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## Leading Governments' Legal Initiatives of Innovational Development in the Sphere of Commercialization of Intellectual Products

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**Abstract:**

*The article analyzes the best practices in the legal guaranteeing of the commercialization of intellectual products that were tested by the leading governments in innovation development. Authors rely on the fact that legal definition of the functions of government entities in innovation and coordination is necessary to come up with a unified state approach in prioritized directions of innovation policy.*

*The article proves that the transfer of property rights and the opportunity of commercial to those who came up with intellectual products, will act as a stimulus to improve the effectiveness of technological innovation and will attract private investors, as well as expand the market for intellectual products. The study analyzes the opportunities to utilize the mechanisms of legal integration, coordination, unification in order to solve the problems in the sphere of commercialization of intellectual assets.*

*Authors deduce that legal regulation of commercialization of results from intellectual activity is not possible at early stages of national principal of legal protection, and there is a need for a step-by-step transition towards the integration of legal regime of intellectual property in the scale of intergovernmental societies that are connected by mutually beneficial economic interests.*

**Keywords:** innovational system, intellectual property, commercialization of intellectual products, legal integration, innovational structure.

**JEL classification codes:** O30, M29

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## **Introduction**

Modern pace of development of market economy has resulted in reduction of life cycles in production, and increase the pace of modernization of manufacturing programs of enterprises, as well as their strategic orientation for the emergence and integration of innovations. The ability to implement the new technologies has become the main criteria for inclusion of the government into the list of leaders in global scientific and technological development.

The valuation of the innovation potential of the governments is carried out by international organizations, considering a variety of criteria. Global ranking includes 143 countries with the population of 95% of the planet, that collectively account for 99,5% of the global GDP. Annual investment into the intellectual assets in the leading countries accounts for 8-11% of the GDP (USA - 12%). The current level of investment into the intellectual assets of the Russian Federation accounts for 1,2% of GDP, with a constant tendency to increase<sup>2</sup>.

Interestingly, in the ratings that are formed on the basis of quantitative indicators of high-tech development, such as the intensity of scientific and construction development, the number of researchers per 1 million people, number of graduates from engineering fields, the Russian Federation is placed as one of the leaders (Bloomberg Globa) Onnqvation Index - placed 14th out of 200. However, in the ratings that are composed on the qualitative variables describing the effectiveness of innovation activity, Russia is ranked lower (49th in INSTEAD GLOBAL Innovation rating), which points at low efficiency of commercialization mechanism. According to the World Bank, as of 2014, we calculated the weighting of Russia in the global export of products with high R&D - 0.5% (for comparison, China - 26%, Germany - 9%, USA - 7%).

Variety of the subjects of innovation related legal relationships and the contradiction of their interests activates the development of a legal basis, creating better conditions for the invention, utilization and commercialization of products requiring high levels of R&D. The task for the government consists of determining the prioritized directions of scientific development of the country and legal support for state innovation programs and projects. Legal regulation of international cooperation in the sphere of commercialization of intellectual assets stimulates the commercial turnover of products requiring high level of R&D.

## **Methods of research**

In order to stimulate the innovation activity, governments-leaders use a wide range of organizational and legal tools, that vary by the level of their effectiveness.

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<sup>2</sup> Davidov A.A. *Innovative Potential of Russia: the present and the future*// [http://www.isras.ru/blog\\_modern\\_3.html?&printmode](http://www.isras.ru/blog_modern_3.html?&printmode).

Therefore the legal understanding of the mechanism to receive the intellectual rent by the government and the embodiment of the knowledge into concrete practical implications requires a wide spectrum of special research methods. Structural-functional method allows highlighting the main stages of the mechanism for commercialization of intellectual products:

- planning of scientific projects, assumes the analysis of opportunities for creation and integration of new products and technology in accordance to the strategy of innovational development of the country/region;
- implementation of the projects with high share of results of intellectual activity, including the coordination of actions of project executors, operational management and regulation of realization processes, control, accounting and analysis of information about the projects;
- evaluation of the effectiveness of investment projects (within the Russian Federation it is performed in accordance to Methodical recommendations about the evaluation of effectiveness of investment projects (approved by the Ministry of Economics, Ministry of Finance of the RF by the order № VK 477 as of 21.06.1999);
- organization of activities to reap the profits from the utilization of the intellectual product.

Method of legal-comparative research of the most successful innovation practices allows to highlight two main directions of commercialization of intellectual products: independent use of results of intellectual activity via the creation of organizations producing and selling the products of intellectual activity (further referred to as PIA), or transfer of exclusive rights (transfer of rights via the agreement about alienation of rights, various licensees, including franchising, organization of collective enterprises).

On the basis of the systemic method, let's analyze the innovational structure, composed of various organizations that are able to support the realization of innovational products, since the moment of establishment of PIA. Since the authors have investigated the various aspects of legal regulation of innovation infrastructure in the Russian Federation in a significant number of ways<sup>3</sup>, we consider possible to rank the subjects of the Russian innovation infrastructure, relying on their potential in the sphere of commercialization: organizations, providing services by forming the innovation projects and their implementation: Centers for technology transfer, Fab-Lab, Centers for collective use and etc.; organizations, providing support for small enterprises, creating commercially beneficial intellectual products: Business-incubators, Technoparks and others; organizations utilizing government support for

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<sup>3</sup> *Shatkovskaya T.V. Legal Problems of Government Regulation of Innovation Activity and Infrastructure in the Russian Federation// Science and Education: economy and agriculture; entrepreneurship, legal rights and regulations. 2016. № 5 (72). P. 40-43.*

commercialization of intellectual products. Modern innovational infrastructure of the Russian Federation complies with the leading global examples. However there is an obvious imbalance within such system, which is the absence of links of innovational infrastructure on regional level, imbalance of public and private sector of innovational infrastructure.

Method of monitoring is used to determine the completeness, modernity and effectiveness of legal targets execution, determining the external and internal factors, that impact the implementation of state innovation policy, and impacting the realization of state innovation policy, as well as integration of proposals regarding the necessity to correct legal acts in the sphere of innovation activity. Monitoring is carried out on the basis of analysis of indicators of socio-economic development, as well as indicators of innovational development of the government, defined in the corresponding legal acts.

### **Results of right-creating initiatives by leaders of innovational development**

Undeniable leader of modern innovational development is considered to be the US. Such results were achieved due to the creation and implementation of government strategy for national scientific and technological development as well as stimulation of innovation activity of private sector of the economy. Substantial basis of the US innovational development is formed by 150 leading universities that are in hold of powerful financial resources that can be used to carry out fundamental research on behalf of the US government and various funds. The volume of funding for one individual researcher is around 270 thousand dollars per year. The share of private investment directed at science research in the US accounts for 64.9%, with state spending around 29.3%. In the countries of Western Europe this breakdown is 53.6% and 35.3% respectively, Japan - 77.1% and 16.2%, South Korea - 75.4% and 23.1%, China - 69.1% and 24.7%.

The US government is an active member in formation of the innovations market via the creation of system of government regulations of innovation activity, creation of venture funds and research centers, as well as via the process of transfer of licenses for commercial use of patented inventions that are considered state property.

One of the important legal initiatives of the US government is considered the Bayh-Dole Act in the 1980. Bayh-Dole Act provided the universities and other researching entities the rights to manage and commercialize the research results, financed from the federal budget. Realization of such rights assumes the compliance of subjects to a number of responsibilities aimed at satisfying the strategic interests of the government. For example, to inform the federal grant providers about the results of the research, the process of patenting, compliance with federal agencies regarding the transfer of rights for the invention, implementation of commercial transfer of technology and etc. The actions of legal initiative Bayh-Dole are demonstrated by the data from Association of University Technology Managers. For the last 20 years,

80 thousand US patents have been issued by the scientific organizations. Within this time period the universities have launched 12000 startups, 879 new products, creating 3.8 million of working spaces. The income from technology transfer is greater than 518 billion dollars<sup>4</sup>.

The effectiveness of commercialization policy in the US provides for selective approach from the government, regarding the funding of scientific research, relying on the results of the universities in the process of technology transfer (the determinants of effectiveness: cost of research, amount of new inventions and licensing income). In order to stimulate the process of patenting of PIA by national companies, the US government has passed a law related to ratification of international agreements in the sphere of patenting: the positions in the Den Haag agreement on international registration of industrial samples (as of 13th of May 2015). The law provides the opportunity to obtain legal protection of industrial samples in a number of countries simultaneously (64 countries in the agreement), by filing and international application into the International Bureau BIRPI. International patenting allows the leading companies to retain technological advantage in the foreign markets, to activate the license turnover and technology transfer between the TNCs.

The Bayh-Dole Act has become the main vector for development of technology transfer not only in the US, but in all the leading countries in innovation process (e.g. in 1999 a similar Act was passed in Japan and France). The most important fact is that governments used the American initiatives regarding technology transfer to further improve their systems of innovation. In France, the implementation of such law not only stimulated the innovational activity by using the potential of state scientific organizations, but also pointed at a number of problems, the solution to which has lead to new legal and organization reforms.

Implementation of innovational policy in the EU has contributed towards the EU strategy in the areas of research and innovation «Horizon 2020», defining highly effective technology as perspectives for scientific and technological development<sup>5</sup>. On the basis of this program, it is planned to form an open innovational system, orientated at single European market of freely traded products, created as a result of high technology. One of the achievements of the European Commission is the application of the open coordination method as one of the main ways of cooperation of EU-members in the process of forming a unified system of innovation. Implementation of this method assumes active exchange of the best innovation experience, formation of unified data base and statistics in the sphere of innovation activity, determining «the best practices» and corrections of innovation strategy as well as plans for the implementation, strengthening of cooperation between the

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<sup>4</sup> <http://www.autm.net/fy> 2015-survey.

<sup>5</sup> *Horizon-2020-the Framework Programme for Research and Innovation: European Commission. URL:*[http://ec.europa.eu/research/csfr/index\\_en.cfm3](http://ec.europa.eu/research/csfr/index_en.cfm3).

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countries via improved mobility of researchers and integration of scientific societies.

We suppose that the EU is the only European regional community that has completed all the stages of legal integration, therefore the mechanism for integrating the legislation in the sphere of commercialization of intellectual property can become the basis for development of internationalization of Eurasian intellectual product market. EU integration is carried out via harmonization and unification of all the legal systems of member states. Given this, harmonization is seen in the rapprochement of national legislation via the implementation of legal international acts. These contain a wide range of instruments and mechanisms, allowing adapting international statements on national basis, create orienteer's for legal improvement of governments and their international cooperation. The unification is understood as the implementation of common regulations, which are commonly binding and contain direct action on the territory of all EU members.

In the process of EU integration it has been possible to overcome a whole range of problems, arising on the way to harmonize and unify the legislation and impose common regulators. Thus, the presence of national regime of legal protection of intellectual property leads to disruption of common principles of private rights, like the principles of free movement of goods for example. Given this the actions of national principle of legal protection of PIA is confirmed at international level. We suppose that the experience of the EU demonstrates the balance upon this issue. On the one hand in the EU rules (p.30 Agreement on education of European economical society, 1957) allow for exceptions from the communal principle of free movement of goods in the interest of preserving the moral and order as well as national safety of the member states. On the other hand, the implementation of national rights regarding intellectual property should occur in full accordance with the statements of communal rights within the EU and cannot breach the barriers set out by free movement of goods and services. In the spheres regulated by the EU Directives, the legislative competence is transferred to the Community for effective implementation of harmonization of national legislation regarding intellectual property. The process of execution of national norms (in case of emergency) is set out in p. 4, Article 95 of the EU Agreement, 1992.

The implementation of the principle of limited possession rights and further control of the PIA by the owner, the authors consider successful on the EU territory. Protected result of intellectual activity, once released into the single market, can be freely present in the market. The implementation of the given principle is aimed at market activation in the sphere of intellectual property handling. Initially this required expansion of the usage of the obligatory licensing system, which binds the owner to allow the access to PIA in case when a certain fair amount is paid. However such measure has resulted in protests from the EU-member states and was displaced by a softer version in the form of collective agreements between organizations dealing with collective management of copyright and organizations interested in utilizing the PIA.

Priority task for the EU is the creation and support of a common European market in order to provide for free movement of intellectual products. At the moment it is the principle of copyright that allows separating the PIA (for its maximum commercialization) from the inventor. Given this the protection of author rights is executed within the institute of so called moral rights that protect the authors' reputation.

### **Some of the results of implementing legal initiatives of the Russian government on the way to form a competitive innovative economy**

At the moment the Russian government is one of the main investors in the science and technology sphere in the Russian Federation, therefore the success of such capital expenditure is directly related to its level of legal and organizational support. The newest state legal initiatives in the sphere of commercialization of intellectual products could be divided into the initiatives aimed at regional and global intellectual product market development; initiatives stimulating and supporting Russian innovational activity, as well as initiatives directed at development and implementation of federal and regional innovational programs.

Order of the Russian Federation as of 14th of February 2017 «Agreement about the order of control of author and shared rights on collective basis», has become an important initiative contributing to intellectual product market development in the Eurasian economic region. According to the Order, the EU-member states have defined the order to create the organizations regarding collective management of exclusive rights to the objects of author and shared rights on the territory of the Union. The Chairman of the Government has signed a Statement regarding the law about the ratification of Geneva Act of the Den Haag Agreement about the international registration of industrial samples.

Long-run direction of innovation activity and government aims to coordinate the efforts of subjects engaged in the innovation process are set out in the Strategy for Innovational Development of the Russian Federation, confirmed by the Russian Federation Government Order 8th December 2011, № 2227-p<sup>6</sup>. The document targets the implementation of ambitious tasks for constructing an innovating government in Russia by 2020, changing the quality of life of the population and creating an innovating economic system. The target for, strategic planning in the sphere of scientific and technological development of the country, state national and regional programs, as well as planned documents of state corporations, companies and joint-stock companies with government share, is set out in the Executive Order of the President of the RF as of 1st of December 2016, № 642 «About the strategy

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<sup>6</sup> *Regarding the confirmation of Strategy for Innovational Development of the Russian Federation for the period until 2020: Russian Federation Government Order as of 8th of December 2011, № 2227-p// Collection of Legislation in the Russian Federation. 2012. №1. P. 216.*

regarding the scientific and technological development of the Russian Federation».

A legal initiative has been implemented regarding the transfer of rights to commercialize PIA by the universities (in the Russian Federation). Similar to the US Bayh-Dole Act, the Russian Federation has passed a Federal Law as of 2nd of August 2009, № 217 - FL, that confirmed the right of state-funded scientific and educational organizations to independently create economic communities using the PIA rights as deposit for the initial capital. Implementation of the law, has demonstrated the distortion in government policy regarding the PIA commercialization, that came up in the forbidding the income distribution, property transfer and university facilities. The opportunity to include the objects of intellectual property into the authorized capital is significantly limited. Thus, a number of objects containing author rights, shared rights and trademarks have not been included in the range. PIA authors do not have the opportunity to become co-founders of economical communities, such right is one granted to state-funded scientific and educational entities. As a result around 70% of established economic communities possess the authorized capital fewer than 40 thousand rubles, which eliminates any opportunity for commercialization of transferred PIA.

Legal support of the government strategy for commercialization of fundamental and applied scientific results can be considered the first stage on the way to formation of the modern national system of innovation. Presidium of the Advisory Board in economic modernization and innovational development for the President of the Russian Federation, has decided on detailed investigation of the problem, regarding the need for the Strategy, and has expressed the opinion regarding its structural elements<sup>7</sup>. The result of right-creating activity of the Russian government in the sphere of innovation, has become, the creation of developed federal innovation infrastructure, the formation of the system of executive power bodies (coordinating the activity of innovation activity members), the development of strategic legal acts (defining the direction for innovation development and further improvements in legislation).

### **Discussion and results: instead of conclusion**

The analysis of the legislation in leading government of innovation development, allows dividing the legal material into: acts, that define the protection of intellectual property via the provision of exclusive rights for S&T (science and technology) activity, and acts, regulating the transfer of technology and competition rules.

Legislation regarding the protection of rights from unfair competition from the US and the EU, provides a single unified approach to the restriction of agreements regarding the transfer of technology. It defines that these agreements should be

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<sup>7</sup> A. Gorbatova, *Intellectual Strategy: to be or not to be// Science and Technology. Digital Issue. strf.ru. 02.04.15*



present within the legal limits of legislation on intellectual property, thereby ensuring that the restrictions contribute towards the development of healthy competition. Moreover, the system of intellectual property rights has significant national features and differences.

One of the most serious international problems in intellectual property commercialization is considered to be the existing contradictions between the priorities of national sources of rights regulation and the absence of a unified international market for intellectual property. Leading governments in innovation development create the unions and form the international legal basis for the protection and regulation of intellectual assets. However, given this, they also protect the priorities of national and territorial protection of subjects of intellectual property. This approach not only makes the movement of intellectual products more complex (due to the differences in legal regulation, formal relationship practices, procedures to obtain documents for protection of intellectual products), but also creates significant financial cost and unsatisfying economic environment.

According to the first international legal initiatives, that were proposed to eliminate the consequences of such contradiction (Agreement in Trading Aspects of Intellectual Property - ATAIP 1994), the path of strengthening the requirements to member-states of international agreements has been chosen (in the spheres of innovation activity and unification of national legislation to comply with international norms).

It should be pointed out that there is a contradiction in the modern legal regulation of intellectual assets commercialization, such as artificial creation of monopolistic areas of profit, granted by government in the form of rights to use certain intellectual assets). Given this, the government constrains entrepreneurial activity in PIA, by the means of anti-monopolistic regulation to deter unfair competition. In order to overcome the above-mentioned and other contradictions, it is necessary:

- to establish legal protection of rules for public-private partnership, contributing towards the development of innovation potential of the companies (scientific and industrial);
- to coordinate and manage the actions of government entities of all the members, that are collectively engaged in fulfilling a concrete government strategy in the sphere of intellectual product commercialization; to legally define the functions of state entities in promoting innovations and their coordination on different state level to create a single approach for prioritized direction in S&T policy, as well as implement large innovational projects using high technology;
- to transform national systems of innovation into open systems, targeting global markets;

- to establish inter-governmental cooperation on the way to create large regional communities (on the territory of which, protected results of intellectual activity will be freely introduced and circulated);
- to overcome the dual perception regarding property rights for intellectual products, obtained as a result of agreements for government orders. Property rights of the government for objects with high share of S&T development should be limited with interests of national security.

Overall, the main focus in the sphere of legal regulation in intellectual property commercialization should be concentrated on three main tasks, the solution of which has resulted in the greatest impact within the leading governments in innovational development: stimulating innovative activity, cancellation of excessive administrative barriers (e.g. in the process of patenting and registration of start-ups), integration of legal monitoring mechanism for evaluating the impact of legal acts on the system of innovation.

Gradual transition from territorial constraints of intellectual property within the government to intergovernmental communities, connected with mutual economic targets and mutual responsibilities for cooperation in the designated areas. This will support the commercialization of PIA, its free movement and protection of interests of innovators.

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