

Challenges to Ukraine's Demographics: Analysing the Exodus of Economically Active Citizens

Vitalii Turenko¹, Svitlana Horban², Tetiana Krygulska³, Nina Kureda⁴, Nataliia Lukianenko⁵

¹Philosophy of Humanitarian Department, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine

²Faculty of Business Technologies and Economics, National University "Zaporizhzhia Polytechnic", Zaporizhzhia, Ukraine

³Department of Economics and Customs Affairs, Faculty of Business Technologies and Economics, National University "Zaporizhzhia Polytechnic", Zaporizhzhia, Ukraine

⁴Department of Management and Tourism, Faculty of Art and Design, Khortytsia National Educational Rehabilitation Academy, Zaporizhzhia, Ukraine

⁵Department of Economics and Customs, Faculty of Business Technology and Economics, National University Zaporizhzhia Politechnic, Zaporizhzhia, Ukraine

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ABSTRACT

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Introduction: The relevance of this established research topic relies on the increasing dangers of the population dynamics owing to the end of the Russia – Ukraine conflict and the movement of working-age citizens.

Objective: The research intends to evaluate the effects of migration on the rate of Ukraine's population and suggest favourable demography. Factors considered include assessment of the existing population situation, movement trends, forecasting and possible interventions to maintain stability.

Methods: The methodologies for evaluating the decade risks of demographic transition impact on Ukraine's economy consist of stages of justification of measures: comprising the collection and estimation of demographic statistics; analysing migration trends; developing scenarios.

Results: The study results show the patterns and trends in population increase attributed to the displacement of people. A key aspect of the research is evaluating how population movements and displacement affect the Ukrainian economy, society and international relations. The tasks include getting acquainted with the structure of the Taras Shevchenko National University of Kyiv and formulating recommendations to the government on demographic matters during the war and post-war reconstruction periods. The study seeks to evaluate measures aimed at encouraging the return of migrants, encouraging birth rates and enhancing social amenities. The supportive results will enable a strategic plan to restore the Ukrainian demographic potential.

Conclusions: Given the currently prevailing circumstances, specific measures are suggested to reinforce demographic resilience and the effectiveness of such measures. Further directions for enhancing the state policy to attain sustainable population growth and the state's economic advancement are given.

Keywords: demographic development, forced migration, economically active population, demographic risks, migration processes, internally displaced persons, demographic growth.

INTRODUCTION

It is undeniable that human development is essential for the stable and self-sustaining economic growth of any nation. It also decides how good the level of economy, social order and quality of life are. The economically active population is an important factor in demographic development, creates value-added work, innovates and is the base of future welfare [1]. The economically active population of working-age people offer goods and services that generate revenue for the government through taxes and support the social systems. Hence, ensuring the size of the economically active population at the bare minimum or improving it further is a strategic goal that all nations should seek to solve. Unfortunately, the demographic crisis has been uninterrupted in Ukraine for a few decades. It is the

high rates of death, low rates of birth and even greater rates of migration that have been fatal to the number of people living in the country. In particular, the population of Ukraine shrank from 52 million in the early nineties to 41 million in 2022 (data from the State Statistics Service of Ukraine). According to Gukalova [2], a significant contributing factor is recurrent cycles of economic instability and unresolved societal issues caused by a lack of infrastructure for families with children. Also, many people had to emigrate to cross borders for better opportunities in terms of funding and a better place to live. This results in a very high life expectancy and adds pressure to the practical usage of pension and social structures, which are other dimensions worth noting while managing economic growth and conducting policy formulation.

The war that broke out in Ukraine in 2022 significantly exacerbated existing demographic problems and added new challenges. Massive forced displacement, destruction of infrastructure, and threats to the lives and health of citizens have led to a significant decline in the population, especially the economically active population. According to international organisations, millions of Ukrainians were forced to leave the country or move to safer regions [3]. This has hurt the labour market, economic activity, and social stability. Regarding the significant changes to be made to stabilise and increase the population, actions such as enhancing international assistance, increasing funding for the reconstruction of destroyed facilities, and using national programmes to facilitate the return and resettlement of labour migrants can be cited. We need to revive economic living, upgrade the social structure, and foster the atmosphere for birthrate if we are to tackle the shift in demographic trends and maintain Ukraine's prosperity in the period beyond the military conflict.

LITERATURE REVIEW

Demographic trends in Ukraine are significant in deciding the course of Ukraine's economic trends, so researchers are not surprised to pursue international adoption for national development. The issue of the demographic crisis of Ukraine has an active interest from the scientific area as the quantitative and qualitative structures of the population embody direct influence on a country's economic output, the available human resources and the society at large. Analysing the demographic patterns in Ukraine, one can notice the adverse effects of external migration and worsening birth rates on the total population [4]. Mulska et al. [5] asserts that an effective employed population is key to enhancing and stabilising the economy. At the same time, population outflow caused by migration is one of the key issues for policymakers.

Kulu's research concerns the internal migration of people in Ukraine and how it is related to the development of specific regions, stressing the importance of providing for internally displaced persons and facilitating their integration [6]. Sundqvist [7] draws attention to the assertion that the war has compelled vast external migration, which has transformed the demographic and labour market of the country. Ryazantsev and Rybakovskii [8] accentuates that there should be policies such as supporting immigrants' return and increasing birth control programmes. They studies how forced migration affects economic activity and social stability in Ukraine, insisting on international assistance for Ukraine's reconstruction. Kichurchak [9] argued that long-term emigrants from economically active ages lead to the loss of significant human capital and eventually affect economic development negatively. Sehedá's research departs from considering demography trends and, in the case of Ukraine, looks at demographic projections with regard to specific development scenarios and the adaptation of public policy to new realities [10]. Moreover, Čajková and Čajka [11] emphasises the restorative demographic processes in the context of the sustained development of post-conflict countries. Lozynskyy's research highlights the issues that Ukraine has been facing due to the demographic catastrophe: population ageing and reduction in the working-age population [12].

Vasylytsiv and Tesliuk [13] stresses the importance of developing an all-encompassing policy with a demographic focus which incorporates family policies, policies for enhancing fertility, and measures aimed at encouraging the return of migrants. According to Filatova et al. [14], unique action plans designed to assist the displaced populations in integrating and employing displaced populations in economic activities in the affected zone are important in solving the issue. Kudelko and Musiał-Malago [15] examines the consequences of changing demographics on the labour market and the economy and offers ways through which these unfavourable trends can be addressed through reforms in social policy. In the view of Kichurchak [16], for Ukraine to register any form of economic advancement and peace with favourable conditions, there is a need to foster the movement of the active working class back to Ukraine while preserving the existing population. In a country policy paper, Barbalat and Liu [17] discusses the Ukrainian government's welfare policies towards families affected by the war, the importance of welfare schemes, and the

provision of resources in promoting fertility. Smirnov and Lytkina [18] outlines the issues related to including internally displaced persons in the new region and stresses the development of social adaptation measures directed to them.

Levchenko's study showed that introducing a standardised return programme would help unify approaches to the problems of population decline and growth [19]. Researcher Vasylykivskiy et al. [20] analysed the strategy for training specialists in population recovery. Mijanović et al. [21] studied the impact of government measures on the long-term solution of demographic problems to ensure population sustainability. Researcher Ivanyuk [22] analysed the impact of cultural and social factors on the effectiveness of population programmes in different regions of Ukraine. Tytok and Emelianova [23] emphasises that the success of population measures depends on economic incentives. Gritsko [24] notes that national approaches to supporting demographic development should be adapted to the specific cultural mentality of different regions to ensure the effectiveness of these programmes. Rodríguez-Muñoz's study points to the prospect of widespread implementation of culturally sensitive approaches in population policy [25]. Thus, scholars share a standard view on the importance of addressing the problems associated with the demographic process in the country.

The study aims to analyse the current risks of demographic development in Ukraine under the influence of forced migration from the economically active population. The article reveals the impact of demographic changes on the country's socio-economic stability and recovery opportunities. The study's objective is to identify the main factors of forced migration and assess their impact on the size and structure of the population. The study's main objective is to analyse current demographic trends, develop scenarios for future development and propose policy measures for the country to improve the demographic situation. This study adds economic value by determining involuntary migrations' consequences on the labour force, society, and economy. One of the areas requiring research is ensuring sustainable population growth and economic stability in conditions of dynamic population alterations. The purpose of the study lies in formulating strategic actions that would increase the number of people in the country, enhance the population's welfare and promote the country's socio-economic development in Ukraine.

METHODS

The methodologies for evaluating the decade risks of demographic transition impact on Ukraine's economy consist of four stages of justification of measures needed to improve the demographic predicament in the country. The sample includes people from Ukraine and its emigrants for 2022 and 2024. The first stage entails a complete appraisal of the status of affairs with the demographic development in Ukraine for 2022 and 2023, comprising the collection and estimation of demographic statistics such as population, birth and death rates. The socio-economic indicators that can affect the demographic process are examined at this stage, such as living conditions and the state of the infrastructure [26]. The second stage is concerned with analysing migration trends arising from the war in Ukraine after 2022 using the number and other characteristics of the economically active population who left Ukraine in the aftermath. Internal and external demographic flows, brain drain, and changes in the population's social structure were analysed. The third stage involved developing and analysing scenarios for further extending the demographic situation in Ukraine, considering various options for migration flows and their impact on the economic and social spheres. The possible scenarios were modelled based on long-term socio-economic forecasts, considering different levels of migrant return, refugee integration, and changes in birth and death rates. At the final stage, possible measures to improve the demographic situation were formulated and substantiated, in particular, to encourage the return of migrants, support birth rates, integrate migrants, create favourable conditions for economic development, and mitigate negative consequences for working migrants. The proposals include measures at the national and international levels. The article contains recommendations for international organisations and donors to support demographic stability in Ukraine.

RESULTS

As of 2024, Ukraine's demographic profile shows several key trends. Over the past decades, Ukraine has experienced significant population losses due to low birth rates, high mortality rates and high migration rates. According to the State Statistics Service of Ukraine, the country's population is declining due to natural decline and migration. This has resulted in an ageing of the country and a decrease in the share of the economically active population. There is a deficiency of birth rate and an echoing high mortality rate across working-age classes, being one of Europe's dubious achievements. The ageing population increases the burden on social security and the health industry. Immigration

also affects demographic changes, ranging from the transition of people from farming regions to metropolitans, which results in a decline in a few counties' population density in the district centres.

The war has played a massive role in aggravating the demographic challenge that Ukraine is facing. The active, working population had to migrate, leading to a dire shortage of human resources. There are data reported by various global bodies indicating that a significant number of Ukrainians were displaced and found themselves in different parts of the country or outside its borders. This resulted in further depression of several persons living in demographic disaster places like places with war and fights going on or where buildings are demolished and economic activities are shut down. It has added to the increasing incidence of displaced people within the country and refugees across borders, and this has added to the burden on the social and economic systems of the host regions and their ability to maintain decent living conditions for their population.

The war has also hurt family structure and fertility rates, as many young people have postponed family planning due to uncertainty and insecurity. All these factors threaten to deepen the demographic crisis, which will negatively impact Ukraine's economic development and social stability. Figure 1 shows the overall demographic situation by 2024.

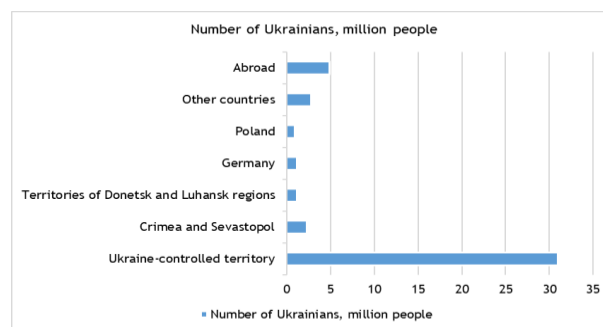


Figure 1: Demographic situation in Ukraine in the first half of 2024

Source: compiled by the Centre for Economic Strategy and the Ptoukha Institute for Demography and Social Studies [27]

Large-scale labour migration and geographical fragmentation of businesses have significantly affected the structure of the Ukrainian economy. Many companies have been forced to relocate their offices and production to safer regions or abroad, resulting in a decline in economic activity in the war-affected regions. The relocation of businesses and labour to the western regions of Ukraine or other European countries has created new opportunities for economic growth and competition for resources and labour. The destruction brought about by the conflicts has resulted in shortages of energy resources that negatively affected the functioning of industry and energy supply to household and commercial buildings, thereby worsening the economy. The shortage of qualified workforce due to the war and energy deficit are fundamental problems that need to be addressed immediately to stabilise and recover the lost economic capacity of Ukraine.

As per the UNHCR, turbulence prevailing in Ukraine during the years 2022-2023 has brought some alarming trends of increased numbers of people leaving Ukraine due to the wavering count of the war. By 1 August 2022, the total number of individuals who fled Ukraine stood at eight million, while only 4 million had returned to the country, creating a negative ratio of 4 million.

Many migrants leave the country in search of safety and better economic opportunities, which creates additional challenges for the Ukrainian economy. Table 1 shows the specific situation.

Table 1: Dynamics of the number of crossings of the Ukrainian border according to UNHCR

Date	Departure from Ukraine	Entry to Ukraine	Indicator
01.08.2022	8 311 687	4 279 441	-4 032 246
01.09.2022	9 667 942	5 456 558	-4 211 384
01.10.2022	11 266 645	6 450 006	-4 816 639

01.11.2022	11 995 013	7 357 971	-4 637 042
01.12.2022	13 047 394	8 182 720	-4 864 674
01.01.2023	14 202 190	9 129 827	-5 072 363
01.02.2023	15 328 015	9 983 965	-5 344 050
01.03.2023	16 243 995	10 668 587	-5 575 408
01.04.2023	17 252 689	11 559 295	-5 693 394
01.05.2023	18 342 070	12 528 786	-5 813 284
01.06.2023	19 464 399	13 408 160	-6 056 239

Source: compiled from Ukrinform [28]

During the war of 2022-2023, there was a large-scale forced migration from Ukraine as a result of a direct threat to the lives and health of citizens in enemy territory, the destruction of housing and economic infrastructure, and deteriorating living conditions. Many economically active people left the country in search of stable living conditions, which resulted in significant losses of human capital and a decline in economic activity. Internal migration has also had a significant impact, as many citizens have moved to safer regions of Ukraine, putting additional pressure on these regions' social and economic systems. Given the uncertainty of a full-scale war in Ukraine, Figure 2 presents two scenarios of demographic development.

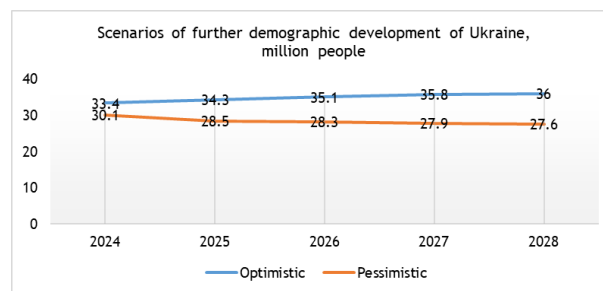


Figure 2: Scenarios of demographic development in Ukraine for 2024-2028

Source: compiled by the author based on IMF data [29]

The optimistic demographic scenario envisages a gradual recovery in Ukraine's population between 2024 and 2028, driven by several key factors. First, it assumes that the current hostilities will end and a long-term ceasefire will be established by 2024, facilitating the return of most displaced persons. The government will actively work to rebuild infrastructure, create new jobs, and implement social programmes to support families, primarily through financial assistance for childbirth and incentives for young families. International organisations and donors will be key in providing financial and technical assistance for economic and social recovery. Under these conditions, the population is expected to grow from 33.4 million in 2024 to 36 million in 2028, indicating the country's success in overcoming the demographic crisis and creating conditions for its sustainable development.

According to pessimistic forecasts, the expected continuation of the war and political instability in Ukraine will have a catastrophic impact on demographic processes. Prolonged hostilities, destruction of infrastructure, and economic stagnation will lead to a further outflow in the population, especially young people and skilled workers who will seek better living conditions abroad. The lack of adequate national policies to support population growth, combined with limited opportunities for economic recovery due to low levels of investment and international assistance, will lead to further population decline. Such an outcome moves the population of 37.73 towards an expected decline, which is set at 30.1 million in 2024 and will further decrease to 27.6 million in 2028, whilst shortages of the attendant workforce, alongside the growing demand on social and pension systems, will remain a critical challenge in the country's efforts in progressing. However, in both circumstances, malefactors like advancement in fertility and mortality rates, the levels of internal migration, and the implementation of statutes by the government and international advocates must also be considered. The optimistic scenario is again the most radical because one assumes that the active state intervention will be around for such activities as reshaping an agricultural workforce to return to their homeland;

fertility in almost all developed countries is hindered by welfare and support for young families. In the pessimistic scenario, such support measures are set aside, and socio-economic issues are developed more acutely, as a result, nations' populations will continue to decrease in number and progressively age.

Political stability and the government's ability to implement reforms that will improve citizens' quality of life and create favourable conditions for attracting investment and business development will play an important role. Depending on the implementation of these factors, Ukraine will either succeed in overcoming the demographic crisis or face new challenges that will complicate its long-term development. The main measures to address the demographic development problems are shown in Table 2. To improve the demographic situation in wartime, the state must take comprehensive measures to support the population and preserve human capital. The most important thing is to ensure the safety of citizens by effectively responding to military threats, quickly restoring damaged infrastructure and providing humanitarian aid to the affected areas. It remains important to support economic activity by creating new jobs, especially in safe areas, and supporting businesses affected by the war. The state should provide education, healthcare and other social guarantees for internally displaced persons and create conditions for their integration into new communities. To this end, attracting international assistance and cooperating with international organisations that can provide financial and technical support is necessary.

Table 2: Solving the problems of demographic development in Ukraine in the post-war period

Issue	Resolution measures	Result
Loss of economically active population	<ul style="list-style-type: none"> - Introduce tax benefits for returning migrants - Reintegration and retraining programmes for returnees - Financial support for starting a business 	<ul style="list-style-type: none"> - Return of migrants - Growth in the number of jobs - Economic revival of the regions
Low birth rate	<ul style="list-style-type: none"> - Increase social benefits for families with children - Expanding programmes to support mothers and children - Providing affordable and quality healthcare services - Implementation of affordable housing programmes for young families 	<ul style="list-style-type: none"> - Birth rate growth - Improving the quality of life for families - Stable demographic development
Uneven distribution of population	<ul style="list-style-type: none"> - Infrastructure development in depressed regions - Implementation of enterprise relocation programmes - Stimulating investment in less developed regions 	<ul style="list-style-type: none"> - Even the distribution of the population - Regional development - Reducing social inequality
Social and economic adaptation of migrants	<ul style="list-style-type: none"> - Establishment of social adaptation and support centres - Educational programmes for adults and children - Psychological support and counselling 	<ul style="list-style-type: none"> - Easy integration of migrants - Reducing social tension - Improving the living standards of migrants

Source: compiled by the author based on Hetman [30]

In the post-war period, the state should focus on encouraging the return of displaced persons and creating conditions for population growth. Implementing programmes for the return and reintegration of migrants should include housing, employment and social support. An important area is to support the birth rate by providing benefits to young families, significantly increasing financial assistance at the birth of a child, and improving access to quality healthcare and childcare facilities. Restoration and modernisation of the education and healthcare infrastructure will ensure a high quality of life and help preserve the country's population. Through comprehensive measures and practical implementation, Ukraine will overcome the demographic crisis and ensure a sustainable future.

DISCUSSION

The topic of demographic development is an active debate among scholars. Our results show that migration significantly impacts demographic processes, which aligns with Shevchenko's findings on the loss of human capital

[31]. Korolyov and Grytsenko [32] argues that supporting families and stimulating fertility are important for demographic recovery, supported by our findings on the demand for state support programmes. Ernst's study highlights the importance of socially integrating internally displaced persons, which aligns with our recommendations to create conditions for their social adaptation [33]. Bvalia's findings highlight the negative impact of the war on economic activity, which is consistent with our observation that migration leads to a decrease in economic activity [34]. Clar's study describes in detail the demographic development scenario under conditions of constant migration [35]. Sharma's argument that long-term solutions to demographic challenges require a holistic approach supports our argument regarding integrated public policies [36]. Lupak's research points to cultural and social factors [37]. Komušanac [38] found that state initiatives significantly impact demographic processes, consistent with observations on the role of state support in stimulating migrant return. According to Koukalová [39], a promising approach to demographic policy is to support economic activity. Lyapin and Logunova [40] emphasises the need for family support programmes and the importance of comprehensive measures to improve the demographic situation. So, scholars concentrate on forming and executing strategic measures to ensure sustainable provision of demographic reproduction in Ukraine, especially given the existing challenges

CONCLUSION

Consequently, the implications of the demographic growth caused by the ongoing involuntary movement of economically active individuals are examined. The state of population migration in Ukraine today, the consequences of warfare for future migration trends, and assumptions concerning the population of Ukraine in the year 2028 are evaluated. Maintaining and growing economically active populations and/or individuals assures stability and development in a nation. The evaluation of the demographic processes of migration induced by the war reflects a large amount of human capital lost, significantly impacting the labour and economic workings of any society. The optimistic and pessimistic scenarios that have been developed enable different forms of restoration and stabilisation of the demographic situation as they foresee different political and economic environments.

Several issues are likely to slow Ukraine's demographic recovery. Chief among these are the persistent conflict, which has caused dislocation and conflict-related mortality among the civilian population, and the devastation of infrastructure, which makes it difficult for the refugees to go back home. Economic hardship and unemployment inhibit the absorption of the IDPs and increase natural population growth. Other important threats include climate change and its effect on the migration movement and the relevance of population policy. Also of considerable concern is population ageing and increasing pressure on the social and pension systems, which have to be resolved with strategies aimed at older adults in the long term.

Among the recommendations and the requisite actions to improve the demographic situation include crafting and executing a full-blown national programme which seeks to assist those displaced persons, the settlement of internally displaced persons, and enhancing the population's reproductive health. In order to ensure the security and stability of the citizens, there is a need to quickly restore the damaged infrastructure and provide humanitarian support to the affected regions. The government needs to endorse the creation of new employment opportunities, investment escalation, and boosting small and medium enterprises. International relations with international agencies and donors should be enhanced to get money and technology assistance. On the child and family side, it is also necessary to elaborate on family support programmes, subsidies for birth promotion, and the provision of medical and educational services, which is also critical. With all-round measures and practical action, Ukraine will reverse the demographic crisis and ensure broad-based sustainable development.

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