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SOME APPROACHES TO THE IDENTIFICATION OF INNOVATIVE ENTERPRISES IN THE REGION

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Abstract

The innovative development is a key priority for the Russian Federation. The negative phenomena in the national economy result from its non-optimal structure. About half of Russian budget revenues are derived from the sale of raw materials in foreign markets. The dependence on the world market requires forced transformations in order to increase the volume of innovative products, works and services. This need is also due to the sanctions which are directed against mining enterprises. Western government do not plan to cancel them. The Russian government aims to intensify the development of high-tech industries. The article considers criteria for classifying enterprises as innovative. They are reflected in official statistical documents and regulatory legal acts. Various author's approaches to the classification of enterprises as innovative are given. The features of application of various criteria for the identification of innovative enterprises are described. Different approaches to their choice are revealed. The advantages of innovative activities and potential risks are identified. The process of selection of criteria in some foreign countries (Israel, South Korea, Switzerland) is described. The positive and negative trends of innovative development of enterprises and the country as a whole are revealed. The general priority of transition to the innovative development path in the conditions of the non-optimal structure of the economy and sanctions is identified.

Keywords: Investment, innovations, business entities, cost of innovations.

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1. Introduction

Full participation of the enterprise in the competition in the domestic and foreign markets is impossible without the innovative component. Innovation activities allow an enterprise to have undeniable competitive advantages in comparison with other market players. For example, a company producing new products and rendering new services can quickly become a leader and formulate standards for the development of the entire industry. This will strengthen the market position of the company, add competitive advantages to it. Another equally important argument in favor of innovative activities is the rational use of its resources for implementing promising innovative projects and conducting research. Among other things, innovative activities allow the company to invest in the development of various priority initiatives and involve the most qualified specialists in research activities.

2. Problem Statement

Despite the priority of innovation, the concept of an innovative enterprise is has not been defined. The analysis shows that there are many criteria for classifying enterprises as innovative. They are used both by official government bodies and an independent expert community (Bovkun, Andreevskaya, & Kolodin, 2018; Shumpeter, 1961).

For example, the Federal State Statistics Service uses a method based on which organizations that have had completed innovations in the last three years, receive the status of innovative. The presence of innovations as well as improved products, services, methods for their production is one more criterion. In addition, they were engaged in implementing new production processes.

In some regions of the Russian Federation, there are own criteria by which an enterprise can be referred to innovative. Some criteria are similar and based on the share of innovative products in the total volume of products produced by the organization, the presence of own or acquired intellectual property, R&D costs, etc. (Astafiev, 2011). At the same time, some regions use their own criteria. In this regard, the experience of Moscow is indicative. To refer an enterprise to innovative, it has to have a medium-term (up to 5 years) strategic plan for implementing innovative projects.

3. Research Questions

To solve these problems, it is necessary to analyze various approaches to classifying enterprises as innovative.

3.1. Study of criteria for classifying enterprises as innovatively active

Some criteria for classifying enterprises as innovative are presented in Table 01.

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Table 01. Criteria for classifying enterprises as innovative in the regions of the Russian Federation

Criterion	Moscow	Saint Petersburg	Tomsk region
The share of innovative products	The planned specific weight of innovative products is at least 40% for the fifth year of activity	The share of innovative products in the total volume of products is 7–20%	The share of innovative products in the total production volume is not less than 30%
Research and development costs (R&D)	R&D and rights to the products of research activities. Attracting highly qualified specialists	The share of R&D expenses in the total expenses of the organization is 3–15%.	The share of costs for innovation, R&D in the total annual volume of goods is at least 10%
Availability of own or acquired intellectual property	The planned number of applications for registration of rights to the results of intellectual activities is at least 2	The organization uses its own results of intellectual activities	Availability of protected rights to the products of intellectual activities
Innovation effect	The economic effect from the sale of innovative products	The ratio of profit from innovation to the cost of innovation	Annual growth of shipped goods of own production is at least 25%

3.2. Analysis of innovation criteria based on regulatory and legal sources

In some regions of the Russian Federation, legal acts provide support to subjects of scientific, scientific, technical and innovative activities. The analysis of regulatory documents reveals the following innovativeness criteria:

- the company carries out research, development and technological work aimed at creating new or improved products;
- the company conducts market research;
- the company creates and develops an innovative infrastructure;
- the company produces a new or improved product, implements a new or improved technological process until the normative payback period of an innovation project is reached (Jie, 2020).

4. Purpose of the Study

To identify innovative enterprises, it is necessary to use methods of analysis and comparison of existing criteria for the innovativeness of business entities.

Some authors divide all Russian enterprises into three types. The first type is represented by enterprises that have reached the world level of innovative activities - large companies involved in public orders, possessing a developed material and technical base and promoting their goods and services abroad.

Enterprises doing business in accordance with internal market requirements form the second type of innovative enterprises. They sell their products in the domestic market. Due to the fact that their production base does not meet more stringent international standards, only a small fraction of their products can be sold abroad. They need to improve the financial situation and update production processes.

The third type is represented by enterprises that do not engage in innovation activities. Ther share is 80%. Small and medium-sized businesses that have an outdated material and technical base, as well as

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idle production facilities, fall into this category. Such enterprises are not able to bring their products to foreign markets.

Other researchers refer organizations engaged in scientific research (marketing, design and technological organizations, design bureaus and some other categories of enterprises).

5. Research Methods

Russian and foreign approaches to the selection of criteria for defining innovative-active enterprises are different. In accordance with the European approaches, small innovative enterprises are business entities created no more than 8 years ago, they have an average number of employees (less than 250 people); their annual sales turnover is less than 50 million euros, and their assets cost less than 40 million euros. Their R&D expenses should be at least 15%. Co-owners of such companies (at least 50% of the enterprise's capital) can be individuals, venture capital funds, mutual funds, and other companies that satisfy the same conditions (Koc & Bozdag, 2017).

The American approach is similar to the European one, although there are some nuances. This refers to the fact that in the USA there is no limit on R&D expenses and the size of company assets. In addition, the number of employees may be 500. US regulations provide for the ownership of an enterprise by individuals. An important feature is that the enterprise should be located in the United States. If the innovation project has a supervisor, it should be a small enterprise.

In Russia, the status of small innovation enterprises has not been defined. In the economic literature and statistical sources, there is no consensus on the types of innovative activities (Repinskiy, 2019).

International statistics include the following key types of innovation activities: research and development; purchase of new machinery, equipment and technologies; production and design works; purchase of software products; purchase of patents and licenses; staff training.

6. Findings

The analysis shows (Table 02) that in Russian and foreign practice, there are no universal criteria for classifying enterprises as innovative. The data indicate that the largest number of organizations performing research and development was recorded in 2015. Since 2016, their number has been constantly decreasing.

Table 02. Organizations performing research and development, units

	2014	**2015**	**2016**	**2017**
Number Of Organizations – Total	3604	4175	4032	3944
Including				
Research Organizations	1689	1708	1673	1577
Design Organizations	317	322	304	273
Design And Survey Organizations	32	29	26	23
Experimental Enterprises	53	61	62	63
Educational Institutions Of Higher Education	702	1040	979	970
Industrial Organizations That Had Research, Design Departments	275	371	363	380
Other	536	644	625	658

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The largest number of organizations performing research and development was observed among specialized research organizations. At the same time, their share decreased from 46% in 2014 to 40% in 2017. The leading positions belong to educational institutions of higher education (Bencivenga & Smith, 1991).

The total level of innovative activities is characterized by the indicators presented in Table. 3.

Table 03. The total level of innovative activities of enterprises, %

The total level of innovation activities (the share of organizations engaged in technological, marketing, organizational innovations, in the total number of organizations), %:	**2014**	**2015**	**2016**	**2017**
Industrial Production	10.9	10.6	10.5	10.6
Telecommunications Activities; Computer Software Development, Consulting Services In This Area And Other Related Services; Information Technology Activities	10.7	10.8	9.3	9.9
Construction	–	2.0	1.5	1.8
Agriculture	–	–	4.0	3.7

The data show that the most active enterprises are industrial enterprises, enterprises engaged in telecommunications, developing computer software and information technology. For example, in recent years, an access to broadband Internet has been significantly expanded using advanced technologies, as well as the deployment of fourth-generation cellular communication networks (Lorincová & Potkány, 2016).

Research and development costs are an important indicator. In the EU countries, research and development costs should be at least 3% of GDP. The dynamics of the relevant indicators in the Russian Federation is presented in Table. 4.

Table 04. Internal research and development costs

	2014	**2015**	**2016**	**2017**
Internal research and development costs:				
In actual prices, billion rubles	847.5	914.7	943.8	1019.2
As a percentage of gross domestic product	1.07	1.10	1.10	1.11

The data show a slight increase in domestic spending on research and development in the period from 2014 to 2017. However, when comparing these values with the national GDP, an alarming picture becomes evident. In recent years, domestic spending as a percentage of GDP barely exceeds 1%. According to this indicator, Russia is in the top ten states and far from the leaders. Innovative states (Israel, South Korea, Switzerland, etc.) invest more than 4% of their GDP in research and development.

7. Conclusion

Currently, in the Russian Federation there are many definitions of innovative enterprises. Both public bodies and experts in offer their interpretations. Such discrepancies affect the assessment of the level of innovative development of the country and its regions. Despite different criteria for evaluating innovative enterprises, there are general parameters, such as the share of innovative products in the total

volume of products produced by the organization, the cost of research, development, the availability of intellectual property and some others (Grushina, 2011).

Some of the above indicators indicate positive trends. For example, higher education institutions play a prominent role in the innovation process. They cooperate with enterprises which form specific areas of research.

It is necessary to say about difficulties. For example, the share of domestic spending on research and development is only 1% of GDP, while in developed countries it is 3%. In Israel, it is more than 4%.

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