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HUMAN CAPITAL AS A DRIVER OF THE FORMATION OF UKRAINE'S COMPETITIVE ADVANTAGES IN THE POST-WAR PERIOD

Purpose. To substantiate the directions and possibility of using human capital (HC) as a driver of the country's competitive advantage (CA) in the post-war period. To establish to what extent the quality of HC meets the goal of gaining CA, to identify factors of positive and negative impact of war and crisis on human capital as well as to identify of trends in the quality of human capital under the influence of these factors.

Methodology. The method of logical generalization was used to establish the significance of its movement for the value of HC, its interaction with social and economic processes which confirms the validity of considering human capital as a driver of competitive advantage. The method of mathematical induction was used to establish how much the HC quality in Ukraine corresponds to the possibility of acquiring CA. The method of critical analysis is to identify the impact of war and crisis on HC and to establish trends in the quality of human capital. The method of comparative analysis was to establish the proportionality of competitive positions of Ukraine and its neighboring countries.

Findings. It is indicated that the value of human capital is determined by its interaction with social and economic processes, which confirms the legitimacy of considering human capital as a driver of competitive advantage. Factors of positive and negative impact of the war on the quality of HC, trends of changes and the fact that dynamic changes in the balance of these factors cause uncertainty of prospects are identified. It is indicated that war, due to its multifaceted impact, also contributes to the improvement of the quality of a specific LC. It is noted that the tendency of rapid growth of the Employee Search Difficulty Index indicates the need to change HR policies at all levels.

Originality. For the first time, a change in the nature of the trend of the dependence of gross national income per capita on the human development index (HDI) has been established. It has been indicated that the HDI of Ukraine corresponds to the prospect of multiplicative acquisition of CA. It is also emphasized that war increases the level of specific HC in modern directions of technological development has been further developed.

Practical value. The identified areas and the possibility of using human capital as a driver of technological innovation will allow the country to realize its competitive advantages in the post-war period.

Keywords: human capital, economy driver, labor demand, employment, competitive advantages, post-war period

Introduction. The National Economic Strategy of Ukraine for the period up to 2030 [1] indicated that the country is able to gain significant strategic advantages due to the quality of its human capital. The large-scale war narrowed these opportunities – this potential of Ukraine is decreasing due to losses both at the front and in the rear areas, and significant external migration. The consequence of the war is that the effectiveness of regulatory instruments for the balanced reproduction of human capital has decreased in the country.

The loss of the quality of human capital is not only a result of the effects of the war. Also before the start of large-scale hostilities, the trend of losses was characteristic of both general human capital, which, as it is known, is formed through the acquisition of education and universal skills, and specific human capital, which is formed through the acquisition of narrow-profile knowledge and skills.

This is due to the fact that in the conditions of demographic crisis, the use of outdated technologies in production, the insufficient level of innovation implementation, the motivation to acquire new competencies necessary for the development of the modern economy decreases, as do the incentives for training. This, accordingly, does not contribute to the restoration of the quality of human capital.

Inadequate attention of institutional structures to ensuring the appropriate level of quality of human capital in post-war times can lead to chronic unemployment and stagnation of economic processes. This is confirmed by insufficient measures to restore the quality of human capital in Bosnia and Herzegovina, where more than ten years after the end of the war the unemployment rate was over 40 % [2]. This should be taken into account in the conditions of post-war reconstruction of Ukraine, with a possible repetition of the situation of long-term unemployment in Bosnia and Herzegovina.

At the same time, the need for a technological leap for the country, as a guarantee not only of gaining a presence in the global market but also of ensuring an adequate standard of living for future generations, enhances the importance of the quality of human capital. This makes it relevant to study human capital and clarify the factors that contribute or hinder its role in shaping the country's competitive advantages in the post-war period.

Literature review. Scientific research confirms that for countries with developed economies, more than 65% of national wealth is provided by the quality of their human capital [3], while even before the large-scale war, the indicator of the quality of human capital in Ukraine characterized the acquisition of less than 30% of the specified indicator of national wealth [3].

As it is indicated by studies of trends in the number of working-age population of Ukraine, in the coming decades the labor resource will decrease by more than 5 %, which will lead to a slowdown in the annual growth of the country's economy to a value of no more than 2.5 % [3]. At the same time, in the study by Geyets V. M. [4], it is indicated that despite significant losses of the population in terms of deaths, injuries, and forced migration, the country has human potential not only for post-

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war reconstruction, but also, with the development of hightech industries, the use of scientific and technical personnel to ensure the country's export opportunities.

The tendency to reduce the population increases the importance of the quality of human capital as a necessary prerequisite for the implementation of the post-war super-task, to which there is no alternative – ensuring a technological leap, restoring the country on the latest technological principles [5].

Scientific works indicate that under various scenarios, in the post-war period, the lack of qualified personnel will limit economic development [6]. Scientists also note that the dynamics of the challenges of the war cause significant uncertainty in economic development and losses of human capital [6].

In view of this, scientists [7] note the importance of institutional support, in particular in the areas of ensuring the quality of human capital for the implementation of a technological leap. These institutional support measures should ensure an increase in the quality of specific human capital in accordance with the advanced needs of production [8].

Scientific works also note that in order for the human capital factor to acquire a stimulating character, state policy approaches to both its formation and its application should respond more promptly to dynamic external challenges [9].

Borinshtein's article [10] indicates that for Ukraine in order to gain competitive advantages in the post-war period, society's efforts should be directed towards the acquisition of new competencies, without which the quality of human capital will not ensure the country's competitiveness in the global market.

Scientists have confirmed [11] that for countries with the lowest level of investment in human capital, the consequence will be an uncompetitive position in the world market due to the fact that labor productivity in them, according to various approaches to assessment, will be lower by a third or even half of that of leading countries.

To form competitive advantages in the world market, as Cammack [11] points out, one should not rely only on regulatory measures of government structures and changes in approaches to corporate human capital management. Citizens should also take the initiative to increase the quality of their own general and, especially, specific human capital [12].

Researchers point to the emergence of new qualities of human capital in Ukraine during the war, which will influence the formation of the country's competitive advantages in the post-war period, in particular, strengthening national identity [13], increasing the importance of intangible values, the formation of digital culture [14, 15], social cohesion [16], readiness to change competencies [17, 18] and, at the same time, the formation of a sufficient level of resilience of the human resource potential of the industry [19, 20].

A review of research and publications on this issue indicates that, despite the generalization of the definition of the need for human capital to improve the economic performance of countries, this factor has not been sufficiently studied in conditions of war and crisis. Scientific works have also not sufficiently studied the factors of the positive and negative impact of war and crisis on human capital and there are no assessments of the adequacy of its quality in conditions of significant challenges to ensure the proper level of competitiveness in the post-war period.

The purpose of the article. The purpose of the article is to establish to what extent the quality of human capital corresponds to the goal of gaining competitive advantages by the country in the post-war period.

To do this, it is necessary to: examine quantitative indicators of the quality of human capital in Ukraine and other countries of the world; identify labor market trends during the war and their impact on the post-war state of human capital; identify factors influencing the use of human capital as a driver of the economy in the post-war period; assess the possibility of using the effects of the war for positive changes in human capital.

Methods. In the research, the materials of which are presented in the article, both general and special methods of scientific knowledge were used. The method of logical generalization was used to establish the fact that the value of human capital is determined not only by its presence as a resource, but, first of all, by its movement, interaction with other types of capital, with social and economic processes.

The method of mathematical induction was used to identify the transition from linear to nonlinear nature of the dependence of gross national income per capita on the human development index and to establish the boundary of this transition. The method of comparative analysis was used to establish to what extent the human development index in Ukraine provides the possibility of acquiring competitive advantages. It was established that the competitive position of Ukraine according to most indicators of the World Digital Competitiveness Ranking is comparable to the positions of other countries, and even higher according to some indicators.

The critical analysis method was used to identify the positive and negative impacts of war and crisis on human capital and to establish trends in the quality of human capital.

Results. The competitiveness (competitive advantages) of the national economy in this study is considered as an integral indicator, which is the result of the acquisition of greater added value by national products and is necessary for the sustainable positioning of the country in the dynamic conditions of the global market. This, in particular, requires the appropriate quality of human resources in areas that meet the requirements of both greater added value and the task of acquiring sustainability in the global market. Thus, competitive advantages are formed by both external factors – demand, supply and trends in the development of the global market, and internal ones, and the quality of human resources is a mandatory requirement for this.

Human capital as a component of intellectual capital in scientific works is interpreted more broadly than the real socalled physical capital. This capital is determined through the interaction of social and economic communities, primarily as one of the intangible foundations for acquiring competitive advantages of an innovative economy. Thus, the value of human capital is determined not only by its presence as a resource, but, first of all, by its movement, interaction with other types of capital, economic and social structures. As for physical capital, the value of human capital increases precisely with its effective use, but since human capital has not only an economic but also a social nature, the effectiveness of its use depends on the presence of an appropriate environment, conditions for reproduction and functioning. This confirms the legitimacy of considering human capital as a driver of the formation of Ukraine's competitive advantages.

Human capital is known to be divided into categories by the scientific community – individual, corporate, national [8]. War leads to losses of national human capital and, at the same time, creates conditions for the growth of individual human capital, since in extraordinary conditions the need for creativity, and leadership qualities increases, the acquisition of new competencies, social communication skills, collective work, etc. is stimulated.

Firstly, this provides an opportunity in the post-war period to use individual human capital to gain the country's competitiveness, and, secondly, changes the emphasis on the use of human capital in the post-war development period, in particular, paying due attention to increasing the quality of individual human capital and transposing this category of human capital assets into higher-level economic and social assets.

In view of the above, human capital in the post-war period should ensure the implementation of the following mediumand long-term tasks:

- effective implementation of operational current tasks of post-war economic reconstruction and ensuring the rapid pace of this reconstruction, which will avoid the risk of stagnation;

- formation of strategic competitive advantages of the national economy.

These tasks are interrelated, since the solution of the first of them will become the basis for the long-term economic development of the country, that is, a prerequisite for solving the second task.

Therefore, the adequacy of the level of quality of human capital and the factors influencing it need to be assessed, primarily those factors that have not been sufficiently reflected in studies on this issue.

According to the World Bank's Human Capital Project [21], Ukraine ranks *100th* among other countries in the world in terms of the human development index (HDI).

Although Ukraine, throughout the entire period studied by the authors from 1990 to 2022, was ahead of the average global indicator in terms of the human development index, in 2022, Ukraine's HDI index showed a year-on-year decrease of 0.021 points and amounted to 0.734, while the average global HDI index increased year-on-year by 0.004 points and reached 0.739 [19].

The authors conducted a study of gross national income (GNP) per capita indicators for 193 countries of the world depending on their human development index (Fig. 1) according to the Human Development Report 2023–2024 of the United Nations Development Program [22], revealing significant changes in the nature of the specified dependence on the HDI value.

This confirms the above thesis that the value of human capital is determined not only by its presence as a resource, but, first of all, by its movement, interaction with other types of capital.

This study confirmed that up to a HDI value of ~ 0.700 , the graph of gross national income per capita depending on the human development index of countries is approximated by a linear relationship, and with an increase in the HDI value, a feedback loop of sufficient level begins to form between the specified indicators for mutual reinforcement of both factors. This changes the nature of the trend to a nonlinear one, which is formalized by a fourth-degree polynomial, the equation of which is shown in Fig. 1. The average slope ratio of the tangent to the dependence graph after the HDI value of ~0.700 increases by almost an order of magnitude.

The non-linearity of the nature of the specified dependence indicates that at a significant level of the human development index, the quality of human capital begins to multiplicatively contribute to the increase in GNP per capita and, accordingly, GNP per capita provides a multiplicative nature of the growth of HDI.

The non-linearity of the acquisition of competitive advantages depending on the level of the quality of human capital not only gives new pace to technological development and innovation processes, it characterizes cardinal changes in the participation of the national economy in the directions and structure of international economic cooperation. The HDI indicator of Ukraine is still in the promising zone for the multiplicative acquisition of competitive advantages of Ukraine in the post-war period, but the impact of the full-scale war has created the prerequisites for the fragility of the specified prospects, since there are both negative impacts of the war and factors of positive impact. Dynamic changes in the dominance of certain factors also cause uncertainty in the prospects.

Although the direct and indirect negative effects of war on the quality of human capital are mainly highlighted in scientific works [12, 14], at the same time, the lack of relevant statistical data makes it difficult to assess their significance for changing the human development index. In particular, today the post-war prospects for the loss of the working-age population due to migration are noticeably deteriorating. The number of external migrants as of 18.11.2024 was 6.8 million [23]. Migrants are adapting to working conditions in other countries - the share of employed among them tends to grow and by the end of 2024 is on average 45 %, and, for example, in Poland this share is higher -68%, 77 % of migrant children go to Polish schools. This indicates that migrants are taking root outside Ukraine [23]. A sociological survey in Germany indicated that over 73 % of adult Ukrainian migrants have higher education, which is 35 % higher than the average indicator for the population of Ukraine in 2021 [23], indicating a loss of quality of human capital in Ukraine.

This indicates that the end of the war will be a necessary but not sufficient factor in the return of skilled migrants to Ukraine. The contributing factor may be the restoration of infrastructure, the availability of jobs with appropriate financial support, and the country's development prospects. That is, increasing the quality of human capital, in particular through the return of skilled migrants, and the advanced development of the economy, which is accompanied by the acquisition of competitive advantages, are mutually reinforcing factors. This increases the need for regulatory measures of both a strategic and operational-tactical nature. Some work in this direction is already being carried out, as evidenced, in particular, by the Plan for Ukraine within the framework of the EU's Ukraine Facility program. At the same time, maintaining the quality of human capital in post-war conditions requires systematic management of social risks, the provision of social guarantees at the level of neighboring countries, which will stimulate migrants to return and stop the migration of specialists. Unfortunately, there are significant obstacles to regulatory measures in this direction: entrenched interests of social strata, lack of trust in the ruling elites, etc. Reducing social risks should occur not only by increasing state guarantees of social protection, citi-

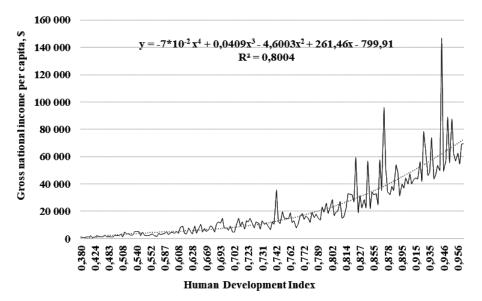


Fig. 1. Gross national income per capita depending on the human development index

zens should take some responsibility for this, in particular for the risks caused by competition in the global labor market.

The cessation of large-scale hostilities and a significant reduction in the army will result in a sharp increase in unemployment, which, accordingly, should be provided with a damper for the surplus of labor in order to avoid significant population migration. The creation of new jobs, which will require the formation of an appropriate base for professional retraining, dynamic change of qualifications should be such a damper. The above, in turn, will require the expansion of centers for training and retraining of personnel, an appropriate reserve of places in institutions of professional technical and higher education. The experience of other countries, in particular the USA, in providing preferential access to higher education for former military personnel or Israel in terms of military personnel taking programming courses during their service, etc., cannot be applied in this case [14], since the demobilization of the Ukrainian military will not be too prolonged due to a significant budget deficit.

Since in the post-war period it is necessary to expect an increase in inflation [4], this will lead to an increase in the financial requirements of the population to ensure their daily needs and, accordingly, to an increase in social tension. The use of human resources for the priority tasks of post-war reconstruction - in construction, destroyed and/or outdated infrastructure, destroyed irrigation systems, etc. will ensure shortterm employment of demobilized people. Therefore, there is a need to solve the problem of using human resources in the long term. The natural way to solve these problems is the advanced innovative development of the economy, which for Ukraine will also mean the acquisition of a strategic competitive advantage, primarily among its closest neighbors in the EU countries. The acquisition of competitive advantages with the use of existing human resources in promising areas of economic renewal will allow solving the problems of: sustainable investment inflow; export development and, accordingly, strengthening the country's budget and removing the debt burden.

Since a significant problem for human capital to acquire the properties of a driver of the country's competitive advantages in the post-war period is the significant level of shadowing of the labor market, which, according to scientific research, has crossed the 40 % mark, it is worth reviewing the wage taxation policy to eliminate the disparity between the wage fund and the level of payments in the informal and official sectors of the economy and reduce obstacles to hiring employees.

A negative factor for ensuring the required level of competitiveness of the country is also the time delay between the need for certain competencies and their acquisition by employees, due to an inefficient system of retraining personnel, which, given the significant dynamics of changes in the postwar period, can lead to structural unemployment.

The imbalance of specialists with the necessary set of human capital qualities and the needs for certain competencies for technological renewal of the economy can also lead to economic imbalance at the macro level, which, accordingly, will slow down or even make impossible the technological breakthrough in the post-war period.

At the same time, the war has given rise to new trends in the labor market, in particular, to a trend towards changing relations between the employer and the employee. This is indicated by the Index of Difficulty of Finding Employees (Fig. 2) according to [24], which, despite its variability, nevertheless tends to grow at a significant pace, although the conditions of war contribute to conservative approaches to the use of human capital.

The spread of conservative approaches to the use of human capital in Ukraine today is also a consequence of the multilevel impact of the war. This is not only the physical loss of people and losses due to injuries and subsequent disability. It also affects the decline in the level of income of the population, the lack of the possibility of changing competencies due to the inadequacy of the personnel retraining system and the lack of citizens' own funds. At the institutional level, the spread of con-

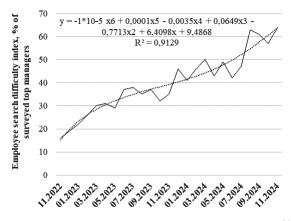


Fig. 2. Dynamics of the Employee Search Difficulty Index, % of surveyed top managers

servative approaches to the use of human capital is a consequence of the fact that there are urgent problems that require prompt resolution. At the same time, this does not allow focusing on the formation of such a quality of human capital that will be needed to ensure the country's competitive advantages in the post-war period. This hinders the realization of the labor potential of citizens who are able to provide the prerequisites for Economy 5.0 in their own country, and, accordingly, contributes to the outflow of the most successful part of the population abroad. That is, with certain regulatory efforts aimed at the return of migrants, the lack of attention of institutional structures to the quality of labor resources stimulates the reverse process.

The hierarchical organization of labor at the meso- and macro-levels also negatively affects the quality of labor resources. At a time when creativity is more effectively manifested in teamwork, the formation of network intra- and extracorporate ties and under conditions of solidary cooperation [17], conservative approaches to the use of human capital lead to the reverse trend. Thus, the hierarchical organization of labor preserves the use of outdated approaches in the relationship between the employer and the employee and, accordingly, is one of the main factors leading to an increase in the Index of the Difficulty of Finding Employees and the Index of Employee Changes. Accordingly, these indices become a marker of the need to change HR policies both at the enterprise level and at the country level. A scarce quality employee requires a higher level of material support, proper working conditions and new approaches in communicating with him.

At the same time, the war forms new properties of human capital, which will be necessary to form the prerequisites for Economy 5.0 in the post-war period, in particular, the level of mobility of workers is increasing, their ability to quickly adapt even under unstable working conditions and unpredictable changes in competence needs. The conditions of war have also accelerated the restructuring of the labor market, in particular in areas that will contribute to the competitiveness of the country in the post-war period. For example, the gender requirements of employers are decreasing, which will contribute to reducing the risk of labor shortages for the growth of the economy after the war.

The driver of the economy in the post-war period will also be those areas of human capital quality formation that are defined as negative in war conditions. For example, internal migration and relocation of enterprises during the war for the growth of human capital in the regions of relocation in the post-war period will determine the economic development of these regions, which, in turn, will increase the competitiveness of the country, in particular in acquiring the presence of products of these regions in the markets of other countries.

A certain direction of increasing human capital in conditions of decreasing population size should be inclusiveness, by which we understand not only the involvement in work, in particular, remote work, of disabled people, whose number has significantly increased as a result of military operations, but also, by expanding the interpretation of the concept of "inclusiveness", the involvement of all categories of the population in participating in the economic development of the country.

A prerequisite for this is providing equal opportunities for this to all citizens regardless of their social status, gender and other characteristics. Equal opportunities also include providing equal access to services that determine the quality of life, in the areas of education, health care, and personal development, as specified in the Sustainable Development Goals, which, accordingly, means accelerating the achievement of these goals. At the same time, providing equal opportunities for personal development does not mean the possibility of their equal acquisition due to the differentiation of citizens by abilities and motivation. Therefore, increasing the quality of human capital should be supported by a fair differentiation of incentives, which is based on qualitative indicators, and not on other ones, in particular, socio-status indicators. It is this approach that will ensure the proper growth of labor productivity and stimulate an increase in the quality of specific human capital, which is important in conditions of a decrease in the number of workers.

Also, the prospects for the formation of the country's competitive advantages in the post-war period are positively affected by today's advanced development of those areas of the national economy to which state budget resources and investor funds were directed during the war and which are provided with human capital as a result of the influence of factors strengthening national identity, social cohesion, and the growing importance of intangible values.

The war, despite all its negative pressure on economic and social processes in Ukraine, increases the level of human capital in the most modern areas of technological development — in particular, robotics. In extreme conditions, engineers and scientists gain new experience and, accordingly, new qualities. In particular, the war increases the possibilities of acquiring in the post-war times the appropriate level of presence of national manufacturers on the ultra-modern and more competitive international market — the market of dual-use weapons and technologies. This also creates prospects for the comprehensive use of the qualities of human capital acquired during activities in this area: practical and theoretical skills, experience in inter-sectoral labor organization, ways to ensure the synergy of their interac-

tion, for the effective development of not only a separate area or some modern industries, but the national economy as a whole. The need for innovative renewal of military technologies gives impetus to the development of digital technologies in Ukraine, first of all, in ultra-modern areas – autonomous automated systems, artificial intelligence, etc. This is important because digital technologies are a prerequisite and driver of the digital transformation of not only the economy but also social and labor relations, providing them with a digital format (remote, digital, platform work and other areas of labor relations organization) [12].

According to [25], this, accordingly, affects the level of competitiveness of the country (Fig. 3).

As it can be seen from the comparison of the components of the World Digital Competitiveness Ranking 2024 for Ukraine and neighboring countries (Fig. 3) [25], the competitive position of Ukraine in most indicators is comparable to the positions of other countries, and in some indicators, in particular "Quality of the business environment", "Knowledge creation", "Spread of innovations" is even higher.

At the same time, a comparison of the components of the World Digital Competitiveness Ranking indicates that Ukraine is lagging behind in the positions "Research and Development (R&D)", "Infrastructure Development" and "Human Capital Creativity". The above characteristics can be extended to other areas of Ukraine's competitiveness, since the digital sphere is the driver of the country's holistic economic system. Accordingly, it is necessary to focus the efforts of regulatory bodies and citizens on the areas in which lagging has been identified in order to acquire the appropriate level of competitiveness, in particular, in the ultra-modern area of economic development.

The consequence of the war and in the post-war period for many countries of the world will be the strengthening of defense and, accordingly, the import and export of weapons. This will lead not only to the expansion of sales of final products of the defense-industrial complex of Ukraine, but also to the development of supporting industries using full-cycle technology, in particular, metallurgical – primarily, the production of special steels, titanium, lithium, aluminum production, enterprises for processing rare metal materials. This, for example, opens up new prospects for the development of deposits of the Tashlyk-Shpolyansky rare metal region, primarily the Polokhiv lithium deposit. At the same time, this will stimulate a reduction in the

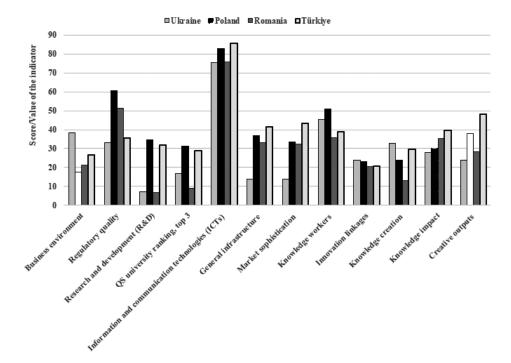


Fig. 3. Comparison of the components of the World Digital Competitiveness Ranking 2024 for Ukraine and neighboring countries

export of raw materials and direct the industry to final products, for example, with the development of the rare metal materials industry, export not aluminum, but foundry aluminum alloys with structural characteristics, piston products made of granulated aluminum, not weakly enriched lithium, but lithium-ion batteries, not zirconium, but aluminum-zirconium ligatures, nuclear power plant fuel elements in a shell containing zirconium, which will significantly increase their efficiency.

Opportunities for this are provided by the availability in Ukraine of highly qualified personnel in materials science, metallurgy, processing of titanium, aluminum, rare metal materials, mining specialists in this field of activity, and changes in the legislation regulating this mining industry.

Factors that will contribute to the use of human capital as a driver of the economy according to the results of the above study are presented in Table.

Some uncertainty regarding the above prospects is due to the war. The professional structure of the lost human reserves is unknown, there is a risk of long-term military confrontation. At the same time, regulatory measures are urgent to create the prerequisites for increasing the level of quality of human capital, and first of all, the operational correction of structural imbalances in employment in accordance with the dynamics of industry development in the post-war period and the ratio of forecast needs for specialists in certain specialites, taking into account the importance of these industries for acquiring the appropriate level of competitiveness of the country. For this, in particular, unified requirements for the competence level of specialists of various specializations need to be implemented and operationally improved, based on a systematic survey of employers.

Conclusions. It is proven that the value of human capital, as well as other types of capital, is determined not only by its potential, but also by its movement, interaction with social and economic processes. This is confirmed by the revealed mutual influence of human development and gross national income of the countries of the world. This proves the legitimacy of considering human capital as a driver of the formation of competitive advantages of Ukraine.

It is proven that for the value of the human development index ~ 0.7 , a change is observed from the predominantly linear nature of the trend of the functional dependence of the specific value of gross national income on the specified index to a non-

Table

Factors that will contribute to the use of human capital as a driver of the economy

No	Human capital factors
1	Human capital movement, interaction with other types of capital
2	Increasing the quality of national human capital through the return of skilled migrants
3	Increasing the quality of individual human capital and
	transposing this category of human capital assets into
	higher-level economic and social assets
4	Reducing the level of shadow labor market
5	Preventing long-term imbalance in the professional structure of the labor market
6	Preventing hierarchical labor organization at the meso- and macro-levels
7	Mobility of workers
8	Inclusiveness of the labor market
9	Providing qualified personnel for the production of final products of the defense-industrial complex and supporting industries using full-cycle technology
10	Increasing the quality of human capital in the most modern directions of technology development
11	Competitive position of Ukraine according to global rankings, in particular "Quality of the business environment", "Knowledge creation", "Spreading of innovations"

linear one. This also proves the formation of the multiplicative nature of the mutual influence of GNP per capita and HDI.

It is proven that the HDI indicator of Ukraine is in a promising zone for the multiplicative acquisition of competitive advantages of the country in the post-war period.

It is proven that a trend of rapid growth of the Index of the Difficulty of Finding Employees has been formed. This indicates the need to change HR policy both at the enterprise level and at the country level.

Insufficient attention to preserving the quality of human capital leads to its outflow to the labor markets of other countries and its establishment there. The quality of labor resources in Ukraine is also negatively affected by the hierarchical organization of labor, the consolidation of conservative approaches to the use of human capital, a significant level of the shadow labor market, the lack of conditions for reproducing the quality of human capital, and the reduction in R&D funding.

It has been proven that the war, while negatively affecting economic and social processes in Ukraine, at the same time contributes to the growth of the quality of specific human capital in the most modern areas of technological development.

This is confirmed by comparing the components of the World Digital Competitiveness Ranking 2024 for Ukraine and neighboring countries. It is established that Ukraine's competitive position is comparable to the positions of other countries in most of the ranking indicators, and is higher in some indicators, in particular, "Quality of the business environment", "Knowledge creation", "Spread of innovations".

It is noted that the growth of defense spending of the countries of the world, under the obvious threats of war, creates for Ukraine in the post-war period the opportunity to take a competitive position in the global arms market. This is due to the acquisition by specialists who work today in the defense industry of Ukraine of new experience and new competencies, that is, the growth of the quality of human capital in this area.

The prospects for further research are to establish the factors influencing human capital as a driver of the development of the post-war economy, to identify the reasons for the strengthening or weakening of the action of these factors, to establish the trends of their change.

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Людський капітал як драйвер формування конкурентних переваг України в повоєнний період

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Мета. Обґрунтувати напрями й можливість використання людського капіталу (ЛК) як драйверу формування конкурентних переваг (КП) країни в повоєнний період. Завдання статті: встановлення того, наскільки якість людського капіталу в Україні відповідає можливості набування конкурентних переваг, визначення факторів позитивного й негативного впливу війни та кризи на людський капітал і виявлення тенденцій змін якості людського капіталу під впливом цих факторів.

Методика. Метод логічного узагальнення дозволив указати, що цінність людського капіталу обумовлюється також взаємодією з соціальними та економічними процесами, що підтверджує правомірність розгляду людського капіталу як драйвера конкурентних переваг. Метод математичної індукції — встановити наскільки якість людського капіталу в Україні відповідає можливості набування КП. Метод критичного аналізу — виявити впливи війни та кризи на ЛК і встановити тенденції зміни якості людського капіталу. Метод порівняльного аналізу — встановити співмірність конкурентних позицій України та країн-сусідів.

Результати. Вказано, що цінність людського капіталу обумовлюється його взаємодією з соціальними та економічними процесами, що підтверджує правомірність розгляду людського капіталу як драйверу конкурентних переваг. Виявлені фактори позитивного й негативного впливу війни на якість ЛК, тенденції змін і те, що динамічні зміни балансу цих факторів обумовлюють невизначеність перспектив. Указано, що війна за її різнобічно направленого впливу також сприяє збільшенню якості специфічного ЛК. Зазначено, що тенденція стрімкого зростання Індексу складності пошуку працівників вказує на необхідність зміни НR-політики на всіх рівнях.

Наукова новизна. Встановлена зміна характеру тренду залежності валового національного прибутку на душу населення від індексу людського розвитку (ІЛР). Указано, що показник ІЛР України відповідає перспективі мультиплікативного набування конкурентних переваг. Також наголошено, що війна збільшує рівень специфічного ЛК у найбільш сучасних напрямах розвитку технологій.

Практична значимість. Виявлені напрями й можливість використання людського капіталу як драйвера технологічного оновлення дозволять реалізувати конкурентні переваги країни в повоєнний період.

Ключові слова: людський капітал, драйвер економки, попит на робочу силу, зайнятість, конкурентні переваги, повоєнний період

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