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The Role of Human Capital in Shaping Competitive Policy and Strengthening the Socio-Economic Security of Ukraine

Abstract

Purpose. The article is devoted to defining and revealing the role of human capital in shaping competitive policy and strengthening Ukraine's socio-economic security. *The subject of the study* is the scientific and methodological foundations for the development and assessment of human capital as a key factor in the competitiveness of the state and its socio-economic security. *The object* of the study is the processes of formation, use, and reproduction of human capital in the context of globalization transformations, military challenges, and post-war reconstruction of Ukraine. To achieve the set goal, the following theoretical *methods* were used: analysis of source base, comparison, systematization, generalization, and a structural-functional approach.

The category of human capital and its place in shaping competitive policy and ensuring the socio-economic security of the state have been defined. The main components of human capital (educational potential, health and demographic characteristics, innovative activity, social mobility, and flexibility) that determine the level of competitiveness of a nation have been identified. The key mechanisms of human capital's impact on competitive policy (innovation, entrepreneurship development, regional development, investment attraction, social stability) are presented.

The economic, social, and security aspects of the impact of human capital on the socio-economic security of Ukraine are considered. It is shown that a highly skilled workforce reduces dependence on technology imports, ensures social cohesion, and contributes to the formation of effective institutions.

It is established that the scientific and methodological foundations for assessing human capital in the context of security and competitiveness include a set of theoretical and practical tools that allow identifying, assessing, and predicting risks associated with its development. In the course of the study, the basic principles of human capital analysis were identified and systematized: systematicity and comprehensiveness, risk monitoring and forecasting, integration into the state's competitive policy, and the use of quantitative and qualitative indicators.

The importance of a systematic approach to the development of human capital as a strategic resource for Ukraine's socio-economic security is substantiated. It is determined that the methodological principles include the development of a system of indicators for assessing its development, regular monitoring, risk analysis, and

Keywords

human capital,
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the formation of effective management tools. Key components of methodological support for human capital development are proposed: monitoring, assessment, and risk management in the areas of education, employment, innovation, and social protection.

The conclusions of the study are that human capital development is a key factor in the competitiveness and socio-economic security of a country. Human capital is not only an economic resource, but also a strategic basis for building an innovative economy, increasing social stability, and strengthening national security.

The socio-economic security of a state is a dynamic state of stable functioning and development of society and the economy in the face of external and internal challenges, which includes protecting the country's economic interests, ensuring financial stability, managing risks, forming competitive policies, and effectively utilizing labor resources.

An understanding of the relevant scientific and methodological foundations can be based on the main approaches to the study of human capital, its key components, and mechanisms of influence on competitive policy and socio-economic security. The article also defines the basic principles of human capital assessment and development – systematicity, comprehensiveness, risk monitoring and forecasting, integration into public policy, and the use of quantitative and qualitative indicators, which makes it possible to develop effective strategies for its reproduction and use.

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1 Introduction

Contemporary globalization processes and geopolitical challenges necessitate a rethinking of the role of human capital in Ukraine's development strategy. In the 21st century, it is knowledge, skills, creativity, and the ability to innovate that form the basis of competitive advantages for countries, while traditional factors of production (natural resources, capital, material and technical base) are receding into the background (Becker, 1993). The effective use of human potential is becoming the main condition for ensuring the competitive advantages of the national economy and strengthening the socio-economic security of the state (Cherep et al., 2023).

Unlike material resources, human capital is renewable and capable of self-development. It not only determines the pace of economic growth, but also creates conditions for innovative breakthroughs, integration into European and global markets, and ensuring a decent standard of living for the population (Zhyvko, Slipa & Volnykh, 2015). The development of human capital encompasses not only education, but also healthcare, social protection, and state policy in the field of employment and training.

The conditions of war and post-war reconstruction in Ukraine only reinforce the relevance of improving the quality of human capital as a strategic resource for competitive policy. Mass labor migration, loss of labor resources, declining living standards, and the destruction of social infrastructure create long-term risks for the socio-economic security of the state. At the same time, there is a need to restore educational

and scientific potential, adapt the workforce to the needs of the digital economy, and develop a new model of human capital development based on innovation, flexibility, and sustainability.

In the context of Ukraine's European integration course, human capital is becoming strategically important, as its quality determines the success of structural reforms, investment attraction, entrepreneurship development, and strengthening of international competitive positions. Thus, the development of human capital should become the basis of the state's competitive policy and a guarantee of Ukraine's socio-economic security in the medium and long term.

The purpose of this study is to identify and reveal the role of human capital in shaping competitive policy and ensuring Ukraine's socio-economic security. The object of the study is the processes of development and use of human capital in the context of globalization transformations and post-war reconstruction of Ukraine. The subject of the study is the scientific and methodological foundations for the formation and implementation of the state's competitive policy based on the development of human capital as a key factor in strengthening socio-economic security.

2 Theoretical Foundations of Human Capital Formation and Development

The concept of “human capital” has become one of the key categories in modern economic science. It emerged in the mid-20th century in the works of T.

Schultz and G. Becker, who proved that the knowledge, skills, and competencies of the population can be considered a specific form of capital that requires investment and provides future income (Schultz, 1961; Becker, 1993). Thus, human capital differs from physical and financial capital in that it is inherent to a person and is accumulated through education, health care, professional experience, culture, and innovative activity.

Contemporary research indicates that human capital is a fundamental factor in long-term economic growth, determines the level of innovative activity in society, and shapes a country's competitive advantages (Porter, 1990; Migus & Koval, 2021). The quality of human capital affects not only production efficiency, but also political stability, social cohesion, the level of democracy, and the socio-economic security of the state (Zhyvko, Slipa & Volnykh, 2015).

The main components of human capital reflect the multifaceted nature of this phenomenon and determine the areas of investment necessary for its development. Scientific literature emphasizes that human capital is not limited to educational level or professional skills. It encompasses the entire range of socio-economic characteristics of a person – from health status to the ability to adapt to technological and market changes (Becker, 1993; Schultz, 1961). That is why, in order to gain a comprehensive understanding of its structure, it is advisable to identify its key components, their

characteristics, and their significance for the economy and the socio-economic security of the state (Table 1).

Table 1 shows that educational potential, health and demographic indicators, innovative activity, and social mobility are interrelated elements of the human capital system. Each of them has its own significance, but only their comprehensive implementation ensures the formation of a competitive workforce and sustainable development of the national economy.

When studying human capital, it is important to consider different scientific approaches to its definition. Each of them highlights separate aspects of this multifaceted phenomenon, from economic benefits to social and institutional factors. Table 2 presents the main approaches to the interpretation of human capital, their essence, and significance for the formation of competitive policy and ensuring socio-economic security.

Thus, analysis of approaches to interpreting human capital shows that it is a multifaceted category combining economic, social, institutional, and innovative aspects. All approaches complement each other: without the investment component, it is impossible to ensure productivity; without the social component, it is impossible to realize potential; without the institutional component, it is impossible to create the right conditions; and without the innovative component, it is impossible to guarantee competitiveness in the global economy.

TABLE 1 Key components of human capital and their characteristics

№	Component	Characteristics	Significance for the economy and security
1	Educational potential	Level of general and higher education, vocational training, qualifications, access to education	Ensures productivity, innovation, and the formation of an intellectual elite
2	Health and demographics	Physical condition of the population, average life expectancy, population structure, access to healthcare	Determines labor activity, reproduction of the workforce, stability of the social system
3	Innovative activity	Ability to generate new ideas, develop technologies, create startups and products	Promotes the development of high-tech industries and integration into the global market
4	Social mobility and flexibility	Adaptation to change, readiness for retraining, labor mobility	Increases economic resilience to crises, helps maintain competitiveness

Source: (Neustroiev & Pravdyvets, 2021)

TABLE 2 Approaches to interpreting human capital

№	Approach	Essence	Representatives/sources	Significance for human capital research
1	Economic	Considers human capital as an investment in knowledge, health, and skills that provides future income	Becker (1993), Schultz (1961)	Explains the economic impact of developing education and healthcare
2	Sociological	Emphasizes the role of human capital in social mobility, the formation of cultural norms and ties	Coleman (1988)	Reveals the influence of the social environment on the accumulation and realization of human capital
3	Institutional	Focuses on the role of the state, political and economic institutions in the development of human capital	North (1990)	Emphasizes the importance of the institutional environment for the effectiveness of investments in human capital
4	Innovative	Considers human capital as the driving force behind scientific and technological progress and the creative economy	Migus & Koval (2021), Neustroiev (2021)	Identifies the key role of human capital in shaping competitive advantages

The quality of human capital determines a country's ability to implement competitive policies focused on innovative development and integration into global markets. A nation's competitiveness in the global economy depends less and less on the volume of natural resources and more and more on the level of development of science, education, and creativity of the workforce (Porter, 1990).

Human capital is key to: increasing labor productivity and economic development; forming high-tech industries; improving social security and reducing inequality; society's resilience to global challenges, including war, migration, and economic crises.

Thus, the formation and development of human capital is not only an economic but also a strategic task for the state, without which it is impossible to ensure the competitiveness of the national economy and the socio-economic security of Ukraine.

3 Human Capital as a Factor in Competition Policy

The formation of an effective competition policy is one of the key tasks of the state in the context of globalization and European integration processes. Its main goal is to create a favorable competitive environment, prevent monopolization, improve the efficiency of markets, and ensure fair conditions for all economic entities. At the same time, human capital is a central element of Ukraine's competition policy, as it provides the basis for innovative development, economic growth, and the sustainability of the national economy.

Human capital is a system-forming factor in the competitiveness of the state, as it directly affects the efficiency of the economy, the level of innovation development, and the social stability of society. Its influence is manifested through a number of key mechanisms that form the basis of Ukraine's competition policy. These mechanisms include innovation, entrepreneurship, regional development, attracting investment, and ensuring social stability.

Each of these mechanisms has its own specifics, but together they create a complex effect that determines the stability of the national economy and its position in the international arena. For better systematization of these approaches, Table 3 provides a description of the key mechanisms of human capital influence and their implications for the formation of the state's competition policy.

Let us analyze human capital in competition policy (Table 3).

As Table 3 shows, human capital determines a country's competitiveness through a multifaceted influence – from innovation and entrepreneurship to social stability. All these mechanisms are closely interrelated and form a comprehensive basis for developing effective competition policy and ensuring the socio-economic security of the state.

For Ukraine, which is in a state of war and post-war reconstruction, the role of human capital in competitive policy is of particular importance. On the one hand, there is an outflow of skilled personnel abroad, a decline in demographic indicators, and the destruction of educational infrastructure. On the other hand, the war has stimulated the mobilization of human potential, the development of the digital economy, the intensification of innovation, and the growth of entrepreneurial initiative. This creates both challenges and opportunities for the state's new competition policy.

A balanced competition policy in Ukraine should take into account not only antitrust and regulatory mechanisms, but also a human capital development strategy that includes:

- education reform focused on digital and innovative competencies;
- stimulation of scientific research and start-ups;
- the development of small and medium-sized business support programs;
- overcoming regional disparities in employment and education;
- the integration of Ukrainian human capital into global economic processes.

Thus, competition policy cannot be effective without taking into account the educational, social, and human

TABLE 3 Key mechanisms of human capital's impact on a country's competitiveness

№	Mechanism	Characteristics	Implications for competition policy
1	Innovation	Ability to generate, adapt, and implement the latest technologies, develop startups and R&D	Formation of high-tech industries, increasing global competitiveness
2	Entrepreneurship	Active participation of the population in creating small and medium-sized businesses, using knowledge and skills in new types of activities	Diversification of the economy, growth in employment, development of a competitive environment
3	Regional development	Investment in human capital to reduce regional disparities and improve the quality of life of the population	Balanced competition policy, reduction of socio-economic inequality
4	Attracting investment	The country's attractiveness to foreign investors thanks to its highly skilled workforce and capacity for innovation	Development of the investment climate, integration into the global economy
5	Social stability	Ensuring social standards, protecting human rights, high levels of education and culture	Reducing social risks, increasing trust in institutions, stable economic development

resource aspects of human capital development. It is human capital that is the driving force behind the formation of a competitive economy capable of ensuring sustainable development, integration into global markets, and strengthening Ukraine's socio-economic security.

4 Human Capital and Socio-Economic Security in Ukraine

The socio-economic security of a state encompasses its ability to counter internal and external threats while maintaining the stability of its financial, social, and production systems (Denysenko & Povzun, 2019). Human capital is a key indicator of this security.

The level of human capital development directly determines the stability of the economy in the face of crises and the state's ability to counter threats associated with globalization processes, military challenges, and demographic changes. Weak human potential makes it impossible to implement development strategies and jeopardizes the country's competitiveness in the international arena.

To systematize the main areas of human capital's impact on socio-economic security, Table 4 highlights three key aspects – economic, social, and security – their characteristics, and their implications for the stability of the national economy and society.

As shown in Table 4, human capital affects socio-economic security in many ways – through economic, social, and security aspects. All of them are interrelated and form a holistic system that determines the state's ability to ensure stability, competitiveness, and development even in the face of global challenges and military threats.

In the current environment, Ukraine's socio-economic security faces a number of challenges directly related to human capital:

- mass labor migration of skilled workers abroad;
- demographic problems (declining birth rates, aging population);
- loss of labor due to war, internal displacement, and emigration;

- destruction of educational and medical infrastructure as a result of hostilities;
- the need to restore and modernize the education system to meet the challenges of the digital economy.

At the same time, these challenges create the preconditions for the formation of a new model of human capital development focused on innovation, mobility, and sustainability.

Thus, human capital is not only an economic resource but also the foundation of Ukraine's socio-economic security. Its development determines the state's ability to ensure stable economic growth, maintain social cohesion, and resist internal and external threats. The conditions of war and post-war reconstruction only reinforce the importance of human capital as a strategic resource on which Ukraine's future competitiveness and security potential depend.

5 Scientific and Methodological Foundations for Assessing the Role of Human Capital in Strengthening the Socio-Economic Security and Competitiveness of the State

Assessing the role of human capital in strengthening the security and competitiveness of a state is a complex task that requires a systematic approach. This is because human capital does not have a purely material dimension: its development depends on educational, social, demographic, institutional, and cultural factors. Therefore, any assessment of the effectiveness of human capital use must take into account the multifactorial nature of its manifestations and its multilevel impact on the economy and society.

Recent studies (Alkema, Litvin & Kyrychenko, 2015; Denysov, 2017; Cherep et al., 2023) emphasize that the analysis of human capital should be carried out not only in terms of quantitative characteristics (level of education, employment, labor productivity), but also in terms of qualitative indicators: innovation, mobility, adaptability, and social cohesion.

Assessing human capital as a component of socio-economic security is impossible without clearly

TABLE 4 Aspects of human capital's impact on Ukraine's socio-economic security

No	Aspect	Characteristic	Consequences for socio-economic security
1	Economic	A highly skilled workforce reduces dependence on imported technology and stimulates the development of domestic production and innovation	Increased economic competitiveness and greater resilience to global crises.
2	Social	Investments in education, healthcare, and social protection reduce migration, support the integration of displaced persons, and promote stability in society	Social cohesion, reduction of inequality, increased trust in state institutions
3	Security	Developed human capital contributes to the creation of effective institutions, reduction of corruption, and ensuring personnel security	Strengthening of state institutions, improvement of management competence, resilience to internal and external threats

(Diachenko & Artemenko, 2015) (Kalnytska, 2017) (Zhyvko, Slipa & Volnykh, 2015)

defined principles that ensure the comprehensiveness and objectivity of the study. Taking into account educational, demographic, social, and economic factors in their interrelationship allows for the formation of a systematic approach, while monitoring and forecasting risks enable the timely identification of potential threats. At the same time, integrating human capital development into state competition policy creates the basis for the effective use of its potential in the long term. The use of qualitative and quantitative indicators guarantees the objectivity of the assessment and enables international comparisons.

To summarize these provisions, Table 5 systematizes the basic principles of human capital assessment in the context of socio-economic security, their characteristics, and practical significance.

As shown in Table 5, the assessment of human capital in the context of socio-economic security should be based on a systematic approach, risk monitoring, integration with the state's competition policy, and a clear system of indicators. This approach provides a comprehensive picture of the state of human capital, enables the timely identification of threats, and facilitates the development of effective development strategies.

International institutions (World Bank, UNDP, WEF) use similar indicators to form human development and global competitiveness rankings, which confirms their significance.

Thus, human capital development should be assessed as an integral part of the socio-economic security system. Without high-quality monitoring, risk forecasting, and integration of human capital into the state's competitive policy, it is impossible to ensure the stability of the economy and its ability to counter internal and external threats. It is precisely a

systematic approach to the analysis of human capital that allows us to build reliable mechanisms of socio-economic security and create a foundation for the long-term development of Ukraine.

6 Conclusions

The analysis of scientific and methodological foundations for human capital development in shaping competition policy and strengthening Ukraine's socio-economic security allows us to draw several conclusions:

- Human capital is a determining factor in shaping competition policy and increasing Ukraine's competitiveness.
- Developed human capital reduces social and economic risks, strengthening the socio-economic security of the state.
- The conditions of military challenges require a stronger state policy in the field of restoration and development of human potential.
- Prospects for further research lie in the formation of models for assessing the impact of human capital on socio-economic security, taking into account integration processes and post-war reconstruction.

Prospects for further developments in this area include improving the system for developing and evaluating human capital, integrating innovative approaches and digital technologies into the state's competition policy, strengthening the role of education, science, and social responsibility, and the formation of flexible management strategies that will strengthen Ukraine's socio-economic security in the context of globalization challenges and post-war reconstruction.

TABLE 5 Basic principles of human capital assessment in the context of socio-economic security

№	Principle	Characteristic	Practical significance
1	Systematicity and comprehensiveness	Human capital analysis must take into account educational, demographic, social, economic, and institutional factors in their interrelationships	Provides a comprehensive view of the state and prospects of human capital development
2	Risk monitoring and forecasting	Continuous monitoring of demographic, economic, educational, and security threats related to human capital development	Enables timely detection of imbalances and prevention of crises in the field of socio-economic security
3	Integration into the competitive policy of the state	Human capital development should be aligned with overall competition policy objectives and innovation development strategies	Improves the effectiveness of public policy, making it comprehensive and focused on long-term results
4	Use of indicators	Application of quantitative and qualitative indicators: level of education, innovative activity, employment, labor productivity, social protection	Ensures objectivity of assessment, possibility of international comparisons, and formation of the country's rating positions

Source: (Alkema, Litvin & Kyrychenko, 2015; Denysov, 2017)

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