



Problems and Perspectives of Creation and Management of the Process of Preparation of Innovational Technological Projects

Problemas y perspectivas de creación y gerencia del proceso de preparación de proyectos de innovación tecnológica

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ABSTRACT:

The article deals with identification of the problems and perspectives of management of the process of commercialization of innovational technological development in modern Russia. The authors determine causal connections of the gap between science and business, which is peculiar for Russia, and develop the model of business accelerator aimed at overcoming of these problems. The authors analyze the sense and specify the main stages of work of business accelerator, as well as determine perspectives of creation and management of the process of preparation of innovational technological projects with its help. As a result, the authors come to the conclusion that formation of business accelerator is really a perspective direction of perfection of the process of commercialization of innovational technological developments in modern Russia. Answering the challenges of globalization, business accelerator could be a model for creation of a network of regional innovational centers and set the standard of

RESUMEN:

El artículo trata sobre la identificación de los problemas y perspectivas de la gestión del proceso de comercialización del desarrollo tecnológico innovador en la Rusia moderna. Los autores determinan las conexiones causales de la brecha entre ciencia y negocios, lo cual es peculiar para Rusia, y desarrollan el modelo de acelerador de negocios para superar estos problemas. Los autores analizan el sentido y especifican las principales etapas de trabajo del acelerador de negocios, así como también determinan las perspectivas de creación y gestión del proceso de preparación de proyectos tecnológicos innovadores con su ayuda. Como resultado, los autores llegan a la conclusión de que la formación del acelerador de negocios es realmente una dirección de perspectiva de la perfección del proceso de comercialización de los desarrollos tecnológicos innovadores en la Rusia moderna. Respondiendo a los desafíos de la globalización, el acelerador de negocios podría ser un modelo para la creación de una red de centros regionales de innovación y establecer el

management of the process of preparation of innovational technological projects.
Keywords: technological innovations, commercialization, innovational infrastructure, business accelerator, innovational startup.

estándar de gestión del proceso de preparación de proyectos tecnológicos innovadores.
Palabras clave: innovaciones tecnológicas, comercialización, infraestructura innovadora, acelerador de negocios, puesta en marcha innovadora.

1. Introduction

Modern global economic system could be characterized as an innovations-oriented economy. This means that the most important condition of country's competitiveness in the international arena is creation and implementation of innovations into activities of Russian enterprises and manufacture of innovational products.

Leading countries of the world, characterized by the highest level of economic development, cope with this task successfully, which allows them holding leading positions in the global economy. At that, it's very difficult for developing countries – like modern Russia – to stand the global competition. In order to level the structure of the global economy and improve the position of the developing countries in the global economic system, it's necessary to create and implement effective mechanisms of stimulation of innovational activity of national enterprises in such countries.

At present, the Russian state and institutes of development try to find adequate mechanisms for solving the task of effective development of new technologies and their quick commercialization in the market. One of these mechanisms is creation of business accelerators. This article offers a scientific hypothesis that perspectives of perfection of the process of commercialization of innovational technological development in modern Russia are connected to formation of business accelerators.

Development of the model of business accelerator requires the correct identification of the problems of the process of commercialization of technological development, which are to be solved by the business accelerator. That's why the purpose of this article is to identify the problems and perspectives of management of the process of commercialization of innovational technological developments in modern Russia.

2. Materials and method

Theoretical basis of the research is comprised of the works of modern scientists, devoted to analysis of the sense and specifics of creation and management of the process of preparation of innovational technological projects; these are works by (Clement et al., (2015), (Klimova et al., 2015), (Laeven et al., 2015)., (Pogodina et al., 2015), (Popkova et al., 2013) (Makarov & Ugnich, 2015), (Schetinina et al., 2015), (Aarikka-Stenroos et al., 2014), (Bezrukova et al., 2013), etc.

During the research, the authors also use the works of modern scientists in the sphere of study of the mechanism of work of business accelerator and the process of commercialization of innovations, which include materials of studies by (Astapenko, 2014), (Minaeva, 2013), (Yuldasheva & Orekhov, 2014), (Cozzarin, 2016), (Rossignoli et al., 2016), (Löfsten, 2016), (Nadtochey, 2012), etc.

Methodological basis of the research is comprised of such scientific methods as problem and systemic analysis, synthesis, deduction, induction, formalization, modeling, and forecasting. The research is performed within the concept of innovational economy, concept of commercialization of innovations, and the concept of business acceleration.

3. Results

Despite possession of large scientific and technical potential, Russia experiences huge difficulties in the sphere of commercialization of scientific knowledge. The researchers and

developers are not involved into the problematics and innovational agenda of industry. In such innovational and active systems as Boston or Silicon Valley certain involvement is provided through constant interaction of university researchers and business within contracts. In the USSR, the system of sectorial institutes was such a mechanism. However, post-Soviet changes led to its destruction, which brought the interaction between science and industry down to minimum. Due to a whole range of reasons, there appeared no other mechanisms in Russia which would stimulate interaction between science and industry – scientific establishments became isolated from economy and market's needs.

Thus, Russia is peculiar for a large gap between science and business, which is difficult to overcome due to several reasons:

1. Innovations are not a priority for Russian companies. According to the research by the Bauman Innovation, only 13% of companies consider innovations a primary task – mainly in industries with quick rate of innovational renewal (Bauman Innovation..., 2010). In the global market, this value reaches 23%. According to the Russian Innovation Survey, only 3.8% of attempts of commercialization of the results of scientific activities in Russia have been successful (Russian Innovation Survey..., 2010).

The structure of expenses for technological innovations is characterized by shift towards expenses for machines, equipment, and software (51.5%), while in the Western Europe expenses for innovational developments exceed expenses for purchase of equipment by two times.

Foreign companies, which, in their turn, try to enter the Russian market, cannot identify and acquire access to commercially viable technologies and specialists in this sphere.

2. The purposes of the researchers and business differ a lot: the former, unlike the latter, are interested to solve the tasks regardless of the fact whether they satisfy a certain need of the market or not. Most researchers focus on activities which they are familiar with, in which application of the results of investigation in commercial products, commercialization, and expediency are not criteria of the work. Possibilities for application of the results of the research work, requiring the market expertise, are not that obvious for researchers. International practices of commercialization are strange to them. As a result, rare attempts of commercialization end with patenting of the wrong object, and, as a rule, there is no wish for obtaining an international patent.

3. Russia is peculiar for weak development of entrepreneurial culture (especially, the culture of technological entrepreneurship), lack of networks of exchange of knowledge on entrepreneurship, lack of living environment of creation and distribution of leading developments. A lot of modern Russian entrepreneurs do not understand commercial process and the sense of commercialization adequately. Most of entrepreneurs do not possess even the basic technological erudition. So it is possible to state that the class of technological entrepreneurs is absent in Russia.

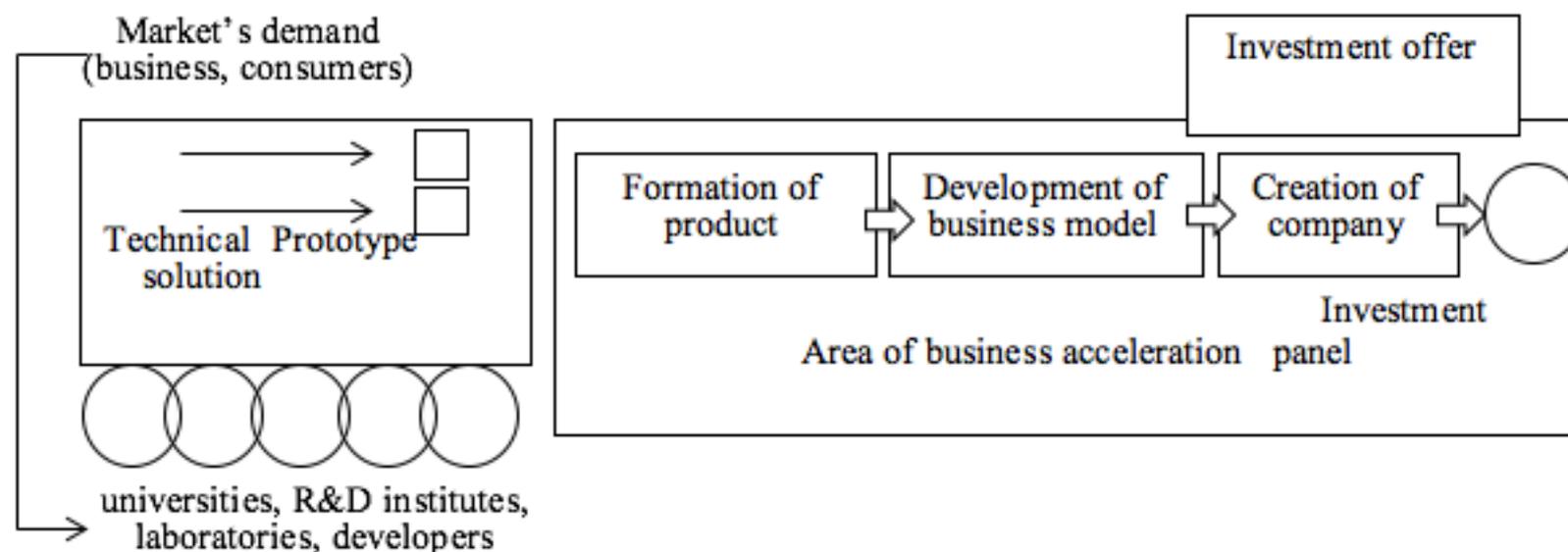
4. At that, the system of regulation of research and innovational activity in Russia does not stimulate – and very often hinders – the development of entrepreneurial practices and culture. This is true for distribution of financing in case of absence of requirements for further application of the results of the work, without consistent policy for implementation of the results of intellectual labor. Unlike Russia, the results of research in the USA are picked up by the market, and state financing is given for solving specific tasks which have practical application.

Estrangement of intellectual property of budget establishments is regulated by the Law No. 217-FZ "On introducing amendments into certain laws of the Russian Federation on the issues of creation by budget scientific establishments of economic societies and for the purpose of practical application (implementation) of the results of intellectual property". At that, direct application of the law not only provokes formal (for the accounting purposes) registration of legal entities in the form of small innovational enterprises with universities but also creates a

range of uncontrolled risks for the funds and scares off private investors.

At present, full-scale state programs and private initiatives for formation of infrastructure of support for innovations are realized, which are oriented at solving these problems. However, these initiatives do not form a single system. According to the authors of this research, perspectives of perfection of the process of commercialization of innovations in modern Russia are related to development of business accelerators (Fig. 1).

Figure 1
Model of business accelerator



Source: compiled by the authors

Activities of business accelerator begins with the stage of "seeding". Working at the input with a flow of technologies from partners, there is a flow of deals for venture partners and "seeding" funds at the output. The basic process of business accelerator is growing of innovational startups. Business accelerator conducts work with projects at the stage of appearance of formed technical solution (method of putting certain material on another material, method of formation of chemical reaction, etc.) after the end of all R&D and design work.

An origin of technical solution is idea. At the next stage, a prototype is formed, then go product, business model, investment offer, and then the sales start. Through organization of the chain of formation of value, business is generated. A point of business accelerator's leaving a project is involvement of seeding fund/investor and selling the company's share.

Full cycle of accelerator's activities from the start till leaving the company can last 3-5 years. The program of business acceleration (incubation) lasts three months on average. After the end of each stage of the program, the results of team's activities are evaluated. The evaluation is performed by the Expert council of business accelerator, which includes the permanent experts and invited specialist who have not taken part in project's admission to the business accelerator.

In case of unsatisfactory results of work, the team gets a possibility to improve the project. When a chance for realization of the projects in current situation or on the specific topic is doubted, the Expert council may decide to exclude the members from business accelerator and terminate all agreements.

4. Conclusion

It should be concluded that formation of business accelerators is a perspective direction of perfection of the process of commercialization of innovational technological development in modern Russia, which proves the hypothesis offered by the authors of the paper. Answering to the challenges of globalization, business accelerator could be a model for creation of the network of regional innovational centers and set a standard of management of the process of preparation of innovational technological projects.

Creation of business accelerators will allow solving – partially or fully – the problems of management of the process of preparation of innovational technological projects and commercialization of innovations. An important advantage of creation of business accelerator, as compared to other mechanisms of stimulation of innovational activity of enterprises, is its orientation at small innovational enterprises.

Theoretical value or the results of the performed research consists in development of the concept of innovational economy. Practical value of the work consists in a possibility for using the authors' conclusions and recommendations during the management of the process of preparation of innovational technological projects and commercialization of innovations in modern Russia.

Theoretical character of the developed model of business accelerator and orientation of the research at modern Russia are a limitation of the performed research. Thus, development of universal recommendations for management of the process of preparation of innovational technological projects in developing countries of the world and adaptation of the model of business accelerator to specific economic conditions comprise perspectives for further research.

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