Formation strategy of economic structures: the tools and practices

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The authors of research within the framework of collective monograph came to the conclusion about the need to study the development strategy of economic structures, highlight the role of the resource potential in the development of the economy, the methodical evaluation of the resource potential of the tools of economic entities.

The authors identified the most important factors that hinder the broad development of economic structures in the face of increasing competition. The research results have been tested on various models of development and validation of appropriate strategies that are implemented in different branches of the national economy and contribute significantly to the economic efficiency of market participants, the ability to provide a spatial transformation of the economy. The results obtained in the course of research, can be used in decision-making at the level of how economic structures and at the level of local governments, on the formation of the resource potential and development entities. Results can also be used by students and young scientists on modern concepts of structural changes in the regulation of economic processes and ensure the stability of the consumer market.

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SCENARIO ASSESSMENT PREDICTION OF UNBALANCED DEVELOPMENT OF THE BORDER REGIONS UNDER CONDITIONS OF CIVILIZATION CHANGES

European Regional Policy is in a state of constant evolution and constant search for answers to the challenges of this dynamic world, i.e. in terms of civilizational changes. However, analysis of the process of its formation and its implementation, of factors and of events, under which it has evolved, and of basic activities performed within it, gives the reasons for the selection of individual characteristics that can be applied to regional policy of frontier regions as a general phenomenon.

Both, experience of the EU and quick comparative analysis of socio-economic indicators of any country and its regions indicate the presence of imbalances. Ambiguous interpretation and understanding of regional disparities in conditions of uncertainty, instability, unpredictability, and imbalance and asymmetric environment significantly complicate the identification of the causes that contribute to their occurrence in real life. As a result, this limits the opportunities for implementation of classification and quantification of unbalanced development of the national economy and, most importantly, it hampers the process of developing guidelines and measures to reduce their negative impact, which in turn requires the necessity to define approaches to assessment techniques of unbalanced development of border regions, and it also contributes to the popularity of use of the scenario approach for economic prediction in management practice.

Issues of scenario assessment prediction of unbalanced development of the world economy and their border regions in terms of civilizational changes have been investigated by a number of domestic and foreign scientists: T. Artiomova, V. Voronina, H. Voronova, V. Heyets, M.

Dolishniy, Ya. Zhalilo, S. Zlupko, V. Kulyk, T. Mirzodayeva, Zh. Naumenko, L. Prudnikova, S. Romanyuk, L. Shynkaruk, I. Shkola and others. Their works are devoted to the research of the newest processes in the globalized economy, analysis of inter-regional and intra-regional disparities, asymmetries, imbalances of social and economic development, trans-nationalization of economic systems, economic divergence and convergence of countries and their regions, global financial integration and processes of techno-globalism in conditions of civilizational changes. However, there is a necessity of further development of methodological aspects of the scenario approach use in predicting assessment of unbalanced development of the border regions in terms of civilizational change.

Economy is a war of proportions. And today one can notice a chain reaction of distortions of basic economic proportions that are identified as disproportions and lead to imbalances, i.e. disproportions are characteristics of both proportionality and its negative changes.

Economic science, as the whole world today, is undergoing reappraisal of values. Thus mostly structural components (proportions, disparities) but not the total values will allow finding solutions to crisis of the global economic development model. Having regard to the theory of «balanced economic growth» we can speak of keeping certain key variables in a fixed ratio that makes the system inflexible, inertial and unsuitable to innovations because it creates rules of the game according to the principle «all or none» when it is necessary to change everything or to change nothing. Keeping the proportional ratio, it is extremely difficult to change everything at once. And in contrast to this an outstanding scientist Joseph Schumpeter proved that economic development also needs civilizational changes that give way to new and perspective ones, and these changes represent some disparities.

Each national economy needs both synchronization and certain de-synchronization. But unfortunately, today we lack both data and measurement system that will make it possible to determine when it is necessary to go beyond one thing or another, as science «chronemics» (being the science of time (lag) consistency in the economy) is in a formative stage and that category disparity may be one of the indicators that will allow it to develop.

According to the balance theory proportionality acts as a condition for achieving both full and partial equilibrium and unbalanced states. At the same time the two latter conditions are caused by disproportions that create imbalances.

According to depth imbalances are distinguished as follows:

surface imbalances are in the demand structure and in income distribution;

deep imbalances are in the model of economic growth and in the industrial structure.

According to economic levels proportions/disparities are distinguished as follows:

macroeconomic – which characterize correlations of certain aspects and elements of social production;

inter-industry – which reflect correlations between branches or between complex industries;

intra-branch – which characterize a ratio within the same industry;

territorial – which reflect the territorial allocation of productive resources within the country, the economic ratio of economic areas, regions, border regions, clusters and field in the production and distribution of the social product [7].

The economic proportions express various correlations in terms of production, distribution, exchange and consumption, therefore classification criteria can be grouped according to the following criteria:

method of economic and statistical measurement: material, valuable;

nature of the final result (goods and services), material production, service industry;

production structure: the ratio of production areas and industries [4].

These proportions reflect material aspects of the national economy. The socio-economic classification criterion is another important aspect that provides such proportions as the ratio of different types of property, social-class structure of the employed population, population structure according to earnings and so on. Economic proportions / disproportions are quite important and they are between the means of production and labor force; various types of production; the ratio between production, distribution, exchange and consumption; accumulation and consumption; economic systems, sectors and sub-sectors; various types of ownership; economic sectors (public and private); the results of the national production.

The main problem of economic systems reproduction is the formation of proportions between: production and consumption; units of the national production; production costs and product revenues from the sale of production; reimbursement of consumed capital and accumulation; consumption and accumulation (savings); savings and investments. [4]

The question of proportionality / disproportionality is expressed in growth by the «golden rule» when under accumulation one realizes such savings rate, in which the state of stable balance of economic system with the highest consumption is set. Society exists to consume the results of economic development, and not to produce products only for products by themselves. Therefore it is understandable why the question of such a steady level of capital stock, in which consumption level in the country becomes the highest, arises. The answer to this question can be given by the so-called «golden rule» of accumulation.

Most likely there aren't any generally accepted for economy quantitative indicators which would clearly give opportunity to identify imbalance impact as positive or negative. As the same economic indicators, proportions can be considered either as positive by some individuals or as negative and disproportionate by others.

In a market economy, identifying and removing at least the vast number of social and economic disparities in the economic literature are considered in the context of supply and demand and they are detailed in all Western macroeconomics textbooks. However, terms disparity and imbalance are much more important in statics and dynamics. In the static approach they are used concerning almost all economic and social phenomena, and as to dynamics, it can be divided into two vectors, namely: the first one helps to overcome them, the second one increases the disparity and imbalance.

In turn, most of the data that are in statistical collections of Ukraine and other countries, the UN, other international organizations, can be considered as the basis for disproportion and imbalance analysis of many socio-economic indicators in statics and in dynamics.

The ratio between maximum and minimum values of the indicators under comparison can be considered as one of the most suitable methods for statistical, quantitative expression of disproportionality (especially in respect of disproportionality in statics between countries and regions). There are at least two fundamental statistical requirements for the analysis of proportionality, without which the conclusions are either impossible, or they are inaccurate and false, and in many cases these conditions are not adhered to. The first requirement is that compared objects should be the same; the second requirement is that it is necessary to use international classifications when comparing the structural disproportionality.

Leading international economic journals draw particular attention to the need to follow the distinct rules regarding compliance with the

statistical data provided in statistical collections or to the realities of economic and social processes that they should reflect, especially those with emphasis on disproportionality in economic research analysis.

The overall conclusion regarding this problem lies in the fact that statistics of disproportionality manifestations are to be analyzed in terms of their reality and are not to be used purely mechanically. Undoubtedly, this requirement is not easy and these rather complex methodological and practical aspects should be primarily settled by statistical services, not by the users of statistics, but in some cases the contradictions between the real situation and statistics are so irreconcilable that they can not be overlooked.

Besides among numerous foreign research papers on various aspects of disproportionality it is necessary to pay special attention to the methodology for assessing the unbalanced development of certain groups of countries and regions in general, namely:

1. Formation of ratings (comprehensive assessments) between countries and regional development;

2. Use of methods of income inequality research (Lorenz curve, Gini coefficient);

3. Use of any classic indicator from the mathematical statistics arsenal used for the assessment of the scattering vector component to the average meaning – dispersion, standard deviation, variation coefficient, etc.;

4. Method of construction of scenario prediction social and economic disparities in the border regions.

The first method of disproportionality assessment is the method of ranking (rating). In general it is defined as an assessment, that is an order or the classification of certain phenomena according to a certain scale by a certain index or group of indices. Ratings are used when there are objective difficulties in measuring the phenomenon. It has become the most popular means for folding information on a large scale. The ability to perform serious orientation function can be named as one of main rating features. There are many ratings in various areas and with different functions, and they can be classified on the basis of various parameters. By quantitative characteristics ratings are divided into one-factor and multifactorial. But ranging can not display the essence of deviations of a phenomenon because it gives an incomplete assessment of the disproportionate phenomena [2].

The second method of disproportionality assessement is the Lorenz curve method, being graphic representation of income inequalities

indicator. In this graph the horizontal axis shows percentage of the population from the poorest to the richest, and the vertical axis shows income percentage received by them. This curve characterizes the degree of equality (inequality) in the distribution of income. The greater the deviation of the Lorenz curve off the bisector, the greater the inequality in distribution of the country income is, and therefore it results in higher concentration (figure 3.5).
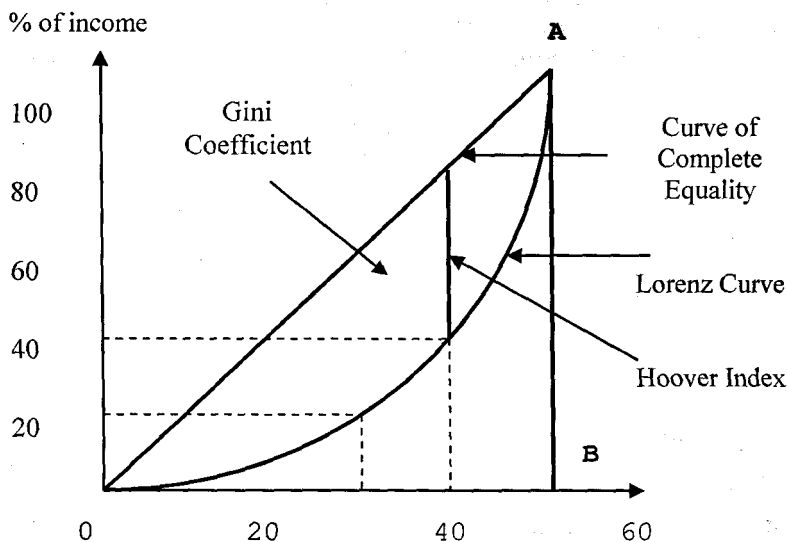

Figure 3.5. Lorenz curve and Gini coefficient

$$K_d = \frac{sL}{s\triangle OAB},\qquad(3.2)$$

K_d – Gini coefficient;
sL – area of a figure, formed between curve L i line OA;
$s\triangle AOB$ – area of triangle AOB.

Hoover index is another indicator of income inequality connected with the Lorenz curve. It is equal to the share of public revenue to be redistributed to achieve equality. Graphically it is represented (figure 3.5) as the longest vertical segment connecting the actual Lorenz curve and the line of equality. It shows what part of population income should

251

be redistributed to achieve equality in income.

However, the method of the Lorenz curve and the Gini coefficient has some drawbacks, as for example, they do not take into consideration the source of income and deviations in investigated uneven distribution of incoming among the people. That's why these figures only deal with monetary income, while some workers receive wages in the form of foodstuffs and so on.

It should be noted that Theil Index, unlike the Gini coefficient, can be decomposed. Thus, due to this the index allows to speak about the percentage of social inequality concerning specified by population division into groups and to compare various divisions.

Convergence and divergence are very common methods of assessing disproportionality in the west. In economic terms, convergence is rapprochement of state economic policies, reduction of the gap in indices of economic development between national states, leveling of the socio-economic development of countries in the framework of integration association. Convergence criteria are macroeconomic and institutional conditions, compliance with which gives the right to join the integration association.

Divergence is a term used in economics to refer to motion along divergent lines: the growing gap between the levels of development of certain countries, the growing differences between the national economic models, their individual structures and mechanisms. The term «divergence» is also used to refer to deviation of certain countries from the average macroeconomic indicators for a certain region or a community of countries. There are two concepts of convergence in the analysis of economic growth of countries and regions. R. J. Barrow, X. Sala-I-Martin, De Long, Baumol suppose that convergence occurs when growth of the poor countries is higher than growth rate of the rich ones. That is, in this case we can talk about the tendencies, when the poor countries catch up with the rich ones by the level of income or of output per capita.

R. J. Barrow and H. Sala-I-Martin name this process, sometimes described as «regression to the average values», as β-convergence [1].

The basis for the analysis of σ-convergence is a device of statistical indicators (variations (small change or deviation), concentration (saturation, integration), entropy (a measure of uncertainty, lack of information)), assessment of β-convergence is formed using the apparatus of econometrics, which includes regression models of tempo and valuable indicators. Statistical apparatus of σ-convergence analysis

provides a statistical assessment of the process and tools of analysis of β-convergence provide dynamic results. Analysis of σ-convergence and β-convergence indices will contribute to conclusion about even distribution of regions by value of selected indicators.

Plotting technique of a scenario prediction of socio-economic disparities of border regions consists in assessment of different states (proportions, disparities) of the prediction object at different forecasts of the object background changes. The scenario approach gives excellent results under high disproportionality, where traditional forecasting methods make mistakes due to differences in the assessment of primary data owing to the influence of individual factor on the forecast results. The scenario of the regional development is not a series of isolated tendencies, but a number of multidimentional models that are interrelated with the socio-economic situation in the region and between the regions.

It makes it possible to assess the most likely course of events and possible consequences. Besides it is meant to mark out key points in regional development and to design on this basis different variants of its dynamics, as well as to give comprehensive analysis and assessement of all detained options and to determine its structural features and possible consequences of its implementation. Advantage of the scenario method is in the fact that not only one picture of the future is projected, but alternative ideas of the object progress have been developed.

Based on the above, we can conclude that techniques for determining disproportional development of the regions are quite numerous, but they evaluate only interregional disparities, while intra-regional disparities remain uncertain. At the regional level, disparities appear only after manifestation at the subregional level. Therefore, Naumenko Zh. H. opportunely notes in his publication that the identification, assessment and reduction of imbalances at an early stage of their emergence may be more effective than fight with them in already progressive condition at the meso level [2].

Thus, it is important to develop methods of assessment of intra-regional disparities development, it will enable border regions to address issues of uneven development. At the sub-regional level man is an important link in the development, with all skills and educational - professional potential due to which the man creates material and spiritual values to meet own needs and the needs of others. We can agree that any socio-economic proportions contain certain elements of disproportionality and when their quantitative characteristics allow

identificating of negative changes in economic processes, then one can consider and interpret their influence as negative. It should be noted that there are none conventional quantitative indicators. Therefore disparity should be considered depending on object and subject of study that enables two options of influence on economic development, namely: positive and negative, despite inherent in the term negative sense in philological point of view. And based on the above, it is possible to assess various options of scenario prediction of development of the border regions in terms of civilizational changes.

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