



Innovation Performance and its Influence on Enterprise Economic Efficiency in the Market

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ABSTRACT

Innovations are means of competition. A success in how an enterprise uses the innovation processes directly depends on its competitive ability and profitability level. Innovation performance is a level of using innovations. Under a competitive struggle in the market, progress in science and technology holds a specific place. Innovations define the economic success of an organization. It is not simple to have only a desire to increase the performance results, it is necessary to have a factor for organization survival, competitive ability and economic growth prospects preservation throughout the modern innovation world. The experience of the most developed countries shows that the one, whose activity is mainly based on using the innovation processes, becomes a winner in a fight for his client and the main purpose of organizations' strategic plan is to develop either a new product or services. The innovation performance of an enterprise can become one of the main factors for organizing the competitive strategic prospects of an enterprise, preserving and increasing its positions in the market. The topicality of the theme is very high, as introducing innovations in the activity of an enterprise and its competitive ability level in the market depend on the level of an organization's innovation performance.

Keywords: Innovation, Innovation Performance, Economic Efficiency, Market, R&D

JEL Classifications: O14, O31, O32, O33

1. INTRODUCTION

Innovation management as well as other economic theories, has its theoretical system. This system contains its own terminology and the structures of fundamental sciences, which are key for innovation management. They are as follows: Theories of scientific- and -technological advance, operation functions organizing (Research and Development/R&D, ideas, recommendations, production and technologies), strategic management (mission and valuable reference points, purposes and environment, potential, basic and preferable strategies), project management (mono - multi - and megaprojects, programs and matrix structures), financial management (investments, financial flows, risks and discounting), marketing (competitive environment, competitive advantage and competitive strengths) and so on.

2. DISCUSSION

Innovation performance is an independent category. Its main function is to estimate the level of pioneering work by means of innovation performance. First of all, pioneering work as well as other economic theory (marketing, strategy formation and implementation, etc.), is characterized by the content and composition of the specific actions, being performed by a certain technology and methodology.

Besides, the actions of any entity are just part of the whole activity. For instance, the actions of an innovator who implements something new; it is just one fragment of innovation, reflecting its life cycle (Carlsson, 2003; Anisimov and Zhuravlyev, 2010). Hence, the innovation processes are considered as a system, where

each subproject is well-defined. It is important to know both for any certain section and for the whole innovation process.

From there, describing innovation performance, it is very important to use such its feature as the place in the structure of the innovation process. All kinds of activity, including also innovation one, must be aimed at any result, that is, be characterized by a certain efficiency, for it demands expenses for resources and lead to changes in an organization.

The activity of a company is such its feature that must show the link between the predicted content of activity and its results. This process gets noticeable, when a company seeks to fulfill its plans. In other words, an enterprise plans such strategy in which the economic indicators of an organization will grow or any process will improve, for instance, its production will accelerate. As a result of the innovation processes, the result turns out to be quite different (Yakovets, 1989), i.e. it either can correspond to the forecasts of the planned activity or can aggravate a crisis. Having the same plans, strategies, tasks and ambitions, the managers of various companies achieve different results. It is explained by their different activity. In particular, the differences in the innovation performance explain different innovation results under the same initial indicators.

Moreover, the characteristics of innovation bear the following features of the innovation processes at the enterprise:

Firstly, the innovation performance must be the planned strategy and controlled at the present time, as the external economic environment begins changing sharply. A strategic approach provides the high level of the innovation performance.

In addition, the innovation performance is obliged to be practical in real time, both in the sequence of its processes and in its timeliness. It will help the innovation performance to gain the necessary variability, the necessary rate of actions and changes. If not to follow these requirements, the innovation performance will bring only the negative consequences, shown in a waste of time and enterprise assets.

In planning the innovation performance its efficiency is estimated by the following indicators:

- The level of an enterprise's innovation strategy;
- Mobilization quality or use of innovation potential;
- The level of the expensed resources-investments.

In the tactical plan the term "innovation" as a performance is defined by the following two indicators:

- The modern reaction of a company in a competitive struggle;
- The rate of implementing the strategy for innovation changes.

In addition, the innovation performance is also understood by the productive processes (the "creative" energy) enterprises, shown in innovations implementation, dictated by the market, scientific and technical, economic, public and other factors, which are designated in the competitive environment.

Quality level increases due to the interrelation between science, technology and production. Innovation performance is shown in it.

For instance, the industrial revolutions accelerated the process of studying and introducing innovations significantly, as there was a set of new goods and products, which had been before (Abramshin and Voronina, 2001). The concept of competition and the aspiration of each corporation to hold the leading place in the market were developed out of it. The innovation performance allows using the improvements of an organization's activity that, finally will involve increase in the efficiency of a company's economic activity.

The scientific research and experimental design activities (developments and introduction of inventions) serve as a source of the evolutionary innovations. They are necessary to be constantly improved. However, the organizational system of many Russian enterprises is not often capable of using innovations quickly. For instance, the concept "business process reengineering" was introduced at the end of the last century in America. This process was of that innovation performance, directed to increasing the economic indicators. Russia began using this process in the 21st century. It is natural that the innovation performance has been not developed so well in our country.

It is very important for an organization to be able to react to the changing market in due course, but this quality gives only a temporary advantage in a competitive fight, as rivals will be able to have these technologies or processes for some time period. The heads of organizations, being aimed at running the innovation processes, are obliged to predict the wishes of their clients and to have ideas of the future market's opportunities. In other words, the innovation performance is accompanied by rather big risks, but only in such a way it is possible to achieve output of products without having competitors.

The innovation performance is influenced by the very big list of indicators; the key one is the skill level of an organization's employees (Carlsson, 2005). It is confirmed by the modern studies, which say that "a success in innovations per 85-90% depends on the quality of the staff; however, the leading role belongs to the organizational leadership." Thus, not just the qualified training and wide professional experience of employees are the important factors for increasing the innovation performance of enterprises and their competitive ability today, and each of the specialists must show their creative vitality (a productive activity means).

The innovation performance is the activity level of an enterprise, which its management team can control for the purpose of applying employees' abilities. The competitive ability of an organization is a reflection of its external sphere, which the management team is directly unable to control; however, it can influence this sphere by increasing the innovation performance level.

3. ENTERPRISE INNOVATION PERFORMANCE IN THE EUROPEAN UNION (EU)

Among the EU states for the analytical research of small and medium businesses' innovation performance, the following indices are used:

- Enterprise percentage, which have introduced the innovation processes in reference to the total of enterprises;
- The amount of the spent financial resources on introducing the innovation processes;
- The share of organizations, which take part in the R&D in reference to the total of enterprises;
- The profit performance of organizations, which have implemented the innovation processes among gross domestic product general items;
- Enterprise classification, including the organizations, which do small and medium businesses, according to the EU Commission's recommendations of May 6th, 2013;
- The number of the qualified specialists, who are engaged in the innovation performance.

These indices are calculated for small business organizations, middle-sized and major companies, including producing and services sectors on an individual basis. In addition, the innovation processes are divided into technological, managerial, marketing ones and so on. The sci-tech innovations include innovation manufacturing process development and, consequently, quality product.

3.1. Innovation Performance Assessment and Observation

According to the Eurostat's information, included in the first publication of the series, which was issued in 2002 under the title of "SMEs in Europe-competitiveness, innovation and the knowledge-driven society," resulted in the observations of 1996-2001, it is possible to draw the following conclusions.

- If to estimate the innovation performance by the number of enterprises, small organizations, which were engaged in manufacturing among the states of Europe, were inclined to using the innovation processes less than large enterprises. For instance, the highest rate of small organizations, which had implemented the innovation processes towards their total number of enterprises, was observed in Ireland and came to 68%. Meanwhile, the minimum similar ratio among large manufacturing organizations was noted in Italy and came to 73%.
- Analyzing the intensity of innovations (by the number of organizations) in the services sector, there noted a lower tendency to innovations. This quality was peculiar to all enterprises, whether they are small or big. Among small business organizations, the minimum part of the investment enterprises was noted in Belgium (13%), the largest one was noted in Ireland (60%). However, Ireland was rather an exception among other states.
- Meanwhile, studying the expenses, involved in the innovation processes as to their turnover, are opposite. In other words, small manufacturing organizations spent the bigger volume of their profit than large business ones on innovations and their introduction. Thus, small enterprises invested 5.1% of their profit in the innovation processes. The investment ratio of large and middle-sized organizations came to 4.7%. As for the services sector, the expenses for the innovations of the small organizations came to 10.2% of the profit in comparison with 3.1% at the large enterprises (Goryushkina et al., 2016).

- Secondly, the innovation performance level of organizations was rather various among the states in Europe. The innovation performance was different from 21% in Luxembourg and Spain to 68% in Ireland.

The percentage of small organizations, which take part in the R&D in the sphere of production, had a difference from 6% (Luxembourg) to 57% (Finland). The similar level of manufacturing middle-sized organizations changed from 15% in Italy to 72% in Finland. Meanwhile, the minimum part of the large companies, participating in the R&D was observed in Italy (35%), the maximum one was observed in Finland (93%).

3.2. Sci-tech Innovations in the Organizations of Various Spheres

The sci-tech innovations were used by the services sector organizations in the following way: Among small enterprises, Denmark (71%) held the leading place and Germany (14%) held the least position (Lobova and Bogoviz, 2015). Among middle-sized enterprises, 14% was observed in Ireland and 70% was observed in Luxembourg. The major corporations, which took part in the R&D, were largely noted in Norway (80%), the smallest part of the participants was observed in German (22%).

Analyzing the research, made by the European experts, one may note that there is an increase in using innovations, as opposed to the 90s years (Borisova et al., 2014). For instance, the number of the innovation organizations in the sphere of production came to 51% in 1996, the services sector made 40%. The research of the economic enterprises over a period of 2008-2015 showed that about 60% of the manufacturing and services sector enterprises had used the innovation processes.

4. ENTERPRISE INNOVATION PERFORMANCE IN THE RUSSIAN FEDERATION

The analytical research of enterprises' performance is made by the country only in reference to those organizations, which are engaged in the industrial and producing sectors. The analysis and data collection are carried out by the Federal State Statistics Service of the Russian Federation, based on Form "No. 2 Small business's innovations" once in 2 years. In other words, the analytical research is not made in reference to those organizations, whose economic activity dealt with output of products, innovations application in the agricultural and building sectors, provision of distributive, transport and communications services, hotel and catering service, real estate and other services (Prokhorova and Semchenko, 2015).

These directions are the main activity of small and middle-sized organizations in Russia. In addition, small industrial organizations are researched as to how they implement the sci-tech innovation processes, i.e., innovations in production and workflows, ignoring the analysis of innovations in management, marketing and others.

The research of middle-sized organizations is made within the statistical analysis of all the Russian companies, except individual

entrepreneurs, small and micro enterprises, i.e. together with large corporations and also by more extensive complex of the economic activity (Prokhorova and Semchenko, 2015). Thereby it is possible to tell that middle-sized enterprises are not a separate part of the statistical control. It means that it is more difficult for the Federal State Statistics Service to draw more exact conclusions concerning the innovation performance level and innovations application, as the whole set of organizations is analyzed.

In its turn, when estimating the innovation performance of small organizations in Russia, it is possible to use the information, given by the Federal State Statistics Service that reflects the percentage of small organizations (Silnov and Tarakanov, 2015), which implement the sci-tech innovations among the whole number of small enterprises, the percentage of innovative products in whole volume of products made by small enterprises and the level of costs of small organizations' expenses level for using the sci-tech innovations.

In other words, one may say that the innovation performance as well as innovations application in general, in Russia are not the standard methods of increasing the indicators of enterprises' economic activity. That is, not each head realizes the importance of introducing innovations and does not aspire to do it.

As the results of the analysis, carried out in 2015 with the participation of the experts from the National Institute for the System Research of Business Problems in Russia, show that the question about financing the innovation processes is particularly acute at many enterprises. Besides using innovations is connected with big risks for companies, even if successful, organizations will spend many resources both financial and human ones.

The results of this research were received, based on the analysis of 500 small and middle -sized organizations, which had used the innovation processes and fulfilled their activity in the territory of the city. The heads of organizations faced the financial stress for developing innovations and shortage of the state financing in the territory of the city. 37.7 and 27.9% of the respondents also faced these problems. Besides, there noted a need for the big expenses for introducing innovations (15.4%).

5. THE CORRELATION OF THE INNOVATION PROCESSES AND CONDITIONS FOR INNOVATION PERFORMANCE CONTROL

The current situation in the Russian economy does not have much in common with the crises, which occur in the Western countries occasionally.

After the crisis of the 90s years in Russia, there was a decrease in the competitive ability level of turning out products very much. The products were put out or, at least, lost their position not only in the world market, but also in the domestic one. There were a lot of foreign products, and their quality was often much higher. Despite it, the innovation performance burst did not happen.

The analytical research of the world practice in introducing the innovation processes shows that a success in the innovation performance directly depends on the conditions, created by the state. They must be as follows:

- To create the positive environment for using the innovation processes;
- To have the suitable juridical base that provides existing the innovation structure;
- To finance corporations and large industrial organizations, which use innovations on the part of the state;
- To use the effective tax system in reference to small business enterprises.

To create a strategy for a support in introducing the innovation processes, it is very important to study the existing and appearing factors, which constrain the innovation performance of organizations. It is natural that the processes for improving the level of the state support are necessary to be developed in any country, considering the features of developing this industry, both in the country and its profitability in the world market. Consequently, the higher this industry has its profitability level (it often depends on whether an enterprise is small or big), the stronger the state must support.

In Russia the questions concerning innovations application are studied by such research centers as National Research University for Higher School of Economics, All-Russian Public Agency for Small and Medium Businesses "OPORA ROSSII," Russian Public Opinion Research Center, Economic Situation Center, Research Center and Science Statistics, World Bank, etc.

The result of researching the experience in using the innovation processes is quite diverse by the techniques, interviews and questionnaires. It complicates the full and qualitative research of the results. Considering the results of some research, it is possible to find out the main factors for limiting the innovation development. They are general for a large number of organizations.

6. INNOVATION PERFORMANCE LIMITING FACTORS IN RUSSIA

By the results of the research, made by the National Research University for Higher School of Economics in 2013, we shall take the analysis of using the sci-tech innovations in Russia as a basis. It is also worth noting that all the factors, influencing the innovation processes, are divided into three groups: Economic factors, internal factors and other factors. By the results of the research, it is possible to distinguish the following innovation development limiting factors, which are of great importance to the interviewed businessmen:

- Shortage of financial investments and state support;
- Heavy expenses for introducing the innovation processes and investment cost;
- Shortage of legal documents for the innovation development control and encouragement;
- Low level of innovation R&D support.

Having analyzed the results of the research, made by LLC “OPORA ROSSII” and the respondents’ answers from the Russian scientific technical undertakings, it can be said that the most important limiting factors are as follows (Kobersy et al., 2016):

1. Deficiency of financial resources for using the innovation technologies (57 % of the respondents chose this factor);
2. Management environment barriers (organizational leadership/ industrial distribution (22% and 23%);
3. Too heavy tax level on the innovation processes (20%);
4. Corruption (17%);
5. Intellectual property weak protection (too many problems, connected with patents acquisition, which are not always measured up (13%);
6. Market regulations and sales of products (6%);
7. Innovation performance poor infrastructure (shortage of developments, communications gap and others) (3%).

By reference to the given data, one may conclude that the primary innovation development limiting factor is a financial stress.

The financial stress against the undeveloped institute for venture capital financing in Russia, a small percent of banks approving credits in the development and initial stages of the already existing processes are very considerable brakes on innovation performance development (Ivanova, 2002).

In addition, the imperfections in the legal system are a considerable factor. The imperfections in the legislative structure involve the administrative barriers, including fiscal regulation methods, supervisory bodies’ activity (sanitation and epidemiological center, fire inspection, etc.) and real sectors regulation (acquisition of license for performance, property patent, etc.).

The government of the Russian Federation applies a number of measures, aimed at decreasing the influence of the limiting factors in the innovation performance.

These measures are often aimed at increasing the state support level, consequently, financing and reducing taxes and others. The government of any country must encourage developing the innovation performance, as the competitive ability of an enterprise, consequently, its position in the world economic market depend on innovations.

In addition, there opened science and technology research centers, which provide innovation availability, for instance, “Skolkovo.”

7. CONCLUSION

By reference to the research, made by the Federal State Statistics Service, either shortage of the state financial investments or deficiency of enterprises’ financial resources are the most current problems about the innovation performance.

Financing enterprises, engaged in implementing innovations, is of great importance to all country’ economic level. Those organizations, which are under their initial development, need a state financing, as they do not have the necessary financial

resources. However, they cannot obtain a bank credit, as they have no evidence of the efficiency in their business activity. Risk level and expenses for introducing innovations in the formed organizations are unprofitable for investors and these organizations’ income level cannot defray innovation costs yet.

Sponsoring enterprises, engaged in the innovation performance, can be

1. Direct, including instruments of financing (to give grants, subsidies and loans to the innovation enterprises);
2. Indirect (state guaranties, VC fund structuring and developing, allowances, tax cuts, etc.).

Another type of financial support, which is widely used all over the world, is a state providing non-repayable investments for introducing the sci-tech, economic and other innovations, product development, etc. The Small Business Innovation Research (SBIR) program and the Russian program “START,” carried out by the Foundation for Assistance to Small Innovative Enterprises in Science and Technology can be as examples.

SBIR was applied by the leadership of the USA in 1982 and its tasks were to encourage small organizations to take part in the projects “R&Ds,” implemented by the state research centers, furnishing the opening capital. This program had considered the question about giving out money resources to the innovation enterprises on non-repayable terms and keeping their intellectual property rights and patents for the first time.

The small enterprises, which were keen to take part in the SBIR program, must meet the following strict criteria:

- American-owned and independently operated
- Availability of the higher qualified specialists, analysts and researchers (50% and more)
- Enterprise size limited to 500 employees.

The SBIR program is implemented in three stages:

- Stage 1: Innovation development and strategy planning. Subsidies and grants cannot exceed \$100,000. There forecast the expectable economic indicators and revealed innovation economic expediency at the first stage. As a rule, this stage lasted 6 months.
- Stage 2: This stage is defined by further work at the innovation processes. As a result, it is necessary to make product, service or new technology prototypes. Funding is based on the results, achieved in Stage I and the sci-tech prospects for the innovation processes, and can make not more than \$750, 000. This stage lasts not more than 2 years. During Stage II the assessment of the project’s economic outlooks comes to an end.
- Stage 3: This stage is characterized by implementing and introducing the innovation process in the market and ends up with the commercial application. It can be also noted that the SIBR program does not provide direct money for activity finance and support.

Assistance is given to the investment organizations, which operate for not more than 2 years and whose profits do not exceed 300,000

roubles till the interaction with the Foundation within the START domestic program. Those enterprises, which are going to take part in the program, are selected on a competitive basis. To assess and analyze projects, independent experts are invited. When participating in the program, the important condition of financing is applying for a patent.

As it has been already noticed before, according to the results of the numerous studies and polls, most organizations defined shortage of the outside financing as the most important problem about business development in the Russian Federation. Many researchers and politicians admitted a need for improving the financial enabling mechanisms.

At the present stage of the Russian national innovative system formation, the financial support system is characterized by the non-repayable ways of financing small enterprises.

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