DOI: 10.18721/JE.10203
UDC 338.22

INNOVATIONS IN RUSSIAN INDUSTRY: GOVERNMENT SUPPORT, EXPECTATIONS AND REALITY

E.S. Balashova, O.I. Gnezdilova

Peter the Great Saint-Petersburg Polytechnic University, St. Petersburg, Russian Federation

The paper discusses the current trends of Russian technological development. This article reviews the regulatory legal acts in the sphere of industry, innovations and science analytically. As the result, the main problems in Russian legislation and some barriers to innovative development of industry are revealed. Purpose: the authors analyze the current regulatory basis in order to work out some suggestions to improve the mechanisms of regulating and stimulating innovative activity and to provide technological independence. The study used the following techniques: comparative analysis, comprehensive analysis of statistical data, analysis of the federal regulatory legal acts, systematization of the research results. In order to summarize the information, a grouping method is used. Results: the authors have analyzed the current regulatory basis in the sphere of science, industry and innovations; revealed some disadvantages of it and developed the proposals to improve the regulatory basis taking into account the target-oriented approach to organization of innovative strategy. The system of achievement indicators in the program documents has been formulated incorrectly. It is necessary to reconsider this system in the context of the shift in the priorities towards increasing sales of high-technology and science-intensive products by Russian companies of real economy. The analysis of Russian economic trends leads to the conclusion that there is a need to implement an innovative economy. The combination of legal, direct and indirect methods of stimulation in terms of a unified state policy is an effective way to increase innovative activity of Russian companies. The authors have defined the primary targets. If these priority tasks are fulfilled, it will be possible to provide technological independence and national defense capability. The materials of the article may be useful for development of scientific fields in the sphere of innovative development of the industrial sector and also in the practice of government regulation of innovative processes.

Keywords: industry; industrial economics; technological development; innovative strategy; industrial policy; regulatory legal acts; government support; innovative activity; innovations

Citation: E.S. Balashova, O.I. Gnezdilova, Innovations in russian industry: government support, expectations and reality, St. Petersburg State Polytechnical University Journal. Economics, 10 (2) (2017) 33–43. DOI: 10.18721/JE.10203

ИННОВАЦИИ В РОССИЙСКОЙ ПРОМЫШЛЕННОСТИ: ГОСУДАРСТВЕННАЯ ПОДДЕРЖКА, ОЖИДАНИЯ И РЕАЛЬНОСТЬ

Е.С. Балашова, О.И. Гнездилова

Санкт-Петербургский политехнический университет Петра Великого,
Санкт-Петербург, Российская Федерация

Рассмотрены современные тенденции российского технологического развития. Проведен аналитический обзор нормативно-правовых актов в сфере промышленности, инноваций и науки, в результате которого выявлены существующие пробелы

в национальном законодательстве и барьеры инновационного развития промышленности. Цель исследования – анализ действующей нормативно-правовой базы с целью разработки предложений по совершенствованию механизма регулирования и стимулирования инновационной деятельности и вывода страны из группы технологических аутсайдеров. Использованы следующие методы: сравнительный анализ, комплексный анализ статистических данных, анализ федеральных нормативно-правовых актов, систематизация результатов исследования. С целью обобщения информации применен метод группировки. Проведен анализ действующего законодательства в области науки, промышленности и инноваций, выявлены недостатки, предложены мероприятия по корректировке с учетом программно-целевого подхода в организации инновационной стратегии. В программных документах система показателей достижения целей сформирована некорректно и требует пересмотра с учетом смещения приоритетов в сторону увеличения объемов продаж высокотехнологичной и наукоемкой продукции российскими компаниями реального сектора экономики. Исследование тенденций развития отечественной экономики приводит к выводу о наличии потребности в ее инновационном развитии. Повышение инновационной активности российских организаций представляется целесообразным путем комбинации методов правового, прямого и косвенного стимулирования в рамках единой государственной политики. Сформулированы первоочередные задачи, решение которых необходимо для вывода России из группы технологических аутсайдеров и обеспечения высокого уровня ее обороноспособности. Материалы исследования могут быть полезны для развития научных направлений в области инновационного развития промышленного сектора экономики, а также в практике государственного регулирования инновационных процессов.

Ключевые слова: промышленность; экономика промышленности; технологическое развитие; инновационная стратегия; промышленная политика; нормативно-правовые акты; государственная поддержка; инновационная активность; инновации

Ссылка при цитировании: Балашова Е.С., Гнездилова О.И. Инновации в российской промышленности: государственная поддержка, ожидания и реальность // Научно-технические ведомости СПбГПУ. Экономические науки. 2017. Т. 10. № 2. С. 33–43. DOI: 10.18721/JE.10203

Introduction. The exhaustion of the raw-materials export model of development determined the modernization of Russian industry and the formation of the National Innovative System. The fallout from long-term orientation of the Russian export to raw materials manifested most clearly with the sharp decline of world oil prices and the implementation of sanctions against Russian Federation by European Union countries (EU) and the United States of America (the US) in relation to the events in Ukraine. In the current unfavorable social and political environment, bridging the technology gap from the advanced countries in the global market of science-intensive and high-technology products and also ensuring the dominant position of our country are necessary for the survival of economy and for providing national defense capability. V.V. Putin made a public statement about successful overachievement of the target for arms export and defense technologies in 2015 (the volume reached 4.5 billion dollars). Nevertheless, the share of arms export was 4.2 % in the total structure of Russian export. It is approximately 11 times less than the export of oil and petroleum products. A significant increase in arms export is observed in comparison to 2013, but the orientation to raw materials remains dominant.

The government plays a key role in thepromotion of innovative activity and providing of Russian industrial growth. An implementation of the industrial policy and different innovative programs is the main tool of the government for regulating and stimulating these processes. However, the current realities testify to the inferiority and inefficiency of the current government support. It is impossible to take a position among the country's group of technological leaders without government support. Mil'skaya [9] and Maksimtsev et al. [8] identify three groups of factors which hinder the growth of innovative activity: economic, internal and other factors. It is important to pay special attention to other factors that include insufficiency of regulatory legal documents with regard to innovative activity regulation and stimulation, poor infrastructure and uncertain benefits of using intellectual property. These aspects confirm the need to reconsider the

current government policy and make significant adjustments taking into account the social, economic and political contexts. The above-mentioned problems and factors determined the relevance of the research topic and allowed the authors to create the problem statement.

Scientific mission. It is necessary to provide an analytical review of the current regulatory basis in the sphere of science, innovations and industry and also to study the Russian economy's major trends and lines of development.

A significant amount of Russian and foreign scientific research which are dedicated to problems of innovative activity [5–7; 21–23] demonstrates the extreme importance of the selected theme. Such scientists as Freeman, Mensh, Nureev, Hayek made a significant contribution to solving the issue of assessing the government's role in innovative processes. Dynkin, Abalkin, Glaz'ev considered the problems of implementing the government regulation and stimulation of innovative activity. Nowadays, many contemporary scientists examine the process of innovative economic development that is based on using the best achievements of science and new technologies produced by Russian companies. As a rule, one part of scientific research is focused on the general analysis of innovative policy and the other is dedicated to a detailed analysis of innovative indicators.

The methodology and results of the study. The methodology of study includes an analytical review of the federal regulatory basis in order to identify declaratory and factual documents. An analysis of the Russian economy's trends and lines of development in order to work out the mechanism for the withdrawal of Russia from the group of technological outsiders is the other part of this study. The study used techniques such as: comparative analysis of various development strategies, comprehensive analysis of statistical data and grouping method.

The regulatory basis in the sphere of industry, innovations and science is considered at the first stage. The government has developed and adopted a large number of practical documents over the past decade. In accordance with study [2] the federal regulatory basis in the sphere of industry and innovations can be presented as the following system of elements:

1. program documents reflecting the necessity of innovative development of the Russian economy in general and increasing the competitiveness of the Russian industry in particular have outlined the goals and common principles of the government policy in this direction (Fig. 1):

1.1. doctrines

– «On the Doctrine of the Development of Russian Science»

1.2. programs

– Federal target program «Modernization of the Unified System of the Russian Federation of Air Traffic Management (2009–2020)»;

– Federal Target Program «Research and development in priority areas of Russian scientific and technological complex for 2014–2020»;

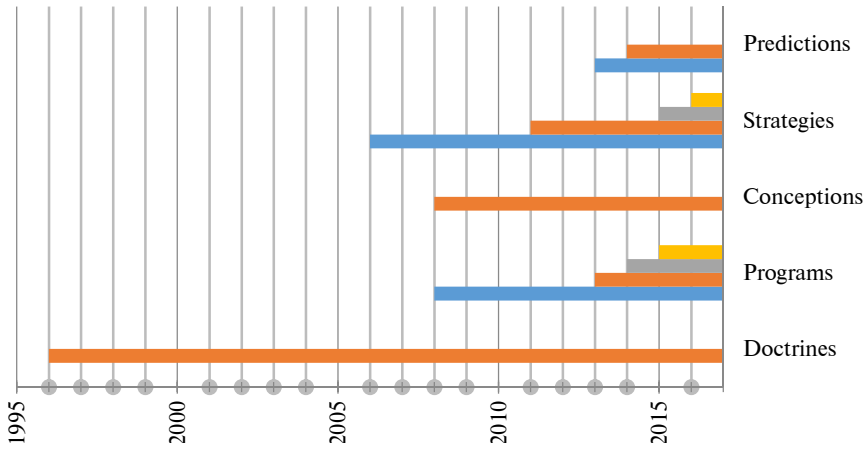

Fig. 1. Validity period of program documents

– State program «The development of industry and increase its competitiveness»;
– Federal Target Program «World Ocean» in 2016-2031

1.3. concepts

– The concept of long-term social and economic development of the Russian Federation for the period until 2020

1.4. strategies

– Strategy of scientific and innovative development in the Russian Federation for the period until 2015;
– Russian innovative development strategy for the period up to 2020;
– «On National Security Strategy»;
– Strategy of scientific and technological development of the Russian Federation until 2035

1.5. predictions

– Prediction of long-term social and economic development of the Russian Federation for the period until 2030;
– Prediction of scientific and technological development of the Russian Federation for the period until 2030

1.6. strategies for the key industries (13 strategies).

The vector of innovative and industrial policy is assigned by the government. The readiness of the government and business structures to move in innovative direction determines the success of this politics in large measure. Numerous federal level documents attempt to revive innovative activity and increase the performance efficiency of the Russian companies through enhanced funding support of research and developments, but despite all of this, a substantial lag of the Russian Federation from the foreign competitors, world's technical leaders, still remains. The results of the development strategy of science and innovations in the Russian Federation for the period up to 2015 show its elaboration and realization levels [16]. The key figures of scientific and innovative development up to 2015 are defined in this document. However, around 50–60 % of the main indicators have not been not achieved and some indicators have negative dynamics. The aims of this strategy are not implemented and it is proven by its duplication in the Strategy of innovative development in the Russian Federation for the period up to 2020 [14]. It is important to note that in accordance with Strategy 2020 a slight increase of the Russian share in the world markets of high-technology products (2 %) is planned by 2020. It is contrary to the main aim of Strategy 2020, which is to transfer the economy of our country to a predominantly innovative way of development. Nowadays, the sales level of high-technological and science-intensive products of Russian industrial companies is not comparable with the present sales level of the world's leaders. In 2015, the sales level of the Russian automobile manufacturer AvtoVAZ totaled 352 thousand items or 176 billion rubles, the number of employees was 43,000 people, whereas the sales level of the German multinational automotive manufacturing company Volkswagen Group totaled 193 billion euros with the total number of employees amounting to 550,000 people back in 2012. Thus, the gap in sales level between the Russian company and its foreign competitor is more than 66 times (1€ = 61₽). This is an illustrative example because it indicates the magnitude of productive activity which is necessary for competitive innovative policy. Furthermore, it is necessary to have access to global markets for successful realization of extensive innovations. In case this opportunity is absent, investments in innovations could be not only ineffective but also unprofitable because of an extended payback period.

In view of the current social, economic and political conditions, the strategy of innovative development of Russian industry should be closely linked to the opportunity to enter specific markets which are the most favorable for Russian business. In today's world the process of admission to global markets is determined by the position of the United States as the leading economic power in the world. The share of this country accounts for a little less than 40 % of the world's market and 80 % of payments in the world is in US dollars [17].

The strategy of scientific and technological development of the Russian Federation until 2035 is aimed at increasing production, and the scientific and technological potential of our country [15]. This document has been developed based on the disadvantages of Strategy 2020. The list of scientific and technological priorities has been revised and only the areas with the highest probability of success have been highlighted. The

decision was necessary in the conditions of the available resources which are limited. There is a clear link between the spending level on Research and Development (R&D) and the organization's competitiveness. According to the latest UNESCO Science «Towards 2030» report, public spending on science is increasing every year, both in absolute and in relative terms [26]. In the period from 2007 to 2013, Global R&D intensity in the world increased from 1.57 % to 1.70 % of gross domestic product (GDP). However, there are natural limits to funding. There is no country that can provide the commercialization of all results obtained through research and development in the form of a final product. The significant point of strategy of scientific and technological development of the Russian Federation is the recognition of the importance of fundamental science as funding of basic research in the recent years had a downward trend [4].

2. general legal acts (Fig. 2):

2.1. Constitution of the Russian Federation (RF);

2.2. RF Civil Code;

2.3. RF Budget Code;

2.4. RF Tax Code;

2.5. Federal Law «On Science and State Scientific and Technical Policy»;

2.6. Federal Law «On Security»;

2.7. Federal Law «On the strategic planning in the Russian Federation»;

2.8. Federal Law «On Industrial Policy in the Russian Federation».

There is a significant point concerning the import substitution issue in the Federal Law № 488-FL «On Industrial Policy in the Russian Federation» [12]. The paramount idea is to provide the extremely high level of economic and technological self-sufficiency and industrial manufacturing. In order to implement the forced import substitution policy, it is necessary to be committed to the following principle: to present on the international market the national production that is more effective than foreign equivalents. If import is cheaper and more effective than domestic production, it is necessary to buy such products and technologies abroad. The above-mentioned statement has a logical explanation: if Russia spends time investigating things already researched, the lag from world leaders will become too colossal to eliminate. Besides, an unsuccessful import substitution policy may be the cause of ineffective resource management and an increasing backlog with respect to world leaders. In case of prosperous technology and product implementation it will be necessary to bring it to the global market for a payback, where these products will face more advanced equivalents [3]. To sum up, indiscriminate import substitution can lead to severe negative consequences.

3. legal acts in the sphere of innovative activity stimulation and promotion (Fig. 3):

3.1. RF Government Decree «On the complex of measures on development and government support of small enterprises in the sphere of material production and the promotion of their innovative activities»;

3.2. Federal Law «On Special Economic Zones in the Russian Federation»;

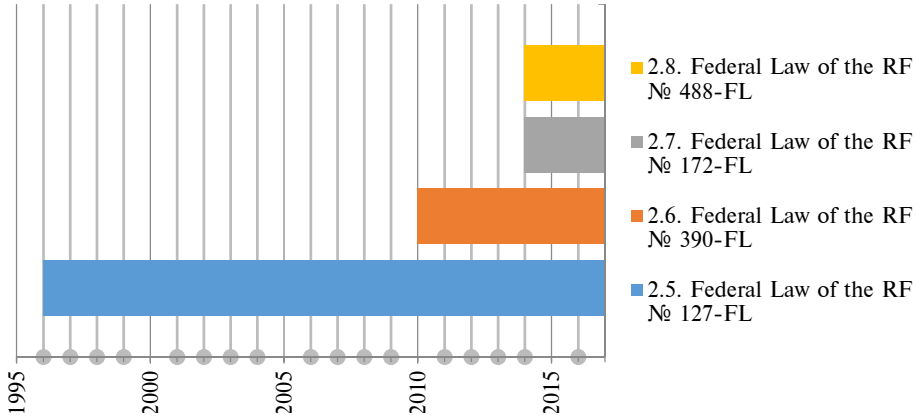

Fig. 2 Validity period of the general legal acts

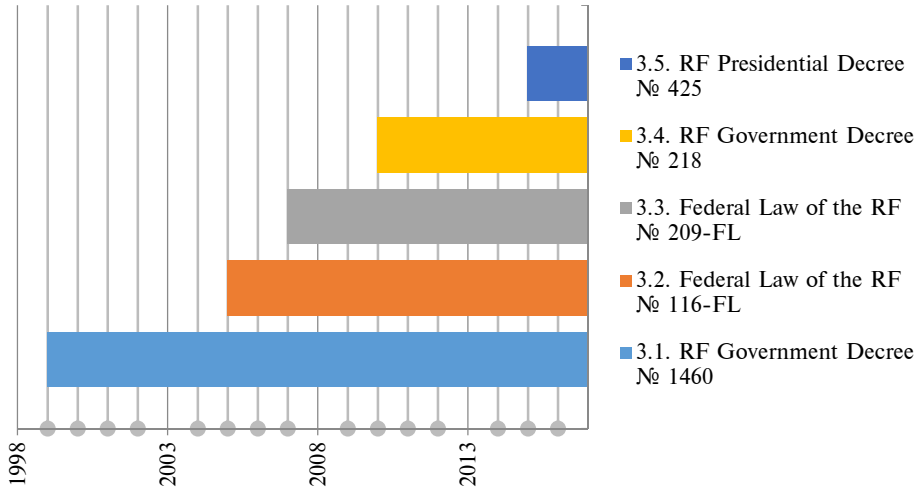

Fig. 3. Validity period of legal acts in the sphere of stimulating and promoting innovative activity

3.3. Federal Law «On the development of small and medium enterprises in the Russian Federation» (article 22. Support for medium and small-sized business in the sphere of innovations and industrial production);

3.4. RF Government Decree «On state support measures of cooperation development of Russian educational institutions of higher education, public research institutions and organizations implementing integrated projects for high-technological production, within the sub-program «Institutional development of the research sector» state program of the Russian Federation «Development of science and technology» for 2013–2020;

3.5. RF Presidential Decree «On amendments in RF Presidential Decree of February 13, 2012 № 181 «On the establishment of the Russian President scholarships for young scientists and post-graduate students engaged in advanced research and development in priority areas of the Russian economy modernization» and the revocation of some acts of the President of the Russian Federation».

At the present time potential realization of medium and small-sized business is becoming more relevant. Entrepreneurship is one of the key factors of Russian economic development and gives an opportunity to solve numerous important social and economic tasks: competition growth, employment creation, increase in tax revenue and others. In the application of economic sanctions against the Russian Federation, special attention should be paid to creating conditions for credit institutions to enhance lending for medium and small-sized business. The main problem is increasing the financial capabilities which are necessary for implementation of innovative projects and programs [1]. This aspect is not reflected in article 22 of the Federal Law of July 24, 2007 №209-FL «On the development of small and medium enterprises in the Russian Federation» [13]. The significant disadvantage of this document is that in describing support measures for subjects of medium and small-sized business in the sphere of innovations and industrial constructions, the word «may» is used when regarding public authorities and self-governing authorities acts. This means there is no direct duty to realize the listed acts in the mentioned document form, which calls into question the general effectiveness of the government policy in the sphere of innovative activity stimulation.

4. legal acts in the sphere of intellectual property (IP) (Fig. 4):

4.1. RF Civil Code (part 2 – Federal Law № 14-FL dated 26.01.1996; part 4 – Federal Law № 230-FL dated 18.12.2006);

4.2. Federal Law «On Commercial Secrets»;

4.3. RF Government Decree «On the Governmental Commission for combating violations of intellectual property, its legal protection and usage»;

4.4. RF Government Decree «On the procedure for disposal of the rights to the results of scientific and technical activity»;

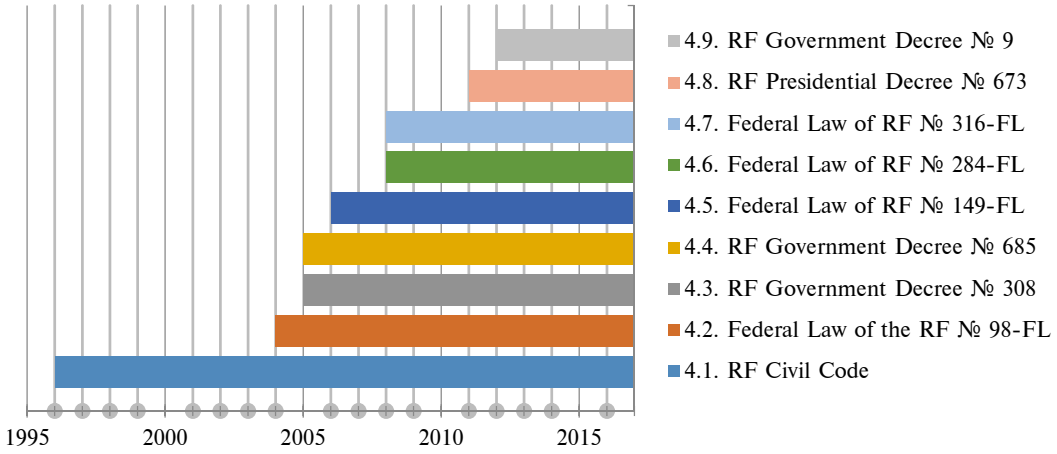

Fig. 4. Validity period of legal acts in the sphere of IP

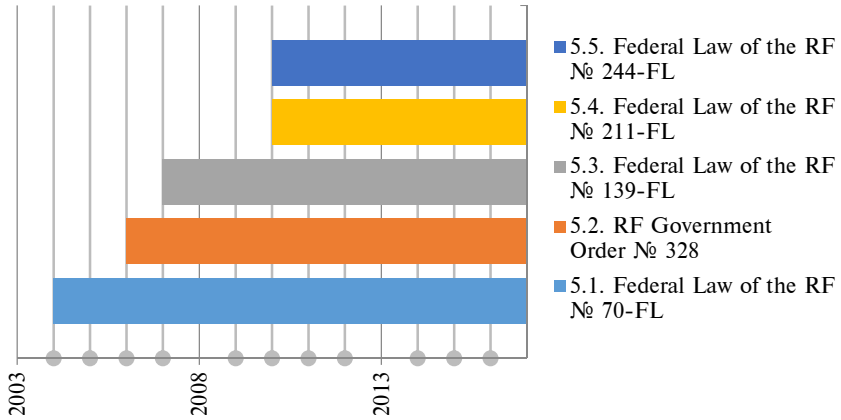

Fig. 5. Validity period of legal acts in the sphere of innovative infrastructure

4.5. Federal Law «On information, information technologies and protection of information»;

4.6. Federal Law «On the transfer of rights to uniform technology»;

4.7. Federal Law «On patent attorneys»;

4.8. RF Presidential Decree «On the Federal Service for Intellectual Property»;

4.9. RF Government Decree «On the implementation of control and supervision in the sphere of legal protection and usage of results of civil intellectual activity, created by federal budget allocations, and also control and supervision in the established sphere of activities in relation to government customers and organizations – executors of government contracts relating to research, development and engineering works».

A perception of the IP role in the development of innovative economy leads to the improvement of the legislation in the sphere of its protection and usage [25]. Changes made by the legislation in Part Four of the RF Civil Code are aimed at promoting innovative processes by transfer simplification of the intellectual activity results and ensuring more reliable protection of IP rights (section VII, chapter 69, article 1227, 1229, 1232, 1233, 1234, 1236 of the RF Civil Code) [10]. However, at the moment of the government's attempts to increase the role of IP in the innovative activity of organizations and country have not achieved the intended effect. There are the following problems:

1) incomprehension of the economic essence of IP by subjects of the innovative process [18];

2) gaps in the legal regulation of scientific and technological activity and IP (an unsatisfactory level of IP protection);

3) ineffective usage of the results of intellectual activity [20].

5. legal acts in the sphere of innovative infrastructure (Fig. 5):

5.1. Federal Law «On the Status of science town of the Russian Federation»;

5.2. State program «Creation of the Russian high-tech industrial parks in the area»;

5.3. Federal Law «On the Russian Corporation of Nanotechnologies»;

5.4. Federal Law «On the reorganization of the Russian Corporation of Nanotechnologies»;

5.5. Federal Law «On Innovation «Skolkovo center».

The main regulatory acts of federal level which regulate the creation and development of innovative infrastructure are presented in Fig. 5. Intense formation of the infrastructure sector is also declared in the program documents for the entire country as well as for individual subjects of innovative activity. Having analyzed the process of creating the national infrastructure since the 1990s it is possible to identify a number of factors that hinder the success of the infrastructure sector. Among the key factors are:

1) absence of institutional integrity with the higher education institution;

2) low level of consistency in the activity of infrastructure organizations;

3) absence of motivation to participate in research projects for young professionals;

4) deficit of funding.

As a result, the lack of interaction between science and business remains. The observed increase in the number of infrastructure organizations will not contribute to achieving the goals as long as the above-mentioned conditions are ignored.

Due to space limitations, it is impossible to consider in detail the existing regulatory basis in the sphere of industry and innovations. According to this analytical review of the key documents, it could be concluded that the main disadvantage of all program and strategic documents in the sphere of science development is the formation of false criteria for assessing the efficiency of interventions. It is proposed to estimate the global level of research and development on the basis of publication activity, global competitiveness based on international ratings, the effectiveness of the organizations' R&D performance based on the public results presentation. The most important and objective criterion of scientific and technological leadership of a country that is an increase in sales of high-technological and science-intensive products of Russian companies of the real economy is completely ignored.

Having examined the issue of practical realization of regulatory documents in the sphere of industry, science and innovations, it is necessary to consider directions and prospects of Russian economic development. For a long period, economic growth was provided by the raw materials industry. Investments in innovations were not of economic benefit and ineffective for government and business because of super-high profitability of the oil and gas sector [27]. Under current conditions there is no question that the transition to innovation-oriented style of development must be made. Continued development in the conservative way means total loss of technological sovereignty and jeopardizes the country's defense capability [19]. In this case, there is no need to revise the current policy and apply special actions.

It is necessary to define clearly the goal in the transition to an innovative way: Russia's inclusion into the number of countries that are technological leaders. The following tasks of prime importance have to be solved:

1) achieving technological independence from external forces in the military sphere;

2) overcoming the backlog of Russian production technologies from similar foreign ones (this task need to be implemented by following the principle of reasonable import substitution which is indicated above);

3) creating original breakthrough technologies on the basis of scientific research results that have no counterparts abroad (with the formation of new markets for science-intensive products).

It is necessary to develop international cooperation in the sphere of science, technology and innovations guided by the principle of equal participation in international projects for the successful innovative policy in Russia. In accordance with the specifics of the current situation, it is not possible to solve these problems independently due to the limited resource base as well as the lack of required knowledge, skills and competencies [24].

Conclusions. The analytical review of the current regulatory basis in the sphere of science, industry and innovations allowed the authors to identify some challenges and barriers to the industrial growth of the Russian economy.

1. One of the key problems is the presence of a deep disconnect between the current research

capacity and low demand for it. This resource is important for both internal economic development and for access to global markets. However, it is not used properly. The current situation requires to reconsider the industrial policy and to determine the government's role in involving scientific research results in the economic turnover. It is necessary to create the specific mechanism that promotes effective commercialization of innovations.

2. When Russia implements a policy of import substitution, it should avoid economic isolation and follow the principles of reasonable import. Indiscriminate import substitution is the reason for reduction in production efficiency: productivity, growth rates and others. However, it is necessary to provide a high level of technological independence of key industries despite the economic benefits of international division of labor. In order to execute this task successfully, industrial policy should provide for the establishment of privileged conditions for the development of specific industries. It will promote to the progressive breakthrough development of the national economy by the creation of «growth points».

3. According to the official statistical data, the intensity of processes in organizations implementing technological innovations remains low (the percentage of organizations is 9.8 % in 2015). Despite the implementation of various support programs for small and medium-sized business in the sphere of innovations and industrial production, the innovative activity of small industrial enterprises has a tendency to reduction (in 2015 the indicator value decreased to 4.5 %). The need to increase innovative activity of Russian organizations can be satisfied by the combination of legal, direct and indirect methods of stimulation in terms of unified state policy. The main tool of direct regulation is the support in the form of public and private partnerships. On the one hand, the control over the fulfillment of industrial processes is being strengthened; on the other hand, the conditions for the commercialization of scientific results are being improved. As a rule, the effect of indirect support measures is carried out due to the fiscal mechanism. It is necessary to consider some ways of decreasing the tax burden on business and also to find opportunities to modernize the system of tax administration.

4. The important point is amending the current regulatory basis regarding the choice of forms and methods of government support for innovative activity in implementing the above-mentioned approaches which promote the shift towards the innovative way of development. The lack of the necessary results leads to a constant replacement of some support forms by others by the legislator. However, these forms are also becoming ineffective after a while. The unsatisfactory situation is due to the choice of support forms and methods inappropriate and inadequate in the current realities of Russian transition economy. A special focus should be paid to forming the program-targeted approach in the organization of innovative strategy. This approach is aimed at setting certain goals, challenges, timeframes for implementation; strengthening the executors who are responsible for results concerning a specific project. As practice shows, as such an approach is absent, a large number of documents are declarative and do not contain specific measures aimed at providing social and economic development stability and a high level of Russian national security.

Directions for further research are seen in the development of the industrial policy of an enterprise in modern political and economic conditions. The need for changes in the development strategy in modern enterprises is caused not only by escalating competition, but also by the ability to influence the economic situation in the country as one of the most important participants in the process of forming state industrial policy.

REFERENCES

[1] **A.S. Alisenov,** Nalogovoe stimulirovanie innovatsii v economike Rossii [Innovation Tax Credits in Russian economics]. Moscow, Prospekt, 2015. 128 p.

[2] **E.S. Balashova, O.I. Gnezdilova,** Problemy pravovogo regulirovaniya innovatsionnoi deyatel'nosti v Rossii [Legal regulation problems of Russian innovative activities], Innovative science. Economy and economic sciences. 3-1 (15) (2016) 62–67.

[3] **V.B. Betelin,** O probleme importozameshcheniya i al'ternativnoi modeli economicheskogo razvitiya Rossii

[About import substitution problem and alternative model of Russian economic development], Strategicheskie prioritety (jelectronnyi mezhdunarodnyi nauchno-analiticheskii zhurnal) [Strategic priorities]. 1 (9) (2016). URL: http://sec.chgik.ru/wp-content/uploads/2016/05/SP-16-1.pdf (accessed January 16, 2017).

[4] **V.V. Ivanov,** Nauchno-innovatsionnyi krizis i puti ego preodoleniya [Research and innovation crisis and ways of overcoming], Innovatsii [Innovations]. (11) (2015) 12–19.

[5] **A.I. Kotov,** Innovatsionnaya deyatel'nost' i predprinimatel'skaya sreda: vremya idet – protivorechiya ostaiutsya [Innovative activities and business invironment: times marches on but contradictions are saved], Innovatsii [Innovations]. (4) (2012) 107–113.

[6] **E.A. Mazilov,** Osnovnye indikatory i faktory innovatsionnogo razvitiya promyshlennosti regiona [Basic indicators and innovative development factors of region's industry], Menedzhment i biznes-administrirovanie [Management and business administration], (1) (2013) 166–178.

[7] **V.N. Makoveev,** Zarubezhnyi opyt stanovleniya naukoemkikh proizvodstv [Foreign experience of formation of high-tech industries], Vestnik CHGU [CHGU Herald], 3 (50) (2013) 62–67.

[8] **I.A. Maksimtsev, A.E. Karlik, V.E. Rokhchin,** Stsenarii strategicheskogo razvitiya promyshlennosti rossiiskogo Severo-Zapada [Scenario of the strategic industrial development of the Russian North-West], Economy and management, (12) (2012) 6–12.

[9] **E.A. Mil'skaya,** Strategicheskoe upravlenie innovatsionno-aktivnym predpriyatiem [Strategic management of innovative active enterprise]. St. Petersburg, SPbGPU Publ., 2011. 295 p.

[10] **I.IU. Mirskikh, ZH.A. Mingaleva,** Pravovoe regulirovanie prav na rezul'taty intellektual'noi deyatel'nosti v Rossii i za rubezhom [Legal regulation of the rights of intellectual activity results in Russia and abroad], Perm University Herald. Juridical sciences, 3 (29) (2015) 62–69.

[11] **M.A. Nazarov, E.P. Fomin,** Problemy razvitiya innovtsionnoi infrastruktury v rossiiskoi ekonomike [Innovation infrastructure development problems in Russian economy]. Economy and management. Economic sciences, 4 (125) (2015) 38–43.

[12] RF Federal Law «About industrial policy in the Russian Federation» of December 31, 2014 № 488 FZ.

[13] RF Federal Law «About development of small and medium-sized businesses in the Russian Federation» of July 24, 2007 № 209 FZ.

[14] Strategy of innovative development in the Russian Federation. December 8, 2011.

[15] Strategy of scientific and technological development in the Russian Federation. December 1, 2016.

[16] Strategy of science and innovation development in the Russian Federation. February 15, 2006.

[17] **A.G. Fonotov,** Strategiya-2035. Zhelaemoe. Vozmozhnoe. Dostizhimoe [Strategy-2035. Desirable. Possible. Achievable]. Innovatsionnaya Rossiya [Innovative Russia], (6) (2016) 24–31.

[18] **A. Shatov, E. Safargaleeva,** O roli intellektual'noi sobstvennosti v innovatsionnom razvitii strany [About intellectual property in innovative development of the country], Ekonomika i upravlenie (jelektronnyi nauchno-prakticheskii zhurnal) [Economy and management], (4) (2014). URL: http://www.bagsurb.ru/about/journal/scientific_seminars/SHATOV,%20SAFARGALEEVA.pdf (accessed January 16, 2017).

[19] **E.S. Balashova, E.A. Gromova,** Resource-based view as a perspective management model in Russian reality, Problems and Perspectives in Management, 14 (2) (2016) 325–330.

[20] **E.S. Balashova, V.V. Glukhov,** Operations strategies in info-communication companies, Internet of Things, Smart Spaces, and Generation Networks and Systems (2015) 562–566.

[21] **M. Colombo, L. Grilli, L. Piscitello, C. Rossi-Lamastra,** Science and Innovation Policy for the New Knowledge Economy. Cheltenham, Edward Elgar Pub., 2011. 208 p.

[22] **C. Freeman, L. Soete,** The economics of industrial innovation. Penguin, 1974. 409 p.

[23] **G. Mensch, Ramanujam Vasudevan,** Improving the Strategy-Innovation Link, Journal of Product Innovation Management, 2 (4) (1985) 213–223. DOI: 10.1111.1540-5885.240213/epdf

[24] **T.A. Meshkova, E.IA. Moiseichev,** Russia's experience of foresight implementation in global value chain research, Journal of Innovation and Entrepreneurship (2016). DOI: 10.1186/s13731-016-0039-7

[25] **Zh. Mingaleva, I. Mirskikh,** The protection of Intellectual property in educational process, Procedia – Social and Behavioral Sciences (2013) 1059–1062.

[26] UNESCO Science Report. Towards 2030. URL: http://en.unesco.org/node/252168 (accessed December 20, 2016).

[27] **T.V. Yurieva,** Innovative social economy: formation and development in Russia. Science prospects, (12) (2011) 271–276.

Balashova E.S. E-mail: elenabalashova@mail.ru

Gnezdilova O.I. E-mail: gnezdilova-o.i@mail.ru

СПИСОК ЛИТЕРАТУРЫ

[1] **Алисенов А.С.** Налоговое стимулирование инноваций в экономике России. М.: Проспект, 2015. 128 с.

[2] **Балашова Е.С., Гнездилова О.И.** Проблемы правового регулирования инновационной деятельности в России // Инновационная наука. Сер. «Экономика и экономические науки». 2016. № 3-1(15). С. 62–67.

[3] **Бетелин В.Б.** О проблеме импортозамещения и альтернативной модели экономического развития России // Стратегические приоритеты (электронный международный научно-аналитический журнал). 2016. № 1(9). URL: http://sec.chgik.ru/wp-content/uploads/2016/05/ SP-16-1.pdf (дата обращения: 16.01.2017).

[4] **Иванов В.В.** Научно-инновационный кризис и пути его преодоления // Инновации. 2015. № 11. С. 12–19.

[5] **Котов А.И.** Инновационная деятельность и предпринимательская среда: время идет – противоречия остаются // Инновации. 2012. № 4. С. 107–113.

[6] **Мазилов Е.А.** Основные индикаторы и факторы инновационного развития промышленности региона // Менеджмент и бизнес-администрирование. 2013. № 1. С. 166–178.

[7] **Маковеев В.Н.** Зарубежный опыт становления наукоемких производств // Вестник ЧГУ. 2013. № 3(50). С. 62–67.

[8] **Максимцев И.А., Карлик А.Е., Рохчин В.Е.** Сценарий стратегического развития промышленности российского Северо-Запада // Экономика и управление. 2012. № 12. С. 6–12.

[9] **Мильская Е.А.** Стратегическое управление инновационно-активным предприятием. СПб.: СПбГПУ, 2011. 295 с.

[10] **Мирских И.Ю., Мингалева Ж.А.** Правовое регулирование прав на результаты интеллектуальной деятельности в России и за рубежом // Вестник Пермского университета. Сер. «Юридические науки». 2015. № 3(29). С. 62–69.

[11] **Назаров М.А., Фомин Е.П.** Проблемы развития инновационной инфраструктуры в российской экономике // Экономика и управление. Сер. «Экономические науки». 2015. № 4(125). С. 38–43.

[12] О промышленной политике в Российской Федерации: Федер. закон РФ № 488-ФЗ от 31.12.2014 г. Доступ из справ.-правовой системы «КонсультантПлюс».

[13] О развитии малого и среднего предпринимательства в РФ: Федер. закон РФ № 209-ФЗ от 24.07.2007 г. // СПС Консультант Плюс.

[14] Стратегия инновационного развития РФ на период до 2020 года: Распоряж. Правительства РФ № 2227-р от 08.12.2011 г. // СПС Консультант Плюс.

[15] Стратегия научно-технологического развития РФ до 2035 года. URL: http://static.kremlin.ru (дата обращения: 22.02.2017).

[16] Стратегия развития науки и инноваций в РФ на период до 2015 года: Протокол № 1 от 15.02.2006 г. [Электронный ресурс]. Доступ из справ.-правовой системы «КонсультантПлюс».

[17] **Фонотов А.Г.** Стратегия-2035. Желаемое. Возможное. Достижимое // Инновационная Россия. 2016. № 6 (212). С. 24-31.

[18] **Шатов А., Сафаргалеева Е.** О роли интеллектуальной собственности в инновационном развитии страны // Экономика и управление (электронный научно-практический журнал). 2014. № 4. URL: http://www.bagsurb.ru/about/journal/scientific_seminars/SHATOV, %20SAFARGALEEVA.pdf (дата обращения: 16.01.2017).

[19] **Balashova E.S., Gromova E.A.** Resource-based view as a perspective management model in Russian reality // Problems and Perspectives in Management. 2016. No. 14(2). Pp. 325–330.

[20] **Balashova E.S., Glukhov V.V.** Operations strategies in info-communication companies // Internet of Things, Smart Spaces, and Generation Networks and Systems. 2015. Pp. 562–566.

[21] **Colombo M., Grilli L., Piscitello L., Rossi-Lamastra C.** Science and Innovation Policy for the New Knowledge Economy. Cheltenham, Edward Elgar Pub., 2011. 208 p.

[22] **Freeman C., Soete L.** The economics of industrial innovation. Penguin, 1974. 409 p.

[23] **Mensch G., Vasudevan Ramanujam**. Improving the Strategy-Innovation Link // Journal of Product Innovation Management. 1985. No. 2(4). Pp. 213–223. DOI: 10.1111.1540-5885.240213/epdf

[24] **Meshkova T.A., Moiseichev E.IA**. Russia's experience of foresight implementation in global value chain research // Journal of Innovation and Entrepreneurship. 2016. DOI: 10.1186/s13731-016-0039-7.

[25] **Mingaleva Zh., Mirskikh I.** The protection of Intellectual property in educational process // Procedia – Social and Behavioral Sciences. 2013. Pp. 1059–1062.

[26] UNESCO Science Report. Towards 2030. URL: http://en.unesco.org/node/252168 (дата обращения: 20.12.2016).

[27] **Yurieva T.V.** Innovative social economy: formation and development in Russia // Science prospects. 2011. No. 12. Pp. 271–276.

Балашова Е.С. E-mail: elenabalashova@mail.ru

Гнездилова О.И. E-mail: gnezdilova-o.i@mail.ru

Статья поступила в редакцию 07.03.17