

# Intellectual property as an active resource for sustainable development of the regional economy

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**Abstract.** This article is devoted to the study of the importance of the intellectual component in the sustainable development of the economy of the Russian regions, taking into account foreign practices. The article outlines the factors constraining the development of pledge transactions with rights to intellectual property objects (IPO) in Russia, identifies key problems that require a solution for turning IPO into an active resource for sustainable development of the regional economy. The accents of organizational, legal, economic and methodical character are made. The article is prepared with the support of the Department of Education and Science of the Kemerovo Region within the framework of the Agreement on Grants from the Regional Budget for the Implementation of Research Projects (the project "Intellectual Property as the Basis for Sustainable Development of the Coal-mining Region (case study Kemerovo Region)").

## 1. Introduction

In modern conditions of commodity production, the significant importance of intellectual property is due to the possibility of using it as a tool for creating added value, a means of capitalizing the assets of enterprises and organizations, and also as an investment resource [1]. Considering the orientation of the Russian economy towards innovative development and modernization, it is obvious that there is a need to form a civilized market for intellectual property, and, accordingly, to create favorable conditions for its functioning. At the same time, not only the legal basis (regulation) and the operation of the mechanism of mutual relations between subjects of the intellectual property market are implied, but also the organizational and economic instruments that can be used in this segment of the economy. Under such conditions, intellectual property will undoubtedly act as an active resource for the sustainable development of the national and regional economy.

## 2. Data and methods

This research is based on the results of scientific research of domestic and foreign specialists, practical materials, as well as legal documents related to lending issues secured by rights to intellectual property. In addition, in carrying out this study, the authors used official statistical and other materials of foreign and Russian organizations (in particular, the World Bank on Intellectual Property Rights and Rospatent), as well as regional enterprises.

## 3. Results and discussion



In foreign studies, the use of organizational and economic instruments based on pledge schemes for IPO was highlighted by the following authors: J. Marshall, R. Caldwell, B. Cain, L. Esposizione, A. Kukrus, V. Antonova, J. Chen and Z. Yuan, B. Amablea, J.B. Chatelaina, K. Ralf [2; 3-5; 6]. The works of Russian scientists also reflect the aspects of the pledge of IPO exclusive rights from the standpoint of organizational, legal and economic aspects [7; 8; 9]. Among the works of Russian scientists, mention should be made of the study of A.A. Kravtsov, focused on the analysis and systematization of problems relating to patent statistics [10].

Issues related to the sustainable development of the economy in its various manifestations are revealed in their works by a number of foreign scientists, such as L. Brown, E. Lovins, H. Lovins, T. Page, J. Rawls, K. Flwein, P. Hocken, et al. Problems of sustainable development of regions (including resource-producing regions) are covered by domestic scientists V.A. Vasilenko, G.I. Gritsko, A.F. Shupletsova, A.V. Samarukha and others. The connection of the production and technological chains, specific to the mining industry, with the economic development of a region is demonstrated in the studies of S.M. Nikitenko, E.V. Goosen, et al. [11-13].

The sustainable development of the regional economy is largely due to the investment climate, the development of which can facilitate pledge transactions with IPO. Authors have identified country specific features of legal regulation and registration of collateral in some EU countries (table 1). In the course of the study of foreign experience, it was found that lending transactions secured by IPO rights in European countries are governed by both the general (for example, the Dutch Civil Code) and the special legislation (for example, the UK Patent Law, the Italian Intellectual Property Code, the French Intellectual Property Code, the French Trade Code). In many countries, it is possible to register transactions with IPO in the state register, which guarantees the rights of parties involved in the transaction [14].

**Table 1.** Objects of intellectual property and registration authorities for pledge transactions for the purpose of lending in certain EU countries.<sup>a</sup>

IPO and features of its use in pledge transactions	Britain	Spain	Italy	Holland	France
Patent	+	+	+	+	+
Patent application	+	+	N/A	N/A	N/A
Trademark	N/A	+	+	+	+
Database	N/A	N/A	N/A	+	N/A
Industrial Designs	N/A	N/A	N/A	+	N/A
Pledge Registration Authority	UK Intellectual Property Office	Spanish Patent and Trade marks Register	Italian Registrar for Trademarks and Patents (UIBM)	- Tax authorities of the Netherlands; - IP registries of the Netherlands	National Institute for Industrial Property (INPI)

<sup>a</sup>Source: compiled by the authors on the basis of [5; 14; 6; 15; 16].

In particular, the US practice shows that for many companies, intellectual property rights are the most valuable assets. Loans secured by patents increase the availability of external funds and return on shareholders' capital. The US Patent and Trademark Office registers transactions related to the transfer of patents to other owners, in addition to IP inventors (the so-called transferring documents) in the Patent Transfer Database, but do not keep records of patent pledge assignments provided non-payment of a loan by a borrower, creating the prerequisites for increasing uncertainty regarding the transfer of intellectual property rights. In this regard, the authors, representing in their work the analysis of the American experience of pledge transactions, indicate: "... it should be done so that the transfer of patent income property rights could be enforced with low costs for not only the debtor but also

competing creditors. Creditors should be protected against the borrower's ability to transfer, refuse or "license" the security in the form of a patent, as well as, from the termination of the borrower's maintenance of the patent in force, prosecution and exploitation. This legal improvement is the way to increase the aggregate debt ceiling and the growth of innovations" [2].

Zhou Li's research shows that China has formed three models of lending to high-tech small and medium-sized enterprises (SMEs) on the basis of IP rights pledge:

1) Beijing pattern which is a direct secured loan (Patent transaction directly between the bank and the enterprise / Copyright protection / Copyright guarantee);

2) Pudong Pattern which is an indirect collateral credit (a bank and state fund guarantee and a patent counter-guarantee);

3) Wuhan Pattern which is a combination of a direct and an indirect collateral loan.

Li Long analyzed the characteristics of loans secured by IPO rights, the cases of granting guarantees to them, and ways to assess the IPO in Japan. He believes that the main characteristic of lending on the security of IP rights in Japan is that it is implemented mainly by Japanese "policy investment banks" and local banks, and is coordinated with other commercial banks. Few commercial banks lend on the security of rights to IPO alone, mainly because of the difficulty of assessing the rights to IPO and lack of relevant experience.

The general regulation of the pledge of IP rights in Estonia is established by PL (Public Law). The pledge of an unregistered IPO is regulated in section 3 of PL "Pledge of rights", according to which the following conditions are specified in § 314: 1) the right to be pledged (for example, to IPO) must be valued; 2) the right to be pledged must be separable, and normative acts of pledge with transfer of possession to the creditor must be applied [4].

India has the developed pledge legislation. Most of the loans provided to date in India are secured loans [17]. In December 2012, the World Intellectual Property Rights (IPR) Bank was established in India to assist the fast-growing transfer of technology and intellectual property rights between the United States, the European Union, the United Kingdom, Russia, South Africa, Japan, China and other parts of the world. The World IPR Bank offers a set of services for manufacturers of original equipment and companies involved in the transfer of technology and IPO. The key services of the bank include: transfer of technology and IPO; technology and IP security; financial and licensing transactions; technology and IP banking; technology and IPR assessment.

The attitude of Russian commercial banks to the use of IPO as collateral for loans is ambiguous. This is explained by the fact that the regulatory acts of the Central Bank of the Russian Federation (Instructions, Regulations, Directives) regulating the procedure for creating reserves for possible losses on loans neither assume nor include intellectual property in the list of collateral. Nevertheless, a number of large Russian banks, based on the provisions of the Civil Code of the Russian Federation, have conducted such operations in recent years.

Despite the fact that there are many problems, the ways of resolving them are seen in the change in the position of the regulator (the Central Bank of the Russian Federation), legislative bodies, commercial banks themselves in the role and place of IPO in lending for the accelerated implementation of new scientific ideas and technologies.

Since the adoption of the 4th part of the Civil Code in Russia in 2006, the processes related to the conclusion of agreements on the alienation of rights to IPO have become more active. By now, some experience has already accumulated in the country of carrying out pledge transactions involving the rights to IPO (table 2). Any contracts for the disposal of the exclusive right to IPO and trademarks (including pledge transactions) in Russia are subject to registration in Rospatent [18-23].

The analysis of the Russian practice has shown that about 20 Russian and foreign banks have participated in pledge transactions with IPO rights registered in Rospatent since 2013. It is known that this pledge practice in Russia is often inherent in the activity of head banks. At the same time, the Russian practice of lending against the security of IPO rights shows that many transactions are carried out with the involvement of foreign banks branches and foreign appraisers, and are structured according to English law [7].

**Table 2.** Number of IPO pledge agreements registered by Rospatent in 2009-2017. <sup>a</sup>

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Pledge agreements over exclusive rights to the results of intellectual activity	-	8	16	17	20	15	13	9	13
Pledge agreements over exclusive rights to trademarks	16	62	52	24	60	40	58	72	98
Number of trademarks referring to which the pledge agreements are concluded	N/A	195	280	82	191	258	362	689	750
Total number of pledge agreements over exclusive rights to IPO	16	70	68	41	80	55	71	81	111

<sup>a</sup>Source: compiled by the authors on the basis of [3-4].

In the course of the study conducted by the authors it was established that not all banks participating in contracts of pledge of IP rights in Russia have a regular nature of concluding such transactions. All banks participating in pledge contracts registered in the period from 2013 to 2016 by Rospatent can be divided into the three categories:

- banks that regularly participate in pledge transactions (for example, Sberbank of Russia PJSC, Moscow Credit Bank OJSC, International Financial Club OJSC AKB and other banks that are registered as pledgees in repeated annual pledge transactions);
- banks that periodically participate in pledge transactions (for example, Far Eastern Bank OJSC participated once in the pledge agreements in 2013 and 2014, Discovery Financial Corporation Bank PJSC in 2013, 2015 and 2016, Promsvyazbank OJSC in 2013 and as Promsvyazbank PJSC in 2016, Russian Agricultural Bank OJSC in 2013 and 2016, etc.);
- banks which were one-time participants in pledge transactions (for example, the European Bank for Reconstruction and Development, London, Great Britain, Center-Invest Commercial Bank OJSC, Absolut Bank Commercial Bank JSC, VESTA Investment Bank LLC), Amsterdam Trade Bank NV, Amsterdam, Netherlands and other banks).

#### 4. Conclusion

At present, the main constraining factors for the development of the regional economy in the direction aimed at the active use of IP, according to the authors, are the following:

- the discontinuity of the production and technological chains, the absence of a model (conditions, respectively) of the sustainable development of a mining region;
- the lack of a methodology for identifying, selecting and preliminary assessing the latest promising technologies ensuring sustainable economic development of the mining regions (taking into account the sectoral specifics of the economy and the existing production and technological potential of the regions) on the basis of making production and technology chains with the production of high added value products;
- inadequate incentives for the development of IPO and the lack of adequate organizational and economic instruments with IPO participation in the mining regions;
- insufficiently active involvement of small and medium-sized businesses in the process of providing IPO access to mining regions.

The identified factors serve as the basis for conducting a study aimed at determining the significance of IP as an active resource for sustainable development of the economy of mining regions. Accordingly, the number of research tasks should include the following:

- research of patent-licensing activity of organizations of mining regions;
- identification of criteria affecting the intellectual activity of a region, and the main factors hindering the achievement of sustainable development of mining regions;
- development of the methodology for identifying, selecting and preliminary assessing the most effective technologies in mining, enrichment and deep processing of minerals based on patent studies, expert assessments and formalized mathematical models;
- development of regulations governing the procedures for the use of IPO as the basis for sustainable development of the mining regions.

The authors consider it expedient to direct the research towards the following fundamental scientific task: to search for the essential interconnection of the categories “knowledge economy” “global technological leadership” and “technological sovereignty” as the basis for the paradigm of the postindustrial model of economic growth of the national economy, as well as the identification of the systemic role of IP as the main productive force in a post-industrial society, forming a new technological mode [27].

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