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ECONOMIC DETERMINANTS OF INTELLECTUAL PROPERTY DEVELOPMENT IN UKRAINE

Abstract. *A detailed analysis of the negative trends in the development of intellectual property has been carried out, which create significant risks for Ukraine to lag behind technological leaders, reduce the independence and competitiveness of the economy, and devalue domestic investments in science and technology. The main ways of commercialization of intellectual property are determined: the use of intellectual property rights in one's own production; the introduction of rights to objects of intellectual property rights in the authorized capital of the enterprise; transfer (sale) of intellectual property rights. Emphasis is placed on the need to use as an objective criterion for determining the market value of an intellectual property object using the economic effect that the user of this property expects to receive within a certain period of time.*

Keywords: *intellectual power, intangible assets, industrial power objects, commercialization*

Introduction. At the turn of the XX and XXI centuries, an economy based on knowledge, in which intellectual property has become a powerful tool for economic development, intellectual (intangible) assets began to play no less important role than tangible assets. Intellectual property is the most important element of innovative development of the country, a condition for the modernization of its economic activity, it is a special kind of property that complements our traditional concept of property. This is due to the fact that intellectual property is the result of intellectual work, a product of intellectual activity. Information contained in the object of intellectual property must have an objective form of expression and, based on this, the object of intellectual property as an information product, acquiring economic meaning, becomes a specific product [1-20]. The traditional view of the company's assets involves the attribution to them mainly objects of the material world: real estate, raw materials, equipment, securities, etc. [3, 8, 13, 18]. At the same time, in the post-

-industrial era, often much more important success factors in the market are the possession of intangible assets, their competent protection and effective use.

A significant number of domestic and foreign scientists, including Cherep A.V. [1], Dundin V.D. [4], Kobieliieva T.O. [6, 11], Kocziszky G. [10, 28], Kosenko, A.V. [7], Tkachov, M. [8, 16, 17], Mosov S.P. [9], Gladenko I. [12], Szakaly D. [13], Virchenko, V.V. [14], Poberezhnyi, R. [15], Tkachova, N. [18, 19], Veres Somosi M. [20]. It should be noted that today the legal aspect of the existence and functioning of intellectual property is more developed, however, the economic aspects of the transfer of intellectual property to intangible assets remain insufficiently covered.

It is known that many Ukrainian enterprises do not keep or have a low level of accounting for intellectual property as intangible assets, and they are not reflected in their balance sheets. The purpose of the article is to substantiate the importance of intellectual property as part of intangible assets in terms of their use in the formation of market advantages of the enterprise.

Research results. According to the classification of the World Intellectual Property Organization, intellectual property means the creation of the human mind: inventions, literary and artistic works, symbols, names, images and patterns used in trade. Intellectual property is divided into two categories: industrial property, which includes inventions (patents), trademarks, industrial designs and geographical indications of origin; and copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works; and works of art, such as drawings, paintings, photographs and sculptures, as well as architectural structures. Intellectual property is one of the most expensive assets in commercial transactions [10].

In accordance with the practice of management in Ukraine there is a certain classification of intellectual property, namely:

- objects of industrial property;
- objects of copyright and related rights;
- information that represents a commercial and (or) official secret.

New technologies and developments protected by patents will promote effective innovative development, and the speed of their development in the market will determine the competitiveness of regional companies. World technology leaders (USA, Japan, Republic of Korea, Singapore, People's Republic of China, Germany, Israel, etc.) form a high share of value added through the use of intellectual property. The main forms of incentives for

small and medium-sized enterprises, as well as individual innovators are: direct financing, which reaches 50% of the cost of creating new products and technologies (France, USA); lending, including without interest (Sweden); grants (almost all countries); creation of funds for the implementation of innovations taking into account the possible risk (Great Britain, Germany, Switzerland, the Netherlands); non-repayable loans for the implementation of innovations, which reach 50% of costs (Germany); deferral of payment of duty or exemption from it, if the invention relates to energy saving (Austria), etc. These measures are considered a significant achievement of the governments of these countries in managing innovation [9].

Over the past 15 years, developed industrial countries have seen a sharp increase in the share of intangible assets in the balance sheet structure of high-tech enterprises from 36% to 63%, including an increase in the value of corporate reputation and company brands. However, in Ukraine, about 80% of industrial enterprises are not engaged in innovation, and the share of national innovative products is less than 4%. The share of intangible assets in the cost of Ukrainian products does not exceed 0.5-2%, which is almost 10-15 times less compared to the world's leading economies.

Negative trends in the development of intellectual property create significant risks of Ukraine lagging behind the technological leaders, reduce the independence and competitiveness of the economy, devalue domestic investment in science and technology.

On October 13, 2020, at a meeting of the Government at the initiative of the Ministry of Economic Development, Trade and Agriculture of Ukraine (Ministry of Economy) of Ukraine, the Ministry of Economy adopted an order "On the National Intellectual Property Authority".

From October 15, 2020, in accordance with the Law on the National Intellectual Property Authority, Ukrpatent has the following powers: accepting applications, conducting their examination, making decisions on them; acceptance and consideration of applications for state registration of copyright in works of science, literature and art, as well as for registration of agreements relating to copyright in works, their registration; state registration of industrial designs and issuance of certificates; state registration of geographical indications; state registration of inventions and utility models, issuance of patents for inventions and utility models; state registration of trademarks, issuance of certificates for trademarks, etc. In 2020, the activity of submitting applications for industrial property decreased by 19.5% compared to the previous year and amounted to more than 46.0 thousand applications. Activity in the submission of applications for inventions, utility models, industrial designs and trademarks decreased by -17.4%, -37.5%, -24.3% and -15.8%, respectively (Table 1, Fig.

1). Of the total number of submitted applications, 6.9% were applications for inventions, 11.5% – for utility models, 4.4% – for industrial designs, 77.2% – for trademarks (of which 21.5% were submitted internationally procedure) [5].

Analysis of the submitted applications for inventions in the distribution of the main technical areas shows that almost 15,6% of their total number belongs to the field of "Medicines", 7,3% – "Organic Fine Chemistry", 6,6% – "Biotechnology", 6,0% – "Chemical raw materials", 5,6% – "Other special machines".

Table 1

Indicators of receipt of applications for industrial property in 2016-2020

(compiled by the authors using [5])

Industrial property	2016	2017	2018	2019	2020	2020 to 2019, %
Inventions	4 093	4 046	3 969	3 852	3 180	82,6
Industrial designs	2 302	2 480	3 042	2 678	2 027	75,7
Useful models	9 559	9 118	9 120	8 459	5 284	62,5
Trademarks, including:	35 605	37 817	38 652	42 194	35 539	84,2
- national procedure	29 600	30 183	30 900	33 736	27 895	82,7
- international procedure	6 005	7 634	7 752	8 458	7 644	90,4

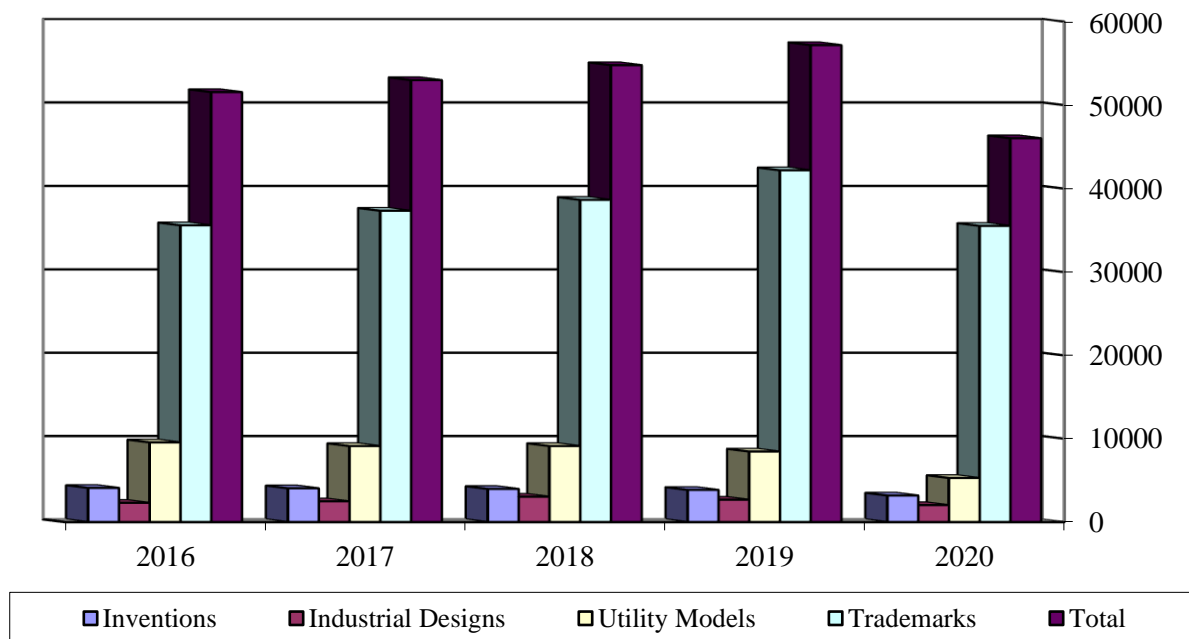


Figure 1. Indicators of receipt of applications for industrial property

(compiled by the authors using [5])

The largest number of classified applications submitted by national applicants in 2020 belongs to the following areas: "Medical equipment" (8,6%), "Measurements" (6,8%), "Other special machines" (6,4%), "Materials, metallurgy" (6,2%), "Electrical equipment, electrical

appliances, electricity" (5,9%), "Drugs" (5,8%), "Engines, pumps, turbines" (5,7%) and "Chemical Technology" (4,8%). In 2020, the leaders in submitting applications for industrial designs in Ukraine were applicants from China (48 applications, + 60,0%), Denmark (34 applications), the Russian Federation (29 applications, 17,1%), the United States (27 applications, 22, 9%), Cyprus (18 applications, +38.5%), Great Britain (18 applications, 41,9%), Japan (17 applications, > 5,7 times), Belarus and Sweden (8 applications each, 20.0% and 11,1% respectively). In 2020, national applicants submitted more than 6.4 thousand applications for inventions and utility models, which is 38,6% less than in the corresponding period of 2019. Among the submitted applications predominate (Table 2) [5].

Table 2

Receipt of applications for inventions and utility models from national applicants

(compiled by the authors using [5])

Industrial property	2016	2017	2018	2019	2020	2020 to 2019, %
Inventions	4 093	4 046	3 969	3 852	3 180	82,6
Industrial designs	2 302	2 480	3 042	2 678	2 027	75,7
Useful models	9 559	9 118	9 120	8 459	5 284	62,5
Trademarks, including:	35 605	37 347	38 652	42 194	35 539	84,2
- national procedure	29 600	30 183	30 900	33 736	27 895	82,7
- international procedure	6 005	7 634	7 752	8 458	7 644	90,4
Geographical indications	-	4	3	6	2	-
Topography of integrated circuits	-	-	-	-	-	-
Total	51 559	53 465	54 786	57 189	46 032	80,5

Inventive activity in industry remains low, industrial enterprises submitted 190 applications for inventions and utility models (against 271 applications in the previous year), which is 4,8% of the total number of applications. The most active in submitting applications in industry were enterprises for the production of machinery and equipment (65 applications), vehicles (38 applications), electrical equipment (21 applications), rubber and plastic products (13 applications), metallurgical production (12 applications) [8, 11].

In the famous monograph «Technology transfer» intellectual property is considered as part of intangible assets. In this approach, it is not separated from the general group of intangible assets, which are, in turn, three groups on the basis of separation from the enterprise or individual [13].

The first group includes intangible assets, inseparable from the enterprise: the presence of trained personnel; systems and methods of management and operation, developed as part of the enterprise; availability of clientele; starting difficulties that have been overcome;

achievements in the field of advertising and promotion of its products; advantages of territorial location; goodwill, i.e. the reputation of the enterprise.

Intangible assets belonging to this group, as a rule, have an indefinite useful life and are valued as a whole. Therefore, they are not subject to depreciation.

The second group of intangible assets, inseparable from the individual, includes: personal reputation of employees or business owners among the public, customers, other employees, other owners and lenders; personal professional qualities of individuals, including their know-how, commercial abilities, talent in the field of financial operations, etc.; general qualifications and personal qualities of the staff or owner in such areas as staff organization, management, customer relations, team relations, etc.

Intangible assets of the second group do not have a fixed term of use (except for specialists working at the company under a fixed term contract). The need to include such intellectual property in the assets of the enterprise is under discussion at the level of scientists. In practice, they are also not included in intellectual property, although their role in obtaining financial results is constantly growing. The results of the enterprise's activity depend on the specialists and management of the enterprise, their skills, abilities, organizational skills and connections.

The third group of intangible assets separated from the enterprise includes: trademarks, trademarks, trade marks, secret methods and technologies, technical libraries, copyrights, secret formulas, licenses, patents, franchises, drawings and templates, rights for films, usage rights, contracts (employment contracts, purchase contracts, sales contracts, advertising contracts), lists (address information, lists of customers, subscribers, etc.) [4].

Intangible assets of industry are often the exclusive rights to intellectual property and means of individualization: inventions, utility models, industrial designs, trademarks and service marks, appellations of origin, programs for computers and databases, and other objects. copyright and related rights, etc. In this case, intellectual property can be involved in economic turnover [13, 14, 18].

Advantages of industrial property:

- facilitated and effective penetration into new markets with new goods;
- monopoly right to produce any type of product;
- the ability to sell goods at a price higher than competitors, in the presence of significant novelty or a well-known brand;
- considerable demand for goods with a well-known brand to consumers;
- significant reduction in advertising costs.

New, non-traditional objects of industrial property are the secrets of production or know-how.

The main condition for a transaction with intellectual property is its presence in an active market, which is characterized by the following conditions:

- items sold and purchased in this market are homogeneous;
- at any time, you can find interested sellers and buyers;
- information on market prices is publicly available.

One of the most important processes of the modern intellectual property market is the process of commercialization, which aims to make a profit by using intellectual property rights in their own production, or selling or transferring rights to use them to other legal entities or individuals.

The main ways to commercialize intellectual property are:

- use of objects of intellectual property rights in own production;
- introduction of rights to objects of intellectual property rights to the authorized capital of the enterprise;
- transfer (sale) of intellectual property rights [13].

Each object of intellectual property in the process of commercialization is transformed into intellectual capital, which serves as a powerful source of competitive advantages of the enterprise in the market. The use of intellectual property, including inventions, utility models and industrial designs, ensures efficient organization and continuity of production at the enterprise, low levels of waste and high-quality products. All this increases the production potential of the enterprise. The presence of intellectual property in the company's assets increases its innovation orientation, as well as investment attractiveness, which allows the company to attract financial resources from external sources, as well as mobilize internal reserves. Thus, intellectual capital allows the company to respond quickly to market needs and quickly meet consumer demand. The use of intellectual property in economic activities allows you to sell products with a high share of value added, increase sales revenue and, consequently, profits, which is an important internal source of funding for the company. This ensures the competitiveness of the enterprise in modern conditions in both domestic and foreign markets. Intellectual property increases the overall efficiency of financial and economic activities of the enterprise, because the use of innovative resource-saving technologies minimizes costs, improves product quality and management efficiency based on modern intellectual information technologies, increases sales through the use of individualization (trademarks, branded names, geographical indications), the sale of

innovative products creates additional income in the form of royalties for the use of intellectual property [14].

In the process of commercialization of intellectual property, the issue of their evaluation is problematic. Regarding the specifics of this valuation, it should be noted that these assets do not have an accurate valuation and objective criteria are quite difficult to establish. These assets are the main deficit in the business, as opposed to those bought at fixed prices in any quantity and at any time. On them the basic conjunctural struggle and ousting of competitors from the market is built. With the help of these assets, the world's leading countries are already receiving the lion's share of export earnings. Therefore, everything related to intellectual property – from patents to know-how in the form of technology, stimulation of scientific and technical creativity and evaluation of its results – in these countries is carefully protected and not disseminated in the exchange of best practices [1].

The objective criterion for determining the market value of intellectual property should be the economic effect (income, profit), which the user of this property expects to receive during a certain period. The market value of intellectual property for its various objects can not be unique and calculated in advance. It will have a different meaning each time, taking into account the rights granted to the buyer to use it [13].

The value of the object of evaluation depends on the expected value, duration and probability of income (benefits) that can be obtained over a period of time with the most efficient use (the principle of expectation). The value of the object of assessment changes over time and is determined on a specific date and depends on external factors that determine the conditions of their use, such as market infrastructure, international and national law, state policy on intellectual property, the possibility and degree of legal protection and others (principle of external influence).

The strategy of using various intellectual property objects (inventions, utility models, software products, etc.) in their own production (strategy of capitalization of intellectual assets) allows companies to produce new high-tech goods and services. On the one hand, it provides companies with a stable competitive advantage, on the other hand, it satisfies society's demand for goods and services. Thus, in the strategy of capitalization of intellectual property rights, the most important economic indicator is information on the share of industrial patents for inventions in the total number of patents received, so this indicator should be included in the intellectual property indicators.

Conclusions. The intellectual property of the enterprise can be used in any sphere of economic activity. Their use provides the production of innovative products, increases sales, reduces its cost, and, accordingly, increases business profitability. In addition, the use of intellectual property allows you to build and effectively use the company's business reputation, optimally manage its activities, and make full use of the potential of human capital accumulated by the company. In addition to its standard functions (providing competitive advantages and protecting their own developments), intellectual property can perform additional ones, helping to increase the credit and investment rating of companies. Timely detection and correct fixation of exclusive rights to intellectual property will allow the company to create its own capital, the proper use of which will help gain a lot of benefits in the market.

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