

cluding environmental, completeness and timeliness display raw data in summary documents and accounting records, the correct costs accounting of core activities and its compliance with the adopted accounting policy, the reliability of information on the costs given in the reporting entity.

Thus, the proposals regarding the transformation of accounting and auditing of operating expenses will clear organization accounting process for forestry enterprises, significantly improve the efficiency and timeliness of accounting information, to monitor the formation of financial results, and the most important is that it will be a small step for Ukraine's development towards a greener environment, because environmental factor is taken into account.

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Трансформація обліку і аудиту витрат лісгосподарських підприємств в умовах екологізації економіки

Розглянуто певні підходи до вдосконалення обліку витрат підприємства. Зокрема, запропоновано вводити додаткові рахунки і субрахунки при веденні бухгалтерського обліку враховуючи екологічний фактор. Сформульовано визначення і сучасну видову структуру екологічних витрат, як важливого елемента витрат в умовах екологізації економіки.

Ключові слова: облік, аудит, витрати, екологічні витрати, екологізація економіки, трансформація, пропозиції, вдосконалення.

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INTELLECTUAL CAPITAL IN THE ASSESSMENT OF BUSINESS VALUE

Presented in this paper are definitions of the following categories: intellectual property (IP), intellectual capital (IC), intangible assets (IA). An analysis of the assessment of intellectual capital in the value of Ukrainian and foreign companies has been made. Several approaches to improving the ways of the formation and assessment of intellectual capital have been proposed.

Keywords: intellectual property, intellectual capital, intangible assets, firm's value.

Intellectual capital (IC) has always been a major source of maintaining the high status of Ukraine in the international arena, which implies the high level of education, cultural traditions, and scientific-and-industrial potential.

However, the crisis has disrupted the regenerative process in most of enterprises in Ukraine. In order to resume this process, an emphasis should be made by the enterprises on their intangible assets, that is intellectual capital.

The whole world is now in the process of forming the so-called “knowledge society”, this being the main way of enhancing the countries competitive ability [2, 3, 11].

In the late 1960s, the industries that were directly related to the production and usage of knowledge came to be known as “knowledge industries”, their share in GNP, for example in the USA, ranging from 29 to 34% [11].

All the world's leading countries are placing emphasis on increasing share of intangible assets and hence the share of intellectual constituent in the final output. Thus, the value of intangible assets in the total value of foreign companies makes up 40 to 50% [10]. In the sector of high technologies, the value of intellectual capital is 3 to 5 times as much as the value of their current income, and by 3 to 100 times exceeds the value of conventional tangible assets [8].

Therefore, the Brand is becoming the dominant factor in the assessment of value of a company's assets [15].

The share of intangible assets in the balance sheet of Ukrainian enterprises amounts only to 0.4 – 0.7%. Most often, intangible assets are not accounted at all.

In developed market economies, the indicator of intangible assets assessment and the methods of measuring them are of great scientific and practical importance. A demand arose for specialized audit service as well as for services to assess intellectual capital. To correctly compare the assessment results for different firms, special standards are being developed.

Statistical assessment of intellectual capital at Ukrainian enterprises is carried out on a fragmentary basis [8, 12]. This adds complexity and every so often makes it impossible to do a system analysis of this indicator.

The concept of intellectual capital and its related concept of intellectual property are essential components which identify the new market economy [4, 5, 6].

It should be noted that the relation between the concept of “intellectual capital” acquire a meaning only under conditions of market of market pricing and functioning stock market. Under conditions of the administered price management, intellectual product does not have a value which would be equal to its contribution to the economy. It is important to keep in mind that the effectiveness and value of intellectual capital become determinable and is able to go up only in the context of a certain strategy for the enterprise development; otherwise the available intellectual resources might be of little use. The most successful development of intellectual capital can be found within the channel of purposeful activities as to the development of a new product and a new niche in the commodity market. Moreover, intellectual resource calls for a long-term and systematic approach to its structuring. Occasional efforts such as “brainstorming” conducted by the outside, invited, specialists do not contribute much to the intellectual capital

of the given enterprise. At the same time, noncreative and unskilled work done by the enterprise's employees make it impossible to create or use the intellectual capital.

Intellectual capital can often make for the survival of an enterprise under crisis conditions. To do this requires a clear understanding of the very notion of "intellectual capital", its structure, the ways of its evaluation as well as the potential benefits arising from the effective use of this kind of capital.

No proper attention is being given to these issues in Ukraine [8, 13]. Historically, patents, licenses, copyrights, etc. were issued by state bodies, these duties having been performed absolutely inadequately. The country was proud of the large number of invention done; however, the earnings to the treasury were miserable compared to what has been achieved by other industrialized countries. Under present conditions, such attitude to intellectual property presents a threat of severe economic disasters. Intellectual property is a constituent part of National Security [9]. Great efforts have been made, for example in the USA, to attract from everywhere people who are capable to create an intellectual product. A case in point is the USA government's declaration that they are ready to grant entry visas to several hundred thousands of computer programmers.

It should be also pointed out that, so far, Ukraine has taken only first steps toward the solution of the problem of protecting intellectual property.

For comparison: in France, over 200 companies are engaged in the issue of copyright and other related rights. An adequate regulation in the sphere of intellectual property has been in progress there since 1943. In addition to France, similar companies dealing with copyright management are found in Bulgaria, Poland, Estonia and other countries. In Poland, significant changes in the legal sphere concerning protection of industrial and intellectual properties have taken place. The intellectual property right, which became effective in 2001, has received the status of Code.

The intellectual capital category is both new and complex. That is why the literature on economics abounds in significant differences as to the interpretation of this term beginning with "brainpower", "the total knowledge of the enterprise's workforce" and ending with company trademark and assets. These definitions are just general terms with no reference to such categories as "price", "rent", etc., nor has this concept received a clear-cut legal definition. The article of the same name in "Civil Code of Ukraine" does not contain such definition; there is only a mere listing of "subjects" and "objects" of intellectual property [1]. The term IP was first recorded at the foundation of the world Intellectual Property Organization (WIPO); however, this term was not then scientifically defined [9, 16]. From the standpoint of accounting, Intellectual property is treated as company's intangible asset that has a certain market value. Therefore, the company can dispose of this property at their discretion: to lease (to hire out), to put as security for getting a loan to expand their own capital, etc.

That is to say, this product can act both as goods and capital [7].

So, the question is: "How is Intellectual capital to be assessed?"

This problem was first faced by some intellectual, information-intensive, companies in the USA when attracting inward investments to expand their business. The investors were not willing to finance businesses like this, which is business with small volumes of tangible assets stock. This brought up a task of measuring the value of intangible assets of a company, which would create a favorable investment situation.

The main consideration in such measurement is the fact that the value of intangible assets of company is precisely that price which the business rival is not able to receive fully for their product because of a lack of such assets.

At present, there are three legal approaches to the assessment of intellectual capital.

- Cost-based approach. It is used in estimating the value of intangible assets in the event that it is impossible to find an analogue, while the predicted income is not steady (e.g. when assessing the database).
- Comparison approach. It is used in the event that there exists a fairly mature market of intangible assets that are assessed.
- Profitability approach. It is used in assessment of patents, licenses, trademarks, property rights. This is based on the estimation of economic gains associated with earning profits at the expense of intangible assets not recorded in the company's balance sheet and which ensure profitable assets or equity capital greater-than-average size.

As for the comparison approach, it is realized by way of correlation between the market value of stock capital (SC) and the value of capital assets (including depreciation) (VCA). We can state that the difference between these two values $IS = SC - VCA$ will suffice to describe the value of non-material assets of a company.

The cut in the gap between the market and the book values shows the need for taking measures to prevent the IC concept from degradation.

D. Tobin, a Nobel Prize winner in economics, has proposed a more reliable indicator of company's Intellectual Level that the difference between the market capitalization and depreciated value of capital assets. The so-called Tobin's coefficient (q) is the ratio of market object's value to the value of its substitute:

if $q < 1$, that is the object is lower in cost than its substitute, there is no point for the company in investing capital in the other object. And vice versa, it is more profitable to buy a new object if it costs the company a lower price. There is one regularity to observe: high value for the coefficient q and IC represent the value of technological investments and human assets. Beside, the coefficient q can describe the degree of profitability for the company in the exchange of goods. For example, at $q = 2$ (a market value of the company is twice as much as the value of its hypothetical substitute), the company will gain the most benefit from this kind of property.

The Tobin coefficient, which is the ratio between market value to its renewable value, is employed as the indicator of intellectual capital usage as a whole. For intellectual capital, the value of this coefficient is larger than 1. When the Tobin coefficient is very high, the company is earning extraordinary profits with the use of this kind of assets. All this is evidence for the advantages of intellectual capital. In this respect, q is an indicator of monopoly rent that is the ability of company to gain higher profits due of having something which is not available with other. This can be considered as a perceptible manifestation of the company's IC.

The coefficient q can be calculated both for a company as a whole and also for its individual object of property.

Naturally, the main medium of intellectual capital can be specially selected and trained personnel of the company.

With qualified management at hand, the maximum return on human assets may be 3 times as high as the return on machinery investments.

The studies of how labor efficiency is dependent on education have revealed the following: a 10% rise in education level yields an 8.6% increase in labor efficiency. The same increase in stock capital results in a 3 to 4% increase in labor efficiency.

Therefore, one can now appreciate the topicality of attempts to find reliable ways of measuring the scope of institutional knowledge of employees, their experience and intuition, and the information they mastered.

Thus N. Koba has proposed a procedure for identification of the coefficient of knowledge which helps in determination of the influence of knowledge management on a company's value added.

The absence of perfect procedure for assessment of IC in Ukraine results in the application of indirect indicators (investments in intangible assets, dynamics of the usage of scientific and research-and-engineering works, innovation introduction and innovative activities).

Thus, the share of scientific and research-and-engineering works is not significant in Ukraine (0.9% and it tends to decrease). The innovative activities indicators in Ukraine do not meet the present world's trends: in the industrialized countries like Japan, Germany, these figures are equal to 50-80%, while in Ukraine – 13%, and this also tends to decrease [7].

Therefore, taking into consideration the fact that IC has become a key factor for maximizing business value, it is essential that necessary preconditions should be created in Ukraine for immediate formation and adequate assessment of IC.

This implies, first of all, a state-level support for the formation, application of IC as well as improvement of the normative base, which would allow for correct assessment of IC.

Conclusions. It has become imperative to do the following with respect to IC question:

1. to make necessary changes in Ukraine's labor market;
2. to solve the problem of storage, accumulation, competent application and skillful commercialization of IC [17];
3. to develop the market of information-and-intellectual products;
4. to identify the scope of the subject's rights to make decisions concerning IC;
5. to overcome the „wastefulness syndrome” with the help of IC [19];
6. liberalization of sector-specific legislation [7];
7. to bring the system of IC accounting in Ukraine in accordance with the world's existing practice, etc.

The above measures will contribute to the desired effect of IC application in Ukrainian economy as a whole and in Ukrainian enterprises in particular. This, first of all, means to increase their market value, at the expense of additionally-involved intangible assets, to 15-20% [10], which could give them (to Ukrainian enterprises) an edge in the economic competition. So, an increase in the company market capitalization by way of implementation of „Value Drivers” will make it possible for most companies to get an increase in market price in the range from 50 to 100% within 2 to 5 years' period, this being the main objective of a company in modern society.

The provision 8: „Intangible assets” of the accounting standards adopted by order of Finance Ministry of Ukraine of 18 October, 1999, No. 244 and by Law „Corporate income taxation” of 28 December, 1994, No. 333/94 (with amendments and supplements), which regulate the intangible assets evaluation procedures, does not meet the currently growing requirements.

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УДК 331.102.344:330.14.133 **Ст. викл. В.М.Якобчук, доц. Л.О. Малик – НЛТУ України**

Інтелектуальний капітал в оцінці вартості підприємств

Розглянуто значення інтелектуального капіталу [ІК], як основного чинника конкурентоздатності держави загалом і окремих підприємств, зокрема проілюстровано. Зрослий акцент на інтелектуальний капітал в загальній вартості іноземних компаній і незначну його частку в балансі управлінських компаній. Наведено дефініції категорій інтелектуальна власність [ІВ], інтелектуальний капітал, нематеріальні активи [НА]. Проведено аналіз оцінки інтелектуального капіталу у вартості українських і зарубіжних компаній. Запропоновані напрямки вдосконалення формування інтелектуального капіталу.

Ключові слова: інтелектуальна власність, інтелектуальний капітал, нематеріальні активи, вартість компанії