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The Consequences of a Forced Migration Shock for the Economy of a Country at War: The Case of Ukraine

Abstract
The full-scale war in Ukraine, which started with the Russian invasion in February 2022, has led to an unprecedented forced migration crisis not seen in Europe since the Second World War. The current Ukrainian forced displacement, which has no analogues in terms of its scale, geographical coverage, quantitative indicators and timeframe, represents an exceptional case to study in terms of its impact on the economic environment of the country of origin. The *purpose* of this paper is to identify and analyse the short- and long-term effects of the forced migration shock on the economy of a combatant country in the context of a full-scale war in Ukraine. *Methodology*. To address the task of classifying the economic consequences of a forced migration shock from the perspective of the country of origin, the publication uses the matrix diagram method. The matrix developed is based on two key characteristics that indicate the durability of the impact (short-term or long-term) and the nature of the impact (explicit or implicit). The analysis of the short-term and long-term effects of forced migration on the Ukrainian economy is based on macroeconomic statistics (key macroeconomic indicators, labour market indicators, public finance indicators, external sector statistics) in the pre-war period, the war period since 2022, and forecasts for 2024–2025. *Results*. Unlike regular labour migration, forced migration has a predominantly negative impact on the economy of a country of origin, both in the short and long term. The explicit effect of forced migration on the economic system of the country of origin is to damage the labour market. The implicit effects include a decrease in remittances, a reduction in production facilities, an increase in the budget deficit and regional budget imbalances, an increase in the level of external and internal debt, increased dependence on international aid, a decrease in consumption, investment and GDP growth rates. *Practical implications*. The practical results provide a basis for further research into policy measures to address the negative aspects of increasing migration processes in Ukraine, particularly with a view to the country's future post-war reconstruction. *Value/Originality*. The matrix developed to assess the impact of the forced migration shock provides a deeper understanding of the multifaceted effects of this phenomenon on the socio-economic system of a country at war.

Keywords
forced migration, displacement, economic development, country at war, war, country of origin

JEL: F22, K37, O15, R22, D74, F51

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1 Introduction

In February 2022, the Russian war on Ukraine had unprecedented consequences. The war endangered people's lives and health, destroyed their homes and civilian infrastructure, and forced Ukrainians to seek safer areas within the country and beyond its borders. Approximately one third of Ukrainians were forced to leave their homes. Nearly 7 million of them became internally displaced persons (IDPs) and another part of the population became refugees abroad. The UN refugee agency estimates that by December 2023, more than 6 million forced migrants were registered in Europe and other regions of the world (UNHCR, 2023). This is now considered to be the biggest refugee crisis in Europe since the Second World War. The scale of forced migration is shocking for both sending and receiving countries and calls for a discussion of the challenges and prospects for the development of this phenomenon and its impact on the economy.

Ruiz I., Vargas-Silva C. (2013), Sarzin Z. (2021), Verme P., Schuettler K. (2021) focus on the general impact of forced displacement on host communities.

From the perspective of the country of origin, a number of researchers, including Libanova E. (2019), Podra O., Petryshyn N. (2021), examine migration problems in Ukraine, their causes and effects, with a focus on labour migration issues. Gorban S., Bilenko O., Trubnik T. (2023), Simakhova A. O., Tserkovnyi I. O. (2022) took the first steps in the academic debates on the impact of migration processes in Ukraine on social and economic spheres during the war. Given the relevance and insufficient study of this topic, this article attempts to explore the economic consequences of forced displacement from the perspective of the country of origin in the context of war.

The **purpose** of this paper is to identify and analyse the short-term and long-term effects of a forced migration shock on the economy of a belligerent country in the context of a full-scale war in Ukraine.

2 General and Explicit Consequences of a Forced Migration Shock

Unlike legal labour migration, forced migration is a real test of strength for the socio-economic system of a country at war.

To classify the possible consequences of a migration shock for the economy of a country at war, the paper uses a matrix diagram method that takes into account the links between two key criteria. The two-by-two matrix allows for a visual presentation of the results in a structured manner.

The paper divides the set of possible consequences of a migration shock on the economy of a belligerent country into four subsets, formed in the form of a matrix (Figure 1). This model is structured around two axes. The x-axis refers to the durability of the impact (short-term or long-term) and the y-axis refers to the nature of the impact (explicit or implicit). The sign of each outcome indicates the direction in which the impact of the migration shock should be assessed. The explicit mode of impact covers the range of results directly related to the labour market. The implicit mode of impact covers the wide range of social and economic outcomes. The analysis of this matrix makes it possible to identify interdependencies between the various consequences of forced migration on the economy of the home country during the war.

The matrix diagram for assessing the impact of the forced migration shock on the economy of a country at war (Figure 1) shows a predominantly negative impact of forced migration on the economy of a country of origin, both in the short and long term.

The article identifies the impact of forced migration on the Ukrainian economy.

The ongoing war in Ukraine has had a serious impact on the labour market. Along with the 7 million people who have left Ukraine for other countries, about 7 million have become *IDPs*. Highly educated women are the main category among the large flow of Ukrainian refugees abroad. Another part of economically active citizens, mostly men, left for European countries before the war as temporary labour migrants, and most of them did not return when the war broke out. Within Ukraine's borders, men between the ages of 18 and 60 are liable for military service and restricted from leaving the country. The combination of these factors led to a labour market shock with changes in the size, distribution and composition of the labour force. As a result, the Ukrainian labour market experienced a contraction caused by a fall in pre-war levels of supply and demand. The contraction in demand outstripped the fall in supply, leading to an *increase in the unemployment rate* of up to 40 per cent. The number of registered unemployed doubled from 6 to 12 per vacancy. Average wages fell significantly (IMF, 2022).

Type of impact			
	Explicit	– an increase in the number of internally displaced persons – increase in unemployment – decline in real wages	– deformation of the demographic structure of the employed – weakening of intellectual potential
	Implicit	– Reduction in remittances from migrants from abroad – deficit in the current account of the balance of payments – increase in the budget deficit (increase in budget subsidies to support IDPs, decrease in tax and social contributions) – increased level of external and internal debt – increased dependence on international aid – rising inflation -increased regional production imbalances in the economy – falling GDP – price boom in the rental housing market of "safe" regions	+ growth in entrepreneurial activity + growth of innovations – budgetary inequality at the regional level – upward trend in prices on the property market in regions not affected by the war
		Short-term	Long-term

Durability of impact

FIGURE 1 Matrix for assessing the impact of a forced migration shock on the economy of a country at war
Source: developed by the author

Migration processes, as well as the imbalance between labour supply and demand, are the determining factors behind the large number of unfilled vacancies in all sectors and regions, especially in the war zones. The processes of brain drain (*intellectual outflow*), which describe the outflow of highly skilled migrants abroad, are of concern. A shortage of labour will eventually discourage investment and economic growth. Over time, it will become more difficult to fund government spending such as pensions and infrastructure support if more Ukrainians are working and paying taxes abroad rather than at home. For a country with an ageing population due to increased life expectancy and low fertility, continued net emigration of people of working age will cause problems and lead to a *deformation of the demographic structure of the workforce* in the long run.

The following factors may increase the further outflow of economically active population from Ukraine or impede the return of refugees after the end of the war:

- Openness of EU countries to labour migrants from Ukraine. Due to demographic changes and population ageing, many countries, including old EU member states such as Germany and France, will face increasing labour shortages and may adjust their immigration policies accordingly;
- the large wage gap between Ukraine and other European countries is a strong incentive for migration. The average monthly salary in Ukraine is only about a quarter of the average salary in countries of employment such as Poland or the Czech Republic, and less than one tenth of the salary in the western or northern EU countries;
- effectiveness of integration measures for Ukrainian refugees. Mastery of the local language and access to the labour market of the host country may negatively affect the plans of Ukrainian refugees to return after the war;
- the growth of the Ukrainian diaspora in the EU. According to the UN, Ukraine is one of the ten countries with the largest number of emigrants, and this number has increased in the last pre-war years. In 2018, the State Statistics Service estimated the number of labour migrants at 1.3 million, while experts gave estimates ranging from 2 to 4 million (Official website of the State Statistics Service of Ukraine). The growing scale and intensity of interaction between Ukrainian citizens within the diaspora facilitates access to various social benefits and enhances the integration of newly arrived migrants.

3 Implicit Consequences of the Forced Migration Shock

To highlight the significant implicit consequences of the forced migration shock caused by the war in Ukraine, it is useful to arrange them in time order.

Remittances. Given the limited domestic resources, Ukraine should focus on the efficient attraction and use of all external resources, including remittances from migrants from abroad. According to the Keynesian model of economics, an increase in remittances can be seen as an increase in household income that is not associated with production growth. In the future, this increase in income could lead to an increase in output through, first, greater consumption of domestically produced goods and services (in the short term) and, second, *greater investment (in the long term)*. Remittances can become a reserve for development if the country's leadership finds opportunities to create a favourable climate for the investment use of these monetary resources.

In addition to the positive value of remittances, their negative effects can also be observed, mainly by setting in motion inflationary mechanisms in the country. Money received from migrants abroad increases the purchasing power of the population, which can lead to a rise in prices. In the case of high levels of imports into the country (which is also typical of Ukraine), goods produced by domestic manufacturers may be replaced by cheaper or higher quality imported products. Given that the purchase of land or property is a common type of investment for migrant workers, rising prices in this sector can be a negative factor.

Thus, the importance of remittances for Ukraine's economic system depends heavily on the specifics of their use.

In 2022, Ukraine's economy experienced a 10% drop in private remittances from labour migrants (12.6 billion USD compared to a record 14 billion USD in pre-war 2021). In 2023, the NBU expects a further decline in private remittances to 11.7 billion USD (NBU). Women with children who moved abroad with the outbreak of full-scale war are less likely to remit to Ukraine and have increased their spending abroad.

Indirect estimates confirm that money received from migrant workers is mainly spent by households on consumer goods and services. The investment potential of migrant transfers remains rather low in Ukraine. There is no reason to assume that there is an increased propensity to save among the population. Undoubtedly, the amounts transferred from abroad are quite significant, but in order for these funds to work for the economy, it is necessary to improve the general socio-economic situation, strengthen public confidence in the financial and banking sphere, and simplify the conduct of business activities.

If migration becomes long-term and a large number of Ukrainian workers obtain permanent residence in host countries, the volume and share of remittances in Ukraine's balance of payments will decline further.

Dependence on international assistance. With the start of a full-scale Russian invasion, Ukraine's state budget for 2022 has undergone significant changes, with state budget spending increasing by 14.7% and the marginal deficit rising by 35%. Ukraine is running a budget deficit of 5 billion USD per month (Official website of the Ministry of Finance of Ukraine). Closing this financing gap is a critical task for the Ukrainian authorities, requiring a thorough justification of possible sources of financing.

Any *widening of the budget deficit* has a negative impact on the sustainability of public finances and the economy, but this measure was driven by the need to finance increased defence needs. Every second hryvnia in 2022 will be spent on defence, which is 4.85 times higher than the same indicator for the previous year (Official website of the Ministry of Finance of Ukraine). Defence spending is financed by tax revenues and borrowing, including through the National Bank of Ukraine, while international aid covers other spending. Figure 2 shows that international aid accounts for 36% of the total financing of government expenditure in Ukraine in 2022.

International funding comes in the form of humanitarian grants and loans. The USA is at the top of the list of countries providing budgetary support to Ukraine, which reached about 21.7 billion USD as of October 2023. The EU has provided several packages of loans and other funding to the Ukrainian government, totalling more than 23.6 billion USD, both directly and through EU institutions such as the European Investment Bank and the European Bank for Reconstruction and Development (Trebesch et al., 2023).

Due to the challenging environment, the budget deficit is projected to remain very high in 2024, requiring significant international assistance to cover basic social needs.

In addition to covering the budget deficit, large external subsidies partially offset the *trade deficit* due to a drop in exports caused by logistical problems in the war-torn country.

At the same time, high dependence on international donor funding leads the recipient country into a pathological "dependency trap". The detrimental effects of high levels of aid include "distorting prices and policies away from sustainable growth and undermining recipient capacity" (Lensink & White, 1999). Lack of accountability, misuse and corruption in the disbursement of donor funds are also factors that exacerbate the consequences of the tsunami of external aid.

In order to avoid the needle of long-term international financial dependence, a comprehensive macroeconomic programme with justification of quantitative indicators and their subsequent monitoring is needed.

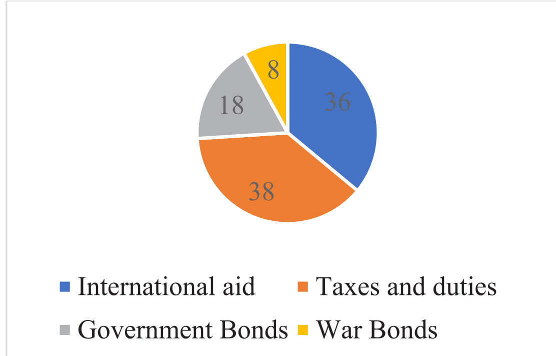

FIGURE 2 Sources of financing public expenditures in Ukraine in 2022, %

Sources: NBU, Ministry of Finance of Ukraine, CES estimates

Business relocation. The continuing destruction of infrastructure and housing is a major challenge of war. Damage to energy infrastructure, transport networks, loss of capacity in many sectors in the active combat zone, particularly metallurgy and agriculture, undermine economic prospects. Electricity supply disruptions caused by the destruction of energy infrastructure have a knock-on effect on other industrial activities.

The destruction of infrastructure and the paralysis of business activity, the restriction of business access to resources and markets, inflation, devaluation and population exodus made it necessary to adapt business to military conditions. Under these conditions, the Ukrainian authorities proposed a mechanism for relocating businesses from the affected areas to safe regions in western Ukraine.

Business owners who decide to relocate their production facilities will receive a package of support from the state. The package includes assistance in selecting a location for the company's facilities, assistance with transportation to the new location, assistance in relocating employees and finding new employees, assistance in restoring logistics, purchasing raw materials and finding markets. As of October 2023, more than 800 enterprises had relocated their production facilities under a relocation programme, but many enterprises changed their plans (Official website of the State Statistics Service of Ukraine). Most likely, the plans have been changed due to problems with relocation and partial de-occupation of territories.

The relocation of enterprises partially solves the problem of restoring business activity in the context of the war in Ukraine, but it is fraught with the consequences of *increasing regional production imbalances in the economy*.

In the long run, after the war ends and the territories are de-occupied, most of the displaced productive assets are likely to remain in the host regions, which will cause the next level of problem – *budgetary imbalances at the regional level*, which will widen the gap between donor and recipient regions.

Housing market. Due to the migration of internally displaced persons, there is a high demand for rental housing across the country, with the exception of the regions in the epicentre of hostilities. There has been a boom in rental prices per square metre in the western regions, which are furthest away from the fighting.

At the same time, some landlords lost tenants during the period of martial law, mainly due to the departure of refugees abroad, so they are actively looking for new tenants and are ready to meet potential residents in order to reduce the cost of rent. Unlike in most European countries, where rental markets are transparent, in Ukraine they operate in the shadows. Neither the central government nor local authorities have any legal mechanism to regulate overpricing for tenants.

The property market in Ukraine is gradually recovering, but buyer activity has fallen since the start of the war. Because of the war, housing construction in Ukraine has been partially suspended. Inflation and devaluation have pushed up the cost of materials and labour, while prices are fixed in contracts. There is also no demand for starter homes, suggesting that Ukrainians are not ready to invest in primary property now.

However, there is a large backlog of demand for property and Ukrainians' interest in housing in the western and central regions, which have not been affected by hostilities. In the long term, one should expect a trend of rising prices on the property market in these regions. Government programmes to compensate refugees in military zones for destroyed housing may provide a boost to the recovery of the construction industry across the country.

Key macroeconomic indicators. After the outbreak of war, the State Statistics Service of Ukraine stopped publishing data on most macroeconomic indicators, especially on the real sector, which made it difficult to assess the situation in the economy. However, data from international organisations, business surveys, etc. can be used for this purpose.

After contracting by almost 30% in 2022, real GDP growth resumed in 2023 and is estimated to be in the range of 4.5-5.8%. According to analysts' forecasts, Ukraine's GDP growth in 2024 is expected to be in the range of 3-5% (Grigorenko, 2023). They predict that public and private consumption, government spending and investment, and export industries will be the main growth drivers of the Ukrainian economy in 2024.

Supply chain disruptions, the devaluation of the national currency and rising global energy prices contributed to inflation in Ukraine, which reached 26.6% in 2022. The NBU's tight monetary policy, the fixing of tariffs for some utilities, and good harvests contributed to a significant decline in inflation to 5.1% YoY in 2023. NBU analysts forecast inflation to accelerate to 9.8% in 2024.

4 Conclusions

The purpose of this paper is to study and systematise the consequences of a forced migration shock for the economy of a belligerent country in the context of a full-scale war in Ukraine.

To achieve this goal, a forced migration impact assessment matrix was developed with two axes indicating the duration of the impact (short-term or long-term) and the manner of impact (explicit or implicit) on the economy of the country of origin.

The matrix of consequences shows that forced migration has a predominantly negative impact on the economy of the country of origin, both in the short and long term, compared to regular migration without war. Forced migration contributes to the increase of unemployment, decrease of remittances, reduction of production facilities, increase of budget deficit and regional budget imbalances, increase of external and internal debt, increase of dependence on international aid, decrease of consumption, investment and GDP growth rates, etc. The results of the analysis of the specific consequences of forced migration for the Ukrainian economy confirm this.

The following initiatives can be proposed to overcome the negative consequences associated with the increased outflow of Ukrainian forced migrants:

- Mitigation of the negative effects of net migration at the state level. This may include policies to reduce regional disparities; support for Ukrainians abroad through consular services, employment services and legal advice; implementation of a diaspora policy to encourage the participation of Ukrainians abroad in the economy and society at home; providing students with the right skills to work both in Ukraine and abroad; and encouraging the use of official channels for remittances. It is extremely important to ensure social protection of migrants, in particular pension protection, the transfer of social insurance rights acquired during work abroad, the conclusion of relevant agreements with host countries, the development of reliable and accessible mechanisms for the implementation of agreements already reached;
- to create conditions for stimulating young people to get higher education and find employment in Ukraine. Achievement of this result is possible under the conditions of effectiveness of youth policy in the country, expansion of youth entrepreneurship development projects, practice of functioning of youth employment centres and providing them with additional subsidies;

- macroeconomic stabilisation of Ukraine, which is a necessary condition for economic growth to encourage people to stay in Ukraine and invest in their future. By implementing comprehensive economic reforms after the end of the war, Ukraine has the opportunity to create favourable conditions for economic growth and social development that will improve people's expectations of their lives in Ukraine compared to potential countries for employment;
- implementation of measures to promote the return of Ukrainians to their homeland and their transition to active employment in Ukraine as an important component of the post-war economic recovery programme. Effective reintegration of returning Ukrainians into economic life involves the provision of micro-credits for business start-ups, the expansion of employment service activities in the area of vocational training and retraining, the organisation of training programmes on how to run one's own business, public works at local level to rebuild infrastructure, and the provision of temporary employment for migrants. Such programmes can be partially funded by international donors as part of the country's post-war reconstruction plan, and must be coordinated with the governments of the host countries, which will be ready to support the process of returning Ukrainians to their homeland once the war is over.

In order to avoid the needle of long-term international financial dependence, a country at war needs a comprehensive macroeconomic programme with justification of quantitative indicators and their subsequent monitoring.

The high degree of uncertainty associated with the military situation in Ukraine makes it impossible to make reliable forecasts of the dynamics and directions of forced migration flows in the long term.

The matrix method used to estimate the impact of a forced migration shock on the economy of the country of origin can be equally useful for studying the economic and other consequences of forced displacement for host countries.

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