

## The Innovative and Technological Developments Acceleration of Russia (The Modern Stage)

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### Abstract

We have undertaken the present investigation in order to offer the main directions of Russian economy reforming by dint of the acceleration innovative and technological development. Basing on these researches, authors allocate a number of the directions of innovative break, the country economic modernization. Today we have to use the public energy and national take-off for development of the country, the economy updating, and the quality improvement of the spheres, which are extremely important for each citizen. On the one hand, an activation of innovative activity demands the public administration and coordination of all its subjects actions, on the other hand, it demands an integration of all interested structures in the realization of innovations, the attraction of investments, the creation of the conditions which promote the innovative process and introduction of achievements of science and technology in national economy. The acceleration of national economy transition on the innovative way of development is impossible without formation the competitive national innovative system on a global scale. For its creation it is necessary to increase the demand for innovations from the most part of economy branches, to increase the efficiency of knowledge generation sector (fundamental and applied science), to overcome a fragmentariness of the created innovative infrastructure. This research can serve as a tool for innovative and technological development in the process of developing the recommendations about improvement of the state innovative policy and further development of national innovative system of the Russian Federation.

**Keywords:** innovative and technological development, acceleration, modernization of the country

### 1. Introduction

Russian Federation has the huge territory, enormous natural resources, the massive industrial potential, the right achievements great list in the field of science, education, art; the army and fleet history, the nuclear weapon, the governmental authorities, which play considerable, and sometimes the defining role in events of historical scale. President of the Russian Federation V. V. Putin and Prime Minister D. A. Medvedev (Putin, 2014; Medvedev, 2009) issue instructions to solve the economy modernizations strategic missions of the country on the basis of innovative development, the state efficiency, the improvement of life quality and competitiveness.

As the economic crises and economic sanctions showed that the economic development by means of materials sector is the deadlock, non-perspective direction. From infinite appeals to modernization of economy, it is time to go to act. It is useful to remind still S. Yu. Witte, the famous political leader, wrote about Russia, "the foreign trade develops mainly by the means of the raw materials resources sale which isn't profitable and is affected by spontaneous influences of the changeable conditions. Under such circumstances the welfare of the population can be neither high, nor steady" (Witte, 1914).

Russia keeps macroeconomic stability and pursues the delicate balanced budgetary policy. The basic indicators of the gold and foreign exchange reserves and the balance of payments remain at the highish plateau. The much attention is paid to formation of the favorable business terrain, the introduction of the best models on work with investors at the global, regional and local levels. In comparison with 2010, our country improved the positions twice in a well-known rating of Doing Business (APEC, 2014). For investors' involvement, derisking,

co-financing of projects and other our country plans to use institutes of development. There is an improvement process of access to credit resources. In addition, the mechanism development of a project financing comes to the end.

In our opinion, in the Russian conditions, there are two vectors of innovative development which are directed, first, on acceleration (consolidation of innovations role at a technologies exchange, the global competition, etc.) and, secondly, on innovations complication (the synergy of innovative business, an attraction of knowledge from outside). Due to occurring and the developed economic tendencies in the world, Russia needs an economic growth and maintenance of its competitiveness through continuous and innovative changes, and coordination of two vectors of innovative development. It follows from this that the Government of the Russian Federation has to find reserves for improvement of economic indicators from the inside. The basis of the state is made by its federal centers (regions); therefore, the economic growth will occur at the expense of reserves and potential powers of these subjects. Therefore, the Government has to develop a complex of theoretical principles and practical recommendations about formation of the innovative development variable content.

The development of basic innovations (technological) which will create the mechanism of concrete actions and will provide sustainable economic development of the country has to be a strategic role of the state policy. In this case the mechanism of investments and innovations interaction at all levels of managing, through available the state potential and means will be feature of basic innovations development and will lead to innovative development of the country. All world science considers the innovative activity as the main part of national economy modernization. Now the producing sector is already at the end of resources. Therefore, without introduction of the innovative activity, which is based on the employment of new technologies, it is not possible to survive and be competitive to Russian and other organizations (Shade, 1998; Massey & Quihtas, 1992; Boudeville, 1966; Stoneman, 1995; Cooper, 1985).

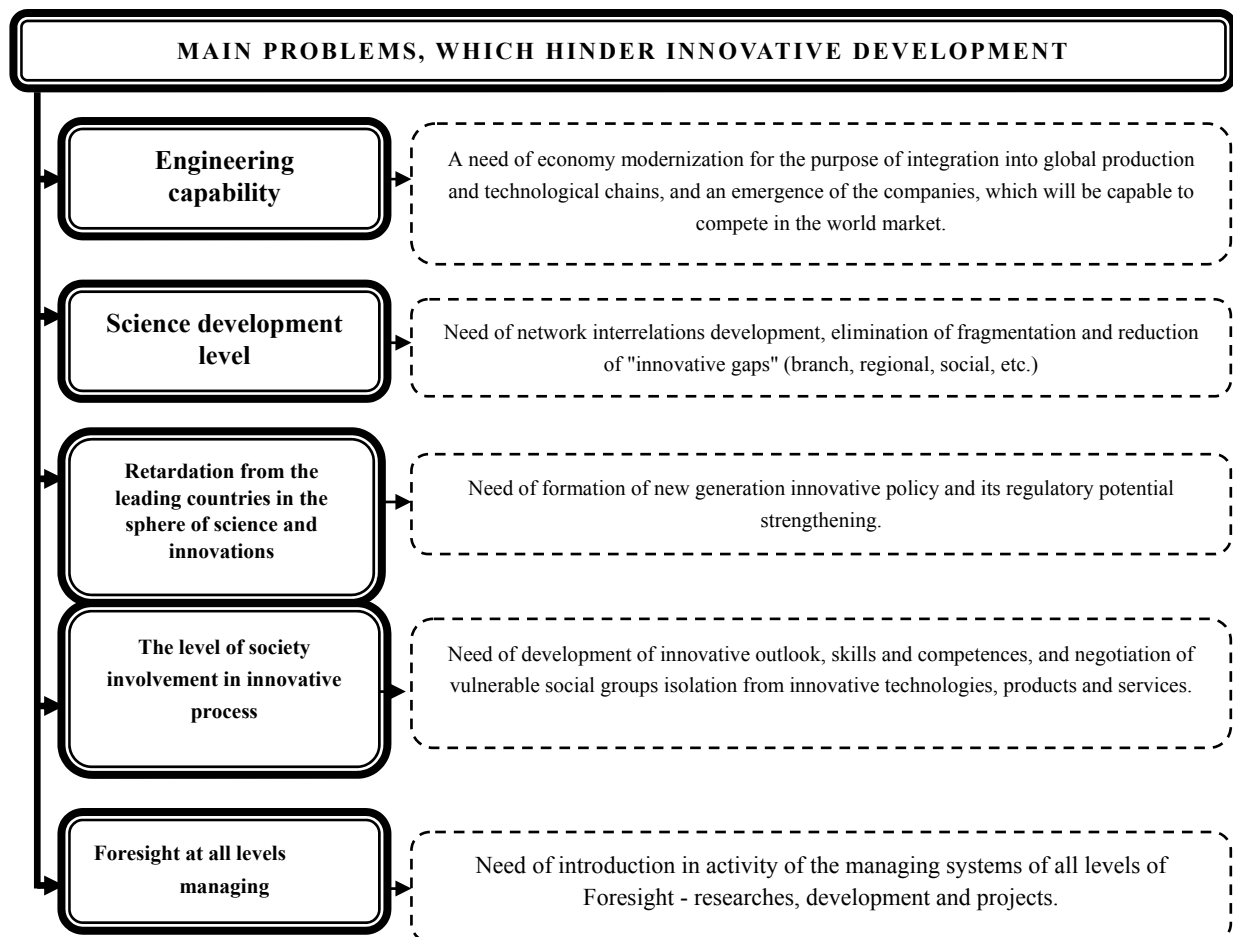


Figure 1. The main problems, which hinder innovative development

Undoubtedly, the continuous introduction and use of innovative activity allows keeping considerable rates of development and level of profitability (Sibirskaya & Stroeva, 2011). After all of these, it is very difficult to maintain high profitability in modern conditions and only the innovative activity use allows to keep and win leader positions during the long period, and to receive high rates of profitability. However, in spite of this it is necessary to study the opportunities and abilities of innovative activity (Sibirskaya, Stroeva, Gubareva, & Mikheykina, 2014).

For the achievement of abovementioned directions and transition to an innovative way of development at the state level, it is necessary to accept uniform methodical and methodological approach. The acceptance of uniform approach to innovative development will allow to solve a number of problems, such as separation of opinions on innovations terminology, the invalidity of formal indicators of an innovative activity assessment, also forced copying of foreign experience of innovations development.

According to authors' opinions, there are a number of the main problems, which hinder innovative development. These problems are demonstrated in Figure 1.

Nowadays in Russia, it is important to create the system of the innovative development modern instruments, which go with the best international practice, and to create the conditions for their application. The sets of the regulators used during every period, especially at the initial stage, can to be differentiated. It is expected that the main problems solution which constrain the innovative development will promote the transition to more advanced innovative modes (from imitation and borrowing to creation of products and technologies which will be competitive in the Russian and global market), to development of innovative moods in society, innovative skills and competences of employees.

Thus, the speed-up of innovative and technological development of Russia assumes refocusing of specialization and diversification of innovative potential due to the forced accumulation of new resource base in the form of scientific and technical activity products, the knowledge-intensive products and services.

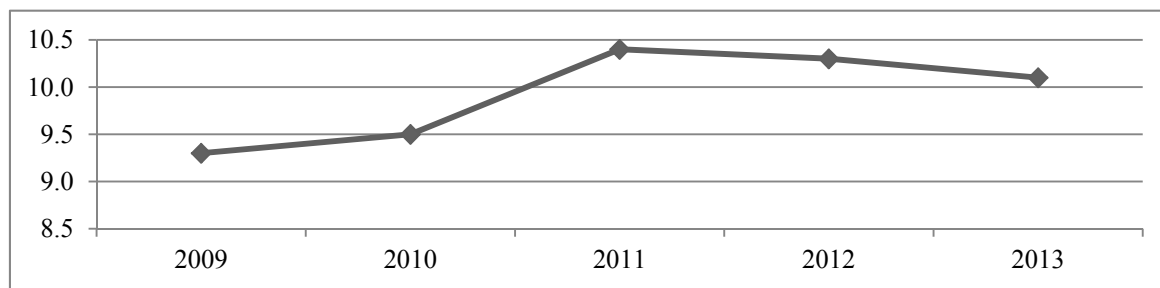
## **2. Describing the Domain**

Within the next decades, Russia has to become the country in which the welfare will be provided the intellectual resources: the "clever" economy, which will create unique knowledge; the export of the latest technologies and products of innovative activity. Due to this postulate, the research instrument, which will allow opening the topical area of research, was defined. The complex and structural-logical approaches appear for a methodical basis. For the solution of performance targets the authors used the following methods of research: the theoretical: the analysis and systematization of monographic and periodic literature; specification and generalization; the analysis of the program and standard documents providing the innovative development of the Russian Federation; the empirical: learning of experience of national economy innovative activity; methods of information collection (supervision, expert assessment); the statistical: statistical analysis and substantial interpretation of research results. Use of productive results of this research gives the chance: to draw the moral from others mistakes without repeating them; to look for new ways of innovative development, working in uniform with the international community methodological space; to make use in Russia of experience of many countries on construction of innovative development institutes; to carry out the international comparisons and foresight researches; to reveal the narrow spaces and competitive advantages in the innovative sphere of the country.

## **3. Methods and Materials**

The world community experience showed that the states could reach economic and social development only on the innovative way. It is enough to note that the economically developed states of the "G-7" are the leading countries in the scientific and technical relation. In addition, the success of the Asian countries, which followed a way of innovative development, impresses our scientists. Therefore, the choice of innovative approach as the basic in economic development of Russia is reasonable (Mesyats, Aldoshin, Buznik, & Ivanov, 2005).

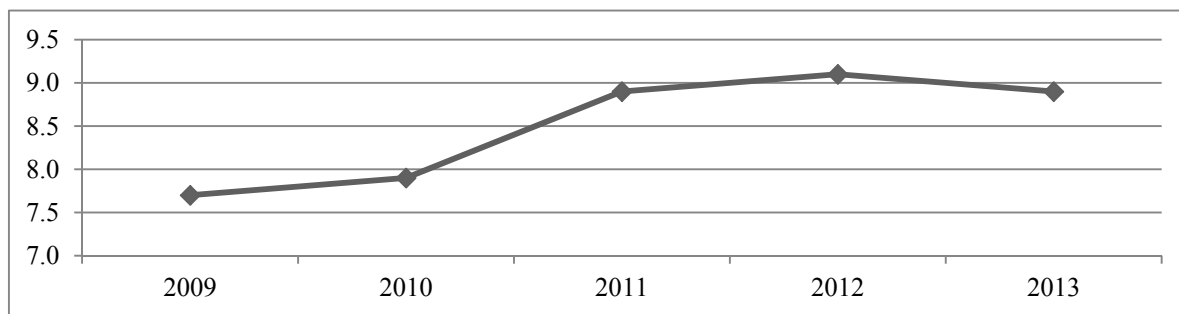
We analyze an innovative activity current state of the Russian Federation for 2009-2013 years according to Federal State Statistics Service data (Federal State Statistics Service, 2014).



*Note.* The innovative activity of organizations (the specific weight of the organizations, which realize the technological, organizational, marketing innovations)

Figure 2. Innovative activity of the organizations of Russian Federation for 2009 -2013 years

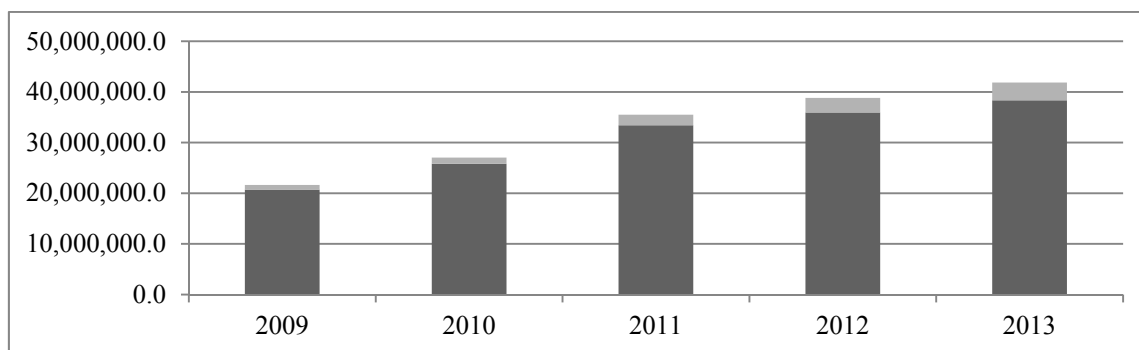
The innovative activity of the organizations remains at very low level now, though it has positive dynamics. From 2009 to 2011 the rising trend is observed (from 9,3% to 10,4%), since 2011 a slight decline of the specific weight of the organizations which realize the technological, organizational, marketing innovations takes place in comparison with the total number of the examines organizations.



*Note.* The specific weight of the organizations which realize the technological innovations in comparison with the total number of the examines organizations).

Figure 3. The specific weight of the organizations of the Russian Federation, which realize the technological innovations for 2009 - 2013 years

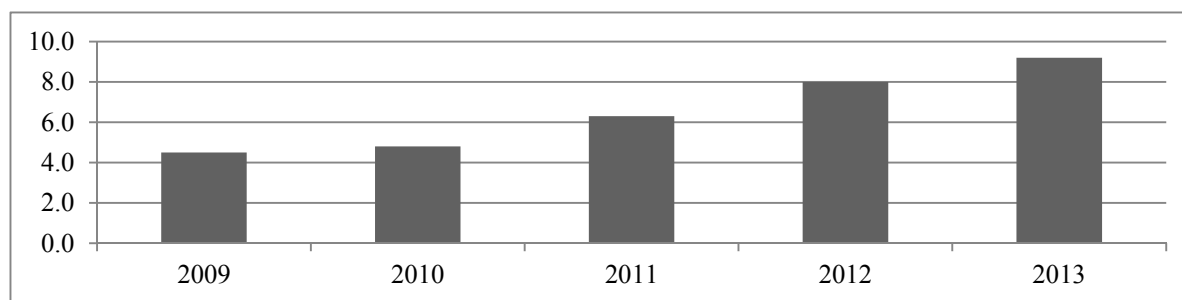
The quantity of the organizations, which realize the technological innovations, grows considerably smaller pace than innovations costs (from 7,7 % to 8,9 %). It testifies to inefficient investment. Besides, it speaks that money is invested in already existing organizations, without stimulating creation of the new enterprises.



*Note.* ■ - including innovative goods, works, services; ■ - the quantity of the shipped goods of own production and it is executed works and services with own forces)

Figure 4. The technological innovations cost in the Russian Federation for 2009 - 2013 years

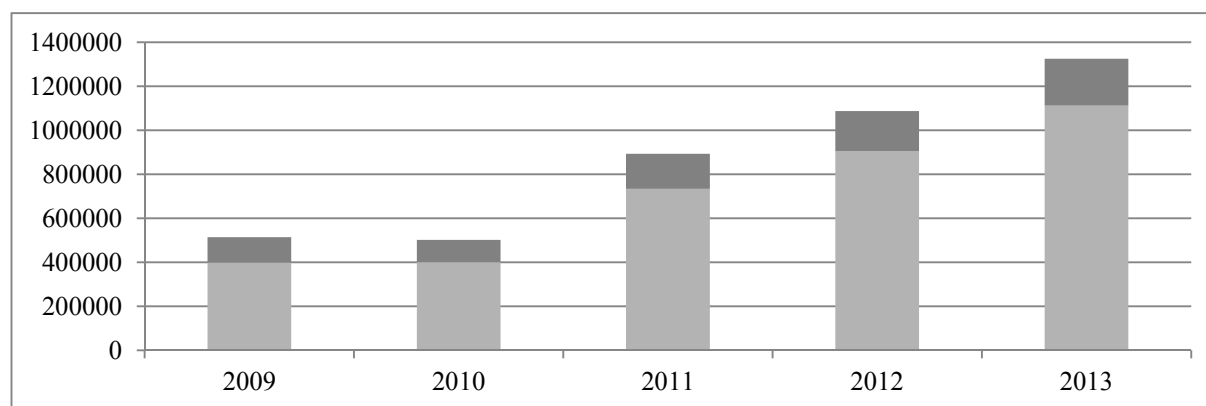
During this period the intensity of technological innovations costs (the specific weight of technological innovations costs in the total amount of the ship goods and the executed services) increases in the actual prices from 399122, 0 million rubles in 2009 to 1 112 429, 2 million rubles in 2013.



*Note.* The specific weight of technological innovations costs in the total amount of the ship goods and the executed services.

Figure 5. The specific weight of technological innovations costs in the total amount of the ship goods and the executed services for 2009 -2013 years

Nowadays only 8-10% of innovative ideas and projects is on average used in Russia, whereas in the USA - 62%, and in Japan - 95%. Thus the share of the Russian Federation in world trade by civil science-intensive products makes only 0, 3% that is about 100 times less than shares of the USA and Japan (Science. Innovations. Information society: the statistical book, 2013).



*Note.* ■ - in real terms 2000; ■ - in the actual operating prices.

Figure 6. The technological innovations cost in the Russian Federation for 2009 - 2013 years

The important difference of the innovative developing economies is that the greatest specific weight of expenses accrues to the researches and developments that are realized by own forces and the smallest weight accrues to the acquisition of already ready innovative solutions. In comparison with 2009 the positive tendency is observed in Russia: the costs share of the researches and development which are realized by own forces is increased from 9, 5% to 16, 8%, however the considerable part goes for machinery, the equipment and software acquisition, more than a quarter of all expenses are regarded to others which aren't classified in any way and it occupies less than 1% in the innovative focused economies. In general, the technological innovations costs in actually operating prices have the rising trend over the last 5 years.

Thus, the main problems of innovative activity development reduce to slow and inconsistent development of legislative base, a fragmentariness of the main units of innovative infrastructure; the inadequacy of the Russian workers skills to innovative economy conditions, etc. For the solution of the legislative, organizational and institutional problems it is necessary: to eliminate the discrepancies in legislative base by means of adoption of

the laws regulating innovative activity and also to correct the already existing; to investigate and systematize foreign experience of national innovative systems formation and development. The special attention should be given to the experience of such countries as Great Britain, Germany, China, Finland, Switzerland, Sweden, the USA, Japan, Canada because the listed countries take the leading positions in the international innovative ratings; to support and expand the practice of realization such actions, as the Summit of innovative economy creators, the Forum of innovative technologies, the international research and practice conferences on the innovative subject, the Competition of the Russian innovations, etc.; to support and develop crowd sourcing initiatives and to create mass innovative communities; to develop the innovative projects foresight (Oslo Administration, 2006).

As a result, it is possible to characterize the strengths of the country in the field of innovative and technological development:

- the fixed socially - economic growth as a condition of resource's provision of the innovative processes;
- the activation of the creative activity and improvement of the confidential environment in the innovative sphere;
- the full support of innovative business;
- the effective instruments complex of the innovative activity state support;
- the developing innovative infrastructure allowing to accompany the innovative projects from the earliest stages and with various branch orientation;
- the existing resources of the venture capital, the existence of the venture structures variety allowing to diversify the investment portfolios and to reduce innovative risks;
- the system personnel policy and the best practices use, the creation of an innovative activity information field.

#### 4. Results

The strategic goal is the achievement of the economic and social development level corresponding to the Russian Federation status as the leading world power of the XXI century which is taking the advanced positions in the global economic competition and which ensures the national security and realization of the citizens' constitutional rights. For the period from 2015 until 2020, Russia has to enter the five of the leading countries on the GDP volume (The national economy, 2013).

The achievement of this goal means the formation of qualitatively new image of future Russia by the end of the next decade. The Russian economy not only remains the world leader in the energy sector, raw material digging and processing, but also will create the competitive economy of knowledge and high technologies. By 2020 Russia can take a significant place (5 - 10 percent) in the markets of hi-tech goods and intellectual services in 5 - 7 and more sectors. Moreover, the conditions for mass emergence of the new innovative companies in all sectors of economy, and first in the sphere of economy of knowledge will be created. The new territorial growth centers will be created as in areas of new raw material resources development, and in traditional regions of innovative, industrial and agrarian capacity concentration, besides the scales of a regional inequality will decrease. The comprehensive solution of the performance targets consists in the Russian economy transition from the export and raw development to the innovative socially oriented type. It will allow expanding the competitive potential of the Russian economy due to accumulation of its comparative advantages in the science, education and high technologies and on this basis to involve the new sources of economic growth and welfare increase.

The innovative economy formation means the transformation of intellect, creative potential of the person into the leading factor of economic growth and national competitiveness. A source of the high income is not only the possibility of the rent receiving from natural resources use, but also the production of new ideas, technologies and social innovations. It will allow to Russia to meet competition with low labor of China and India economies and with high quality and innovative production of the Europe, USA and Asia developed countries (The Concept, 2008).

Thus, we assume that by 2020 the qualitative and quantitative characteristics of the Russian economy in the connection with acceleration of innovative and technological development will change. Among them the modernization of the Russian economy traditional sectors; the forward-looking increase in production volume of advanced processing branches which through to 2020 remain the leading sectors of gross domestic product production; the transformation of innovations into the leading factor of economic growth; the share of the industrial enterprises which realize technological innovations has to increase to 40 - 50 percent; the innovative production share of release has to increase to 25 - 35 percent (Indicators of innovative activity, 2014).

## 5. Conclusion

This demonstrates that the innovative development is objective necessity for Russia. And we consider that in order to push the innovation and technological development of Russia it is necessary: to concentrate on the growth of the new economy sectors which meet the needs and values of new consumers generation, i.e. the sectors which provide so-called "the clever growth" (new power industry, the industry of health, the cognitive industry, a free access to the future world of education, high quality of life for all age groups, life in the network world based on identity and safety); the orienting point has to be made not on the basis of research and development, but on the basis of the new markets start; to form the clusters which have to provide the competitive presence in the new quickly growing markets; to realize the further improvement of support infrastructure of the innovative and technological growth; to parlay the new companies and institutes. Thus, nowadays the increase questions of technological modernization efficiency and acceleration of Russian economy innovative development are one of the priorities of the state policy and are in the center of scientific discussion.

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