive momentum subject to a possible increase in production of hard coal. The loading of this factor in the energy potential growth model is also very significant and is more than 39%. Therefore, the key to boosting the energy potential is to increase the level of exploration and production of fuel and energy resources (see Table 2).

Table 2

Coefficients for assessing the impact of factors on the region's energy potential

Indicator	Value	Economic interpretation
Partial coefficients of elasticity		Used for economic interpretation of nonlinear links, shows the average percentage of change in the size of the region's energy potential subject to the increase in factor by 1% and a fixed state of other factors.
X_1	$E_{i1}=0.16$	
X_2	$E_{i2}=0.12$	
X_3	$E_{i3}=0.00$	
X_4	$E_{i4}=0.05$	
X_5	$E_{i5}=0.12$	
X_6	$E_{i6}=0.09$	
Standardized regression coefficients or beta coefficients		Used to eliminate differences in measurement and the degree of fluctuation of factors, shows the part of value of the mean-square deviation the mean value of the level of Ukraine's energy potential changes to where the respective independent variable increases by one mean-square deviation with the fixed state of other factors.
X_1	$\beta_1=0.70$	
X_2	$\beta_2=0.34$	
X_3	$\beta_3=0.05$	
X_4	$\beta_4=0.02$	
X_5	$\beta_5=0.22$	
X_6	$\beta_6=0.35$	
Delta coefficients		Shows part of the effect of each factor in the overall effect of the factors included in the regression equation.
Factor loading, %		
X_1	$\Delta_1=0.395$	
X_2	$\Delta_2=0.014$	
X_3	$\Delta_3=0.185$	
X_4	$\Delta_4=0.374$	
X_5	$\Delta_5=0.129$	
X_6	$\Delta_6=0.324$	

Reference: calculated by the author

The developed multifactor model for the formation of Ukraine's energy potential enables to assess the mutual influence of resource factors. It shows a direct interrelation between the region's capacity and the region's potential and points to the need to expand the sources of financial security for the development of the region's resource potential. This model can serve as the basis for making managerial decisions on the calculation of the level of energy security of Ukrainian regions in terms of availability of own fuel and energy resources.

Conclusion. Despite the serious structural changes in the formation of the added value of Ukrainian regions and the increase in the share of services, the development of the

postindustrial economy makes the production potential one of the significant factors of regional development and economic growth since the complex of extracting and processing industries remains dominant in the structure of Ukraine's industry, followed by individual service industries. The concentration of fuel and energy resources forms the growth poles, with the analysis of their density indicator giving impetus to the spatial development of the combined structures, which is undoubtedly a competitive edge in the context of globalization. At the same time, the importance of the periphery is also emphasized since the outflow of capital, the aging of the production sector reveal social problems. With the growth potential, the periphery in the common energy space can demonstrate intensive development together with growing and flourishing centers. The polarized development of Ukraine's energy market can help reduce energy threats to supplies of fuel and energy resources and contribute to the development of regions with high concentration of own energy potential, which to some extent can smooth out or eliminate spatial disproportions. This undoubtedly depends upon the included strategic initiatives for regional development, the state distribution policy and specific actions of the management of large economic entities aimed at integrating small and medium-sized enterprises into the whole new forms of cooperation in the sphere of their interests that are territorially located in the optimal space. In addition, effective measures are required to support the development of small territories, small business and maintenance of its infrastructure. This is subject to both the expansion of organizational and legal forms that are optimal for small businesses and the development of microfinance organizations with investment orientation.

In view of the foregoing, we consider it possible to use the approach to analyzing the density of fuel and energy resources in the energy market monitoring methods. To this end, the list of statistical studies should include the systematic collection of information on the concentration and density of fuel and energy resources for all regions of Ukraine, which will allow us to continuously analyze trends and changes. With this indicator, it is possible to suggest ways of improving the policy of stimulating regional growth.

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ПЕРСПЕКТИВИ ФОРМУВАННЯ ПОЛЯРИЗОВАНОГО ЕНЕРГЕТИЧНОГО ПРОСТОРУ: ПІДХІД ДО АНАЛІЗУ ДАНИХ

У дослідженні підкреслюється актуальність формування поляризованого енергетичного простору в контексті глобалізації та загрози енергетичній безпеці України. Для вивчення регіональних дисбалансів була розроблена методика аналізу щільності ресурсів у регіонах. Представлено мультиресурсну модель паливно-енергетичних ресурсів для вивчення енергетичного потенціалу регіону. Запропонований підхід до аналізу та оцінки концентрації щільності ресурсів дозволяє характеризувати певні регіональні диспропорції, що сприяють формуванню просторової поляризації. На основі порівняльного аналізу були визначені регіони з найбільшою концентрацією паливно-енергетичних ресурсів. Серед переваг реалізації просторової поляризації з точки зору регіональної конвергенції є можливість зменшення диспропорцій у структурах різної економічної діяльності, що є однією з основних соціально-економічних проблем, оскільки концентрація виробництва та фінансування сприяє перерозподілу ресурсів на їх користь, залишаючи периферію без реальних шансів подолати загрози економічному розвитку. Дослідження показало, що аналіз концентрації щільності ресурсів та просторової поляризації є двома взаємозалежними процесами, спрямованими на вирівнювання розвитку території.

Ключові слова: паливно-енергетичні ресурси, просторова поляризація, стовпи зростання, енергетична безпека, регіон, глобалізація.