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INTELLECTUAL CAPITAL OF ENTERPRISES OF THE AGRICULTURAL SECTOR: THEORETICAL FUNDAMENTALS OF RESEARCH

Abstarct.

Transformational flows in the modern economic environment can be confidently characterized as highly dynamic with accelerating rates at both micro and macro levels of economic systems. The pace of transformation is steadily increasing, making competition increasingly fierce and forcing businesses to adapt to new business conditions. Such changes in economic processes, connections and methods have resulted in the emergence of a new type of knowledge- and information-based economy. As a result, modern businesses are increasingly finding competitive advantages not in the efficiency of the use of material resources, as was the case before, but in the search for intellectual resources.

Keywords: *intellectual capital, agricultural sector, capital, management mechanism, innovation development, convergence development of systems, agricultural innovation system.*

INTRODUCTION

Integration into the world economic system has opened new horizons and opportunities for domestic agricultural enterprises. The flip side of the coin was fierce competition, which is virtually unfamiliar to industries that have operated in a planned economy for more than seventy years. Ukraine's economy is currently at the crossroads of choosing ways of further socio-economic development, which requires analysis of its own practice of systemic economic transformations in the context of studying the main directions of world economic development, adaptation of successful countries to the realities of the modern world market.

MATERIALS AND METHODS

Research on the nature of intellectual capital, its structure and its possibilities for effective use dates back to the second half of the twentieth century. Scientists such as E. Brooking, J. Galbraith, L. Edvinson, M. Malone, T. Stewart, and K.-E. Sweiby et al. have made a significant contribution to the development of the theory of intellectual capital. In Ukraine, O. Butnik-Siversky, O. Kendyukhov, O. Komlichenko, G. Kaletnik, S. Legenchuk, O. Litvinov, O. Strizhak, O. Sobko, A. Chukhno, O. Shkurupiy, O. Shpykulyak, V. Shcherbachenko and others were engaged in research of the questions connected with problems of intellectual capital. Their research is important and serves as a basis for the formation of a modern paradigm of functioning and development of intellectual capital of enterprises. However, the issues of developing an effective mechanism for managing the intellectual capital of enterprises operating in the agricultural sector of the domestic economy remain unresolved. The above-mentioned problematic issues led to the choice of topic and allowed to determine the purpose, object, subject and objectives of the study.

RESULTS

The traditional model of economic growth of industrialized countries has largely exhausted itself and cannot be offered to other countries as a model. The current model of development and the corresponding type of production and consumption are not sustainable for developed countries and are not acceptable for developing countries [1]. In addition, "market transformations in the country's economy have radically changed the food security system, necessitating the formation of a new agricultural policy and its adaptation to European legislation, as well as the introduction of tactical and long-term strategic measures aimed at creating the necessary conditions for effective agri-food sector of the economy, formation of export potential of agricultural products, ensuring physical and economic availability of food, improving product quality, ensuring national food and environmental security and reorientation of the country's agricultural policy towards sustainable development "[2]

The processes of transformation of economic systems involve theoretical coverage not only of the general but also specific in their implementation. Obviously, any transformational processes in the economic sphere need scientific understanding, explanation and, as a consequence, the emergence of opportunities to improve the management of new processes, phenomena, formations in order to obtain a higher beneficial effect. The transition to a new stage of development of economic systems, to the so-called "knowledge economy", necessitates the analysis of a new order of functioning of economic systems based on the concept of information and knowledge as basic resources and sources of wealth [3, p. 123-129].

The basis of the modern economic paradigm is the concept of intellectual capital as a new terminological concept, which reflects the hitherto little-studied sphere of economic formations - intangible, intangible, but no less important. Thus, the expediency of clear identification of the "intangible" component of the capital of the enterprise is due to the need to manage it as one of the most important components of competitive advantage, value added and the value of the enterprise as a whole [4].

The growing attention to the concept of intellectual capital and intangible assets is associated with the growing importance of them in the operation of the enterprise and the expansion of opportunities for positive economic results. About 6-30% of the value of a successful company is accounted for by the assets reflected in the balance sheet, while everything else is intangible assets. If the latter play such an important role in shaping the value of the enterprise, it is necessary to build such management mechanisms that would focus on the most efficient use of so-called "intangible" assets, or intellectual capital.

World business experience indicates that the basis of wealth and competitiveness of modern economic systems is intellectual capital, which explains the increasing interest in its identification, evaluation and management. Empirical studies show a direct link between increased efforts to manage intellectual capital and productivity and the ability to innovate. In particular, as noted by M. Molodchyk [5, p. 7], increasing the intensity of efforts to manage intellectual capital by 1% leads to an increase in the company's ability to innovate by 4%, and productivity - by 3%. Thus, the feasibility of developing ways to improve the management of intellectual capital is obvious.

The concept of intellectual capital in the study of economics has emerged only recently - in the 1990s, although the background of some aspects of this issue can be found in the concepts and ideas of centuries ago. Today, the study of the functioning of intellectual capital has become a modern scientific field that is developing rapidly. One of the key aspects of this research was the formation of approaches to the quantification of intellectual capital. It is also worth noting that the quantitative assessment of intellectual capital has been developed from the very beginning with wide application - not only for knowledge-intensive enterprises, but also for all sectors of the economy.

The main reasons for the increase in the share of intellectual capital in the overall capital structure of the enterprise and the growing interest in intellectual capital by scientists, in our opinion, are the gradual approach to depletion of material and natural resources, increased competition and the need to create products with high added value. way to increase competitiveness, increase demand for high-tech products, etc. (Fig. 1)

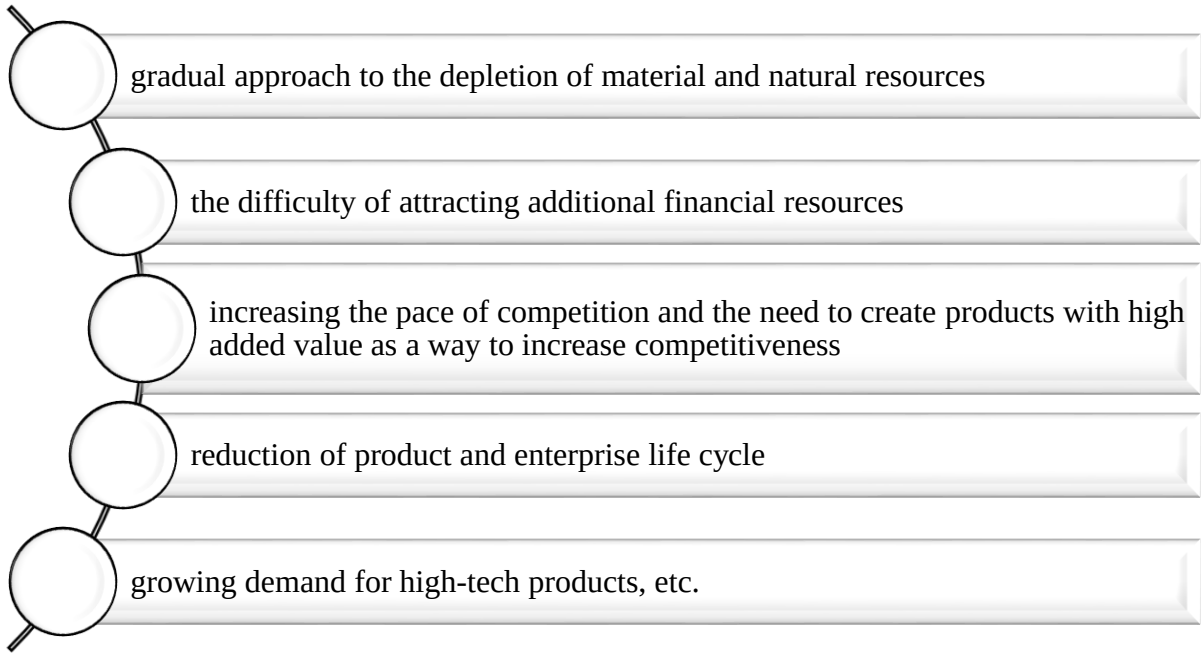

Fig. 1. The main reasons for the growing interest in the issue of intellectual capital

A study of the literature suggests that the theory of intellectual capital emerged as a result of the study of two areas of modern economics - the theory of human capital and the theory of post-industrial society. Within the framework of the first, the term "intellectual capital" was gradually formed, while studies of post-industrial society laid the foundation for understanding the mechanisms of its reproduction and movement. One of the leading experts in the field of using intellectual capital to form the competitive advantages of the enterprise N. Bontis in his works emphasized that intellectual capital was considered by many, defined by some, understood its essence chosen, but not actually evaluated by anyone [7].

Kevin A. Hassett and Robert J. Shapiro, who conducted a study to determine the amount of intellectual capital of 24 sectors of the economy and its share in the total book and market value of enterprises, empirically found that the intellectual capital of enterprises in six of the 24 industries is at least two-thirds of the book value of their tangible assets, in 12 of the 24 industries intellectual capital is at least half of their book value. At the same time, ten of the 24 industries have intellectual capital equal to half or more of their total market value. Thus, the authors emphasize the fact that intellectual capital and intangible assets began to dominate the processes of value creation and wealth in the American economy, which indicates the

transition to an economy based on ideas (idea-based economy) [8].

Using the principle of assimilation of living conditions and business conditions, B. Leontiev draws parallels between the three physical states of matter and three types of capital, pointing out that physical capital is analogous to solid matter, financial - liquid, and intellectual - gaseous. If nature can develop only with a harmonious combination of three states of matter, then in the economy it is impossible to develop only on the basis of two types of capital - physical and financial [9, p. 116-117].

From the point of view of modern economic ideas, the assessment of the market value of the enterprise can be carried out on the basis of taking into account in the value structure of such components as financial, material, intellectual capital and market expectations. Moreover, in the transition from the industrial type of society to information in the context of informatization and intellectualization of the economy, the concept of the category "capital" began to expand and include all new elements compared to classical ideas, it became obvious limitation of the approach to capital research. form, because the competitiveness and market advantages of modern enterprises are largely provided by the use of resources that have an intangible nature (intellectual, informational, organizational, social) [10, p. 120]. If in the mid-1980s the market valuation of an entity roughly matched its valuation according to the financial statements, by the end of the 1990s the market valuation exceeded the accounting value five times. When an increasing part of assets is not taken into account, there is a gap between the valuation of business by the market - market capitalization and its valuation according to accounting data.

According to the World Bank, the share of natural resources in the total wealth of low-income countries at the beginning of 2006 is 26%, while in high-income countries this figure is only 2%, while the share of intangible capital reaches 80%. In the five richest countries in the world (Switzerland, Denmark, Sweden, USA, Germany), the share of intangible capital in the structure of the country's wealth ranges from 82 to 87% [11]. A reflection of this trend is the growth of the intangible component in the structure of the market value of enterprises included in the S&P 500 index of the US stock market (Fig. 2).

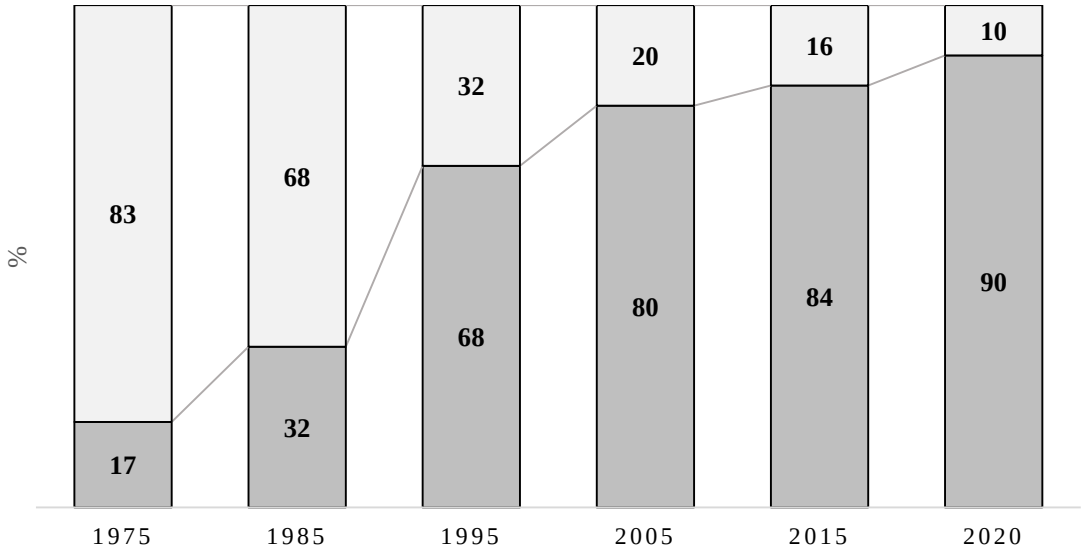

Fig. 2. The share of tangible and intangible assets in the value structure of enterprises S&P 500, 1975-2020

Between 1995 and 2015, the market value of the intangible assets of enterprises increased from 68% to 84%, and in July 2020 Ocean Tomo renewed the Intangible Asset Market Value (IAMV) to assess the economic impact of the pandemic . Thus, it was found that COVID-19 accelerated the trend of increasing the share of IAMV, and intangible assets now exceed 90% of the market value of the S&P 500 [11].

The research results indicate that "over the past 35 years, the economies of the United States and developed countries have undergone economic inversion. These markets are transforming from their industrial production base to a more innovative basis. This shift is one of the most underused areas in the modern economy, finance and investment, especially outside the United States" [12]. Given the rapid pace of intellectualization of the economy, we can say that the value of intellectual capital will continue to grow, and the basis for such changes are digitalization processes that accelerate the spread of knowledge and information. At the micro level, such changes cause differences in the capital structure of modern enterprises, where the influence of the intellectual element is increasing.

Intellectual capital is an important resource and a key factor in economic success and business value creation, an intangible driver of enterprise value formation, which strengthens competitiveness. The modern business environment is quite dynamic, and businesses are undergoing many changes. The survival of many businesses depends on their willingness and ability to adapt to such changes. Thanks to intellectual capital, companies can quickly adapt to change and remain competitive in the markets. Thus, intellectual capital is increasingly becoming a source of competitive advantage through innovation.

The reality today is that in many enterprises intellectual capital is "idle". Intellectual capital management is rarely identified as a priority for the strategic development of domestic business. Since accounting reflects only a small part of intellectual capital in the form of intangible assets, the management of such a significant element in value and significance will help increase the efficiency of enterprise capital. Therefore, managing the level of intellectual capital of the enterprise on the basis of accounting policies will allow: to take into account all assets and more adequately reflect the value of the company; increase the efficiency of intangible asset management; identify factors and reserves of development; increase innovation activity; more fully inform potential investors and increase the attractiveness of the enterprise; create a creative atmosphere; focus more on human capital and its development [12].

Measuring the level of intellectual capital development can provide a number of benefits, including: emphasizing the importance of developing people's knowledge, technology and other components of intellectual capital; support for organizational development in those areas that have the greatest impact; ensuring a better long-term growth rate; helping to make strategic decisions, as we now have a better understanding of where our growth comes from; supporting the allocation and management of financial capital by improving profitability and financial performance.

Thus, the main advantage of measuring and researching the intellectual capital of the enterprise is that the financial statements inform about the past results of the enterprise, but do not cover potential development opportunities, which is the basis for investor interest. The potential of the enterprise does not lie within its financial capital, but in its intellectual capital. Leading financiers are increasingly concerned about the traditional accounting model. Financial reporting, the main product of the traditional accounting model, is extremely inadequate for reporting on business valuations. It is real values, not balance sheet values, that are the focus of financial management. According to New York University, a typical set of financial statements reveals only about 15% of the market value of a business. In order to bridge the gap between market and book value, we need to recognize something called intellectual capital [13].

V. Zhuk's statement about the completion of the formation of the system of accounting for tangible assets and the feasibility of its improvement in part - intangible assets is quite justified. This, in turn, requires the creation of an effective information base that would allow to take into account all the assets, liabilities and results of activities related to its use [14]. Thus, the coverage of information on the intellectual capital of the enterprise will not only better manage its intangible resources, develop staff motivation, as well as provide greater confidence for investors and other stakeholders about the future potential profits of the enterprise.

It is interesting to determine the importance of research and measurement of intellectual capital of the enterprise, highlighted in the Memorandum of the Danish Agency for Trade and Industry "Intellectual capital accounts: reporting and management of intellectual capital": "The company is like a tree. Part of it is visible - it's fruit, and the hidden part - it's roots. If you focus only on the fruit and ignore the roots, the tree will die. A tree can only grow and continue to produce if the roots are nourished"[15]. Emphasizing the imperfection of modern management theory and practice, E. Ibragimov gives the following example: "if a company dismantles 100 lifts before they fully produce their resource, it would be recorded by accounting as a loss. But if 1,000 employees, who have spent at least $ 150 billion on training, leave the corporation, none of the financial statements reflect this as a loss. Moreover, the stock market can show this as a benefit "[16, p. 139]. If we compare the amount of information reflected in the financial statements with the iceberg, most of it remains invisible to stakeholders (Fig. 3).

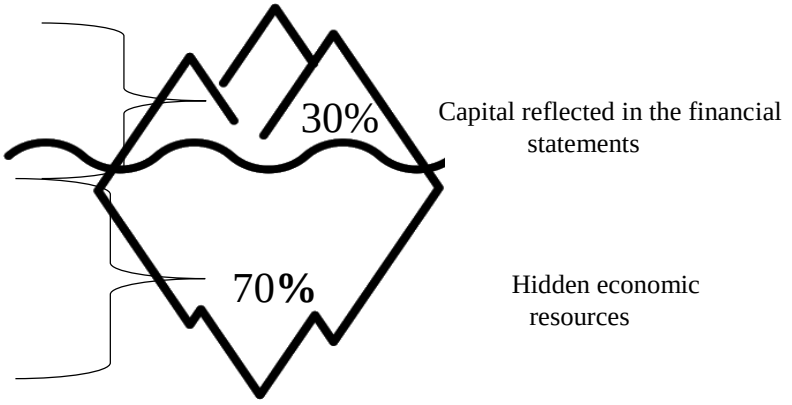

Fig. 3. Schematic representation of the imperfections of the financial statements of the enterprise

Having incomplete, partial information, the company's management will make ineffective decisions, which in turn may lead to lower profitability.

The above makes it possible to identify the main problems associated with the need to identify and manage intellectual capital.

First, the dynamism and inclusiveness of the world economy. Traditional management methods that were effective in the industrial period have become unsuitable for use in the information economy. The process of forming a knowledge economy can be considered as an objective process, because its formation by individual countries changes international

competition and division of labor and does not allow regions outside the context of new economic conditions. As a result, the lag in the formation of the knowledge economy results in a decrease in innovation and export potential. Therefore, there is reason to believe that business management should be based on approaches that take into account the peculiarities of the transition to a knowledge economy.

Secondly, the modification of the capital structure of the enterprise. Today, both external conditions (economic policy, legislation and taxation system, new competitors appear) and internal conditions of the organization (restructuring of enterprises, strategies and organizational structures of many companies, technological changes, the emergence of new jobs, etc. .), which puts most companies in need of preparation for work in the new environment. There is a constant increase in the importance of the "intangible" component of the company's capital, which is an important determinant of innovation and a source of future economic growth. The competitiveness and success of enterprises in industrialized countries are increasingly based on intangible capital, which includes, inter alia, innovation in new processes and products, training of employees and building a strong reputation of the company. Therefore, intangible assets are fundamental for increasing the productivity of enterprises and, consequently, for economic development.

Third, the impossibility of using the traditional accounting system to reflect intellectual capital. The category of intellectual capital arose as a result of the desire to more fully take into account the main factors involved in production, along with physical capital and labor. Accounting methods cannot be used to adequately assess intellectual capital. In addition, the method of accounting is based on the presumption of additivity of all quantities, at the same time, the elements of intellectual capital have a non-additive nature. In turn, the financial statements also do not reflect complete information about the availability, level and dynamics of intellectual capital.

The development of the agricultural sector of the economy in modern conditions is influenced by a number of factors, the level of influence of most of which changes according to the change in the type of management system. The strategic vector of development of modern agricultural enterprises is the convergence with the new order of management at the current stage of evolution of the world economy, characterized by the transition to a post-industrial society. The level of effectiveness of traditional principles and methods of management is gradually declining, because until now the management system of the agricultural sector did not provide for the management of such a specific resource as knowledge. All this necessitates the construction of a new paradigm of agricultural enterprise management, based on the active formation, use and management of intellectual resources in order to accumulate intellectual capital and, consequently, achieve the planned results in the form of excess profits, value added, market segment expansion, increase customer loyalty, etc.

The issues of formation and development of intellectual capital in the agricultural sector are becoming relevant in connection with the objective trends of intellectualization of relations in all sectors of the economy. Effective use of intellectual capital of the agricultural sector is possible provided the creation of an institutional basis for the production, transfer and dissemination of knowledge, which is currently the basis for the formation of sustainable competitive advantages of economic entities. As noted by L. Kurilo, "the strategic perspective of scientific and practical solution of this problem is to form a resource-saving, environmentally friendly, knowledge-intensive sector of the economy, able to ensure the competitiveness of products in domestic and foreign markets, which is impossible without addressing agricultural science, education, formation of functional institutes of scientific and innovative activity "[1].

Taking into account the fact that the agricultural sector is currently the locomotive of the domestic economy, the priority is to ensure its sustainable development, which would take into account the economic, social and environmental components. The statement about the lack of intellectual capital in the agricultural sector is erroneous. Modern agricultural entrepreneurship is not just cultivation of land for profit, but a complex multifaceted concept that reflects economic, environmental, social activities aimed at meeting the needs of consumers in quality agricultural products, providing optimal working conditions for expanded reproduction of human potential of agricultural workers, formation of a high level of food security of the state, development of the newest technical and technological environment of functioning of the agricultural enterprises for maintenance of steady competitive advantages.

CONCLUSIONS

The basis of the new economic paradigm is the concept of intellectual capital as a new economic category, which reflects the still little-studied field of economic formations - intangible, intangible, but no less important.The need for clear identification of "intangible" component of capital due to the need to manage it as one of the most important formation of competitive advantages, value added products and the value of the enterprise as a whole. Management of intellectual capital of the enterprise allows to take into account all assets and more adequately reflect the value of the company, increase the efficiency of intangible assets management, identify factors and reserves of development, increase innovation, more fully inform potential investors.

The categorical-conceptual apparatus has been expanded by clarifying the concepts: "intellectual capital of enterprises of the agricultural sector of the economy covers a set of intellectual resources, which as a result of production and commercial processes provide material and intangible benefits, generate higher added value and enhance competitive advantage" and "management intellectual capital of agricultural sector enterprises, which provides a set of actions aimed at creating, planning, organizing and controlling intellectual resources to increase their

efficiency and socio-economic benefits ", which allowed to expand the terminological field in the theory of intellectual capital in essence, content and the end result.

In addition, it is established that there is currently no single approach and method for assessing the level of intellectual capital. At the same time, the assessment of intellectual capital is the basis for the formation of an effective management mechanism, as the availability of complete and reliable information about all components of intellectual capital is a prerequisite for management actions. Without a properly organized and methodically formed system of intellectual capital assessment, it is impossible to choose the methods and levers of influence, as the lack of completeness of information will contribute to ineffective decisions.

It is determined that the basis for the formation of an effective mechanism of intellectual capital management is the development of such an evaluation method that would determine not only the overall level of intellectual capital development, but also its individual components to develop strategies to improve the efficiency of each. effect of the use of intellectual capital of the enterprise as a whole. The conceptual scheme of two-level estimation of the intellectual capital of the enterprise is offered.

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