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## HUMAN CAPITAL IN UKRAINE: STATUS, PROBLEMS AND TRENDS OF ITS DEVELOPMENT IN THE POST-WAR PERIOD

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### ЛЮДСЬКИЙ КАПІТАЛ В УКРАЇНІ: СТАН, ПРОБЛЕМИ ТА ТЕНДЕНЦІЇ ЙОГО РОЗВИТКУ У ПОВОЄННИЙ ПЕРІОД

***The task of the study is to review the process of providing the economy of Ukraine with human capital in the pre-war period and the period of the Russian-Ukrainian war and to identify trends in its further development. In connection with this, the article analyzes the level of provision of the economy of Ukraine with human capital. The methodology of such an analysis is based on the analysis of two eight-year statistical periods in Ukraine: data for the period 2006–2013 (pre-war period) and data for the period 2014–2021 (the war period before the start of a full-scale invasion). Analytical data on the state of labor supply of Ukrainian business in 2022–2023 were also studied. Based on the calculations, the following was established: the available potential of the labor force in Ukraine has significantly decreased, and as a result of the ongoing war in Ukraine, this trend will continue; among the list of risks that will have the greatest impact on the workforce in the period 2023–2027, which are: political instability, migration, education and vitality of the workforce, economic inequality, state intervention (tax and labor laws), cyber risks, aging and shrinking workforce, the priority in Ukraine in comparison with the world falls on political instability and migration. In order to improve the existing situation, the authors proposed a number of urgent measures in the process of providing the economy of Ukraine with human capital during the war period and promising directions for the development of human capital in the post-war period. Options for getting out of this situation are: programs to increase the birth rate and return forced Ukrainian migrants; replacing people with technology and improving labor productivity; launch of global recruiting to invite necessary foreign personnel to Ukraine; state reforms of professional technical education and higher education. Taking into account the fact that the greatest economic value is people, and the development of human capital is a healthy way to increase the economic growth of the entire country, further research should be focused on finding new solutions to the problem of the demographic crisis in Ukraine and creating the necessary conditions for the reproduction of human potential.***

***Завдання дослідження полягає в огляді процесу забезпечення економіки України людським капіталом у довоєнний період та період російсько-української війни і виявленні тенденцій його подальшого розвитку. В зв'язку з чим в статті проаналізовано рівень забезпечення економіки України людським капіталом. Методика такого аналізу базується на аналітиці двох восьмирічних статистичних періодів в Україні: дані***

за період 2006–2013 років (довоєнний період) та дані за період 2014–2021 років (воєнний період до початку повномасштабного вторгнення). Досліджено й аналітичні дані щодо стану забезпечення у 2022–2023 роках українського бізнесу робочою силою. За проведеними розрахунками встановлено наступне: наявний потенціал робочої сили в Україні значно зменшився та внаслідок війни, яка триває в Україні, ця тенденція має продовження; серед переліку ризиків, які у період 2023–2027 років найбільше впливатимуть на робочу силу, а це: політична нестабільність, міграція, освіта та життєздатність робочої сили, економічна нерівність, втручання держави (податкове та трудове законодавство), кіберризик, старіння і скорочення робочої сили, першість в Україні у порівнянні зі світом припадає на політичну нестабільність та міграцію. З метою покращення існуючої ситуації авторами запропоновано низку невідкладних заходів в процесі забезпечення економіки України людським капіталом у воєнний період та перспективних напрямів розвитку людського капіталу у повоєнний період. Варіантами виходу з цієї ситуації є: програми щодо збільшення народжуваності та повернення вимушених українських мігрантів; заміна людей технологіями й підвищення продуктивності праці; запуск глобального рекрутингу на запрошення необхідних іноземних кадрів до України; державні реформи професійної технічної освіти та вищої освіти. Беручи до уваги факт, що найбільша економічна цінність — це люди, а розвиток людського капіталу — це здоровий шлях підвищення економічного зростання всієї країни, подальші дослідження слід зосередити на пошуку в Україні нових рішень проблеми демографічної кризи та створення необхідних умов для відтворення людського потенціалу.

*Key words: human capital, workforce, demography, population, war, risks, forced migration, Ukraine.*

*Ключові слова: людський капітал, робоча сила, демографія, населення, війна, ризики, вимушена міграція, Україна.*

## STATEMENT OF THE PROBLEM IN A GENERAL FORM AND ITS CONNECTION WITH IMPORTANT SCIENTIFIC OR PRACTICAL TASKS

We strongly believe that human capital is the basis of any project, regardless of the country, sphere and type of economic activity. Of course, all the resources that are used for the implementation of this or that project are, to a certain extent, interchangeable, but only human capital has significant features and specifications regarding the possibilities of their substitutability, since the carrier and owner of human capital is a person with his abilities, not the state and /or employers.

Currently, human capital forms 70% of the national wealth of developed countries and only 30% of the national wealth of Ukraine [1].

For years, Ukraine has accumulated problems in the field of human capital development: demographic crisis, labor migration, limited access to quality education and medical services, etc. After 10 years of Russia's war against Ukraine and the full-scale invasion of the Russian Federation from February 24, 2022, the problem of forced migration was added.

There is no doubt that the most important factor in the recovery of Ukraine's economy is people. As it is known, more than 6 million Ukrainians became forced migrants due to the war. It led to a reduction of the domestic labor force by 22% [2]. Therefore, the preservation and development of human capital is currently a critically important aspect for the existence of our country.

## ANALYSIS OF RECENT RESEARCH AND PUBLICATIONS

The question of the theory of human capital throughout the history of the development of society was studied by many scientists: A. Marshall, J. Mill, V. Petty, D. Ricardo, A. Smith, G. Becker, M. Blaug, H. Bowen, J. Kendrick, R. Lucas, R. Solow, M. Friedman, M. Weber, and others. A wide range of human capital problems existing in Ukraine was considered by such scientists as: S.V. Voloshyna [3], A.V. Semikina [4], O.I. Sakhnenko, I.V. Sakhno [5], V.P. Antonyuk [7] and others, as well as analytical centers [6; 11–14]. However, modern Ukrainian realities require a rethinking of the concept of human capital existing in Ukraine in order to develop certain practical steps, both at the level of the country as a whole and in certain spheres of its economic activity.

## SETTING OBJECTIVES

The task of the study is to review the process of providing the economy of Ukraine with human capital in the pre-war period and the period of the Russian-Ukrainian war and to identify trends in its further development. In connection with this, the object of our research is human capital as the main and valuable factor in the development of the economy of Ukraine. The definitions "workforce", "labor resources", "population" used by the authors in the article are synonyms for the object of our research.

## PRESENTATION OF THE MAIN RESEARCH MATERIAL

An important factor in the development of society is the demographic one, which reflects the structure

**Table 1. Number and composition of the permanent population of Ukraine**

Indicator	2006	2010	2013	2014	2017	2018	2019	2020	2021	The growth rate, %	
										2013 to 2006	2021 to 2014
<b>Number of permanent population, thousands of people</b>											
That's all	46465,7	45598,2	45245,9	42759,7	42216,8	41983,6	41732,8	41418,7	40997,7	-2,6	-4,1
men	21434,7	21032,6	20918,3	19787,8	19558,2	19455,3	19343,5	19195,4	19007,0	-2,4	-3,9
women	25031,0	24565,6	24327,6	22971,9	22658,6	22528,3	22389,3	22223,3	21990,7	-2,8	-4,3
<b>Composition of the permanent population, %</b>											
men	46,1	46,1	46,2	46,3	46,3	46,3	46,4	46,3	46,4	0,1	0,1
women	53,9	53,9	53,8	53,7	53,7	53,7	53,6	53,7	53,6	-0,1	-0,1

Source: calculated based on [9; 10].

Note: data starting from 2014 are given without taking into account the temporarily occupied territory of the Autonomous Republic of Crimea and the city of Sevastopol. Calculations (estimates) of the population were made on the basis of available administrative data regarding the state registration of births and deaths and changes in the registration of the place of residence.

**Table 2. Number and composition of the working-age population of Ukraine aged 16–59, thousands of people**

Indicator	2006	2010	2013	2014	2017	2018	2019	2020	2021	The growth rate, %	
										2013 to 2006	2021 to 2014
<b>Number of working population, thousands of people</b>											
That's all	28140,0	29090,1	28372,5	26613,3	25641,3	25293,7	24968,1	24618,9	24294,9	0,8	-8,7
men	14403,9	14085,2	13796,8	12962,7	12541,2	12391,8	12253,2	12100,6	11961,8	-4,2	-7,7
women	13736,1	15004,9	14575,7	13650,6	13100,1	12901,9	12714,9	12518,33	12333,1	6,1	-9,7
<b>Composition of the working population, %</b>											
men	51,2	48,4	48,6	48,7	48,9	49,0	49,1	49,2	46,2	-2,6	0,5
women	48,8	51,6	51,4	51,3	51,1	51,0	50,9	50,8	50,8	2,6	-0,5

Source: calculated based on [9; 10].

Note: data starting from 2014 are given without taking into account the temporarily occupied territory of the Autonomous Republic of Crimea and the city of Sevastopol. Calculations (estimates) of the population were made on the basis of available administrative data regarding the state registration of births and deaths and changes in the registration of the place of residence.

and size of the population on the one hand, and on the other hand it acts as a human factor that is decisive in measures to increase the efficiency and competitiveness of material production. Over the past 50 years, most developed and developing countries have experienced a decline in birth rates and a demographic crisis. All of them seek to obtain labor resources from, as a rule, poorer regions of the world, including and from Ukraine, attracting the workforce with good working conditions, a safe living environment, and high social standards.

Contrary to the widespread opinion about the decreasing trends of the population of Ukraine in recent decades, it should be noted that the total population growth in our country began to decrease in the early 60s of the 20th century: in 1960, the total population growth was 628,4 thousand people, in 1965 year — 415,6 thousand people, in 1979—200 thousand people, in 1986-1987—230 thousand people. Since 1991, there has been a natural population decline in Ukraine [8].

Therefore, we will focus the study of the available human capital in Ukraine on the plane of the available potential of the labor force — the assessment of the dynamics and structure of the permanent and able-bodied population (Table 1). For the calculation, we will choose two eight-year statistical periods in Ukraine: data for the period 2006—2013 (pre-war period) and data for the period 2014—2021 (the war period before the start of a full-scale invasion).

During the period 2014—2021, the number of the permanent population of Ukraine decreased by 1.8 million people, which amounted to 4,1 p.p. This rate of population decline exceeds the first period — 2006—2013 — by 1,5 percentage points.

The number of working-age population of Ukraine aged 16 to 59 as of the end of 2021 amounted to 24,3 million people, which is almost 2,3 million less than in 2014 (Table 2).

In contrast to the almost identical rates of change in the size of the permanent population of Ukraine from 2006 to 2021, the rates of change in the number of the working-age population vary greatly. If from 2006 to 2013 the number of the entire working population increased by 0,8

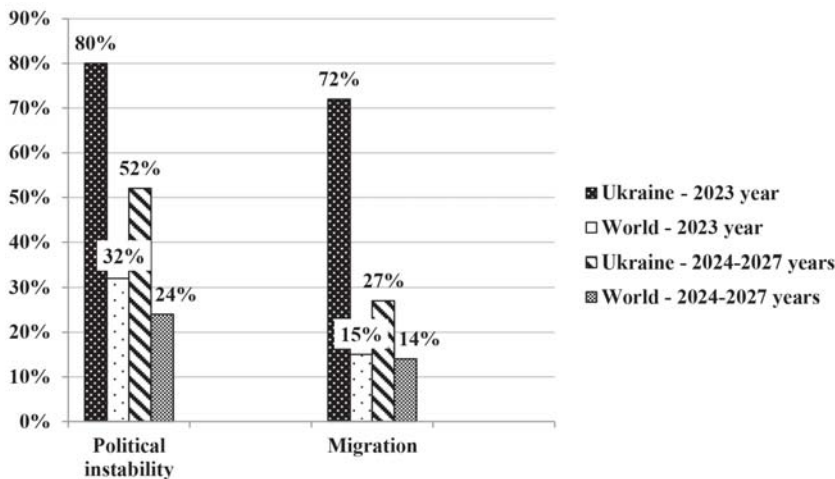
percentage points, then from 2014 to 2021 this indicator decreased by 8,7 percentage points.

In addition, the ongoing war on the territory of Ukraine contributed and continues to contribute to the rapid outflow of the working population. Thus, according to the UN Population Fund report, 36,7 million people lived in Ukraine as of the beginning of 2023, and the Institute of Demography and Social Research assumes that as of January 1, 2023, the population of Ukraine was 28-34 million [11]. Since February 24, 2022, approximately 6 to 8 million refugees have left Ukraine. At the same time, experts assume that the share of irreversible migrants will be about 50%, and the total amount of economic damage associated with human losses will amount to UAH 348,5 billion or 6,3% of GDP [12].

According to the worst estimate of the Institute of Demography and Social Research, only 26 million people may remain in Ukraine in 2033 [13].

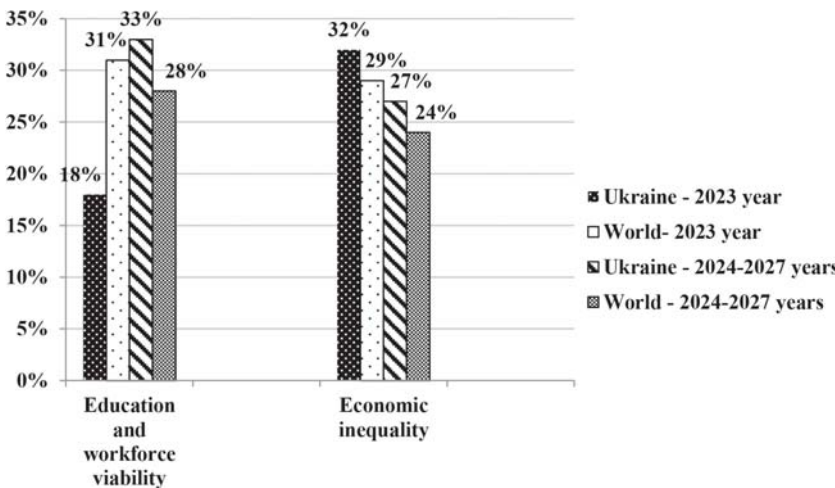
Ukrainian business is already experiencing a labor shortage. The industrial sector expects that there will be, on average, 0,75 applicants for one vacancy in the summer of 2024 [13].

Ukraine is threatened by structural unemployment and a shortage of personnel at the same time. Among the list of risks that will have the greatest impact on the workforce in the period 2023—2027 are: political instability, migration, education and vitality of the workforce, economic inequality, state intervention (tax and labor legislation), cyber risks, aging and reduction



**Fig. 1. The greatest risks of impact on the labor force in Ukraine**

Source: systematized, summarized and grouped based on [14].



**Fig. 2. The greatest risks affecting the workforce in the world**

Source: systematized, summarized and grouped based on [14].

of the workforce forces, the primacy in Ukraine in comparison with the world falls on political instability and migration (Fig. 1).

Instead, the greatest risks affecting the workforce in the world, in addition to political instability, instead of the risk of migration, which is inherent in Ukraine, include the education and viability of the workforce and economic inequality (Fig. 2).

The country's economy must grow at a rate of at least 7% of GDP per year for recovering. Such rates of development require people. And even under the conditions of the return of part of the forced migrants, by 2032 Ukraine may lack 4,5 million workers [13].

Options for getting out of this situation are presented in fig. 3.

The first option is an increase in the birth rate and the return of forced Ukrainian migrants.

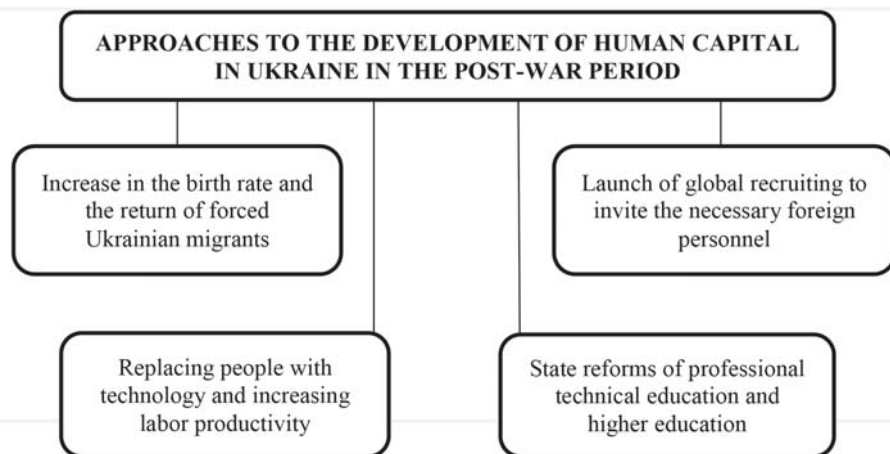
Influencing on the increase of the birth rate is a difficult and long-term process. To prevent depopulation and encourage families to have more children, rich countries spend up to 4% of GDP [13].

A full-scale war is going on in Ukraine, the main expenses of the budget go to defense, so the state does not have the opportunity to stimulate Ukrainians to have more children at the expense of financial mechanisms. Therefore, only economic stability and security can gradually correct the a situation. That is why security, accessibility to the labor market or the opportunity to create your own business, the opportunity to get housing, quality and free medicine and education are important conditions for the preservation and development of human capital and for the restoration of our state.

For the Ukrainian migrants returning it is absolutely necessary to implement a state policy aimed at creating economic incentives, namely: restoration of destroyed infrastructure and housing; creation of retraining and employment programs in "safe" regions; implementation of structural reforms that ensure long-term growth of incomes and living standards in Ukraine.

To return citizens to Ukraine, it will be necessary to enlist the help of partner countries. "If Ukrainians remain abroad, European countries will receive a direct economic benefit, but in case of their return, there will be an indirect benefit

for the EU. The return of refugees will strengthen Ukraine's economy and allow it to invest more in security



**Fig. 3. Prospective directions of human capital development in Ukraine in the post-war period**

Source: generated by the authors.

and reconstruction, so it will need less European funds" [15].

The second option is to replace people with technology and increase labor productivity.

Manpower is, of course, an important factor, but not the key one, because technology is becoming the main thing in the world at the moment. We compare two models of conditional business: 1) production involves the presence of numerous cheap workers and, accordingly, the outflow of workers turns into a tragedy for such an enterprise; 2) business becomes high-tech, thanks to which instead of 50 people, only two are needed in production. Such a company not only adapts to the situation, but is also able to offer two employees decent salaries, for which migrants will be ready to return to Ukraine.

So, such technological modernization and creation of jobs with a competitive level of remuneration will obviously be a challenge for Ukrainian business at the stage of recovery of our country.

At the same time, "technology makes work better for people, and people — better at work. Already now, for example, some Ukrainian agricultural companies are actively using artificial intelligence in production processes. It helps employees improve productivity through data-driven decision-making. According to the results of a global study of trends in the field of human capital, artificial intelligence and machine learning will contribute to an increase in labor productivity by 37% by 2025" [14].

The third way is to launch global recruiting to invite the necessary foreign personnel to Ukraine.

Ukraine will have to become as inclusive as possible in order to attract as many people as possible from all over the world. Attract by any means — liberal internal regulations, ease of employment and business, comfortable living conditions. However, it is possible to expect very serious negative risks in solving demographic problems, primarily the volume of labor supply, due to external migration. For many years, scientists at the Institute of Demography and Social Research named after M. Birds of the National Academy of Sciences of Ukraine. The researchers of this academic institute under the leadership of academicians of the National Academy of Sciences of Ukraine E. Libanova state that "representatives of Asian and African ethnic groups are already showing a desire to immigrate to Ukraine (in most countries of Asia and Africa, the standard of living of the population is still much lower than ours). But on a significant scale of migration, there may be a danger of breaking the unity and internal balance of society, the difficulties of mutual adaptation of the native and immigrant population, and in fact, the ethno-cultural uniqueness of Ukraine may be lost" [16].

The fourth option is state reforms of professional technical education and higher education. Ukraine needs a system of economic planning and forecasting — when the state understands the needs of the labor market and trains relevant specialists.

Thus, we can state that demography and economy are walking side by side. Investors need stability, positive demographic data and forecasts. So, the demographic situation is one of the main markers for making a decision to invest in the country.

It is important to note that the demographic problem in Ukraine did not arise in connection with the war, but much earlier. The reason for migration was the dissatisfaction of those who left Ukraine in the pre-war period with the state of the following important components of lifestyle: income level; work; health care and education systems; security; social life and leisure; observance of rights; ecology, etc. Therefore, among the policies aimed at the development of human capital in Ukraine, already during the war, measures should be implemented to improve the system of rehabilitation of persons with disabilities, improve health care, gender equality, implement housing programs such as the affordable mortgage "eOsel", create sustainable system of transition from military service to civilian life, development of demographic and migration strategies, implementation of pension reform and social protection reform.

### CONCLUSIONS AND PROSPECTS OF FURTHER INVESTIGATIONS IN THIS DIRECTION

The study of the issue of available human capital in Ukraine showed that for many years in the country, the attitude of the state and employers towards people as a stable production resource prevailed. The development of a person as an individual, expansion of his opportunities and needs to transform into a full-fledged economic agent, unfortunately, was not a priority of the Ukrainian government. And the lack of quantitative and qualitative assessments and the incomprehensible perception of the impact of human capital on the economy by the Ukrainian society led to its absence in the rhetoric of the authorities and politicians or government priorities and problems of the demographic crisis. But the Russian-Ukrainian war changed this situation, and all economic agents in Ukrainian society understood that the greatest economic value is people, and the development of human capital is a healthy way to increase the economic growth of the entire country.

So, in modern realities in Ukraine, questions have arisen regarding:

1) immediate implementation during the war of measures to improve the system of rehabilitation of persons with disabilities, improvement of health care, gender equality, implementation of housing programs such as affordable mortgage "eOsel", creation of a sustainable system of transition from military service to civilian life, development of demographic and migration strategies, implementation of pension reform and social protection reform;

2) working out and supplementing by interested persons the promising directions for the development of human capital in Ukraine in the post-war period, namely: the increase in the birth rate and the return of forced Ukrainian migrants; replacing people with technology and improving labor productivity; launch of global recruiting to invite necessary foreign personnel to Ukraine; state reforms of professional technical education and higher education.

Further research should be focused on finding new solutions to the problem of the demographic crisis in Ukraine and creating the necessary conditions for the reproduction of human potential, taking into account the established trends of changes that have taken place.

## Література:

1. Важливість розвитку людського капіталу у сучасному світі. URL: <https://uifuture.org/publications/vazhlyvist-rozvytku-lyudskogo-kapitalu-u-suchasnomu-sviti-yakoyu-maye-buty-strategiya-ukrayiny>
  2. Human Capital UA: обговорення розвитку людського капіталу. URL: <https://pon.org.ua/novyny/10673-human-capital-ua-obgovorennia-rozvytku-ludskogo-kapitalu.html>
  3. Волошина С.В. Композиційна побудова поняття "людський капітал". Торгівля і ринок України. 2018. № 1 (43). С. 51—61.
  4. Семикіна А.В. Людський капітал: підвищення конкурентоспроможності на основі соціальних інновацій: [монографія] / А.В. Семикіна. Одеса: "Атлант" ВОИ СОІУ, 2018. — 272 с.
  5. Сахненко О.І., Сахно І.В. Інвестування у розвиток людини як пріоритетний напрям формування та управління людським капіталом. Інвестиції: практика та досвід. 2019. № 11. С. 50—55.
  6. Розвиток людського капіталу: на шляху до якісних реформ / Центр Разумкова. Київ: Заповіт, 2018. 368 с. URL: [http://razumkov.org.ua/uploads/article/2018\\_LUD\\_KAPITAL.pdf](http://razumkov.org.ua/uploads/article/2018_LUD_KAPITAL.pdf)
  7. Антонюк В.П. Ризики і втрати людського капіталу внаслідок війни. Економічний Вісник Донбасу. 2022. № 1 (67). С. 110—116. URL: [https://doi.org/10.12958/1817-3772-2022-1\(67\)-110-116](https://doi.org/10.12958/1817-3772-2022-1(67)-110-116)
  8. Природний рух населення України. Статистичний збірник. Київ: Державна служба статистики України, 2022. 153 с. URL: <http://www.ukrstat.gov.ua/>
  9. Робоча сила України. Статистичний збірник. Київ: Державна служба статистики України, 2022. 216 с. URL: <https://www.ukrstat.gov.ua/>
  10. Праця України. Статистичний збірник. Київ: Державна служба статистики України, 2022. 209 с. URL: <https://www.ukrstat.gov.ua/>
  11. State of World Population report 2023. URL: [https://ukraine.unfpa.org/sites/default/files/pub-pdf/swop2023-english-230329-web\\_5.pdf](https://ukraine.unfpa.org/sites/default/files/pub-pdf/swop2023-english-230329-web_5.pdf)
  12. Демографічна криза в Україні. URL: <https://focus.ua/economics/561008-demograficheskij-krizis-skolko-lyudej-ostalov-ukrayini-i-hto-ih-zhdet>
  13. П'ять головних фактів про людський капітал України. <https://rubryka.com/blog/human-capital-ua/>
  14. Епоха навичок, інновацій та сильних лідерів: компанія "Делойт" назвала HR-тренди 2023. URL: <https://www2.deloitte.com/ua/uk/pages/press-room/press-release/2023/human-capital-trends-event.html>
  15. Після війни додому можуть не повернутися 3 мільйони українців. Що буде з економікою? Економічна правда. URL: <https://www.epravda.com.ua/publications/2023/09/11/704143/>
  16. Демографічні чинники післявоєнного відновлення нашої країни. URL: <http://www.golos.com.ua/article/364400>
- References:
1. UIF (2021), "The importance of human capital development in the modern world", available at: <https://uifuture.org/publications/vazhlyvist-rozvytku-lyudskogo-kapitalu-u-suchasnomu-sviti-yakoyu-maye-buty-strategiya-ukrayiny> (Accessed 29 Apr 2024).
  2. PON (2023), "Human Capital UA: discussion of the development of human capital", available at: <https://pon.org.ua/novyny/10673-human-capital-ua-obgovorennia-rozvytku-ludskogo-kapitalu.html> (Accessed 25 Apr 2024).
  3. Voloshyna, S.V. (2018), "Composite construction of the concept of "human capital"", *Torhivlia i rynek Ukrainy*, vol. 1 (43), pp. 51—61.
  4. Semykina, A.V. (2018), *Liudskiy kapital: pidvyschennia konkurentospromozhnosti na osnovi sotsial'nykh innovatsij [Human capital: increasing competitiveness based on social innovation]*, Atlant VOY SOYU, Odessa, Ukraine.
  5. Sakhnenko, O. and Sakhno, I. (2019), "Investing in human development as a priority direction in the formation and management of human capital", *Investytsiyi: praktyka ta dosvid*, vol. 11, pp. 50—55.
  6. Razumkov Centre (2018), "Development of human capital: on the way to quality reforms", available at: [http://razumkov.org.ua/uploads/article/2018\\_LUD\\_KAPITAL.pdf](http://razumkov.org.ua/uploads/article/2018_LUD_KAPITAL.pdf) (Accessed April 29 2024).
  7. Antoniuk, V.P. (2022), "Risks and Losses of Human Capital as a Result of War", *Ekonomichnyj Visnyk Donbasu*, vol. 1 (67), pp. 110—116. [https://doi.org/10.12958/1817-3772-2022-1\(67\)-110-116](https://doi.org/10.12958/1817-3772-2022-1(67)-110-116)
  8. State Statistics Service of Ukraine (2022), "Natural movement of the population of Ukraine", available at: <http://www.ukrstat.gov.ua/> (Accessed 25 Apr 2024).
  9. State Statistics Service of Ukraine (2022), "Labor force of Ukraine", available at: <http://www.ukrstat.gov.ua/> (Accessed 29 Apr 2024).
  10. State Statistics Service of Ukraine (2022), "Labor of Ukraine", available at: <http://www.ukrstat.gov.ua/> (Accessed 25 Apr 2024).
  11. United Nations Population Fund (2023), "State of World Population report", available at: [https://ukraine.unfpa.org/sites/default/files/pub-pdf/swop2023-english-230329-web\\_5.pdf](https://ukraine.unfpa.org/sites/default/files/pub-pdf/swop2023-english-230329-web_5.pdf) (Accessed 29 Apr 2024).
  12. Babenko, M. (2023), "Demographic crisis in Ukraine", available at: <https://focus.ua/economics/561008-demograficheskij-krizis-skolko-lyudej-ostalov-ukrayini-i-hto-ih-zhdet> (Accessed 29 Apr 2024).
  13. Lyvch, D. (2023), "Five main facts about the human capital of Ukraine", available at: <https://rubryka.com/blog/human-capital-ua/> (Accessed 29 Apr 2024).
  14. Deloitte (2023), "The era of skills, innovation and strong leaders: Deloitte named HR trends 2023", available at: <https://www2.deloitte.com/ua/uk/pages/press-room/press-release/2023/human-capital-trends-event.html> (Accessed 29 Apr 2024).
  15. Vinokurov, Ya. (2023), "After the war, 3 million Ukrainians may not return home. What will happen to the economy?", available at: <https://www.epravda.com.ua/publications/2023/09/11/704143/> (Accessed 29 Apr 2024).
  16. Yatsevs'kyj, V. (2022), "Demographic factors of the post-war recovery of our country", available at: <http://www.golos.com.ua/article/364400> (Accessed 29 Apr 2024).

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