

# New Approach to the Socio-Economic Management Theory

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**Abstract**—The economic transformations carried out in the country are accompanied by numerous problems that lead to an increase in public discontent and to the quality of governance and the results of reforms. This is dictated by objective circumstances. Indeed, many ongoing projects, as well as the leadership they carry out, deserve low marks. However, the point is not only the low qualifications of managers of different levels or the ineffectiveness of the proposed updates. Like any open system, the economy, considered by us as a set of forward and backward connections, processes and phenomena, has a whole set of probabilistic states. Studying them and the conditions for transition to them dictates the need to develop new approaches to managing them. In the presented work, an attempt is made to develop new approaches to the management process, to assess the effectiveness of management efforts associated with reforming the economic system in order to overcome imbalances in the development of industries, regions, territories. And also to give a methodological justification for the application of the synergetic-institutional approach in solving the tasks.

**Keywords**—*efficiency, institutions, model, methodology, synergetics*

## I. INTRODUCTION

Economic science, by analogy with natural science, is currently moving along the path of integrating various theories, which serves as a new impetus for its development and complication. This is supported by the fact that many economists studying socio-economic processes are looking for approaches similar to those in other scientific fields.

One of the key problems of Russia's economic development is the creation of conditions for the country's movement along an innovative path with an emphasis on science-intensive enterprises. These processes dictate their own requirements for the management methodology, as well as for the rules for the development and implementation of policies for sustainable socio-economic development.

There are a few more points that affect the perception of the results obtained [1-7]. First, it requires clarification whether the interests of the authorities are in line with the interests of society, and are the results of the reforms a direct consequence of the goals set by the ruling elite for

themselves? Secondly, you need to understand that the processes of economic reform, due to a sharp change in the dynamics and vector of development of socio-economic processes, are always accompanied by phenomena of instability and upheavals in society [4]. Any changes in the structure and composition of the economic system lead to a change in entropy, and, consequently, to a deepening of instability, which contributes, even with insignificant fluctuations, to its transfer to a new state corresponding to already different values of the control parameters of the changed environment. This transformation takes place as a change from one order to another through a stage of chaos [3]. At the moment the system transitions from one state to another, it is impossible to predict which form of organization will arise and whether it will correspond to a higher level of functioning [2].

The relevance of the research topic is due to the need to create conditions in Russia for economic development and the development of new methodological approaches to the process of managing socio-economic processes to overcome disparities in the development of industries, regions, and territories. The reforms being carried out are associated with a change in the approach to socio-economic processes during the transition from administrative-command mechanisms of management to market ones. For almost 30 years, the old economic systems, structures, relations, institutions have been modernized and replaced with new ones that are adequate to the challenges and threats to Russia's sustainable economic development. One of the reasons for the insolvency of the ongoing economic reforms in the country is the elimination of the state from participating in financing the real sector of the economy and regulating socio-economic processes [8]. Long-term sustainable economic growth in Russia can be ensured, firstly, by the inflow of large-scale investments into the economy and, secondly, by the creation of an effective management system at all levels of government. In control theory, a new direction is being developed, a feature of which is based on the use of chaos theory to analyze the dynamics of control processes. The chaos that periodically arises in the economy has certain causes and patterns. Understanding the mechanism of origin and course of these processes allows

predicting the approach of chaos, identifying its causes, and preventing its negative manifestations. Recently, much attention has been paid to management problems in economic theory. The objective need for effective management of the country's economic development, the lack of theoretical and methodological developments related to the problem of optimizing management actions at the level of a region, industry, enterprise, determined the relevance of this study.

The purpose of this study is to develop theoretical provisions and methodology for synergetic and institutional management of socio-economic processes in a multilevel economy at the federal, territorial, regional, and sectoral levels.

To achieve this goal, it is necessary to solve the following tasks:

- to identify the reasons for structural imbalances in the development of industries, regions, and territories and to substantiate the need for an active state policy in the field of economic reform;
- to analyze the available conceptual approaches to the problem of managing economic systems and identify the reasons for their inefficiency;
- to substantiate a synergetic-institutional approach to the management process based on the concepts of a stratified economic space and dysfunction of economic development.

## II. PROBLEM STATEMENT

The development of a new approach to the management process, as well as the methodological substantiation of its effectiveness in managing socio-economic processes at different levels of the economic system (at the state, territorial, regional, sectoral) should be carried out using a synergetic-institutional approach. This is due to the fact that the stratification at each of these levels is the most obvious and amenable to research. Since, for example, the efficiency of the economic activity of the region is directly related to the processes taking place at the macro level (i.e., it is connected with the strategic goals and objectives of transforming the economy of the entire country), and at the micro level (i.e., there is a connection with the goals and objectives of the industries, functioning in a particular territory of a region, an industrial complex or a separate enterprise). Therefore, if we consider socio-economic transformations at the regional level (at the meso-level), then it will act as a laboratory level (layer), in relation to which both macro- and micro-levels are imaginary. The provisions of the theory of the stratification of economic space allow us to study and understand the essence of the processes occurring in different layers, and to identify the causes of management dysfunction and ways to eliminate them [2, 10].

The bases for regional transformations are the goals and objectives of the state's economic development, information about the quality of the region's functioning and the state of the environment. The interaction of the information component with the processes at the regional level causes a resonant effect (like the unification of two subspaces), generating conditions for the implementation of modernization projects on it [11]. The social orientation of economic transformations determines the principles of the division of powers between the center and the region: at the macro level,

national problems and tasks are solved; at the meso-level - the tasks of regional policy related to improving the quality of life of the region's population; at the micro level - the tasks of developing industries, enterprises due to the growing role of an individual approach to the problems of the current moment. This means that the tasks facing industries and individual enterprises are a reflection at the micro level of the tasks of the region and state policy as a whole.

## III. RESEARCH QUESTIONS

All this causes the need to develop a fundamentally new methodological approach, ways and methods of personnel training that could form human capital of such a level and quality, which will ensure the adoption of managerial decisions by qualified specialists taking into account modern conditions, constantly occurring changes and endlessly developing technologies. Moreover, it will allow to calculate the possible consequences of the actions taken and to correct them in time depending on the type and level of the system, taking into account the emerging laws of their development. To remove the indicated problem, it is necessary to develop new methodological approaches to the study of socio-economic systems. From our point of view, one of such approaches will be interdisciplinary management theory, which allows not only to harmonize systemic connections that arise between interacting economic structures, but also to carry out an objective analysis of their possible (alternative) options, as well as the choice of the most optimal ones. Furthermore, understanding the dynamics and mechanism of structural transformations in open systems under the influence of both internal and external factors will allow us to advance in solving many problems of the economy, modern society, and the state [3, 12].

## IV. PURPOSE OF THE STUDY

Understanding the mechanism of self-organization and self-development of economic systems, as well as the processes of transition of the system from one level to another will lead to the expansion of the field of research to separate subspaces of the imaginary economic space [9]. This will make it possible to assess and predict the consequences of the influence of these strata on the dynamics and vector of development of the observed economic space, to carry out management actions in a timely manner and thereby achieve the efficiency of the functioning of the economy, both as a whole and its individual sectors.

## V. RESEARCH METHODS

In this work, the methods of systemic, institutional approaches and synergetics were used.

We used consistency as a general scientific concept that studies modern phenomena. At the same time, the key point of research was the disclosure of the essence of the ongoing processes and objects, which are a set of many interconnected components, various relations and interactions, including with the external environment, and can be called systems that differ: the level of complexity, the number of constituent elements (elements) subsystems, the degree of openness, etc. That is why systemic methods of analysis give a detailed picture of possible changes, directions of development and results of functioning.

The synergetic approach, based on identifying the analogy

and regularities in the functioning of systems of different nature, significantly expands the capabilities of the systems approach. At the same time, when applied in economics, it also has a number of disadvantages. Thus, it completely ignores the influence of institutions on the dynamics and vector of development of socio-economic processes, as well as the emergence of the need to change the functions, composition, and structure of the institutions themselves. This distorts the predictive estimate of the researcher, which makes the synergetic approach not in demand for economic systems. We propose to apply a synergetic-institutional approach, which allows modeling the dynamics of control actions during the restructuring of the real sector of the economy, taking into account possible institutional constraints.

## VI. FINDINGS

Studies have shown that when studying economic activity, modernizing the real sector of the economy, it is very important to take into account the influence of institutional factors on the quality of assimilation of innovations by an individual and the degree of their introduction into production in the event of its modernization. The institutional approach is based on the assumption that the consequences of an individual's actions depend on the model of his behavior and the conditions in which he produces them. This allows you to make decisions and get results in the presence of incomplete information and limited rationality. Institutional theory implies that human behavior is largely determined by influence from other individuals, and existing incentive mechanisms reflect repetitive actions. However, they are a consequence of decisions made by individuals and, as a rule, without considering the likely negative consequences for violations of generally recognized rules and requirements [11, 13-15].

The development of the economic activity of the region is significantly influenced by many factors, such as natural and climatic conditions, economic and geographical position, resource base, demography, socio-economic policy of the state, direction of economic activity, quality of infrastructure development, efficiency of the financial and banking system, market conditions resources and consumers.

An economic entity embodies its interests in strategic plans, the main goal of which is the formation and development in the long term of the competitive advantages of the industry (enterprise) both in the domestic and international markets. Achievement of these goals is possible only with the effective use of available resources and, above all, labor, the quality of the organizational structure, the level of the organization's innovative potential. Together, these basic provisions determine the potential for strategic development of the industry (enterprise, organization), the implementation of which will be ensured by skillful and well-organized management. Management activity is always purposeful. The set of management tools and methods that determine the management technology will allow to reach the targets.

The study and application of well-known management technologies, as well as the development and development of new, innovative, is a prerequisite for effective management in modern realities. Management technologies are a process of transferring theoretical developments into practical activities to achieve the assigned tasks with periodic coordination of management actions and synchronization of all technological and organizational processes. The transition of the country to

market mechanisms of economic management in the context of globalization and intensified competition has led to the increased role of management technologies. For Russia, these processes are especially important, since the technologies used in an economy based on command methods of management, when a mechanistic approach and linear methods of organizing a management system were clearly traced, are not applicable in market conditions.

Modern technologies are the product of theory and practice and have been improved along with the development of the economy and economic relations. In the context of the transition of the economy to a new level of functioning, the country's leadership has become urgent such tasks as the search and implementation of new technologies in management practice, allowing timely and high-quality solutions to emerging problems. Technologies that would reflect the nonlinearity of the course of socio-economic processes, the instability of economic systems; consider the influence of many factors, the dynamics of changes in their activity, multidimensionality and stratification of the economic space. Such technologies are currently available, and they are quite in demand by practitioners of managers at different levels of the economic system. They are used for mathematical modeling of socio-economic processes, predicting the possible results of their interaction and mutual influence. On the basis of such models, new methods and techniques are being developed that make it possible to organize and direct the development of the economy to the set goals, giving special meaning to the decision-making processes.

The decision-making process itself takes place under the influence of information flows coming from the level of imaginary layers to the operating level (laboratory level). Moreover, this information is an adequate reflection of the processes of the observed level on the imaginary layers. That is, a closed loop (cycle) is formed. The functioning of such a cycle of information exchange, and, consequently, the stable coordinated work of all sublevels, continues as long as the system adequately reacts to possible external stimuli and timely corrects the processes [9, 16].

According to the concept of stratification of the economic space, if the work in the signal-response system is disrupted, regardless of what circumstances, then fluctuation mechanisms are activated, transferring it to states of instability and disequilibrium. The consequence is fundamental structural changes in the economic system at bifurcation points. Difficult times are coming for the economic system and for the people who make decisions at the moment, since the disruption of the flow of flows from the imaginary layers leads to the emergence of unpredictable and uncontrollable processes and conditions that reduce all efforts of the leader to a negative result. For such cases, the application of the institutional-synergetic approach is especially important, since it allows you to identify the reasons for the inconsistency of the processes occurring in the system; deviations from the set goal and make timely adjustments.

It is obvious that the effective functioning of both industries and enterprises belonging to these industries is determined by the quality of interaction of weighted, corresponding to the real political, socio-economic situation, sets of control actions; production processes; the level of

training of performers; governing factors and spontaneously arising orders. At the same time, the consistency of all elements, the degree of order, the intensity of the processes, the strength of interactions, the coherence of functioning change depending on the scale of the system and the stratification of the economic space. These components should be considered and taken into account as a whole, and this is the task of a new approach to management.

The information system is being developed for specialists of different profiles and levels. Moreover, the analytical group (at some enterprises it is called the strategic planning group), is one of the main divisions that plan economic, including investment, innovation activities, assess the potential of the enterprise, its competitiveness, and coordinate the activities of other divisions.

The information that comes from it to representatives of the highest level of management allows making decisions and carrying out activities, which together represent a system of management actions that contribute to the effective functioning of an enterprise (organization) in real conditions.

In this case, the main functions of the information system are:

- collection, processing, systematization, storage of information containing information about work-related to economic activity in the form of graphs, tables, and other forms on paper and electronic media, necessary for analyzing the performance of an enterprise (organization), assessing its potential, and making management decisions;
- the calculation, analysis, and control of the dynamics of the coefficient of economic activity;
- the calculation, assessment of the effectiveness of alternative projects, including innovation and investment, taking into account risk and uncertainty;
- timely submission of data to the heads of all interested departments of the enterprise (organization);
- provision of a report on the operation of the management information system to the heads of the enterprise (organization).

Equation (1) presents one of the possible mathematical models for managing information flows in the implementation of economic activity at an enterprise under conditions of uncertainty and risk.

$$\begin{cases} Y = f'(Z) \\ U_t = F(Y, y_{t-1}, \omega, \delta) \\ y_{t-1} = f(x_1, x_2, \dots, x_n) \\ \omega = F(X_1, X_2, \dots, X_m) \end{cases} \quad (1)$$

Where:

Z is a property of the external environment;

Y is a functional dependence of the properties of the internal environment of the enterprise on external factors;

U<sub>t</sub> is a control action;

F is the function of the dependence of the control action on the properties of the external and internal properties of the system;

f is a functional dependence of the controlled system;

x<sub>1</sub>, x<sub>2</sub>, x<sub>n</sub> are the factors influencing the controlled system;

X<sub>1</sub>, X<sub>2</sub>, X<sub>m</sub> are the factors influencing the control system;

y is property of the controlled system;

ω is a property of the control system;

δ is random factor (degree of uncertainty).

Thus, after analyzing the information system as a whole, the flows that are created at the same time, and their impact on managerial influences, the following conclusions can be presented:

- To ensure optimal interaction of all technological procedures and operations related to the management of the economic activities of enterprises (organizations), the modeling of the management process should be carried out within the framework of an institutional-synergetic approach based on the concept of stratification of the economic space and the theory of cyclical development with the mandatory use of information systems. This allows you to create conditions for the creation of new technologies, improves the quality of decisions and provides the ability to change the management process in a rapidly changing external and internal environment of the enterprise (organization).
- Building an information system is a process that includes several stages, starting with the selection of the modeling area, carrying out a pre-design analysis of the system, providing the decision-maker with information for making a decision on the feasibility of developing a model before using it and studying the results obtained, allowing, if necessary, to modify. The proposed modeling scheme is due to the need to take into account the quality of the information system, i.e. its ability to ensure the required volume, quality, and completeness of information, its timeliness, as well as the availability of well-established decision-making technologies, quantitative indicators of forecasting and planning, budgeting and control, the effectiveness of interaction between participants in the management system [4, 11, 14].

These components should be considered and taken into account as a whole, and this is the ultimate task of the new approach to management.

The quality of management that ensures the stability of the system (industry, enterprise) to changeable external influences is associated with the ability of individual subsystems and elements to synchronize with each other based on the coordination of decisions made for the largest number of involved layers due to the quality of the available information. Hence, the main task of management is to create conditions that ensure the stability of structures with the manifestation of constant contradictions between the layers of the economic system [3, 17].

Forming a system for managing economic activities, the state must ensure:

First, the creation of a unified, efficiently functioning system for managing economic activities, organically

combining the vertical subordination of the subjects of the Federation and local authorities to the federal, and their independence (in the interpretation of the concept of unity and stratification of economic space: the joint course and interconnection of processes occurring on the macro-, meso- and micro-levels);

Second, forecasting the consequences of the development of economic systems at different levels, including the validity, continuity, planning and gradualness of all measures that transform systems in accordance with the information that comes from different layers of the economic space;

Third, the reliability of the system for managing economic processes due to the organization of an adequate and timely response at the operated (laboratory) level to information coming from imaginary layers.

Fourth, optimization of the number of functions, their concretization and distribution among various links of the control system according to their functionality.

Fifth, the flexibility of the management system and its individual links, sensitive to external and internal changes, and the efficiency of its functioning.

Management of the economic development of the state is carried out at the macro level (state), meso level (region, industry), micro level (individual companies, firms, production).

At the same time, it is necessary to observe a number of management principles: purposefulness, priority, complexity, consistency, alternativeness, which require the construction of a hierarchy of social needs and the formation of priority areas of economic policy.

## VII. CONCLUSION

The main idea of the synergetic-institutional approach is the alignment of the strategic goals of the development of national economic policy, policies of the subjects of the Federation, industries (enterprises). At the same time, a vertical line of interests of subjects of different levels of economic space is being built, the task of which is to create prerequisites and conditions for the implementation of the interconnection of strategic goals for the implementation of economic policy in the country.

At the federal level, the concept of the development of the country, society and social relations is determined and the foundations of the economic and political orders are formed, reflecting the historical trends in the development of Russia, the features of social relations, the culture and mentality of the peoples and nationalities that make up the Russian Federation, the goals and objectives of the national economy in the conditions of globalization and ongoing geopolitics.

The harmonization of the interests of the region with the interests of the industry and enterprises occurs only when the set of strategic economic zones designated by them is combined with the spectrum of those in the region [11, 16]. The implication is that when developing an economic strategy for an industry or enterprise, one should focus on those zones, a set of which will make the best use of their opportunities while receiving tax, credit, and other preferences due to the economic policy adopted in the region.

In the traditional approach to the analysis of economic systems and conditions of sustainable development, economic phenomena are divided into subjective and objective components, which seems methodologically unjustified. The proposed approach is based on the concept of stratification of economic space and considers them as indivisible and equivalent. This eliminates methodological inconsistencies.

In this case, the task of the control process appears to be such manipulation of possible levers of influence, in which the gradient of uncertainty and instability can either be reduced to zero or the fluctuation of processes, taking place in economic systems, can be reduced to a noise level that is incapable of causing dysfunctional changes.

The advantage of this approach lies in the fact that the observed processes and phenomena are considered in it as processes (phenomena) of one layer of the system with similar mechanisms of functioning, and, on the other hand, the hidden from observation processes are concerned as the processes occurring in imaginary (hidden from observation) layers and obeying their laws and mechanisms of functioning. But the exchange process between these layers follows one scenario (a mechanism).

This makes it possible to apply optimization control models based on the theory of fuzzy sets, which make it possible to transfer the processes hidden in imaginary spaces to levels where they can be observed and controlled. Then the mechanism will look like this: the found version of the control action is transmitted in the form of an information circuit to a specific division of the organization, moreover, to the extent necessary to perform the actions of this division, within the framework of their functional responsibilities and competence.

The conditions limiting the size and content of this information flow are determined by job responsibilities. For this, it is necessary that the control apparatus clearly distinguishes the space where its actions are carried out. And it must obey the rules that set and determine the processes occurring at the current time, i.e. the field of the phase space of the prevailing economic conditions and its stratification into sublevels, conventionally called imaginary and observable, as well as the processes of exchange of information and matter between them.

Ensuring sustainable development of the economy is reduced to monitoring and regulating its state in that area of the economic space that is hidden from observation, i.e. is imaginary.

Thus, we propose a solution to the problem of transferring imaginary spaces (control of processes in which it is difficult) to the observed area. This will require new information technologies that can help to simulate real behavioral situations that ensure the launch of management processes aimed at creating conditions for sustainable economic development.

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## References

- [1] J.T. Landa, *The Coevolution of Markets, Entrepreneurship, Laws, and Institutions in China's Economy in Transition: a New Institutional Economics Perspective. Economic Success of Chinese Merchants in Southeast Asia*. Springer, Berlin, Heidelberg, 2016, pp. 2015-247.
- [2] O.S. Sukharev, "Teorii o disfunktsii: problema upravleniia iutochenie tselei makroekonomicheskogo razvitiia", *Vestnik Instituta ekonomiki Rossiiskoi akademii nauk*, 2020, vol. 1, pp. 95-112.
- [3] L. Shmaneva, and S. Shmanev, "The human capital investment in the modernization of the real economy sector", In the *European Proceedings of Social & Behavioural Sciences*, Future Academy, 2019, pp. 836-842.
- [4] S. Shmanev, and L. Shmaneva, "Effective Functioning of Institutions as a Basis for sustainable economic Development", In the *European Proceedings of Social & Behavioural Sciences*, 2019, pp. 114-119.
- [5] G.B. Kleiner, "System coordination in economics: Towards the formation of a general theory of coordination", In: V.I. Mayevsky, S.G. Kirdina (eds.). *New research in heterodox economics: Russian contribution*. Moscow: Institute of Economics, RAS, 2016, pp. 177-194. (In Russ.).
- [6] L.V. Akopova, "Innovatsionnaia deiatelnost: problem i perspektivy", *Pravoporiadok: istoriia, teoriia, praktika*, 2018, vol. 2(17), pp.70-73.
- [7] V. Glaz, Y. Glaz, A. Zbritskiy, T. Ivchik, and A. Tolmachev, "Development of Systematic Methods for Managing Socio-Economic Systems", *International Journal of Innovative Technology and Exploring Engineering*, 2019, vol. 9(1), pp. 468-472.
- [8] M. El-Hodiri, and A. Ongdas, "Problems of Industrial and Innovative Development of Economy of the Republic of Kazakhstan in Modern Conditions. Vision 2025", *Education excellence and management of innovations through sustainable economic competitive advantage*, 2019, pp. 7947-7956.
- [9] E. Serova, "System Models for Strategic Spatial Planning and Regional Development", In *Proceedings of the 13th European Conference on Management, Leadership and Governance*, 2017, pp. 452-458.
- [10] A. Mazaraki, Y. Drozdova, and S. Bay, "Theoretical and methodological principles for assessment the readiness of socio-economic systems for changes", *Baltic Journal of Economic Studies*, 2020, vol. 6(1), pp. 80-86. DOI: <https://doi.org/10.30525/2256-0742/2020-6-1-80-86>
- [11] S. Khalatur, S. Khaminich, O. Budko, O. Dubovych, and O. Karamushka, "Multiple system of innovation-investment decisions adoption with synergetic approach usage", *Entrepreneurship and sustainability issues*, 2020, vol. 7(4), pp. 2745-2763.
- [12] D.A. Kononov, V.V. Kul'ba, and A.N. Shubin, "Information management in socio-economic systems: ethical aspects", In *IFAC Proceedings*, 2016, vol. 38(1), pp. 25-30. DOI: <https://doi.org/10.3182/20050703-6-CZ-1902.02312>
- [13] V. Kyfyak, and Y. Lopatynskiy, "Methodical approaches to business processes reengineering at modern enterprises", *Baltic journal of economic studies*, 2018, vol. 4(4), pp. 151-158.
- [14] L.K. Koretskaya, E.E. Lomov, A.M. Gubernatorov, D.V. Kuznetsov, and N.V. Yudina, "The adaptation of the concept of fuzzy logic in the management of socioeconomic systems", In *Proceedings of the 6th International Conference on Management and Technology in Knowledge, Service, Tourism & Hospitality*, 2020, pp. 321-327. DOI: 10.1201/9780429445118-45. ISBN 9781138334762
- [15] V.A. Vagurin. *Sinergetika evolyutsii sovremennogo obshchestva*, M.: LENAND, 2019, 214 p. (In Russ.).
- [16] I.I. Belyaev, and A.V. Bulavin, *Osnovy strategirovaniya v oblasti natsionalnoy bezopasnosti. Novy podkhod k sravnitel'nomu analizu*, monografiya, Moscow: KNORUS, 2018, 620 p. (In Russ.).
- [17] D.K. Nort, *Institutions, Institutional Change and Economic Performance*, M.: Fond ekonomicheskoy knigi «Nachala», 1997. 180 p.