

Methods And Techniques Of Motivation Of Subjects Of Regional Economy For Innovative Improvement

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Abstract: Ensuring the innovative development of the economic system is the result of the initiative of its subjects. In the absence of a motivated need for innovative development, subjects will not make every effort in their segment, which will not allow achieving a synergistic effect. Realizing the need to activate the motivational mechanism, the article developed a matrix approach to the implementation by all participants of the regional economic system of coordinated expedient activities that contribute to achieving the goals of innovative development, i.e. the formation of a new technological structure. The developed matrix is three-dimensional and contains methods and tools grouped according to their type (organizational, institutional, economic) to be implemented by regional development stakeholders to increase the innovative activity of each group and the regional system as a whole.

Index Terms: Motivation, Innovation, Innovative Improvement, Regional Economy, Regional authorities, Stakeholder groups, Stimulus-reaction model.

1 INTRODUCTION

The importance of managing economic development at the regional level is due to the existing shortcomings of a market economy, primarily its focus on generating an economic effect and neglecting problems of social justice. At the same time, the feasibility of managing economic development at the regional level is justified by the features of the existing economic system, the presence of specifics in the development and spatial distribution of productive forces, and geographical and demographic features [1-5]. The modern paradigm of structural transformations of the regional economy is reduced to creating conditions for motivating the innovative activity of stakeholders in the regional economy [6-8]. Within the framework of a systematic approach, innovative improvement can be considered as a sequential process of interaction and mutual influence of the elements of the regional socio-economic system [9-10]. The effectiveness of this process depends on the quality of interaction of the elements with each other, as well as with the external environment. Therefore, the analysis and evaluation of the determinants of innovative improvement should take into account not only the conditions that determine the specifics of the course of innovative processes and affect its effectiveness but also take into account the nature of the interaction of structural elements.

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2 REGIONAL ECONOMIC SYSTEM AS AN OBJECT OF STRUCTURAL TRANSFORMATION.

The practice of regional innovation process management indicates that stakeholder groups of regional development differ significantly in their response to incentives for innovative development. Besides, as noted above, these groups often have diametrically opposite interests and exhibit opportunistic behaviour. The absence of stakeholder motives for creative, innovative activity among stakeholder groups naturally provokes a decrease in the innovative potential of the regional socio-economic system. Innovative motivation is the basis for innovative improvement of the regional economy. Therefore, for the intensification of innovative processes, it is essential to consider and diagnose the internal motivation of stakeholder groups. According to the Adams' Theory of Justice [11], each group of stakeholders constantly compares its contribution to

the innovative development of the region's economy and the results obtained from it, expecting justice (Fig. 1).

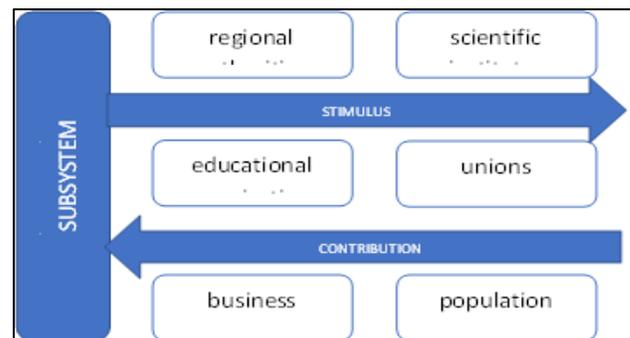


Fig. 1 Stimulus-reaction model of stakeholder groups

The motivation of stakeholder groups for innovative improvement is due to the development of the region as a structural element of the macroeconomic system. The motivation for innovation may indicate the readiness of stakeholder groups to change, as well as the possibility of realizing their interests. The level of motivation for innovation is the most critical indicator of assessing the potential of a

regional innovation subsystem for development. Ignoring the factors that determine the level of motivation of stakeholder groups to innovate, provokes a decrease in the effectiveness of the regional innovation subsystem. And it can also lead to imbalances between the possibilities of innovative development and their implementation. The basis for increasing motivation should be based on the chance of achieving the group interests of stakeholders. Depending on the degree to which innovative processes correspond to the group interests of stakeholders, the latter select appropriate strategies for adapting to them:

- 1) a policy of full recognition;
- 2) partial recognition strategy;
- 3) denial strategy.

The strategy of full recognition of innovative improvements implies the active participation of the vast majority of stakeholder groups in innovative processes, which manifests itself in their effective, innovative activities, taking advantage of innovative products. The strategy for the partial recognition of innovation improvements is that innovation processes are supported by only a small part of stakeholder groups and their neutral attitude to innovation. The strategy of rejecting innovative improvements implies the complete rejection of innovative processes by the overwhelming majority of stakeholder groups, their opposition to innovation, and the rejection of the use of innovative products. To ensure the implementation of the strategy for the full recognition of innovative improvements, it is necessary to manage this process by building a motivation system that includes methods and techniques for stimulating the subjects of the regional economy to innovative activities. In this aspect, motivation is the process of purposefully encouraging stakeholder groups to innovate. The main methods of motivation are the following:

1) institutional - aimed at creating an organizational environment to stimulate the innovative activity of stakeholder groups. This method is characterized by its content as "external" and involves the development and application of a regulatory, methodological base for innovative improvements;

2) economic - based on the economic interests of stakeholder groups and including the use of a wide range of material incentives (benefits, subsidies, subsidies, etc.);

3) moral and psychological - aimed at creating a favourable moral climate for innovation and the development of innovative culture (Fig. 2).

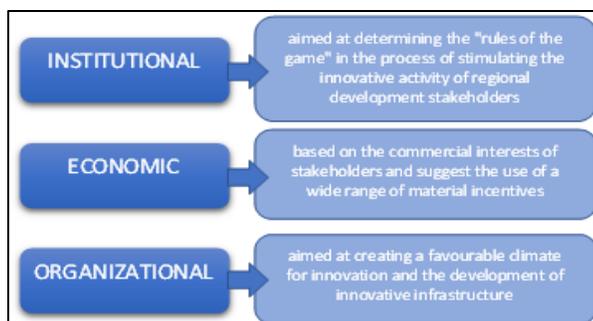


Fig. 2 Methods of motivating regional economic entities to innovative improvement

3 METHODOLOGY AND ANALYSIS OF THE RESULTS

Within each method, one can develop a set of techniques aimed at motivating a specific group of stakeholders to increase their innovative activity. When developing a set of motivation techniques, it is necessary to focus on the interests of each group of stakeholders, which should be satisfied as a result of the application of the developed motivation system. Within the framework of the institutional method of motivation, it is advisable to propose the following techniques:

1. Improving the regulatory framework for innovation management, taking into account international experience. Namely, it is proposed the development and implementation of a standard for the interaction of innovation stakeholder groups. A similar standard has been in force in the UK since 2011, which regulates the planning of interaction, the execution of interaction, and the assessment of the quality of interaction by interested parties. This regulatory action can be used for various types of communication:

- functional (at the level of stakeholder groups);
- organizational;
- interaction on specific problems and issues.

It can be used at various levels of interaction: internal and external. This standard allows you to formalize the interaction between groups of stakeholders legally.

The main principles laid down in the standard are:

- materiality - this principle implies a high degree of relevance and significance of the problem being solved;
- involvement - the cooperation of all stakeholders in the strategic decision-making process;
- The principle of reaction - prompt response to issues arising during the adoption and implementation of strategic, tactical and operational tasks.

2. Development of guidelines for R&D. Often, guidelines have been developed and implemented that form the basis for R&D. However, a significant drawback of these methodological documents is the low degree of study of the issues of interaction between stakeholder groups of innovative improvement. The development of such a regulatory action will help to level out the conflict of interests of stakeholder groups.

3. Creation of organizational support for coordination of interaction between stakeholder groups within the framework of innovative improvements. The corporate form of such coordination may be the so-called "project office", the essence of which is to coordinate the interaction of stakeholder groups through the development and implementation of project management standards. This structure creates optimal conditions for the exchange of resources, as well as the methodological and methodological foundations of the interaction of stakeholder groups in the implementation of innovative projects. It also helps mitigate conflicts of interest.

4. Development of innovation infrastructure. The transition to a digital economy is impossible without the event of a sufficient infrastructure, which must be understood as a set of organizations that create the conditions for innovation.

Technoparks, techno-incubators, technopolises, innovative production complexes, venture funds, etc. can be called such objects. The process of their interaction is carried out through information communications.

5. Creating conditions for the development of promising forms of cooperation between stakeholder groups. As promising forms of interaction, the author reasonably identifies a multigroup, cluster, association, alliance. The author considers benchmarking, project management, outsourcing, crowdsourcing, reengineering, and management based on integration processes as interaction methods adequate to modern conditions. These forms and methods are most consistent with the processes of digitalization, integration, humanization of social and economic development.
6. Development of public-private partnerships (PPPs). PPP is an agreement between the state and the private sector for the production and provision of infrastructure services. The interest of the state in PPP lies in need for the development of innovations and innovative products in various sectors of the economy. Also, in the implementation of PPP projects, achieving synergistic effects. The interest of private organizations or businesses is to increase profits and minimize risk.

Thus, the methods of motivation that we have proposed within the framework of the institutional method are generalized and to varying degrees meet the interests of stakeholder groups (Table 1). In the framework of the economic method of motivation, it is advisable to offer the following techniques:

1. Preferential taxation. According to the experience of foreign countries, the provision of tax incentives for funds spent on innovation, the reduction of property tax rates for enterprises actively engaged in innovative activities, especially in the digital economy, can be used as an effective method of motivation. Reducing the VAT rate on innovative products, which will act as an economic incentive for consumers, the provision of tax deductions for individuals acquiring expensive innovative products.
2. Irrevocable subsidies. It is focused on providing financial assistance from budgetary funds to groups of stakeholders actively participating in the process of innovative improvements.

Table 1
Techniques of the institutional method of motivation, corresponding to the interests of stakeholder groups

Institutional methods of motivation	regional authorities	scientific institute	educational organizations	unions	business	population
Improving the regulatory framework for innovation management, taking into account international experience	✓	✓	✓	✓	✓	✓
Development of guidelines for R&D	✓	✓	✓	✓	✓	✓
Creation of organizational support for coordination of interaction between stakeholder groups within the framework of innovative improvements	✓	✓	✓	✓	✓	✓
Development of innovation	✓	✓	✓			

infrastructure						
Creating conditions for the development of promising forms of interaction between stakeholder groups	✓	✓	✓	✓	✓	
Development of public-private partnerships	✓	✓				✓

3. Special government loans. By which we can understand the provision of loans for innovative activities at preferential interest rates, compensation for loans and borrowings, refinancing of previously obtained loans.
4. Financing of part of the wage fund at the expense of state funds. This technique involves the payment of part of the wages to employees employed in organizations engaged in the production of innovations.
5. Development of the innovation insurance system, which is understood as the creation of conditions for managing innovation activity risks. Innovative risk accompanies any innovative product, so risk insurance is an effective method of motivation.
6. Creation of consulting centres. They will have to provide consulting services on various issues of innovation: legal, financial, tax, economic, marketing, etc. Thus, the methods of motivation proposed by us within the framework of the economic way are generalized and to varying degrees, meet the interests of stakeholder groups (Table 2).

Among the moral-psychological method of motivation, it is advisable to offer the following techniques:

1. The formation and development of an ideology of innovations that encompasses society as a whole and forms a request on its part for innovation. It is about shaping the needs of the community for innovation, increasing the importance of innovation for progress in technology, economics, solving environmental problems, etc.

Table 2
Receptions of the economic method of motivation, corresponding to the interests of stakeholder groups

Economic methods of motivation	regional authorities	scientific institute	educational organizations	unions	business	population
Preferential taxation 		✓	✓		✓	✓
Irrevocable subsidies 		✓	✓		✓	✓
Special government loans 		✓	✓		✓	✓
Financing part of the wage fund at the expense of state funds 		✓	✓		✓	✓
Development of an innovative insurance system 	✓	✓	✓	✓	✓	✓
Creation of consulting centres 	✓	✓	✓	✓	✓	✓

2. The development of an adaptive corporate culture at the micro level focused on a positive perception of organizational change and innovation. Such a culture stimulates the growth of creative potential among staff and promotes innovative and rationalization activities.
3. Improving the digital literacy of the population through the

creation of a universal education system that supports the formation of demand for innovative products.

- Motivation by "personal example", by which it is necessary to understand that the state itself should be the "pioneer" of innovative improvements and the introduction of digital technologies. Thus, the methods of motivation that we proposed within the framework of the moral and psychological approach are generalized and to varying degrees meet the interests of stakeholder groups (Table 3.).

Table 3

Methods of the moral-psychological way of motivation, corresponding to the interests of stakeholder groups

Moral-Psychological methods of motivation	regional authorities	scientific institute	educational organizations	unions	business	population
Formation and development of an ideology of innovations that encompasses society as a whole and forms a request from it for innovation	✓	✓	✓	✓	✓	✓
The development of adaptive corporate culture at the micro-level		✓	✓	✓	✓	
Enhancing digital literacy by creating a universal learning system		✓	✓	✓	✓	✓
Motivation by "personal example"	✓	✓	✓	✓	✓	✓
Motivation by international achievements	✓	✓	✓	✓	✓	✓

Thus, it is possible to assess the potential increase in the innovative improvement of regional economic entities using the proposed integrated factors of stimulation (Fig. 3-4).

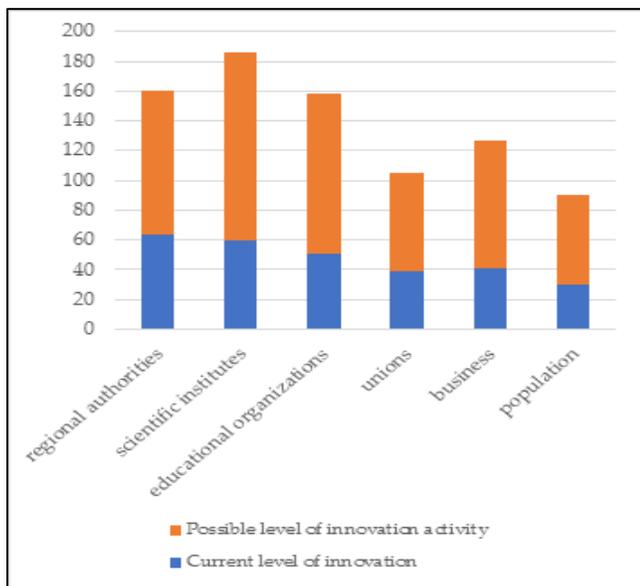


Fig. 3 Increasing the innovative improvement of regional economic entities using the proposed motivational mechanisms

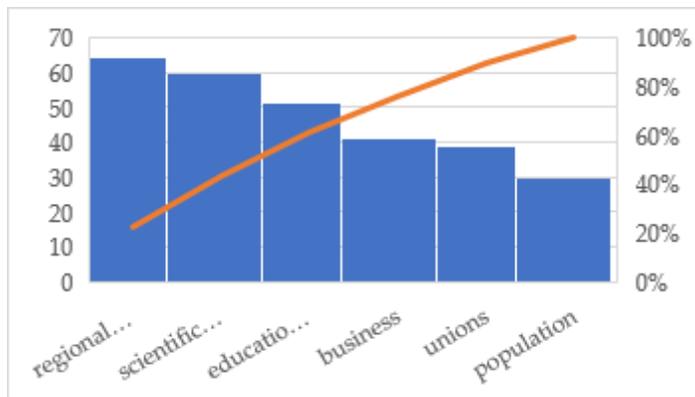


Fig. 4 Increasing the innovative improvement of regional economic entities using the proposed motivational mechanisms (in decreasing order of total innovation improvement)

Analyzing the results, we can draw certain conclusions about the impact of the recommended tools to stimulate innovative improvement, among the most significant:

- These tools have the greatest impact on the least innovatively acting regional economic entities, eventually closing the gap between them.
- Scientific institutes remained leaders in innovation activity, but regional authorities have more intensive growth, followed by educational organizations. In the closing three, changes took place: business moved to 4th place, ahead of trade unions, which is more profitable for the economy.
- The proposed tools have a maximum impact on scientific institutes, educational organizations and business (almost doubled).

4 CONCLUSION

Summing up, we note the innovative improvement of the region's economy is impossible without creating a system of methods and techniques of motivation, adequate to the interests of stakeholder groups. This motivation system should be an integral element of the strategy of innovative transformation at the regional level. The issues of structural and substantial transformation of the economic system are among the most controversial since each new change in institutional conditions encourages scientists to propose new approaches to the implementation of structural alterations. In modern studies of the regional socio-economic system, in the context of the formation and development of the digital economy, the following areas have been outlined that need theoretical and methodological interpretation:

- firstly, the development of theoretical and methodological provisions revealing the content of structural-digital transformations of the regional economic system in the new conditions, characterized by a focus on innovative development;
- secondly, the current methodological approaches do not allow to fully assess the state of innovation processes in the region, which necessitates the development of methodological methods for determining the level of development of a regional innovation subsystem and substantiating promising directions for its improvement;

- thirdly, among the types of economic activity, sectors and industries are noted that demonstrate a low rate of innovative renewal, which does not allow the economic system to function effectively following the requirements of the digital economy. In this regard, it is of interest to study the sectoral type of structure of the regional economy and develop proposals to ensure the innovative development of "lagging" industries.

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