

Analysis of Funding Innovation in the Russian Federation

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Abstract—This paper analyzes the scientific sphere of Russian Federation in retrospective including dynamics study of different investment sources in science. The quantitative results of funding the priority areas of scientific research and innovation activities of the country from 2000 to 2016 are given. Some sources of investment in science have been analyzed, which are the federal budget and the business enterprise sector from 2010 to 2015 in Russia and other countries. Based on the obtained results, some reasons that affect the development of research and innovation in Russia have been identified. Also possible ways of further development of innovation funding in the Russian Federation are suggested. The article emphasizes the importance of innovations funding and contains the conclusion and recommendations.

Keywords—science funding, innovative activity, the economic growth, funding of innovations.

I. INTRODUCTION

The economy growth is what the economies of all the states are striving for, because it exactly has an influence on increasing of standard of living and other important key indicators, determining the welfare of nations. However, in our opinion, the really important key is not only the high rate of the economic growth but stability and stable development during long-term period. We also believe that success of the stable economy growth should consists of three main constituent: institutes, investments and innovations.

Innovative activity includes such criteria as: quantity and quality of research institutes; cooperation of business and universities in sphere of innovations; expenditure of government and business on R&D; amount of scientists and engineers and number of applications for intellectual property protection [7].

Lack of innovative sphere funding causes low level of science and its research. At the same time, even countries with rich scientific and technical potential are not able to ensure that economic effect of R&D will be impressing. Therefore, the issue of financial support for innovations, the choice of sources and methods of such support is topical and we decided to make our own research on this topic [7].

II. FUNDING OF SCIENTIFIC RESEARCH

According to Global Innovation Index 2017 [8] Russian Federation places the 45th position, compared to the 43th one in 2016. The lowest indicators of Russia in this rating are institutions and infrastructure.

We analyzed the dynamic of expenditure on science at all and dividing it on fundamental funding and applied one. All numbers are given in real prices (see Fig. 1 and Fig. 2).

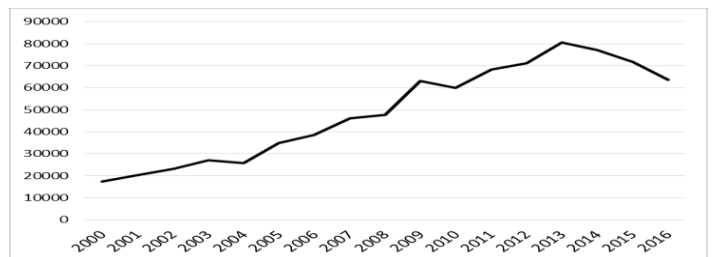


Fig. 1. Expenditure on civil science from the federal budget, m. rub., in dynamics, in real prices.

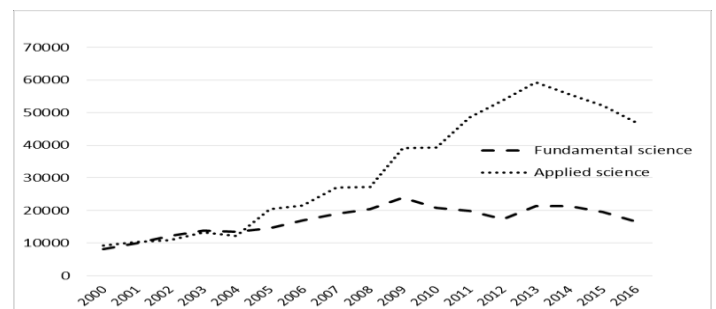


Fig. 2. Expenditure on civil science from the federal budget dividing on fundamental science and applied one, m. rub., in dynamics, in real prices.

The graph (fig. 1) shows that there is a positive trend in the growth of funding of scientific activities from the federal budget for the period 2000-2014. In 2014, funding amounted to more than 80,000 mln. rub., which was the maximum value for the period under review. After 2014 there is a decline in funding of almost 20,000 mln. rub. Such a decline can be explained by the difficult economic situation of the country and imposed sanctions.

The graph in figure 2 shows the funding of fundamental and applied sciences from the federal budget for the period 2000-2016. According to the graph, it can be observed that the funding of applied research is more than the fundamental since 2009. It depends on the fact that applied sciences are aimed at introducing theoretical aspects of research into a real useful product. The state finances more than those studies that can take place in the world market and bring income to the country.

Also in fig. 2 it can be seen that after 2014 the funding of applied research was reduced from 60,000 mln. rub. to 45,000 mln. rub. As noted earlier, this is due to the difficult economic situation in the country. As for fundamental research, funding costs since 2008 do not deviate significantly from the level of 20,000 mln. rub.

III. SOURCES OF INVESTMENT

As noted earlier, the component of innovation activity is the expenditure of business enterprise sector and the government on R&D.

We analyzed the expenditure on R&D in Russia by different sources in dynamics compared to the other OECD countries [9, 20] government (see Fig. 3) and business (see Fig. 4).

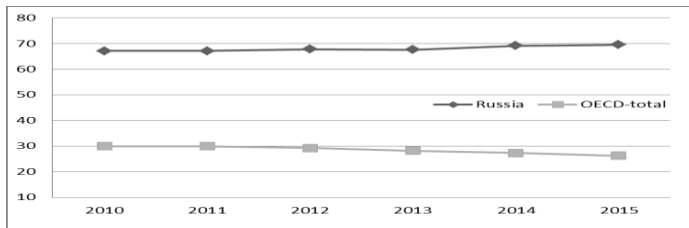


Fig. 3. Percentage of Gross domestic expenditure on R&D (GERD) financed by government.

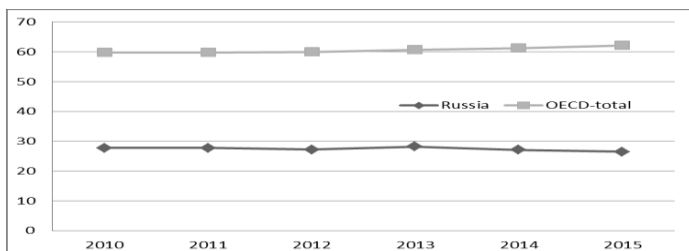


Fig. 4. Percentage of Gross domestic expenditure on R&D (GERD) financed by the business enterprise sector.

The graphics show that funding R&D by government in Russia is more than two times higher than in OECD-countries while business do not want to invest resources into that. It looks like a trend and it seems for us it is not going to be changed in the near future.

We define the following list of reasons that could explain this trend.

1. Resources of federal budget is the main source funding of fundamental science research, according to for the Federal law «About science and government science-technical policy». Implementing of fundamental science by business is conjugated with higher level of risks which we name bellow;

2. Expenditure on fundamental science and term of its implementation are uncertain;

3. Results of such research, as rule, do not have commercial value

Nevertheless, a lot of commercial companies abroad run fundamental research as well as applied one. For example, expenditure on fundamental science by business:

- USA - 25%
- Japan - 38%
- South Korea - 45%

Russia shows the different result at all: funding of both spheres of science by corporative sector amounts a little bit more than 20 percent.

IV. CONCLUSIONS

Currently, in conditions of continuing sanctions, our economy is need to be modified. We believe, that the key factor for that is involving business funding in science and innovations.

Considering our analysis, we would like to suggest some ways of future innovative sphere development in Russia. We have found that our government continues supporting of innovations in spite of times of restrictions and other economic problems. Nevertheless, these restrictions have an influence of business funding: the rate of business investments in innovations decreases. This also could be explained by the high level of risk for business.

In our opinion, the solution of the problem is institute of efficient managers. Managers often want to save profit into a firm as reserves but not to invest it in R&D in Russia. In our opinion, the do not believe in the future of our economics, thus government should motivate them to invest and offer some guarantees. Another characteristic is short life-time of managers. [13]. They literally do not have enough time to plan and control strategy of innovations.

Innovations in our country develops slowly. We see the development of the key factor of innovations - its infrastructure; however, to accelerate this process, it is necessary to involve business in funding. To make it we need the government motivation system for business.

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