

G. S. Mikhalev, L. R. Batukova

Siberian State Aerospace University named after academician M. F. Reshetnev, Russia, Krasnoyarsk

TO THE QUESTION ON INNOVATIVE DEVELOPMENT OF THE RUSSIAN ECONOMY

Several conceptions of innovation methodology, formed on the institutional level are being reviewed. Their level of methodological interpretation and the possibility of their use as a base for development of methodological instruments are being analyzed.

Keywords: innovative type of development, national innovative system, innovative socially-directed type of economics development, innovative model of economics growth, model of innovative social-directed development.

Russia nowadays is facing a problem of the prompt transition to innovative type of development of economy. Authors of scientific researches generally understand such development of economy, where knowledge and its commercial realization play the main role in the steady growth of the gross domestic product, as the given type of development, where knowledge manufacturing becomes the basic resource of stable economy growth. As the basic competitive advantage of the socio-economic system developing on innovations, allocated is the possibility of its advance modernization on the basis of accumulated or outsourced mental potential.

Realization of transition to innovative type of economy development demands deep understanding of innovative development processes, well-grounded methodological and methodical base. In this respect the great interest of modern researchers to innovative subjects becomes clear.

While disputing and forecasting on the given topic in the field of modern economics a number of widely used terms of innovation field were generated. Such terms include: innovative development, innovation, innovative activity, innovative business, etc. Despite wide discussion concerning the definitions of innovation terms, unfortunately, no unity of understanding of the given notions has been reached. At the same time, economic practice, having real requirement for those terms of innovations has actively started to use them.

In current documents accompanying the actual economic and economical activities in Russia (laws and sublegislative certificates, concepts, analysis, strategies, state-of-the-art reviews, etc) during last years various terms of innovation field are widely used.

It is possible to relate terms which are formed and used in documents on the state (municipal) level to backbone ones. The given terms set a vector, key parameters and principles of innovative development in the context of which applied concepts of innovations are formed. Those backbone terms include, for example: innovative type (way) of development of economy, innovative model of development of socio-economic system, national (regional) innovative system.

A number of derivative terms which designate objects and processes of real economic practice include: innovative project, innovative activity, innovative infrastructure, innovative enterprises and others.

Backbone terms, inherently, should form a methodological basis of innovative development and be supported by the basic macroeconomic and philosophical categories. Then

the derivative notions generated on their basis, will be accurate and unequivocal. In our case, apparently, it does not occur.

Though, terms of innovation field have transferred from the area of research to the legal and economic spheres, it has not brought any clearness to their application. Still, even in state documents, intended to be a methodological and methodical basis of innovative development, different interpretations, illegibility, vagueness of definitions and formulations take place. In this connection there are considerable problems on the level of application, when economic and economic management players in real try to build system of mutual relations on the basis of the concepts which have not been finally developed, but fixed on the state (municipal) level. It is a rather serious problem and until it is solved, it is hardly possible to promote innovative development of national economy. To estimate the problem level we will consider the most essential documents which are used today as the basis for decision-making or as an example for new innovative documents design.

One of basic documents in the field of innovative development of Russia is the Concept of Long-term Social and Economic Development of the Russian Federation for the period till 2020, approved by the regulation of the Government of Russian Federation No 1662-r of November, 17th 2008 (further under the text – the Concept). The analysis of the given document is essentially important as for today it is the base document on the federal level fixing strategic directions of economic and technological development.

The given Concept, as well as any other concept is urged to fix in the institutional field a methodological basement and to generate, extendedly, the basic methodical approaches providing the decision of tasks assigned. It is necessary that the user will have received the accurate and clear answer to a question – “how to reach the concept purposes?”

The aim of the Concept of Long-term Social and Economic Development of the Russian Federation comprises “defining the ways and means of long-term maintenance (2008–2020) of steady increase of well-being of the Russian citizens, national security, dynamic development of economy, strengthening of positions of Russia in the world community” [1].

The priority problem of the Concept, assuring the achievement of the given purpose, is the transition of the Russian Federation to innovative type of development. The developer of the Concept (further under the text – the Developer) does not give any special definition to the given

concept, but speaks about the value of the innovative way of development: without it “formation of the competitive on a global scale national innovative system” is impossible. Besides, according to the Developer to switch to innovative type of development is possible if:

- to provide “an increase of professional requirements to staffs, including the levels of intellectual and cultural development”;

- to generate “national innovative system, including such elements as the system of scientific research and development integrated with higher education flexible for the economic inquiries, business engineering, innovative infrastructure”.

As we see, the circular reference takes place: the innovative way of development should provide the national innovative system formation; in order to transfer to innovative way of development, in turn, it would be necessary to generate national innovative system. As a result of given incorrectness, both terms of the Concept, in essence, methodologically are not defined.

Indirectly, it would be possible to determine the essence of an innovative way of development if the concept of national innovative system, for example, proceeding from its internal organization was accurately formulated. The Developer of the Concept defines organizational essence of national innovative system as follows:

“The national innovative system represents a set of interconnected organizations (structures) occupied with manufacture and (or) commercial realization of knowledge and technologies, and a complex of institutes of legal, financial and social character providing interaction of the educational, scientific, entrepreneurial and noncommercial organizations and structures in all spheres of economy and public life”.

When analyzing the given definition it becomes clear that it clarifies neither the essence of concept of innovative development type, nor the concepts of national innovative system. Definition is generated in such a manner that even the set of existent institutes, enterprises and organizations related to commercial realization of knowledge and technologies falls under the definition of national innovative system given in the Concept. Though, everybody realizes that in the Russian Federation such system practically doesn't exist at present. Moreover, the more specific definition in the selected format will give nothing as the simple enumeration of elements, without revealing of their consolidating methodological basis, does not allow to accurately define such a complicated object as national innovative system.

One more formulation which defines requirements for transition to innovative type of development causes interest. The legislator considers that “the innovative type of economic development demands creation of as many as possible favorable conditions for the enterprise initiative, increase of competitiveness and investment appeal among the Russian private companies, expansion of their ability to work in the open global markets in the conditions of rigid

competition as private business is the basic motivating power of economic development. The state can create necessary conditions and stimulus for business development, but should not substitute business by own activity”.

It follows from the given quotation that innovative type of development is not a simple set of certain factors, as that of maximum favorable conditions for the enterprise initiative, increase of competitiveness and investment appeal among the Russian private companies, expansion of their ability to work in the open global markets, the conditions created by the state and stimulus for business development, etc., but it is something else, however the occurrence of this (transition to innovative type of economic development) the presence of those listed specific conditions is necessary. The given observation is important as the authors believe it to be not just a simple legal incorrectness of the Developer. This formulation bares an essence of the methodological problem. On the one hand, there is absence of accurately formulated methodological basis allowing to particularly define the base term of an innovative family in the document, on the other hand, attempt of the Developer, in absence of such methodological basis, to indirectly define the concept essence, being of great necessity for real practice.

Apparently, absence of comprehensively well-grounded methodological base pushes the Developer to introduction of the additional terms duplicating the basic concepts.

Hence in our opinion, for more accurate statement of the essence of innovative type of development of the Russian Federation the Developer uses the term: innovative socially focused type of economic development (Russian Federation). The essence of the given type of development is not formulated by the legislator, but it is underlined that it is characterized by that “based on” (further under the text – “basic characteristics”):

A. “Modernization of traditional sectors of the Russian economy (oil and gas, raw, agrarian and transport), advance increase in volume of production in high repartitioned branches which up to 2020 remain the leading sectors of gross domestic product manufacturing”.¹

B. “Transformation of innovations into the leading factor of economic growth in all sectors of economy, 3–5 times labour productivity increase in the sectors which determine national competitiveness, 1,6–1,8 times power consumption decrease on the average”.

C. “Formation of economy of knowledge and high technologies which are becoming one of the leading sectors¹ of the national economy, as compared to gross domestic product contribution with oil and gas and raw sectors by 2020”.

What is it? Conditions of transition to the innovative socially focused type of economic development or it is also the characteristic of the given type of development?

In the section “transition Directions to the innovative socially focused type of economic development” the legislator specifies a complex of definite transformations (conditions) which are necessary to be carried out to assure the given transition, namely:

- development of Russian human potential;

¹ Under the economy of knowledge and high technologies we understand the spheres of professional education, high-tech medical care, science and experimental engineering developments, connections and telecommunications, science intensive subbranches of Chemistry and Mechanical engineering.

– creation of highly competitive institutional environment, stimulating entrepreneurial activity and attracting the capital to the economy;

– structural diversification of economy on the basis of innovative technological development;

– fastening and expansion of global competitive advantages of Russia in traditional spheres (power, transport, agrarian sector, processing of natural resources);

– expansion and strengthening of the external economic positions of Russia, increase of efficiency of its participation in the world division of labour.

Judging by the fact that transition conditions are defined more or less accurately, three “basic characteristics”, listed above, are the essence of the innovative socially focused type of economic development of the Russian Federation. But then there is a number of following from the given characteristics questions.

Firstly, whether modernization of traditional sectors of the Russian economy, even on the basis of high technologies is the essence of the innovative socially focused type of economic development of the Russian Federation? If it is so, how can such a choice of directions be proved, apart from tradition and our inability to create something else? Besides, why will modernization of the given sectors of the industry lead to innovative type of economy development? After all, both earlier and current modernizations in particular directions on the basis of high technologies took place, but generally they did not result in innovative development of economy.

Secondly, what is the purpose of formation of economy of knowledge and high technologies which, according to Concept DCER of the Russian Federation, should have become one of leading sectors of national economy by 2020? Should the economy of knowledge serve the modernized traditional sectors or there are other variants of application of its potential? Who is the end user of the economy of knowledge production?

This document does not give any answers to the above questions. Basically, this is hardly the end of the question list of them. But the criticism of the given particular document is not the aim of the authors of the present article. The purpose of above question set is to demonstrate the insufficiently developed methodological basis on which the Developer of the document relies and the fact that introduction of specifying terms to the Concept does not make the interpretation of the basic terms of innovation field clearer.

Throughout research we will consider one more basic term of the Concept – the innovative model of economic growth. It is not defined as well, but in the context of the document it is used as a synonym of innovative type of development of socio-economic system. The Developer opposes concept of innovative model of economic growth to the concept of export-raw model of economic growth of socio-economic system. In terms of development models the purpose of socio-economic development of Russia is considered as “transition from export-raw to innovative model of economic growth”. Such transition, intended by the Developer is provided “with formation of the new mechanism of the social development based on the balance of enterprise freedom, social justice and national competitiveness” [1]. Thus, the Developer, in this case, relies on the concepts

“enterprise freedom”, “social justice” and “national competitiveness”.

In the definition of enterprise freedom, social justice and national competitiveness the Developer limits it only to the declaration of notions, which is understandable, because these questions have not been solved even on the fundamental scientific level, they are still being widely disputed and will be disputed for a long time. How can they be taken as a principle of such conceptual document? Therefore, definition of transition to innovative model of economic growth does not clear up the concept of innovative model of economic growth and does not help with clearing up of other concepts of an innovation family.

The analysis of the basic terms of the Concept will be not full if not to consider the term: model of innovative socially focused development. The given term is a derivative, specifying the term innovative type of economic growth and innovative model of the economic growth, used in the Concept, and therefore, according to nature of transitivity, it at least should partially define the term of innovative type of development. The Developer gives the following definition to the above term:

The model of the innovative socially focused development of the Russian Federation is such model of growth which “along with the use of traditional competitive advantages in power and raw sector assumes creation and activation of new factors of the economic growth satisfying the calls of the long-term period. It is a breakthrough in the increase of the human capital efficiency and creation of comfortable social conditions, liberalization of economic institutes and strengthening of competition of the business environment, the accelerated distribution of new technologies in economy and development of hi-tech manufactures, activation of the external economic policy”. According to the given model the Developer suggests considering the exit of the Russian economy “on a trajectory of long-term steady growth with average rate of about 106,4–106,5 percent a year” as criterion of actual development.

Analyzing the above definition it is again possible to ascertain that it does not cause major objections. But the considerable amount of various variants of development falls under it and, therefore, it does not bring any methodological clearness to understanding the essence of neither innovative type of development, nor innovative model of economic growth. As for the set of criterion of growth it is possible to say that they are certainly desirable. However, as practice shows, they can be reached without the leading role of innovative factors.

Apart from the above listed, the term of innovative technological development used in the Concept is of great interest. The given type of development, intended by the Developer “should provide structural diversification of economy of the Russian Federation”. In turn, the structural diversification of economy is necessary as one of the directions providing transition to innovative socially focused type of economic development. Innovative technological development assumes the following:

A. “Formation of national innovative system, including such elements as the system of scientific research and development integrated with higher education flexible for

the economic inquiries, business engineering, innovative infrastructure, institutes of intellectual property market, mechanisms of innovation stimulation etc.”.

B. “Formation of the powerful science and technology complex providing achievement and maintenance of leadership of Russia in scientific research and technologies in priority directions”.

C. “Creation of the global competence centers in processing industries, including hi-tech manufactures and economy of knowledge”.

D. “Assistance in increase of the leading branches of economic competitiveness via private-state partnerships mechanisms, improvement of conditions of the Russian companies access to the sources of long-term investments, provision of economic branches with highly professional staff of managers, engineers and labour force, support of export with high added cost and rational protection of domestic markets taking into account the international expertise in the field”.

As we see, again the given concept relies on the term of national innovative system which methodologically is very poorly developed. Besides, measures on formation of a powerful science and technology complex and creation of the *global* competence centers are allocated in separate points, which also cause questions. Aren't the given measures included into number of measures on creation of national innovative system, don't they demand unified methodology, and accordingly – the unified identifying name and unified coordination? But if they are included, why are they divided? Or is the national innovative system an abstract object in general which is not planned, and as consequence is there anybody responsible for it?

There is a set of important questions associated with this term as well. Most of them come to the following: what is the difference between the measures listed in this document and unified by the term innovative technological development, and those which had been planned before but were not unified by this term? At first sight there is not any.

Apart from the backbone methodological concepts there are some applied terms of innovation field are used. Among them are: innovation, innovative company, innovation potential etc. However as this conceptual document is aimed at the formation of the general conceptual field, mentioned here applied terms have not been explained yet (except some indirect explanations).

In general this document seems a heroic attempt of the Developer to combine both the development of methodological basement and basic innovative toolkit of RF socio-economic system. As we have already mentioned, documents of this kind should only consolidate the methodology, the most attention should be paid to methodical issues. The development of methodological base is the competence of science. The statement could have

appeared only due to the absence of suggestion on the fully worked out innovative development methodology from Russian economic science.

At the same time, as it has been mentioned, in economic and economical activities there is a huge requirement for a methodological and methodical basis of innovative development. Therefore the life pushes economic players to independent development of the given subject. On the level of subjects of federation and on municipal level many documents which are urged to help solve a problem of insufficient methodological and methodical security of innovative development for particular territories and business entities are developed.

The most developed in the given aspect is methodological and methodical security of Moscow city. The Moscow law on innovative activity and variety of decisions of Moscow government form a legal field provide methodically innovative development of the city economy and also give an example for similar documents design in other regions. We will consider in more details the Law of Moscow city (further under the text – the Law) on innovative activity [2].

In the Law the following basic terms are used: innovative activity, production of innovative activity, the innovative policy of Moscow city, the innovative program (project), the innovative program of Moscow city (the complex program of innovations), the subject of innovative activity.

In general, it is necessary to conclude that the basic principles are formulated accurately enough and unequivocally to advantages of the given Law. In many respects thanks to accurately formulated definitions of the basic Law terms. Thus, outwardly, the law looks quite a worthy methodical tool.

At the same time, while making a more profound analysis of definitions of the basic terms we see that their list is generated with the support on two base terms which are postulated in the form of axioms. These terms are – innovative activity and production of innovative activity (innovations) (further under the text – “basic terms”). Thus, in this case they act as methodological basis of the document. Their definitions are resulted in the table.

Actually, definitions of the given terms are not the invention of the authors of the Law. They successfully sublimated all scientific experience accumulated by the researchers of innovations. But despite it, the given definitions do not contain one most important thing – unequivocal, methodologically grounded criteria which would allow, while putting into practice, to separate innovative activity from not innovative and innovations from not innovations.

Let's take for example an introduction of scientific and technical achievement which was mastered abroad, which was not used in our country and is being introduced here only now, from what point to what can we consider it as innovation? Or another question: whether it is necessary to

Basic terms of the Law of Moscow city on innovative activity

Basic term	Characteristics
Innovative activity	The activity directed at introduction of scientific and technical or science and technology achievements in technological processes, the new or advanced goods, the services sold in the internal and external markets
Production of innovative activity (innovation)	The introduced scientific and technical or science and technology achievements mastered in manufacturing the new or advanced goods, services or technological processes

consider only scientific and technical or science and technology achievements new or advanced goods in the technological processes, the services realized in the internal and external markets as objects of innovative activity and how to treat other innovations? For example, those which are not marketed or arrive to the consumer via other, not market channels? A lot of similar questions can arise.

These points in question are not new and periodically discussed among researchers, what testifies again the insufficiently worked out methodological basis of innovative development, and results in lack of methodical toolkit.

The statement about insufficient readiness of methodological basis can seem disputable in connection with presence of a considerable quantity of works on the given subject both in Russia and abroad. In this respect it is possible to object that domestic researchers, unfortunately, generally follow those directions set by foreign researchers and not so often, as it would be desirable, select own author's directions.

To sum up, all the above said testifies firstly, the importance of conceptual and categorial tools both for the economics and for economic practice; secondly, the necessity to analyze the terms of innovative field used in economic and legal spheres.

Bibliography

1. Концепция долгосрочного социально-экономического развития РФ на период до 2020 г. [Электронный ресурс]: [утв. распоряжением Правительства РФ № 1662-р от 17 нояб. 2008 г.] // Консультант Плюс. Электрон. дан. 2008. Режим доступа: <http://base.consultant.ru>. Загл. с экрана.

2. Закон города Москвы об инновационной деятельности в городе Москве [Электронный ресурс]: [в ред. Закона г. Москвы от 30.11.2005] // Консультант Плюс. Электрон. дан. 2005. Режим доступа: <http://base.consultant.ru>. Загл. с экрана.

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A. A. Boyko, N. V. Bakhmaryova

Siberian State Aerospace University named after academician M. F. Reshetnev, Russia, Krasnoyarsk

PROBLEMS OF MANAGING REPRODUCTION OF DEFENSE-INDUSTRIAL FUND AT THE MACHINE-BUILDING ENTERPRISES

The basic problems of managing reproduction of defense-industrial fund at the machine-building enterprises are considered by the authors.

Keywords: problems, reproduction, management, basic production assets.

The modern machine-building complex is a set of industries producing various cars, presented by actually mechanical engineering and metal working. The mechanical engineering consists of such major branches as power mechanical engineering, electrotechnical, machine-tool constructing and tool industry, instrument production as well as of some separate branches which are producing the equipment for extracting and manufacturing industry, building, transport, mechanical engineering, motor industry, tractor and agricultural mechanical engineering, etc.

Today the mechanical engineering in Russia numbers about 49,000 functioning enterprises and organizations that make about 55 % of all enterprises of the industry.

In the USSR the development in the sphere of mechanical engineering was put in life mainly in extensively, as it constantly involved additional labour, material and financial resources therefore the huge industrial machinery which was not of appropriate scientific and technical level and has been saved up and is inefficiently used. It has led to lowering of not only economic indicators of defense-industrial fund (DIF) reproduction, but also financial indicators of enterprises activity in general.

In their own turn technical possibilities and economic efficiency of machine-building complex functioning is defined in many aspects by the active part of its basic production

assets. The mechanical engineering takes leading positions as per percentage of DIF deterioration which is 54.3 %. The factor of basic means retirement in this branch is larger than updating factor and as the result the majority of them function beyond the limits economically justified serviceability.

Updating DIF in present-day conditions is restrained by complicated financial situation at the enterprises of mechanical engineering and insufficient investment support of the state. The implementation of technical and organizational innovations is carried out at the machine-building enterprises as a rule in the basic production that results in disproportion between the level of the basic production and the level of maintenance of the fixed capital in an efficient condition. Operational expenses is one of the most meaningful issues of expenses at the machine-building enterprises that make 15 % of the production cost price. It results in low efficiency of DIF management that negatively influences the economic condition of the enterprise in general as labour productivity of industrial workers appreciably depends on the condition and working capacity of the equipment, duration of its idle times because of repair works. Besides, without timely and qualitative repair and service works for the equipment it is impossible to provide output of competitive products.

High wear and tear and obsolescence and also low technological level of the basic production assets cause low