



ISSN: 0975-766X
CODEN: IJPTFI
Research Article

Available Online through
www.ijptonline.com

INSTITUTIONAL BARRIERS OF RUSSIAN ENTERPRISES INNOVATION ACTIVITY

Yury Ivanovich Seliverstov, Yury Anatolievich Doroshenko
Belgorod State Technological University named after V.G. Shukhov,
Russia, 308012, Belgorod, Kostyukov Street, 46.
Belgorod State Technological University named after V.G. Shukhov,
Russia, 308012, Belgorod, Kostyukov Street, 46.

Received on 14-08-2016

Accepted on 20-09-2016

Abstract.

This article discusses and analyzes the factors that constrain the activity of Russian companies concerning the establishment and the engagement of intellectual property in commercialization. They considered the indicators of Russia global competitiveness in 2014-2015, determined by the World Economic Forum, primarily the state of "Innovation" and "Institutions" factors. They revealed and characterized the trends at the Russian market of intellectual property. It was established that the existing institutions stimulate economic agents poorly to the acquisition/creation and the use of intangible assets. They analyzed the reasons for this situation. The main reasons are: the lack of interest among economic entities in the use of modern technologies in respect of production and management; the insufficient development of innovation infrastructure; the shortage of innovative managers; weak competitive environment at the commodity market.

Keywords: intellectual property, intellectual property market, Russian companies, the index of global competitiveness, institutions, institutional barriers.

Introduction.

The rapid increase of crisis phenomena in Russian economy, associated with the significant reduction of economic growth rate in European countries, Japan and China, the introduction of economic sanctions against Russia, the fall of world prices for hydrocarbons, puts for the federal government, the authorities of Russian Federation and local self-government the task of economic growth effective point identification and support. Nowadays, the most important factor of the country advantages in the international competition is the ability to an effective use and an expanded reproduction of intellectual capital. The innovative strategy of macroeconomic development is considered by most developed countries as the only way of the systemic crisis overcoming in the medium and long term.

The totality of the relationship and institutions, ensuring the creation, the spread and the application of new knowledge is called the national innovation system (NIS). A special place in NIS is occupied by intellectual property (IP) market, which provides the interaction of property right holders for the results of intellectual activity and the potential consumers of commercially attractive ideas, supporting the transformation of new developments into innovations. Technology transfer provides the dynamics of innovation processes. In fact, the IP market is the institutional environment that integrates the individual functional and territorial NIS elements [2, 13, 20, 21].

IP is not only legal, but also a complex economic category. It participates in the creation of added value, particularly in high-tech industries, where the share of IP in product price makes 10-15%. IP contributes to the value of economic entity assets and increases the market capitalization of business [16, 17, 22]. IP is involved in the investment process, and it may be not only the object of a capital investment, but also the subject of a pledge, ensuring the commitment in respect of investment loans.

The exclusive property rights on the results of intellectual activity are the "fourth basket" of the world trade, along with goods, works and services. It is the fourth according to time inclusion in turnover, but not by importance. In the countries where the civilized IP market was formed, the volumes of right sales are very significant. The sale of IP in the world trade within WTO makes up to 10% of GDP in the countries included in WTO.

Methods. The object of the study are the real sector enterprises of Russian economy as the current and the potential participants of IP market. They used the dynamic and structural analysis as research methods. The information and empirical base of the study was developed on the basis of the Federal Service data for Intellectual Property (Rospatent), the Federal State Statistics Service (Rosstat), the World Intellectual Property Organization, the study results of the World Economic Forum and the Savings Bank of Russian Federation, as well as on the information of IP market state published in periodicals and in specialized scientific literature.

Main part. The multifaceted and controversial nature of IP accumulation problems as the components of intellectual capital as well as its participation in the economic turnover of property rights as a product are responsible for their coverage in the works of Russian [3, 5, 6, 10] and foreign [14, 15, 18, 19] economists-theorists of various scientific disciplines and the practitioners, whose professional competencies which are associated with the creation, the legal protection and the commercial use of IP.

Unfortunately, Russia occupies one of the last places as the global IP market participant. In fact the Russian market of IP is not developed, and business is not motivated to the transactions with IP. The strategically important problem

recognized by the authorities is a significant imbalance between the volumes of new knowledge creation and its commercialization. In recent years, the number of patents that ceased to have effect, exceeds the number of newly issued patents and no more than 2% of patents are involved in commercial turnover.

In the light of the abovementioned things, the development of IP market should be considered as one of the basic conditions for NIS functioning and of the technological modernization performance concerning the domestic industry. It is impossible to overcome the raw specialization of Russia in the world trade and to ensure an intensive growth at the expense of sectors with high added value without it. The transition to an intensive type of economic growth requires a shift in the structure of innovation expenditures on imported equipment in favor of industrial enterprise cost increase for research and development. However, the multiple intensification of the obtained results implementation should be recognized as the most important task to be solved for the modernization of Russian economy. IP commercialization is not a secondary process. It requires at least the same amount of investment and special knowledge as research and development.

Unfortunately, the current state of "Innovations" factor estimated by the World Economic Forum during the calculation of the Global Competitiveness Index (GCI) remains very low in Russia. In general, Russia occupied the 53-rd place in the rating of 148 countries at GCI value of 4,4 (the maximum value is 7) [23]. At that the evaluation of "Innovations" factor and the indicators developing it is significantly lower (Table. 1).

Table 1. Competitiveness values according to “Innovations” factor.

Indicator name	Rank (among 144 countries)	Score
Opportunities for innovations	66	3,8
The quality of scientific research institutions	56	4,0
Business costs for R & D	67	3,6
Public procurement of high-tech products	81	3,3
The presence of scientists and engineers	70	4,1
Patent applications according to RST procedure, the number of patents per million people	43	7,1
According to “Innovations” factor in general	65	3,3

Let's look at this issue from the perspective of an institutional approach. An institute is a set of formal frames, recorded in law code, and informal frames, recorded in customary law (traditions, customs, taboos), that structure the interactions of individuals in economic, political and social spheres [8, p. 188]. The main objective of the institutional environment as a set of formal and informal institutions is to maintain the stability of the developing economic relations [4, p. 137]. The level of institution effectiveness determines an ownership structure, the business activity of

economic entities, the nature of contractual relations and the value of transaction costs which accompany the transactions. The priority of the institutional environment is unconditional in IP sphere. The quality of right protection concerning RID (non-legal imitation barriers) determines the interest of economic entities in their specification and innovation activity in general.

The idea about the existence of a causal relation between the level of society institutional development on the one hand, and the investments in fixed assets, business performance, economic competitiveness and economic growth in general on the other hand, is one of the main tenets of neo-institutionalism. It also received an empirical support. In particular, the Nobel laureate D. North applied the theory of transaction costs and the theory of property rights for historical analysis purposes. In the famous work [7] he showed by the set of examples that institutional changes provide the basis for recovery, and economic activity reduction throughout human history, including the present time. The regression models of economic growth and institutional development are presented in the works of many foreign researchers (J. Temple and P. Johnson, J. Scully, F. Leyn and A. Torrel, S. Neck and F. Kiefer, P. Moreau and R. Barro). Their overview is presented in the works of Russian scientists [1, 11, 12].

In order to characterize the level of public institutions development in the country ratings and the analytical studies of major international organizations (World Bank, European Bank for Reconstruction and Development, the World Economic Forum, the Savings Bank of Russia) an extensive set criteria is used. For example, the system of competitiveness index indicators of the Geneva School of Management (IMD), covering 58 countries, includes the following [1, p. 48]:

- Legal environment and regulation;
- The adaptability of the state policy to economic shocks;
- Transparency
- The efficiency of bureaucracy, reflecting its impact on business activity;
- The effectiveness of government decisions;
- The effectiveness of competition laws for the prevention of unfair competition;
- The level of bribery and corruption;
- The implementation of laws;
- The ease of doing business and its support at the legislative level;
- A personal security and the protection of property rights.

During the calculation of the Global Competitiveness Index (GCI) in 2014-2015, estimated by the World Economic

Forum the rating of such competitiveness basic term as institutions is very low in Russia: it took only 97-th place at the index value of 3.45 [23]. In order to understand the scale of institutions quality in our country it is enough to give the examples of neighboring countries: this is Trinidad and Tobago, Iran, Algeria, Mongolia, Egypt and Albania.

If you look at the individual items from which an overall GCI's assessment is made up, Russia is at the end of the list according to a number of indicators. At that most of them are the indicators that are fundamental ones and critical to the efficiently functioning economy, where rights of all economic subjects are respected. Let's take, for example, the basic principles on which a constitutional state with an efficient economy is based: it is the minimum state intervention, the inviolability of private property, the freedom of trade and business, the rule of law, the legal equality, which is implemented through an independent judiciary system.

The indicators characterizing the state of these principles in Russia leaves much to be desired:

- Ownership rights - 120-th place (hereinafter out of 144), the score makes 3.3 (the maximum value is 7);
- The independence of courts - 109-th place, score - 2.9;
- Favoritism in government decisions - 87-th place, score - 2.8;
- Heavy burden of government regulation - 111-th place, score - 2.9;
- The reliability of law enforcement - 114-th place, score - 3.2;
- The effects of taxes on investments - 122-th place, score - 3.1.

The presented data show that the most acute problems of Russian institutional environment that certainly hamper the innovative activity, are unprotected property rights, including intellectual property rights, the administrative barriers, the low level of judicial decision independence and the ineffectiveness of legislation in administrative regulation challenging.

It can be assumed that the rules of intellectual property market functioning in Russia do not stimulate the economic entities to the acquisition/creation and the use of intangible assets. The situation is preserved when most of intellectual activity results is just an unprotected information. At that the thing is not so much about the legislative support of IP market, but about the ineffectiveness of right protection and the lack of motivation among enterprises for IP increase. The intellectualization of assets is extremely low. Capital in its money form and the accumulated material base remain the main production factor. There are several reasons for this situation, in our opinion.

1. The lack of interest among economic entities in the use of modern production and management techniques, while an extensive growth potential is not exhausted yet. According to GCI index in terms of "Technology introduction" Russia occupies the 111-th place with the estimate of 4.1 points.

If a company product demand allows it to make money without resorting to technical upgrade and to the restructuring of a management system, but simply increasing the resource base, the company will not be engaged in innovative activity. This situation developed during the pre-crisis period in Russia, and the crisis clearly demonstrated the ineffectiveness of costs and personnel redundancy.

Unfortunately, the economic order developed in Russia does not create the incentives for innovation activity and focuses business owners (mostly individuals who are also the senior managers or control business through affiliated persons in a board) to the so-called the rental maximization of personal income through the investments in power possession. The natural result of the shock economic reforms and privatization of the early 1990-ies in Russia is a common practice of profit extraction and its transfer to the personal income of an owner due to low wages, the product sales "their" middlemen at low prices and its subsequent resale, the drawing up of contracts with affiliated suppliers/contractors at inflated prices, leaving the burden of social costs, the non-payment of dividends to minority shareholders, the concealment of income in order to minimize tax payments, etc.

2. Insufficient development of innovative infrastructure. The problem characteristic of the Russian innovation system is the absence of a link between research organizations - the creators of innovations and real economic sector enterprises - the potential consumers of innovations. The indicator "The transfer of technologies and direct foreign investment" of GCI index for Russia makes 3.8 points (the 123-rd position).

The solution of the scientific sector isolation problem is a local one and comes from a large corporate business, which creates its own R&D departments and even research institutes, orders the developments to universities and industrial institutions. But there are few such examples.

3. The deficiency of innovative managers. Despite the fact that 20 years have passed since the beginning of economic reforms in Russia has been 20 years the labor market has no (or only a few) professionals who are able to manage the commercialization of innovations competently. According to the value "The quality of management schools" of GCI index Russia occupies the 104-th position with the estimate of 3.7 points. On the one hand this is the legacy of the Soviet economic system, when the potential of high technologies was focused mainly in the framework of the military-industrial complex, the administrative staff of which did not take any decisions for the product promotion at

the market. On the other hand, the lack of professionals in the field of innovation management is closely related to the first of the considered reasons concerning the low share of the intellectual property in the composition of Russian company assets. As you know, demand creates supply. If companies do not perform innovative activities on a regular basis, then there is no need for the experts in innovation management.

4. The reluctance of economic entities to specify the ownership rights for intellectual property results due to the ineffectiveness of property right institute in Russia; the methodological problems of accounting and the evaluation of intellectual activity results; the transaction costs of specification and the protection of relevant property rights. We talking about the situation where a company implements technological, product and/or organizational and managerial innovations de facto, but does not draw up intellectual property rights de jure. According to expert estimates, the market value of intellectual activity results belonging to Russian companies, which did not get a proper legal registration and are not recorded in the financial statement, makes more than \$ 1 trillion dollars. [9, p. 71]

5. A weak competitive environment at the commodity market ("Competition» value of GCI index makes 4.1 points, 119-th position). Despite the fact that the anarchy of the initial post-socialist accumulation was overcome, the current level of fair competition in economy remains a low one. The winning in the competition struggle is achieved not through the introduction of innovations but due to insider information, the informal relations and the access to administrative resources. The most significant contribution to the creation of added value is made by the industries, which are not characterized by high innovation activity according to their nature, but provide an increased profitability: the mining and processing of natural resources, metallurgy, infrastructure sectors and the sphere of services. Product innovations are not a critical success factor for them. And in Russian conditions it is much easier to buy the technologies and equipment from foreign producers.

6. State makes a major political and administrative impact on economic activity and, therefore, it is a source of uncertainty itself. The natural tendency of business to reduce the business risks of economic activity and receive a rental income leads to the need of investment into the building up of economic power among private business owners. This is a kind of defensive reaction, an adaptation to the prevailing norms of behavior. The possession of such power allows you to dictate your terms to counterparties and restrict the access to the market for competitors.

The power dominant (political, administrative, monetary and criminal one) in conjunction with the "short" institutions and rules of economic order, leads to the so-called "investment myopia". The costs of lost profits in case of failure from the investments in innovative projects are small and business owners neglect them easily. There are

less risky short-term investment alternatives, which allow to obtain a high return on invested capital and bring it out of the respective business.

7. Speaking about the institutional framework for innovation, one need to allocate the existing standardization and technical regulation problem especially. The situations of outdated standard actions, which were developed in 1980-ies, are combined with the complete absence cases of technical regulation, standards and requirements. It does not stimulate innovations in product and business process quality improvement. Russian companies also do not hurry to perform a voluntary certification for the compliance with international standards. From our point of view, the public policy of consistent and gradual increase of regulatory technical requirements for various characteristics, determining quality (reliability, safety, energy efficiency, environmental friendliness, durability, etc.) is objectively necessary in such a situation.

Summary. Thus, the institutions develop a set of general conditions for the operation and the interaction of NIS entities. On the one hand, the presence of well-functioning institutions can hardly be considered a sufficient condition for the emergence of a strong incentive to innovation activity among companies. However, an unfavorable institutional environment is a very high barrier for an innovative business development. The inefficient institutions hinder not only the initiatives of individual companies, but also an effective implementation of stimulating measures taken within the state innovation policy.

So in the conditions of property right guarantee absence the capital owners will prefer to invest not only in long-term innovation projects related to specific assets but in short-term liquid assets. The dependence of the judiciary system compromises this mechanism of copyright protection and the exclusive rights to all intellectual property objects and other rights arising from commercial contracts, which are concluded by the participants of the innovation process. The corruption of executive authorities significantly increases the cost of innovation and investment projects implementation and reduces the efficiency of budgetary funds use allocated for innovation support.

Therefore, it can be argued that the normal quality of institutions is the prerequisite for an innovation activity of economic entities. In order to start an innovative path of development one needs "long" rules of interaction between economic entities and with a state, i.e. the institutions which minimize the risks of property right infringement and an unfair execution of contractual obligations.

Conclusions. Based on the foregoing, it can be argued that the intensity of scientific and technological activity commercialization and the business desire to carry out the transactions with IP are directly related to the IP market

*Yury Ivanovich Seliverstov*et al. /International Journal of Pharmacy & Technology*

institutions. Its base is created by active formal institutions - legislative and administrative rules of main participant functioning. The structure of property relations, the subjects of which have intellectual property rights, stands out the following:

1. The relations arising from the use of intellectual activity result by its creator on the basis of the exclusive right recognized by him;
2. The relations arising from the use of intellectual activity results by the acquirer of exclusive rights on the basis of contracts;
3. The non-contractual use of intellectual activity results, carried out without the copyright owner consent under the law.

One may also state that the importance of institutional factors at the development of intellectual activity is much higher than during the performance of an established and a built up work. The effectively functioning institutions reduce the risks of property right infringement and an unfair fulfillment of contractual obligations and, consequently, increases the confidence of a business entity in the future.

Thus, a favorable institutional environment is a strong impetus to the growth of innovation activity.

Acknowledgements. The article was published with the financial support from Ministry of Education and Science of the Russian Federation within the framework of state assignment to the project #26.1511.2014K “Theory and methodology of managing innovational and investment processes in small business enterprises.”

References

1. Akindinova N.S., Aleksashenko A. Petronevich and M. Petronevich, 2011. What is the price of broken institutions? Problems of economics, 8: 41-58.
2. Arcatov A. Ya. and E.A. Kondrashova, 2014. Intellectual resources - the basis of an enterprise innovative development. Bulletin of BSTU named after V.G. Shukhov, 6: 128-131.
3. Buhonova S.M., and K.A. Klimashevsky, 2013. The evaluation methods of innovation investment efficiency. Bulletin of BSTU named after V.G. Shukhov, 3: 100-104.
4. Valieva O.V., 2007. The institutional environment of innovations: theoretical and applied aspects. The bulletin of the Novosibirsk State University. Series: socio-economic sciences, 7 (2): 134-143. p. 137.
5. Doroshenko, Yu.A., and I.O. Malykhina, 2014. The essence and the mechanisms of higher educational institution innovative infrastructure development. Bulletin of BSTU named after V.G. Shukhov, 1: 86-91.

6. Kozyrev, A.N. The measurements of intellectual property in economics, 2010. The International Forum "Innovative development through intellectual property market": the collection of documents and materials; ed. by Lopatin V.N. - M.: The electronic edition, 279 p.
7. Nort, D., 1997. Institutions, institutional changes and economic performance. Trans. from English by A.N. Nesterenko; foreword and scientific edition by B.Z. Milner. M.: The fund of economic book "Nachala", p. 180.
8. Oleinik A.N., 2000. Institutional economics: Textbook. M.: INFRA-M, p. 416.
9. Olehnovich, G.I., 2003. Intellectual property and commercialization issues. Minsk: Amalhteia, 128 p.
10. Buhonova S.M., Y.A. Doroshenko, Y.I. Selivyorstov et al.; edited by S.M. Buhnova, 2014. Current trends of Russian economy and finances development. Monography. Belgorod: Publishing House of BSTU, p. 154.
11. Somina I.V., 2015. The stimulation of innovative process economic efficiency indicators at macro and meso level. Bulletin of BSTU named after V.G. Shukhov. 6: 277-280.
12. Doroshenko, Yu.A., S.N. Glagolev, A.Ya. Arkatov, etc.; ed. by Y.A. Doroshenko, 2015. The strategy of Russia investment and innovation development within the global economic challenges. Monograph. Belgorod: Publishing House of the BSTU, p. 209.
13. Toktamysheva, Yu.S., 2015. Indicators of innovation development in Russian regions during the analysis of their economic growth potential. Bulletin of BSTU named after V.G. Shukhov, 3: 153-158.
14. Anand, B.N., and T. Khanna, 2000. The Structure of Licensing Contracts. Journal of Industrial Economics, 1(48): 103-135.
15. Blair, M.B., 1995. Ownership and Control: Rethinking Corporate Governance for the Twenty-First Century. Washington DC: Brookings Institute, chapter 6.
16. Bontis, N, 1996. There's a price on your head: managing intellectual capital strategically. Business Quarterly, Summer, pp: 4-47.
17. Bontis, N, 1998. Intellectual capital: an exploratory study that develops measures and models. Management Decision, 36 (2), pp: 63-76.
18. Griliches, Z., 1990. Patent Statistics as Economic Indicators: A Survey. Journal of Economic Literature, Vol. XXVIII. December 1990, pp. 1661 - 1707.
19. Hiatt, J., and Tim Creasey The definition and history of change management. www.change-management.com/tutorial-definition-history.htm.

20. Porter, Michael E., 2008. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, Simon and Schuster, pp: 432.
21. Santo, B., 2005. Innovation as a tool for economic development: a tutorial. Per. in Hungarian. Moscow: Progress, pp: 376.
22. Schuler, T., 2000. Social and human capital: the search for appropriate techno methodology. *Policy Studies*, 21(1), pp: 25-35.
23. The Global Competitiveness Report 2014–2015. [Electronic resource] Access mode: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf