



**Kozyrieva O.,
Sagaudak-Nikitiuk R.,
Yevtyshenko V.,
Derenkaya Y.,
Yevtyshenko G.**

RESEARCH OF THE LEVEL OF SOCIO-ECONOMIC DEVELOPMENT OF UKRAINIAN REGIONS

Досліджено процеси соціально-економічного розвитку регіонів України та запропоновано аналітичну схему ідентифікації стадії проблемності соціально-економічного розвитку регіонів країни. Обґрунтовано систему часткових показників та на її основі розраховані інтегральний та узагальнюючий показники економічного та соціального розвитку регіонів України. Запропоновано матрицю визначення проблемності регіонів України в площині соціально-економічного розвитку. Запропоновано критерії ідентифікації динамічності валового регіонального продукту регіонів країни та визначено її вплив на соціально-економічний розвиток регіонів України.

Ключові слова: соціально-економічний розвиток, дохід на одну особу, валовий регіональний продукт, рівень безробіття, коефіцієнт міграції, проблемні регіони.

1. Introduction

Socio-economic development of Ukraine is based on the substantial positive changes in the regions. So, transition processes in Ukraine were differently marked on the development of its regions: some of them managed to mobilize their capacity and gradually adapt to difficult economic conditions, while the others, as before, are currently in the state of deep economic stagnation, which has led to an increase in regional inequality.

To crown it all, taking into account the complexity of modern processes of Ukrainian regions' socio-economic development, the total assessment of determination of Ukrainian regions' levels of socio-economic development is required.

2. The object of research and its technological audit

The object of research is the process of spatial socio-economic development of Ukrainian regions. The subject of research is theoretical and methodological support for the study of the differentiation of socio-economic development of regions in the spatial economy of Ukraine.

3. The aim and objectives of research

The aim of research implies prompting the research results of determination the problem concerning consolidated assessment of socio-economic development of Ukrainian regions.

For the achievement of the aim it is necessary to decide the row of tasks:

1. The concept of spatial socio-economic development of regions of Ukraine is developed.

2. The structurally-logical scheme of estimation of factors of economic growth of regions is constructed.

3. The methodical approach to identifying the stage of the problem of socio-economic development of the country's regions is substantiated.

4. The system of concepts that describe the differentiation of socio-economic development of regions in the spatial economy of the country is defined.

4. Research of existing solutions of the problem

Modern processes of socio-economic development of Ukrainian regions are complex and poorly defined and therefore require detailed analysis to determine the factors of their irregularity.

In the scientific economic literature there are three main approaches to the survey of socio-economic processes, which are based on: modeling, analytical schemes or a combination of both directions together [1–3]. Each of the above-mentioned approaches has certain advantages and disadvantages, which are thoroughly analyzed in the work [4]. Basing on the work it can be defined that the first stage of this study will use the approach of analytic schemes.

Analysis of a number of studies [5–11], which studied the processes of the regions' socio-economic development, allows offering a certain identification stage of problematic concerning the country's regions socio-economic development.

Thus, works [5, 6] are grounded for modeling socio-economic development of countries and their regions on the basis of the allocation of central and peripheral territories.

The authors of the work [7] investigated the factors of endogenous regional growth taking into account the context of of modern problems for the achievement of steady development of regions.

In their research the authors of the work [8] define the criteria and indicators of the typology of the development of the regional economic space in the context of the formation of a network economy using a structural approach to the analysis of economic co-operations in a region.

The priority role of the state in providing of economic growth was emphasized [9, 10].

Theoretical and practical structural development models suggest that differences in regional development are the

result of their linear transition from one stage, reflecting the processes of socio-economic transformation, to another [11].

At the same time, justification of the actual approach to determining the level of socio-economic development of the regions of the country requires in-depth development, which determines the relevance of this article.

5. Methods of research

The methodology of the article is based on the theories and concepts of socio-economic and spatial development of the regions. Obtaining scientific results was based on the use of such methods and techniques:

- analysis and synthesis, logical construction - to substantiate hypotheses of the concept of spatial socio-economic development of Ukrainian regions;
- matrix approach - to identify problem regions in the area of their socio-economic development;
- scaling and economic comparative - to estimate the dynamics of economic growth in the regions;
- formalization and structural decomposition - to structure factors of economic growth of regions;
- content analysis - to construct a classification of the socio-economic status of the regions of the country and determine the sequence of growth of the problem of their socio-economic development, as well as to clarify the essence of the concepts that describe the differentiation of socio-economic development of regions in the spatial economy of the country.

6. Research results

Analytical framework for assessment the stage of problematic concerning socio-economic development of the regions is given in Fig. 1. One of the main indicators determining the economic development level of the country regions is GDP per person. Fig. 2 shows the distribution of Ukrainian regions on this indicator in 2014.

As can be judged from Fig. 2, the leader in the country in terms of GRP per person is Kyiv city - 109402 UAH. Which is far ahead of the second region in the range namely Dnipropetrovs'k region - 46333 UAH. The following areas are Kyiv region - 39988 UAH, Poltava region - 39962 UAH, Donetsk region - 37830 UAH and Kharkiv region - 31128 UAH. Outsiders of GRP per person in the country are Chernivtsi - 15154 UAH, Ternopil - 16819 UAH, Rivne - 19003 UAH and Kherson - 19311 UAH.

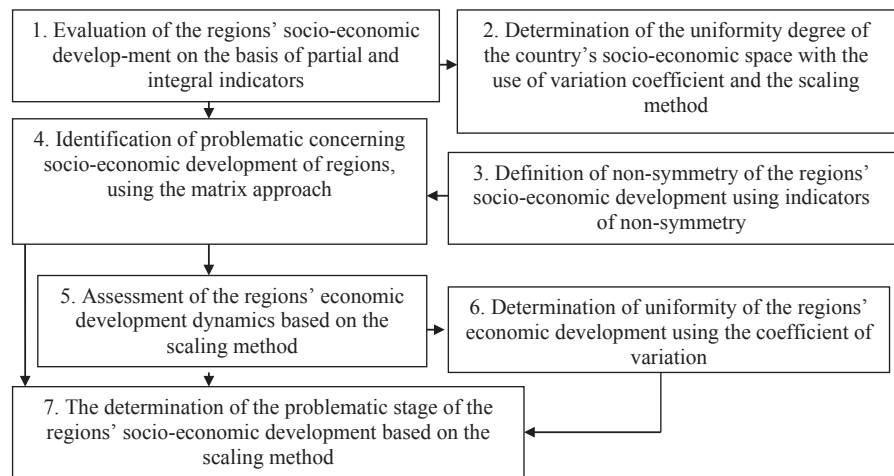


Fig. 1. Analytical scheme of identification stage of the problematic concerning socio-economic development of the country's regions

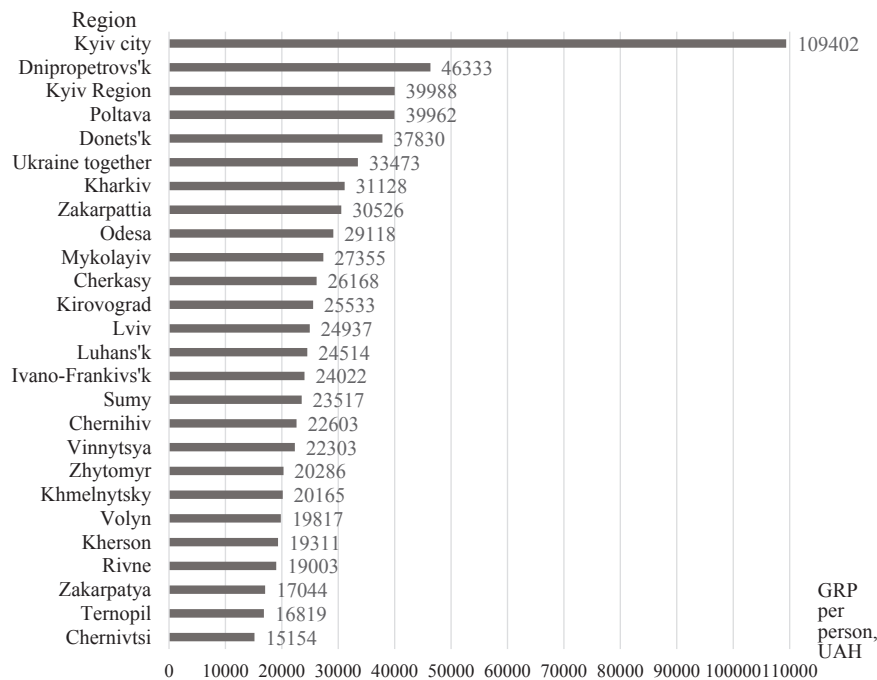


Fig. 2. The diagram of Ukrainian regions division according to the GRP indicator per person (2014)

The biggest increasing of the GRP indicator per person to the average rate in Ukraine in 2014 in comparison with 2002 was detected in Kyiv region – 26.4 %, Dnepropetrovsk region – 17.4 %, Donetsk region – 13.8 % and Poltava region – 12.0 % Meanwhile decrease of the GRP indicator was present in Sumy region – 23.3 %, Zaporizhzhya – 18.0 %, Rivne region – 15.1 % and Odesa region – 15.0 %.

While scientists characterize the economic development of the regions by one indicator – the GRP indicator per person, several indicators characterize the social development. Thus, the analysis of some works [5, 11] gives an opportunity to offer the following set: the income per capita, the unemployment rate and migration coefficient.

According to the rate of income per capita Ukrainian regions in 2014 were distributed as follows (Fig. 3).

As can be judged from Fig. 3 the leader in terms of the income rate per person in the country is Kyiv city – 65672.8 UAH, which is far ahead of the second value of Dnepropetrovsk region – 33352.1 UAH.

At the following places are Zaporizhzhya region – 31106.2 UAH, Kyiv region – 29361.5 UAH, Kharkiv region – UAH 27516.7 and Poltava region – 26998.5 UAH. Outsiders by income per person in the country are Zakarpattia region – 17789.7 UAH, Chernivtsi region – 18984.8 UAH, Ternopil region – UAH 19273.0 and Luhansk region – UAH 19920.6.

The unemployment rate of Ukrainian regions' population in 2014 was as follows (Fig. 4).

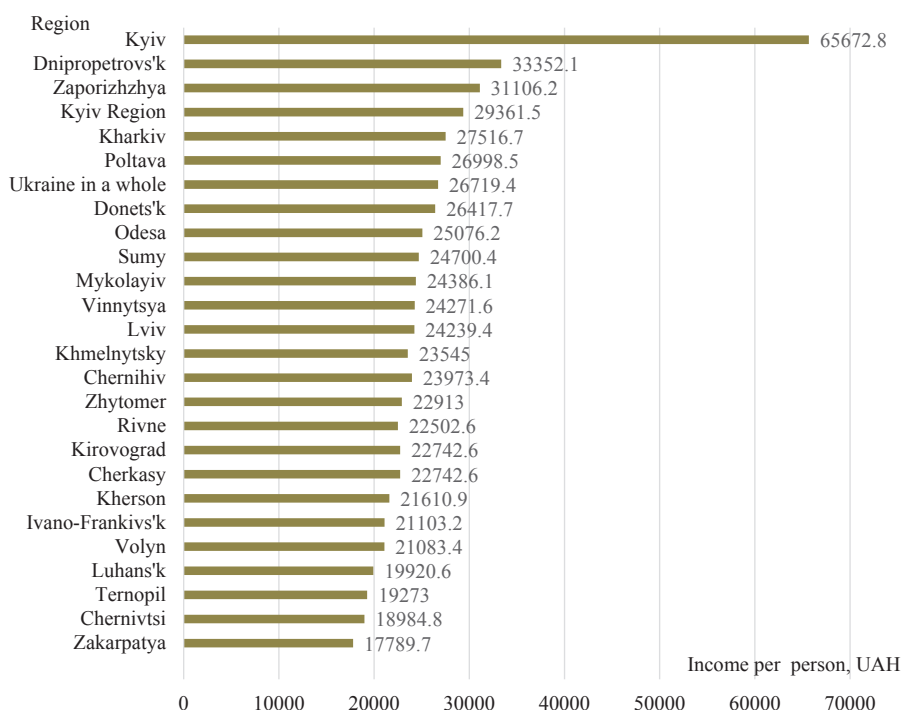


Fig. 3. Diagram of Ukrainian regions distribution according to income per person in 2014

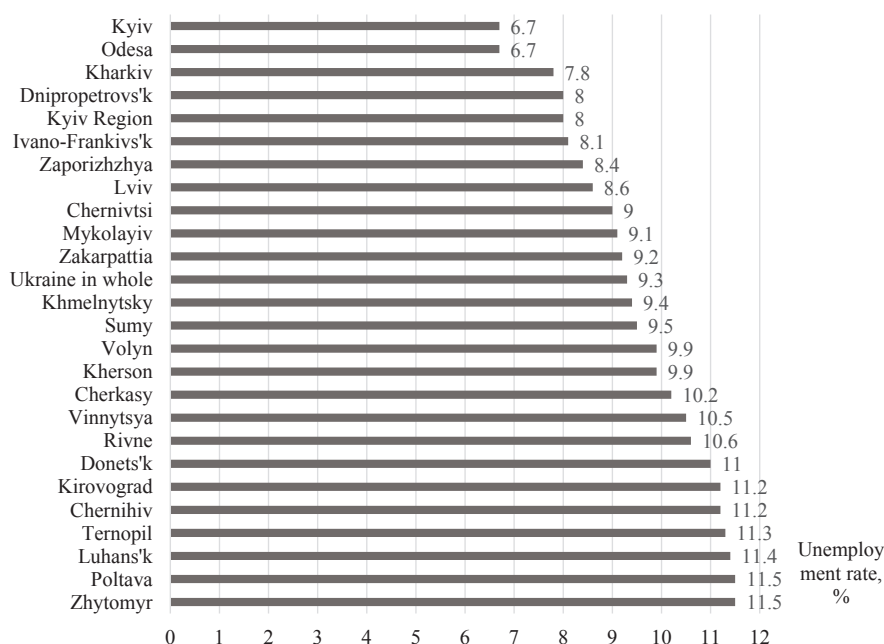


Fig. 4. Diagram of Ukrainian regions distribution according to unemployment rate in 2014

Subject to Fig. 4, the leaders of unemployment rate in the country are Kyiv city – 6.7 %, Odesa – 6.7 % and Kharkiv region – 7.8 %, while the outsiders are Zhytomyr – 11.5 %, Poltava – 11.5 % and Luhansk – 11.4 % regions.

According to migration coefficient Ukrainian regions in 2014 were distributed as follows (Fig. 5).

As can be judged from Fig. 5, the biggest positive migration coefficient has Kyiv region – 6.4 %, Kyiv city – 6.0 % and Kharkiv region – 3.0 %, while the negative migration coefficient has Luhansk region (–3.6 %) and Donetsk region (–2.5 %).

The results of integral estimation of Ukrainian regions' social development index (I_c), which is offered in work [5], are described in Fig. 6.

According to Fig. 6, Kyiv city (1,0) is significantly ahead of other regions of the country subject to the integral indicator of social development. Kyiv region is in the second place – 0.6346, it is followed by Odesa region – 0.5065, Kharkiv region – 0.4338 and Dnipropetrovsk region – 0.3725.

It should be stressed that the above mentioned indicators of Ukrainian regions social and economic development have different nature and have no threshold which could identify their problematic, and the need for state support.

Pursuant to Fig. 1, the second stage involves assessment of the homogeneity of the socio-economic space of Ukraine. For this purpose, the coefficient of variation is employed [11].

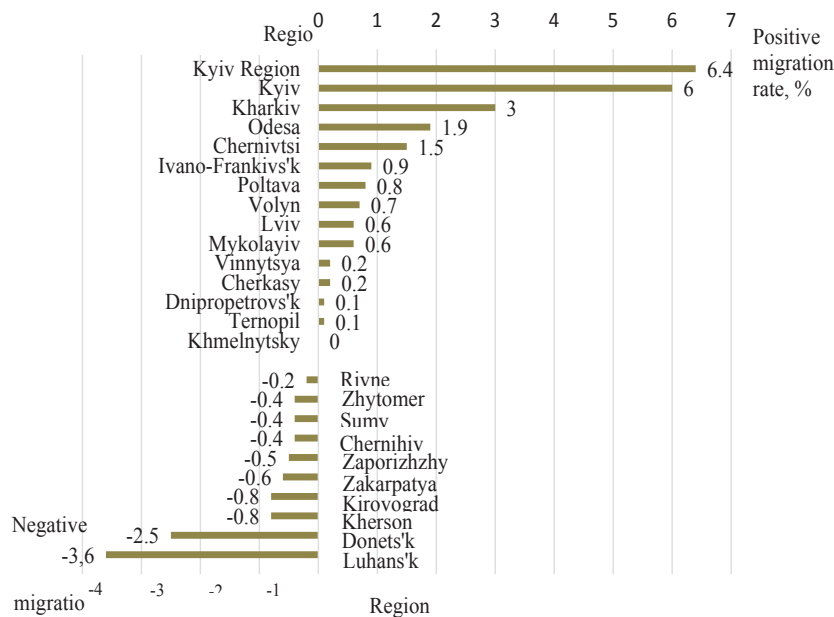


Fig. 5. Diagram of Ukrainian regions distribution according to migration coefficient

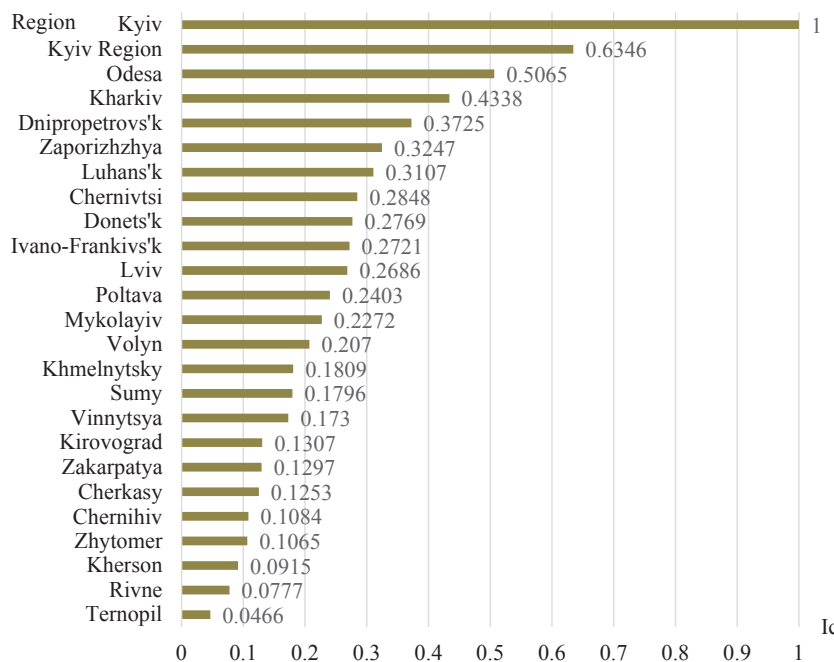


Fig. 6. Diagram of Ukrainian regions distribution subject to the integral indicator of social development in 2014

The GRP indicator in Ukraine had the following dynamics in 2002–2014 (Fig. 7).

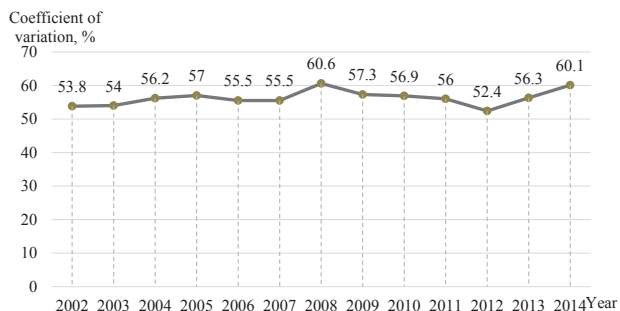


Fig. 7. The dynamics of the coefficient of GRP variation per person by region

In accordance with Fig. 7 during the analyzed period the coefficient of variation in terms of GRP per person tended to increase from 53.8 % in 2002 to 60.1 % in 2014.

Pursuant to the scale, given in Table 1, one can state that in 2014, the economic space of Ukraine in terms of GRP per person has reached the degree of heterogeneity.

Table 1

Scale of definition of the socio-economic space homogeneity degree

Coefficient of variation, %	Socio-economic space homogeneity degree
≤30	Homogeneous
30–60	Average degree of homogeneity
≥60	Heterogeneous

During the period analyzed coefficient of variation in terms of disposable income per person tended to increase to 27.7 % from 15.6 % in 2002 and to 27.7 % in 2014 (Fig. 8).

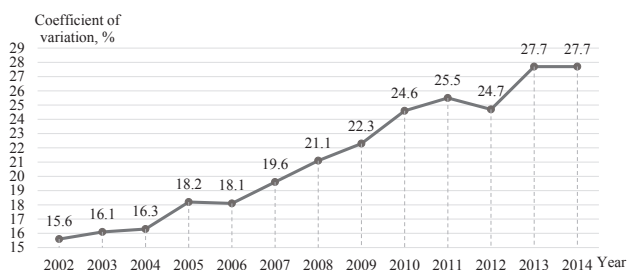


Fig. 8. Dynamics of the coefficient of variation in terms of disposable income per person in the Ukrainian regions during 2002–2014

According to the scale provided in Table 1, the social space of Ukraine in terms of disposable income per person remains uniform, despite significant growth.

The coefficient of variation in terms of unemployment rate of the population in Ukrainian regions decreased from 21.1 % in 2002 to 16.8 % in 2014 or to 20.4 % (Fig. 9).

As can be judged from the scale provided in Table 1, the social space of Ukraine in terms of unemployment rate remains uniform.

The coefficient of variation in terms of integral indicator of social development increased from 43.2 % in 2002 to 75.5 % in 2014 or to 174.4 % (Fig. 10).

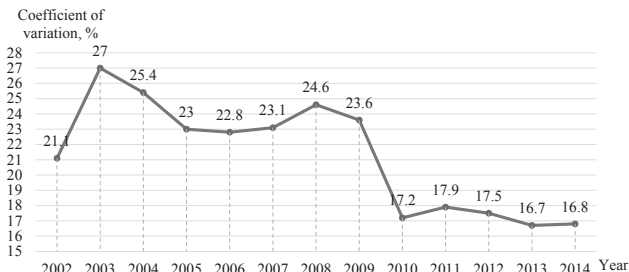


Fig. 9. Dynamics of the coefficient of variation in terms of unemployment rate of the population in Ukrainian regions in 2002–2014



Fig. 10. Dynamics of variation coefficient of integral indicator of Ukrainian regions social development in 2002–2014

According to the scale provided in Table 1, the social space of Ukraine in terms of integral indicator of social development is heterogeneous and continues to increase.

Pursuant to Fig. 1, the third stage involves the asymmetry estimation of the regions distribution in the socio-economic space of Ukraine (Fig. 11). For this reason the asymmetry coefficient was employed [11].

During 2002–2014 in terms of GRP per person the distribution of Ukrainian regions in the economic space had right-sided asymmetry that indicates the presence of combination of a great number of them with a value which is less than the national average.



Fig. 11. The dynamics of asymmetry coefficient of GRP per person in Ukrainian regions in 2002–2014

In terms of disposable income per person Ukrainian regions' distribution in the social area had a right-sided asymmetry that indicates the presence of combination of a great number of them with a value, which is less than the national average. At the same time within the analyzed period their number increased (Fig. 12).

According to the unemployment rate the distribution of Ukrainian regions in the social area had a slight left-sided asymmetry, which indicates that they are symmetrically distributed relative to the average value in the country (Fig. 13).

In terms of the integral indicator of social development Ukrainian regions had a right-sided asymmetry in the social area that indicates the presence of combination

of a great number of them with a value which is less than the national average. At the same time within the analyzed period their number increased (Fig. 14).

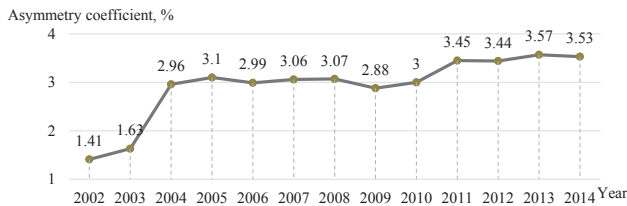


Fig. 12. The dynamics of asymmetry coefficient of disposable income per person in Ukrainian regions in 2002–2014

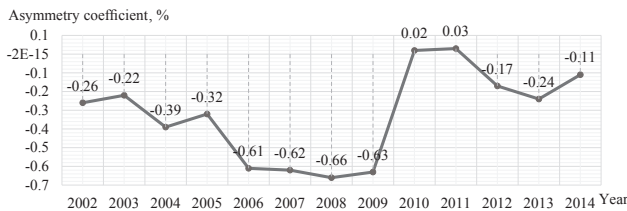


Fig. 13. The dynamics of asymmetry coefficient of Ukrainian regions population's unemployment rate in 2002–2014

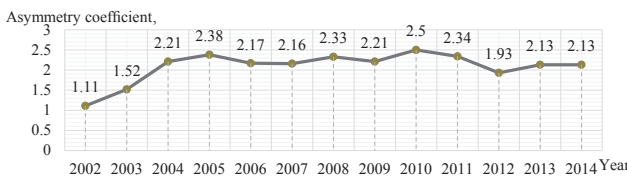


Fig. 14. The dynamics of asymmetry coefficient of Ukrainian regions of integral indicator in social development in 2002–2014

Determination of problematic regions should be carried out with the aid of bidimensional matrix in the plane of their socio-economic development (Fig. 15).

In the matrix provided in Fig. 15 the indicators calculated above, namely the integral indicator of social development (I_C) and the integral indicator of economic development – GDP per person (I_e) are used as indicators for assessing the socio-economic development.

As a threshold (I_e^{HA} , I_e^A , I_C^{HA} , I_C^A) which split the matrix into quadrants, are respectively average and above average values of integral indicators of social (I_C) and economic (I_e) development.

Pursuant to threshold, the matrix consists of 9 quadrants, characterizing the following condition of the country's regions: socially and economically unproblematic ($HI_e - HI_C$), of the average social problematic, but economically unproblematic ($HI_e - AI_C$) socially unproblematic, but of the average economic unproblematic ($AI_e - HI_C$), of the average social and economic problematic ($AI_e - AI_C$), socially unproblematic, but of the high economic problematic ($LI_e - HI_C$), of the high social problematic, but economically unproblematic ($HI_e - LI_C$), of the average social problematic but of the high economic problematic ($LI_e - AI_C$), of the high social problematic but of the average economic problematic ($AI_e - HI_C$), of the high social and economic problematic ($HI_C - HI_C$).

Subject to the calculations, Ukrainian regions in 2002 and 2014 were distributed in the matrix quadrants in the plane of their socio-economic development in the following way (Fig. 16).

Basing on the work [12–14] the following criteria for identification of types of economic growth dynamics (changes in GRP) of the country's regions are offered (Table 2).

Pursuant to criteria (Table 2), the regions with advanced growth of GRP are: Dnipropetrovsk, Kyiv, Poltava and Cherkasy regions; with catching-up growth – Zhytomyr, Ivano-Frankivsk, Kirivograd, Lviv, Kharkiv regions and Kyiv; with lagging growth – Vinnytsia, Volyn, Donetsk, Zakarpattia, Zaporizhzhya, Luhansk, Mykolaiv, Odesa, Rivne, Ternopil, Kherson, Khmelnytsky and Chernihiv regions (Table 3).

Subject to Table 3, the dynamic growth of GRP during 2002–2014 allowed the following regions: Dnipropetrovsk, Kharkiv regions and Kyiv city to hold high positions in terms of socio-economic development, while the others: Ivano-Frankivsk and Lviv regions to increase it. At the same time, low dynamics of GRP in the analyzed period led to the deterioration of socio-economic development level of a number of regions: Vinnytsia, Volyn, Donetsk, Mykolaiv, Odesa and Chernihiv.

According to the coefficient of variation in terms of the rate of GRP change the economic space of Ukraine is a homogeneous (Fig. 17).

In scientific literature and the practice of management such concepts as «troubled», «depressed» and others were used to the characterize the unsatisfactory level of social and economic development of the regions [15–25].

Table 4 provides some of the definitions of these concepts.

I_e	High	6 $HI_e - LI_C$ High social problematic, but economically unproblematic	3 $HI_e - AI_C$ Average social problematic, but economically unproblematic	1 $HI_e - HI_C$ Socially and economically unproblematic	
	Average	8 $AI_e - HI_C$ High social problematic but of the average economic problematic	4 $AI_e - AI_C$ Average social and economic problematic	2 $AI_e - HI_C$ Socially unproblematic, but of the average economic unproblematic	
	Low	9 $LI_e - LI_C$ High social and economic problematic	7 $LI_e - AI_C$ Average social problematic but of the high economic problematic	5 $LI_e - HI_C$ Socially unproblematic, but of the high economic problematic	
		High	I_C^A Average	I_C^{HA} Low	I_C

Fig. 15. The matrix of determination of Ukrainian regions' problematic in the plane of their socio-economic development

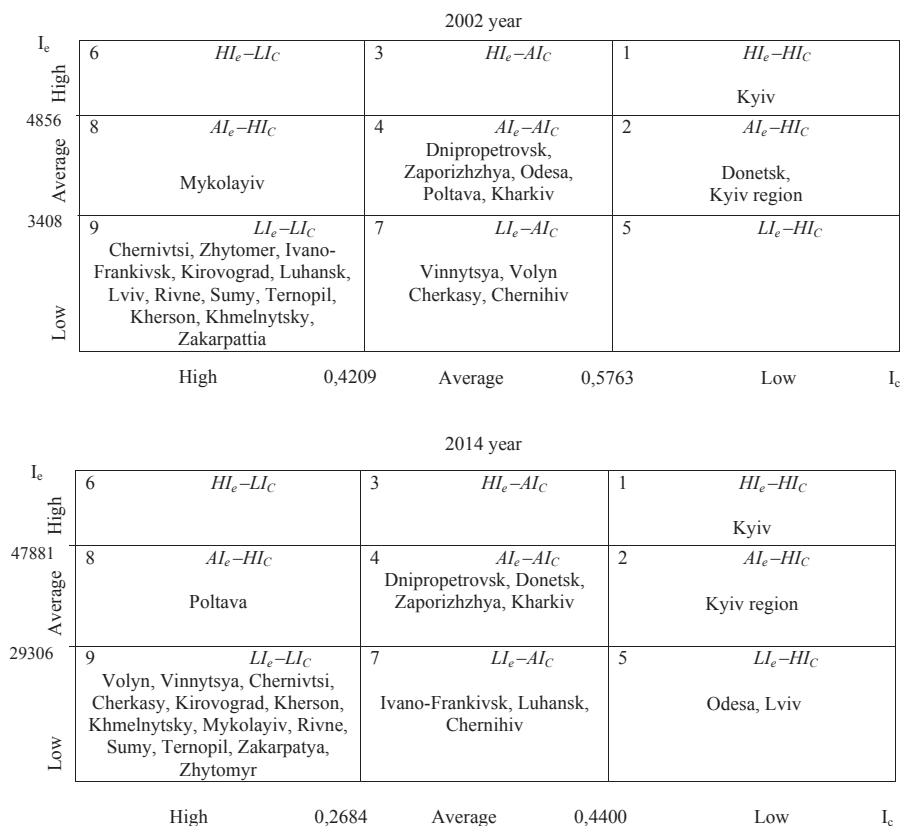


Fig. 16. Distribution of Ukrainian regions in the matrix quadrants in the plane of their socio-economic problematic in 2002 and 2014

Table 2

Criteria for identification of the GRP dynamics of the country's regions

Region's dynamics of economy	Criteria
Advanced (A)	$\frac{\Delta GRP_i}{\Delta GRP_{HA}} \geq 1.0$, ΔGRP_i – dynamics of the GRP of the region; ΔGRP_{HA} – the average value of the dynamics in the regions which have the value of this indicator higher than the national average
Catching-up (C)	$\Delta GRP_A \leq \Delta GRP_V < GRP_{HA}$, ΔGRP_A – the average value of the GRP dynamics in the regions of the country
Lagging (L)	$\frac{\Delta GRP_i}{\Delta GRP_A} < 1.0$
Degrading (D)	$\Delta GRP_i < 0$

Table 3

The influence of the GRP dynamics type on the problematic of Ukrainian regions of socio-economic development in 2002–2014

Region	2002		2002–2014			2014		
	$I_E - I_C$		ΔGRP			$I_E - I_C$		
	Quadrant	Rank	%	Rank	Cluster	Quadrant	Rank	The direction of change
1	2	3	4	5	6	7	8	9
Vinnitsa	<i>LI_e</i> - <i>AI_C</i>	7	793.1	17	L	<i>LI_e</i> - <i>LI_C</i>	9	↓
Volyn	<i>LI_e</i> - <i>AI_C</i>	7	733.4	24	L	<i>LI_e</i> - <i>LI_C</i>	9	↓
Dnipropetrovsk	<i>AI_e</i> - <i>AI_C</i>	4	1016.5	3	A	<i>AI_e</i> - <i>AI_C</i>	4	→
Donetsk	<i>AI_e</i> - <i>HI_C</i>	2	806.3	14	L	<i>AI_e</i> - <i>AI_C</i>	4	↓
Zhytomyr	<i>LI_e</i> - <i>LI_C</i>	9	894.1	8	C	<i>LI_e</i> - <i>LI_C</i>	9	→

Continuation of Table 3

1	2	3	4	5	6	7	8	9
Zakarpattia	$LI_e - LI_C$	9	771.9	18	L	$LI_e - LI_C$	19	→
Zaporizhzhya	$AI_e - AI_C$	4	742.0	23	L	$AI_e - AI_C$	4	→
Ivano-Frankivsk	$LI_e - LI_C$	9	871.6	9	C	$LI_e - AI_C$	7	↑
Kyiv	$AI_e - HI_C$	2	1140.6	1	A	$AI_e - HI_C$	2	→
Kirovograd	$LI_e - LI_C$	9	915.2	6	C	$LI_e - LI_C$	9	→
Luhansk	$LI_e - LI_C$	9	845.3	11	L	$LI_e - AI_C$	7	↑
Lviv	$LI_e - LI_C$	9	900.9	7	C	$LI_e - HI_C$	5	↑
Mykolaiv	$AI_e - LI_C$	8	799.4	16	L	$LI_e - LI_C$	9	↓
Odesa	$AI_e - LI_C$	4	757.7	20	L	$LI_e - HI_C$	5	↓
Poltava	$AI_e - LI_C$	4	988.4	4	A	$AI_e - LI_C$	8	↓
Rivne	$LI_e - LI_C$	9	701.5	25	L	$LI_e - LI_C$	9	→
Sumy	$LI_e - LI_C$	9	746.8	22	L	$LI_e - LI_C$	9	→
Ternopil	$LI_e - LI_C$	9	821.2	12	L	$LI_e - LI_C$	9	→
Kharkiv	$AI_e - AI_C$	4	869.5	10	C	$AI_e - AI_C$	4	→
Kherson	$AI_e - LI_C$	9	761.2	19	L	$LI_e - LI_C$	9	→
Khmelnitsk	$LI_e - LI_C$	9	803.1	15	L	$LI_e - LI_C$	9	→
Cherkasy	$LI_e - AI_C$	7	1028.2	2	A	$LI_e - LI_C$	9	↓
Chernivtsi	$LI_e - LI_C$	9	752.1	21	L	$LI_e - AI_C$	7	↑
Chernihiv	$LI_e - AI_C$	7	813.1	13	L	$LI_e - LI_C$	9	↓
Kyiv city	$HI_e - HI_C$	1	916.0	5	C	$HI_e - HI_C$	1	→

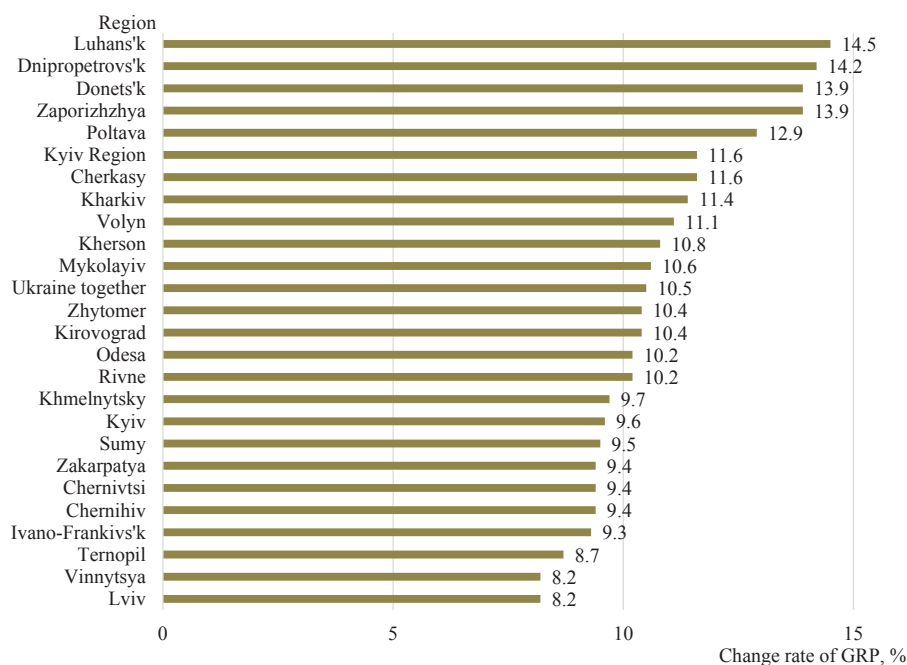


Fig. 17. The coefficient of variation in terms of rate of GRP changes indicator in Ukrainian regions in 2002–2014

Table 4

The essence of the concepts that characterize the problematic of socio-economic development of the state's regions in the scientific literature

Author/ Source	Definition of the concept
Problematic regions	
Perroux F [8]	Problematic area – the area that isn't able to solve their socio-economic problems or realize their highest potential and therefore requires active support from the state
Machihina A. V. [19]	Problematic regions are crisis, retarded, depressed and border regions of the North. The primary characteristics of these regions are: a low living standard of the population, lack of investment, labour shortage, ethnic conflicts, outdated production
Tolchinskaya M. N. [20]	Problematic region – the territory possessing during a long period of time low economic potential, the development of production and investment activity, living standard of the population, a high unemployment rate compared to the average rate in the country
Depressive regions	
Novikova A. [21]	Depressive areas – industrialized areas, the crisis state of which is a manifestation of the structural crisis of the economy and the uneven development of industrial production in terms of industry sectors and regions of Ukraine
Yaroshenko I. V. [22]	Depressive regions are those in which economic growth is absent or is not significant
Klimov A. A. [23]	Depressed regions are characterized by the processes in the economy that are in stagnation, social tensions and with low level of entrepreneurial activity, regardless of their geopolitical location
Underdeveloped regions	
Capello R. [11]	Underdeveloped regions – areas with the lowest indicators of the magnitude of special production, highly specialized economic and mainly raw materials or agricultural orientation
Yaroshenko I. V. [22]	Underdeveloped regions are those that have low economic level and unfavorable structure of the economy
Ivanov Yu. B., Oleynik A. D. [24]	Underdeveloped regions are problem regions, which have a low level of economic activity, low level of diversification of the sectoral structure of the industry, a significant lag behind other regions in terms of accumulated production potential, weak scientific and technical potential, relatively weak infrastructure areas (including transport), underdeveloped social services
Crisis regions	
Keretsman V. Yu. [25]	Crisis regions – the regions in which the systemic crisis is causing irreversible social and political strain
Yaroshenko I. V. [22]	Crisis regions are those regions in which economic growth is absent or negligible
Tolchinskaya M. N. [20]	Crisis regions differ in the extreme nature of economic, socio-political and eco-natural processes

In [19] there are main approaches segregated to determine the types of regions' development, by virtue of which the following scheme of the formation of the concept of «problematic regions» is offered (Fig. 18).

Basing on the above-mentioned statement, one can offer the following classification scheme of socio-economic state of the country's regions (Fig. 19).

On the basis of the concepts determination provided in Table 4, which were classified in Fig. 19, sequence of the growth of problematic of regions' socio-economic development is as follows: depressive → underdeveloped → crisis.

In this case, the scale of determining the stage of problematic of regions' socio-economic development will be as follows (Table 5).

Pursuant to the scale, provided in Table 5, Ukrainian regions are at the following stages of the problematic of socio-economic development (Table 6).

As can be judged from Table 6, 4 regions in Ukraine (16 % of the total number) are unproblematic, 2 (8 %) – depressive, 6 (24 %) – underdeveloped, 13 (52 %) – crisis.

Unproblematic regions have high or average level of economic and social unproblematic ($1[BI_e - BI_c] - 1[CI_e - CI_c] - 2[CI_e - CI_c]$) and advanced or chocking-up dynamics of growth (2BP2HP).

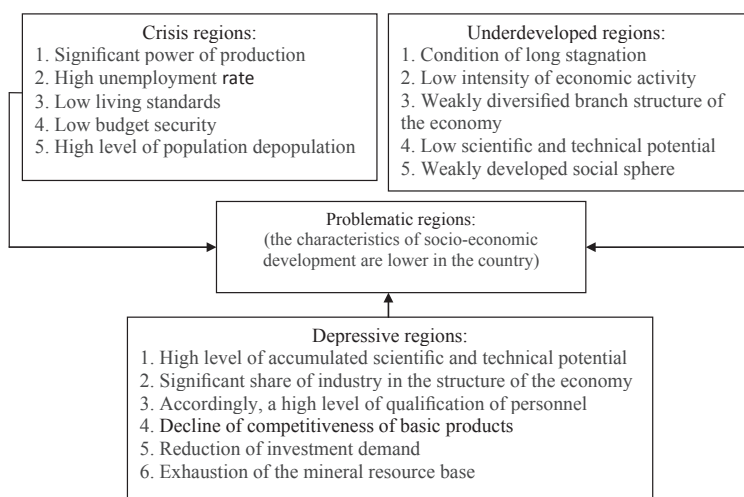


Fig. 18. The formation of the concept of «problematic regions» [19]

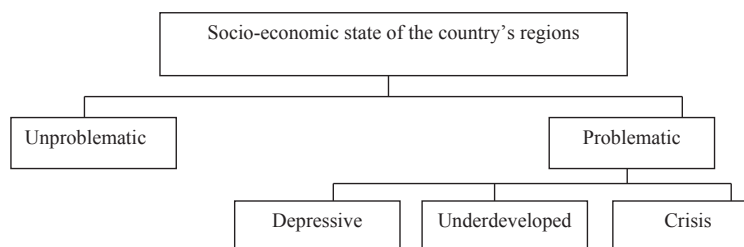


Fig. 19. Classification of socio-economic state of the country's regions

Table 5

Determination scale of the stage of the problematic of regions' socio-economic development

Stage of problematic		Level of problematic	Dynamics of growth
Unproblematic		$HI_e - HI_C$ $AI_e - HI_C$ $HI_e - AI_C$ $AI_e - AI_C$	A C
Problematic	Depressive	$HI_e - HI_C$ $AI_e - HI_C$ $HI_e - AI_C$ $AI_e - AI_C$	L D
	Under-developed	$LI_e - HI_C$ $HI_e - LI_C$ $LI_e - AI_C$ $AI_e - LI_C$	A C L D
	Crisis	$LI_e - LI_C$	A C L D

Table 6

Identification of Ukrainian regions in terms of the stage of problematic of socio-economic development in 2014

Region	Level of problematic in 2002	Dynamics of growth in 2002-2014	Level of problematic in 2014	Stage of problematic
Kyiv (city)	$HI_e - LI_C$	C	$HI_e - LI_C$	Unproblematic
Kyiv	$AI_e - LI_C$	A	$AI_e - HI_C$	Unproblematic
Dnipropetrovsk	$AI_e - AI_C$	A	$AI_e - AI_C$	Unproblematic
Donetsk	$AI_e - HI_C$	L	$AI_e - AI_C$	Unproblematic
Zaporizhzhya	$AI_e - AI_C$	L	$AI_e - AI_C$	Unproblematic
Kharkiv	$AI_e - AI_C$	C	$AI_e - AI_C$	Unproblematic
Lviv	$LI_e - LI_C$	C	$LI_e - HI_C$	Underdeveloped
Odesa	$AI_e - AI_C$	L	$LI_e - HI_C$	Underdeveloped
Ivano-Frankivsk	$LI_e - LI_C$	C	$LI_e - AI_C$	Underdeveloped
Luhansk	$LI_e - LI_C$	L	$LI_e - AI_C$	Underdeveloped
Chernihiv	$LI_e - AI_C$	L	$LI_e - AI_C$	Underdeveloped
Poltava	$AI_e - AI_C$	A	$AI_e - LI_C$	Underdeveloped
Vinnitsya	$LI_e - AI_C$	L	$LI_e - LI_C$	Crisis
Volyn	$LI_e - AI_C$	L	$LI_e - LI_C$	Crisis
Zhytomyr	$LI_e - LI_C$	C	$LI_e - LI_C$	Crisis
Zakarpattia	$LI_e - LI_C$	L	$LI_e - LI_C$	Crisis
Kirovograd	$LI_e - LI_C$	C	$LI_e - LI_C$	Crisis
Mykolaiv	$AI_e - LI_C$	L	$LI_e - LI_C$	Crisis
Rivne	$LI_e - LI_C$	L	$LI_e - LI_C$	Crisis
Sumy	$LI_e - LI_C$	L	$LI_e - LI_C$	Crisis
Ternopil	$LI_e - LI_C$	L	$LI_e - LI_C$	Crisis
Kherson	$LI_e - LI_C$	L	$LI_e - LI_C$	Crisis
Khmelnitsk	$LI_e - LI_C$	L	$LI_e - LI_C$	Crisis
Cherkasy	$LI_e - AI_C$	A	$LI_e - LI_C$	Crisis
Chernivtsi	$LI_e - LI_C$	L	$LI_e - LI_C$	Crisis

Depressive regions are characterized by the average level of economic and social problematic $[2(CI_e - CI_C)]$ and lagging dynamics of growth (2BC).

Underdeveloped regions have the average or high level of economic problematic and low, average or high level of social problematic $[2(HI_e - BI_C) - 3(HI_e - CI_C) - 1(HI_e - HI_C)]$ and lagging, chocking-up or advanced dynamics of growth (1BP2HP3BC).

Crisis regions are characterized by low level of economic and social problematic $[13(HI_e - HI_C)]$ and lagging, chocking-up or advanced dynamics of growth (1BP2HP10BC).

7. SWOT analysis of research results

Strengths. The proposed operational model for studying the differentiation of the country's socio-economic space has allowed the regions of Ukraine to be positioned in the context of their socio-economic development.

Weaknesses. The uncertainty of the exhausted list of factors of influence on regional competitiveness at the macro, meso and local level, as well as the innovative activity of business entities operating in the region.

Opportunities. Forming of instruments of state support of equalization of social and economic development of Ukrainian regions. The state policy of regional development should be implemented in relevant strategies, programs, projects and plans that must be developed taking into account insufficient efficiency of traditional instruments of smoothing of regional development such as transfers. It is advisable to carry out continuous monitoring of indicators of economic and social development of regions, to track and timely adjust its differentiation. Thus, application of the offered instruments is able to decrease the socio-economic unevenness of regional development in the economic space of Ukraine, which is of particular importance during the strengthening of foreign policy challenges and the aggravation of the threat to the integrity of the country.

Threats. The imperfection of the existing spatio-territorial, state and tax-budget systems significantly reduces the level of socio-economic development of certain regions.

8. Conclusions

1. The processes of socio-economic development of Ukrainian regions is researched and the analytical scheme of identification stage of the regions' problematic of socio-economic development is offered. The scheme includes areas such as the formation of private and integrated indicators of economic and social development, assessment of the dynamics and asymmetry of regional development,

the identification stage of the regions' problematic of socio-economic development based on the method of scaling.

2. The system of fractional indicators is justified and on its basis the integral and generalizing indicators of economic and social development of the regions of Ukraine are calculated. The leaders in the integral indicator of social development in 2014 were Kyiv city, Kiev, Odesa, Kharkiv, Dnipropetrovsk and Zaporizhzhia regions. The leaders for the general indicator of economic development in 2014 were Kyiv city, Dnipropetrovsk, Kiev, Poltava, Donetsk and Kharkiv regions.

It is proved in the work that asymmetry, indicating the formation and consolidation of the trends of the uneven socio-economic development of Ukrainian regions is inherent to the indicators that characterize the economic and social development of Ukrainian regions.

3. Methodical provisions on the positioning of Ukrainian regions in the plane of their socio-economic development is developed. The following states of the regions of the country are identified: socially and economically unproblematic; socially unproblematic, but of the average economic problematic; of medium and high social and economic problematic etc.

It was proved that some regions of Ukraine, namely Ivano-Frankivsk, Lugansk, Lviv, Chernivtsi, managed to improve their position in the matrix of socio-economic development assessment during the studied period.

4. The classification of socio-economic state of the country's regions is refined and the sequence of growth of socio-economic development problematic is determined. The growth of socio-economic development problematic can be as follows: depressive – underdeveloped – crisis. On this basis the scale of determining the stage of problematic of socio-economic development of the country's regions is justified.

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ИССЛЕДОВАНИЕ УРОВНЯ СОЦИАЛЬНО-ЭКОНОМИЧЕСКОГО РАЗВИТИЯ РЕГИОНОВ УКРАИНЫ

Исследованы процессы социально-экономического развития регионов Украины, предложена аналитическая схема идентификации стадии проблемности социально-экономического развития регионов страны. Обоснована система частных показателей и на ее основе рассчитаны интегральный и обобщающий показатели экономического и социального развития регионов Украины. Предложено матрицу определения проблемности регионов Украины в плоскости социально-экономического развития. Предложены критерии идентификации динамичности валового регионального продукта регионов страны и определено ее влияние на социально-экономическое развитие регионов Украины.

Ключевые слова: социально-экономическое развитие, доход на одну особу, валовой региональный продукт, уровень безработицы, коэффициент миграции, проблемные регионы.

Kozyreva Olena, Doctor of Economic Sciences, Associate Professor, Department of Management and Economics, National University of Pharmacy, Kharkiv, Ukraine, e-mail: yakakos74@gmail.com, ORCID: <http://orcid.org/0000-0002-2014-4584>

Sahaidak-Nikitiuk Rita, Doctor of Pharmaceutical Sciences, Professor, Department of Processes and Equipment of Chemical and Pharmaceutical Production, National University of Pharmacy, Kharkiv, Ukraine, e-mail: sagaidak_rita@ukr.net, ORCID: <http://orcid.org/0000-0002-9337-7741>

Yevtushenko Viktoriia, PhD, Associate Professor, Department of Marketing and Management of Foreign Economic, V. N. Karazin Kharkiv National University, Ukraine, e-mail: evtushenko_va@ukr.net, ORCID: <http://orcid.org/0000-0002-7764-2277>

Derenskaya Yana, PhD, Associate Professor, Department of Management and Economics, National University of Pharmacy, Kharkiv, Ukraine, e-mail: y.derenskaya@gmail.com, ORCID: <http://orcid.org/0000-0001-7428-6249>

Ievtushenko Ganna, PhD, Associate Professor, Department of Marketing and Management of Foreign Economic, V. N. Karazin Kharkiv National University, Ukraine, e-mail: evtushenko_anna@ukr.net, ORCID: <http://orcid.org/0000-0003-0472-0737>

UDC 656.615:332.1

DOI: 10.15587/2312-8372.2017.108826

Pavuk O.

COMPARISON OF PORT ACTIVITIES OF THE EAST COAST OF THE BALTIC SEA: 1996–2016

Показано, що за період 1996–2016 рр., після будівництва ряду портів в Ленінградській області (Росія), обсяги вантажообігу в регіоні Східного узбережжя Балтійського моря зросли в 4,5 рази, в той час як в країнах Балтії приблизно в 2 рази. Зроблено висновок, що позитивна динаміка світового обороту морських вантажів дозволяє дивитися на майбутнє всіх портів з оптимізмом.

Ключові слова: Балтійське море, Євроазіатський регіон, морський транспорт, вантажообіг, Балтійські країни.

1. Introduction

Seaports play an important role in the development of the East Coast region of the Baltic Sea. In the mid-90s of the 20th century, the ports of Latvia, Lithuania and Estonia played a key role in transshipment of goods. For 20 years, after the construction of a number of ports in the Leningrad region, the volume of cargo turnover in the designated region has grown 4.5 times, and transshipment in six Russian ports has grown 24 times, while in the Baltic States it has approximately doubled. Politicians of

both sides often use rhetoric that undermines interstate economic relations. However, the positive dynamics of the world turnover of sea cargoes allows to look at the future of all ports with optimism.

2. The object of research and its technological audit

The object of scientific research is the performance of the ports of the East Coast of the Baltic Sea, as well as data on the development of economies in the Baltic States.