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DYNAMICS AND METHODOLOGICAL ASPECTS OF ECONOMIC TRANSFORMATION

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ABSTRACT

Emphasis is placed on the dynamics and methodological aspects of economic transformation. It is noted that consideration of the dynamic theory in economics continued in science for several centuries, and this issue remains relevant. The concept of "transformation" together with its content and essence has been studied. The study was conducted using a comparative method in order to define categories of "statics" and "dynamics". The difference between these terms was established by constructing a comparative table. The content and nature of dynamic theory as an integral component of the transformation process is considered. The relationship and interdependence between dynamic theory and economic transformation are defined. The results of the study proved the influence of time series on the relevance of the study of the causes of economic growth. It is emphasized that the analysis of macroeconomic indicators has significant importance, taking into account the influence of time series in terms of economic transformation. A conclusion is drawn regarding the presence of interdependence between the type of economic dynamics and the type of structural shifts which occur during the process of post-socialist transformation. In Ukraine, these structural shifts took the form of bifurcation points, which meant a turning point and a new round of development. The nature of bifurcation points in terms of post-socialist transformation is considered in detail. Thanks to the dynamic theory, bifurcation points that have developed in terms of the post-socialist transformation in Ukraine have been determined. Conclusions are made regarding the current situation of the socio-economic system of Ukraine in the context of post-socialist transformation.

Keywords: economic transformation, dynamic theory, structural shifts, GDP, bifurcation points, time series

JEL Classification: A11, O11, O21

INTRODUCTION

Economic transformations take place in countries every day, although qualitative changes in this process do not appear immediately. Its nature is an integral component of economic transformation: it is a continuous non-linear process that occurs throughout the entire history of mankind. Over time, the economic system reaches a state of new quality and creates prerequisites for its further development.

It is not surprising that for a long time, the subject of economic thought has been the search for answers to the questions of the nature and character of changes occurring in the economy, which becomes the driving force of the transformation process. The study of economic equilibrium, the analysis of the influence of production factors on economic growth, and the search for regularities between quantitative and qualitative changes and economic development - it took centuries for scientists to characterize the content of economic transformation with one concept - the process of turning changes in the system, thanks to which it emerges into a qualitatively new one level.

LITERATURE REVIEW

Understanding the nature of the transformation process did not come to economists immediately. For a long time, scientists studied the fundamental parts of this process - statics and dynamics, which would explain one or another state of the economic system

on a metaphysical level. And only with the transition to dynamic theory did they begin to gain an understanding of how changes generally occur and when exactly they predict the transition of the economic system to a qualitatively new level.

Many foreign (Bonifati G. [1], Kondratieff N. [2], Myrdal G. [3], Hicks J. [4], Machlup F. [5], Atkinson R. and Andes S. [6], Lucas R. [7], Harrod R. [8], Hodrick R. and Prescott E. [9], Guangcheng M. [10] etc.) and domestic (Shumska S. [11], Shynkaruk L.V., Bevz I.A. and Baranovska I.V. [12], Bondarevska K.V. [13], Halaburda M. [14] etc.) economists were engaged in the study of dynamics and dynamic theory in the conditions of the process of economic transformation. The essence of the dynamic theory was defined in their writings by the above-mentioned scientists.

Bonifati G. [1] proposes to use an approach based on emergence as a process of changing the functionality of the existing system of relations, which is given a new direction, to analyze the processes of socio-economic transformation, and can be used as a method of analyzing the processes of socio-economic transformation in different countries. Kondratieff N. [2] in his work considered and substantiated the static and dynamic view of the economy. Myrdal G. [3], in turn, drew attention to the dynamic approach in the monetary policy of countries and the achievement of monetary equilibrium. Hicks J. [4] conducted research using methods of economic economics. Machlup F. [5] argued for the correctness of the semantic understanding of statics and dynamics and their application in economics. Atkinson R. and Andes S. [6] used the state index of the new economy to study dynamic economic development in the United States. Lucas R. [7] was one of the first to study and propose the use of a dynamic approach in the theory of the business cycle. Harrod R. [8] conducted a comparative analysis of dynamic and static approaches in economics. Hodrick R. and Prescott E. [9] focused on practical issues of the dynamic post-war business cycles of the USA. Guangcheng M. [10] structured a system of indices for assessing the potential of economic transformation of cities in dynamics with the help of 17 indices.

Shumska S. [11] presented the dynamics of long-term trends in the development of the economies of the world and structured them according to the relevant groups (global, developed and developing economies). Shynkaruk L.V., Bevz I.A. and Baranovska I.V. [12] focused attention on the structural transformation of the economy of Ukraine using a dynamic approach and highlighting the observed contradictions. Bondarevska K.V. [13], in turn, analyzed informal employment in the conditions of economic transformations in Ukraine. Halaburda M. [14] revealed methodological approaches to the analysis of the dynamic equilibrium of the economic system.

The unsolved aspect of the problem. The relevance of the problem lies in the fact that the analysis and development of programs for reforming the economy of Ukraine during the process of economic transformation in Ukraine took place by simply trying to copy the experience of systems that had already built a market economy instead of taking into account the path taken during the Soviet era. In addition, the point of bifurcation, as well as its cascade, in which Ukraine is in connection with a full-scale invasion of Russia, are understudied.

AIMS AND OBJECTIVES

On the basis of what has been stated, it is possible to formulate the goal and task of the research: description, establishing the essence of transformation, establishing the dependence between dynamics and economic transformation, as well as methodological aspects of the transformation process. In addition, the following areas of work should be highlighted: the analysis of the evolution of the methodology to determine the dynamics and the development of the dynamic theory, the study of the impact of cyclicality on economic transformation, as well as the search for methods of levelling cyclicality during the study of the economic system. Finally, the purpose of the article is to search for patterns of economic transformation in post-socialist countries, which has continued and continues in Ukraine since the declaration of independence, and to determine the future direction of the movement of the Ukrainian economy.

METHODS

During the writing of the article, a historical approach was used in the study of the evolution of the dynamic theory methodology, as well as the determination of bifurcation points in the context of the transformation process taking place in Ukraine. Using the method of mathematical modelling, the influence of time series based on macroeconomic indicators was established. In addition, the historical approach and the method of comparison were used during the periodization of the stages during which the main turning changes took place.

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RESULTS

Transformation is a continuous process of change that is constantly in motion and corresponds to the laws of economic dynamics. This process can be observed and felt in everyday life, but the evaluation of the changes that take place will have an exclusively qualitative nature.

The essence and content of the economic transformation remained unexplored for a long time. Economic science took several centuries to approach the analysis of this process. Instead, economists were engaged in the study of statics and dynamics - the states of the economic system, without understanding which it is impossible to reach the transformational process, but which were already studied by other sciences and were formed in separate terms. Statics translated from Greek means "that which stands", but "dynamics" - "that which moves", so at the philosophical level, the dynamics of the economic system were often considered as a collection of all its static states over a certain period.

The dynamic theory in economics comes from the development of an interdisciplinary approach in the methodology of economic research since the 18th century. The term "dynamics" was first used in the 17th century in physics by one of the most famous scientists in the history of world science, Isaac Newton. The essence of dynamics in the natural sciences is the description of phenomena and processes that occur in the environment around us and indicates the importance of changes in their characteristics over time. In physics, dynamics has become part of the mechanics section, which studies the movement of bodies and the interaction between them.

The evolution of the methodology to the definition of statics and dynamics, and their key differences, took place in economic thought for two centuries. One of the first to explore the meaning of the above-mentioned categories was the French philosopher Auguste Comte, who believed that statics reflects an abstract theory of social order, and dynamics is a prerequisite for the theory of social progress. Representatives of the classical school of political economy were also involved in the introduction of dynamics into economics. And the main postulate of Marxist dynamics was the theory of cumulative development, built on historical evolution, which, in turn, explains the regularities of the construction of all social life (the doctrine of the base and superstructure). G. Bonifati also noted how, in Marx's analysis, the complexity of the economic system under the conditions of the capitalist mode of production is influenced by three elements: work as a creative and transformative activity, the alienation of the results of work, as well as quantitative transformations. Focusing attention on these elements, as well as on their interactions and mutual influences among themselves, contributed to the development of a critical ontology of the process of transformation of socio-economic systems and emphasizing their special social connections, in which relationships of another level arise [1].

The theory of economic development is closely related to the theories of cycles, which were studied by M. Tugan-Baranovsky, M. Kondratiev, R. Harrod, J. Hicks and other economists. It is generally accepted that despite the cyclical development of the economy, each subsequent long wave is accompanied by a qualitatively new state of the economic system and a more complex network of connections. Kondratiev, for example, agrees with the definition of statics and dynamics as phenomena that exist on a metaphysical level. However, an important addition of the scientist to the formulated theses about dynamics was the definition of changes, which, in his opinion, can be both reversible and irreversible [2].

Economic fluctuations became an important point in the theory of cycles. They actually became the basis for determining time series: the economic system really moves from point A to point B, but this movement is not permanent: after a certain period of time, economic growth not only slows down but also leads to negative trends in the system (a decrease in real incomes, production growth and others). One of the main explanations for the cyclicality of the economy is the emergence of sectoral disparities. Under such conditions, the economic system goes out of equilibrium, and regardless of how quickly the economy curbs these negative consequences, the above-mentioned changes will still occur. Understanding the relationships between cycles and the transformation process is important because it is the answer to the question of why macrodynamic models only explain how changes occur, but do not answer the question about causes that lie at their basis.

However, due to the underdevelopment of the dynamic theory in economics, scientists for a long time only ascertained the existence of cycle phases. The vast majority of economists, when determining dynamics, actually used static methods. Only at the beginning of the 20th century, the Swedish (Stockholm) school, which was an alternative to the neoclassical school, was one of the first to devote its attention to the search for economic equilibrium, based on the fact that the population, the size of the territory, the amount of capital and the level of technical development of the country are constants. And if the founder of this direction, K. Viksel, assumed that the economic system is stationary, then already his followers, in particular G. Myrdal, expressed statements about dynamics as a cumulative process, during which the deviations observed in the monetary market gradually acquire their spread. And the dynamic theory, in accordance with this, should study changes in independent factors and time segments, using the analysis of periods, taking into account that the state of equilibrium may be unstable, and adaptation to these changes does not occur instantly [3].

Thus, Myrdal used the approach employed in the definition of economic cycles: the results of the transformation process will depend on the phase of the cycle and on how clear and effective the new "rules of the game" are since this depends on the duration of the time system from the period of breaking the old institutional field and the introduction of a new one.

The importance of the approach of the Swedish school of economics lies in the fact that, while studying price changes in certain periods, it also paid attention to the factor of consumer expectations. The famous economist J. Hicks, investigating the nature of statics and dynamics, turned to the theory of K. Viksel during the analysis of the equilibrium state of the system. According to Hicks' positions, the system's static state is impossible due to objective reasons, primarily due to the time factor, during which the elements interact with each other, and in the long term, the connections between them become complicated [4].

It was Hicks, one of the first representatives of the neoclassical direction, who showed a methodological gap that had previously arisen during the study of dynamic theory. Both Adam Smith and David Ricardo, as well as and the rest of the representatives of the classical school of political economy used statics (comparative statics) to explain the dynamic theory. In other words, when conducting a study of the equilibrium state of the economic system, they took as a basis separate time periods in which it was already in static equilibrium. In fact, the system undergoes constant changes in dynamics, and the presence of economic plans and predictions regarding its future state is the most important reason for this.

To establish the differences between statics and dynamics, let's use the definition of the Austrian economist F. Machlup. He proposed to consider statics and dynamics not only in terms of the essence of these concepts but also in the context of what role they play during the study of the theory of equilibrium or the theory of the behaviour of an economic individual, as well as what is their dependence on time [5].

Table 1. Defining the difference between static and dynamic theories.

	Statics	Dynamics
Theoretical essence and content	It studies the state of equilibrium that arises under the influence of a system of economic incentives at a certain point in time. The main assumptions are methodological individualism, homo economicus and ceteris paribus	It studies changes in the key parameters of the economy over time and the factors that influence them. The main assumptions are the endogenous nature of economic imbalances and the nonlinearity of economic growth.
Main characteristics	The pure theory of exchange, formulation of an idealized model of general market equilibrium, use of functional analysis. The theoretical construction of statics is based on the perception of the economy as a stably balanced system, which is a consequence of rational optimizing behaviour.	A theory in which economists deal with empirical reality and is a historical description of facts that have occurred over a period of time. The dynamic theory is endogenous and explains the changes that occur.
Parameters of variables	Statics uses variables according to a specific point in time, assuming no time lags, avoiding the time factor. Population, capital, technology, business organization, tastes and preferences, and social institutions change only at a given point in time, analyzing the effect of their adjustment.	Dynamics considers that all variables - population, capital, technology, business organization, tastes and preferences, and social institutions - are aggregated independent variables or functions of time, analyzing processes and effects. Dynamics uses variables according to different time periods, taking into account the existence of time lags and lagged variables. All quantitative parameters are functions of time.
Scope of use	Equilibrium stability has qualitative implications with respect to comparative static effects. Comparison of equilibrium states of the system before and after correction of the influence of exogenous parameters. Modelling of stable equilibrium rates of change. Monotonically comparative statics.	Dynamics studies the forces that maintain an equilibrium state in the economy or contribute to a return to this position. It serves to explain the processes of transition from one equilibrium state to another and the processes of transformation of economic variables.
Key limitations	The results are valid only within extreme proximity to the optimum and for minor changes in exogenous variables. Work with a small amount of individual data.	The results are valid for significant changes in endogenous variables. Work with aggregate values.

Briefly, the difference between statics and dynamics can be summarized as follows:

- the concept of statics corresponds to theoretical economics, dynamics to practical (applied) economics;
- both concepts are of decisive importance and refer to two separate areas studied by theoretical economics;
- the entire economy is dynamic; statics does not exist in its pure form;

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- both concepts have different subjects of research. The subject of statics is consumption and exchange relations, of dynamics are general properties of macroeconomic systems;
- statics is the study of conditions for the stability of an equilibrium state. Dynamics, in its turn, deals with the study of the forces that lead and direct the economic system to an equilibrium state.

Therefore, the dynamics of the economic system can be considered as a set of all its static states over a certain period. At the same time, the set of static states is not their sum, but a reflection of the changes that occur between periods t and t+1, using additional (incremental) values. Transformation is a continuous process of changes, constantly in motion, and therefore has a dynamic character. This process can be observed and felt in everyday life, but the significance of the changes taking place will not be quantitative, but qualitative in nature and can only be formed through evaluation.

Dynamics is the driving force of economic transformation, and in order to achieve the set goals, all efforts must be purposeful. And therefore, there must be time periods (series) within which these changes take place. R. Atkinson and S. Andes note that unlike the "old economy", the "new" one is based on economic dynamics and competition. And innovation becomes an important prerequisite in terms of competitive advantages, as it enables countries to "rejuvenate" themselves thanks to new modern companies and supports their economic viability [6].

After the end of the Second World War, a study was conducted in the United States, during which significant fluctuations in the economic system were discovered. The peculiarity of these fluctuations was that the demographic and technological aspects, which should have influenced the transformation in the system itself, did not undergo significant changes. Only later, in 1981, the economist R. Lucas drew attention to the fact that the capitalist economy is characterized by repeated fluctuations, which is associated with its growth, as well as the deviation of the system from equilibrium [7]. The dependence between the occurrence of fluctuations, as well as economic growth, is associated with a change in the parameters (macroeconomic indicators) of the model: changes occur in the manufacture of products, the level of investments, consumption, capital intensity and labour productivity, and the length of an employee's working day. And so, there are time series - a series of data points plotted in chronological order - that provide a basis for analysis and forecasting.

In fact, Lucas used the tools of the neo-Keynesians Harrod and Domar, who used incremental models to establish the relationship between investment and economic growth. And he used it to form his own theory of rational expectations, according to which prices in the future period (t+1), all other things being equal, may differ from prices in the present (t), because an individual, evaluating the current state of the economy, decides to act rationally (according to his own forecasts) and tries to maximize his own benefit by comparing costs in the current period with potential costs in the future. And precisely because of the actions of this individual, the state of the new economic equilibrium in the period (t+1) is different, while macroeconomic indicators undergo changes in connection with the activity of economic individuals at the markets. Most importantly, the theory of rational expectations does not lie at the level of individual households but is actually a window into macroeconomic analysis.

The explanation of the nature of time series is also the above-mentioned Harrod-Domar model, which is based on the thesis of interdependence and inter conditionality of economic growth from investments. An increase in investment stimulates economic growth, and compared to the previous time period, the economic system will have an increase in growth, which, accordingly, can be used to further invest in the economy. This is a confirmation of the existence of time series, where each subsequent period will differ from the previous one by the excess (or deficit) of the studied parameter, for example, GDP [8].

At the same time, the Harrod-Domar model is also proof that time series are by their nature heterogeneous, that is, they contain various impurities that "distort" the economic model itself. It can be stochastic data or data with a low correlation or coefficient of determination. The heterogeneity of time series is due to the fact that they contain a seasonal or cyclical component that distorts the model: the system cannot be characterized by constant economic growth despite its dynamics and even trends that indicate it. In connection with objective economic patterns (changes in the level of product prices and production costs or the reaction of the financial market and the labour market), the system sooner or later begins to decline.

It is incremental values and time series that unite all mathematical models of the neoclassical, neo-Keynesian, Swedish and other schools, they are their main tools for interpreting dynamics in the economy. Regardless of whether we talk about changes in prices in accordance with expectations or changes in investments and economic growth, it is not just a comparison of macroeconomic values for the period t and t+1, for example, but the use of this increase for further analysis of changes in other parameters.

However, this analysis is also imperfect. If one looks at the economic growth of a country over one period, it can be seen that even dividing the data into time series shows the same trends over a certain period of time. These trends can be

seasonal and cyclical in nature and create a false impression that the system is undergoing irreversible qualitative changes, and therefore the economic transformation that is taking place is directing it to a qualitatively new level.

Accordingly, the Hodrick-Prescott filter - a method of smoothing time series with the aim of eliminating the cyclical component and highlighting the trend component - is used for a better analysis of time series, extracting from them only those data that are important for further assessment and forecasting [9, 10]:

$$Y_t = g_t + c_t \quad (1)$$

Where Y_t - the observed time series; g_t - growth parameter; c_t - cyclicity parameter.

If we consider t as a separate period, then the previous period can be defined as t-1. And therefore, the increase in the growth parameter is defined as

$$\Delta = g_t - g_{(t-1)} \quad (2)$$

Thus, when solving the task of minimizing the impact of the cyclicality parameter on the time series, it is necessary to have such values of cyclicality, as well as the differences between the studied periods (t and t-1, as well as t-1 and t-2), for which the squares of these parameters gave the smallest value.

The economic expression of the Hodrick-Prescott filter is that after filtering cyclicality from the model, it is possible to observe the interdependence between the level of economic growth (real GDP) and other macroeconomic indicators: consumption, investments, government expenditures, a mass of money in circulation, discount rate, price index. The obtained data are important not only for assessing the real situation but also for forecasting macroeconomic policy. S. Shumska, using the Hodrick-Prescott filter, indicates that the transition from the real rates of economic dynamics to the analysis of the rates of potential GDP makes it possible not only to highlight the transition from the stage of divergence to the convergence of two groups of countries with different development and potential but also to emphasize the appearance of a negative slope trend in the development of the world economy [11]. But the Chinese scientist M. Guangcheng used an approach based on 17 indices, each of which had its own weight and significance, to assess the economic transformation. Using data from 2013 to 2016, he came to the conclusion that changes took place in nine Chinese cities at once, thanks to which they were able to reduce the lag from more developed cities by transforming certain structural elements of their own economy [10].

Consideration of cyclicality in dynamics is important in the context of economic transformation. The point lies in the nature of these phenomena: both cyclicality and dynamics are metaphysical in nature. Both dynamics and cyclicity are characterized by constant, endless movement, but the vectors of their movements are different. Dynamics implies a linear movement of the system, while cyclicity is characterized by the repetition of phases. However, it is the presence of time series that explains why the economic system is at a qualitatively different level compared to the previous period: the connections between its elements have become more complex, and therefore the system itself has gone through a transformation process. That is, precisely as a result of dynamics, the economic system undergoes changes and transformations at such a level that lead to the complication of connections between its individual elements, and therefore to the implementation of the process of economic transformation.

So, the Hodrick-Prescott filter actually allows the model to exclude the trend line from GDP - a long-term trend in the economy that reflects the dynamics of business activity in society over a long period of time. That is, if seasonal and cyclical fluctuations, which are characteristic of any economic system, are excluded from the model, then the remaining deviations from equilibrium will mean that changes and transformations will have a qualitative nature for it because the remaining quantitative parameters will remain unchanged. The transformation process, accordingly, directs the economy not only to growth but also to development, where quantitative changes occur simultaneously with qualitative ones.

In practice, the transformation of the economic system is not realized immediately, after the prerequisites for changes and transformations have been accumulated. The "explosion" (implementation) of these changes can be represented with the help of a bifurcation point (breakpoint), which explains why path dependence is not the usual linear vector of the system's movement from beginning to end, but rather has the form of a broken line. This can be explained by superimposing dynamics on cyclicality, and we are not talking about economic or business cycles, but rather about political ones, which determine the further movement of the entire system in general. Economist L. Shynkaruk et al. notes that there are many

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different variants of economic dynamics at the macro level, among which three main blocks are distinguished, corresponding to states of economic growth (ΔY>0), stagnation (ΔY=0) and economic decline (ΔY<0), while each type of economic dynamics corresponds to three different characteristics of the quality of structural shifts, when the quality increases (K>0), decreases (K<0) and remains constant (K=0) [12]. But K. Bondarevska, researching the problems of informal employment in the labour market of Ukraine from 2006 to 2018, revealed an inverse relationship between the indicators of informal employment and the gross regional product per person, as well as the available income of the population per person [13].

The overlapping of the dynamic nature of the system with the cyclical one and the creation of a bifurcation point can be shown by the example of the decline of the socialist system, which began to be observed in the 80s of the 20th century. The governments of these countries set themselves the goal of reforming the economy, although the corresponding changes began to be observed already with the breakdown of the old socialist system - precisely when new parameters (bifurcation points) began to make qualitative changes to the system itself. That is why the construction of a market (capitalist) system in the realities of post-socialist countries seemed a natural step in their further development.

In post-socialist countries, especially during the transition stage of transformation, fluctuations of varying amplitude were observed, which were associated with the unstable position of the system, its deviation from the equilibrium state and the inability to immediately return to it, taking into account all the structural shifts that occurred within the system. For some countries, these fluctuations had the effect of a drop in the indices of real GDP, industrial production and the level of employment. Some of them (among them Ukraine) still cannot return to the GDP figures of 1990. M. Halaburda examines the dynamics of post-socialist transformation through a sequence of quasi-equilibrium processes that continuously replace each other and accompany the dynamics of radical socio-economic and organizational-political transformations from the command-administrative system of socialism to market capitalism. And despite the presence of a number of shortcomings of dynamic equilibrium as a logical substantiation for the theory of post-socialist transformation, generalized facts about economic plans and expectations underlying it are considered sufficient conditions for describing the point around which fluctuations happen [14]. All post-socialist countries passed through them without exception: Poland, for example, went through serious fluctuations at the beginning of the transformation process. And, as noted by the Polish economist A. Habarta, even at present there is no clear answer to the program of reforms that were introduced by the government and led to serious socio-economic upheavals: some economists are sure of their underdevelopment, others refer to the worse results of the transformation in other countries [15].

DISCUSSION

The presence of time series is also an explanation of the theory of post-socialist transformation, in particular, how this process takes place in Ukraine. If we consider the phasing in Ukraine (at the organizational, institutional and political levels), then since the declaration of independence, it has gone through at least three bifurcations, each of which made adjustments to the further vector of movement and development of its system [16-18]:

- the first (zero) point of bifurcation occurred for Ukraine precisely in 1991, when Ukraine declared independence and ceased to be part of the Soviet Union. It is important to note that this bifurcation was of a political nature: changes took place at the highest level, which determines the vector of movement of the entire system in general. At the same time, as noted by V. Heyets, the institutional transformation in the post-Soviet countries in the initial period was limited only to the process of denationalization at the first stage of reforms, and therefore this point of bifurcation did not become final for Ukraine;
- the second point of bifurcation - 2004-2005 during the period of the Orange Revolution. In addition to the political reorientation of the development vector to the European one, this period was characterized by an increase in the volume of investments, which became one of the prerequisites for the economic growth of the entire economy. Moreover, the global rise took place in the next four to five years before the onset of the global financial crisis;
- the third point of bifurcation - 2013-2014 - the beginning of the war in Ukraine and the final reorientation of the economy to Western models and trade markets.

Currently, Ukraine is passing the fourth bifurcation point, which can be called a cascade. The consequences of this cascade of bifurcations in terms of economic transformation cannot be assessed, since the analysis of time series contains a number of stochastic data, not only seasonal ones. In addition, it is also connected with the modern trends of digitalization, which has become the basis for radical innovations and a new technological revolution by introducing structural changes in the economy. And, unlike previous structural changes, the impact of digitization can be traced not only to the technological base but also to the very essence of production, infrastructure, markets, as well as to state policy and the environment

[17-20]. In other words, the formation of a program of reforms that could further launch the transformation process in Ukraine has actually been postponed indefinitely.

CONCLUSIONS

Studying the dynamics, as well as the evolution of the methodology of economic transformation, one can come to the following conclusions:

- The importance of the time factor in the study of changes in the economic system. The possibilities of statics are limited to the description of quantitative differences between moments of time, and it is also possible to draw certain conclusions about deviations from the optimum on the basis of the received information. Dynamic analysis is focused on macro-parameters of the processes of economic changes and establishing factors due to which these changes occur. The inclusion of the time factor allows going beyond the theoretical problems of static optimization and obtaining relevant results of the macroeconomic analysis as well as forecasting future trends. Thus, it is fair to attribute statics precisely to pure theoretical economics, and dynamics to its applied part;
- Most economists agree that transformation should be equated with dynamics. In particular, Hicks and Myrdal claim that since the economy is always in motion, it is the dynamics that will be able to provide answers to questions about the vector of this movement and the changes that are taking place. At the same time, thanks to statics, it is possible to evaluate the equilibrium state of the economic system and compare it with a different state;
- The processes of economic transformation are accompanied by changes in all spheres of social interaction. Adaptation and exaptation of key institutions become a prerequisite for the continuity of transformational changes. Changes that occur in period t are caused by changes that occurred in the past period t-1 and will be important for further changes in the future period t+1.

Based on the postulates of systems theory and dynamic theory, the economic post-socialist transformation of Ukraine has reached its final stage. The severing of ties with the former Soviet republics formed the prerequisites for bifurcations in the socio-economic, organizational and political life of the country.

The full-scale invasion of the Russian Federation into Ukraine is a component of the cascade of bifurcations for the entire post-Soviet space. The vector of further changes will largely depend on the endogenous factors of the development of Ukrainian society (the perception of freedom, efficiency, justice and general civilizational institutional values). One can be sure that a new system of social interaction will be formed as a result of the cascade of bifurcations in Europe.

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ДИНАМІКА ТА МЕТОДОЛОГІЧНІ АСПЕКТИ ЕКОНОМІЧНОЇ ТРАНСФОРМАЦІЇ

Акцентовано увагу на динаміці та методологічних аспектах у розрізі економічної трансформації. Зазначено, що розгляд динамічної теорії в економіці тривав у науці впродовж кількох століть, а ця проблематика залишається актуальною. Досліджено зміст і сутність поняття «трансформація». Проведено дослідження з використанням методики порівняння визначення змісту категорій «статика» та «динаміка», визначено різницю між ними шляхом побудови порівняльної таблиці. Розглянуто зміст і природу виникнення динамічної теорії як невід'ємної складової трансформаційного процесу. Визначено взаємозв'язок та взаємозалежність між динамічною теорією та економічною трансформацією. Результати дослідження засвідчили вплив часових рядів на релевантність дослідження причин економічного зростання. Наголошено, що аналіз макроекономічних показників з урахуванням упливу часових рядів в умовах економічної трансформації має істотне значення. На основі індикаторів зростання зроблено висновок щодо наявності взаємозалежності між типом економічної динаміки та типом структурних зрушень, що відбуваються під час процесу постсоціалістичної трансформації. В Україні ці структурні зрушення мали вигляд точок біфуркації, кожна з яких означала переломний момент і новий виток розвитку. Детально розглянуто природу точок біфуркації в умовах постсоціалістичної трансформації. Завдяки динамічній теорії визначено точки біфуркації, які склалися в умовах постсоціалістичної трансформації в Україні. Зроблено висновки щодо поточного становища соціально-економічної системи України в контексті постсоціалістичної трансформації.

Ключові слова: економічна трансформація, динамічна теорія, структурні зрушення, ВВП, точки біфуркації, часові ряди

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