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VENTURE INVESTMENT AS A FACTOR IN ENHANCING
INNOVATION

O. S. Andreev (a)*

*Corresponding author

(a) Samara State University of Economic, Soviet Army Str., 141, Samara, Russia, andreevoleg1984@mail.ru

Abstract

The strategy of economic development of the Russian Federation proclaims one of the main tasks for Russia to become one of the five world economies. The task of the modern period of economic reform is to identify the cause-and-effect relationship between the requirement of investments and the ability to use them effectively in the direction of innovative development of socio-economic processes. The relevance of the problem under study is due to the issues of venture investment, thanks to which it is possible to solve the problem of lack of investment for scientific, technical, research and development work. With the successful functioning of the venture investment system, venture capital becomes one of the significant factors of innovative reproduction. The relevance of the study is determined by the new objective conditions for investment that have arisen as a result of changes in the conditions of reproduction associated both with the development of the independence of the regions and with the formation of an innovative economy. The purpose of the article is aimed at developing conceptual approaches to state management of the development of venture capital investment in Russia. The novelty of the research lies in the development of the main components of a holistic concept of public administration of the national venture industry in Russia, which can have a significant impact on the development of venture capital investment as one of the factors for enhancing innovation in priority sectors of the national economic system.

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Keywords: Concept, innovative activity, models, support measures, venture capital



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1. Introduction

In modern conditions, the development of the world economy indicates the objective laws of the transition of national economies to innovative type of development. The country's competitiveness was largely determined by the manufacturability of the output products, the speed of mastering the latest developments, and the effectiveness of the national innovation system. One of the breakthrough areas of the economy is the formation of an innovative economy of a new type. In Russia is being solved the problem of transition from a raw material economy to an innovative economy. For this purpose are being adopted special state programs for the development of innovations. For the effective functioning of the national innovation system, special economic zones, technoparks, business incubators, technology commercialization offices, as well as investment, innovation, venture funds are created to stimulate the innovative activities of companies, the production of science-intensive products by providing them with the necessary capital. At the same time, innovative activity is associated with significant investments. As practice has shown, the main source of investment is often venture capital, which is an investment in the authorized capital of a company with the simultaneous participation of an investor in the management of this company. Existing theories of venture investment serve as a guideline for conducting research and replenish its methodological base.

2. Problem Statement

The interest of scientists in venture investment as a new phenomenon in the economy is taken relatively recently, which is due to the paucity of available works on this topic, especially from the point of view of management science. Existing research by specialists is mainly limited to the study of international experience and theoretical aspects of venture investment, in particular such concepts as "venture capital", "venture investment" and others. But at the same time, there is no holistic theory of venture capital, venture investments, the methodology of state management of the development of the industry under study in order to form an integrated approach to ensure state influence on the development of venture investment. The issues of state participation in venture processes have not received due elaboration. Innovative development and venture capital investment are considered independently, and not interconnected with each other and not in the context of public administration. At the same time, there is a need to develop comprehensive, scientifically grounded approaches to the development and support of venture capital activities in Russia.

3. Research Questions

Successful global experience in the field of venture capital investment shows that it is due to the active position of the state that the growth of the venture capital market and an increase in the share of innovative enterprises are ensured. Innovation activity is becoming the main factor of economic growth, and venture investment is the most important way of its financial support. It is necessary to take into account the peculiarities of the development of modern scientific and technological progress, in which the main factor of development is the state scientific, technological and innovation policy, which affects the innovative renewal of the economy and its sectors, as well as the formation of venture capital. There is a need for modern approaches to public management of venture capital, strengthening the role of the state in

its policy taking into account monitoring, analysis and evaluation of foreign and domestic experience, as well as factors affecting the national innovation system. The existing infrastructure and conditions for the development of innovation and the innovation system need significant updating (Novikov, 2015).

It is the innovations associated with the development of scientific developments, the latest technologies in production and provided with venture (risk) capital that make it possible to produce new, high-tech products. Innovations are not only the basis for the profitability of companies, but also the "engine" for the development of entire industries, the emergence of new, its high-tech areas that can give a significant, sometimes "explosive" impetus to the development of the economy.

4. Purpose of the Study

The purpose of research is to develop the main components of the concept of state management of the national venture capital industry in the Russian Federation, which can have a significant impact on the development of venture capital investment as one of the factors in enhancing innovation activity in priority sectors of the national economic system. One of the most serious systemic problems is the lack of interconnection between science and business, which results in the unpreparedness of R&D results for venture capital investment. R&D results are often not prepared for commercialization, i.e. to direct implementation into production. The objects of investment are mainly those developments that are carried out by scientific organizations by order of enterprises and are the property of the latter. That is, the development of scientific organizations is not represented on the investment market. Consequently, there is no pool of investment objects, including venture capital, necessary for the activation of innovative activity (Midler, 2008). A solution to the problem of low venture activity in the Russian Federation can be the principle of innovation and venture clustering, the essence of which is to concentrate within one region all the main participants in venture processes and venture infrastructure entities in order to ensure their closer, productive interaction and mutual consideration of the interests of cluster participants.

5. Research Methods

Recently, the role of innovation has been increasing, and the scope of its use is expanding. Currently, almost all countries are focused on an innovative model of economic development, implementing measures of state support for the activities of high-tech innovative companies. The cyclical nature of scientific and technological development is expressed in the change, at certain intervals, of generations of engineering and technology and the methods of organizing production and labor associated with them. When analyzing the periodicity of changing generations of engineering and technology, there is a pattern of reducing the time for changing generations of existing technical solutions (Konecsny & Havay, 2011).

Analysis of the development of the modern world economy made it possible to question the justifications of competitive nations popular in world economic science:

– concepts explaining the "competitive advantage of the nation" by macroeconomic indicators – by the size of the state budget deficit, the bank interest rate or the exchange rate of the national currency (the view that nations with small budget deficits and low bank interest rates are usually competitive) that cannot explain why countries like South Korea have achieved export growth and relatively high living standards despite budget deficits and high interest rates;

- the widespread assertion that the competitiveness of a nation is directly related to "cheap labor" in export industries, which is not suitable for explaining the experience of countries such as Germany, Switzerland, Sweden that have achieved economic growth despite high wages and a general shortage of labor resources;
- the traditional point of view, according to which competitiveness is determined by the surplus of natural resources in the country, which does not take into account that Japan and South Korea have achieved generally recognized successes in the economy, despite the fact that they are importers of raw materials;
- the concept that has gained popularity in the economic literature, according to which "successes of national competitiveness" are associated with active government intervention in the economy and government support for export industries.

In developed countries, venture capital investments are directed to those industries and sectors of the economy that are the most high-tech and promising in terms of their growth. Among the factors in the development of venture investment activity, there are public institutions that contribute to this (associations and unions of investors, business angel clubs, etc.). The most widespread is the concept of long waves, in which we can see the undulating nature of development, its mechanism of positive and negative feedbacks acting in cyclical processes of development. An essential aspect that makes it possible to judge the development of any national high-risk investment system is infrastructure. Most researchers, describing its components, do not give an comprehensive definition of this concept.

6. Findings

Taking into account the sources we have studied, we believe that venture infrastructure can be defined as a set of private and public participants in the venture process, as well as technology parks, commercialization offices and other subjects of industrial and innovative infrastructure. The main types of participants represent, respectively, science, business and investment sector as three indispensable components of any successful venture capital system.

In the Russian Federation the state makes more efforts to create such an infrastructure. To implement the relevant policy, the state uses various methods of influencing the development of the venture capital industry. It should be noted that there are few cases of venture investment, and these investments came mainly from funds created at the initiative of the state and with its equity participation. The unpopularity among private investors of independent investments in venture projects and companies remains due to the lack of effective government incentives that can increase the attractiveness of the venture business. In the field of innovations, the mechanism of state support is more common in the country through the allocation of grants for the acquisition of technologies, industrial research (Bartlett, 1999).

The state, influencing the venture capital industry, implements it through appropriate direct and indirect support measures. Measures of direct impact include direct equity financing of venture funds and companies, issuance of government concessional loans, subsidies, etc.

Measures of indirect impact imply the creation of conditions for the independent development of elements of the venture infrastructure, first of all, with the help of tax incentives, accelerated depreciation of equipment and other property of venture capital entities; by encouraging banks and other financial institutions to provide long-term loans to venture capital companies, as well as by minimizing requirements

for initiators of venture capital funds and by facilitating the development of exchange activities, etc. At the same time, the creation of a new product on the basis of scientific developments requires not only a fairly long time, but also the availability of significant, sometimes huge, financial resources. In this regard, most innovative companies face difficulties in attracting investment for the production and sale of new high-tech products. Therefore, venture capital can be an available source of investment for active innovative companies. Venture investment today is an integral element of the national innovation system and is aimed at providing capital for knowledge-intensive industries. Studies have shown the diversity of its interpretations.

Thus, Bartlett, Fenn, Liang, Prows understand venture capital as a long-term investment in capital stock of innovative enterprises of small businesses (Bartlett, 1999; Fenn et al., 1995). Lirmyan (2016) notes such a distinctive feature of venture capital as its riskiness.

Indeed, the study of the mechanism of venture investment makes it possible to state that venture capital is characterized by increased riskiness. Due to the high degree of uncertainty about the new product demanded by the market, the company cannot guarantee the investor a profit on the invested funds. In venture investment, there is a high-level set of various risks in the process of assimilating scientific developments, technologies within the framework of an innovative project. Folomev and Neubert (1999), in addition to a high degree of riskiness, indicate high profitability of venture capital, which is the main motive for an investor.

There are numerous definitions of the concept of "venture capital", which make it difficult to understand the essence and assess the potential of the most important type of capital for innovation processes. In theoretical studies, there are various formulations of the concept of venture investment. Myat (2016) characterizes venture capital investment with the introduction of inventions into commercial production. Romanchin et al. (2012) define venture capital investments as sources of long-term investments for companies to expand and modernize. In this regard, it is necessary to renew completely all innovative activities in Russia and, above all, to change their concept, paradigm and programs. Venture capital is an economic instrument of venture business activity used to finance companies, develop them or reorganize their form of ownership. However, a single scientifically based definition of venture capital and investment has not yet been fully developed. In our opinion, it is inappropriate to reduce venture capital and venture investment only to monetary and other financial resources.

From our point of view, the interpretation of venture capital as a contribution only to an already established or existing company is not entirely justified. Venture capital investment can be carried out at a very early stage of an innovative project, for example, by business angels, when there is only an idea and it requires to create a prototype, to conduct additional research to bring it to an industrial design, to create a company, and so on. Venture capital is not only property benefits, but also the professional experience of an investor who, in order to minimize the high risks accompanying any innovative project and to ensure the stable growth of the company, invests, in addition to financial resources, his entrepreneurial experience, market knowledge, offers his existing business and other social relations, attracts the necessary specialists, participates in the management of the company.

Venture capital functions:

1. Scientific and technological function.

2. Investment function
3. Structural function.
4. Function of commercialization of the results of scientific and scientific-technical activities
5. Function of a kind of guarantor of temporary economic stability.
6. Social function
7. Venture infrastructure development function.

Based on the essence, characteristics and functions of venture capital, we have identified the features of venture capital, which:

- is associated with innovative, scientific and technological activities and is aimed, first of all, at investing the results of such activities;
- is focused on long-term (3-10 years) investment of leading and high-tech companies;
- is focused on the formation and effective use of intellectual resources;
- is ready for high innovative commercial risk;
- fragmentation or staging of venture investment in high-tech companies and differences in profitability at different phases of their development, such as the phase of development, start-up, early growth, expansion, interim financing and exit, recession (Lirmyan, 2016). A distinctive feature of venture capital is its influence on the development of the invested companies through implemented effective innovative projects and on the integration of science and entrepreneurship (Prowse, 1998).

Venture capital is invested either in an existing business or in a newly created company that produces innovative products, the appearance of which can have a significant impact on the market structure. The development of venture investment in the leading countries of the world is due to the consistency of its constituent elements. Arkhangelsky et al. (2013) note the existence in the venture capital industry of consistency, structuredness and self-reproduction ability.

In addition to a set of elements, the concept of a venture investment system also includes a variety of processes, relationships, and interconnections, which make it a dynamic and unified organism. These scholars identify three segments of the national venture capital system. We propose to supplement the national system of venture investment with a fourth block – "management". In our opinion, it is the presence of a set of four blocks of the national venture investment system, their effective functioning, the presence of stable ties and fruitful interaction between them that will ensure the growth of the venture capital market and innovative activity.

The following methodological principles are inherent in venture investment:

- consistency of venture capital;
- the principle of accounting and optimal balance of interests of all subjects of venture capital activities;
- the principle of participation of public administration in this process.

The outlined principles will give the opportunity to take into account the possibilities of venture capital in the process of enhancing innovation:

- the investor has no requirements for the provision of collateral and other security,
- duration of the investment period,

- in addition to financial resources, also investment of knowledge, experience, connections and other intangible resources of the investor.

Due to these features, venture capital is one of the factors of innovative development. Research has shown that the theoretical foundations of venture capital investments and government influence on their development are sufficiently reflected in the works of a number of authors, such as Zhurov (2010), Novikov (2015) and others. However, the existing literature does not propose measures of state support that would be most acceptable, taking into account national characteristics, in relation to countries where the institution of venture investment is in a formative stage. In the field of venture investment, the models of cooperation between the state and entrepreneurs differ. The first model assumes the creation of a fund, which at the expense of public funds (both budgetary and extra-budgetary) can finance the formation of various venture funds, which, in addition, attract private investment. These funds, accordingly, further invest in the venture companies themselves. The second model is called the "pilot region" model and is used by those countries, the economic level of regions within which varies significantly. This model provides for two strategies that can either be used independently or, which is often encountered, complement each other. The main feature of the third model is investment innovation companies created and managed by private investors who, through a competition, can obtain the right to use public funds. These companies are based on venture principles. As a result of their work is achieved:

- activation of innovation processes at the regional level,
- attention from local government bodies,
- access of small research organizations and innovative companies to state funding is facilitated by participating in the implementation of state special programs.

Under the fourth model, government guarantees are provided, according to which some part of the invested funds can be returned to investors if the invested company turns out to be unprofitable in the end. Guarantees are provided, for example, to financial institutions (banks) as investors issuing funds to entrepreneurs in the form of credits or loans. The availability of guarantees is a circumstance that stimulates the attraction of risky investments. The choice of a specific model for the development of the venture industry by the state depends on the market readiness for venture investments and on the existing local features of the innovation system. One of the new forms is the financial participation of the state through guarantees to compensate for damage that may arise if a venture company is unprofitable. The guarantee form of government participation in high-risk investment has spread around the world relatively recently. In this regard, there are few studies showing its effectiveness (Kolesnichenko & Kiselev, 2008).

Thus, taking into account the specifics of the national economy (raw materials orientation, low level of innovation activity, lack of venture proposals from the private sector), the state should take the initiative to form and develop a full-fledged national venture system in the country. The state needs not only to provide financial support for venture investments, but also to provide tax incentives for both venture capital companies and venture capital investors.

The economic processes taking place in the modern world indicate that innovation is one of the main conditions for sustainable economic development. At the same time, venture capital is one of the most important sources of investment in innovative activities. It is directly related to innovations, with the results of scientific, technical and other intellectual activity, is most adapted to them and can become a significant

catalyst for the development of innovative activity. With the successful functioning of the venture investment system, venture capital becomes one of the significant factors of innovative reproduction (Midler, 2008). Unlike venture capital as a collection of various resources, venture capital investment is the process of investing these resources in a venture business project or company. Fundamentally new in definitions is:

- venture capital is not limited to cash and may include any property and property rights, as well as knowledge, experience, social connections of the investor, which are invested in venture projects;
- the clarified nature of the recipient of investments (it can be an innovative business project or an existing innovative company).

To achieve economic growth, Russia has chosen the path of innovative development. In accordance with the strategic priorities of the country in this direction, program documents and legislative acts have been adopted that determine the country's innovation policy and regulate innovation activities, steps have been taken to create a national innovation system. The ongoing innovation policy was accompanied by an attempt to create a national venture capital industry, as a result of which the institutional framework for venture investment, venture funds, and associations of investors in the formal and informal sectors were laid at the state level; venture investments were made. However, the state does not envisage measures, including taxation, that would stimulate venture capital activities; the existing legislative restrictions in terms of organizational and legal forms that are permissible when creating venture funds have not been eliminated, etc.

7. Conclusion

In general, the work carried out in this area does not contribute to the widespread involvement of private investors in venture capital processes, does not lead to the building of a full-fledged national venture capital system, and as a result, the volume of the venture investment market today is represented only by venture transactions of a few venture funds created with the participation of the state.

Among the constraining factors for the development of venture business can be noted:

- lack of scientific and technical developments ready for implementation;
- lack of close interaction between science and industry;
- low financial literacy of potential investors and weak management;
- lack of access to information required for participants in venture capital processes, etc.

Thus, it is necessary to focus on the organizational, financial, regulatory, personnel and informational directions of the development of venture capital investment in terms of:

- strengthening the relationship between the subjects of scientific and technical activities, business and venture investors, which, on the one hand, will increase the demand for scientific developments, their focus on business needs and readiness for commercialization; on the other hand, it will lead to an increase in the number of high-tech industries; thirdly, it will ensure that innovative projects meet the requirements of venture capitalists;
- ensuring the availability and variety of sources of venture capital, including by attracting a wide range of potential investors to high-risk investment;
- opportunities to attract new, previously unused varieties of sources of venture capital investment;

- development of public-private partnerships in the field of venture investment;
- attracting large strategic investors, placing shares of venture capital companies on stock markets, including foreign ones, etc.;
- development of integration within the domestic venture capital industry, support for associations and other unions of formalized and non-formalized venture investors;
- creating a system for training qualified risk managers in order to ensure effective management of venture projects;
- organization of information support for venture activities.

Achievement of efficiency in the framework of the listed areas is seen in the development of conceptual approaches to their implementation and ensuring the complexity of the measures taken. The implementation of these recommendations will give the opportunity not only to develop the venture capital industry, but also to influence innovative activity in the country.

References

- Arkhangelsky, V. V., Arkhangelsky, V. N., & Ivanov, V. V. (2013). *Innovative type of economic development*. Economics.
- Bartlett, J. W. (1999). *Fundamentals of venture capital*. Madison Books.
- Fenn, G., Liang, N., & Prowse, S. (1995). The economics of the private equity market. <https://www.federalreserve.gov/pubs/staffstudies/1990-99/ss168.pdf>
- Folomev, A. N., & Neubert, M. (1999). *Venture capital*. Nauka.
- Kolesnichenko, E. A., & Kiselev, A. A. (2008). The concept of venture capital and its role in the system of innovative entrepreneurship. *Socio-Economic Phenomena and Processes*, 2(010), 46-52.
- Konecsny, J., & Havay, D. (2011). The importance of state's role in the Hungarian venture capital market. *International Journal of Economics and Finance Studies*, 3(2), 159-168.
- Lirmyan, R. A. (2016). *Venture investment in innovation: World experience and Russian practice*. Scientific Book.
- Midler, E. A. (2008). Venture investment as a tool for implementing an innovative strategy. *Economic Bulletin of Rostov State University*, 6(1), 61-67.
- Myat, S. B. (2016). Sources and forms of development of venture capital. *Journal of International Law and International Relations*, 4(39), 92-96.
- Novikov, I. V. (2015). Russian model of venture financing: Problems of formation and development prospects. *Bulletin of Moscow City University of Management*, 2, 20-26.
- Prowse, S. (1998). The economics of the private equity market. *Economic Review*, 3, 21-34.
- Romanchin, V. I., Skoblyakova, I. V., & Smirnov, V. T. (2012). *Venture capital in crisis management strategy*. Oryol State Technical University.
- Zhurov, A. V. (2010). Tax incentives as a stimulus for the development of business angel investment: The experience of Russia, the United States and European countries. *Questions of State and Municipal*, 1, 89-97.