

# Theoretical Research of the Concepts “Innovative Project” and “Competitiveness of an Innovative Project”

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**Abstract—** According to the authors, the main disadvantage of current theoretical approaches to the concept “innovative project” is that they ignore the fact that an innovative project is a complex system representing a combination of resources, deadlines and contractors for implementation of a complex of interrelated tasks. Furthermore, they do not take into account that it aims to achieve ultimate goals in various fields of science and technology development.

An innovative project is not an economic system (structure), because it does not have its own domestic resource. Each project is unique, has a limited duration and one-off nature. This is its distinctive feature from the standpoint of the research. In this regard, the competitiveness of an innovative project has a specific nature and meaning, which differs from traditional views on the competitiveness of an economic system.

According to the authors, competitiveness of an innovative project is the quality of its content that makes the project to be capable to have all possible effects and effectiveness to all interested parties at each stage of its life cycle. It is determined with a value chain consisted of the external and internal basis of a project (competitiveness advantages / disadvantages) in all stages of its life cycle.

**Keywords—** innovative project, competitiveness, assessment, management.

## I. INTRODUCTION

We need to analyze the theoretical basis of the concepts “innovative project” and “competitiveness of a project” if we are going to develop and substantiate the theoretical recommendations and scientific and methodological features of an evaluation of innovative projects.

Innovative projects are studied by the branch of the theory of management of socio-economic systems and by the innovation management, which studies techniques, forms and tools of the most effective and rational project management decisions. There you can also find the theoretical and methodological understanding of the substance and features of innovative projects, their types, assessment methods of their effectiveness, stages at their life cycles and features of project management at every of them, structuring of innovative projects, etc. Innovative projects are adopted everywhere. However, the management of an innovative project competitiveness is not sufficiently researched in the theory and

it requires improved methodological support and practical recommendations.

A. Smith is the first scientist who researched the substance and nature of a competitiveness and a competition as a theoretical genesis. He published his observations about domination of some countries in the world (with natural resources, lands, capital, etc.) in his book named “An Inquiry into the Nature and Causes of the Wealth of Nations”.

Later, D. Ricardo, who introduced the concept “comparative advantage” (competitiveness) concerning countries, continued A. Smith’s ideas. To date, at various time the concept “competitiveness” was studied by different scientists, such as A. Marshall, F. Hayek, M. Porter, Zh. Lamben, R. Fathutdinov and others. They interpreted the concept in different ways depending on the subject and the aims of the study. However, all of them described the competitiveness of a country, economy, product (good / service), enterprise, industry. In 80s, M. Porter divided those concepts into “types of competitive advantage”. So, due to M. Porter, the concept “competitive advantages of economic structures” (enterprises, industry, countries, national and world economies) was appeared in the science.

If an economic entity (structure) has a real competitiveness, it becomes more attractive to the partners and more dangerous to competitors.

Thus, in the broadest sense a competitiveness is the ability of an object to compete in the definite market, in the definite conditions in comparison with analogs.

In the context of an innovation project, it is clear that a competition influences an innovative activity of the economic entity and vice versa, an innovative activity influences a competitiveness forming competitive advantages. Nevertheless, we have some kind of the interconnectedness of a competitiveness and innovations, their influence on the competitiveness of an object (for example, economic structures and systems of all levels: from a global economy to a project or an enterprise). In turn, the object itself (product, process, project) must be competitive. From a theoretic point of view, there are many assessment methods of innovative projects, but all of them boil down more to economic effectiveness. However, economic effectiveness is substantially different from competitiveness.

Competitiveness should include economic efficiency indicators among other factors and advantages.

## II. RELEVANCE

In Russian academic literature, the concept “innovative project” defines in two ways. The first one is as a range of activities associated with creating and diffusion of innovations to benefit or another new effect. The second one is as a document (or a package of documents) related to implementing innovation and its stages.

According to the authors, the main disadvantage of these meanings is that all of them do not take into account that innovative project is a complex system representing a combination of resources, deadlines and contractors for implementation of a complex of interrelated tasks. Moreover, innovative projects aim to achieve ultimate goals in various fields of science and technology development.

There are also different views to the concept “competitiveness of an innovative project” in the theory.

Undoubtedly, any innovative project should be competitive. Many researches and academic works covered this question. But in spite of it the question of competitiveness of innovative projects has a potential for further exploration and improvement.

Innovative project is not an economic system (structure), because it does not have its own domestic resource. Each project is unique, has a limited duration and one-off nature. This is its distinctive feature from the standpoint of the research. In this regard, the competitiveness of an innovative project has a specific nature and meaning, which differs from traditional views on the competitiveness of an economic system.

## III. RESULTS AND DISCUSSIONS

This research describes the concept “competitiveness of an innovative project” through the prism of the competitiveness theory.

Let us turn to the definition and the substance of the concepts “innovation” and “innovative project”.

I. Schumpeter, a classic contributor to neoclassical economic theory, introduced this concept in 1935. He generalized earlier introduced “new combinations” (1911) in a new term “innovation”. Since then many scientists have defined the term as a process or as the result of this process, a product, a technology, etc. Therefore, the meaning of the term “innovation” depends on a context and aims of its implementation: innovation can be a product and a process. The implementation of innovation also depends on the goals: in one case, the economic entity can apply innovation to reduce costs, in the second case—the aim of innovation might be a product, in the third case – technological development of the object.

Therefore, innovation is applied everywhere nowadays. Innovation is a multifaceted and multidimensional concept in the theory.

Pervushin V.A. in his training manual “Praktika upravleniya innovatsionnymi proektami” [“Innovative project management practice”] gives a wider definition of a concept “innovative project”. The author submits that innovative project is a system of coherent aims and means for achieving them. It is a complex of research, development, industrial,

organizational, financial, commercial and other activities, which are properly adapted (according to terms, resources, and contractors) and have all project documentation. The author says that it should provide an effective solution of the definite a scientific and technical task (difficulty), which is quantified and leads to innovations. According to the type of a project, there can take part from one to several dozen (or just several hundred) enterprises [1].

In Russian practice, there are two definitions of the concept “innovative project”. The first one is as a range of activities associated with creating and diffusion of innovations to benefit or another new effect. The second one is as a document (or a package of documents) related to implementing innovation and its stages [2].

**We define the concept “innovative project” as a complex system representing a combination of resources, deadlines and contractors that aims to achieve ultimate goals in various fields of science and technology. Moreover, we define its organizational and economical mechanism of implementation as a complex system representing an interaction between the participants of a project, which incorporates forms and quantitative parameters of its interactions.**

Any innovative project should certainly be competitive. Many researches and academic works covered this question. But in spite of it the question of competitiveness of innovative projects has a potential for further exploration and improvement.

The scientists of our time, such as Barsukov D.P. and Skorshelletti D.S., defined that “competitiveness of an innovative project is its dynamic property characterizing its ability to be implemented in a market competitive environment and reflecting the attractiveness of the project both for a consumer and an investor. This parameter defines by its economic effectiveness. This definition of “competitiveness of an innovative project” consists of the following meanings.

First, competitiveness is a dynamic property of an innovative project and forms in the initial stages of its implementation: stages of scientific researches (the project development and its investment programs) and introducing innovative idea as a business innovation.

Second, competitiveness, as a property of an innovative project, is considered from a consumer’s and investor’s points of view. The consumer is interested in the set of a consumer specification and cost of the project results. Therefore, in this context, competitiveness of an innovative project expresses the differences of project results (its position) in the market through the degree of consumer satisfaction with the innovative product [3] (Fig. 1).

Next we consider other definitions of the concept “competitiveness of an innovative project”.

A. Gorshko founded two main parts of competitiveness of an innovative project. They are social, which should not contradict social fabric and has social significance, and economical, which defines by consumer value [4].

G.Zh. Abdykerova found a functional congruence between competitiveness and innovative project, which was described in her academic work “Razrabotka metodov, modeley i sredstv informatsionnoy podderzhki protsesssa otsenki

innovatsionnykhproektov” [The development of methods, models and informational support tools of innovative project assessment] [5].

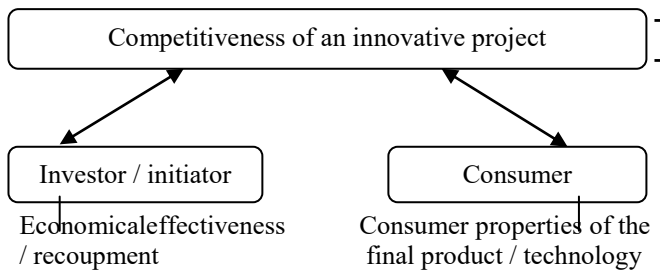


Fig. 1. Stakeholders of competitiveness of an innovative project (by Barsukov D.P., Skorchelletti D.S.)

Dobrosotskiy M.A. after combining different meanings of the concept “competitiveness” decided that competitiveness is a market category represented in the process of interaction between supply and demand [6].

Therefore, there are different views to the concept “competitiveness of an innovative project” in the theory.

**In our opinion, competitiveness of an innovative project is the quality of its content that makes the project to be capable to have all possible effects and effectiveness to all interested parties at each stage of its life cycle.**

We also think that competitiveness of an innovative project is determined with a value chain consisted of the external and internal basis of a project (competitiveness advantages / disadvantages) in all stages of its life cycle.

The competitiveness potential of any economic agent or economic structure is a complex of competitive advantages and disadvantages represented during activity. Its success always has a comparative nature.

However, innovative project is not an economic system (structure), because it does not have its own domestic resource. Each project is unique, has a limited duration and one-off nature. This is its distinctive feature from the standpoint of the research. In this regard, the competitiveness of an innovative project has a specific nature and meaning, which differs from traditional views on the competitiveness of an economic system.

Nowadays, in addition to the concept “competitiveness of an innovative project”, the concept “success of an innovative project” is intensively studied. We suppose these concepts overlap, but they do not have the same meaning. Competitiveness is a broader concept than “success”. It includes the concept “success” as well as “economical effectiveness of an innovative project”.

The foreign authors use the concept “success of an innovative project”. It means that investors achieved the desired results of the innovative project [7]. We suppose that it is a subjective-based point of view.

Andreev V.V. proposed the concept of the success of an innovative project in his research “Klyucheveye factory uspezhnosti rossiyskikh innovatsionnykh proektov v realnom sektore ekonomiki” [Key success factors of Russian innovative projects in a real sector of the economy], in which he described some necessary conditions:

- financial results of a new innovative project should not put company existence at risk;
- a successful innovative project should be chosen for their further active development and multiplying;
- value of innovative production is defined by its demand;
- it is necessary to rapidlyasses the results at all stages of innovation process and take timely decisions to reduce potential losses [8].

Furthermore, we should pay attention to the author’s ideas about “universal factors of success of an innovative project” and “universal curve of success of an innovative project”. The idea of curve is that 3000 creative ideas transform into 300 patent applications, which further turned into 125 experimental researches, which become 9 development projects, further – 4 industrial approbations, 1.7 production and 1 commercial success. The author distinguishes success factors according to project development stages, level of novelty, the type of a new product and the industrial sector.

Furthermore, there is a contrary idea saying that the success of innovative projects (or their competitiveness) appears to be random. It is considered that it is very difficult to predict innovative project / business, because we do not know exactly the mechanisms of its development [8, 21].

We fundamentally disagree with that statement, because it shows that there is no economic sense to predict effects of innovative project implementation. Quite to the contrary, we think that each idea (which is going to be implemented as an innovative project) should be fully analyzed, assessed and predicted, because each innovative project needs investments, efforts and resources. Not all these should be excluded from the benefits (economical or any other).

In our opinion, the concept “success of an innovative project” should also include the concept “competitiveness”. We should determine this concept as assessment criteria of the competitiveness of an innovative project according to the author’s method presented before.

Therefore, nowadays we have the methodological problems in the theory and poor enforcement of the assessment methods of competitiveness of innovative projects in practice. Trofimov O.V. defined these problems:

1. inadequacy of approaches to the assessment of an innovative project implementation (lack of legal regulations on an innovation implementation, application of assessment methods of investment projects for innovative projects that is not correct, because innovative projects differ from investment projects in its nature and substance);
2. insufficient level of knowledge about the sectoral innovation market in selecting competitive innovative projects or a direction of an innovative development of an economic object;
3. their own limited investment resources and an inadequate financial planning during innovative projects implementation;
4. insufficient elaboration of prediction methods of innovation life cycles (the difficulty includes a heterogeneity of innovation stages, difficulty in innovation implementing, because we don’t have such experience for investigation);
5. payback insecurity of competitive innovative projects in the development conditions of Russian industrial

## References

- [1] V.A. Pervushin, *Innovative project management practice: training manual*, Moscow: «Delo», p. 203, 2013.
- [2] V.K. Proskunin, I. Ya. Lukasevich, *Analysis and financing of innovative projects: training manual*, Moscow: INFRA-M, p. 112, 2014.
- [3] D.P. Barsukov, D.S. Skorchelletti, «Competitiveness of the innovative project: context, factors, assessment», *Russian Entrepreneurship*, № 4 (202), p.p. 49-54, 2012. [Electronic resource], Access mode: <http://www.creativeconomy.ru/articles/19833/>.
- [4] A. Gorshko, «Assessment of a the effectiveness of a building project», *Building newspaper*, p. 14, 11.11.2009.
- [5] G.Zh. Abdykerova, «The development of methods, models and informational support tools of innovative project assessment», *Diss. for the degree of candidate of technical sciences*, Ust-Kamenogorsk, p. 141, 2010.
- [6] M.A. Dobrosotskiy, «Scientific and methodological approaches of innovation management», *Diss. for the degree of candidate of economic sciences*, Voronezh, p. 205, 2010.
- [7] R.G. Cooper, «Identifying New Product Success. Project NewProd», *Industrial Marketing Menedgment*, № 2, p. 124, 1979.
- [8] V.V. Andreev, «Key success factors of Russian innovative projects in a real sector of the economy», *Issues of economics*, № 11, p. 41-43, 2010.
- [9] O.V. Trofimov, «Developing of the innovation strategy of enterprises: difficulties and solutions», *Economic sciences*, № 9 (70), p. 71-74, 2010.
- [10] R.A.Fathudinov, *Innovative management*, St.Petersburg: «Peter», p. 448, 2011.
- [11] J.A. Schumpeter, *The theory of economic development*, Moscow: Progress, 1982.
- [12] A.G. Granberg, «Simulation of the spatial development of the economy», *Strategic planning in regions and cities of Russia*, St. Petersburg, № 9, pp. 32-34, 2014.
- [13] V.G. Medynsky, *Innovative management*, Moscow: INFRA-M, 2002.
- [14] R. Baytasov, *Innovative management: tutorial* [Electronic resource], Access mode: <http://www.researchgate.net/publication/263234894>
- [15] A.N. Barykin, *Designing innovations* [Electronic resource], Access mode: <http://www.lagoda.by/docs/10319.pdf>
- [16] V.P. Oreshin, E.A. Kuvshinova, «Structural transformations in the economy: transition to an innovative way of development», *Bulletin of Moscow University. Ser. 6, The Economy*, № 3, pp. 107-113, 2014.
- [17] A.A. Trifilova, *Evaluation of the effectiveness of innovative development of the enterprise*, Moscow: Finance and Statistics, 2005.
- [18] K.S. Sablin, «The role of the institutional environment in the formation of development institutions», *Journal of Institutional Studies*, Volume 4, №2, 2012. [Electronic resource], Access mode: <http://ecsocman.hse.ru/data/2012/08/10/1265219943/jis4.2-3.pdf>.
- [19] F.G. Milich, «Indicators of the level of innovative susceptibility of economic systems», *Electronic scientific journal Management of economic systems. Innovations. Investments* № 48, 2012. [Electronic resource], Access mode: <http://www.uccs.ru/innovacii-investigcii/item/1880-2012-12-25-10-21-11>
- [20] T.V. Kutergina, «Management of competitiveness of innovative industrial technologies», *Diss. for the degree of candidate of economic sciences*, Moscow, p. 193, 2002.
- [21] Solovev D. B., Merkusheva A. E. Increase in Efficiency of Use of Pedestrian Radiation Portal Monitors // *IOP Conf. Series: Materials Science and Engineering*, Vol. 262, pp. 1-6, 2017. Paper № 012200. [Online]. Available: <https://doi.org/10.1088/1757-899X/262/1/012200>

technologies (the difficulty is in old technological base of the most part of Russian enterprises, and as a result, they cannot apply innovations which need more modern equipment);

6. lack of a comprehensive framework to innovation risk assessment (we usually use assessment methods of investment projects, which do not suitable for measurement of innovation project risks);

7. incomplete legislative framework of innovation economics” [9].

We agree with the author and consider that the theory and methodology of innovative projects should be extremely specialized in the field of innovations.

#### IV. CONCLUSION

We presented authors’ definitions of the concepts “innovative project” and “competitiveness of an innovative project” based on the theoretical study of the Russian and foreign scientists.

Competitiveness of innovative projects is multi-criteria as well as innovative projects. So it is logical to claim that the more competitive an innovative project is the more criteria of competitiveness it responds to. It means that the management of competitiveness of innovative projects should be like practical and scientific process of influencing on competitive advantages and disadvantages of the innovative project at each stage of its life cycle in order to maximize competitive advantages.

Innovation should have such a level of novelty to oppose it to a high risk specific to any innovation, initial attractive profits and high economic growth during its subsequent commercialization. At the same time, the task (for determining of the competitiveness of an innovative project) is to determine stages when these factors have their minimum and maximum.

Moreover, we think that the main problem of the assessment of competitiveness of innovative projects is a lack of balance in indicators and criteria. So there are many well-known assessment methods of economic effectiveness. They can also be substantiated by statistical observations. Regarding indicators of an innovation, there we have an opportunity to rely only on expert judgments and opinions, but it is a subjective-based point of view. We can also deal with a difficulty in determining the projections.

Competitiveness of an innovation project is a difficult enough “substance” which should have a separate approach which will help to define management objects at each stage of the innovative project life cycle, because they can change under the influence of external and internal factors.

In this regard, it is necessary to improve scientific and methodological foundations concerning assessment and management of competitiveness of innovative projects.