

## The Financial Mechanism to Ensure the Innovation Process

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**Abstract:** The article defines the role of the financial mechanism to enhance the innovation process and presents the author's definition of this phenomenon as a process of flexible and efficient control over attracting financial resources belonging to different property owners (the government or business entities) to provide innovation process and achieving positive effect within limited (tense) time periods. It has been proved that every development area of the innovation process should be influenced through a mechanism of attracting financial resources. The features and the reasons hindering the financing of innovation activity have been identified. A number of circumstances have been revealed proving low productivity of public sector science. It has been revealed that in allocating state budget funds to the public sector science must be based on innovation projects of special importance for the development of the domestic economy. Financial assets by their characteristics have been considered and financing forms of innovation in the Russian Federation have been systematized. A mechanism to ensure the innovation process based on the use of different funding sources has been proposed, as it is the implementation of financial mechanism, which is given a major part in enhancing the innovation process.

**Key words:** Innovations • Innovation process • Funding sources • Financial mechanism • State-funded research sector

### INTRODUCTION

The funding system is an important tool for influencing the innovation sphere of activity, designed to provide solutions to the following major problems:

- Preservation and development of innovative research and production capacities in priority areas of national economy within the shortest terms;
- Coordinating the interests of owners of financial resources and owners of innovations, who require financial support [1].

In order to intensify the innovation process, first of all it is necessary to find such financial leverages, which possess the potential to impact on the interests of both investors and entrepreneurs in innovation sphere [2]. The objective part of the impact of the financial

mechanism on innovation processes lies in the decomposition of material and financial resources, as through the rearrangement of separate parts and the cost and allocation of material assets into the innovation sphere, it is possible to influence the basic motive of business activity - maximizing the profitability of production at the lowest cost [3]. In this case, the financial instruments begin to perform its incentive function, acting as the main lever for innovation process activation.

### MATERIALS AND METHODS

The Russian government pays great attention to activation to innovative activity. One way to address this issue is to maintain home equity capital, which until recently was exported abroad, as evidenced by the State Statistics Committee.

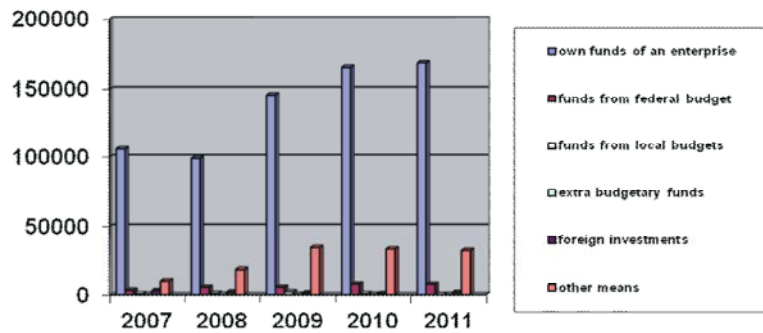


Fig. 1: Expenditures on technological innovations by financial sources

In 2011, gross domestic savings have increased compared to 2010 by 1.5 times and amounted 28% of GDP. While investment in fixed and current capital in 2011 amounted 13% of GDP, almost 25% of gross earnings went abroad. The export of capital from the private sector amounted 25 billion dollars in 2010 (14% of GDP).

In our view, another effective solution in reducing the outflow of capital from the country would be government guarantees to investors and amnesty for already exported capital.

Today, innovative sphere is experiencing difficulties associated with a lack of financial resources. The main reason for the high inertia of Russia on the way to modernization of the economy is considered to be specific mentality of the Russian business community, which are reluctant to invest money in risky innovative projects. [2] According to Federal Statistics Service, the way the funding for research and development in the industrial sector was going on, can be traced both absolutely and relatively (Figure 1). In Figure 1, the share of enterprises' own funds allocated for financing of research and development, dominates over the funds from other sources. The federal budget funds are stable, equal to about 3-4% and a very small contribution to the financing of the innovation process are made from the budgets of the subjects of the Russian Federation and local budgets, extra-budgetary funds, foreign investment. Indeed, in such a situation it is difficult and, to be more precise, almost impossible to drastically influence the activation of innovative processes taking place in domestic economy.

It is necessary to influence all the development areas of the innovation process through the mechanism of attracting financial resources. In connection with this, the issue of improving financial instruments in the field of innovative production is becoming urgent [3].

With this purpose, in this paper we have considered and systematized the forms of financing innovative activity in the Russian Federation, which are presented in Figure 2.

In the course of economic reforms, the process of financial resources formation, allocated to research and production complex, has undergone serious qualitative and quantitative changes, therefore, prior to commencing development a mechanism to provide the financial means for the innovation process, these funds must be classified according to certain characteristics, which manifest themselves in the following specific ways:

- in the form of investments and monitoring the activities in the field of transformation of basic science to the applied: direct - a direct investment of financial, intellectual and other alternative means into making an innovative product or purchasing real assets, portfolio - acquisition of securities, loans - provision of funds in the form of loans at a certain interest.

In various types of investment: financial investments or monetary investments in cash and cash equivalents (targeted investments, working capital, securities, shares, loans, etc.), intelligent investment, property rights.

- In the form of ownership: state, municipal, private, mixed.
- In the form of various conditions for allocations: concessional, non-concessional.
- In a differential relation to open economic system: resident, non-resident.
- In the form of alternative ways of financial and credit support: leasing, factoring, venture capital, common and shared [4].

Based on the classification of financial resources, the Russian entrepreneurs need to learn how to use them in their activity, using a mechanism to mobilize outside financial resources.

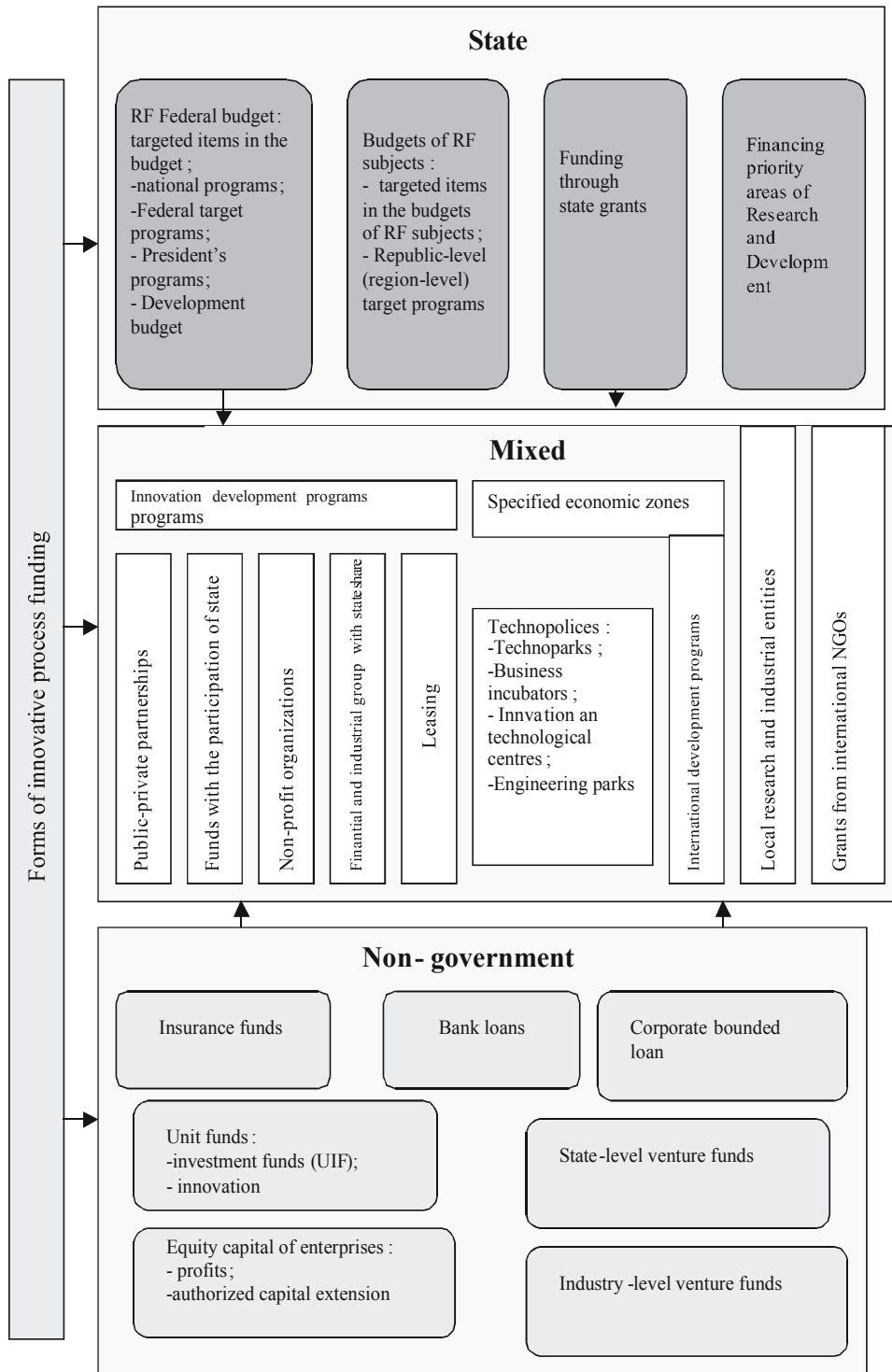


Fig. 2: Form of financing innovative activity in the Russian Federation

A distinctive feature of the mechanism of financing the innovation process, in addition to its primary orientation to achieve maximum profit is diversity of funding sources. Variety of sources contribute to a

comprehensive provision of various stages of the innovation process with financial resources, which can quickly respond to changing outside conditions, providing maximum effect at the same time [5].

Maximizing financial return from implementing innovative processes is the most important general index, on the basis of which the end results of innovative activities are determined, including the effectiveness of integration relationship between scientific and industrial subjects and integrated economic entity - the state. Therefore, in this case, under the financial mechanism for the innovation process, we understand the process of flexible and effective regulation in attracting financial resources belonging to different owners (the government or business entities) with the purpose of investing knowledge-intensive production and achieving positive effect within a limited time period.

Formation of financial mechanism for supporting the innovation process from different sources with the account of investment capital differentiation can influence the intensity of innovative activities [6].

At present, Russia has developed a number of regulations which define the state policy in the field of financial support for innovation activities, however, the Government was constantly reducing the funds allocated into the innovation sector. In conditions of transformation of the economy such subject of the innovation process as research and development centers and laboratories should be financed from the budget, since in case of underfunding the social usefulness of public sector science remains low.

In our opinion, the lack of efficiency and insufficient performance of public sector science is defined by the following:

- Excessive size and fragmentation of the public sector science;
- Imperfect structure of the public sector science by the organizational and legal forms being used;
- Low fiscal capacity of researchers, mainly allocations for research according to estimates;
- Extremely uneven distribution of public sector science across the country;
- Low level of monetary compensation for employees engaged in research activities;
- Imprecision of target indicators of activities of organizations related to science public sector;
- Presence of institutional and legal barriers between fundamental science and education;
- Non-optimality of composition and irrational use of asset complexes of research organizations ;
- Imperfection of the legal framework governing legal relations in the sphere of circulation of rights to the results of scientific and technological activities [7];

- Insufficient integration of the manufacturing sector to the public sector for science.

Given the above circumstances, allocating budgetary funds to the public sector must be based on scientific innovation projects, having an impact on the level of development of the economy as a whole. At the same time, this irrevocable allocation of budget funds should be an exception from the general rules, based on the principles of urgency, repayment and interest payment, that is, on the principles of credit allocation of funds [8].

**Basic Part:** In stable economic conditions the necessary funding mechanisms for the innovation process are provided automatically. However, in the framework of modernization of the economy such conditions must be created by the state. First of all it includes legislative support for innovative activity as well as confirming of the nature of the impact of financial leverage on the intensification of the innovation process at the level of regulations [9]. We have proposed a financial mechanism to support the financial innovation process at the regional level, presented in Figure 3.

This financial mechanism includes the following steps:

- On the basis of innovation demand and (or) an innovative offers the enterprises, organizations, groups and innovative companies create an innovative project.
- An innovative project developed is submitted to the Chamber of Commerce and Industry, Association of Industrialists of entrepreneurs, other concerned agencies and directly to lending institutions (venture capital and investment funds) for further financial support.

If lenders provide funds for concessional financing of an innovative project, the cycle is closed. In case of refusal, the above organizations and agencies forward innovative developments with their comments to the branch work group at the Department of Economic Development of the region.

- This work group shall review all proposals and make a decision concerning the future of the program, using patent information, database on industrial capacity and market research results.

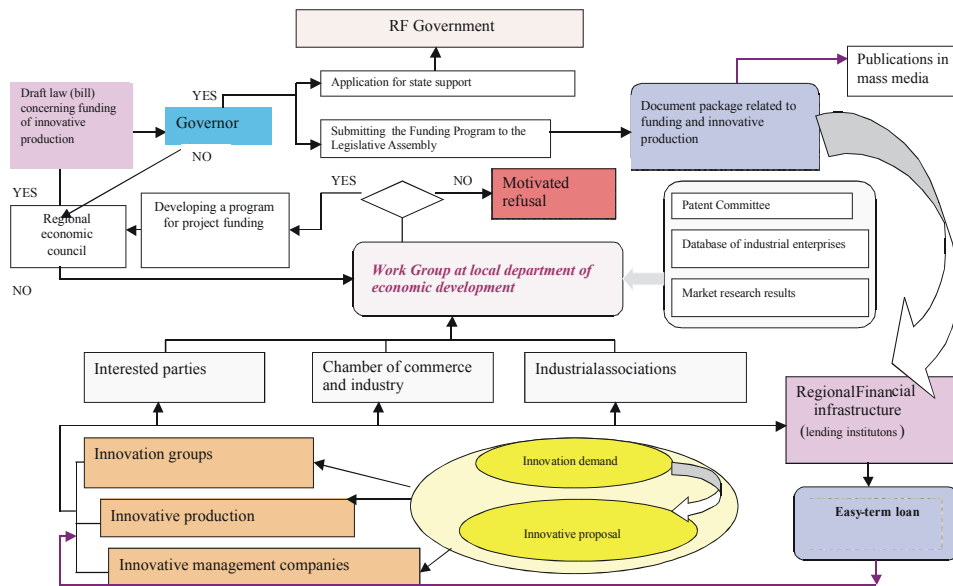


Fig. 3: Financial mechanism to ensure innovation process

In case a given innovation project is not relevant, the working group prepares a reasoned refusal (arrow "NO"). If the project will be profitable, it is submitted to the Regional Economic Council (arrow "YES" and the following).

- Regional Economic Council, in the event of shortcomings or mistakes, sends all documentation back to the committee for economy and development for subsequent revision (arrow "NO"), in case of favorable decision, the committee prepares a package of documents "On financing an innovative project" and submits it to the governor for approval (arrow "YES" etc.).
- In case the governor has disagreed with the draft law, the draft is sent back for revision – to the regional economic council. In the event of governor's decision that the local public treasury is unable to cope with the financing of the project, an application is prepared pleading for government support, which is further submitted to the Government of the Russian Federation (arrow 'OR' and below). If financing is available in full amount at the expense of the region, the package of documents already approved "on financing an innovation project" is forwarded to the Legislative Assembly of the region.
- In case a draft law has not been adopted, it is sent back to the governor (arrow "NO"). If adopted, taking into account the relevant amendments and addendums, in conformance with the law "On the

implementation of scientific, technical and innovative activity", a new law or a set of documents is signed "on financing an innovative project", which, for the entry into force, shall be published in the local mass media. The new law should contain the necessary provisions to ensure concessional financing for organizations engaged in the development of innovative production. The success of intensification will largely depend on the flexible interaction between the basic factors of the financing process. The result of this interaction is expected to develop market conditions for access to the external level of creative activity, shifting priorities of government regulation towards the system of tax benefits, which promotes the development of new industries based on venture capital [10].

### CONCLUSION

Distinctive features of the organization of financing of the innovation process, in addition to its target orientation are numerous sources of funding and inability to respond flexibly to rapidly changing external conditions in order to maximize the efficiency in the use of financial resources. The growth of financial return from the implementation of innovative projects is the most important general indicator, allowing to identify both the results of innovative activities and the effectiveness of the relationship, realized by business entities and a complex economic entity - the state.

With the account of the characteristics of the organization funding the innovation process, we have developed an enhanced financial mechanism for innovative projects and programs which puts forward new, more rational communications between all subjects of sole proprietorship. In this case, it involves the entire process of development and approval of funding of these projects and programs.

**Findings:** Summarizing, it can be noted that the provision of financial resources for the innovation process is carried out mainly by enterprises themselves. Limitations of these entities in the financial resources results in the slowdown of the innovation process. The resources of the state budget are available mainly to large enterprises. But even for them the scale of allocating state budgetary funds is no more than 3-4% of the amount required for funding the innovation activities.

While forming a mechanism to ensure the innovation process - attracting the money of large manufacturing enterprises could be a major contribution. Most of industries are not interested in funding the research. Only very large buyers of innovations representing base materials sector of the economy or an efficient working mechanism for intensification of financial integrated interaction between participants of the innovation process are able to drive the situation from the dead-lock.

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