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Abstract

To provide an economic description of social driving forces in modern society, the author develops his own concept of economic sociotronics. It is a section of social sciences that is focused on the development dynamics of economic institutions of interaction between actors and society in the digital economy. The paper formulates scientific principles and ideas of economic sociotronics that allow establishing the cause and effect relationships between endogenous factors of environment and successful development of social projects. The obtained results make it possible to perform the integrated institutional modelling of the public sector's formation under current conditions with the aim of forecasting the further development of its driving forces.

JEL classification

D00, O10

Economic Sociotronics of the 21st Century¹

INTRODUCTION

The development of the public sector in the context of the digital economy caused a paradoxical situation to emerge. On the one hand, the traditional benefits of the tertiary sector of economy are being further developed and deepened; on the other hand, the advanced forms of social interaction help to deal with the failures of the public goods market. In this regard, there emerges a necessity for inventing a new concept of a comprehensive analysis of modern driving forces for developing the public sector of economy. A comprehensive analysis of social driving forces can be carried out within the framework of the institutional economic paradigm which uses the evaluation of norms of interaction between economic agents. However, still the world scientific literature cannot boast of a vast number of publications on modelling transactions in the public sector.

The purpose of the study is to develop the principles and ideas of the institutional modelling of public goods production processes within the framework of the author's concept of economic sociotronics¹.

THE THEORY OF ECONOMIC SOCIOTRONICS: CONTENT AND MAIN IDEAS

To characterize the development of social driving forces, it is expedient to apply a concept that is consistent with new public trends. Such a concept was introduced by Alvin Gouldner. In his opinion, sociotronics is the name of the concept which implies that solely informatization of modern society is capable of resolving the current social pathologies and deviations. Experts directly engaged in information, communication and computerization processes become the major actors of social rehabilitation [3].

Hence, economic sociotronics is a section of social sciences that is focused on the development dynamics of economic institutions of interaction between actors and society in the modern digital economy.

Network interacting is one of the fundamental factors in the development of public goods [1]. Here, we can formulate *the first principle* of the theory of economic sociotronics: the successful development of modern public goods is determined by network interactions between economic agents of the public sector.

In this case, the central importance is attributed to the institutional background of the development of public goods. The institutional environment makes competitive markets work better and sees such markets as one form of institution fulfilling the coordination function [2].

The procedure of the public goods examination consists of three stages:

- 1) analyzing the dynamics of local public goods financing;
- 2) assessing the quality of local public goods;
- 3) analyzing the dynamics of local public goods consumption.

The norms and rules creating the institutional environment of local public goods form the institutions of regulation, production, distribution and consumption of public goods. Economic agents are represented by public and municipal authorities as the client and the contractor of the processes of production and distribution of local public goods; objects of socio-cultural purpose; the immediate producer of local public goods and population acting as the consumer. Based on the analysis results obtained during the procedure of the institutional environment examination, the place of local public goods in the matrix of the institutional environment's current state is determined.

The research conducted allows formulating *the first idea* of the theory of economic sociotronics: it is appropriate to carry out the institutional modelling of the production of local public goods on the basis of the matrix of the current state within the framework of "the dynamics of the number of consumers – the dynamics of financing".

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² The complete results are presented in the paper "Econotronics" in *Economy of Region*, 2018, no. 1, pp. 13–28.

Экономическая социотроника XXI века

It is worth mentioning that the modern digital society dictates the necessity to apply brand-new economic tools, and it is crucial to bear them in mind in the course of developing the public sector.

The application of the brand-new economic tools makes it possible to accelerate the development of new projects and phenomena in the social sphere. Here, we can lay down *the second scientific principle* of the theory of economic sociotronics: the accelerated development of contemporary social projects depends on the application of the cutting-edge economic tools, such as social innovation, crowdfunding, fundraising, etc.

The new social phenomena that emerged due to the application of the digital economy also embrace the implementation of the sharing economy. The sharing economy, or exchange economy, refers to encouraging consumers to participate in the development and realization of a product through the application of digital technology.

With the development of the sharing economy, it is possible to form territorially scattered, but commercially linked systems of sports, education, healthcare and other social services. Under the sharing economy, individuals join social unions and render social assistance to similar projects providing them with information support [4].

Therefore, we can formulate *the second idea* of the theory of economic sociotronics: the accelerated development of social projects can be based on the application of the methods for implementing the sharing economy. These methods include the mechanisms of the digital technologies (including mobile communication and transferring data via the Internet (version Web 2.0)), as well as the application of a settlement system based on cryptocurrency.

How can the development of social projects be enhanced? Apparently, through social entrepreneurship.

For the purpose of this study, by social entrepreneurship we mean a set of interrelated types of activity aimed at resolving social problems by stimulating the com-

mercial activity of economic agents. In the given definition, the emphasis is placed on the priority of public goals and the creation of social benefits over economic goals, which distinguishes social entrepreneurs from traditional business people [6].

The requirements of society, in turn, are met by means of norms enshrined in the institutional infrastructure [5]. At that, the quality of formal institutions influences the size of the bureaucratic apparatus that is in charge of the public sector, including the development of social entrepreneurship [7].

The author's research allowed grouping formal institutions for the social entrepreneurship development into three categories: regulative, supportive and cognitive institutions.

Hence, we are ready to establish *the third principle* of the theory of economic sociotronics: the availability of the formal institutional infrastructure ensures the success of social entrepreneurship within the public sector.

At the same time, informal economic institutions also play an important part in the course of the development of social projects. Empirical studies on the development of the healthcare systems clearly indicate that, when resolving social problems, informal economic institutions exert a more profound effect in comparison with formal institutions.

Thus, the social structure of society and the development of social entrepreneurship, in many respects, rely on application of informal economic institutions. Consequently, we can formulate *the third scientific idea* of the theory of economic sociotronics: informal economic institutions adopted in society guarantee the development of social entrepreneurship.

What new social projects are being formed in the society? What driving forces contribute to their development? To answer these questions, let us look at social innovations, their formation and development.

Assuming that economic institutions act as the conditions for the unfolding

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Ключевые слова

ДИНАМИКА РАЗВИТИЯ
ЭКОНОМИЧЕСКИЙ ИНСТИТУТ
СОЦИАЛЬНОЕ ПРЕДПРИНИМАТЕЛЬСТВО
СОЦИАЛЬНЫЕ ИННОВАЦИИ

Аннотация

Для экономического описания социальных движущих сил в современном обществе предложена авторская концепция экономической социотроники как раздела социальных наук о динамике развития экономических институтов взаимодействия между акторами и обществом в цифровой экономике. Разработаны научные принципы и идеи экономической социотроники, позволяющие установить причинно-следственные связи между эндогенными факторами среды и успешным развитием социальных проектов. Полученные результаты дают возможность проводить комплексное институциональное моделирование развития общественного сектора в современных условиях с целью прогнозирования дальнейшего формирования его движущих сил.

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of the evolution process, the stages of social innovations' evolution can be reduced to the following sequence. Innovators generate a new idea which is then transformed into a social-innovative project and can lead to the formation of an organization. This innovation has an impact on society, which causes positive social and economic changes. Society, in turn, influences social innovators when generating new ideas.

Thus, we can formulate *the fourth principle* of the theory of economic sociotronics: the formation of social innovations is determined by the following sequence: (a) identification of a social problem by potential innovators; (b) the development of its solution and the design of a social-innovative project; (c) putting this project into practice by society.

The institutional environment of social innovations is a set of institutions and institutional agreements that affect the conditions of interaction between economic agents. The institutional environment is capable of both enhancing the development of social-innovative projects and constraining their implementation. It also can serve as a catalyst for social innovativeness and be a barrier to implementation of social-innovative projects.

Economic institutions form the basis for new policy of public authorities which implies a system of measures aimed at developing social innovations. Social innovations are designed to deal with failures that arise between the market, the state and the public sector. Therefore, the recommended measures are characterized by the development of cooperation in the sector and the creation of incentives.

Consequently, *the fourth idea* of the theory of economic sociotronics is the following: the place and the role of social innovation projects in dealing with failures of the market of social services are established

using the method for constructing an institutional atlas that reveals the bottlenecks of the institutional infrastructure.

Institutional analysis is an indispensable method for apprehending the phenomenon of social innovations, as well as trends and mechanisms of their development. This need is grounded on the fact that all types of resources and all parties involved in social innovations are interconnected by a whole system of formal and informal norms that represent the institutional context of social development.

The absence of a unified classification of social innovations, as well as a universal way of their systematization, encouraged the author to develop a multi-parameter classification of social innovations. A list of criteria that serves as the basis of the multi-parameter classification of social innovations allows establishing the place of a certain innovation in the social space, which builds the foundation for forecasting its influence on the development of the public sector at different economic levels (global, national, regional and municipal).

Thus, we can formulate *the fifth principle* of the theory of economic sociotronics: the importance and the role of a social project for society is determined by its position according to the systematization coordinates: the sphere of activity, government participation, the degree of participation, the level of initiation and the level of novelty.

At that, the appropriateness of the development of social projects should be measured by economic methods. It can be assumed that when using the evaluation criteria for social innovations, one should rely on private and social benefits obtained by the producer and the consumer of social innovations.

The main idea behind the development of social innovations uniting all the ap-

proaches is the idea of a balance between commercial activity and social mission for all sources of social innovations excluding public authorities and volunteering. The empirical study of social projects in Sverdlovsk oblast of the Russian Federation proved the applicability of the performance evaluation matrix for analyzing the progress of social innovations.

Thus, we can produce *the fifth scientific idea* of the theory of economic sociotronics: economic efficiency of a social project's implementation is dependent on the realization of commercial and public benefits and can be determined within the framework of the matrix of social innovation performance evaluation.

CONCLUSION

In order to develop the principles and ideas of institutional modelling of public goods production processes, within the framework of the author's concept of economic sociotronics we obtained the following results.

Firstly, to provide an economic description of social driving forces in modern society, the author frames his concept of economic sociotronics as a section of social sciences which is focused on the dynamics of the development of economic institutions of interaction between actors and society in the digital economy.

Secondly, the author develops the scientific principles and ideas of economic sociotronics that allow establishing the cause and effect relationship between endogenous factors of the environment and the successful development of social projects.

The obtained results make it possible to form the comprehensive institutional modelling of the development of the public sector in the modern conditions with the aim of predicting the further development of its driving forces. ■

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