

# Reconstruction and Development of the Real Sector of the Ukrainian Economy (Micro, Meso, and Macroeconomic Levels)

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## Abstract

Russia's full-scale offensive has forced Ukraine to reconsider its old economic policy and set priorities that will lead to the elimination of the catastrophic consequences of Russia's actions. The direction of Ukraine's development should be focused on ending its deep dependence on the Russian market and should include all macroeconomic policy measures. The article highlights the real economic opportunities and current conditions, as well as the problems that limit real economic development. On the basis of the analysis, the author identifies directions of national policy to encourage modern changes based on production efficiency. In this regard, the article determines that investment and technological development should be aimed at encouraging high value-added industries. At the same time, equal access to markets and resources should be ensured for various participants in economic relations, and new methods of using limited resources should be developed. Overall, the article concludes that a balanced policy and consistent, timely external support can help ensure the stability of the macroeconomic and financial system. The paper argues that strong accountability and rapid reforms are essential for macroeconomic and financial stability in difficult times.

**Keywords:** Industry, Technology, Agriculture, Transport, Value-Added, Recovery, Stabilisation, Global Experience, Efficiency.

## Introduction

### Research Problem

Today, Ukraine is facing a complex geopolitical challenge to restore and ensure the long-term development of the country's real economy. Given the foreign experience of recovery from war, it can be argued that compared to countries such as Germany (Rupp, Lau, et al., 2020), Austria (Fenz, & Stix, 2021), Japan (Taghizadeh-Hesary, Mortha, et al., 2020), and Iraq (Drebee, & Abdul-Razak, 2020), which recorded a maximum GDP decline of 25-50%, Ukraine already experienced significant losses in its economy in 2022. The Ukrainian economy can also be compared to the economy of Bosnia and Herzegovina, where

more than 50 percent of the territory was occupied by military operations (EU Commission, 1997).

At the same time, Ukraine is a candidate for accession to the European Union, which creates both additional prospects and challenges. For the Ukrainian economy, such priority areas are the development of industries with maximum added value. In his work, Bulkot (2021) formulated directions for the implementation and development of the smart economy. Zrybneva (2021) identified models of competitive and sustainable development of a technological enterprise based on the structural modernisation of the national economy. Riabov, & Riabova (2021) and Bushman (2021) focused on and proved the effectiveness of development based on the creative economy in their works. At the same time, these works note that decentralisation reforms and the introduction of new technologies require significant investment. Given the martial law situation in Ukraine, limited financial resources should be allocated in the most optimal way.

In this regard, special attention is currently being paid to foreign direct investment and the protection of private property. Many authors are currently working in this area and have achieved significant results. For example, Vdovichena, Vidomenko, et.al. (2022) proved that the use of information helps countries to synchronise with the world economy in order to globalise it. The authors Kovalchuk, Kobets, et.al (2019) formulated strategies for staff development in the context of globalisation and global trends.

Thus, the war creates new challenges for businesses of all types: damaged infrastructure, reduced demand for goods and services, lack of liquidity, insurance and logistics issues. Hurzhyi, Kravchenko, et al. (2022) analysed the directions of economic development in the post-industrial period. The strategies considered can be adapted to the new conditions of addressing the issues of economic recovery in Ukraine (Zrybnieva, 2021). To address these challenges, the government should focus on market activation, public procurement programmes, and support for small and medium-sized businesses. It is necessary to expand the government's 5-7-9% lending programme and attract foreign direct investment from the private sector. Support in the form of joint investment funds and EU guarantees could

be an effective way to encourage investment. All of these unresolved issues have determined the purpose and basis of the research in this paper.

### **Research Aim**

The purpose of this article is to develop measures for the reconstruction and development of the real sector of Ukraine's economy at the macroeconomic, mesoeconomic, and microeconomic levels based on the analysis of the post-war reconstruction experience in other countries.

### **Materials and Methods**

The methodological basis of the study is a systematic analysis - the study of the theoretical foundations of the development of the real sector of the national economy and the essence of financial forecasting. The analysis, integration, and comparison were used to determine the characteristics and capabilities of the economic development forecasting system; statistical analysis was used to assess the Ukrainian economy and the current state of the real sector. Time series analysis was used to study the performance of the Ukrainian economy and global markets. The generalisation method was used to analyse global trends in the development of world markets. Modelling was carried out based on forecasting the real indicators of the development of the real sector of the Ukrainian economy and identifying strategies for economic recovery. The expert assessment was used to identify key areas for the development of the real sector of the Ukrainian economy. The working information base includes scientific papers by domestic and foreign researchers, as well as Ukrainian laws and regulations governing the activities of companies in the real sector of the economy. In addition, documents of the Ministry of Economic Development and Trade of Ukraine, the Ministry of Agrarian Policy and Food of Ukraine, the Ministry of Finance of Ukraine, and statistical reports of the State Statistics Service of Ukraine were used.

The scientific novelty of the results obtained is that this study makes it possible to consolidate, systematise and integrate the theoretical foundations of economic forecasting of the development of the real sector of the Ukrainian economy and to determine the directions of its recovery.

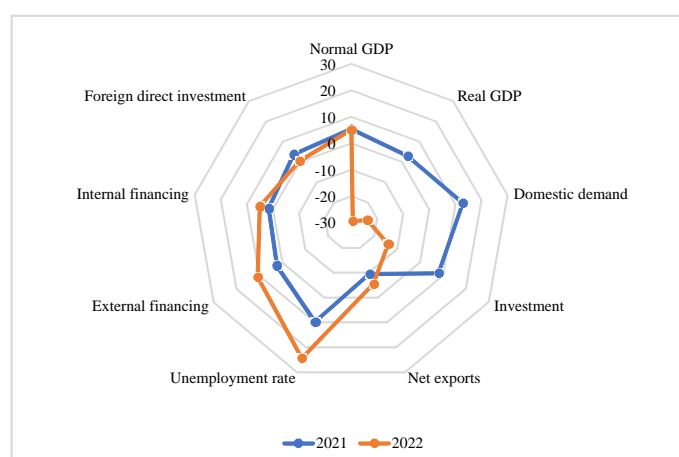
## Result

The real sector, as well as the country's economy, is still in a very difficult situation: military operations, destroyed industrial facilities, damage to most of the agricultural sector, transport and logistics infrastructure, and active market closures. The biggest problem for the country's exports is the blocking of transit from Russia for Ukrainian producers and third countries, as well as the decline in global prices. At the same time, Ukrainian exports are stagnating due to the military conflict. Against the backdrop of global economic trends - a significant increase in knowledge-intensive industries, the spread of new technologies and innovative processes, and the dominant position of the fifth technological mode in the structure of the developed world economy - Ukraine's economy faces a challenge. The country's real sector is still based on low-tech, export-oriented production, whose competitiveness is ensured by traditional factors such as labour, natural resources, and capital. The preservation of this development model became an insurmountable obstacle for Ukraine and at the same time guaranteed the success of the aggressor's hostile intervention. As the market dependence of some industries has been eliminated and economic policy is aimed at eliminating cooperation with the Russian Federation, it is advisable to support the development of the real sector based on new technologies, processes, and innovations in the future. The EU takes into account Ukraine's national interests by developing high-tech sectors of the economy, creating new industries, and ensuring sustainable and inclusive economic growth.

The real sector accounts for more than a third of the total value added of the Ukrainian economy, and the sustainable economic development of Ukrainian society depends on the activities of the real sector. The crisis trends caused by the effects of the COVID-19 pandemic in the real sector of Ukraine's economy in 2020 and Russia's full-scale military invasion of Ukraine are intensifying and require immediate measures to restore the economy. The speed of recovery depends on the effectiveness of the government's actions to manage existing risks and address critical systemic issues at three levels of government.

Researchers focus on such real sector sectors as manufacturing, agriculture, IT, mining, and transport. At the same time, the main task is to identify the industries that can create the maximum added value. The results of the analysis of the development of the real sector of Ukraine's economy (Figure 1) show an imbalance in development and the possibility of stagnation.

**Figure-1. Indicators of Ukraine's economic development in 2021-2022, in percentage terms**



(compiled by the authors)

Thus, the war has caused great damage to Ukrainian industry. In 2022, Ukrainian industrial production will decline by 38%. World Bank experts estimate industrial and commercial losses at \$10.9 billion. At the same time, \$23.2 billion will be needed to restore these industries by 2033. Of this amount, 80% corresponds to the planned expenditures for the renewal and modernisation of production facilities, machinery, and installations, as well as the costs associated with the conversion of warehouses. After 2022, the government estimates that the economy shrank by almost a third, with irreparable industrial losses exceeding 30%. Some sectors of the economy suffered more damage. For example, the mining and metals sector was hit by the confiscation and destruction of two large steel mills in Mariupol and the closure of the export port, which led to a 70% drop in production and exports.

The Kyiv Economic University estimates that in 2022, at least 109 large and medium-sized enterprises suffered direct losses from the occupation and large-scale bombing. In total, experts estimate direct and indirect losses from the war in Ukraine at more than USD 600 billion. Of this amount, about \$138 billion was due to damage to infrastructure and production. As a result of the war, the national labour market has shrunk, and more than 8 million Ukrainians have moved abroad. Most of them are women, children, and the elderly. At the same time, the real sector of Ukraine's economy has a great potential for recovery and development, which allows for effective innovation and use of investment resources. To prevent stagnation and deterioration in Ukraine's economic development, appropriate stabilisation and recovery measures should be taken. Indicators that determine the development of the real sector of Ukraine's economy require intensification, improvement, and further development of all areas of economic development.

In order to choose the most efficient and effective methods and implement recovery measures, it is advisable to analyse the successful experience of countries with post-war economic recovery. Existing examples of post-war reconstruction in the mid-20th century are useful for classical management methods and solutions. However, in setting priorities and tools, we must rely on our own strengths and solutions, as well as on the assistance of international partners.

According to experts, the most important step to start post-crisis recovery is to assess the cost of military operations, natural and man-made disasters, identify needs, and define the details of all the necessary work. At the national level, this includes all recovery planning, as well as monitoring and control of relevant processes with a clear division of responsibilities between national and sectoral structures. This is achieved by identifying potential sources of funding and implementing legal and regulatory changes in a timely manner, including the approval of master plans and other supporting documents at the local and regional levels.

In many cases, work began before the end of the war, for example, in Warsaw in early 1945. Ukraine is following the same path: hundreds of destroyed infrastructure and

housing have been restored, and significant financial resources have been raised. However, the complexity of this solution lies in the fact that large areas are still under enemy control, most of them directly on the front line. Reconstruction work is being carried out in stages. The most important task is to ensure the security of the post-war system and to avoid too many mistakes in post-war reconstruction. Some local authorities and international partners have focused on rebuilding infrastructure, neglecting industrial development and instead focusing on manufacturing, which has led to the demolition of citizens' homes and a shift in priorities in some areas. In most cases, improvements were gradual, mistakes were corrected, and imbalances were addressed, allowing experts to call several cases of post-crisis recovery successful and in the shortest possible time.

Therefore, it is very important to study the experience of the past world, determine the main priorities, take into account the lack of financial resources in any case, and find a balance between different areas of national reconstruction and reform.

A classic example of successful post-war reconstruction is the European Marshall Plan, which is being discussed today in the context of preparations for the reconstruction of Ukraine, which was implemented from 1948 to 1952, not immediately after the war. There is the American programme of Hans Morgenthau, FDR's Treasury Secretary from 1944 to 1947. Their goal was to make Germany an agricultural country. But gradually, under President Truman, it was decided to abandon this approach. After all, it was hard to imagine Europe without Germany's industrial potential.

According to the plan proposed by US Secretary of State Cartwright Marshall, more than 80 percent of the aid would be provided to European countries affected by the war free of charge, and the rest would be in the form of loans. However, these funds do not go directly to the budgets of the recipient countries. They are used to buy industrial products such as fuel, equipment, and food. The use of funds is controlled by special funds managed by representatives of the US and European countries.

Special attention is paid to the revival of industry. 17

European countries received a total of \$115 billion from the Marshall Plan. Thanks to this approach, the region's industry grew by 35 percent between 1948 and 1952, and by the mid-1970s, the level of income rose by 20 percent.

About 12 percent of the allocated funds were used to rebuild West Germany. The reasons for this success include the relatively rapid recovery of the war-torn German economy, the radical liberal reforms of the post-war German government, and financial support from abroad. The main emphasis here is on reforming government relations and the financial system. The country also abolished state price controls, rapidly removed about 90 percent of regulatory restrictions on business, and introduced tax incentives to boost exports.

As a result, most financial resources are spent on business development rather than on maintaining the state apparatus. On the positive side, measures are planned to protect certain sectors of the economy, including the state, from monopoly. These risks are mainly concentrated in the metallurgical, automotive, machine-building, and other industries. In addition, the country's focus has shifted from industrial leaders to processing technologies. Funding for vocational science by Beilin Federal University has increased fivefold. All improvements and innovations were implemented immediately. As a result, Germany's industrial production tripled in 1962 compared to the pre-war level.

South Korea has a different experience. When this Asian country, almost completely destroyed by war, began to rebuild in the mid-1950s, the authorities made many mistakes, including wasting American aid money. However, management and control methods gradually evolved. By investing in education and science, the country is investing in its future. One of the results of this policy is technological development. Qualified specialists are the key to high-quality restoration.

Attracting foreign investment has also paid off in South Korea. South Koreans prefer to invest in local industry because the government guarantees the safety of their capital and offers many benefits, such as government contracts, cheap loans, and tax breaks.

The country has the same export standards as Europe -

mainly value-added products. The share of raw material exports should be reduced, regardless of how promising and cheap it is. As in South Korea, export revenues should be used to purchase and implement new technologies, not to buy food.

But experts note that Koreans do not always act according to market principles. Countries like the Soviet Union developed five-year plans to nationalise banks and reduce corporate debt, which partially worked in the middle of the last century. In the mid-1960s, South Korea's economy grew by an average of 7.8% per year thanks to industrialisation. At the same time, many industries were created, such as metallurgy.

South Korea's economic growth in the late 1980s was also based on the rapid development of the domestic market, which increased domestic demand. The country's merchandise trade grew from \$480 million in 1962 to almost \$128 billion in 1990. This is an impressive number even when adjusted for inflation. As demand for cars and other luxury goods grows, the creditworthiness of citizens is steadily improving.

Overcoming the corruption of the state apparatus that has prevailed in South Korea until now could be an important impetus for borrowing from the country's experience. Even in the 21st century, there are cases of corruption at the highest levels of the country. However, this phenomenon is no longer systematic and is the exception rather than the rule. Society's tolerance for corruption has changed dramatically.

The most applicable experience of successful economic recovery for Ukraine is the example of the six Western Balkan countries: Croatia, Serbia, Kosovo, Montenegro, Bosnia and Herzegovina, which suffered significant damage in the 1990s, comparable to the level of destruction caused by Russia's military invasion of Ukraine.

After Serbia, Montenegro, Bosnia and Herzegovina, and Croatia (1992-1995) ended a three-year conflict and signed an internationally supported peace agreement, the situation in Bosnia cleared up. Herzegovina suffered the most. The country's direct losses were estimated at USD 5 to 70 billion, which was 15 to 20 times its GDP at the time. In addition, almost 2.5% of the population was killed.

International partners, especially the European Union, have developed a special programme for the recovery of the Balkan countries. One of them is a separate subprogramme “Phare” for Bosnia and Herzegovina, which provides materials and equipment for 10 major sectors of the national economy. Separate programmes have been implemented to support agriculture and rural livelihoods, as well as infrastructure rehabilitation and refugee return.

Between 1996 and 1999, the BNB received \$5 billion in grants from the World Bank and the European Bank for Reconstruction and Development, almost 1.5 times the GDP of the time. Overall, international development assistance exceeded 20 percent of the national GDP in the early stages of post-war recovery. The volume of international aid to the country ranges from \$140 to \$279 per capita in different years. These investments are helping to accelerate the restoration of infrastructure.

At the same time, domestic reforms were carried out. This includes the financial sector, local development, and institutional development, including the restructuring of public administration. Relatively successful refugee and return programmes are important for the country's future and contribute to the partial restoration of human capacity. The most urgent and difficult issue for post-war Ukraine will be the repatriation of refugees and wartime labour migrants.

In addition, experts believe that the experience of managing and restructuring China's external debt is useful for Ukraine. Through careful thought and consistent policy implementation, of course, by cancelling borrowers' loans, it was possible to reduce the public debt-to-GDP ratio from 66 percent in 1999 to 35 percent in 2004. Overall, Bosnia and Herzegovina's post-war reconstruction programme is considered a success. In 1997, 1998, 1999, and 2000, real GDP grew by 22.9 percent, 13.8 percent, 10.8 percent, and 4.4 percent respectively.

However, both the positive and negative experience of Bosnia and Herzegovina is instructive and useful for Ukraine. Experts believe that the Balkan country is implementing reconstruction projects without a comprehensive economic development strategy. There are also signs of the absence of a single centre for

reconstruction programmes, duplication of activities, and poor coordination between different donors. They also highlighted the weak administrative capacity of the authorities in Bosnia and Herzegovina. Thus, unlike post-war Western Europe or South Korea, their decade-long thinking was largely unpredictable, but some of China's projects were not based on strategic priorities and vision and were influenced by temporary interests, but ultimately the limited capacity had a multiplier effect on the development of the national economy.

There are mistakes such as underestimating the role of industry in the country's economic recovery, not using tools for the recovery and restructuring of industrial enterprises, a poor business environment, and weak domestic investment intensity. As a result, the unemployment rate in the country has remained high for a long time, and the development of small and medium-sized industries has been very slow.

Due to the lack of relevant reforms, the country has relied heavily on financial assistance from abroad. In any case, Ukraine should not make the same mistake. Given the differences between countries and populations, as well as the current global economic crisis, Ukraine's international partners in the EaP have few resources. Ukraine needs to invest hundreds, if not hundreds of billions of dollars annually to provide billions of dollars in aid annually, thus maintaining the ratio of external to internal revenues and meeting Ukraine's needs. Therefore, instead of direct budget support after the war, attention should be paid to profitable investments, including private enterprises. The role of the government is not to focus on international financial support, but to encourage such investments.

Croatia's experience can also be applied to Ukraine. At the end of the last century, during the armed conflict in the Balkans, about 20% of Croatia's territory was occupied. The municipal infrastructure and housing sector suffered significantly, with approximately more than 10% of the country's housing stock completely destroyed. In total, almost 30 percent of the Croatian economy was destroyed as a result of the war. However, thanks to a successful post-war reconstruction programme, Croatia became a member of the European Union and joined the European Union in

2013.

From 1991 to 2004, Croatia allocated \$3.4 billion from its budget to rebuild war-torn areas. The backward areas that incurred the costs were actively involved in agricultural activities. However, according to experts, the process will be effective if a comprehensive plan for the country's revival is implemented from the outset. This is because, especially in the first post-war years, the emphasis was mainly on intuitive and obvious facts.

Croatia financed reconstruction by taxing victims not related to the war. The main source of financing for the reconstruction of residential and commercial premises is the funds of interested individuals and legal entities. On the one hand, this reduces public spending, but since there is no separate compensation procedure, the private sector pays for reconstruction mainly at its own expense and without compensation. Although the law provides for the reconstruction of war-damaged buildings using financial resources, in practice the law has been partially implemented. Between 1992 and 2003, more than \$2.4 billion was spent to repair more than 126,000 homes and about \$100 million to repair 342 damaged schools. In 2004-2006, the state repaired more than 4,000 homes. In the 10 years since the war, more than 3,000 requests for reconstruction have not been implemented. Although many private owners refused to pay compensation under various pretexts, the authorities underestimated the value of the victims. As a result, many Croats were forced to rebuild their homes on their own.

Nevertheless, in terms of economic recovery, Croatia's reconstruction is considered a success. This was primarily due to innovative and unconventional solutions. In the 2000s, economic growth was boosted by a credit boom driven by the post-war privatisation of the National Bank, capital investment, especially in road construction, tourism, shipbuilding, and a recovery in consumption.

Shipbuilding, an important Croatian export, survived the war. It actively promotes personal loans and investments. In 2000, Croatia's seafood export turnover was \$7 billion. The country's seafood export turnover in 2000 was 7 billion us dollars. Other industries are also actively developing: raw materials, fuel and energy, real estate, consumer goods, and

programmes to promote employment. In 2003, the country's GDP reached the level of 1990, and the crisis ended.

The German non-governmental organisation Arbeiter-Samariter-Bund Deutschland made a special contribution to Croatia's post-war reconstruction. It implemented \$68 million worth of EU-funded projects in the country, repairing more than 3,000 dilapidated buildings and many public, social, and economic infrastructures.

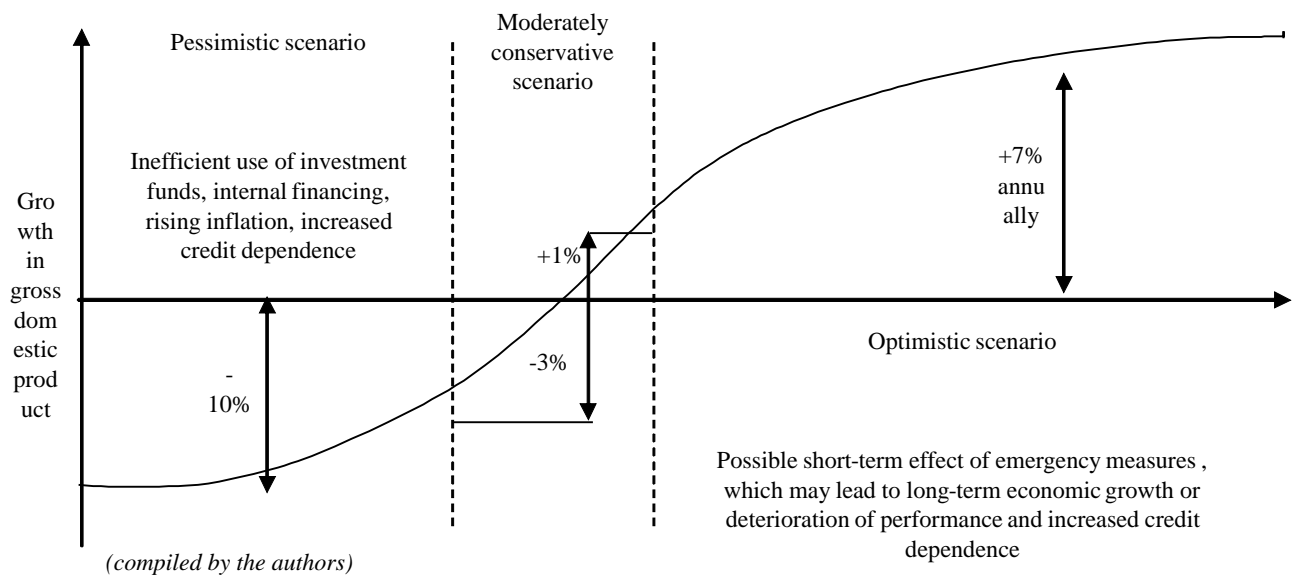
At the beginning of the reconstruction, Croatia was criticised for over-regulation and lack of effective anti-corruption measures. However, the situation has gradually improved, and the country has been granted candidate status to join the European Union. The status, granted last June, is expected to contribute to the modernisation of post-war Ukraine.

Analysing the successful experience of post-war reconstruction, it can be argued that some of the decisions and action plans cannot be fully implemented in Ukraine due to the lack of natural resources. However, many measures can be adapted to the realities of the Ukrainian economy, adjusted for the scale of the war and the destruction caused. In addition, it is necessary to prioritise and distribute measures at three levels of government - macroeconomic, mesoeconomic, and microeconomic.

The global experience of rebuilding the real sector of the economy is a proven example of effective post-war reconstruction and should be used within the Ukrainian economy. At the same time, each positive experience should be adapted to the specific conditions and requirements of the country. At this stage, the main task is to find ways to achieve maximum results in the shortest possible time.

In the medium and short term, the recovery of the real sector of Ukraine's economy will depend on the intensity and development of military operations in Ukraine. According to the IMF's Extended Fund Facility programme (n.d.), there are three scenarios for the recovery of Ukraine's real economy: negative, moderately conservative, and radical reform (Fig. 2)

**Figure-2 Strategic directions of development of the real sector of the Ukrainian economy**



Based on the moderately conservative and most realistic scenario, Ukraine's economic development will grow moderately. This will allow for the efficient use of investment funds and their optimal distribution among economic sectors to maximise added value. On this basis, the actions of the government and industry should be aimed at ensuring stability and recovery at all levels - macroeconomic, mesoeconomic, and microeconomic. At the same time, the country's development strategy should be based on a moderately conservative approach, which will allow achieving real economic growth.

The calculation uses an integral indicator of the strategic development direction. The index is always a relative value calculated by dividing the value achieved by the original indicator by the reference value. In accordance with the purpose of our study, the average value of the development of the real sector of the Ukrainian economy was taken as the normative value, i.e., the criteria for assessing real indicators. In general, in order to assess the level of development in a particular industry, it is necessary to calculate certain elements of the system and the corresponding indicators.

Thus, the integral indicator of development of the real sector of the Ukrainian economy ( $I_{int}$ ) is calculated as follows (1):

$$I_{int} = \frac{\sqrt[3]{I_{soc} \cdot I_{econ} \cdot I_{ecol}}}{I_{et}}, \quad (1)$$

Where  $I_{soc}$ ,  $I_{econ}$ ,  $I_{ecol}$  – aggregate index of social, economic and environmental development of a particular region, respectively.

$I_{et}$  – the benchmark value of the aggregate index of socio-economic development of the regions of Ukraine.

The social development index includes the number of employed people in the region, the number of new jobs created, and the unemployment rate. The economic development index is calculated on the basis of indicators of products sold, total income, average salary, and investment. The environmental development index takes into account the costs of environmental measures and the level of environmental friendliness of production.

At the same time, the integrated index of the real sector of Ukraine's economy may be affected by motivating and destabilising factors. Thus, the value of the indicator may change. If the integral index is influenced by motivating factors, the overall integral index will take the following form (2):

$$I_{int} = \frac{\sqrt[3]{I_{soc} \cdot I_{econ} \cdot I_{ecol}}}{I_{et}} \cdot m, \quad (2)$$



where  $m$  – is an aggregate indicator of the number of motivating factors influencing the development of the real sector of the Ukrainian economy. These may include an increase in investment, the development of scientific and technological progress, innovative development, an increase in the number of enterprises.

If the integral index is influenced by destabilising factors, the overall integral index will look like this (3):

$$I_{int} = \frac{1}{n} \cdot \frac{\sqrt[3]{I_{soc} \cdot I_{econ} \cdot I_{ecol}}}{I_{st}} \quad (3)$$

Where  $\frac{1}{n}$  – is an aggregate indicator of the number of destabilising factors affecting the development of the real sector of Ukraine's economy. These may include the closure of enterprises, a decrease in the number of working-age people, a decline in wages, and a decline in innovation development.

The practical application of this index will be carried out on the example of the development of the real sector of the Kyiv region's economy in 2022. The reference value will be the level of development of the Kyiv region before Russia's military invasion of Ukraine - 1.46.

Based on the indicators of socio-economic development of the Kyiv region, we will calculate the integral indicator of the real sector of the Kyiv region's economy:

$$I_{int} = \frac{\sqrt[3]{1,08 \cdot 1,64 \cdot 1,16}}{1,46} = 0,87$$

The value of the integrated index of the real sector of Ukraine's economy is less than 1, so measures need to be taken to improve the socio-economic situation. For example, it is necessary to increase the motivational part by attracting investment in the region, reducing the tax burden, lowering inflation, increasing the availability of loans for small and medium-sized businesses, and increasing the number of skilled workers.

It is noted that the gross domestic product cannot be the only resultant indicator. Possible scenarios of economic growth will also depend on the inflation rate. Since the level of gross domestic product depends on price growth, and price growth leads to inflation, the optimal level of the ratio of gross domestic product to inflation should be found. For the moderately conservative scenario, this ratio is set at -3+1% to 30%.

**Table-1. Measures to restore and develop the real sector of Ukraine's economy**

<b>Moderately conservative scenario of recovery and development</b>		
<b>Gross domestic product at the level of -1% +3%</b>		
<b>Inflation rate at 30%</b>		
<b>Macroeconomic level</b>	<b>Meso-economic level</b>	<b>Microeconomic level</b>
<ul style="list-style-type: none"> <li>Accelerate the creation of export credit institutions to expand the export potential of Ukrainian business units, improve the structure of exports, and protect Ukrainian exporters from financial losses.</li> <li>Launch a procedure for compensating Ukraine for losses, international sanctions against Russia in the areas of education, innovation, research, and technology, including the suspension of flights. cooperation in the field of intellectual property and the provision of security files.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening Ukraine's subjectivity as a partner of the European Union by deepening the vector of European industrial policy and reflecting it in the European discussion on development to solve problems.</li> <li>Development of production, technology parks, industrial zones, technoparks, creation of regional innovation centres, and their state support from the state and municipal budgets;</li> </ul>	<ul style="list-style-type: none"> <li>Organising exhibitions and presentations of Ukrainian products, facilitating direct negotiations between Ukrainian entrepreneurs and foreign traders.</li> <li>Developing technical assistance projects with international donor organisations (European Bank for Reconstruction and Development, USAID, World Bank, etc.) aimed at harmonising national regulations and standard systems of agricultural production technology with European and international standards.</li> </ul>

Macroeconomic level	Meso-economic level	Microeconomic level
<ul style="list-style-type: none"> <li>• First of all, to take measures against international organisations within the WTO in order to offset the illegal actions of the Russian Federation to prevent the transit of Ukrainian goods through the WTO mechanism.</li> <li>• To use public-private partnership mechanisms to activate Ukraine's foreign economic missions in potential markets, including co-financing of interested private companies and the status of a trade representative.</li> <li>• Identify the types of products to be exported, strategic partners for exporting these products, and define the principles of organising national export work and providing financial support.</li> <li>• Strengthen control over imports of Ukrainian goods, identify situations where anti-competitive behaviour may harm domestic producers, and, if necessary, introduce preventive barriers, conduct investigations, and take special measures in accordance with the law.</li> <li>• Finalise a national plan for the development of domestic industrial enterprises, taking into account the needs of domestic consumption, and submit it to the Cabinet of Ministers of Ukraine, with the main goal of promoting orders for Ukrainian producers and the construction of new enterprises.</li> </ul>	<ul style="list-style-type: none"> <li>• Expanding the exchange between the Ukrainian and European industrial sectors, aligning the environmental modernisation of Ukrainian industry with European trends and initiatives, integrating Ukraine into the EU digital market, and supporting the digitalisation of the Ukrainian industrial sector;</li> <li>• Development of the national machine-building industry through the formation and approval of a targeted national plan for scientific and technological development.</li> <li>• Support the creation of powerful, export-oriented national scientific and industrial associations capable of pooling resources to develop promising technological assets and ensure the efficient use and integration of these resources into global production. Selling innovative products.</li> <li>• Strengthen social, economic, and psychological incentives for households to transform into agricultural enterprises based on their added market value.</li> <li>• Support the establishment of production relations between Ukrainian producers and major EU producers.</li> <li>• Develop standards for the identification of high-tech industries, products, and professions and introduce coding according to European standards.</li> <li>• Support the implementation of circular economy principles based on the experience of EU countries.</li> </ul>	<ul style="list-style-type: none"> <li>• Improving the work of healthcare regulatory authorities, including assisting companies in implementing food safety management systems and upgrading the skills of these organisations' specialists to facilitate the implementation of modern, advanced systems.</li> <li>• Create and implement an investment plan for the development of domestic agricultural machinery, mainly for the development of home-made machinery and individual parts of special power combines and tractors.</li> <li>• Initiate harmonisation of national standards and EU member states' requirements for food quality and safety by removing bureaucratic obstacles, simplifying product certification procedures, and harmonising existing EU standards at Ukrainian state-owned enterprises (DSTU).</li> <li>• Joint initiation of scientific and technical cooperation projects on the development and implementation of modern intermodal transport technologies, transport network traffic, and traffic management systems between Ukrainian transport companies, scientific institutions, and research institutions of the EU countries.</li> </ul>

Thus, the state does not necessarily have to build physical facilities. But this process should be supported and encouraged from an economic policy perspective. It is the government's duty to invest in private companies to build modern and technically advanced production facilities. This area should be provided with financial support: from direct infrastructure to financial support through a business park.

The above-mentioned areas of support should be implemented by interested organisations. In all countries where structural changes in the economy are taking place, there are institutions with sufficient financial capabilities to develop specialised production. At the same time, it is necessary to rely only on international and European financial development institutions that are willing to

actively participate in the reconstruction of Ukraine. The Development Bank should guarantee investor support for the construction of modern and valuable facilities. Regardless of whether it is the global financial crisis or another pandemic, development banks should increase funding for new projects, not just suspend existing projects. This commitment to development is often a hallmark of national institutions established for this purpose.

## Discussion

The Reconstruction Plan for Ukraine is aimed at laying the foundation for the future reconstruction of the national economy and creating an independent mechanism for economic development. Given the possibility of using the experience of other countries in rebuilding and developing the real sector of the economy, it is necessary to note the difficulties of implementation for Ukraine. The main tasks on the way to recovery according to the Bosnia and Herzegovina recovery plan are demining, strengthening defence capabilities, reconstruction of heating systems and transport infrastructure, restoration of the education system, and support for the medical sector. These measures should be applied as part of the recovery of the real sector of Ukraine's economy. At the same time, the proposed plan suggests emergency recovery measures that may bring quick short-term results but will not be effective in the long run. For example, Zakeri, Paulavets, et al. (2022) proved in their work that these measures bring only a short-term fleeting effect and should be supplemented by effective long-term measures. In Väyrynen (2023), the author analysed the possibilities of overcoming long-term crises based on proven effective measures. Asefi-Najafabady, Villegas-Ortiz, & Morgan (2021) developed integrated climate and economic assessment models that are large-scale and can be applied in the process of recovery and long-term development of the Ukrainian economy.

The article identifies that a positive aspect of Ukraine's economic recovery plan is the possibility of cooperation on the path to European integration. The plan is aimed at integration into the EU, synchronisation of Ukrainian legislation with the Copenhagen standards (Andersen, & Jørgensen, 1995), and ensuring mutual market access. At the same time, it should be borne in mind that post-war

reconstruction was seen as an opportunity to bring Ukraine into line with EU rules and standards.

The strength of the recovery plan is the rational identification of resource measures and a rational assessment of budgetary needs. Berger et. al. (2021) and Jayasinghe, Adhikari et. al. (2020) found that in addition to meeting the basic needs of the defence forces, the government also identified emergency projects such as natural gas stockpiles and storage. Relocation of railway, road, and Danube crossings/ crossing of European and external barriers and restoration of damaged public structures. Developing infrastructure, raising funds from the state budget, providing large amounts of money to small and medium-sized enterprises during the war, adequate financing of agricultural producers, providing storage facilities for products, etc. At the same time, these measures will require significant financial investments and the search for ways to attract them from various sources.

Based on macroeconomic forecasts and projections, the economic recovery plan appears to be ineffective. High GDP growth under the moderate scenario will not bring the rapid effect expected from the recovery plan. However, it should be borne in mind that this strategy, combined with emergency measures, will bring a long-term economic effect.

On the other hand, assuming that the damage caused by the war is not too great and that the government successfully implements structural reforms and receives external loans and assistance, average annual real growth of more than 7 percent is realistic or achievable.

Another challenge in national recovery plans is the allocation of total funding across sectors and different programmes. In some cases, the definition is vague and imprecise. The experience of countries affected by armed conflict shows that such efforts are costly and can far exceed the total planned expenditure. According to this framework, official development assistance to Bosnia and Herzegovina totalled US\$6.8 billion (Shaoshi, Lifeng, et al., 2020). Between 1996 and 2004, the United States and the People's Republic of China received more than \$18 billion in international assistance to deploy and strengthen their defence and security systems. The United States and

the majority of these funds are used to support international military and security forces. In 2013-2014, the United States spent \$60.6 billion on reconstruction in Iraq. The United States will spend 45 percent of these funds on national defence, especially on training and modernising Iraqi security forces (Cordesman, 2020).

Another major drawback of the National Reconstruction Plan is that the various plans overlap and contradict each other. In addition, some of the benefits of these plans are difficult to implement. For example, agriculture and ferrous metallurgy have significant advantages as value-added sectors of the economy. The selection of interests for these programmes may be outdated and based on current business interests. The government has estimated the need to finance the development of key industries and agriculture at USD 50 billion. However, the sources of funding, the form of the funds, and the means of achieving the goals have not been identified.

It is possible to imagine the government's plans to promote innovation through financing exporters (e.g., through an export credit mechanism) and financial support for industrial and academic cooperation. The creation of a national economic reconstruction fund or a bank for reconstruction and development is not a special task, but an opportunity.

One of the biggest drawbacks of the aid programme is the lack of coordination of various policy initiatives at the state budget level. However, the economic recovery plan is designed for the long term and includes long-term plans to achieve structural reforms. In this regard, the current level of tax pressure in Ukraine (compared to other European countries) is acceptable and the problem of budget sustainability makes the planned tax reform unreasonable. There has also been an increase in the budget deficit due to tax cuts, which were offset by a reduction in public debt under the recovery plan.

## Conclusion

Today, economists are faced with the problem of determining the direction of development of the real sector of the Ukrainian economy. Some economists believe that the focus should be on production, while others believe that the focus should be on productivity.

In addition to removing Russian aggressors from the armed conflicts of recent decades, the reconstruction of post-war Ukraine should also be seen as an integral part of the overall EU integration plan. Therefore, we must use the resources mobilised by ourselves and with the help of international partners to implement institutional reforms, actions, and measures whose results cannot be measured here and now in terms of the national currency, the hryvnia, or GDP growth. Therefore, many experts believe that more efforts should be made to find more ways and solutions to achieve the goal of GDP growth of at least 7 percent per year in the next decade and reaching \$500 billion by 2032. To date, successful attempts to rebuild countries after military conflicts have not achieved this result. The article analyses the successful experience of countries overcoming the post-war crisis.

A comparative analysis of national GDP based on IMF data shows that Bosnia and Herzegovina's nominal GDP tripled between 1996 and 2005, while Croatia's doubled between 1994 and 2003. An interesting example is the growth of nominal GDP in Iraq. However, this experience is unique in many ways, and the country benefited enormously from the rise in oil prices in the early 2000s. At the same time, the aspiration to achieve 7 percent GDP growth annually is considered the most optimistic option for Ukraine.

The annual real growth of more than 7 percent is possible, but only if the results of the war are partially reversed and structural reforms and government policies are successfully implemented, thanks to the continued flow of foreign aid. For example, annual growth in Bosnia and Herzegovina was 7.9 percent in 1997-2006, 4.5 percent in Croatia in 1994-2003, and 17.5 percent in Iraq in 2003-2003. In 2012-2012, Croatia recorded the average annual growth rate of 1994-2006. In 2006, the average annual growth was 7.9 percent. 4.5% in 2003 and 17.5% in 2003-2012 in Iraq.

Given the Ukrainian reality, it is necessary to focus primarily on the restoration of production and the development of the real sector of the Ukrainian economy. The industry's unique advantage is the combination of several economic activities that bring added value to the

country. Manufacturing is an automatic engine of economic growth. A working company not only produces goods, but also sells them and creates added value, which will help to increase employee salaries, core revenues, and the purchase of goods and raw materials. Therefore, the plan for the recovery and development of the real sector of Ukraine's economy should focus on the development of a modern and integrated processing industry, from food production to advanced intelligent technologies and equipment. Among these, the construction of plants in Ukraine to process domestic raw materials will yield the fastest results. This shows that we need to stop exporting grain completely and increase the share of processed grain.

This way, we can make better use of our country's natural resources and replenish the budget. As a result, the average price of Ukrainian agri-food exports in 2020 will be \$299 per tonne. Yes, this is the average price for exports of grain raw materials, livestock products, and food. But in France, one tonne cost \$1,089 last year. This does not mean that French grain is more expensive than Ukrainian grain. The question is what the structure of agricultural exports will be. France also sells unprocessed grain. But to a much lesser extent. In this case, prices for animal products, such as meat, cheese, and other natural products made from single-grain crops, will rise.

Ukraine produces 120 million tonnes of grain annually. This is almost a third more than last year. Part of the harvest is intended for direct export. However, additional production should be in Ukraine. In the future, our duty is to increase the share of processed products in agricultural exports. For example, indicative planning can be introduced. This link is important for grain exports.

The article emphasises that the development of the real sector of Ukraine's economy should be based on three levels of management - macroeconomic, mesoeconomic, and microeconomic. The proposed measures will allow to achieve success not only in the agricultural and metallurgical sectors but also to achieve stable growth rates of gross domestic product.

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