

Human capital mobility in the context of globalisation, technological change and demographic transformations

Vira Novikova*

PhD in Technical Sciences, Associate Professor
V.N. Karazin Kharkiv National University
61022, 4 Svobody Sq., Kharkiv, Ukraine
<https://orcid.org/0000-0003-3153-2619>

Abstract. The relevance of the research is stipulated by the need to study the impact of military actions on the mobility of human capital as a key factor of economic development in the conditions of the transformation period in Ukraine. The purpose of the study was to determine the main trends in the mobility of human capital and identify groups of factors, influencing the movement of labour resources in different economic and social conditions. Methods of comparative analysis, synthesis and systematisation were applied to achieve this goal. A comparative analysis made it possible to identify differences in mobility factors between different regions and countries. The synthesis method made it possible to integrate the obtained data and identify general patterns. Systematisation allowed for structuring the factors, influencing migration processes. In the course of research, it has been discovered that the key trends in the mobility of human capital include digitalisation of labour, the spread of remote work, the growth of international labour migration and the change in the structure of demand for professional skills. It has been found out that the war in Ukraine has significantly transformed migration processes, stimulating the outflow of highly qualified specialists abroad, as well as boosted internal mobility due to the movement of workers to safer regions. It has been proved that the interaction of globalisation, technological and demographic factors significantly affects the scale and nature of human capital mobility. In particular, the development of digital technologies has expanded the possibilities of remote work, which has become an important mechanism for adapting to crisis conditions. Demographic processes, such as population aging and increasing demand for young labour also affect the nature of international mobility. The practical significance of the study is determined by the possibility of using the results to develop strategies for adapting labour market to new conditions, improving mechanisms for regulating migration processes and increasing the efficiency of labour resource management

Keywords: globalisation challenges; labour migration; organisational culture; remote work; socio-economic processes; technological changes

INTRODUCTION

The issue of human capital mobility is relevant: globalisation contributes to the increase of international labour mobility, as companies seek talent in the global labour market and professionals migrate in search of better career opportunities. Rapid technological developments are changing skill requirements, forcing workers to retrain and seek new labour markets. Apart from voluntary migration, many workers are forced to change their profession or work environment due to external circumstances, posed by

social and psychological challenges. Crises, including the COVID-19 pandemic and the Russian invasion of Ukraine in 2022, have exposed the vulnerability of global supply chains and migration flows, reinforcing the need to manage labour mobility.

J. Masdonati *et al.* (2022) concluded that forced career changes are accompanied by isolation, uncertainty and the need for adaptation. This is especially true in conditions of military conflicts and economic crises. S. Orie *et*

Article's History: Received: 27.01.2025; Revised: 09.05.2025; Accepted: 27.06.2025

Suggested Citation:

Novikova, V. (2025). Human capital mobility in the context of globalisation, technological change and demographic transformations. *Development Management*, 24(2), 59-68. DOI: 10.63341/devt/2.2025.59.

*Corresponding author



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

al. (2025) pointed out that the scale of career changes depends on professional mobility, access to education and state support, affecting the reintegration of workers into new markets. Ukrainian researchers have studied the mobility of human capital in various aspects. In particular, I. Tomashuk & L. Boltovska (2022) studied the impact of migration processes on the world economy, emphasising the importance of improving the system of international labour migration regulation. V. Blyzniuk & L. Yatsenko (2023) considered labour mobility as a factor of boosting human capital, analysing the main factors influencing its formation and socialisation, as well as the tasks of state policy to support it. A.V. Moisiyakh (2022) focused on the strategic management of human capital in order to form an innovation-oriented economy on the basis of modern challenges that require the application of new approaches to the development and preservation of human capital, in particular among people with special needs.

Yu. Safonov *et al.* (2023) emphasised the importance of human capital development in the context of Industry 4.0 and social challenges caused by digital transformation. They discovered that demographic changes, in particular the growth of migration flows, population aging and the transformation of demographic structure, directly affect the labour market. It necessitates international mobility to balance labour supply and demand. Labour migration plays an important role in the economic development of countries, contributing to economic growth and strengthening social stability. States actively regulate migration processes through relevant legislation and international agreements, which determines the level of human capital mobility.

Special attention should be paid to social aspects of mobility. L. Mandemakers *et al.* (2024) found out that women, migrants, elderly and unskilled workers are less likely to be career mobile due to limited access to new opportunities, which complicates their integration into the labour market. O. Stryzhak & O. Pravdyvets (2022) pointed out that war transforms the labour market, creating challenges for the development of human capital. It reduces the employment rate and boosts labour migration within and across the country, affecting workers' skills and their adaptation to new economic realities. The authors emphasised that martial law accelerates digitalisation and automation, opening up new opportunities for human capital mobility. At the same time, these changes provide for retraining and adaptation of the workforce to maintain labour market efficiency. O. Stryzhak (2022) emphasised the close connection between human capital development and digital technologies as a key factor in the modernisation of society in the context of globalisation and innovation.

The above mentioned suggests that the problem of human capital mobility is relevant and requires an integrated approach from governments, business and the academic community to achieve effective solutions and measures that would take into account the interests of all the parties involved. Thus, the purpose of the article was to identify key trends in human capital mobility and characterise the main groups of factors, influencing the movement of labour resources in the context of socio-economic changes. The scientific novelty is stipulated by the fact that economic, social, political, technological and demographic factors, determining the scale and direction of population mobility,

have been identified in the study. A special attention was paid to the analysis of their interaction and impact on labour market dynamics.

● MATERIALS AND METHODS

Methods of comparative analysis, synthesis and systematisation have been used to achieve the goal of the study. Their application allowed for a comprehensive assessment of human capital mobility, identification of key factors influencing it, and development of recommendations for its regulation. The collected data contributed to drawing conclusions regarding the main drivers and barriers to labour mobility in Ukraine, as well as outlining areas for improving state regulation in this sphere. The study was carried out in several stages.

1. Collection and analysis of relevant literature, statistical data processing. The analysis of labour migration trends was conducted based on data from World Bank (2023a; 2023b), OECD (2024), M. McAuliffe & L.A. Oucho (2024). Synthesis was used to combine the results of scientific literature analysis, international reports and statistical data, which made it possible to formulate general trends and patterns of human capital mobility. More than 20 scientific articles, monographs and reports of international organisations were examined. This method also made it possible to summarise information about economic, social, political and technological factors, determining the level of population mobility.

2. Comparative analysis of international experience. A comparative analysis was used to study differences in factors of human capital mobility in different countries and regions. In particular, the peculiarities of labour mobility regulation in the European Union countries, Canada and the USA, as well as mechanisms of state support for Ukrainian migrants, were studied. In addition, the analysis contributed to assessing the effectiveness of policies for attracting and retaining highly qualified specialists, as well as comparing strategies for reducing the outflow of personnel in countries with different levels of economic development.

3. Systematisation of the obtained results. Systematisation made it possible to structure the factors, influencing the mobility of human capital into five main groups (economic, social, political, technological and demographic), which were characterised in the course of the study. Each of the above groups was studied in the context of its impact on international and internal labour mobility. The main attention was focused on assessing the significance of economic, social and political factors for labour mobility. The consequences of the war for the mobility of human capital in Ukraine were considered separately, as well as the prospects for the development of remote work as a tool to curb the outflow of personnel. The analysis also covered state policy mechanisms aimed at regulating labour mobility.

● RESULTS AND DISCUSSION

Human capital mobility is defined as the ability and willingness to change employment, profession, residence or education to increase competitiveness in the labour market and to meet personal and professional needs. It covers three main areas: geographical, professional and educational mobility. Geographical mobility involves the

movement of workers between different regions or countries. Professional mobility is characterised by a change in the field of activity or career direction. Educational mobility refers to the transfer of degree-seeking students between educational institutions within or outside the country in order to obtain knowledge and qualifications. One of the most important trends has been the deepening of globalisation processes, which has contributed to the opening of borders and simplifying international co-operation. This, in turn, has reduced barriers to workers' movement between countries and made the labour market more integrated at the global level. Easier access to international labour markets has opened up new opportunities for qualified specialists, although at the same time has intensified competition between countries for attracting highly qualified personnel.

The rapid development of information technologies and digitalisation has allowed employees to work remotely, which has significantly broadened their opportunities for professional mobility. V. Melnychuk (2023) study has proved that digitalisation is a determining factor in the change of labour market structure. In particular, the development of digital technologies contributes to the growth of demand for big data specialists, artificial intelligence (AI) and cybersecurity specialists, which, in turn, increases their mobility and competitiveness. The creation of a continuing education system plays an important role, allowing specialists to adapt quickly to rapid changes in the labour market. It has led to a decrease in dependence on the physical location of the employer, which is especially relevant for specialists in the field of IT, marketing, financial services and data analytics.

Demographic changes have played an equally significant role in shaping modern trends in human capital mobility. The population aging in developed countries has led to an increase in demand for young labour, which has encouraged international migration of specialists from less developed regions. The governments of many countries have developed special programs to attract foreign workers, which has contributed to the strengthening of global migration flows. At the same time, growing competition between countries for highly skilled workers stimulates the development of new strategies for attracting them. A study by D. Kaplan *et al.* (2023) has proved that those countries, which introduced rapid employment programs for foreign specialists, demonstrate better results in the field of economic development and innovation.

Educational migration also had a significant impact on the human capital mobility. The number of students studying abroad increased, which both broadened their professional prospects and increased their chances of employment in the countries of study. Many graduates remained to work in the host countries, which affected the structure of national labour markets and created new challenges for donor countries of educational mobility. Moreover, the growing popularity of flexible forms of employment, such as self-employment, temporary work and remote work, contributed to an increase in the level of worker mobility. The opportunity to work on projects for different companies in different countries enabled specialists to change their place of residence more easily, choosing countries with better working conditions and social security.

The spread of AI has played a special role in the transformation of mobility, having a multifaceted impact. The analysis of scientific literature suggests that the development of AI has changed the structure of demand for skills, contributing to the automation of routine and technical tasks (Butelskyi *et al.*, 2024; Kostyk & Tsymbal, 2024). It has led to a decrease in demand for traditional professions, while contributing to an increase in the need for specialists in programming, big data analysis, cybersecurity and AI. At the same time, the modern labour market has required a combination of technical competencies with soft skills, such as project management and effective communication in a globalised environment.

AI has also significantly affected territorial mobility, expanding opportunities for remote work. Specialists have been able to work anywhere in the world without the need for physical migration, which has reduced relocation costs and facilitated adaptation to new working conditions. This aspect has become particularly important in times of crisis, in particular during military conflicts and economic shocks, such as those occurring in Ukraine.

Thus, modern human capital mobility is the result of a complex interaction of globalisation, technology, demographic and socio-economic factors. The identified trends indicate the growing importance of digital technologies, educational mobility and government policies in shaping global labour markets. The obtained results support the findings of previous studies regarding the significant impact of digitalisation, demographic changes and globalisation on labour mobility (Czaika & de Haas, 2018; Falk & Hagsten, 2020). It is worth mentioning that in the post-war period, Ukraine will face unique challenges, as forced migration, a reduction in the number of highly skilled workers and changes in the organisational structure of enterprises call for immediate measures from the state and business (Antoniuk & Zaloznova, 2023; Halushka, 2024). In particular, key strategies may include the implementation of comprehensive migrant reintegration programs, expanding remote work opportunities and creating financial and social incentives for the return of specialists. At the same time, as international experience suggests, long-term results depend on the effectiveness of adaptation mechanisms, in particular the policy of qualifications recognition, the development of educational programs and the integration of new technologies into human resource management processes (Friedman, 2020; Kaplan *et al.*, 2023).

Due to the introduction of AI, the educational process becomes more flexible: AI helps create personalised curricula for retraining or advanced training; universities adapt their programs to attract foreign students, facilitating knowledge exchange. AI stimulates enterprises, provide for the creation of new business models and start-ups support. Although AI opens up new opportunities, it also creates challenges. One of these is the digital divide. Not all countries and regions have equal access to technology and training. AI also displaces unskilled specialists: it replaces physical and repetitive work, leaving some categories of people unemployed. Therefore, the question of ethical and social aspects and the need to regulate the impact of AI arise. It is important to ensure a balance between the introduction of AI and the protection of workers' rights. The

issue of developing adaptability skills becomes relevant, as the mobility of human capital depends on the ability to learn and adapt quickly.

Taking this into account, the development of digital competencies is an important factor in increasing mobility, which allows employees to adapt to changes in the labour market and increases their competitiveness. M. Czaika & H. de Haas (2018) have concluded that more than 70% of employers in high-tech industries prefer candidates with experience in the field of digital transformation and AI. They point out that such specialists have wider

opportunities for employment both in their country and abroad, which contributes to their professional mobility. Moreover, the implementation of digital solutions in various sectors of the economy provides for constant improvement of employees' skills, stimulating the development of continuous education and retraining system. Based on current trends, determining the issue of human capital mobility, and relying on the latest statistical data, 5 groups of factors can be identified, the understanding of which will contribute to revealing features of this process: economic, social, political, technological, psychological (Table 1).

Table 1. Characteristics of groups of human capital mobility factors

Groups of factors	Characteristics	Statistical data
Group of economic factors	Economic growth and development. Regions or countries with high economic growth rates often create more opportunities for employment and career advancement. Investment in certain industries or regions can lead to the creation of new jobs and an increased demand for skilled labour	According to the OECD, 50% of international migrants relocate for economic opportunities Salary is the main factor for 70% of employees when choosing a workplace
	Wage levels. High wages in certain regions or industries can encourage workers to relocate for better economic conditions. Differences in wage levels between countries or regions are often the main motivator for international or internal migration	
	Infrastructure and working conditions. Developed infrastructure, including transportation, housing and social services, social guarantees, workplace safety, working conditions and opportunities for professional development can contribute to the attractiveness of certain regions for the workforce	
	Tax policy. High taxes can discourage mobility, while tax exemptions or lower tax rates can attract workers. Government fiscal policies aimed at supporting business and creating jobs also affect mobility	
	Cost of living. The high cost of living in a certain region can deter migration, even if wages are higher there. A low cost of living combined with a reasonable wage level can be attractive to workers	
	Investing in human capital. Regions that invest in education and vocational training can create better conditions for the development and mobility of the workforce. Access to advanced training and retraining programs promotes occupational mobility	
	Housing market. The affordability and cost of housing influence decisions to relocate. High housing prices can discourage migration, while affordable housing can encourage it. Government policies to support affordable housing can promote mobility	
	The opening of new markets and the integration of economies can create new opportunities for employment abroad. Transnational corporations often create jobs in different countries, encouraging international mobility	
Group of social factors	Social networks and connections. Social networks availability and support can facilitate adaptation to a new location. Social connections, family circumstances and cultural characteristics can both encourage and discourage mobility	35% of migrants cite family circumstances as the main reason for relocation 40% of new migrants stress the importance of social networks for their integration
	Education and access to learning opportunities. A high level of education increases competitiveness in the labour market and the willingness to relocate for better opportunities. International and domestic student exchange programs, internships and advanced training courses promote mobility, allowing people to acquire new skills and knowledge	
	Quality of life. The availability of good social infrastructure, such as medical facilities, schools, cultural and entertainment facilities, increases the attractiveness of a region for residence. A high level of public safety is an important factor in the decision to relocate	
	Cultural and value factors. Countries and regions with a high level of tolerance for cultural differences attract migrants, providing comfortable conditions for integration. Societies that highly value education, professional development and self-realisation encourage people to seek new opportunities	
	Demographic factors. Young people are generally more mobile than older generations, so regions with a high proportion of young population have higher mobility. Single people and couples without children are more likely to move than families with children	
	Social programs and immigration policies. Government programs that promote employment, training and relocation can stimulate mobility. Liberal immigration policies and integration programs for immigrants promote international mobility	
	Social justice and equal opportunities. Equal opportunities for all increase overall mobility, allowing people from different social groups to realise their potential. Supporting gender equality promotes women's active participation in the labour market and their mobility	

Table 1, Continued

Groups of factors	Characteristics	Statistical data
Group of political factors	Security and stability policies. A high level of political stability and the absence of conflict encourage the inflow of labour. Policies that ensure the protection of human rights and civil liberties contribute to the creation of attractive living and working conditions. Programs aimed at the integration of migrants, such as language courses, housing support and health insurance, contribute to successful adaptation and increase mobility. Policies that support family reunification allow workers to relocate together with their families, which contributes to stability and mobility	55% of international migrants relocate to countries with high levels of political stability Regulatory policies can either reduce or increase migration levels by 20-30%
	Regulatory policy. Laws and regulations, facilitating or restricting migration, play an important role. Simplifying procedures for obtaining work permits and setting up a business promotes the mobility of workers and entrepreneurs. A high level of transparency and efficiency of state institutions contributes to the trust in the state and promotes mobility	
Group of technological factors	Technological progress and the development of information and communication technologies. Process automation and production robotisation: the introduction of automated systems reduces the need for routine physical labour, allowing workers to focus on more complex and creative tasks. A high level of robotisation in industry can create new jobs that require specialised skills, promoting professional mobility. Improved international transport networks (air, railway, road) facilitate physical mobility of workers. Innovations in logistics and transport reduce time and costs for transporting goods and people. Blockchain technologies provide reliable protection of personal data, which is particularly important for migration and employment abroad. The use of blockchain technologies to store and exchange information about qualifications, diplomas and professional achievements simplifies the recognition of qualifications at the international level	60% of freelancers work remotely due to technology 45% of employees consider the possibility of remote work to be the main advantage when choosing an employer
	Virtual work and distance learning. The development of remote work technologies, such as video conferencing, cloud services and shared workspaces, allows people to work from anywhere in the world, reducing the need for physical mobility. Freelancing platforms such as Upwork, Fiverr and others create opportunities for on-demand work, regardless of geographical location. Such platforms as Coursera, edX and Udemy provide access to courses from leading universities and professionals, which helps to improve skills and adapt to new professions. Regular webinars and trainings provide for new knowledge and skills without the need for physical presence	
	AI and data analytics. Using AI and big data to analyse the labour market helps predict skills and occupation needs, which contributes to advanced training and professional mobility. AI-based systems can recommend jobs, training programs and other opportunities based on individual user profiles	
Group of psychological factors	Personal traits, sense of belonging, family and social ties. Personal characteristics such as readiness for change, level of adaptability and stress tolerance, level of resilience and fear of the unknown affect the propensity to relocate. Support from family and loved ones can greatly facilitate the decision to relocate or change jobs. Obligations to family or friends can limit mobility, especially if they require constant support or care. Strong attachment to a hometown or region can discourage relocation. People who feel a strong cultural or national identity may be less willing to move to another environment with a different culture. High self-esteem and confidence in one's professional skills contribute to readiness for change. Insecurity in one's abilities can inhibit decisions to relocate or change careers	70% of highly adaptable employees integrate more easily into new environments 50% of people change jobs due to a desire for self-realisation
	Motivation, previous experience and psychological support. The desire to achieve career success, professional growth and self-fulfilment encourages people to relocate. The desire to improve their financial situation can be a powerful motivator for changing jobs or moving to another city or country. People who have a positive experience of relocating or changing jobs are more likely to move further. Negative previous experiences can create psychological barriers to future mobility. Access to psychological counselling and support can help people overcome fears and anxieties related to mobility. Participation in support groups or professional networks can contribute to a sense of security and confidence when making decisions about changes	

Source: compiled by the author based on M. Czaika & H. de Haas (2018), M. Falk & E. Hagsten (2020), Freelancer (2021), J. Masdonati et al. (2022), World Bank (2023a; 2023b), M. McAuliffe & L.A. Oucho (2024), N. Furxhi & A. Toromëni (2024), OECD (2024), SBE Council (2024), Y. Kostyk & K. Tsybal (2024), Ya. Butelskyi et al. (2024), Z. Megdad & D. Çağlar (2024)

The interaction of the above-mentioned groups of factors creates conditions for the movement of the workforce, influencing decisions to change the workplace or residence (Fig. 2). These groups of factors interact

with each other, creating synergies, affecting global labour markets, in particular the level of professional mobility and the adaptation of workers to new conditions.

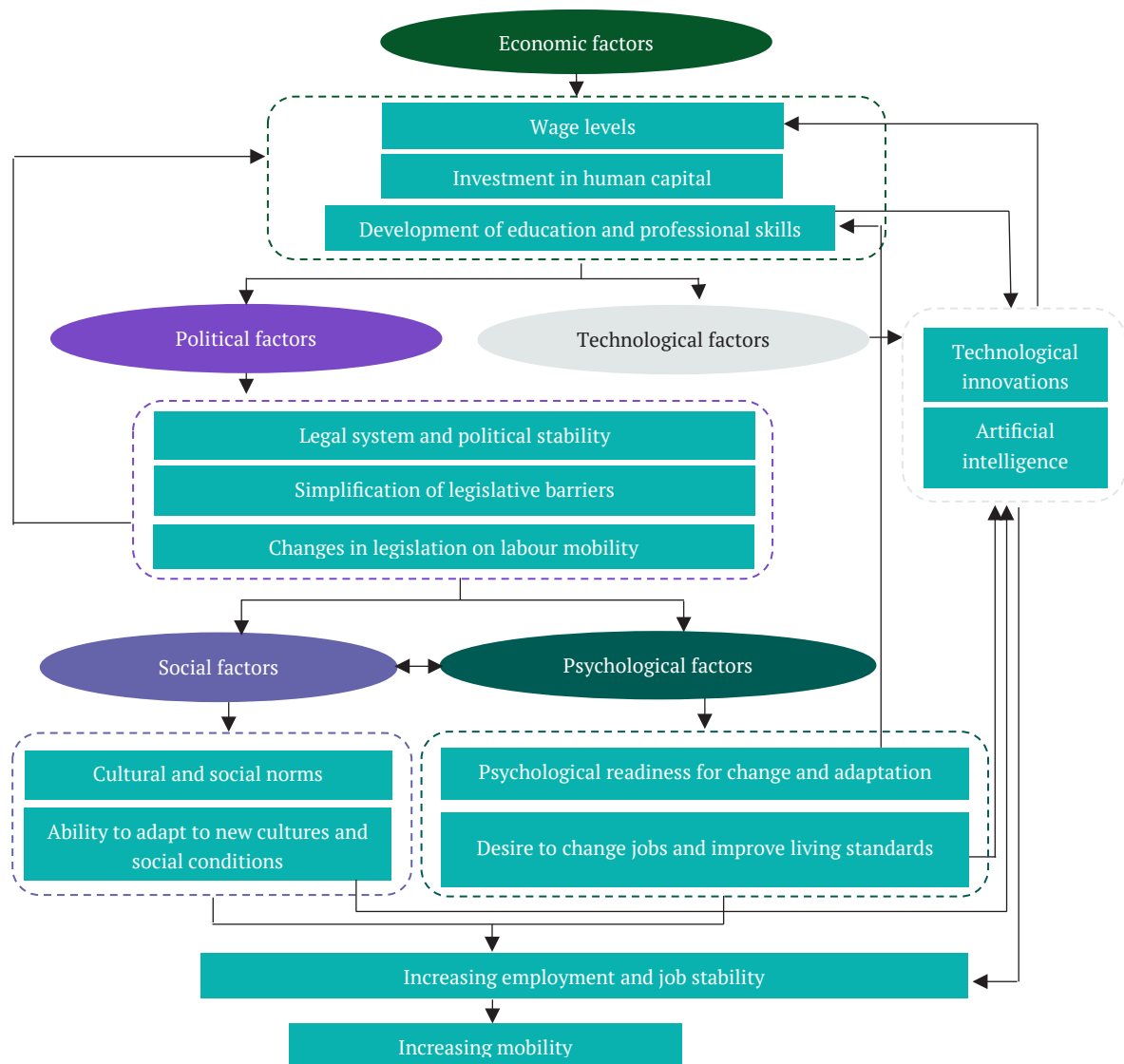


Figure 2. The impact of human capital mobility factors on the global labour market

Source: developed by the authors

The economic group of factors interacts with political and technological ones. High wages in other countries can stimulate the search for work abroad, which, in turn, can affect political (for example, simplifying visa and labour conditions, changes in legislation) and technological factors (the opportunity to work remotely due to the latest technologies and relevant state policies). The group of political factors (legal system and stability), in turn, closely interacts with the group of economic factors. If the political situation in the country is stable, it contributes to the growth of investment in human capital and the development of educational programs, which increases the economic level. A group of technological factors (new technologies, automation) creates new opportunities for psychological factors (e.g., the increase of psychological readiness for change among employees). This allows for the adaptation of workplaces for highly skilled personnel, which contributes to their mobility.

A group of social factors (cultural and social norms) interacts with a group of psychological factors and makes it possible to predict better the behaviour of employees and

develop strategies, supporting their mobility. Taking into account personal traits, motives, fears and social connections is key to creating conditions that promote positive decisions regarding mobility. People who are psychologically prepared to change jobs may be more open to moving to countries with different social conditions. Psychological readiness for change, combined with social factors, creates a favourable environment for mobility, where employees strive for professional development and an increase in the standard of living in other countries or regions.

Understanding the synergy of groups of factors, influencing the dynamics of human capital mobility, makes it possible to determine an effective trajectory of measures at the state and regional levels on the return of Ukrainian refugees, as well as the involvement of foreign specialists for the reconstruction of the country. This problem is actively studied by the global scientific community, in particular in the context of the influence of economic, social and political factors on migration processes.

J.N. Friedman (2020) has analysed the impact of state programs on attracting migrants and claimed that

comprehensive social integration measures contribute to both the return of citizens and the attraction of highly qualified specialists from abroad. The scientist has pointed out that states, investing in improving the quality of life, creating competitive working conditions and expanding support for migrants, both reduce the level of emigration and strengthen the domestic labour market by returning qualified labour. An important aspect is the development of adaptation and professional reintegration tools, which contributes to a quick engagement of migrants in the economic processes of the country.

Ukrainian researchers have also studied the issue of labour migrants' return in the context of the country's post-war reconstruction. L. Shymanovska-Dianych *et al.* (2023) and L.M. Shymanovska-Dianych & M.M. Sosyan (2024) have analysed in the works changes in the organisational culture of companies, taking place under the influence of the war, and their impact on human capital management. The scientists have concluded that it is necessary to create flexible adaptation programs for Ukrainians returning from abroad, as well as expand the possibilities of remote work, which can become an important factor in the reintegration of specialists into the Ukrainian labour market.

Significant attention to measures aimed at stimulating migrants' return was paid by D. Kaplan *et al.* (2023), studying the impact of economic inequality on labour mobility. The effectiveness of programs to overcome socio-economic gaps, such as raising wages, affordable housing, financial support for entrepreneurship and infrastructure development have been examined in the work. Researchers' findings prove that these factors determine workers' decisions to return to their country of origin. The literature review has revealed that human capital mobility is an important element of the global economy and its current trends are increasingly dependent on technological progress, digital transformation, and demographic changes (Falk & Hagsten, 2020; Safonov *et al.*, 2023). In particular, digitalisation has opened up new opportunities for remote work, which significantly expands the scope for geographical mobility of workers without the need for physical relocation (Freelancer, 2021).

According to the OECD research (2024), remote work has become a key factor in productivity growth in many sectors. It creates new opportunities for developed countries to retain talented specialists, as well as for developing countries to export intellectual capital without significant migration flows. In addition, the COVID-19 pandemic has significantly accelerated these processes, contributing to the active introduction of flexible forms of employment. According to the research, conducted by the Small Business & Entrepreneurship Council, more than 60% of workers in developed countries want to work in a hybrid format or completely remotely. It opens up new opportunities for developing economies, as specialists can work in the global market without the need to emigrate (SBE Council, 2024).

Foreign scientists' studies prove that human capital mobility is an important factor in the economic development of regions and cities. M. Ruesga (2019) has analysed the key factors, encouraging international mobility of specialists, among which economic, political and social conditions play a special role. The scientist treats migration processes as a mechanism for adapting the labour market

to changes in the global economy and emphasises the competition between countries for highly qualified personnel. This study contains data on the impact of labour migration on labour markets of both donor and recipient countries and reveals the role of international programs in regulating these processes.

The work of the Professor of Economics from the University of Missouri, D. Kaplan *et al.* (2023), is devoted to the study of migration, labour mobility and labour market characteristics in developing countries. The researcher has investigated structural changes caused by mass labour migration and focused on such problems as precarious employment of migrants, discrimination in the labour market and limited access to social services in host countries. In particular, the work emphasises the importance of state integration programs that help reduce negative consequences of inequality in access to the labour market. However, the challenges of migrants' social integration remain relevant. The study of L. Mandemakers *et al.* (2024) has proved that about 40% of labour migrants face difficulties in recognising their qualifications, which complicates their adaptation in new labour markets.

J.N. Friedman (2020) has examined the issues of social and economic mobility, in particular the mechanisms, contributing to increasing opportunities for economic growth. Policy measures that affect the movement of labour resources were analysed, in particular the impact of tax policy, small business support programs and access to education on population mobility. Among the author's key findings is the acknowledgement that reducing the tax burden on the middle class, expanding microcredit programs and investing in quality education significantly increase economic mobility, contributing to both domestic and international labour activity. These findings emphasise the importance of targeted government regulation to enhance human capital.

An important role in increasing the mobility of human capital is played by the strategic adaptability of companies, which contributes to the integration of innovations into the personnel management system. Researchers Z. Megdad & D. Çağlar (2024) have pointed out that strategic adaptability significantly strengthens the relationship between human resource management strategies and the innovative development of organisations. This is especially true for developing countries, where enterprises are forced to respond quickly to market changes and adapt personnel policies in accordance with global economic challenges.

Ukrainian researchers also pay considerable attention to transformations in the field of human resource management caused by military actions. In particular, scientists L. Shymanovska-Dianych *et al.* (2023) and L.M. Shymanovska-Dianych & M.M. Sosyan (2024) have analysed changes in the organisational culture of companies, taking place under the influence of war and their impact on human capital management. The study contains specific examples of enterprises adapting to new conditions, in particular, the transition to remote work, introduction of flexible schedules and strengthening of social support programs for employees. The authors also consider psychological aspects of mobility, such as the need to support employees in crisis situations and the adaptation of organisations to changes in the employment structure.

Z. Halushka (2024) has analysed the impact of the war on the main components of the country's human capital. He highlighted the problem of forced labour migration and the reduction of highly qualified specialists in strategically important industries. The author emphasised that without effective state programs for the return and reintegration of Ukrainian specialists, the country's economy may suffer long-term negative consequences. Y. Zaloznova & N. Azmuk (2022) have analysed large-scale direct and indirect losses of the country's labour potential. As a result of forced migration, infrastructure destruction and production reduction, a significant part of qualified personnel either left the country or lost the opportunity for professional activity. At the same time, in the post-war period, human capital will become a key factor in economic recovery and state policy should be aimed at creating incentives for the return of specialists, adapting internally displaced persons to new market conditions and implementing educational programs to increase the competitiveness of labour force.

V. Antoniuk & Yu. Zaloznova (2023) have paid considerable attention to the problems of regional disparities in the formation of human capital, analysing the consequences of economic infrastructure destruction, forced migration and reduction of labour for different regions of Ukraine. The authors have claimed that the personnel shortage could become a serious challenge for the post-war recovery of the country. In this regard, they have concluded that it is necessary to develop regional programs for the development of human capital aimed at restoring the labour market, attracting young specialists and creating conditions for the return of migrants.

The issue of social integration is also an important aspect of labour market recovery. D. Raiko & I. Krolivets (2023) have investigated the process of forming marketing personnel taking into account the peculiarities of the human capital of people with disabilities. In their work, the authors have pointed out the need to develop specialised training programs and adapt such workers to modern market requirements. Their approach emphasises the importance of combining traditional methods of personnel management with marketing strategies, which provides for creating an inclusive environment, promotes social adaptation of employees and increases the competitiveness of organisations.

Modern research covers a wide range of issues related to human capital mobility – from socio-economic to political aspects. Considerable attention is paid to the development of state regulatory mechanisms aimed at stimulating the return of qualified personnel to Ukraine in the post-war period. However, this problem remains open for further research, since human capital mobility is one of the key factors determining macroeconomic stability and prospects for the development of the national economy.

Based on the analysis of scientific literature and research results, a number of measures necessary for the return of Ukrainian refugees and the attraction of foreign specialists can be identified. These include simplifying visa procedures for returning Ukrainians and foreign specialists willing to work in Ukraine; expanding the network of language courses to facilitate the reintegration of returned citizens and the adaptation of foreign workers; simplifying the mechanisms for recognising qualifications, which will

reduce barriers to the return of professionals and increase the mobility of human capital. It is also important to develop programs to retain qualified personnel, which provide for improved working conditions, social support and career growth opportunities. Moreover, programs are needed to overcome economic inequality, which will contribute to increasing the standard of living of Ukrainians and reducing the scale of labour emigration.

Some Ukrainians, mostly women with children, have found refuge abroad. Despite social support programs in host countries, many of them face integration challenges, including language barriers, differences in education systems and difficulties finding employment. Ukraine needs to develop return programs aimed at professional reintegration, job creation and improved living conditions to prevent the loss of skilled professionals and support economic recovery. The priority tasks are to modernise health facilities, ensure access to quality education for returning children and create advanced training programs that meet current needs of the labour market. This will ensure decent working conditions and help realise the potential of each individual (UNICEF, 2025). Effective reintegration provides for cooperation with civil society organisations, international funds and government agencies. Special attention should be paid to the psychological rehabilitation of war-affected people and the creation of social programs for internally displaced ones. Effective economic incentives, in particular, affordable housing programs, tax exemptions for entrepreneurs and career development opportunities, are needed to attract Ukrainians back home (World Bank, 2023a; 2023b).

Understanding the nature and peculiarities of human capital mobility will make it possible to tailor better policy strategies that promote economic growth and social well-being. It can stimulate innovation and productivity, facilitate the exchange of knowledge and technology but it can also cause imbalances in the labour market and create social and political challenges. It is important for politicians and business leaders to take into account both positive and negative aspects of human capital mobility when designing development strategies. Thus, modern research proves that human capital mobility is a multifactorial process, which depends on comprehensive political, economic and social measures. The implementation of effective state strategies can significantly affect the processes of re-emigration, contributing to the return of skilled labour and attracting foreign specialists to restore Ukraine.

● CONCLUSIONS

Human capital mobility has been analysed as a multidimensional phenomenon shaped by five key factors: economic, social, political, technological and demographic. It has been discovered that the development of digital technologies and the growing popularity of remote work are transforming traditional forms of labour mobility, reducing workers' dependence on geographical location. The analysis of demographic trends has proved that population aging in developed countries is a catalyst for attracting young personnel from developing countries, including Ukraine. Statistical data suggest that over 40% of Ukrainian labour migrants face barriers to recognition of qualifications, which limits their mobility.

The findings also suggest that the most important factors for retaining personnel in wartime in Ukraine are flexible forms of employment, support for the psycho-emotional state of employees and the development of retraining programs. The collected empirical data indicate the need to improve state policy in the field of recognition of foreign experience, as well as create conditions for the return of specialists through tax incentives and investments in labour infrastructure. The experience of multinational companies has shown that corporate training programs, digital platforms for employee integration and corporate social responsibility initiatives are effective tools for mobilising human capital.

In Ukraine, these practices can be adapted to strengthen internal labour mobility, especially in the fields of IT, healthcare and education. The obtained results make it possible to provide a number of practical recommendations

for public policy, including the creation of a comprehensive strategy for the return of Ukrainian specialists from abroad, improving mechanisms for the recognition of qualifications and supporting the digital transformation of workplaces. Further research should be aimed at a comparative analysis of mobility regulation models in the EU countries and identifying key factors, contributing to the effective migrants' integration into Ukrainian labour market.

● ACKNOWLEDGEMENTS

None.

● FUNDING

None.

● CONFLICT OF INTEREST

None.

● REFERENCES

- [1] Antoniuk, V., & Zaloznova, Yu. (2023). *Human capital in the regions of Ukraine: Problems of reproduction in the conditions of hybrid and full-scale war as a threat to post-war recovery of the country*. Kyiv: Institute of Industrial Economics of National Academy of Sciences of Ukraine.
- [2] Blyzniuk, V., & Yatsenko, L. (2023). Labor mobility enhancement as a factor of human capital development. *Economy of Ukraine*, 66(2(735)), 73-95. doi: 10.15407/economyukr.2023.02.073.
- [3] Butelskyi, Ya., Burmekha, Yu., Hnatiuk, D., Latyshev, Yu., Melnychuk, V., & Tsybrukh, A. (2024). Key trends of structural transformations of the labor market in connection with the spread of artificial intelligence. *Academic Visions*, 28. doi: 10.5281/zenodo.10554675.
- [4] Czaika, M., & de Haas, H. (2018). The globalization of migration: Has the world become more migratory? *International Migration Review*, 48(2), 283-323. doi: 10.1111/imre.12095.
- [5] Falk, M., & Hagsten, E. (2020). Technological innovations and labor demand using linked firm-level data. In K. Zimmermann (Ed.), *Handbook of labor, human resources and population economics* (pp. 1-18). Cham: Springer. doi: 10.1007/978-3-319-57365-6_170-1.
- [6] Freelancer. (2021). *The future of work*. Retrieved from <https://www.my.freelancer.com/articles/future-of-work>.
- [7] Friedman, J.N. (2020). *Intergenerational mobility around the world*. Retrieved from <https://thedocs.worldbank.org/en/doc/7f03f1cdc098bb2d79a325c8e2367fed-0050022023/original/Friedman-World-Bank-ABCDE.pdf>.
- [8] Furxhi, N., & Toromëni, A. (2024). Youth migration: The role of family. *International Journal of Community and Cooperative Studies*, 12(1), 84-92. doi: 10.37745/ijccs.2014/vol12n18492.
- [9] Halushka, Z. (2024). Human capital of the Ukrainian economy: The impact of war and post-war recovery potential. *Herald of Khmelnytskyi National University. Economic Sciences*, 328(2), 100-108. doi: 10.31891/2307-5740-2024-328-15.
- [10] Kaplan, D., Rivera, A., & Van der Werf, C. (2023). *A fair chance for migrants in the labor market*. Washington: Inter-American Development Bank. doi: 10.18235/0005198.
- [11] Kostyk, Y., & Tsymbal, K. (2024). The impact of artificial intelligence on the labor market. *Economy and Region*, 3(94), 6-12. doi: 10.26906/eir.2024.3(94).3477.
- [12] Mandemakers, L., Jaspers, E., & Van der Lippe, T. (2024). Not leaving your unsatisfactory job: Analyzing female, migrant, elderly and lower-educated employees. *Equality, Diversity and Inclusion*, 43(9), 18-38. doi: 10.1108/EDI-07-2023-0223.
- [13] Masdonati, J., Frésard, C.É., & Parmentier, M. (2022). Involuntary career changes: A lonesome social experience. *Frontiers in Psychology*, 13, article number 899051. doi: 10.3389/fpsyg.2022.899051.
- [14] McAuliffe, M., & Oucho, L.A. (Eds.). (2024). *World migration report 2024*. Geneva: International Organization for Migration.
- [15] Megdad, Z., & Çağlar, D. (2024). The mediating role of strategic adaptability on the relationship between human resource management strategies and innovation. *Sustainability*, 16(20), article number 8729. doi: 10.3390/su16208729.
- [16] Melnychuk, V. (2023). *The role of human capital in the digital economic environment*. In *Business, innovation, management: Problems and prospects collection of abstracts of the IV international scientific and practical conference* (pp. 46-47). Kyiv: Igor Sikorsky Kyiv Polytechnic Institute.
- [17] Moisiyakha, A.V. (2022). State management of human capital development in the post-war period. *Scientific Notes of the V.I. Vernadsky Tavrichesky National University. Series: Public Management and Administration*, 33(72(4)), 52-57. doi: 10.32782/TNU-2663-6468/2022.4/09.
- [18] OECD. (2024). *International migration outlook*. Paris: OECD Publishing.
- [19] Orie, S., Peeters, E.R., & Semeijn, J.H. (2025). Disentangling career change magnitude through expert analysis. *Journal of Career Development*, 52(3), 336-353. doi: 10.1177/08948453251319028.
- [20] Raiko, D., & Krolivets, I. (2023). Features of the formation of marketing staff regarding the human capital of persons with special needs in the personnel management system. *Efektivna Ekonomika*, 8. doi: 10.32702/2307-2105.2023.8.5.

- [21] Safonov, Yu., Stangret, A., Olyanyshen, T., & Bahinskiy, D. (2023). Industry 4.0: Human capital development and social challenges. *Investytsiyi: Praktyka ta Dosvid*, 9, 12-21. doi: [10.32702/2306-6814.2023.9.12](https://doi.org/10.32702/2306-6814.2023.9.12).
- [22] SBE Council. (2024). *Gallup: Employee views and preferences on remote work*. Retrieved from <https://sbecouncil.org/2024/12/17/gallup-employee-views-and-preferences-on-remote-work>.
- [23] Shymanovska-Dianych, L., Pedchenko, N., & Lozova, O. (2023). Changes in the organizational culture of companies in the conditions of war: Experience and priorities of multinational and Ukrainian companies in matters of human capital management. *Scientific Bulletin of Poltava University of Economics and Trade. A Series of "Economic Sciences"*, 2(108), 97-102. doi: [10.37734/2409-6873-2023-2-13](https://doi.org/10.37734/2409-6873-2023-2-13).
- [24] Shymanovska-Dianych, L.M., & Sosyan, M.M. (2024). Management of strategic changes by domestic enterprises during the war and in the post-war period. *Economics: Time Realities*, 6(76), 126-134. doi: [10.15276/ETR.06.2024.13](https://doi.org/10.15276/ETR.06.2024.13).
- [25] Stryzhak, O. (2022). Features of the relationship between human capital development and digital technologies in the context of society 5.0 formation. *Agricultural and Resource Economics: International Scientific E-Journal*, 8(3), 224-243. doi: [10.51599/are.2022.08.03.11](https://doi.org/10.51599/are.2022.08.03.11).
- [26] Stryzhak, O., & Pravdyvets, O. (2022). Human capital of Ukraine under martial law. *Finance of Ukraine*, 12, 112-129. doi: [10.33763/finukr2022.12.111](https://doi.org/10.33763/finukr2022.12.111).
- [27] Tomashuk, I., & Boltovska, L. (2022). Migration processes in the context of globalization of the world economy. *Economy and Society*, 40. doi: [10.32782/2524-0072/2022-40-50](https://doi.org/10.32782/2524-0072/2022-40-50).
- [28] UNICEF. (2025). *Three years of full-scale war for Ukraine's children*. Retrieved from <https://www.unicef.org/eca/stories/three-years-full-scale-war-ukraines-children>.
- [29] World Bank. (2023a). *Global migration in the 21st century: Navigating the impact of climate change, conflict, and demographic shifts*. Retrieved from <https://www.worldbank.org/en/news/feature/2023/12/11/global-migration-in-the-21st-century-navigating-the-impact-of-climate-change-conflict-and-demographic-shifts>.
- [30] World Bank. (2023b). *Updated Ukraine recovery and reconstruction needs assessment*. Retrieved from <https://www.worldbank.org/en/news/press-release/2023/03/23/updated-ukraine-recovery-and-reconstruction-needs-assessment>.
- [31] Zaloznova, Y., & Azmuk, N. (2022). Human capital of Ukraine in the conditions of war: Losses and gains. *Economy and Society*, 38. doi: [10.32782/2524-0072/2022-38-59](https://doi.org/10.32782/2524-0072/2022-38-59).

Мобільність людського капіталу в умовах глобалізації, технологічних змін та демографічних трансформацій

Віра Новікова

Кандидат технічних наук, доцент

Харківський національний університет імені В.Н. Каразіна

61022, майд. Свободи, 4, м. Харків, Україна

<https://orcid.org/0000-0003-3153-2619>

Анотація. Актуальність теми зумовлена необхідністю дослідження впливу військових подій на мобільність людського капіталу як ключового чинника економічного розвитку в умовах трансформаційного періоду в Україні. Метою дослідження було визначити основні тенденції мобільності людського капіталу та ідентифікувати групи факторів, які впливають на переміщення трудових ресурсів у різних економічних і соціальних умовах. Для досягнення цієї мети були застосовані методи порівняльного аналізу, синтезу та систематизації. Порівняльний аналіз дозволив виявити відмінності у факторах мобільності між різними регіонами та країнами. Метод синтезу дав змогу інтегрувати отримані дані та виявити загальні закономірності. Систематизація дозволила структурувати фактори, що мали вплив на міграційні процеси. У результаті дослідження було встановлено, що ключовими тенденціями мобільності людського капіталу стали: цифровізація праці, поширення віддаленої зайнятості, зростання міжнародної трудової міграції та зміна структури попиту на професійні навички. Виявлено, що війна в Україні значно трансформувала міграційні процеси, стимулюючи відтік висококваліфікованих фахівців за кордон, а також активізувала внутрішню мобільність через переміщення працівників до безпечніших регіонів. Підтверджено, що взаємодія глобалізаційних, технологічних та демографічних факторів суттєво впливає на масштаби та характер мобільності людського капіталу. Зокрема, розвиток цифрових технологій розширив можливості дистанційної роботи, що стало важливим механізмом адаптації до кризових умов. Демографічні процеси, такі як старіння населення та зростання попиту на молоді трудові ресурси, також визначають характер міжнародної мобільності. Практична цінність дослідження полягає в можливості використання результатів для розробки стратегій адаптації ринку праці до нових умов, удосконалення механізмів регулювання міграційних процесів і підвищення ефективності управління трудовими ресурсами.

Ключові слова: глобалізаційні виклики; технологічні зміни; соціально-економічні процеси; трудова міграція; віддалена зайнятість; організаційна культура