

# State Support of Foreign Patenting by Small and Medium-Sized Businesses as a Tool to Increase the Export Orientation of the Economy (World Experience)

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**Abstract** - Article is devoted to the analysis of the situation in the field of patenting by small and medium-sized businesses of the results of intellectual activity abroad. As a result of the conducted research, a number of problems hindering the effective development of this area of business have been identified. The authors have developed proposals for state support of innovations, removal of economic and organizational barriers to obtaining security documents abroad, developed approaches to improving the efficiency of international innovation activities of small and medium-sized businesses.

**Index Terms** - Government support, information support, intellectual property attache, lending, patenting, small and medium-sized businesses, subsidizing.

## INTRODUCTION

World practice shows that the capital of international companies is formed by almost 30% from intangible assets (technologies, brands), while Russian companies have little use of them to increase their fixed capital. Intangible assets make up on average only about 5% of the total value of the property of enterprises in the Russian Federation [1].

An increase in the number of developments patented by Russian companies during their subsequent inventory and evaluation will significantly increase the size of net assets and fixed capital of Russian companies. The state registration of Russian developments, the world novelty and inventive level of which will be confirmed by the issued patents, will ensure their evaluation and registration at a higher market value. The number of technical solutions patented by Russian companies is also a target indicator and an indicator of the implementation of the subprogram "Promotion of research and experimental development in civil industry" within the

framework of the State Program "Development of Industry and increasing its competitiveness" [2].

At the same time, if only 10% of international applications under the Patent Cooperation Agreement (PCT) are filed by Russian applicants from the total number of national patent applications filed in Russia, then the Russian Federation will enter the top 10 leading countries in this parameter. The implementation of the support program for the foreigners' patents will lead to an increase in the patent activity of Russian companies and improve the position of the Russian Federation in the leading international rankings, which take into account the jurisdictions of persons filing patent applications or who have received patents. These global rankings are: The Global Innovation Index, Bloomberg Innovation Quotient, The Global Venture Capital and Private Equity Country Attractiveness Index. The high place of the Russian Federation in these ratings of innovative countries will positively affect the investment attractiveness of domestic business.

The analysis of foreign experience also indicates a significant interest of developed countries in supporting their residents in patenting abroad, primarily representatives of small and medium-sized businesses [3].

Assistance in foreign patenting is provided through specialized institutions, attorneys and other similar institutions. Thus, on the website of the Government of the United Kingdom, in the section "Professional assistance", it is indicated that due to the difficulties associated with obtaining patent protection abroad, the possibility of seeking advice from a patent attorney or other professional consultant should be considered. Assistance in finding a patent attorney can be obtained from CIPA (Certified Institute of Patent Attorneys) [4].

Special attention should be paid to the Sino-British Business Council (CBBC), which offers advice on the protection of intellectual property, support in law enforcement

and access to specialists in the field of intellectual property for enterprises interested in the Chinese market.

In the USA, the Intellectual Property Attaché Program (IP Attaché) The United States Patent and Trademark Office (USPTO) provides significant assistance to American businesses and practicing lawyers who are experiencing problems with the protection of intellectual property rights abroad or are considering entering the foreign market.

Within the framework of the IP Attaché program, a staff of 13 representatives has been formed, who are experts in the field of intellectual property. They are attached to US embassies and consulates in 10 countries: Belgium, Brazil, China, India, Kuwait, Mexico, Peru, Switzerland, Thailand and Ukraine. At the same time, in addition to attaches based in China and Switzerland, each attache has a regional coverage. Their mission is to promote the interests of American small and medium-sized businesses in subordinate countries or regions [5].

Intellectual Property attaches are a free resource for American businesses and other interested parties. Attaches can provide detailed information about laws and regulations, legislative changes, as well as legal and administrative means of protecting, enforcing and licensing intellectual property rights in a particular country or region. Attaches can inform interested parties about region-specific risks in a particular industry or area, such as mandatory technology licensing requirements, trade routes or ports with a high level of counterfeit goods turnover.

Intellectual property attaches also work closely with the Office of the Trade Representative and the U.S. Department of State. This allows them to interact with foreign government officials, share information with them in order to improve the effectiveness of the system of protection and protection of intellectual property. The functions of the attaché also include information and propaganda work with foreign officials in order to find solutions to systematic problems related to the intellectual property system. Thus, the educational function assigned to this state institution is also fulfilled to a certain extent.

Having diplomatic status, attaches meet with foreign government officials in the supervised area, who may not be available to interested parties in the United States, who do not have official status. American companies or their lawyers who face problems in the field of intellectual property abroad can contact the attaché, ask them for organizational and methodological assistance.

Based on this, it can be confidently stated that the institute of Intellectual Property Attaché is exactly what is most in demand in Russia today by small and medium-sized businesses in the field of foreign patenting. In addition to the financial component, this process is also hindered by the fear of uncertainty, the uncertainty of a new sphere of business activity, a foreign language, rules in force in a particular jurisdiction, as well as the lack of real systematic support. It is the support from the attaché that will minimize these problems [2].

In addition, there is an opinion in the business and political circles of the United States that the American government should use additional measures to ensure the

participation of universities in the process of innovation activity, since it is university science that is the most important factor of innovation in the long term. To this end, a number of important steps have been taken in the USA. So, back in 1980, the Bay-Dole Law was adopted, according to which universities became owners of intellectual property for inventions that appeared as a result of research funded from public funds. The same goal is pursued by a number of other regulations in force in the United States: the Stevenson-Weidler Law "On Technological Innovations" of 1980, Federal Law on Technology Transfer of 1986, National Law on Competitiveness in the Field of Technology Transfer, 1989 and others.

In particular, one of the results of these innovations was that, if before 1980 all US universities received about 250 patents per year, by 2005 their number exceeded 3000. As a result, by 2000, the U.S. economy received an additional \$40 billion, and more than 250,000 jobs were created.

#### MATERIALS AND METHODS

The study is based on data from 2019 to 2021, including use of statistical data studies in the Russian instate and foreign patenting usage field. In the preparation of the material an author used methods of analysis, comparison, conclusion, generalization.

#### RESULTS

Of particular importance for the development of foreign patenting in the United States was the recognition by Congress that independent inventors, small businesses and non-profit organizations seeking patent protection for their innovations should not bear the same economic burden as well-established firms and corporations. Implementing this approach, America Invents Act (AIA) established a seventy-five percent (75 percent) discount on patenting for "microenterprises". Canada has followed a similar path, offering a 50 percent discount to organizations that employ 50 or fewer employees or that are universities.

At the same time, other approaches to solving the problem of foreign patenting for small and medium-sized businesses are also possible. So, the Intellectual Property Office of China does not offer any discounts for small businesses. However, in this country, there is a system of direct state subsidies for patent applications and service fees for Chinese citizens (This seems to explain the growth of foreign patenting among small businesses in China). The importance of subsidies when filing patent applications abroad is enshrined, in particular, in the "Guidelines of the SIPO (State Intellectual Property Office of China) on subsidizing the work of filing patent applications".

The ways of implementing this concept can be illustrated by the following examples:

(a) In 2006, the Beijing Municipal Government announced its intention to grant citizens 1,000 yuan for patents filed in foreign countries ("Incentives for Filing a patent application in Beijing");

(b) In 2006, the Municipal government of Tianjin announced its intention to provide citizens with 5,000 yuan for patents issued in other countries ("Measures to subsidize patent fees in Tianjin").

In addition, many provinces have increased the level of subsidies per patent. This was facilitated, among other things, by the establishment by the state of targets for increasing patenting in certain provinces. At the same time, the United States does not recommend using government funding to directly support small businesses in international patenting. And this applies to both loans and grants. As stated in a special report to the Congress on the problems of international patenting, if the grant covers 100% of the costs associated with patenting, excessive investments in such activities may arise, which will lead to deformation of the structure of small businesses. And since small, and especially young, companies may not have sufficient cash flow or capital, patented innovations may not be implemented.

Lending to innovations can also be inefficient, since if the company does not receive the expected profit and cannot pay off its obligations, this will lead to the bankruptcy of the borrower, to the termination of its activities. At the same time, it should be borne in mind that there is a high probability of investing in expensive projects, which, of course, increases the risks of non-repayment of funds [6].

### DISCUSSION

Given that a patent is often obtained at an early stage of the innovation process, there is high uncertainty both regarding the technological and market potential of the patented result of intellectual activity. In the absence of complete information, small businesses may not invest enough in profitable projects or invest in activities that will bring little return. The report also noted that a review of the specialized literature failed to find data indicating the effectiveness of loans and grants.

The interest of Russian companies in the legal protection of intellectual property abroad has also begun to grow: there are more and more requests for information, methodological and financial support [7].

Patenting covers a whole range of measures to ensure legal protection of developments abroad, which includes:

- selection of developments for patenting;
- preparation of patent applications;
- filing patent applications with the relevant patent offices;
- correspondence with patent offices during the examination of applications;
- correspondence on patent disputes with administrative and judicial authorities;
- obtaining patents;
- payment of fees for legally significant actions in the implementation of office work on patent applications and patents obtained, as well as the services of patent attorneys;
- maintenance of patent applications and granted patents.

Conducting office work on foreign applications requires rather complex coordination and preparation of materials in several foreign languages, tracking the timing of responses to requests from patent offices, understanding the intricacies of patent legislation in different countries. Most small and medium-sized companies do not have such qualified employees. The documents sent to each country of patenting must be drawn up according to the rules of their patent laws. Even the procedure for filling in matching documents differs, which requires detailed knowledge of the patent laws of the

countries in which protection of the development is sought. The support of competence centers for the protection and protection of intellectual property abroad is non-systemic in nature and covers only certain target groups [8].

In addition, foreign patenting requires considerable foreign currency funds. If in the old days all expenses were borne by the state, now they must be borne by the applicants themselves.

At the same time, filing an international application under the Patent Cooperation Agreement (PCT) through Rospatent, taking into account the services of a Russian patent attorney, will cost about 200-250 thousand rubles. The subsequent transition to the national phase will require much more costs. And the total cost of submitting national applications in the USA, the European Union, Japan and China (which are the main innovation markets abroad) is in the range of 30-50 thousand dollars. Such an amount, in fact, becomes a barrier for small and medium-sized businesses. Resolution of the Government of the Russian Federation No. 1368 of 15.12.2016 (as amended. dated 06.02.2021 No. 126) "On state support of Russian manufacturers in order to compensate for part of the costs associated with the registration of intellectual property objects on foreign markets" (together with the "Rules for granting subsidies to Russian manufacturers in order to compensate for part of the costs associated with the Registration of Intellectual property objects on foreign markets", "The Rules for the Exercise by the Russian Export Center Joint Stock Company of the functions of an agent of the Government of the Russian Federation on the issue of granting subsidies to Russian Manufacturers in order to compensate for part of the costs associated with the Registration of intellectual property objects on Foreign Markets") [9] establishes that in the field of international patenting, costs are subject to compensation:

- for preparation, filing and office work on international applications (PCT);
- for payment of fees related to the filing and consideration of international applications (PCT);
- for the preparation, filing of a national and (or) regional application (including applications for registration of the exclusive right to the name of the place of origin of goods and (or) geographical indication), issued in accordance with the regulatory legal acts of national patent offices, and office work in respect of it;
- for payment of fees provided for by regulatory legal acts of national patent offices related to the filing, consideration of applications, issuance of security documents (patents, certificates) and maintenance of applications or legal protection in force for the first 3 years;
- to prepare, submit an application for international registration of an industrial design in accordance with the Geneva Act of the Hague Agreement and record-keeping in relation to such an application;
- for the payment of fees payable to obtain the international registration of an industrial design, in accordance with the Geneva Act of the Hague Agreement, the General Instructions to the 1999 Act and the 1960 Act of the Hague Agreement of January 1, 2019, the Administrative Instructions for the Application of the Hague Agreement of July 1, 2019.

At the same time, these provisions remain largely declarative. So, in 2019, these expenses were not included in the budget. And in other periods of time, the amount of government funding has always been insufficient to meet the needs of business.

At the same time, the Order of the Ministry of Industry and Trade of the Russian Federation No. 670 dated March 02, 2021 "On the selection of organizations in order to compensate for part of the costs associated with the registration of intellectual property objects on foreign markets" [10] contains a number of noteworthy proposals for the implementation of a mechanism to support foreign patenting, criteria for evaluating the effectiveness of subsidies have been developed.

Thus, the indicator necessary to achieve the results of the grant is the organization's delivery of products, which includes intellectual property objects, for the registration of which the subsidy was granted, and (or) the granting of rights to use these intellectual property objects in accordance with the corporate program of legal protection of intellectual property within 3 years from the date of receipt of the first security document (patent, certificate) for the amount, exceeding the amount of the subsidy provided by at least 5 times for small and medium-sized businesses and at least 15 times for other organizations.

It also provides a description of the business model of bringing the product (technology) to foreign markets, indicating the intended sales channels (opening a representative office in a particular country (region), sales through a foreign partner, Internet sales, etc.). The evaluation of the economic effect of the legal protection of the product (technology), including the volume of sales and (or) the granting of rights of use, is named as indicators of the effectiveness of the grant of subsidies for the years of implementation of the program of legal protection of intellectual property. However, it is too early to judge the effectiveness of the proposed mechanism, given the relatively recent adoption of this act.

Thus, taking into account a number of difficulties with state financing of foreign patenting, other levers come to the fore: in terms of financial assistance, it would be possible to extend tax benefits to innovations and to cases when the results of intellectual activity are patented abroad. In this connection, it would be possible to temporarily (to stimulate patenting abroad) introduce the following types of tax benefits:

- "tax holidays" for several years on profits received from the sale of a patent abroad;
- reduction of the tax on the increase in costs associated with the implementation of a patent abroad (advertising, marketing research, product promotion, etc., or the provision of interest-free bank loans for the same purposes or grants);
- deferred tax payments for 3 years;
- reduction of tax rates on profits received as a result of the implementation of a patent abroad for 3 years;
- reduction, for tax purposes, of the income received for expenses on patenting and payment of legal services for obtaining legal protection of the results of intellectual activity.

At the same time, practice shows that many companies are not aware of government incentive opportunities at all or do not consider them as an affordable means for developing their own business.

The problems of information security of the process of foreign patenting arose not only in the Russian Federation. So in the mid-1980s, experts from European countries came to the conclusion that it was necessary to centralize business development assistance not only within individual countries, but also in Europe as a whole. It was pointed out that small firms do not have the necessary information, and therefore cannot control market changes. In the following years, the EU took a number of steps to solve this problem.

This is how the portal for small and medium-sized businesses was created - "[http://ec.europa.eu/enterprise/sme/index\\_en.html](http://ec.europa.eu/enterprise/sme/index_en.html)", which provides extensive information on policies and specific tools for helping entrepreneurs in EU member states, legislation, taxation specifics, partner search and conditions for participation in support programs. The EU Competitiveness and Innovation Framework Program (CIP) was adopted, and the European Information Center (EIC) operates, which includes offices that make possible the network exchange of information between countries.

In addition, interactive support tools are actively used all over the world - portals, webinars, video conferences, video and audio technologies (for example, an English website <http://www.train2gain.gov.uk> /, offering consulting, individual and group training programs for small and medium-sized enterprises, as well as financial support for training [8]).

Another example of a small and medium-sized business support program is the Continental Network of free information Resources in support of small and Medium-sized Businesses (European Enterprise Network). This network includes almost 600 organizations acting as an intermediary between businessmen and the European Union.

It cannot be said that the Russian Federation stands aside from this process. Information support of innovation activity in Russia is regulated by the "Regulations on the State system of Scientific and Technical Information". The State System of Scientific and Technical Information (GSNTI) is a set of scientific and technical libraries and organizations, regardless of the form of ownership and departmental affiliation, specializing in the collection and processing of scientific and technical information and interacting with each other taking into account the system obligations assumed.

The goals of the creation of the State Scientific and Technical Information (STI) are to ensure the formation and effective use of state resources of scientific and technical information (STI), their integration into the global information space and to promote the creation of a market for information products and services.

There is also an information support system at the local level. Thus, participants of the Skolkovo Foundation Center on the issue of preparing documents for applying for participation in the support program for registration of intellectual property objects in foreign markets can apply for free advice and support to the Skolkovo Intellectual Property Center

(<http://sklegal.ru> / E-mail: IPCenter@sk.ru tel. +7 495 956-00-33 ext. 2405).

At the same time, this is clearly not enough, the system requires further development, expansion of coverage, informing entrepreneurs about the availability of such opportunities. The more relevant is the request for such services from small and medium-sized businesses.

Increasing interest in foreign patenting directly depends on training in intellectual asset management. In many countries of the world there are special organizations engaged in education in this field, with the support of the state, special literature is produced, courses and seminars on intellectual property rights are held.

So, Japan has released a special manual on management – The Intellectual-Assets-Based Management Manual, and relevant thematic seminars are also held (SME Intellectual Asset-Based Management Workshop).

The specialized organization The Australian Patents Office (IP Australia), which has prepared The IP Toolbox and Smart Start, is engaged in highlighting the advantages of intellectual property among small and medium-sized businesses in Australia.

In Canada it is The Canadian Intellectual Property Office, in Hong Kong - Hong Kong, China's Intellectual Property Department, Portugal has formed a National Network of Support and Promotion of Industrial Property – National Network of Units for Industrial Property Promotion.

WIPO's Best Practice program – WIPO's Best Practice Program - identifies opportunities for medium and small enterprises in the field of intellectual property. A number of countries encourage the participation of small and medium-sized enterprises in negotiations on intellectual property rights (including international agreements), for example, the Australian Patent Office (IP Australia) and the Mexican Institute of Industrial Property (Mexico's Institute of Industrial Property).

In Russia, JSC "REC" (Russian Export Center) performs the functions of an agent of the Government of the Russian Federation on providing support to Russian manufacturers for registration of intellectual property objects in foreign markets.

At the same time, there remains a request for the creation of national information centers on spheres or branches of the national economy, for all types of products. Moreover, the main criteria in their creation should be informative, easy accessibility (as they say, "in one click"), simplicity and high efficiency of use, as well as the possibility of obtaining explanations. Virtual catalogs, exhibitions, and reference books are also relevant [11].

It would be necessary to expand the functionality of trade representative offices, extending their work to small and medium-sized businesses (to monitor supply and demand, market segmentation, prices, elasticity of demand, main competitors, conduct marketing research, including on bringing products to market and keeping them on the market, taking into account exports and imports, assessing the level of basic, current and forecast prices for products; to send out proposals to the most qualified foreign specialists; following the example of a number of countries, to promote the participation of small and medium-sized enterprises in

negotiations on intellectual property rights (including in international agreements).

Such an educational aspect is also important as professional development programs for managers and staff, educational programs (master's programs, advanced training programs).

In order to stimulate the participation of educational and scientific organizations both in educational activities and in foreign patenting, it is necessary to include appropriate indicators in a special rating, on the basis of which it is possible to obtain tax benefits when doing business [12].

## CONCLUSION

The internationalization of business, especially small and medium-sized businesses, as the most important tool for economic development, needs all possible state support, including the state needs:

- to analyze and forecast innovation processes in the country and abroad;
- to establish the sale of products to the foreign market (state order);
- to form a market and own sales network;
- to enhance the support of foreign patenting for the small and medium-sized businesses in border areas (for example, in addition to tax benefits, the provision of free space in business centres, access the engineering and scientific-educational organizations (with tax incentives in recent expansion of this cooperation));
- using the resources of Rospatent to provide free advice to small and medium-sized businesses in the protection of intellectual property, enforcement activities and access to specialists abroad.

Since, in general, international patenting remains undeveloped in our country due to a weak export-oriented economy and a low culture of legal protection of inventions, the most promising, in our opinion, would be the expansion of foreign patenting within the CIS [13]. It would accustom representatives of small and medium-sized businesses to this type of activity, removing the psychological barrier, and, on the other hand, would enable the state to test the mechanisms of its real and timely support. This would make it possible to further extend this model within the framework of the SCO (Shanghai Cooperation Organization) and BRICS (a group consisting of Brazil, Russia, India, China and South Africa) on a parity basis, thereby covering a large segment of the world market, moving not in the European direction, complicated by sanctions, conflict of interstate interests, disproportionality of lobbying opportunities. Moreover, our eastern neighbors already have some experience. A body promoting cooperation in this area should be established at the level of the relevant ministries of the participating countries (CIS, SCO, BRICS) with a pool of specialists and technical staff.

Thus, effective support for patenting promising Russian developments abroad, provided to applicants, will increase the number of technical solutions patented by Russian companies.

Support for foreign patenting is a serious incentive to carry out research and development, support the export of high-tech products and ensure equal competition conditions for Russian companies in world markets.

## State Support of Foreign Patenting by Small and Medium-Sized Businesses as a Tool to Increase the Export Orientation of the Economy (World Experience)

Another clear advantage of foreign patenting is the receipt of additional income by patent holders due to royalties from users from other countries, which, in turn, will push further

research and development, as well as increase the efficiency of the domestic economy.

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