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## INTELLECTUAL PROPERTY PRODUCTS AS INTANGIBLE COMPONENTS OF THE NATIONAL WEALTH OF UKRAINE\*

**Abstract.** The growing tension on many parameters of Ukrainian socio-economic system development can cause structural shifts or even bifurcation changes. One of the key attractors of a new economic system may well become intellectual property products, which are an important intangible part of the national wealth. The purpose of this study is to justify the ways of improving intellectual property products representation as of the part of the intangible national wealth in general and of Ukraine in particular on the basis of international comparative analysis of their formation and methodology of economic evaluation.

In appliance with the System of National Accounts principles, intangible fixed assets are evaluated using an expenditure approach, but in reality, the expenditure method often does not reflect the true value of the asset because benefits from innovative intangibles could greatly exceed the cost of their creation. That's why the most expedient method to count the real value of intangible fixed assets is to capitalize the future benefits from their use or possession. The list of intellectual property products should be grown by including new innovative elements and separating them from existing ones. Since goodwill, market assets, contracts, leases and licenses are created as a result of the company management activity and marketing services, they should be named as «produced» assets in lieu of «non-produced».

Except intellectual property products and non-produced assets, the intangible part of the national wealth should include other important components, among which – human, social and information potential. Social potential initially could be considered as a quasi intangible asset because of the partial compliance to its attributes. Due to its peculiarities, information potential should be represented as a supplemental index reflecting specific linkages between other intangibles in the national wealth ranking.

**Keywords:** intellectual property products; intangibles; national wealth; System of National Accounts.

**JEL Classification:** E10

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**ПРОДУКТИ ІНТЕЛЕКТУАЛЬНОЇ ВЛАСНОСТІ ЯК НЕМАТЕРІАЛЬНІ КОМПОНЕНТИ  
 НАЦІОНАЛЬНОГО БАГАТСТВА УКРАЇНИ**

**Анотація.** Доведено, що роль продуктів інтелектуальної власності та нематеріальних активів загалом у економічному розвитку невідмінно зростає. Обґрунтовано напрями трансформації алгоритму ідентифікації нематеріальних активів як складової національного багатства в рамках міжнародних стандартів Системи національних рахунків (СНР). Визначено шляхи впровадження в Україні балансу СНР у частині нематеріальних активів.

**Ключові слова:** продукти інтелектуальної власності, нематеріальні активи, національне багатство, Система національних рахунків.

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**ПРОДУКТЫ ИНТЕЛЛЕКТУАЛЬНОЙ СОБСТВЕННОСТИ КАК НЕМАТЕРИАЛЬНЫЕ КОМПОНЕНТЫ  
 НАЦИОНАЛЬНОГО БОГАТСТВА УКРАИНЫ**

**Аннотация.** Доказано, что роль продуктов интеллектуальной собственности и нематериальных активов в целом в экономическом развитии постоянно возрастает. Обоснованы направления трансформации алгоритма идентификации нематериальных активов как составляющей национального богатства в рамках международных стандартов Системы национальных счетов (СНС). Определены пути применения в Украине баланса СНС в части нематериальных активов.

**Ключевые слова:** продукты интеллектуальной собственности, нематериальные активы, национальное богатство, баланс Системы национальных счетов.

**Introduction.** The growing tension on many parameters of the development of the socio-economic system in Ukraine can cause structural shifts or even bifurcation changes. These processes, as evidenced by historical experience, are accompanied by the formation of new attractors that determine its development at a later stage. Despite the fact that the transformation process has a chaotic nature, it is possible and necessary to detect potential sources of strong economic growth, which will be the cornerstones of a new socio-economic order. One of the key attractors of a new economic system may well

become intellectual property products, which are an important intangible part of the national wealth (NW).

**Brief Literature Review.** Intellectual property products (IPP) is the innovative term implemented by System of National Accounts 2008 (SNA-2008) [1] in regards to the «traditional» intangible fixed assets (IFA) as they were represented according to SNA-93 [2]. In the SNA balance sheet, provided by the European Commission, the OECD, the IMF, the United Nations and the World Bank, were made the first official methodological and practical steps to generalize the international data on different components of wealth of nations, including intangible assets, but international standards of SNA framework should be improved in accordance with new economic conditions. Almost all countries, participating in the SNA framework, have their own specialties in accounting, including Ukraine. But, when

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leading countries provide new innovative ways of such assessments, Ukrainian differences [3] consist in underdevelopment of evaluations which are already elaborated and implemented in the international practice. Among other flaws, the current Ukrainian appraisal system doesn't provide intangible assets estimations in a stock dimension and represents only flow indexes. So the native system of their stocks representation in Ukraine should be developed and implemented.

**The purpose** of this study is to justify the ways of improving intellectual property products representation as of the part of the intangible national wealth in general and of Ukraine in particular on the basis of international comparative analysis of their formation and methodology of economic evaluation.

**Results.** The questions that accompany the tasks of implementing this goal are to improve a concept of definition and composition of the intangible national wealth, including intellectual property products, and to outline ways of their considering as SNA assets and their economic evaluation.

Currently, in the SNA-2008 balance sheet (unlike in SNA-93) assets aren't divided into tangible and intangible (as it was in SNA-93 balance sheet), but such differentiation is implied. Intellectual property products, as it was mentioned before, are still considered to be the intangible part of fixed assets and are defined as a result of research, development, investigation or innovation leading to knowledge that the developers can market or use to their own benefit in production because use of the knowledge is restricted by means of legal or other protection. The word «products» emphasizes that it does not include third party rights which are considered non-produced assets in the SNA. According to SNA-2008 classification, intellectual property products include: research and development, mineral exploration and evaluation, computer software and databases, entertainment, literary or artistic originals, other intellectual property products [1]. This composition is quite different from SNA-93 balance sheet division, which considered intangibles to be a separate block, and singled out produced and non-produced intangible assets as a part of non-financial assets. According to the SNA-93 definition of produced intangibles – intangible fixed assets – fixed assets that consist of mineral exploration, computer software, entertainment, literary or artistic originals and other intangible fixed assets, intended to be used for more than one year [2]. Despite of the theoretical existence of newer classification, the practical international reviews of balance sheets currently represent data on intangible assets in conformity with the SNA-93 methodology.

The share of stocks of intangible fixed assets (in contrast to tangibles) in stocks of fixed assets, even in developed countries, remains quite low – mostly within 0.5-3% (except Australia) [4] (Figure 1). During 1/1/1990-1/1/2012's slightly higher this ratio was only in Australia (3.2-4.3%).

But the proportion of volume of intangible fixed assets formation in gross fixed capital formation amount (as well as in GDP volume) in 1990-2011 had been growing gradually in all OECD countries, which represent these data in the international OECD Statistical Extracts [4] (in particular in USA – from 5.9% to 14.2%, in Japan – from 2.8% to 10%, in France – from 7% to 10.8%). In contrast,

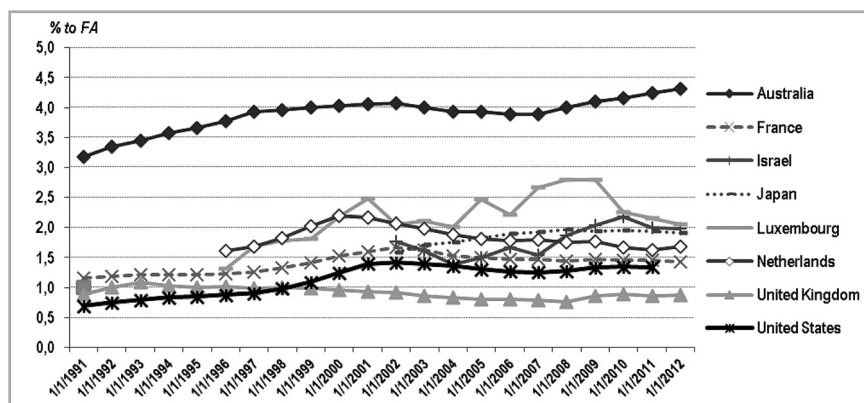


Fig. 1: The Dynamics of Stocks of Intangible Fixed Assets Share in Stocks of Fixed Assets in Some OECD Countries, %  
Source: Calculated on the base of: [4]

the Ukrainian ratio during 2005-2011 is diminished from 3.7% to 1.7% (Figure 2).

OECD investigations prove that for a number of countries, investments in intangible assets grow faster than in tangibles. In the United Kingdom, for instance, investments in intangibles are estimated to have more than doubled as a share of market sector gross value added between 1970 and 2004. Recent studies estimate annual investment in intangibles in the United States of between USD 800 billion and USD 1 trillion, with a stock of intangibles of up to USD 5 trillion. It should be noted too, that the value of some leading global companies, such as Microsoft, is now almost entirely accounted for by their intangible assets [5].

The main share in the structure of stocks of intangible fixed assets in most OECD countries belongs to computer software. As of 1/1/2012 in the Netherlands, computer software has reached 45.9% of all stock of intangible fixed assets, in Czech Republic – 64.7%, in Luxembourg – 73.9%, in Finland – 75.3%, in France – 96.3% [4] (Figure 3a). In contrast, the proportion of mineral exploration, literary and artistic originals usually are much smaller, but in Australia the mineral exploration share (30.3%) even exceeds the part of computer software (22.6%).

In appliance with the SNA-93 principles, intangible fixed assets are evaluated using an expenditure approach on the basis of the purchasers' price or, in the absence of such prices, on the basis of costs of production when produced on their own account (mineral exploration as an asset is measured by the value of the resources allocated to exploration during the accounting period) [2; 6]. The same method of evaluation is supposed to be implied for databases, which are considered to be the intellectual property products according to SNA-2008 standards [1]. And only for research and development, (R&D) it was mentioned that its value could be determined in terms of the economic benefits it is expected to provide in the future (this

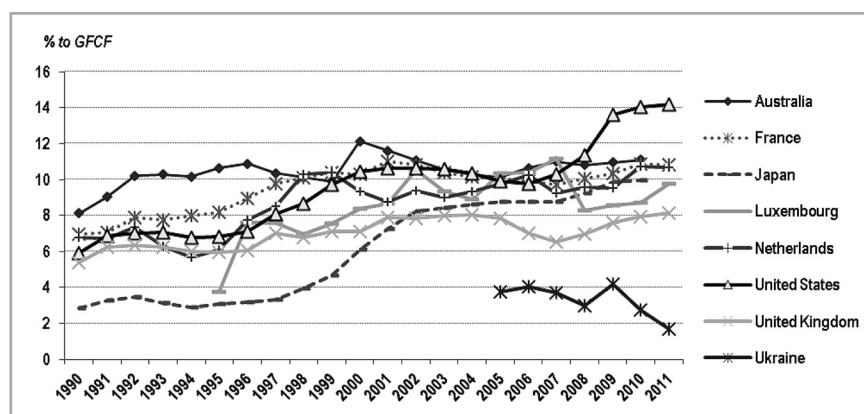
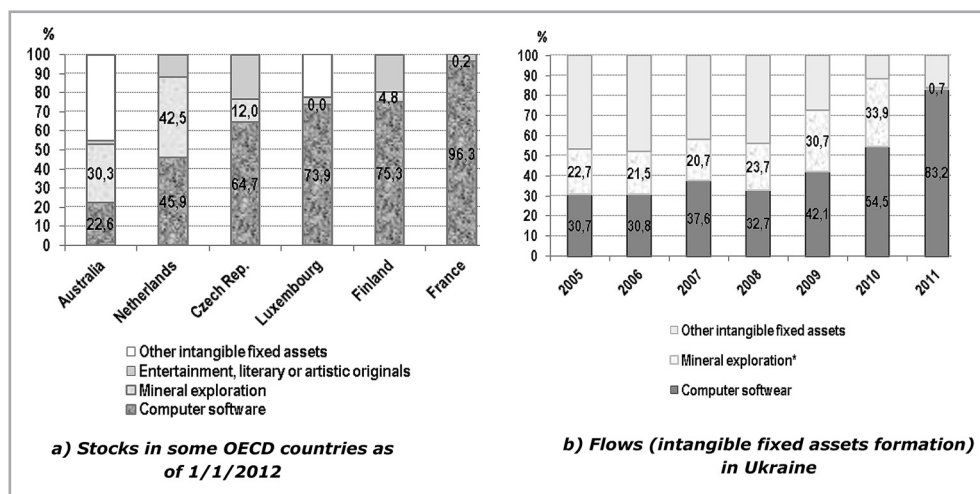


Fig. 2: The Dynamics of Intangible Fixed Assets Formation Proportion in Gross Fixed Capital Formation in Some OECD Countries and Ukraine, %  
Source: Calculated on the base of: [3; 4]



Note: \* – Assets were reclassified according to the Accounting Standard No. 33 «Expenses for exploration of mineral resources» in 2011.

Fig. 3: The Structure of Intangible Fixed Assets, %  
Source: Calculated on the base of: [3; 4]

includes the provision of public services in the case of R&D acquired by government). But basic methods of R&D assessment are the same as for other IPP – market prices if known or by the sum of the costs incurred. But in reality, the expenditure method often does not reflect the true value of the asset. For example, benefits from innovative software could greatly exceed the cost of their creation. That's why the most expedient method to count the real value of intangible fixed assets is to capitalize the future benefits from their use or possession.

As well as IPP, non-produced intangible assets methodology and practice in the SNA framework have inconsistencies. The set of SNA-2008 classification include: contracts, leases and licenses (marketable operating leases, permits to use natural resources, permits to undertake specific activities, entitlement to future goods and services on an exclusive basis); purchase and sale of goodwill and marketing assets [1]. And according to SNA-93 standards, which used in the analytical SNA classifications currently, non-produced intangible assets consist of patented entities, leases or other transferable contracts, purchased goodwill and other intangible non-produced assets [2]. Their significance grows rapidly and in definite countries already exceeds produced intangibles. Thus in France in Jan 2012 per capita volume of «non-produced» intangibles stocks (USD 8.7 thousand) had become 3 times larger than it was in Jan 2002 (USD 2.87 thousand) and almost 5 times larger than produced intangible assets in the beginning of year 2012 (USD 1.8 thousand) (Figure 4).

But it is should be noted that unlike the natural resources (which are a part on non-financial non-produced assets as well), the non-produced intangible assets (goodwill, market assets, contracts, leases and licenses) are results of the human economic activity so they should be treated accordingly.

Ukraine doesn't provide information on stocks of IPP (intangible fixed assets) and non-produced intangible assets, but according to the data on flows characteristics, the share of computer software in the annual formation of intan-

gible fixed assets constantly grows and in 2011 even exceeded 80% (Figure 3b) due to being reclassified according to the Accounting Standard No. 33 «Expenses for exploration of mineral resources» [3]. In Ukraine, legislative and normative regulation of issues related to the definition of intangible assets in general and intellectual property products in particular is extremely limited. Several Ukrainian laws provide definitions of the term «intangible assets», and in the most part of laws they are slightly dissimilar (a common feature is viewing them as a property right on the results of intellectual activity [7; 8]). Lists of intangible assets in Ukrainian legislation are represented only fragmentarily. In particular, the Tax Code of Ukraine states, that, among others, intangible assets include industrial property right, the right to use natural resources, property right and goodwill. The broad description in the Tax Code is given only to goodwill [8]. To date Ukraine has no legislative separation of intellectual property products as a constituent part of intangible assets. The full list of intangibles and their definitions is absent in Ukrainian laws as well. The general definition of such assets has to be improved too. Intangible non-financial components of the national wealth should be defined as a scope of non-financial assets, which don't have a material embodiment, on which establishes the ownership of the state, businesses and/or individuals – residents, that are or may be used to provide their economic interests for the purposes of social development.

In turn it is necessary to clearly distinguish in SNA tangible and intangible non-financial components of national wealth. As it was mentioned before, IPP, as well as contracts, leases, licenses, goodwill and marketing assets, distinguished according to the SNA-2008, constitute only a part of general intangible assets as a component of the national wealth. Yet the intangible part of the national wealth includes other important elements – human, social, information potential, which are not recognized by the SNA methodology of the balance sheet constitution currently. The social potential is closely linked to the human potential, but has quite a bit of unique features which distinguish it.

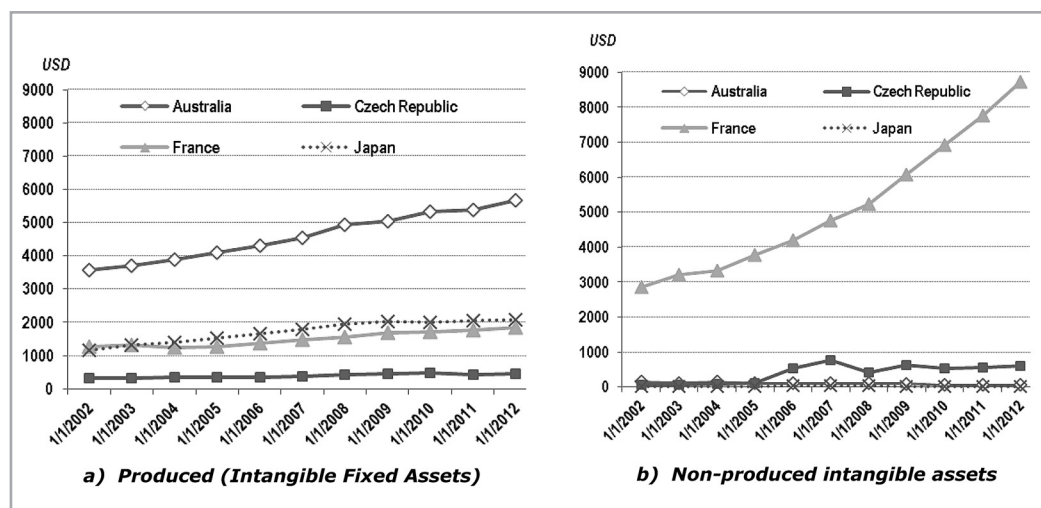


Fig. 4: The Dynamics of Per Capita Volumes of Non-Financial Intangibles Stocks in Some OECD Countries  
Source: Calculated on the base of: [4]

Initially social potential could be considered as a quasi intangible asset due to the partial compliance to their definition, complexity, conventionalities of delineation, evaluation and establishing of the ownership. The information potential is even harder to separate into a single asset since it either partially includes other components of the national wealth or absorbs other assets. Intellectual property products are only one form of information potential; the other forms are: index of human development and natural resources due to the natural feature of objects and phenomena to emit information. Due to its peculiarities, information potential should be represented as a supplemental index reflecting specific linkages between other intangibles in the national wealth ranking.

**Conclusions.** It should be said that to facilitate successful economic transformations in Ukraine, there should be established a native system of non-financial intangible assets representation in the SNA balance sheet framework. It applies to all aspects from the terminology and other methodological principles to the performance of practical analytical results of the corresponding accounting work. To grant the full-scale regulation of issues related to the formation and use of intellectual property products in Ukraine, it is important to separate in normative documents different types of intangibles in order to legislate their full list with definitions and specifications. Not the least important task is to provide a feedback with Inter-Secretariat Working Group on National Accounts to improve the existing international methodological standards of intangible assets definition, classification and evaluation.

The general classification of intangible non-financial components of national wealth should be supplemented by the human and social potential. The information potential has to be highlighted as a part of the intangible national wealth in SNA also. The list of intellectual property products should be grown by including new innovative elements and separating them from existing ones (e.g. new business models, brands, exclusive educational and training programs, unique service conceptions, communication technologies, advertising imagery, extraordinary designs, networks, organizational know-how, etc.). Since goodwill, market assets, contracts, leases and licenses are created as a result of the company management activity and marketing services, they should be named as «produced» assets in lieu of «non-produced». The suggested additions will require the elaboration of criteria establishing the ownership on new forms of intangible assets and their evaluation.

Except measuring the wealth stock, one of the most important directions of enhancing of intellectual property products representation analytical value is to provide efficient productivi-

ty measurement and management. The contribution of IPP to the growth of the productivity requires further research and elaboration of new innovative methods.

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