

## *Original Paper*

# Shaping the European Future of Ukraine during Wartime

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### ***Abstract***

*A significant amount of information is available regarding the onset of the Russian invasion, the progress and failures of the military attack, and the assistance to be provided by the international community once the war has ended. The authors of this paper and others have addressed these issues. However, given the uncertainty of when and how the war may ultimately end, it is essential to consider what can be done during the interim phase leading up to that point in the future. Specifically, this paper explores what Ukraine can do during wartime given changes in the global landscape, we examine how Ukraine can improve the rule of law during wartime, change its economic model, and promote empowerment within the country. On the internal front, Ukraine must combat paternalism and oligarchs, fight corruption, foster education and international contacts, upgrade production and industrialization, address the impact of emigration on ageing, and work towards meeting the membership requirements for the European Union. Therefore, all importantly, in addition to a Marshall Plan to support the post-war rebuilding of Ukraine's economy, preliminary measures towards changing the domestic socio-political regime are needed. Rules established during wartime will be critical in ensuring later assistance, as well as improving wellbeing and to contribute to a new upcoming world order. The future of Ukraine hinges on the outcome of elections in the United States, as well as the rise of nationalism in Europe, both could mean a risk of diminishing support for Ukraine.*

### ***Keywords***

*Marshall Plan, support of businesses, institutional capacity, EU integration, combatting corruption, digitalization, fiscal rules*

## 1. Outline of the Paper

The Russian invasion of Ukraine has caused extensive damage, population displacement, and a significant economic downturn, with GDP declining by over 30% and a substantial increase in poverty rates. With resources diverted to military efforts, ensuring short-term stability in energy networks and food supplies has become crucial.

Section 2 assesses these losses and addresses pressing issues that cannot be postponed until after the conflict, including determining an appropriate economic model, enhancing education, and improving the country's economic potential.

While international commitments and military aid are important, Ukraine's own goals should guide the process, ensuring that international organizations provide assistance rather than dominate the decision-making (Section 3). Ukraine's aspiration to join the European Union necessitates significant post-war changes, also requiring preparations during the wartime period.

Sections 4 and 5 focus on improving institutional capacity and reshaping the industrial structure, respectively. Education and international contacts, including the role of expatriates, are discussed in Sections 6 and 7. The paper concludes in Section 8, providing final remarks.

## 2. Towards an Appropriate Economic Model for Rebuilding

Choosing a suitable economic model for the reconstruction of Ukraine is crucial in the wake of the Russian invasion and the need for a new world order. The model should address both external challenges and internal needs; it should consider Ukraine's geographical advantages, economic potential, natural resources, and human and technological capabilities. The success of the economic model depends on solid institutional capacity within state power institutions, including central and local authorities.

Critical factors for success include the rule of law, an effective judicial system, stable fiscal rules, financial stability, a balanced economic structure, minimal corruption, greater transparency in political decisions, steps towards eliminating corruption, and a developed financial and banking system. An economically stable middle class is also essential, along with sufficient personal income, effective social policy, and competent state management.

Ukraine's rebuilding after the war poses complex challenges that include transforming the economy, implementing structural reforms, and transitioning to a sustainable and competitive European economic model. The goal of joining the EU by 2030 requires aligning Ukraine's legislation with EU rules, harmonizing fiscal policies, and seeking coordination with the relevant ministries and EU bodies.

Ukraine's integration into the EU should prioritize national interests, considering its unique historical development and economic structure, while preserving its comparative advantages. It should align with the EU's strategy for a low-carbon and resilient economy, enhancing both Ukraine's potential and the overall economic potential of the European Union.

International scientific consultation for Ukraine should be cautious of superficial and reactive recommendations. Foreign experts often overlook economic inequality and citizens' well-being, focusing

on market methods favoring large international investors. It is vital to understand Ukraine's historical context, economic growth challenges, and the need for a comprehensive approach to wealth redistribution. Given the oligarchic economy and potential geopolitical pressures, market-based methods may not work effectively during the post-war reconstruction and the formation of a new industrial structure in Ukraine. Ukraine seeks guarantees of being an equal subject in international relations, with independent economic policies and control over critical economic sectors. Attention should be given to supporting civil society, professionals in public administration, and Ukrainian views on the state of affairs.

Though supportive, the Paris Report (Gorodnichenko et al., 2022) on rebuilding Ukraine does not respect the Ukrainian context and historical realities. It overlooks the role of civil society and the potential of Ukraine's higher education and science system. Policies should also address youth, family support, and social welfare, considering the decline in population, the ageing of the population, and the labor shortage. A systematic approach is needed, adopting successful practices that prioritize the well-being of citizens. It should be emphasized that the engagement of international research groups and the collaboration between Ukrainian and foreign economists can contribute to a more comprehensive understanding of the Ukrainian context and facilitate the development of effective policies for reconstruction. However, it is crucial to balance the incorporation of external recommendations with Ukraine's unique historical, social, and political realities. Merely imposing foreign policies and models without tailoring them to Ukraine's specific needs and circumstances is unlikely to yield the desired outcomes.

One area of concern is the reliance on market-based methods for economic regulation during the post-war reconstruction phase. While market-oriented approaches have their merits, in Ukraine they may only be effective in addressing the oligarchic structure of the economy and the inadequate institutional environment. The oligarchic economy, characterized by the concentration of wealth and power among a few individuals, has hindered equitable economic growth and the well-being of the general population. The previous experiences of privatization and land reform in Ukraine serve as cautionary tales. Privatization in the 1990s primarily benefited specific individuals rather than the state, leading to an oligarchic economic structure. Similarly, land privatization did not achieve the goal of establishing small and medium-sized family farms. Instead, agricultural holdings emerged, further exacerbating income inequality and the concentration of land.

Therefore, we conclude that addressing these challenges requires a comprehensive and context-specific approach. Promoting wealth redistribution, improving the rule of law, fighting corruption, and fostering an independent economic policy that safeguards Ukraine's national interests are all aspects of this approach. The engagement of professionals and experts within Ukraine, with the support of international partners and repatriation, will be crucial to effective public administration and policy implementation. A systematic approach that draws from successful practices in various policy areas abroad can contribute to achieving positive outcomes in Ukraine's reconstruction, so that Ukraine can pave the way for sustainable and inclusive economic growth.

### 3. Supporting the Economy in Wartime and Preparing for the EU

On June 23, 2022, Ukraine was granted candidate status for EU accession by the European Council, reflecting the country's progress in reforms meeting EU criteria, its democratic commitment, and the acknowledgement of its geopolitical significance.

To become a full EU member, Ukraine must fulfil the Copenhagen criteria established in 1993, encompassing political, economic, and *acquis* criteria. Ukraine is expected to undertake the following critical tasks:

- judicial reform, including the selection process of judges for the Constitutional Court,
- combatting corruption and nepotism with de-oligarchizing efforts,
- a new mass media law, which addresses media regulation and freedom issues.

Successfully implementing these reforms will contribute to Ukraine's progress and attract investments. Ensuring the independence of the judiciary and reducing corruption is crucial. Equal conditions for Ukrainian and foreign-invested companies, preventing corruption in all sectors, and facilitating privatization are priorities. All the required reforms must also be aligned with the need for effective income distribution policies to combat the rate of poverty, which increased from 5.5% to 24.2% in 2022. During the devastating war in 2022, Ukraine also witnessed a sharp decline in its GDP by 29.1%, accompanied by a significant inflation rate of 26.6% by the end of the year (National Bank of Ukraine, April 2023). This resulted in 7.1 million more people falling into poverty, undoing 15 years of progress (World Bank, 2023a). Projections indicate that the country's GDP is expected to grow by a modest 0.5% in 2023 (World Bank, 2023a). It is crucial to address various aspects such as minimum wage, social safety measures like healthcare coverage, unemployment support, and a comprehensive review of the 'consumer basket'.

To reverse Ukraine's downward economic trajectory and successfully integrate it into the global economy, sustained and long-term growth is essential. Achieving higher productivity levels necessitates focusing on labor and aggregate productivity within a new industrial structure that embraces modern technologies and digitalization. With a per capita income of only up to 13% of the EU average according to World Bank's pre-war data (US\$4,835.6) and taking into consideration Ukraine's real GDP losses of 29,1% in 2022 (National Bank of Ukraine, April 2023), the state must experience accelerated growth through increased productivity and investment. The lower level of GDP per capita in comparison with the EU countries is one of the obstacles to Ukraine's equal membership in the EU. Likewise, with that in mind, the rebuilding of Ukraine requires economic growth starting from 3,5% and an ambition to reach 7% annually, which would be a significant step towards achieving a convergence of average income per capita with the EU members, and which entails increasing household incomes.

Overall, Ukraine remains determined to implement priority reforms for European integration and OECD (2022; 2023a) accession while sustaining the economy during the war.

### *3.1 Support for Businesses*

During the war, the Ukrainian government supported the country's economy by assisting businesses and facilitating their relocation from combat zones to safer regions. Approximately 800 enterprises have received aid with relocation, preserving existing jobs and creating new ones (The Ministry of Economy of Ukraine, 2023).

The relocation of businesses has played a vital role in stimulating economic growth in western regions of Ukraine, which were previously considered economically depressed areas. However, the ongoing hostilities in other regions have destroyed industrial potential. Therefore, a regional economic policy is necessary to restore these areas and engage local authorities and residents in reconstruction.

Public finances have been used to support the economy, but have not been directed towards an upcoming peace. Government budget expenditures have increased by 41.5%, primarily in the areas of security and defense. Budget revenues have declined due to economic contraction and tax privileges have been granted to businesses. To compensate for the decrease in tax revenues, Ukraine has pursued domestic borrowing and received support from allies and external creditors (Ministry of Finance of Ukraine, 2023; Trebesch, 2023; Word Bank, 2022).

Tax reductions, small- and medium-sized business grants, and the Affordable Loans Program 5-7-9% were ventured. Tax payment deferrals and incentives have also been introduced to alleviate the financial burden on enterprises and facilitate post-war recovery. In the future, investment opportunities have to be better prepared. Despite the ongoing war, Ukraine remains an attractive investment market with significant potential for economic development. The Advantage Ukraine platform, launched in 2022, has received numerous investment requests from international investors, demonstrating the growing interest in the country (Ministry of Economy of Ukraine et al., 2023). It is essential to highlight that Ukraine is significantly underinvested, with estimates indicating a need for investments ranging from US\$180 billion to US\$500 billion (Eisen et al., 2023). Key sectors for investment in Ukraine include defense, metallurgy, agro-industrial complex, energy industry, pharmaceuticals, natural resources, logistics, infrastructure, furniture and woodworking, innovations and technologies, and industrial manufacturing.

### *3.2 Challenges and Mitigation*

Investing in Ukraine does come with challenges, including military risks, attacks on infrastructure, and corruption. However, the delivery of modern air defense systems, along with cooperation with international organizations, helps mitigate these risks.

To attract investments and mitigate risks, Ukraine seeks cooperation with export credit agencies and international organizations such as the US International Development Corporation, the World Bank Group's International Finance Corporation, European Development Finance Institutions (EDFIs), and the Multilateral Investment Guarantee Agency. Collaboration and co-financing among these stakeholders are crucial for successful initiatives (Eisen et al., 2023).

Investing in Ukraine means supporting a country fighting for democratic values and contributing to its future as a member of the European Union. Ukraine offers an attractive domestic market, new export opportunities, and the potential for sustainable development and technological advancement.

### *3.3 Fiscal Policy*

Fiscal policy becomes a powerful tool for governments to effectively support the economy during times of conflict and adversity, surpassing the limitations of monetary policy alone. The coordination of actions between the government and monetary authorities, leveraging both fiscal and monetary measures, is crucial to achieving better outcomes in supporting the economy and attaining financial stability. These coordinated actions in fiscal and monetary policy reflect the resilience, determination, and strategic decision-making of the Ukrainian government in the face of adversity.

In the long run, fiscal rules play a crucial role in ensuring responsible and sustainable financial management after wartime. These rules encompass various aspects such as restrictions on government spending, borrowing, taxation, budget transparency, and accountability. After the war, Ukraine must restore fiscal rules in accordance with EU requirements (Smith, 2021) to prepare for EU accession.

Before the war, Ukraine had fiscal rules in place, including debt limits and budget deficit constraints. However, these rules were temporarily suspended for 2020 because of the pandemic, and for 2022/2023, due to Russia's full-scale invasion, which led to exceeding the maximum values of state-and-guaranteed debt and the budget deficit. The consolidated budget deficit reached almost 26% of GDP, excluding grants (National Bank of Ukraine, 2023). To prevent similar situations in the future, Ukraine needs to reinstate fiscal restrictions based on the European experience. Compliance with the EU Council Directive 2011/85/EU is crucial to aligning fiscal policy with EU provisions in the medium term (Council of the European Union, 2011).

The EU places significant emphasis on budgetary regulations for economic coordination and macroeconomic stability. Ukraine should develop medium-term plans for fiscal-structural adjustments, prioritizing sustainable public debt levels and economic reforms. It is important to note that Ukraine's public debt reporting lacks the category AF.2 (currency and deposits), leading to the figures reflected in the reports not representing the total amount of the state's debt (Bohdan, 2023).

In addition to fiscal framework alignment, Ukraine needs to harmonize its operational rules with EU practices to effectively control current fiscal policy. One proposed operational indicator for fiscal policy supervision is the net primary expenditure of the general government sector. The Ministry of Finance and tax authorities should work on bridging the discrepancies between Ukraine and the EU by bringing fiscal rules closer together. Independent compliance monitoring is necessary to improve public finances and protect state investments.

As a candidate for EU membership, Ukraine should follow the Fiscal Structural Plan of the EU, but this can only happen after the war. Moreover, the country must demonstrate its ability to meet the EU's fiscal framework requirements, including the Stability and Growth Pact (SGP) and the European Semester process (European Commission, 2023). The SGP sets out rules and guidelines for fiscal policy in the EU,

including limits on budget deficits and public debt levels. At the same time, the European Semester process provides a framework for coordinating national fiscal policies and structural reforms across the EU.

Membership in the EU brings economic benefits to Ukraine, including increased trade and investment, improved market access, and participation in decision-making processes. It also signifies a commitment to democratic values and political stability. Achieving economic reforms requires sustained political will, public support, and backing from EU member states. The steadiness of international support for Ukraine will depend on many factors, including the election results in the US.

The EU sanctions against Russia in response to its aggression against Ukraine are crucial and require continuation. These measures and the support of Ukraine's allies serve multiple purposes in addressing the ongoing conflict.

The EU has implemented ten packages of sanctions targeting Russia's economy, limiting its access to critical technologies and markets, and weakening its ability to sustain the war. The objectives of these sanctions are to disrupt Russia's war financing, impose costs on the responsible political elite, and diminish Russia's power base (European Council, 2023).

The European Commission reports a significant increase in sanctioned trade between the EU and Russia. Since February 2022, the EU has prohibited over €43.9 billion of exported goods and €91.2 billion of imported goods, accounting for a substantial portion of trade (European Council, 2023).

The eleventh package of EU sanctions against Russia includes extraterritorial measures against third countries (Mann et al., 2023).

The sanctions and international support have played a pivotal role in Ukraine's position on the global stage. Ukraine has established itself in international politics, contributing to preserving the international world order. It remains an important player in global food security and is emerging as a confident player in the EU market, working towards energy system rebuilding and strengthening energy security.

International military, financial, and humanitarian assistance continues to play a vital role in Ukraine. This support includes financing assistance, grants, and credits, with contributions from the US (USD 1.5 billion per month), the EU (EUR 18 billion), and the IMF (USD 17 billion tranches) to cover the deficit in 2023. However, the upcoming 2024 presidential election in the US introduces risks and uncertainties that could have an impact on Ukraine's standing in the international community.

The consensus on Ukraine among Americans has become fragmented, particularly with respect to the 2024 presidential campaign. Initially, there was bipartisan support for Ukraine's sovereignty and security, but partisan politics and domestic considerations have increasingly influenced the discourse (Jentleson, 2023). The divergence of opinions within the American political landscape raises concerns about the future trajectory of US policy towards Ukraine.

The varying perspectives within the Republican Party, as highlighted by experts, reflect many complexities and divergent interests within the party. The outcome of the 2024 presidential election and the scenarios of a decisive Ukrainian victory, a continuation of the war, or an enduring stalemate will

shape the future of US-Ukraine relations and international perceptions of the American commitment to global security and democratic values (Jentleson, 2023).

In summary, the evolving dynamics of international affairs and the fragmentation of the consensus on Ukraine among Americans raise questions about the future of US engagement with Ukraine and its broader international role. The collective decision-making of Ukraine's allies, including the US, remains crucial for the country. Ukraine's efforts align with global strategies for sustainable development and a low-carbon economy, contributing to a more sustainable and environmentally friendly future.

#### **4. Enhancing Institutional Capacity and Strengthening the Rule of Law While Combatting Corruption**

A robust rule of law and strong institutions are crucial for the effective functioning of a modern economy. However, Ukraine still needs to enhance its institutional capacity. While the Ukrainian state has been working on this issue since it gained independence, there have been both successes and failures. The government institutions in Ukraine have demonstrated their functionality and institutional capacity by actively exercising resistance during the war for independence, thereby ensuring the economy's survival. Thus, the capacity of government institutions and the governance process are vital to successful reform implementation.

The reconstruction of Ukraine will be supported by financial assistance from international allies, financial and non-financial institutions, and the private sector. It raises significant concerns regarding the rule of law, anti-corruption efforts, and the reduction of the influence of oligarchs in public administration. Documenting losses at national and international levels is crucial in this regard.

The Rapid Damage and Needs Assessment (RDNA2) (World Bank, 2023b), a collaborative effort involving various organisations, aims to evaluate the damages caused by Russia's invasion, identify Ukraine's economic and social requirements during and after the war, and estimate losses. Preliminary estimates indicate that Ukraine has incurred direct and indirect losses exceeding \$1 trillion, which is five times its GDP (Ukrinform, 2022a).

As of February 24, 2023, the estimated reconstruction and recovery needs amount to approximately \$411 billion (RDNA2). These efforts aim to transform Ukraine into a modern, low-carbon, disaster- and climate-resilient country aligned with EU policies and standards. Priority areas for 2023 require around \$14 billion, including energy, housing, infrastructure, essential services, explosive hazard management, and private sector development. The government intends to allocate approximately \$9 billion for initial reconstruction efforts.

The direct damage caused by the war is estimated at \$135 billion, with sectors such as housing, transport, energy, commerce, and industry being the most affected, particularly in the frontline regions. Disruptions to economic flows, production, and other war-related expenses contribute to an estimated total loss of around \$290 billion.



To manage external assistance, an international agency for reconstruction should be established in cooperation with the Ukrainian government. It is suggested that this agency should have equal representation of international participants and Ukrainians.

International donors emphasise the need for targeted use of funds, supervision, and transparency to address concerns about corruption and the influence of oligarchs. Building trust is crucial, considering Ukraine's oligarchic past.

#### *4.1 The Law on Oligarchs*

Even before the full-scale Russian invasion, on September 23, 2021, the Verkhovna Rada of Ukraine passed the so-called anti-oligarchic law, which aimed to provide legal grounds for avoiding and preventing the influence of oligarchs on state policy in a broad sense. Its full name is the Law of Ukraine "On preventing threats to national security associated with the excessive influence of persons who have significant economic or political weight in public life (oligarchs)" (No. № 1780-IX). This law defines the legal and organisational principles of the system's function to prevent threats to national security associated with the excessive influence of individuals with significant economic and political weight in public life (oligarchs), along with related individuals, as well as the content and procedure for applying relevant response measures.

Since 2014, Ukraine has made a significant effort to combat corruption by creating several anti-corruption bodies. The National Anti-Corruption Bureau of Ukraine (NABU) was established in 2014 to investigate and prevent corruption offences committed by high-ranking officials. In the same year, the Specialized Anti-Corruption Prosecutor's Office (SAPO) was also created to prosecute corruption cases investigated by NABU. Additionally, in 2015, the National Agency on Corruption Prevention (NACP) was established to prevent corruption in public institutions through asset declarations and monitoring conflicts of interest.

In 2016, the High Anti-Corruption Court (HACC) was created to prosecute and try corruption cases investigated by NABU and SAPO. The HACC is an independent court with the authority to impose sentences for public officials' corruption offences. Finally, in 2019, the Office of the Financial Ombudsman was established to protect the rights of individuals and legal entities in financial disputes with banks and other financial institutions. These anti-corruption bodies have made progress in investigating and prosecuting corruption cases in Ukraine. However, there is still much work to be done to eradicate corruption in the country entirely.

The new Ukrainian society will play a crucial role in fostering trust within the international community regarding the utilisation of international funds for reconstruction efforts in Ukraine. At this pivotal juncture, the people of Ukraine find themselves in a new historical reality, undergoing a process of renewal and potential rebirth. The crucible of war is a critical test for the resilience of the populace, state institutions, and, in particular, the presidential institution. Even amidst the challenging circumstances of martial law, the Ukrainian people hold lofty expectations of their government. As the nation transitions into the stage of reconstruction, these expectations remain high. The active involvement of civil society

in exercising social control over the reconstruction process and overseeing the use of reconstruction funds will assume significant importance. International oversight and support will also play a vital role in ensuring accountability and promoting successful outcomes (Note 1).

What is essential, and in our opinion can be utilised for the targeted application of funds for assistance to Ukraine from various recipients, is the multi-level system of control over assistance to Ukraine and a straightforward procedure for reporting suspicions of violations. However, such control procedures should allow the rapid targeted provision of funds for use, as they can slow down the process of accumulating these funds and, accordingly, lead to delays in the procedures for their use. A reasonable policy and steadfastness should prevail in all matters.

Therefore, to rebuild Ukraine, its allies will create a corresponding fund: an Agency for Reconstruction and Economic Recovery of Ukraine. In our opinion, the issue of European integration should not fall within the scope of responsibility of this temporary institution, as proposed in the Paris Report 1 (Gorodnichenko et al., 2022). For this purpose, there is the government of Ukraine with relevant profile ministries, the functions of which are divided in terms of their responsibility for Euro integration. Moreover, there is a profile Vice Prime Minister for the European and Euro-Atlantic Integration of Ukraine.

The issue of combatting corruption or even preventing corruption in the process of Ukraine's reconstruction also presents an image issue for the government of Ukraine and its people. Ukraine has acquired a new image as a fighter for justice and democracy, raising the value of human beings and their rights and dignity. Therefore, the corruption problem in this system of renewed social values is resolved at the level of civil society. The new civil society was born during the war in Ukraine. Currently, the expectations and demands on the governmental authorities of Ukraine are high, and this also applies to the fight against corruption. The war has brought about a turning point that formulates the non-loyal attitude of civil society towards corruption. Civil society has come to play a monitoring role.

Furthermore, digitisation is aiding Ukraine in the fight against corruption. The Ministry of Digital Transformation is successfully digitising all public services, actively utilising the "Diia" application that provides Ukrainians access to various government services, digitised identity documents, and more. It is a unique practice at the global level (Tett, 2023). There is considerable interest among many countries to implement such a service. Additionally, the "ProZorro" platform is used for public procurement and serves to prevent corruption. Therefore, the overall digitisation of public services is making it possible to establish transparency in government funds. These digital tools can be helpful in monitoring and coordinating the targeted use of donor funds from partner countries to rebuild and reconstruct Ukraine.

Therefore, in the aggregate, the Ukrainian government has an image and reputation advantage in terms of international trust in establishing an Agency for Reconstruction of Ukraine as the administrator of donor funds. This idea was realized as the Multi-agency Donor Coordination Platform, launched on January 26, 2023, building on the results of the Conferences in Lugano, Berlin, and Paris. It supports Ukraine's repair, recovery, and reconstruction efforts by facilitating coordination among international

donors and financial organisations, bridging the gap between needs and resources, and ensuring transparent and accountable support. The question of the Ukrainian Government's Agency for Reconstruction is still on the table. Therefore, it has been proposed to involve representatives proportionally from the Ukrainian government and international donors. All these efforts are complemented by the utilisation of Ukrainian digital tools such as Diia, ProZorro (eProcurement Platform) and the Electronic Office of the Taxpayer, the effectiveness of which has been tested over time and which will ensure transparency, coordination, openness, clarity, and the targeted use of the pool of international donor assistance.

## 5. Improving Industrial Structure

It is evident that rebuilding or reconstructing Ukraine after the war entails constructing a new industrial structure based on the existing leading sectors of the economy, while rejuvenating specific sectors on a modernized basis.

There are several key areas in which Ukraine will need to focus its efforts in order to prepare its economy and industrial structure for potential EU membership by 2030:

- Strengthening the rule of law and governance. This includes improving the efficiency and transparency of public administration, tackling corruption and ensuring judicial independence.
- Economic reforms. Ukraine must continue with structural reforms to improve the business environment, increase competition, and modernize the economy. This involves areas such as deregulation, privatization, and reducing barriers to trade and investment.
- Fiscal discipline. Ukraine must maintain fiscal discipline, implementing fiscal rules after the war and reducing the budget deficit and public debt level in alignment with EU regulations and standards, particularly in environmental protection, labor law, and consumer protection.
- Investment in infrastructure and innovation. Ukraine must invest in its infrastructure, including transport and energy networks, while fostering innovation and entrepreneurship.
- Social policy and human capital development. Ukraine must improve its social policies, including education, healthcare, and social welfare, to increase its citizens' well-being and promote inclusive growth.
- Regional integration. Ukraine must deepen its integration with the EU and its regional neighbors through trade and investment agreements.

The exact timeline and conditions for EU accession will depend on various factors, including progress on the pace of reform, and the willingness of EU member states to support Ukraine's candidacy.

Ukraine's industrialization and industrial structure after the war will depend on various factors, including the pace of post-war recovery, the country's economic priorities and policies, and the evolving demands of the global markets. The most vital step is to create a nationally rooted economic growth model in Ukraine based on the advantages of available resources (natural, technological, labor) with high value-added chains. Of course, it must be the resilient and low-carbon model of the economy. However, several

general trends and areas of focus are likely to shape the future of Ukraine's industrial structure, and these are as follows:

- **Diversification.** Ukraine must diversify its industrial base, removing its heavy reliance on steel, mining, and heavy industry in general. Subsequently, a new industrial structure will allow it to depart from the raw appendage model. Such a goal will require developing new industries and sectors like technology, innovation, and services. The sector of military defense production is of high importance.
- **Modernization.** Ukraine must adapt existing industries and infrastructure, opening itself up to new technologies and practices to improve efficiency, productivity, and competitiveness.
- **Export-oriented focus.** The Ukrainian government must focus on increasing its exports and expanding its access to global markets by strengthening trade ties with the EU and other key trading partners.
- **Renewable energy.** Ukraine has significant potential for renewable energy production. The energy transition of the country will be founded on an energy mix involving small atomic stations with modular reactors, solar and wind power, green hydrogen, and biomethane. This could reduce its dependence on fossil fuels, lower its carbon footprint, and result in it becoming a prominent net energy exporter.
- **Sustainability.** Ukraine must prioritize sustainable, environmentally friendly industrial practices, including efforts to reduce emissions and waste.
- **Agriculture.** Ukraine has vast agricultural resources, including fertile land and a favorable climate. By modernizing its agricultural practices and adopting new technologies, Ukraine could increase its agricultural output and become a significant player in global food markets.

Therefore, the industrial structure of Ukraine after the war will need to reflect the country's evolving economic priorities and global market demands. By diversifying its industrial base, modernizing its existing industries, and prioritizing sustainability and human capital development, Ukraine can position itself for long-term economic growth and prosperity.

In addition to these general trends and areas of focus, there are several specific sectors and industries that Ukraine could prioritize in order to build a more resilient and diversified industrial structure:

- **Digital technology.** Ukraine has a growing and dynamic IT sector with a highly skilled and competitive workforce. By continuing to invest in this sector, Ukraine could become a hub for IT outsourcing, software development, and other digital services.
- **Tourism.** Ukraine has a rich cultural heritage and diverse attractions, including historic cities, scenic landscapes, and cultural festivals. Ukraine could attract more visitors and generate significant economic benefits by developing its tourism infrastructure and promoting its unique cultural offerings.
- **Logistics.** Strengthening transportation infrastructure and supply chain management will enable a seamless flow of resources, materials, and services for rebuilding. Embracing

digitalization and sustainable practices in logistics will enhance competitiveness and resilience. Thus, sustained investment in the logistics sector is vital for Ukraine's reconstruction, fostering long-term growth and stability.

- **Manufacturing.** While Ukraine will need to move away from its heavy reliance on traditional manufacturing industries, there are still opportunities for the country to develop high-tech and innovative manufacturing sectors, such as the defense production sector, aerospace, biotechnology, and advanced materials.

During the active phase of the war, the defense production sector has played a crucial role in ensuring the country's security in Ukraine. The war can destroy many production facilities, making maintaining the country's security and military advantage on the battlefield significant. After the war, the defense production sector may retain some importance for the country, as the level of preparedness for possible threats remains high. There may also be a need for orders to repair and modernize military equipment and new military developments.

In addition, the defense production sector may contribute towards developing and producing civilian goods, allowing for the country's economy to expand and increase its competitiveness in the global market. The defense production sector can drive the innovative development of other sectors. The current reality shows the necessity of sufficient defense production and public procurement programs to support it in the medium and long term.

Likewise, the future of Ukraine's industrial structure will depend on a combination of factors, including the country's economic policies and priorities, its investment in critical sectors and industries, and its ability to adapt to changing market demands and global trends. By pursuing a diversified, modern, and sustainable industrial strategy, Ukraine can position itself for long-term economic growth and development.

Overall, building a resilient and modern industrial structure in Ukraine is crucial, based on the existing competitive advantages and regional preferences. It meets the expectations of the private sector, the regional municipal authorities, and other stakeholders. The industrial structure must be modernized to achieve a low-carbon economy, energy security, and self-sufficiency. The aim of Ukraine's reconstruction is to establish a resilient economy with a cutting-edge industrial structure.

## **6. How to Return Refugees at Home**

The Russian-Ukrainian war has caused significant population displacement in Ukraine, resulting in millions of refugees and internally displaced people. The number of Ukrainians who have left the country during the war remains uncertain. However, countries like Poland, Germany, the Czech Republic, Italy, Spain, the United Kingdom, the United States, and Canada have received many Ukrainian refugees (Vyshlinskyi, 2023). As of April 11, 2023, the UNHCR estimates that more than five million Ukrainians have registered to receive temporary protection status in Europe.

The return of Ukrainian refugees is a critical concern for the government, as it is crucial for the country's reconstruction and development. Estimates on the number of returnees vary, with the Institute of Demography of Ukraine suggesting a risk that 90% of refugees will not return due to the protracted war (Radio Ukraine International, 2023). This situation allows Ukrainians with temporary protection status to settle abroad, find employment, and provide education for their children. There is a risk of families not being reunited after the war, as husbands may opt to join their wives abroad, leading to further migration and a loss of human capital.

On the other hand, other estimates suggest that only 10% of Ukrainian refugees will not return home (Ukrinform, 2022b). However, it is essential to note that before the war, 7% of Ukraine's population desired to emigrate (RBC, 2022). The war influenced uncertain people, prompting them to leave under the pressures of the situation. Most Ukrainian refugees are women aged 45 on average with children, and with a significant percentage having higher education qualifications (UNHCR, 2023; OECD, 2023b). This represents a potential loss of valuable labor force for Ukraine.

Regrettably, Ukraine's current population in 2023 is 36,744,634, reflecting a decline of 7.45% compared to 2022 (Macrotrends, 2023).

To encourage repatriation, the Ukrainian government should cooperate with EU countries, prioritize the rapid reconstruction of affected regions, provide assistance during the reconstruction process, help with employment and retraining, and work towards opening the EU labor market for Ukrainians. The repatriation policy should be part of Ukraine's National Recovery Plan and address various issues, including housing, employment, and business establishment.

It is essential to acknowledge that the war's impact goes beyond population displacement, as it has affected the standard of living, trust in the government, and overall well-being of Ukrainians. The successful repatriation of Ukrainians from abroad depends on establishing a sense of security, improving public services, and fostering a favorable environment for a better future.

## **7. Improving the Educational System and R&D**

Currently, under the conditions of the war, there is a need to develop a shared vision for future reforms in education and the research sphere in Ukraine. Ukraine's educational system, notably that of higher education, has undergone several reforms since independence. Reforms in higher education included the implementation of university autonomy, albeit only partially, which was a breakthrough. The National Agency for Higher Education Quality Assurance was also established, independently of the Ukrainian Ministry of Education and Science (Ministry of Education and Science of Ukraine, 2023). Furthermore, the educational authorities carried out reforms in postgraduate education and abolished state-standard diplomas. The Ministry of Education and Science implemented the "New Ukrainian School" reform in primary school. A three-tiered higher education system was introduced, consisting of bachelor's, master's, and PhD degrees, bringing the Ukrainian higher education system closer to European qualification standards (the Doctor of Science in different fields of education was preserved). Overall, integrating and

adapting the higher education system to European standards has been and remains a fundamental focus of education reform in Ukraine.

In Ukrainian education, there is a need to move away from rigid hierarchical relations and transition towards an individualized approach (Vinnytskyi, 2022). Therefore, Ukraine must modernize its education system and the scientific sphere, incorporating the best global practices. However, it is vital to preserve the positive aspects of the existing education system. It is worth noting that a student-centered approach and the development of individual learning trajectories have been practiced in Ukrainian universities for over a decade. However, there are still challenges in implementing these approaches effectively (the system of elective disciplines only sometimes meets the students' knowledge and competency needs).

The field of science faces challenges in many Ukrainian universities due to insufficient research funding, limited opportunities for commercialization, and the diminishing prestige of scientists in society. Autonomy reforms have benefitted top universities conducting world-class research, but research is rudimentary in many institutions, with a focus on teaching. Reforms should modernize higher education, preserve positive aspects, and reintegrate science into universities.

Reforming education requires considering the consolidation of universities, closure of programs, and introducing differentiation between research and pedagogical staff. Financial incentives, rewards for scientific achievements, and excellence in teaching should be implemented. However, the 2023 education budget has been reduced by 17%, impacting salaries and social expenditures.

Increased funding is crucial for universities during the reconstruction phase. Access to leading foreign scientific literature is limited, hindering research. Scientific and pedagogical staff often cover expenses themselves. Therefore, the well-being of teachers, scientists, and educational staff should be prioritized, restoring the profession's prestige.

In Ukraine's academia, there is a need to improve the knowledge of foreign languages among educators and researchers. Reforms have been implemented requiring PhD and Dc.Sc. Candidates aiming for the academic titles of associate professor or professor to demonstrate a minimum B2 level proficiency in a foreign language through an internationally recognized certificate. While some may criticize this requirement, not all academic staff and teachers, particularly older individuals, possess adequate foreign language skills. This language barrier hinders internationalization efforts and negatively affects research and higher education quality. To address this issue, the government should initiate special programs and funding to promote the study of foreign languages, primarily English. Additionally, efforts should be made to attract native speakers as language instructors. Another challenge is the ageing academic staff, making it crucial to encourage young individuals to pursue academic careers.

Undoubtedly, the funding for universities during the reconstruction phase should be significantly higher than the pre-war level. Reducing state expenditures on education and science means a reduction in investment in human capital with corresponding consequences. The minimum level of science funding in Ukraine should be at least that in Poland when considering R&D expenses in absolute numbers rather than as a percentage of GDP. If the government were to continue to allocate funds for education and

R&D as a percentage of GDP, which has decreased by one-third, Ukraine will not reach the pre-war level, which was already insufficient, anytime soon. This could result in lost decades, especially in the field of artificial intelligence amid rapid competition.

Due to the lack of funding in higher education, access to leading foreign scientific literature and journals is limited, hurting research outcomes. In order to conduct research at a global level and teach at an international standard, constant and complete access to modern educational and scientific literature is necessary. Only a few universities or research institutes can afford top scientific journals from abroad. Of course, this problem varies across different fields of knowledge.

Ukraine has lost human potential during the war, including scientists and students. Many have sought opportunities abroad due to better working conditions and remuneration. Ukrainian students studying abroad are catching up to peers in Western systems. EU accession and donor support provide opportunities for change, but consensus is needed for the future system. Education and scientific research must be strengthened and protected during the war, ensuring children's right to education.

In summary, underfunding in science and education exacerbates the recovery challenges. Ukraine has lost significant human and scientific potential. Working conditions and remuneration need improvement. Access to modern literature is limited. Researchers' well-being and income must be addressed. Reforms should prioritize the well-being of teachers, researchers, and academic staff. In doing so, Ukraine can strive for a brighter future based on education and science.

## 8. Conclusions

This paper builds on our previous work on a potential Marshall Plan for Ukraine (Aiginger & Moskalenko, 2022) and outlines measures to improve the economy, and society during wartime. We argue the following points:

- 1) Supporting Ukraine's economy requires collective efforts from the international community, the Ukrainian government, and the private sector. Strengthening institutional capacity, enhancing trust, ensuring transparency and accountability, and improving public administration are crucial for recovery and rebuilding. Balancing external and internal approaches is essential when considering unique historical and cultural conditions and prioritizing the needs of the Ukrainian people.
- 2) Ukraine's integration into the EU should prioritize its national interests while consider its historical development, economic structure, and the preservation of comparative advantages. In the active phase of the war, Ukraine's economy needs support from the state, allied countries, and international financial and development institutions. Establishing economic rules for conducting business during wartime, continuing reforms for EU integration, and providing a clear path to EU membership within ten years are necessary.
- 3) Efforts to combat corruption and dismantle the oligarchic economy must be increased. This includes the government's commitment to the rule of law, justice, democracy, and human rights. The emergence of a new civil society during the war presents an opportunity to address corruption as a



negative phenomenon. Civil society plays a crucial role in monitoring and holding the government accountable.

- 4) The government should create a favorable investment climate, attract foreign direct investments during the war, and support business initiatives willing to operate under wartime risks. Trustworthy investment policies, a favorable climate, and dialogue with international financial and development institutions are essential. Judicial reforms and the rule of law contribute to an encouraging investment environment.
- 5) Ukraine needs a modernized industrial structure aligned with the EU market based on comparative advantages, regional recovery needs, available resources, and promising markets. Key sectors include military production, agriculture, logistics, infrastructure, energy, IT, digitalization, higher education, research institutes, and healthcare.
- 6) The Multi-Agency Donor Coordination Platform should efficiently allocate donor funds, ensure transparency and affordability, and prevent corruption. The question of the Ukrainian Government's Agency for Reconstruction is still on the table. The proportional involvement of Ukrainian government representatives and international donors is proposed. The digitization of government services enhances transparency and accountability.
- 7) Higher education and scientific research should provide Ukraine's economy with qualified labor and quality research. Funding for education and science, reduced during the war, should be restored at a significantly higher level when the war ends. The negative trend of reducing Ukraine's scientific and educational potential must be reversed. Measures should be taken to retain Ukrainian teachers and researchers and prevent the loss of young talent seeking study-abroad opportunities.

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## Notes

Note 1. As an example, we have the recent events with the verification by Americans of the targeted use of the funds they provided to help Ukraine. As noted in the European Truth (2023), despite the increase in the number of reports on possible non-targeted use of US aid, no signs of serious violations have been found. This was stated by the Acting Inspector General of the US Agency for International Development (USAID), Nicole Angar, at a special meeting in the US Senate. The inspector emphasized that, to date, USAID has no serious criminal findings related to US aid to Ukraine. They are satisfied with their informational and educational activities, and people know to whom and how to report potential misuses of USAID funds.