

HUMAN CAPITAL AS A FACTOR OF INNOVATIVE DEVELOPMENT OF THE NATIONAL ECONOMY

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The article considers the essential content of the "human capital" category. The role of human capital in the formation of the global knowledge economy of Ukraine is determined, the state of human capital in Ukraine is analyzed according to the human capital index, recommendations are given regarding the improvement of the level of formation and use of human capital and its components as a factor in the innovative development of the national economy.

Keywords: human capital; knowledge economy; National economy; innovative development; human capital index.

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STATEMENT OF THE PROBLEM IN A GENERAL FORM

At the current stage of Ukraine's development, the importance of the human factor is increasing, because without it, the proper functioning of the innovative economy becomes impossible, in which the intellectual abilities of a person, his creative skills and initiative are most needed. In this regard, all economic phenomena and factors of economic growth must be considered in relation to the human factor. That is why economists are interested in the concept of "human capital", that is, in human creative abilities, and on the basis of enterprises, they pay great attention to accumulated human capital as the smallest of all types of capital.

The study of this issue, taking into account the negative impact on human capital and its components, such as the health of the population, the quality of educational services and other macroeconomic indicators, of the COVID-19 coronavirus pandemic, has become especially relevant. Also, in Ukraine, the decline in the level of human capital was significantly affected by the Russian military aggression, as a result of which there is an urgent need for new approaches to the preservation and development of the human capital of Ukraine. It is human capital and the optimal structure of its components that will allow to obtain a positive synergistic effect, which will become the driving force for the post-pandemic and post-war revival and reconstruction of Ukraine.

Since the accumulated national human capital of the country shows the level and quality of life of its population, and also plays a significant role in determining its competitiveness on the world market, especially in the aspect of strengthening European integration, all these factors determine the relevance of the chosen research topic.

ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

Among the researchers who studied the issue of human capital, it should be noted: O. Grishnova [1], O. Borodina [2], N. Markova [3], V. Antonyuk [4], N. Holovai [5], L. Shevchuk [6], T. Kiryan [7], L. Mykhalova [8] etc.

HIGHLIGHTING PREVIOUSLY UNRESOLVED PARTS OF THE GENERAL PROBLEM, TO WHICH THE ARTICLE IS DEVOTED

Considering the significant number of studies on the essence of human capital, the question of the role of human capital as a factor of innovative development in the modern knowledge economy is insufficiently researched among scientists and requires further research.

FORMULATION OF THE GOALS OF THE ARTICLE

The purpose of the work is to characterize the essence of human capital and its role in the economy of Ukraine in the conditions of post-pandemic and post-war revival and reconstruction.

PRESENTATION OF THE MAIN RESEARCH MATERIAL

Human capital is one of the basic and main concepts of the economy, which can describe and explain many processes of economic activity due to their direct connection with human interests and needs.

The theory of human capital has sufficient scientific tools to determine the essence, types, methods of assessment of this scientific category.

In the economy, human capital is understood as a certain set of knowledge, skills, various abilities, as well as a stock of health, which a person needs to receive income. For the first time, the phrase "human capital" was introduced in 1961 by T. Schulz. He claimed that human capital is a combination of all innate and acquired abilities of a person. Human capital is property that is valuable and can be developed through appropriate investments [9]. His follower, G. Becker, expanded this concept. In his opinion, human capital is a stock of knowledge, skills, motivation, investments in education, experience, health, mobility, awareness [10].

The latest macroeconomic studies determine that a person, his intellectual potential and abilities are a strategic resource that can be formed, developed and which becomes a potentially new source of competitiveness of both individuals and enterprises, the national and world economy [11-18].

A more detailed approach to the essential content of the category "human capital" in the works of Ukrainian scientists O. Grishnova [1], O. Borodina [2], N. Markova [3], V. Antonyuk [4], N. Holovai [5], L. Shevchuk [6], T. Kiryan [7], L. Mykhaylova [8] are shown in chronological order in Table 1.

Table 1.

Main approaches to the essential content of the "human capital" category

Approach	Essential content of the category
Grishnova O. (2001)	An economic category that characterizes the set of productive abilities, personal traits and motivations of individuals that are formed and developed as a result of investments, are in their possession, are used in economic activity, contribute to the growth of labor productivity and, thanks to this, affect the growth of the income (earnings) of its owner and the national income [1, p. 16]
Borodina O. (2003)	A set of invested socially useful industrial and general human skills, knowledge, abilities possessed by a person, which belong to him and are inseparable from him, merged with a living personality and are practically used in everyday life [2, p. 51]
Markova N. (2005)	The totality of knowledge, skills, creative abilities, as well as the ability of owners and employees of knowledge-intensive work to meet the requirements and tasks of the enterprise [3, p. 45]
Antonyuk V. (2006)	Such qualities of a person as accumulated productive abilities, knowledge, possession of information, health, motivation and mobility, which he uses in economic activity for the production of goods, provision of services and which provide him with profit [4, p. 40]
Golovai N. (2007)	First of all, a specific resource in the form of special knowledge, skills and abilities, which are used in the production and economic activities of the enterprise for the purpose of obtaining income or creating certain innovative processes for the subsequent production of qualitatively new goods, services and the creation of other know-how [5, p. 133]
Shevchuk L. (2007)	Capital resources of society, invested in people, a person or as a person's ability to participate in production, create, build, create values, the concept of human capital is revealed as a part of the collective knowledge, abilities and qualifications of the carriers of the labor force, which is capable of generating income, that is, which is used for production of goods and services [6]
Kiryan T. (2008)	Socio-economic category, derived from the categories "work force", "labor resources", "labor potential", "human factor", in general, it can be considered as a set of natural abilities belonging to the employee (health, creative tendencies, etc.), as well as independently accumulated (acquired as a result of life experience) and developed by him as a result of investing in education, professional training and rehabilitation [7, p. 73]
Mykhaylova L. (2008)	Assessment of an individual's potential earning capacity. Applying this approach, human capital can be characterized as the ability to more efficiently produce products of higher quality at the expense of higher labor productivity [8]

Summarizing the various definitions of the category of human capital given by foreign scientists and domestic theorists, several main approaches can be distinguished: most economists define human capital as a set of skills and abilities of a person, another part as knowledge acquired in the process of formal education, and the rest are attributed to these concepts, as well as social, psychological, cultural and ethnic characteristics of people.

Although the set of skills and abilities of a person in the economy is called exactly "capital", but still, human capital, unlike physical and other types of capital, has a number of specific features. First, it is the inseparability of human capital from its carrier. Secondly, human capital is characterized by a long investment period. Third, the level of risk of investing in human capital is much higher than in physical capital. Fourthly, the difference between physical and human capital is that the profitability of the former slowly decreases with its accumulation, while the return of the latter, on the contrary, first increases to a level limited by the upper limit of working age, and then sharply decreases. But it should be taken into account that human capital can take not only monetary form. Fifth, the employer, buying the right to use the services of human capital, comes into contact with a free individual who has rights, which leads to the diversity and saturation of the labor market with institutional structures.

So, summing up, it can be argued that human capital is a stock of health, knowledge, abilities, including psychological, motivation, which is innate or acquired and accumulated by an individual with the help of investments and investments, which is used in the spheres of social production, affects productivity and quality of work, amount of income of its owner.

A national economy is only as competitive as its human capital is effectively capitalized in today's hyper-competitive global markets. The world's digital technologies contribute to the globalization of the economy and accelerate the accumulation of human capital by digitizing jobs, providing the population and households with electronic services and intelligent data analysis technologies.

The functioning of the global knowledge-based economy is largely driven by the simultaneous development of information and communication technologies (ICT), software, digital platforms and services. Globalization of the knowledge economy and digital technologies has a significant impact on the state and dynamics of human capital development. On the one hand, firms can access human capital worldwide using a global network of information portals, on the other hand, employees gain access to the global labor market as well. The creation of a new generation of the workforce equipped with modern high-performance competencies for effective and advanced work to obtain high professional mobility under the influence of informatization becomes possible not only in the process of formal education, training and learning in practice, but is also now determined by the conditions of life, the Internet and network information resources, as well as the implementation of ICT by households and the population [14, 16].

Digital technologies contribute to the globalization of the economy and accelerate the development of new qualities of human capital through the digitization of jobs, the provision of electronic services to people and households, the capabilities of the Internet of Things and big data processing technologies. Empirical studies prove that human capital and ICT have a positive effect on the effectiveness of the organization's activities, social development and acceleration of the growth rate of the knowledge production sphere [14, 16].

The entry of human capital into the digital age began with the organization of open digital portals that change the way people interact with the fields of education, health care, learning, culture, leisure and other social services provided electronically.

The development of human capital occurs through the accumulation of knowledge and the acquisition of new skills necessary for successful progress in an ever-changing society, while the development of ICT occurs through the digitalization of social change, economic growth and social progress. Thus, the generally recognized consequences of ICT implementation are: intensification of interactivity, improvement of market efficiency, reduction of information asymmetry and costs of obtaining and using information, as well as global coverage of markets with information services.

Education and professional development are priorities in the models of digital development of society. These measures are considered key measures of human development. When mastering any skills, it is important to develop measures that express the state of readiness to expand the use of information and new technologies for development.

The fundamental basis of digitization is formed by scientific and research activities aimed at increasing the production of public goods and obtaining competitive advantages. Being an integral part of the process of generating new knowledge, research activities create conditions for the development of the digital economy.

Some empirical studies of economic growth have attempted to assess the role of human capital and ICT as a determinant of long-term economic growth performance based on indicators of human capital and ICT literacy [19]. Such indicators usually include: coverage of secondary special and higher education; education expenses; years of study; the level of education of employees and the degree of ICT implementation by households and the population, ICT application infrastructure, development of electronic services.

Since scientists have different approaches to the interpretation of the essential content of the category "human capital" and its components, different approaches to its evaluation are also distinguished, depending on the selected input indicators and the possibility of their measurement. For example, there are expert and statistical evaluation methods. The peculiarity of the statistical method is that it is used for individual indicators of human capital (cost of living, investment in education, etc.).

And work [20] proposed a methodology for evaluating the human capital of the regions of Ukraine, taking into account its main components, namely statistical data: the number of students of higher education institutions; the number of teaching staff; the number of the population with higher education; morbidity of the population by classes of diseases; provision of inpatient hospital beds; the number of doctors of all specialties; providing the population with institutions of culture and art; attendance of

cultural and art institutions by the population. Next, integral indicators are determined: assessment of human capital; identification of threats to the development of human capital; formation of a strategy for the development of human capital.

A variety of indices are used to assess human capital at the national level, including the Human Capital Index (HCI). HCI calculates the contribution of health care and education to labor productivity. The final index value ranges from zero to one and measures the future labor productivity of a child born today relative to a benchmark of full health and full education. This index includes the following components: survival from birth to school age, measured using mortality rates of children under 5 years of age; expected years of schooling, which combines information on the quantity and quality of education, the amount of education is measured as the number of years of schooling that a child can expect to receive by the age of 18, taking into account the prevailing structure of enrollment rates; health, in the absence of a single universally accepted, directly measured, and publicly available indicator, general health is captured by two proxies: (1) adult survival rates, defined as the proportion of 15-year-olds who survive to age 60, and (2) rates of developmental delay in children under 5 years of age.

So, in Ukraine, a child born in 2020 [21] can only expect to achieve 63% of the productivity of an adult with a full education in optimal health. In contrast to most other countries of the region and the world, Ukraine did not observe an improvement in the level of ILC between 2010 and 2020. This means that in order for the Ukrainian people to realize their full human potential, larger and more targeted investments in education, health care, and social protection are needed [22].

Investments in human capital largely determine the structure of the national economy, the efficiency of the national economy at all its organizational levels, as well as the quality of products and services. Based on the fact that in the conditions of the formation of the post-war model of the development of the economy of Ukraine and the development of the information society, creative work occupies a dominant position in the structure of factors of production and general labor costs, the efforts of the state must be focused on the development of a reasonable policy of financing the social sector. Financial resources aimed at education and science should not be considered as state expenses, but as necessary investments in people, without which economic growth is impossible.

CONCLUSIONS

In this work, research was conducted regarding human capital and its role in the national economy. The following conclusions can be made from everything presented in the work.

Human capital is a person's accumulated stock of health, knowledge, skills and abilities, which he uses in professional activities. An increase in the quality of human capital, accordingly, leads to an increase in labor productivity and a person's income.

There are many different classifications of human capital according to different characteristics, because different economists gave it a different structure and considered it at different levels of its application. It depended primarily on what sphere of social life scientists were studying and in what aspect they considered human capital, because the essence of human capital can cover several sciences at once: such as economics, but also psychology, sociology, etc. All because the type of capital is inseparable from its owner - a person.

The problem of formation and accumulation of human capital, which is important both for an individual employee or firm, and for the national economy, was also considered. The formation of human capital must be considered as a two-way process of interaction between an individual and society.

In the modern economy, much attention is paid to the formation and development of the employee's skills, and not to the accumulation of material goods, that is, there is a change in priorities, which leads to a new type of economic development based on the formation, reproduction and consumption of human capital.

Human capital is a generator of economic development. On the other hand, under the conditions of the formation of an information society, where access to information and its effective development are decided by many, the role of human capital in the economy grows even more. Today, production efficiency depends primarily on the initiative of employees. Companies can succeed mainly only through creative ideas and creative ideas. Ideas and technology drive progress.

In the course of the work, it was found that human capital can be measured both at the national level and at the individual and firm level, and there are many approaches and methods of its assessment. Economic evaluations of human capital have become widely used both at the microeconomic and macroeconomic levels to determine the amount of national wealth, societal losses from wars, diseases and

natural disasters in the field of life insurance, the profitability of investments in education, health care, migration and for many others goals

The human capital of Ukraine has a number of features. There are also many limitations to the growth of its quality. Therefore, the problem of reforming the system of education, science and stimulating innovation is now acute. The economic and social development of Ukraine in the future will largely depend on society's attitude to the processes of reproduction of human capital.

If economic mechanisms are not created to ensure that personnel training meets the requirements of production, even in conditions of economic growth, the situation with employment is unlikely to change radically: a shortage of jobs may well be combined with significant levels of unemployment. On the other hand, the most important role is played by both the quantity and quality of jobs. An increase in the number of jobs while their quality structure deteriorates will lead to a "brain drain" abroad. But if investment in human capital is made, and the necessary measures and policies are taken to improve its quality, both the quality of the country's population and its competitiveness in the world market will increase.

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ЛЮДСЬКИЙ КАПІТАЛ ЯК ФАКТОР ЕКОНОМІЧНОГО РОЗВИТКУ НАЦІОНАЛЬНОЇ ЕКОНОМІКИ

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У статті розглянуто сутнісне наповнення категорії «людський капітал». Визначена роль людського капіталу у становленні глобальної економіки знань України, проаналізований стан людського капіталу в Україні згідно індексу людського капіталу, надані рекомендації стосовно підвищення рівня сформованості та використання людського капіталу та його складових як чинника інноваційного розвитку національної економіки.

Ключові слова: людський капітал; економіка знань; національна економіка; інноваційний розвиток; індекс людського капіталу.