

FORMS OF PLANNING THE SOCIO-ECONOMIC SYSTEMS DEVELOPMENT IN THE LONG-TERM PERIOD

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Abstract: *In the structure of the region's development, the main importance has the possibility of long-term planning and formation of a strategy that would ensure constant development for the socio-economic environment of the region. In this regard, it is necessary to clearly understand how to model the development of the socio-economic system in order to ensure the sustainable functioning of socio-economic systems. The authors of the article see the possibility of implementing similar models through the system of stimulation of the innovation activity. The article shows that the choice of processes and phenomena that are actual at present for the implementation of innovations, their structuring and the choice of prospects for development in the future is the basis for the formation of tendencies in planning the development of socio-economic systems in the long-term period. According to the results of the author's methodological apparatus of planning the development of socio-economic systems in the long-term period, the introduction of formalized methods of forecasting becomes possible. According to the proposed approach of planning the development of socio-economic systems in the long-term period, the next step is the clusterization of prospective tendencies and the results of the formation of planning the development of socio-economic systems in the long-term period. This stage is justified by the necessity to mathematically systematize a set of prospective tendencies depending on their direction. The authors show the possibility of formation of methodological and organisational mechanisms.*

Keywords: modelling; socio-economic development; region; economy; structure.

Let us present the detalization of the clusterization implementation of prospective tendencies and the formation of planning the development of socio-economic systems in the long-term period¹. The main idea of socio-economic forecasting and the formation on this basis of socio-economic development programs of the region or the state itself is determined by the fact that the management and planning authorities strive to predict the trends that arise in the process of management as

¹ E.M. Akhmetshin, K.A. Barmuta, Z.M. Yakovenko, L.I. Zadorozhnaya, D.S. Mironov, E.N. Klochko, "Advantages of cluster approach in managing the economy of the Russian Federation", in *International Journal of Applied Business and Economic Research*, 2017, vol. 15, no. 23, p. 355-364.

accurately as possible². In this regard, there is a necessity of developing a methodological apparatus that would allow to form a forecast of tendencies at the level of the innovation integration^{3,4}.

The tendency which developed in the course of formation and supervision of the main tendencies in socio-economic projecting is a natural change of process in a certain time series. Based on this interpretation of the concept of "tendency", there are two main properties that characterize it – these are the cases of the process demonstration (tendencies) and the time in which these cases took place. It is on the basis of these properties that the essence of change of process demonstration cases in time is based. If it comes to the fact of occurrence of a particular case of the process under study, it should necessarily have the geographical space in which it took place⁵.

Together, these judgments are three indicators – time, space and quantity. These indicators form the properties of the tendency, namely: time, place and action. The confirmation of the logical interdependence of the tendency's properties is the triunity of time, place and immediate action – the classical unity by Aristotle. This philosophical statement has already received adaptation in the economic scientific idea, for example: the George Abell's Three-Dimensional Scheme⁶.

When considering each of the tendency's properties in the more detailed way, one should emphasize that learning the patterns of changes in time is a complex and time-consuming procedure of research as well as any phenomenon under study forms a variety of factors acting in the

² D.A. Kaldiyarov, A.M. Baltabayeva, A.E. Bedelbayeva, "Competent role of anti-crisis management in the development of economy in the Republic of Kazakhstan", in *Espacios*, 2017, vol. 38, no. 48, p. 20.

³ K. Carson, "Economic Calculation Under Capitalist Central Planning", in *Austrian Theory and Economic Organization: Reaching Beyond Free Market Boundaries*, Palgrave Macmillan US, New York, 2014. https://doi.org/10.1057/9781137368805_4.

⁴ E. Kryukova, M. Vinichenko, S. Makushkin, A. Melnichuk, V. Bondaletov, E. Potekhina, "On sustainable economic development of the mono town of Baikalsk", in *International Journal of Economic Research*, 2016, vol. 13, no. 6, p. 2409-2424.

⁵ M. Alameddine, A. Baumann, A. Laporte, R. Deber. "A Narrative Review on the Effect of Economic Downturns on the Nursing Labour Market: Implications for Policy and Planning", in *Human Resources for Health*, 2012, vol. 10, no. 1, p. 23. <https://doi.org/10.1186/1478-4491-10-23>.

⁶ V. Gnevasheva, Dutch disease of Russia's economy? in *Mezhdunarodnye Protsesty*, 2016, vol. 14, no. 4, 146-154.

different directions⁷. But without taking into account the time during which the tendency develops, it is impossible to deduce its resultant value^{8,9}.

Literature review

The speed of innovative tendencies spread reveals the importance of the probability degree of successful implementation of innovative ideas in the activity¹⁰. The process that reflects the further implementation of innovative ideas in the formed innovation is demonstrated in the innovation diffusion. Thus, the acceleration of this process is facilitated by certain factors which are also key aspects of the implementation of prospective tendencies in the innovative ideas that form innovative directions of development in the future¹¹.

Different tendencies under the study can develop in the different ways in the directions of the innovation development and this can take different periods of time.¹² Thus, the nature of successful implementation of prospective tendencies depends not only on external factors surrounding the state and management decisions inside, but also on the very nature of the tendency, that is, indicators of a set of factors¹³.

There are five main reasons that govern the success of introduction and implementation of innovations, namely: relative advantage,

⁷ M.N. Lukiyanova, I.A. Zayarnaya, M.A. Kadyrov, "Introduction of the "3-p" model in the concept of strategic management of municipal entities", in *Public Policy and Administration*, 2018, vol. 17, no. 4, p. 586-599.

⁸ N.V. Buley, Y.A. Melnichuk, S.A. Makushkin, M.V. Vinichenko, A. Melnichuk, "Marketing in management structure of commercial activity of enterprise", in *International Journal of Applied Business and Economic Research*, 2017, vol. 15, no. 12, p. 251-259.

⁹ O.A. Urzha, "Social engineering as methodology of management activity", in *Sotsiologicheskie issledovaniia*, 2017, no. 10, p. 87-96.

¹⁰ I.L. Litvinenko, L.K. Gurieva, O.N. Baburina, M.A. Ugryumova, V.I. Kataeva, "Tendencies and features of innovation management in the activities of business", in *International Business Management*, 2016, vol. 10, no. 22, p. 5397-5405.

¹¹ D. Reisman, "Economic Planning", *James Edward Meade*, Springer International Publishing, Cham, 2018. https://doi.org/10.1007/978-3-319-69281-4_11.

¹² H. Wang, S. Li, "Planning System – The Major Aspect of Application of Social Systems Engineering", in *Introduction to Social Systems Engineering*, Springer Singapore, Singapore, 2018. https://doi.org/10.1007/978-981-10-7040-2_7.

¹³ T. Atanelishvili, A. Silagadze, "Formation of economic views in the ancient era", in *Bulletin of the Georgian National Academy of Sciences*, 2018, vol. 2, no. 1, p. 191-196; I.A. Kapitonov, I.V. Zhukovskaya, R.R. Khusaenov, V.A. Monakhov, "Competitiveness and competitive advantages of enterprises in the energy sector", in *International Journal of Energy Economics and Policy*, 2018, vol. 8, no. 5, p. 300-305.

compatibility, being in demand (ease of implementation), relevance (ease of implementation) and observability (communicativeness).¹⁴

There are also additional factors that determine the pace of innovations when they have already material embodiment in goods and services such as¹⁵:

- solution type regarding innovations;
- nature of communication channels, nature of the social system in which innovations find their mass spread and foreign trade activity of agents.

By drawing an analogy of innovation diffusion to the process of spreading the tendencies, it is advisable to analyze only the first five main factors contributing to the spread. After all, by its nature, the tendency is the initial stage of substantiation of ideas of innovations and its material embodiment in the specific innovative directions and innovations which it has not yet formed¹⁶.

Five main factors contributing to accelerating the rate of tendency spread are the concepts that encompass a significant set of aspects of the supposed successfulness of tendencies in the future¹⁷. Thus, the first factor is the relative advantage of innovations suggests that at the time of implementation of the tendency towards innovation development, this innovative idea will be better than the idea it replaces¹⁸. Relative advantages can be represented in the improvement of economic and

¹⁴ R. A. Abramov, A. P. Koshkin, M. S. Sokolov, M. N. Surilov, "Transformation of the public administration system in the context of integration of the national innovation systems of the Union State", in *Revista ESPACIOS*, 2018, vol. 39, no. 14, p. 15 -30.

¹⁵ E. Dimitrova, M. Tasheva-Petrova, A. Burov, I. Mutafchiiska, "Energy Sensitive Spatial Planning as a Public Sector Tool Towards Sustainable Economic and Territorial Development", in *The Role of Public Sector in Local Economic and Territorial Development: Innovation in Central, Eastern and South Eastern Europe*, eds. Maroš Finka, Matej Jaššo, and Milan Husár. Springer International Publishing, Cham, 2019. https://doi.org/10.1007/978-3-319-93575-1_5.

¹⁶ M. Babacan, "Change and Continuity in National Economic Planning: A Methodological Survey", in *Economic Planning and Industrial Policy in the Globalizing Economy: Concepts, Experience and Prospects*, ed. Murat Yülek. Springer International Publishing, Cham, 2015. https://doi.org/10.1007/978-3-319-06474-1_3.

¹⁷ P.L. Sawyer, "Between Economic Planning and Market Competition: Institutional Law and Economics in the US", in *New Perspectives on the History of Political Economy*, eds. Robert Fredona, Sophus A Reinert. Springer International Publishing, Cham, 2018. https://doi.org/10.1007/978-3-319-58247-4_12.

¹⁸ D.Y. Cen, "Study on Technical and Economic Integration Assessment Based on Transmission Planning", in *2nd International Conference on Green Communications and Networks (GCN 2012)*, vol. 4, eds. Yuhang Yang and Maode Ma. 2 May 2012. Springer Berlin Heidelberg, Berlin, Heidelberg. 2013.

ecological efficiency and (or) they can be technical improvements in the result of implementation of tendencies in the ideas of the innovative directions of development. Thus, the type of relative advantage that will matter most is determined by the very nature of the tendency¹⁹.

The ease of the tendency implementation reflects its ease for understanding, use and adaptation to the innovations.²⁰ Thus, understanding, use and adaptation are related indicators, but their values can vary significantly²¹. Thus, the degree of use can be much less than the degree of understanding and vice versa as well as the degree of adaptation, that is, the implementation in a certain direction of the innovation development²². The ease of tendency implementation is directly proportional to the speed of tendency spread because the greater is the ease of tendency in these three indicators, the speed of its spread can gain more importance²³.

The compatibility of the tendency represents the degree of its compliance with the current system of socio-cultural values and ideas from the past that are replaced from the standpoint of consumer requests²⁴. The tendency, which has greater compatibility, has not only a greater probability of implementation from the position of potential consumers,

¹⁹ J.C. Henshall, "Planning for Economic Development and Downtown Revitalisation", in *Downtown Revitalisation and Delta Blues in Clarksdale, Mississippi: Lessons for Small Cities and Towns*, Springer Singapore, Singapore, 2019. https://doi.org/10.1007/978-981-13-2107-8_9.

²⁰ F.R. Siegel, "Planning for Contracting/Aging Populations: Societal and Economic Ramifications", in *Cities and Mega-Cities: Problems and Solution Strategies*, Springer International Publishing, Cham, 2019. https://doi.org/10.1007/978-3-319-93166-1_9.

²¹ B. Cao, Y. Yu, "Industrial Planning, Macro-Economic Control and Government's Role in the Perspective of Economic Crisis", in *Modeling Risk Management in Sustainable Construction*, ed. Desheng Dash Wu. Springer Berlin Heidelberg, Berlin, Heidelberg, 2011.

²² Q. Paris, "Decentralized Economic Planning", in *An Economic Interpretation of Linear Programming*. Palgrave Macmillan US, New York, 2016, https://doi.org/10.1057/9781137573926_20.

²³ M.T. Vespucci, S. Zigrino, F. Bazzocchi, A. Gelmini, "Optimal Planning and Economic Evaluation of Trigeneration Districts", in *Handbook of Risk Management in Energy Production and Trading*, eds. Raimund M Kovacevic, Georg Ch. Pflug, Maria Teresa Vespucci, Springer US, Boston, MA, 2013. https://doi.org/10.1007/978-1-4614-9035-7_11.

²⁴ B.-S. Choi, "Managing Economic Policy and Coordination: A Saga of the Economic Planning Board", in *The Korean Government and Public Policies in a Development Nexus*, vol. 1, eds. Huck-ju Kwon, Min Gyo Koo, Springer International Publishing, Cham, 2014. https://doi.org/10.1007/978-3-319-01098-4_3.

but also respectively greater speed of spread²⁵. The degree of compatibility of innovation should be considered from the standpoint of socio-cultural norms and values and in comparison with the ideas of the past replaced by it²⁶.

The possibility of testing and verification of the tendency determines the ease of its testing in certain limited scale²⁷. The study of tendencies from the position of further formation of perspective directions of the innovation development shows a possible approbation of tendencies in the innovation's implementation. When generating innovative ideas, the tendency can be investigated in the very region and within the occupied market share of any enterprise²⁸. Thus, the greater is the verifiability of the tendency, the greater is the speed of its spread and implementation within the studied region or socio-economic system²⁹.

Observability or communicability tendencies in general terms is the visibility of the results of innovations to other people. That is, this factor reflects the alternatives of increasing the market share due to the implementation of the given tendency in the direction of the innovation development as well as the possibility of increasing the demand from existing consumers³⁰. Analysis of these factors that contribute to the diffusion of innovations, and therefore, the speed of the spread of

²⁵ M. Tiryakiouglu, "Integrating National Learning Systems in Economic Planning: A New Approach to Economic Planning", in *Economic Planning and Industrial Policy in the Globalizing Economy: Concepts, Experience and Prospects*, ed. Murat Yülek. Springer International Publishing, Cham, 2015. https://doi.org/10.1007/978-3-319-06474-1_18.

²⁶ R.C. Freeman, K.P. Bell, A.J.K. Calhoun, C.S. Loftin, "Incorporating Economic Models into Seasonal Pool Conservation Planning" in *Wetlands*, 2012, vol. 32, no. 3, p. 509-520. <https://doi.org/10.1007/s13157-012-0284-x>.

²⁷ D.J. Robinson, "Strategic Economic Development Planning", in *Economic Development from the State and Local Perspective: Case Studies and Public Policy Debates*. Palgrave Macmillan US, New York, 2014. https://doi.org/10.1057/9781137317490_2.

²⁸ E. Akhmetshin, E. Danchikov, T. Polyanskaya, N. Plaskova, N. Prodanova, S. Zhiltsov, "Analysis of innovation activity of enterprises in modern business environment", in *Journal of Advanced Research in Law and Economics*, 2018, vol. 8, no. 8, p. 2311-2323.

²⁹ B. Mota, M.I. Gomes, A. Carvalho, A.P. Barbosa-Póvoa, "The Influence of Corporate Social Responsibility on Economic Performance Within Supply Chain Planning", in *Computational Management Science*, eds. Raquel J Fonseca, Gerhard-Wilhelm Weber, João Telhada. Springer International Publishing, Cham, 2016.

³⁰ S.A. Sergeeva, "Sustainable socio-economic development of the country using the results of statistical analysis of the public procurement volume", in *Astra Salvensis*, 2018, vol. 6, p. 147-157.

tendencies reveals the possibility of analyzing the successfulness of tendencies³¹.

Materials and methods

The implementation of the methodological apparatus of planning the socio-economic systems development in the long-term period is due to the necessity of identifying the basis for the formation of the innovation development directions, that is, the key aspects that characterize the processes and phenomena under study³². That is, prospective tendencies should be grouped according to certain criteria. This grouping is proposed to be carried out by the method of multivariate research on the basis of the rate of propagation of tendencies, namely, on the basis of cluster analysis³³. Its particularity lies in the fact that at the beginning of the analysis it is possible not to set a specific constant value of groups that form clusters. The results of tendency analysis using the method of hierarchical clusterization allow us to draw a conclusion about the interconnection of separate tendencies in their innovation activity.

The methodical apparatus of hierarchical clusterization allows to form homogeneous groups of tendencies with similar features of development. In the result of analysis the tendencies, which are grouped, will be similar according to certain criteria. The criteria by which the cluster analysis will be carried out should be formalized and objective.

We propose on the basis of a certain degree of spread of each tendency to investigate the speed of their spread and analyze the factors that contribute to it. In the result of this analysis, clusters of tendencies will be obtained. At the same time, tendencies of different clusters will differ between one other in groups of factors contributing to the speed of their spread.

Thus, having obtained the information about what tendencies are maximally possible to one other by the impact of key factors on them, it

³¹ E.V. Povorina, O.V. Serbskaya, N.F. Bondaletova, E.V. Duplij, N.V. Buley, "Improving quality control tools for domestic industrial production", in *International Journal of Applied Business and Economic Research*, 2017, vol. 15, no. 12, 283-296.

³² T.V. Shtal, Y.O. Polyakova, E.L. Hasanov, G.S. Ukubassova, S.A. Kozhabaeva, "Formalization of the enterprise international economic activity efficiency management", in *Utopia y Praxis Latinoamericana*, 2018, vol. 23, no. 82, p. 64-82.

³³ E.M. Akhmetshin, E.P. Kolpak, E.A. Sulimova, V.S. Kireev, E.A. Samarina, N.Z. Solodilova, "Clustering as a criterion for the success of modern industrial enterprises", in *International Journal of Applied Business and Economic Research*, 2017, vol. 15, no. 23, p. 221-231.

can be further argued that clusters of prospective tendencies form prospective areas of the innovation development. And the impact of key factors of impact on the clusters of tendencies in the future will represent a set of factors that maximally contribute to the development of promising areas of the innovation development³⁴.

On the basis of functioning of such tendentious clusters it is advisable to forecast perspective directions of the innovation development.

Results and discussion

The development of socio-economic formations has always been accompanied by the development of science, regardless of the scope of application and positioning of its methodological and practical concepts. The fact of objectivity of such contemplation is unconditional, so, it is in this context of historical development that at the turn of XIX–XX centuries institutionalism appeared as a methodology of interdisciplinary synthesis which included the aspects of social, economic, natural, political and legal sciences. Its categories are still not sufficiently stable, and discussion character generates a constant interest from researchers as evidenced by the concepts of research schools and the multifaceted possibilities of wide application for determining the objects and phenomena. This is both an advantage and a disadvantage, but our research position is the motive to the implementation of their own identification of institutionalism categories.

Methodologically and practically recognized is the fact that institutes and institutions in the functioning of market economy should be considered in the structure of institutional theory, having highlighted among them social and economic ones. Thus, the conception of understanding the essential-thematic characteristics of institutes in the market economy follows from the methodological provisions of institutionalism and the evolutionary theory of definitions of the formation and functioning of socio-economic formations.

Douglass North, a Nobel laureate in economics, noted that reduction of uncertainty by establishing a permanent structure of human interaction was the main aim of institutes. Their main objective is to point at the way for human interaction, they establish and limit a set of choices for individuals. It is advisable to note that according to D. North's

³⁴ A.V. Kostruba, "Right deprivation in the legal regulation mechanism of civil property relations", in *Journal of Legal, Ethical and Regulatory Issues*, 2018, vol. 21, no. 1, p. 1-15.

interpretation, the institutional environment created by people has an impact on the ideology, forms a belief system, determines a particular behavior of economic agents and creates stimuluses for them³⁵.

It is advisable to note that according to D. North's interpretation, the institutional environment created by people has an impact on the ideology, forms a belief system, determines a particular behavior of economic agents and creates stimuluses for them. The scientist considers an individual as the primary link of analysis, based on the methodological individualism principle.

One should agree almost categorically with the conclusion that the important role of institutes is connected with ensuring the stability of the market and economic structures, in particular, including in the development of the innovation activity. It is advisable to note that ensuring the permanence is achieved with the help of a complex community of restrictions. The restrictions are divided into formal and informal. As for the formal restrictions, we can say that they are combined in the hierarchical order so that the change of every level in it is more expensive than the change of the previous one. The informal restrictions allow people to share knowledge and experience without thinking about their circumstances³⁶. Behavior, traditions and habits determine the strength of informal restrictions. Hence, the interdependence of formal and informal restrictions articulates human existence and guides us in our daily activities. The importance of institutes and their impact on economy can be summarized as follows:

- institutional basis establishes the framework of the activity and orienting point of change and development of the society and economy;
- objective of institutes is to create appropriate conditions for exchange and minimize the costs connected with them;
- institutes determine the level of transaction and transformation (production) costs in economy.

The argument is the fact that modern society began to specialize much better in technological innovations and environmental sustainability³⁷, social justice and the ability to cope with the massive

³⁵ S.G. Tyaglov, I.V. Takmasheva, N.N. Kiseleva, N.Yu. Rud, "Entrepreneurship as a strategic resource of economic development", in *Astra Salvensis*, 2018, vol. 6, p. 491-500.

³⁶ M.S. Kozyrev, N.V. Medvedeva, V.A. Maslikov, E.V. Frolova, B.L. Beljakov, "The influence of the social structure on ideology in the works by R.K. Merton", in *Man in India*, 2016, vol. 96, no. 10, p. 3581-3590.

³⁷ A.E. Zhatkanbayeva, N.S. Tuyakbayeva, A.K. Jangabulova, S.T. Alibekov, E.V. Kasatkina, E.A. Maslihovala, "International regulation of environmental auditing in the countries of the European Union", in *Journal of Environmental Management and Tourism*,

demographic changes that the world is experiencing and which depend on rapid institutional transformations.

Thorstein Bunde Veblen is the founder of institutionalism. The scientist determined the institutes as a common way of thinking with regard to the individual relations between the society and the individual and the individual functions they perform. John Commons, an American economist, determines institutes in the narrow sense, that is, as a system of laws or natural rights in the framework of which individuals act as prisoners and, in the wide sense, as a collective action on control, liberalization and expansion of individual activity.

The function of institutes in the society's life is quite significant while economic theory is decisively organized under the institutionalism's impact. The view on innovations through the prism of institutionalism is primarily due to the necessity of creation and development of market institutes in the countries in the transformation period.

Institutes are the foundation of the social life. They consist of formal and informal rules, monitoring and enforcement mechanisms and value systems that determine the context in which individuals, corporations, trade unions, nation states and other organizations operate and interact with one other. Institutes are the regulators generated by the struggle and agreements.

One of the successful definitions of institutes is the following: institutes are the rules of the game in the society, or restrictions, established by people, which determine the structure of interaction between them. Institutes consist of formal rules (Constitution, legislation and regulatory acts) and informal restrictions (social norms, traditions and habits, procedures and practices). So, institutes combine the features of both types of rules.

Institutes are the rules of interaction of individuals formed in the process of cultural development and they determine the usual way of organizing this or that sphere of the social life.

The key objective of the institutes is the creation of signals about the society's needs, that is, the generation of information combined with simultaneous solving the emerging problems and support of the balance of interests of all the society members. Formal and informal institutes are meant for preventing the concentration of resources in the hands of

2018, vol. 9, no. 5, 1030-1043; N. Poshanov, Z. Kosanov, S.T. Alibekov, M. Dossymbekova, A. Begzhan, "Comparative analysis of existing environmental control in the Republic of Kazakhstan and foreign countries", in *Journal of Legal, Ethical and Regulatory Issues*, 2018, vol. 21, no. 1, p. 1-7.

certain segments of the population or clans since weak institutes lead to inequality and provide opportunities of emergence of a dictatorial system. The study of different views on the institutes as an economic category showed that there is no single view on their determining and classification.

At its core, the institutes are meant to ensure the stability of society and that is what disrupts the innovations. Traditional society considers innovations more as a threat to itself. When it comes to the institutional ensuring of the innovation activity, we speak about creating an institutional environment that is as open as possible to changes that ensure the development of the economy maintaining the stability of society at the same time. Thus, we find it necessary to consider the components of the institutional system.

Economic entities (subjects of institutional interaction) on the basis of certain established norms of social behavior interact between one other. Such subjects can be either individuals or legal entities, represented as organizations or the state which can also be represented as a set of organizations. The organization acts as the only person in relations with other subjects of institutional interconnection. One should note that the internal relations in the organization are characterized by a set of specific institutes. The institutional infrastructure is meant for ensuring the prospectiveness of the efficient interaction between individual subjects within the institutional system. Institutional blocks unite the institutes operating in separate, interconnected spheres of public life (production relations, financial system, etc.).

Each of the institutional system levels contains blocks of institutes that guarantee the integrated ensuring of performance of the relevant functions.

So, the main institutional units of the society's economic system are the system of production relations, financial system, corporate governance system, organizing the production activity, education and professional development, ensuring the innovative activity and social support of the population³⁸.

In the development of the market and the market economy as a whole, institutes and institutions play a systemic role building the mechanism of the organization, and most importantly, arranging the aspects of the interaction of economic agents in the formation of efficiency. Thus, that on the basis of the well-known scientific postulates,

³⁸ A.V. Kirillov, "Management of innovative activity at the present stage of development of Russia", in *Materials of the Afanasiev Readings*, 2014, no. 1, p. 139-143.

we believe that the institutes form a general economic structure for arranging the organizational and economic interactions.

The classification and theoretical-methodological identification of institutes and institutions are quite diverse and that is what regulates the objectivity of the position that they represent a systematic set of definitions of the demonstrations of the functions of the market, society, human behavior, intellectual and innovation activity.

It is believed that there are basic and derivative institutes and institutions as well as social, economic, legal, etc., which are structured by functional characteristics and scope of application in the market environment. Our research position is based on such a concept of the market institutionalization and innovation activity as a type of market process because the institutional methodology makes it possible to understand the economic and market aspects of the relations of the market agents from a completely different angle, one that takes into account the rules of their behavior under the impact of the competition law.

It is the understanding that not only economic laws affect the behavior of market exchange participants, but also there are different kinds of “game rules” that the concept of institutionalism is based on. Hence our research position regarding the necessity of determining the place and role of institutes in the functioning of the market economy – the most progressive mechanism of public intelligence activation – as well as ensuring the rational use of resources on the principles of innovativeness.

Leaders in the creation of innovative economies demonstrate the advantages of innovative ways of development in the field of employment, environmental protection and high social standards. Innovations are practically inexhaustible public capital of knowledge that is immediately applied. The production of knowledge application becomes the leading sector of the economy. Many countries of the world realized the necessity of orienting the economic policy towards an innovation development model, considering it as an important way of competitiveness. It is also advisable to use the experience of other countries on the activation policy of the innovation development. Now there is a large number of statements and approaches to the definition of innovations, but there is no precise and non-contradictory concept of “innovations”, so meaningful analysis of the essence of innovations remains a subject of discussion.

The innovation activity as a basis of the efficient functioning makes up the process basis of the formation of the relevant innovation model, which according to the process approach, requires the creation of an

efficient system of information support, both in terms of the possibilities of evaluating the state of affairs, and the development of forecasts for the future. In this context we note that the present and prospects of the formation of the innovation model of economic development require the active institutionalization of such components of the institutional ensuring of the market as monitoring and forecasting what is determined by objective necessities. In the context of the competitive national sector development, in addition to the actual financial and resource, infrastructure, personnel and managerial components of the institutional ensuring of the innovation market as the main harbinger of achieving this goal, an important and constructively necessary step is the formation of a system of market monitoring and forecasting the development of innovations. The given institutional construct in the structure's regulation of the market of innovation is due to the objective necessity of acquiring the sources of market information about the movement of innovations as well as its absence in the public dimension for management decision making by all economic entities including the state.

The monitoring system in the organizational terms is positioned by us as a formally agreed scheme of actions of the authorized bodies on the collection, accumulation and spread of information about the innovations implemented in practice in the manner prescribed by law. It should be formed as a structured system (mechanism) that will act for the benefit of society, science and business performing the following tasks:

- monitoring the state and forecasting the tendencies of the economy's innovative development;
- analysis of the efficiency of the state regulation mechanism of the innovation activity;
- ensuring the public access to the results of scientific research and prospective domestic developments;
- increase of the innovative culture level of the population;
- formation of the efficient mechanism of the systematic implementation of public discussion of strategic issues of the state innovation policy;
- coordination of information flows in the system of analysis of the innovation activity aspects at all levels of the institutional system of the homonymous market (producer institutes, institutions-implementers and institutions-innovation consumers).

Herewith the methodological construct of such a system, especially in the context of forecasting the innovation development, is suggested the

use of the most advanced methodology which today is considered to be foresight. Foresight is a process that contains three fundamental elements:

- view on prospect (long term, farseeing);
- planning (policy development, goal-setting) and participation of actors (main customers / interested parties);
- application of various information sources.

The foresight method gained the greatest popularity in Europe (EU, Switzerland, Norway and Russia) and at the international level under the auspices of the OECD, FAO, UNESCO, UNIDO and World Bank. It is believed that France has the longest experience of foresight in business³⁹. In general, foresight is a system of methods of expert evaluation of long-term prospects of the innovation development, the definition of technological breakthroughs that provide a positive impact on the economy and society. However, we propose here a monitoring system that is positioned as a complex one, namely, a combination of analysis of the current state of innovativeness with the methods of forecasting the prospects. This is actually an attempt to normalize the realism of the strategic priorities of the innovation development and management decisions in the business system⁴⁰. The creation of such an institutional system and institutionalization of the foresight methods in the production sector is possible, advisable and real in the context of the recognition of the industry as the economy engine and innovations – the key to sustainable and renewable development.

³⁹ D. Yedilkhan, G.U. Bektemyssova, “Identifying similar business process models”, in *Journal of Theoretical and Applied Information Technology*, 2016, vol. 91, no. 1, p. 152-157; G.U. Bektemyssova, D. Yedilkhan, “Applying of process management in the 'e-license' project”, in *ICCAS 2015 - 2015 15th International Conference on Control, Automation and Systems, Proceedings*, 2015, p. 2076-2079; R.K. Uskenbayeva, B.K. Kurmangaliyeva, D. Yedilkhan, “Situational management for process implementation of working operations of the business process”, in 2015 54th Annual Conference of the Society of Instrument and Control Engineers of Japan, *SICE 2015*, 2015, p. 292-297; R.K. Uskenbayeva, B.K. Kurmangaliyeva, D. Yedilkhan, A.B. Kassymova, “Principles for achieving the optimal performance of the input tasks flow of a business process and optimal performance of the business process”, in 2015 54th Annual Conference of the Society of Instrument and Control Engineers of Japan, *SICE 2015*, 2015, p. 728-733; R.K. Uskenbayeva, G.B. Bektemyssova, B.K. Kurmangaliyeva, D. Yedilkhan, “Development of the business process for national companies of Kazakhstan with the integration of the project 'E-Government'”, in 2015 54th Annual Conference of the Society of Instrument and Control Engineers of Japan, *SICE 2015*, 2015, p. 724-727.

⁴⁰ E.E. Nakhratova, I.Y. Ilina, A.I. Zotova, M.S. Stepanov, S.V. Dusenko, “Modern peculiarities of SWOT analysis when taking management decisions by Russian TOP managers”, in *International Journal of Applied Business and Economic Research*, 2017, vol. 15, no. 7, p. 187-194.

The institutionalization of the proposed methodological construct of the market monitoring and innovation development forecasting, based on foresight, will solve one of the fundamental problems in improving the institutional ensuring the innovation market – the active positioning of the necessity of moving the industry to the investment and innovation model and ensuring proper information and analytical support of this process^{41,42}. This will also provide a real opportunity to combine information resources on accumulation of information on the state, conditions, particularities and prospects of the innovation activity, creating a specialized analytical system with an objective approach to the evaluation (analysis and forecasting) of the market of innovations and innovation development of enterprises.

For achieving the above, it is necessary to intensify the efforts of the state and its institutes on the creation of legal, economic and organisational conditions for the development and efficient functioning of the system of information and analytical support of the implementation of the state innovation policy, monitoring the of the economy's innovative development and market of innovations as a product. However, there should be appropriately formed an institutionalized special mechanism which will be functionally developed by the authorized state body together with the public organization of the scientific direction. Each of these bodies should perform its own function, namely: state administrative bodies – coordinating, and scientific – direct monitoring and analytical processing of information. But if to consider this process from the organisational and mechanistic standpoint, there is still a necessity to do a lot of things in terms of institutionalization of the market of innovations monitoring (this is only monitoring of the state without the foresight constitution):

- to determine the model set of analyzed indicators on the development of the innovation process and the market of innovative goods in general;
- to determine the targets of monitoring and a circle of consumers by categories of the obtained information;

⁴¹ E.M. Akhmetshin, E.I. Artemova, L.V. Vermennikova, R.A. Shichiyakh, N.A. Prodanova, N.M. Kuchukova, “Management of investment attractiveness of enterprises: Principles, methods, organization”, in *International Journal of Applied Business and Economic Research*, 2017, vol. 15, no. 23, p. 71-82.

⁴² A. Kaldiyarov, D.A. Kaldiyarov, D.S. Nardin, S.A. Nardina, “Process approach to managing real investment projects focused on import substitution of products”, in *Journal of Applied Economic Sciences*, 2016, vol. 11, no. 7, p. 1368-1375.

- to ensure the information spread on the state of innovation and prospective domestic development with the aim of drawing the attention of investors and consumers;

- to stimulate the development of the international scientific and technical cooperation in the formation and implementation of the state innovation policy;

- to streamline the relations on conducting a conjunctural research of internal and external market, generalization of the patent and patent licensed information with the aim of forecasting the development of the innovation activity and the market as an institutional system;

- to normalize wide public access to the results of scientific research, to create conditions for their publication by the innovative exchange subjects except for the information with limited access according to the legislation⁴³;

- to ensure the provision of state support in organizing and conduct of information and awareness-raising and exhibition activities in the innovation field;

- to improve the legal and regulatory framework on information and analytical support of the implementation of the state innovation policy and monitoring of the state of the innovation development of the economy, in particular, to ensure its harmonization with the relevant norms of the international law.

Also, one should note that without efficient tools that make monitoring more efficient it is impossible to collect and process the obtained information in the qualitative way. Timely receipt of necessary information is the most important condition for making important management decisions. Therefore, it is clear that due to the latest information technology it is possible to improve the quality and efficiency of monitoring. In this regard, it is possible to create an information system for monitoring the innovation development of the regional economic systems.

At the same time, we consider the institutionalization of monitoring on the basis and with the aim of qualitative forecasting of innovation processes is the main aspect of solving this issue in the context of the

⁴³ A. Sailaukyzy, R. Shakuova, K. Sak, T. Lebedeva, “Contemporary view to the history of Kazakhstan's democratic journalism and publicism”, in *Opcion*, 2018, vol. 34, no. 85-2, p. 825-849.

problem of institutional ensuring of the innovation market⁴⁴. Based on this, we are going to develop our concept of improving the institutes and institutions of the market of innovations⁴⁵.

The introduction of the foresight method of monitoring the innovation market will allow to implement the approaches to forecasting the innovation activity in the most progressive terms. Therefore, we focus our attention to the description of the methodological foresight construction in the conceptual positioning of the indicated forecasting system on such a specific model of the economic process as the production sphere, in particular, the market of innovations. We propagandize the necessity of the foresight use as a special forecasting methodology (table 1).

Table 1: Institutional Construct and Implemental Contours of Foresight in Forecasting the Market of Innovations

Institutional construct	Implemental contours
System of methods of expert evaluation of long-term prospects of the innovation development and market of innovations	Determination of the prospects and forecasting of innovations in the complex institutional systems
Analysis of the phenomena which provide for the control and management	Determination of priorities of sustainable development of the industry with the aim of setting the measures for preserving and ensuring the innovations
Determination of tactical and strategic competitive advantages, development of plans and organizing the activities with the aim of achieving systemic effects of the economy and society	Forecasting the competitiveness and determining the priorities of the development of innovation activity with the aim of evaluating the national prospects in the global institutional space
Combination of "product" (forecasts, scenarios, priorities) and "process" (establishment of ties between interested parties) for the future prediction	Formation of the priority evaluation system focused on determining the model scenarios for the long-term innovation development
Step-by-step and multidimensional interaction of expert groups of different spheres of the innovation activity	Creation of the efficient mechanism of identifying the "points of contact" of the innovation process as well as other industries and determination of public

⁴⁴ E.M. Akhmetshin, V.L. Vasilev, D.S. Mironov, A.V. Yumashev, A.S. Puryaev, V.V. Lvov, "Innovation process and control function in management", in *European Research Studies Journal*, 2018, vol. 21, no. 1, p. 663-674.

⁴⁵ A. Yessekeyeva, I. Kuderin, K. Altayeva, S. Yergobek, K. Bekmuhametova, "Compare the rules as to passage of risk in international sales transactions under the Vienna Convention and the English common law", in *Life Science Journal*, 2013, vol. 10, no. 4, p. 2924-2929.

	priorities for determining the appropriate state policy
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The foresight will provide an opportunity to forecast the prospects of the innovation development and evaluate the advisability of different approaches to improving institutional support positioning itself as its part (foresight is a component of improving the institutional support of the market of innovations and improve its efficiency)⁴⁶. This statement, in our opinion, is quite acceptable from the methodological point of view and from the point of view of providing the necessary improvements of organizing the monitoring process of prospective innovations. Its institutional construction in the methodological and practical terms is aimed solely at determining the contours of the future in the innovation market functioning which in its turn normalizes the necessity of changing the institutional support (legislation, and infrastructure). The introduction of the institutional construct of foresight positioning given in table 1, in our opinion, will provide an opportunity to identify the segments in forecasting the market of innovations by institutional levels (table 2).

Table 2: Conceptual Identification of Innovation Forecasting Segments

Institutional levels	Segments	Responsibility centers
Macrolevel	Nation-wide	Government and authorized body
Mesolevel	Industrial	Industrial academy
Microlevel	Enterprise level	Institutional structure of infrastructure support

This will make it possible to clearly determine the choice of strategic priorities of the development and institutional ensuring of the market of innovations in particular. This question formulation is objectively dedicated to the basic principles of institutionalization of the organisational structure of the studied market, namely, efficiency and competitiveness which are possible only in the framework of the innovation forecasting with determining their objective necessity. It is the choice of strategic priorities (the right choice) that will allow to form the necessary institutional structure of the market, having determined

⁴⁶ O.V. Nikonova, “The development of the social protection system in the context of improving the legal and economic status of public organizations in the Russian Federation”, in *Astra Salvensis*, 2018, vol. 6, no. 12, p. 679-687.

achievable priorities, and strive to ensure the necessary effects of activities in the modern globally competitive world⁴⁷.

- choice of strategic priorities for the development of the market of innovations and the industry in general;
- identification of the most constructive and achievable industry innovations;
- streamlining and improvement of institutions-conductors of the innovation process.

The implementation of these structures of institutional support in the framework of foresight forecasting of the market of innovations is the main factor of their institutionalization for improving the ability of productive forces and organisational streamlining of industrial relations in the industry⁴⁸. This ensures the complex nature of institutional interactions with providing them a status of predictability and certainty in the effects because science and innovations are the main factor of scientific-technical and socio-economic process.

The foresight provides new opportunities for the improvement of institutes, institutions and mechanisms as well as programming of institutional interactions and the very process of creation and spread of knowledge and their implementation in the innovative products. The foresight, in this particular case, becomes a strategic and necessary reference point in the implementation of measures on the market monitoring and innovation activity forecasting.

The adoption of the given forecasting methodology as a forecasting tool is not a tribute to fashion, but a reality because in the world there has already formed a completely different context for organizing the innovation process which is based on the model of building long-term forecasts including the market institutes. Science and innovations of the national economy should become the center of responsibility in ensuring management decision making. This should be a national priority in improving the organizational and market mechanism and the formation of the institutional environment for the innovation development.

Proposing the necessity of the foresight methods implementation as special and unusual for determining the market of innovations and for

⁴⁷ A. Sailaukyzy, K. Sak, T. Lebedeva, "Alash publicism and journalistic activity of Alikhan Bukeikhan", in *Opinion*, 2018, vol. 34, no. 87-2, p. 149-163.

⁴⁸ D.A. Kaldiyarov, E.O. Kydyrbayeva, B.K. Shomshekova, M. Toregozhina, G.R. Baytaeva, "Cooperation of small forms of managing in agro-industrial sector in the Republic of Kazakhstan", in *Espacios*, 2017, vol. 38, no. 62, p. 13.

improving the monitoring and forecasting processes we show possible and achievable effects (table 3).

Table 3: Foresight Effects in the Development of Innovation Activity and Institutional Support of the Market of Innovations

Effect	Outcome
Determination of innovation priorities	Rational distribution and use of scientific and technical potential
Creation of efficient market institutes	Formation of the favorable institutional environment and ensuring the science forecasting
Science reorganization in the context of market innovative model	Increase of competitiveness of created innovative product
Development of a national and identical strategy of the development of science and market of innovations	Science institutionalization into the progressive market model
Formation of a modern progressive system of forecasting the scientific development of the industry	Efficiency and rationing of the scientific research advisability
Optimization of the company's benefits and expenses in the innovation positioning	Minimization of "institutional dissonance" between the aims and possibilities of the institutes of the market of innovations and research systems
Strengthening of science integration to the global space	Involving the most relevant knowledge and innovations to the national innovation system; increase of investment attractiveness of the industry; adaptation of the national innovation system to the conditions of the global market of innovations; improvement of the conditions of institutionalization of science and technology achievements

One should note that the foresight approach, in our profound conviction, will provide the opportunity to maximally and efficiently use and distribute the innovations in the priority directions, institutionally organize the innovative potential of science and technology and most importantly to eliminate existing today demonstrations of pseudoinnovations. The particularity of foresight forecasting is an interdisciplinary approach (interdisciplinary cooperation) which allows to identify diverse priorities and opportunities as well as effectively allocate the resources of science, having streamlined the institutes of the market for this purpose. The foresight localization is not a problem because, as we have already noted, it is a priority strategy in the country in the role of opportunities of increase of added value and national product. The above

mentioned effects mediate the competitiveness of the industry by obtaining the opportunities of increase of comprehensive benefits of running an entrepreneurial activity thanks to innovations including the following points:

- diversification of sources and mechanisms of financing the innovation process;
- application of competitive bases of investment in the latest technology;
- rational use of direct and indirect ways of investing in research and the innovation activity;
- increase of entrepreneurs' interest in domestic innovations, providing them with tax benefits⁴⁹;
- maximum involvement of the existing significant potential of science;
- creation of stable and efficient institutional environment for the development of the latest market innovation economy.

Based on the necessity to implement the fundamental priorities of foresight in the system of market monitoring and forecasting of the innovation process of the sphere, we propose the main stages of the given process (Table 4).

Table 4: Stages of the Foresight Implementation in the Mechanism of Monitoring the Market of Innovations

1 stage	Choice of priorities and their institutional identification
2 stage	Evaluation of economy and efficiency of science functioning
3 stage	Choice of innovation priorities
4 stage	Institutional strengthening the priorities
5 stage	Formation of market infrastructure of priority implementation
6 stage	Creation of the system of collection, storage and spread of information about innovations

We proposed institutionalization system of the market monitoring and innovation activity forecasting as complex one because it allows to combine traditional methods with non-traditional ones which include the foresight method.

The implementation of the stated institutional monitoring system will provide grounds for ensuring the innovation process forecasting and it will be one of the important aspects of improving institutional support,

⁴⁹ D.A. Kaldiyarov, V.R. Burnasheva, A.D. Kaldiyarov, “Tax evasion and its influence on development of the economy of the Republic of Kazakhstan”, in *Life Science Journal*, 2014, vol. 11, no. 19, p. 95-103.

in particular, in terms of obtaining and spread of information about the processes taking place in the field of the innovation development.

For the first time we have developed a model scheme of institutionalization of monitoring the market of innovations which is based on the “foresight” methodology that provides a comprehensive evaluation of the innovation activity prospects. One should note that the foresight methodology should have a coordinator who guides the potential participants, assists in organizing workshops and seminars, monitors ongoing efforts and provides the information. The experts from different industries should be invited to participate as members of brainstorming sessions and discussions in the expert groups.

The market of innovations in its basis and target orientation is risky for the participants, so its model as well as the very model of institutional support requires the development of a special development strategy which should differ from traditional product markets.

The development of competitive, stable and forecast in the development tendencies of the national economy becomes possible only on condition of its transition to an innovative way of development. Among the business entities there are structures that, thanks to sufficient financial capabilities, primarily procurement of capital from other industries, systematically introduce advanced innovation developments.

In the concepts of institutional content it is noted a mediocre level of nature of the institutional environment innovations. The concept of institutional environment covers the essence of the fundamental social, political and legal rules that define the framework of human behavior which forms the basis for production, accounting and distribution. The institutional environment creates circumstances that help or do not help the innovation activity. The degree of development of socio-economic institutes and the quality of their functions significantly affect the formation of entrepreneurs' expectations and innovations themselves.

The legal environment is a significant condition for innovativeness. It is impossible to obtain innovative benefits without reliable protection of property rights. Consequently, the innovation activity becomes impossible under certain conditions that have an institutional character and what is equally important, historical one. The state, as a political institute, on the one hand, determines the norms and rules of behavior in the society, and on the other hand, creates mechanisms for enforcement of their keeping to, carries out a number of important institutional functions related to the innovations. In the modern conditions, it supports basic technological and economic innovations giving them an initial

impetus. The state should perform the function of forming the socio-economic and psychological environment of the innovations. Among the methods with the help of which innovation activity is activated through the impact on informal rules, ideological levers are becoming of particular importance.

So, innovation, in our opinion, should be considered the renewal and expansion of the range of products, services and markets; creation of new methods of production, supply and distribution; making changes in management, organisation of work and working conditions and skills of the workforce. Also, innovations provide the enterprise with economic growth and financial stability and in the result it makes it competitive in the market.