

ECONOMIC CHALLENGES OF SUSTAINABLE DEVELOPMENT GOALS IN UKRAINE

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Abstract. The United Nations 2030 Agenda and its Sustainable Development Goals pose new challenges for Ukrainian businesses, which need to adapt their operations and strategies to the requirements of the SDGs. The *purpose* of this paper is to highlight the role of economic challenges and business opportunities of the SDGs for the Ukrainian economy. In particular, it assesses whether the SDGs can realistically be achieved after the COVID-19 pandemic and the war with the Russian Federation. *Methodology.* More generally, the framework allows to assess the macroeconomic coherence with the development strategies of Ukraine. The basic trends of the SDGs for Ukraine are summarized, and the estimation model of the progress in achieving the SDGs is carried out. The impact of the COVID-19 pandemic on the economy of Ukraine is studied. *Results.* The results show that the economic challenges after the COVID-19 pandemic and the war include ethical, social, financial, and legal aspects that meet the requirements of sustainable development, which is a very high priority for the community in Ukraine. *Practical implications.* A comparative analysis of the activity of Ukrainian enterprises during quarantine is made on the basis of research data and those for official statistics. *Value/originality.* According to this study, Ukraine will need 5-7 years to regain the potential lost during the COVID-19 pandemic and the war. The actions of the government and the National Bank of Ukraine continue to support the economic mitigation of the negative effects of the war. The research is based on the economic issues that show how the SDGs can be achieved in the country under different policy scenarios, including modernization of production, development of innovation, increasing export potential, and support from the international community, especially the EU and the US. The assessment of the progress in the implementation of the SDGs in Ukraine showed their significant indicators, such as: The share of exports of goods whose production uses technologies of high and medium-high level in the total exports of goods; Ukraine's position as assessed by the Global Innovation Index; the increase in employment; the creation of institutional and financial capacities for self-realization of the potential of the economically active population and the development of the creative economy; Development of high-quality, reliable, sustainable and accessible infrastructure based on the use of innovative technologies, including environmentally friendly means of transport; ensuring the development of sustainable food production systems that contribute to the preservation of ecosystems and the gradual improvement of the quality of land and soil, primarily through innovative technologies; doubling agricultural productivity, primarily through innovative technologies; mobilization of additional financial resources through the promotion of foreign and domestic investment. Other SDGs showed low improvement and likelihood.

Key words: economic challenges, sustainable development goals, estimation model of SDGs' achievement progress, COVID-19 pandemic, war.

JEL Classification: F02, F17, O11

1. Introduction

In 2017, Ukraine completed the adaptation of the "Sustainable Development Goals to 2030" adopted

by the United Nations on September 25, 2015 (UN 2015). As a result, the national report "Sustainable Development Goals: Ukraine" was prepared, which

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included a list of adapted tasks and indicators for their monitoring, providing guidelines for Ukraine's development until 2030. (Ministry of Economic Development 2017) The next step for businesses was their implementation after the adaptation of the SDGs, including their integration into national and local development strategies and programs.

The COVID-19 pandemic plunged the world into a deep recession, infecting 140 million people and killing over 3 million by mid-April 2021. Millions of people were pushed into extreme poverty in the short term and even more in the medium term. (Dora Benedek et al., 2021) The impact of the COVID-19 pandemic on Ukraine's development reemphasized the importance of reforms to promote sustainable and inclusive growth in the country. The purpose was to develop and make decisions that would help businesses and the economy to survive the crisis caused by the pandemic with minor losses. In 2022, the war in Ukraine caused a major humanitarian crisis affecting millions of people. The associated economic shocks and their impact on global commodity, trade and financial markets also had a significant impact on economic outcomes and livelihoods.

The Ukrainian government should continue to implement structural reforms to raise potential growth and increase public resources by improving the tax system and spending efficiency. They should also reinvigorate strategies to facilitate private investment in the SDGs. The paper provides recommendations on how to take the SDGs into account in the further development of business, creating long-term value, positive social and environmental impact, and building functional partnerships with all stakeholders: employees, consumers, communities, etc.

In addition, the paper aims to highlight the role of the economic challenges and business opportunities of the SDGs for the Ukrainian economy. In particular, the framework assesses whether and how the SDGs can realistically be achieved after the COVID-19 pandemic and war. More generally, the framework allows for the assessment of macroeconomic coherence with Ukraine's development strategies. The research is based on the economic issues that show how the SDGs can be achieved in the country under different policy scenarios, including modernization of production, development of innovation, increase in export potential, and support from the international community, especially from European countries and the US.

The results show that the economic challenges were multifaceted, helping the government to mobilize additional financial resources by promoting foreign and domestic investment and illustrating the potential impact of comprehensive development policies.

The paper is suitable for the analysis of a variety of long-term economic issues. It allows the simulation of different development paths consistent with domestic policies to increase available public and private resources for Ukraine's development, and alternative scenarios for international contributions. This publication will be useful for government officials, ministries, international organizations, academics, public figures and those interested in strategic planning for sustainable development in Ukraine.

2. Literature analysis

A number of studies and scientific publications of leading research institutions and scholars are devoted to determining the problems, prospects, and consequences of the economic challenges of the SDGs. The evaluation of modern research publications allows to distinguish fundamental trends in six areas, which may be important for Ukraine to achieve the 2030 Agenda (Figure 1). These six trends relate to (I) poverty and inequalities, (II) demography, (III) environmental degradation and climate change, (IV) shocks and crises, (V) development cooperation and financing for development, and (VI) technological innovation.

Katja Freistein and Bettina Mahlert (2016) suggest that the recently adopted Sustainable Development Goals include various explicit and implicit goals that address inequality. However, the SDGs go much further than previous development goals in addressing inequality as a central issue. Ignacio Saiz & Kate Donald (2017) argue that economic inequality has risen to unprecedented levels in recent years, posing new threats to the full range of human rights. Against this backdrop, the 2030 Agenda includes a goal aimed at reducing inequalities of all kinds within and between countries. One of the most transformative aspects of the new sustainable development agenda, SDG10, can bring about a much-needed paradigm shift in how development efforts are pursued to realize human rights and reduce inequalities.

Drimmelen R. (2013) provides an overview of the different ways in which companies can earn money with sustainable practices. When a company switches to a more sustainable way of working, upfront investments and costs often increase, and products and markets change. It requires a shift to new business models. The challenge is to contribute to all three sustainability goals of the business model: environmental, economic and social. Business models are grouped into four categories that correlate with the four strategies a company can choose to implement sustainable practices: eco-efficiency strategy, beyond compliance leadership strategy, eco-branding strategy, and environmental

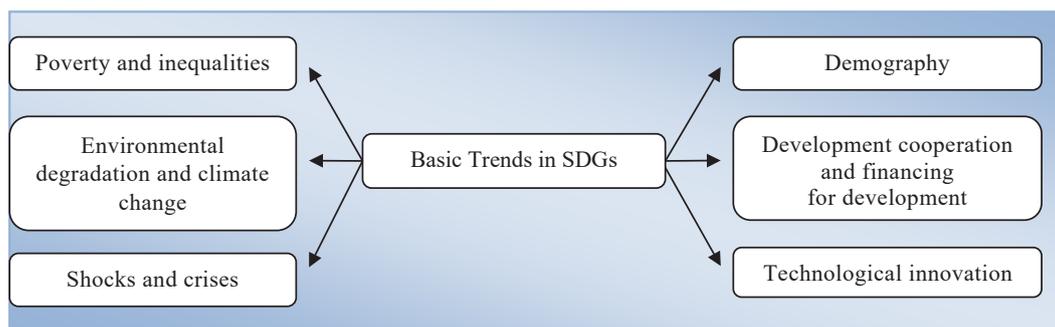


Figure 1. Fundamental Trends in the SDGs for Ukraine

Sources: compiled by the authors based on (United Nations, 2015)

cost leadership strategy. Doing so is challenging, and not many companies manage to strike the right balance.

The conceptual study by Adams, Carol A. (2017) provides a framework for incorporating sustainable development issues into an organization's decisions, strategies, and business model by considering the risks and opportunities presented by the external environment. The sustainable development issues that gave rise to the Sustainable Development Goals pose constraints on the availability of capital on which businesses rely.

Dora Benedek, Edward R. Gemayel, Abdelhak S. Senhadji and Alexander F. Tieman have found that the COVID-19 pandemic has hit countries' development agendas hard. The ensuing recession pushed millions of people into extreme poverty, and reduced government resources available for spending on achieving the United Nations Sustainable Development Goals (SDGs). Using a newly developed dynamic macroeconomic framework, the authors assess the current state of SDG financing in five key development areas: education, health, roads, electricity, and water and sanitation. They believe that policies should support a favorable business climate to catalyze increased private finance. Private investment can make a significant contribution to economic growth and development. In addition to taxes, governments can increase revenues from other sources through more robust management of public assets. (Dora Benedek et al., 2021)

According to these scholars, macroeconomic and sociopolitical conditions are key determinants of credit risk and foreign investment. Weak institutions and high levels of corruption increase the risk of asset loss and pose a high reputational risk to investors. In effect, this reduces the risk-adjusted return on private investment. Countries with weak governance and regulatory environments should strengthen their institutional frameworks to improve the clarity and transparency of the regulatory and legal

framework and to ensure consistent enforcement of contracts and property rights. (Dora Benedek et al., 2021)

However, the existing international business research is largely silent on the role of the private sector in achieving global policy goals. Jan Anton van Zanten and Rob van Tulder (2018) have found that the Sustainable Development Goals cannot be achieved without the contribution of multinational enterprises (MNEs). Their exploratory survey suggests that MNEs are more engaged with SDG targets that are actionable within their value chain operations than those outside, and more engaged with SDG targets that "avoid harm" than those that "do good." Differences in SDG engagement based on MNEs' home and host countries and industry sectors.

Peter Jones, David Hillier, and Daphne Comfort suggest that leading financial services firms are in a powerful position to play an essential role in achieving the SDGs. However, if the financial services industry is to play an essential role in facilitating the transition to a sustainable global future, it faces a number of fundamental challenges. To address these challenges, the industry's leading players would be well advised to develop a coherent, coordinated and proactive approach to the SDGs, and to communicate their policies effectively to all their stakeholders. (Peter Jones et al., 2017)

Assunta Di Vaio, Palladino R., Hassan R., and Escobar O. discuss the relationship between artificial intelligence and rapid developments in machine learning and sustainable development. Specifically, they aim to understand whether this branch of computer science can influence production and consumption patterns to achieve sustainable resource management in line with the Sustainable Development Goals (SDGs) outlined in the UN 2030 Agenda. (Assunta Di Vaio et al. 2020)

Johannes W.H. van der Waal, Thomas Thijssens, and Karen Maas aim to explore innovative contributions to the SDGs by assessing the level of SDG-relevant innovation by the world's largest

multinational corporations. The researchers have developed a method to identify SDG-relevant patent applications, distinguishing between "green" patents related to environmental issues and "blue" patents related to "improving conditions" and addressing unmet sustainable development needs. In addition, they investigated whether the level of SDG-relevant innovation is systematically associated with various company characteristics. Their study attempts to quantify the real impact of companies' sustainability strategies by identifying their sustainable patents and associating them with company characteristics, using a new method for identifying sustainable patents. Furthermore, SDG-relevant innovation goes beyond green innovation to include the full range of technological innovations related to the broad range of SDGs. (Johannes W.H. et al., 2021)

However, despite numerous studies by scholars and practitioners on this issue, there is a need to identify a clear direction of the economic challenges and business opportunities of the SDGs in Ukraine and whether the SDGs can realistically be achieved after the COVID-19 pandemic and the war with the Russian Federation.

3. Economic Challenges of the SDGs in Ukraine

The 2030 Agenda for Sustainable Development is committed to promoting development in a balanced way – economically, environmentally and socially (UN 2015). It provides clear direction on 17 Sustainable Development Goals (SDGs) and 169 targets to realize the economic and social dimensions (Figure 2).

In Ukraine, the government started working on the SDGs in 2015. The first step was to adapt them, taking into account the specifics of national development. While developing a strategic framework for the sustainable development of Ukraine until 2030, the Ministry of Economy launched an inclusive federal process of localization of the SDGs, which lasted in 2016–2017 and involved the respective line ministries, UN agencies in Ukraine, international organizations, NGOs and the business community.

The national baseline report "Sustainable Development Goals: Ukraine" (Ministry of Economy, 2017) led to the establishment of national goals, forecasts, and the selection of SDG indicators. It provided a basis for the national SDG system in Ukraine, which defined 86 goals and 183 indicators of national development. It established target values for the 2030 horizon, as well as intermediate values for 2025.

The situation was exacerbated by challenges related to COVID-19. According to the Ministry of

Development of Economy, Trade and Agriculture of Ukraine (2019, p. 6), Ukraine made progress in 15 out of 17 SDGs. The main achievement was the reduction of poverty, from 58.3 percent in 2015 to 43.2 percent in 2018. Significant progress was made by increasing wage standards and population coverage with housing subsidies (from 12% in 2014 to 64% in 2017). Ukraine implemented the "New Ukrainian School" reform and joined the PISA-2018 international education quality survey. Ukraine introduced small and full-scale electricity markets in 2019. Due to improved conditions for the development of small and medium-sized businesses in 2016–2019, the positive balance of foreign trade in ICT services increased by 2.5 times and high-speed 4G internet was introduced.

It was found that Ukraine has ensured steady GDP growth by modernizing production, developing innovation, increasing export potential and exporting products with high added value (Table 1). The average annual growth rate of real GDP in 2016–2019 was 2.9%, including per capita – by 3.4% due to accelerated investment growth. The share of SME production costs in value added increased from 58.1% in 2015 to 64.3% in 2018. Ukraine's place in the Doing Business Index ranking improved by 17 positions in 2019 compared to 47 in 2015. According to the authors, the country has increased production efficiency through sustainable development and competitive high-tech industries. The government mobilized additional financial resources by promoting foreign and domestic investments until 2022. At the same time, Ukraine created institutional and financial capacities for the self-realization of the potential of the economically active population and the development of the creative economy.

In 2020, the National Bank of Ukraine kept the discount rate at 6% per annum. According to the NBU, the balance of inflationary factors and risks did not indicate any reason to lower the rate and expected inflation to accelerate to 4.7% by the end of 2020 (NBU, 2020). In June 2020, the number of hryvnia funds on the accounts of the population increased by 8.9 billion UAH (by 2.5% m/m), business – by 17.9 billion UAH (5.6% m/m). The dynamics of balances in foreign currency accounts was less pronounced: individuals increased them by USD 32 million (0.3% m/m), but business decreased them – by USD 139 million (1.8% m/m). In general, the annual growth of the deposit base of the banking system was 24%. In authors' opinion, the collapse of oil prices (up to 25 USD/barrel Brent on April 1, 2020) was good news for Ukraine's balance of payments. Energy accounted for about 25% of the structure of imports, but oil accounted for about 40% of this amount.

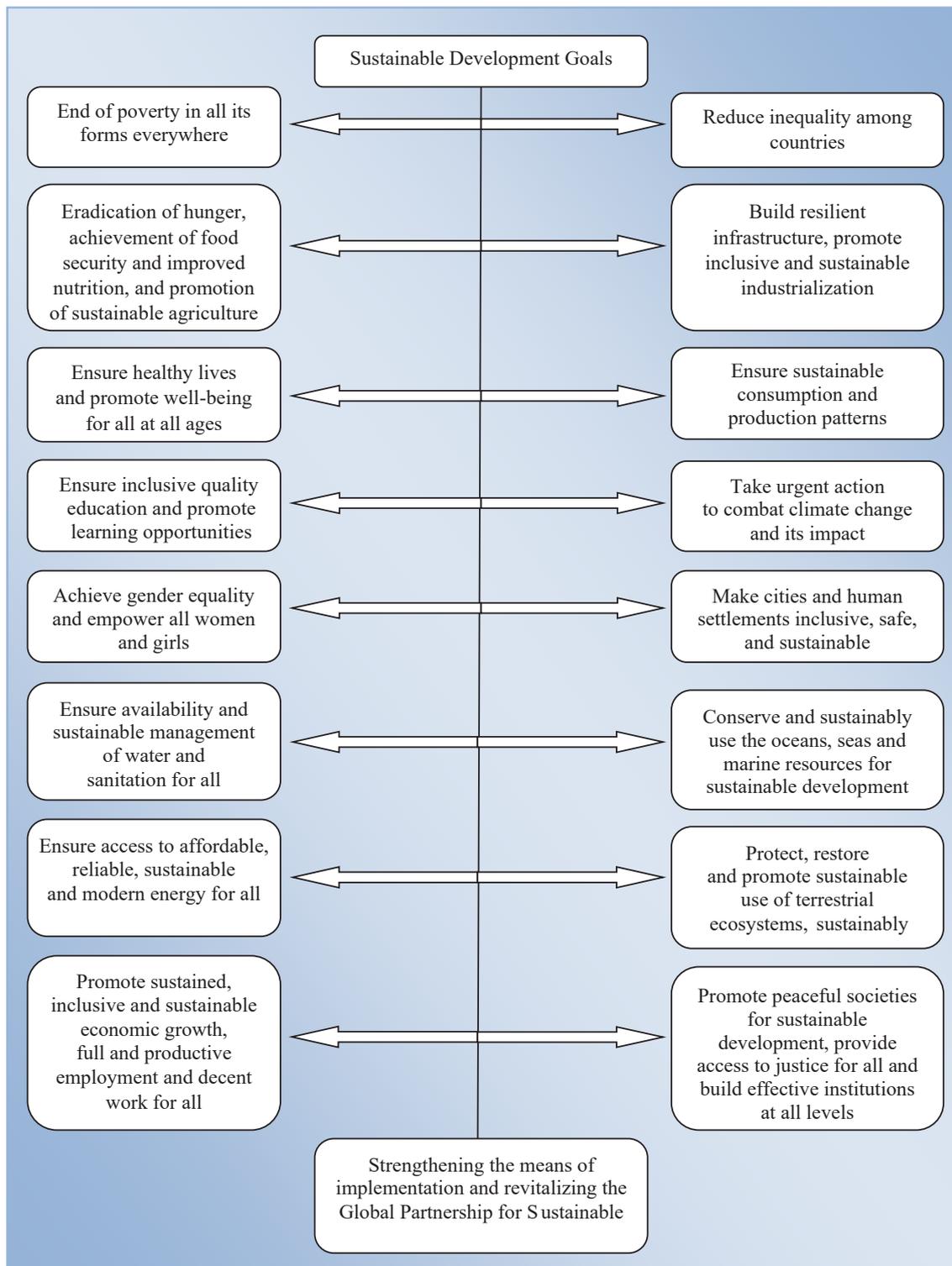


Figure 2. Sustainable Development Goals

Sources: compiled by the authors based on (United Nations, 2015)

The authors believe that low incomes in the economy had both advantages and disadvantages. According to the NBU, in May 2020 the consumer price index (CPI) increased by 0.3%, food prices – by 1.2% due to the decrease in natural gas prices

by 16.8%, and fuel prices by 8.6%. More than half of the cost of the consumer basket in Ukraine consisted of food, alcohol, and cigarettes. This meant that even in a crisis, consumer demand would not collapse as much as in developed EU countries.

Table 1

Progress in the Implementation of the SDGs in Ukraine

Target	Indicator	2015	2016	2017	2018	2019	2025	2030
1. Ensure steady GDP growth by modernizing production, developing innovation, increasing export potential and exporting high value-added products.	GDP volume index, %	90.2	102.4	102.5	103.4	103.2	106	107
	1.1. Gross fixed capital formation as a percentage of GDP, %	13.5	15.5	15.8	17.7	18.0	28.0	22.0
	1.2. Share of exports of goods whose production uses high and medium-high technology in total exports of goods, %	19.2	17.3	16.8	17.0	16.4	28.0	30.0
	1.3. Ukraine's position in the Global Innovation Index	64	56	50	43	47	45	40
2. Increasing the efficiency of production of production based on sustainable development and the development of competitive high-tech industries.	2.1. Labor Productivity Index, %	99.2	103.5	103.2	102.1	101.9	103,6	105,8
3. Increase employment.	3.1. Employment rate among those aged 20–64, %	64.4	64.2	64.2	65.6	66.9	68.0	70.0
4. Creation of institutional and financial capacities for the self-realization of the potential of the economically active population and the development of the creative economy.	4.1. Share of value added to production costs of SMEs, % of total value added to production costs	58.1	62.3	62.6	64.3	66.5	75.0	80.0
5. To develop high quality, reliable, sustainable and accessible infrastructure based on the use of innovative technologies, including environmentally friendly means of transportation.	5.1. Volume of goods transported, million tons	1,474	1,543	1,582	1,643	1,650	1,750	1,900
6. Ensure the development of sustainable food production systems that contribute to the conservation of ecosystems and the progressive improvement of land and soil quality, primarily through innovative technologies.	6.1. The food production index, %	88.6	108.9	107.1	98.5	103.9	103.0	103.0
7. Double agricultural productivity, primarily through innovative technologies.	7.1. Index of agricultural production, %	95.2	106.3	97.8	108.1	101.1	102.0	102.0
8. Mobilize additional financial resources by encouraging foreign and domestic investment.	8.1. Ratio of private remittances from abroad to GDP, %	7.6	8.1	8.2	8.5	7.8	6.0	6.0

Sources: compiled by the authors based on (Ministry for Development of Economy, 2019)

Annual inflation slowed to 1.7%, which was the lowest since the beginning of 2014. Despite the COVID-19 pandemic, in June 2020 the production in the Ukrainian industry decreased only by 5.6% YoY. This was a significant improvement in dynamics after a decline of 16.2% YoY in April and 12.2% YoY in May 2020. Some industries have even reached positive dynamics: food (+0.8% YoY), coke chemistry and oil production (+7.7% YoY), and chemical industry (+1.1% YoY) (NBU, 2020).

In 2020 Ukraine put record volumes of grain in foreign markets. According to the State Statistics Service of Ukraine, in the marketing year 2019/20 (July 2019 – June 2020) Ukraine exported 56.7 million tons of grain and legumes. It was an absolute record in the history of the country compared to the previous 2018/19 MY. The volume

of grain exports amounted to 50 million tons. In 2019/20 MY, the historical records of exports of two main grain crops were reached – wheat 20.5 million tons and maize 30.3 million tons (State Statistics, 2020).

According to the authors, Ukraine has ensured sustainable food production systems that have contributed to the preservation of ecosystems and gradually improved the quality of land and soil, mainly through innovative technologies. The country has doubled its agricultural productivity, primarily through innovative technologies.

Among the positive industrial trends, only those measured by global indicators could be noted, in particular, the growth of the share of small enterprises in the total value-added industry from 5.2% in 2015 to 8.5% in 2018. The authors believe

that the increase in the share of such enterprises had a positive impact on industrial production in Ukraine, as this group of enterprises was more stable. This strengthened the role of small businesses in the development of the industry. These current start-ups were able to generate breakthrough innovations, which increased the potential to accelerate technological modernization and competitiveness.

There was also a positive trend of increasing exports of high and medium-high tech goods by 29.7% in 2017–2019. However, it was not enough to compensate for the losses incurred in 2013–2016 due to the decrease in exports of these goods by 66.2%. The share of these goods in total exports of goods was only 16.3% in 2019 and did not reach the level of 2015 (19.2%). At the same time, the dynamics of high-tech exports accelerated significantly. According to the NBU, the positive balance of telecommunications, computer and information services increased by 2.5 times (from USD 1.5 billion in 2015 to USD 3.6 billion in 2019). Their share in the export of services increased from 16.9% in 2015 to 25% in 2019, and their markets were formed primarily in technologically advanced countries. In particular, according to the State Statistics Service of Ukraine, in 2013 the USA accounted for 24.1% in the structure of exports of telecommunications, computer and information services, while the markets of Russia, Kazakhstan and Belarus – only 16.1%.

The medium progress and probability were determined by the 1st (1.1) and 2nd targets. The assessment of the progress in the implementation of the SDGs in Ukraine showed their significant indicators for such targets as: the 1st (1.2 and 1.3), and the 3-8 targets (Table 1). Other SDGs had low improvement and probability.

4. The impact of the COVID-19 pandemic and the war on business opportunities in business opportunities in Ukraine

On March 12, 2020, the government introduced a quarantine in Ukraine to combat the spread of the coronavirus infection COVID-19. In particular, the work of subways in Kyiv, Kharkiv and Dnipro was stopped; the movement of land transport in the cities was also interrupted. Intercity and interregional automobile, railway, and air transportation were suspended. (Cabinet of Ministers, 2020) On March 28, 2020, Ukraine completely closed the border for regular traffic, including air traffic. On April 24, 2020, the Prime Minister of Ukraine announced a plan to end quarantine in Ukraine, which consisted of five stages. The first – easing of quarantine restrictions in Ukraine began on May 11, 2020. The Cabinet of Ministers allowed

some commercial and public service facilities to operate. The second phase of quarantine mitigation began on May 22, 2020. The adaptive quarantine was applied until August 31, 2020, it was extended in the fall in eight regions of the country. The government divided the country into four zones according to the number of sick people: red, orange, yellow and green.

Therefore, in March 2020, the Union of Ukrainian Entrepreneurs (SUP) established a COVID-19 Business Headquarters, the purpose of which was to work out and implement decisions that would help business and the economy to survive the crisis caused by the pandemic with minor losses (SUP, 2020). Together with the leaders of associations and clubs from different regions of the country, it was decided to unite the efforts of all Ukrainian businesses to communicate quickly and effectively with the authorities at all levels to find solutions that could help prevent the collapse of the economy.

Micro, small, and medium enterprises constituted the majority of the structure of the Union of Ukrainian Entrepreneurs. The main activity of the members was retail and wholesale trade, i.e. consulting, marketing and advertising services, non-banking financial services, production of equipment, furniture and engineering, services, construction and architecture, IT companies, educational services and others. There were representatives from all regions except the occupied territories, and 17% of respondents had offices throughout Ukraine. In addition to the government, SUP decided to help small and medium businesses survive the crisis caused by COVID-19. During the pandemic, many Ukrainian entrepreneurs found it increasingly difficult to find money to pay wages to employees and to pay taxes. However, most of them tried to provide medical institutions, doctors, citizens with everything necessary to fight the pandemic.

The attitude to the prolongation of quarantine in Ukraine until August 31, 2020 was more pessimistic among entrepreneurs – 42% of businessmen, those who did not decide – 30%. Only one in four considered it necessary to continue the restrictive measures during the pandemic. 48% of businessmen thought that it is necessary to relax the restrictive measures (quarantine only for the elderly or people with weak immunity), 33% thought that it is better to apply an individual approach to a certain area. Only 1% of the respondents expected a complete abolition of quarantine. (SUP, 2020)

Nearly 60% of entrepreneurs continued to work during the restrictions (mainly large and medium enterprises), the others – 29% stopped working (typical for micro-enterprises). At the same time, 51% of the enterprises were able to continue working

for only one month, and every fourth enterprise was able to work for 2-3 months during the quarantine and not go bankrupt; 6% of the entrepreneurs closed their business completely (mainly micro and small enterprises) (Figure 3). Only 3% of respondents said that their business could operate for a long time under the necessary conditions (rental vacation, remote access for employees, review of the business model, etc.).

One third of the entrepreneurs (mainly micro-entrepreneurs) reported a 90-100% drop in income since the beginning of the quarantine. The same entrepreneurs have already laid off up to 50% of their staff. Small and medium business owners reported a 25-50% decrease in income compared to the pre-quarantine period and have already laid off 10 to 25% of their employees. Losses of profit of large enterprises were 10-25%; there was a staff reduction of 25% by the end of restrictive measures in 2020 (SUP, 2020).

One of the first negative consequences of the epidemic and the fall of the economy was the state budget, which had problems with tax revenues even without the quarantine. In the spring of 2020, the situation was not so critical, but tax revenues were already 14% behind schedule and barely exceeded the figures for the first quarter of 2019. The service sector – restaurants, air transport and shopping centers – had a smaller share in the structure of GDP than in the EU. The crisis that affected these businesses did not affect the Ukrainian economy as much as in the EU. At the same time, household consumption, a key driver of GDP growth in recent years, has fallen sharply. The quarantine left the Ukrainian economy with almost no chance to grow in 2020. The transport, retail and industrial sectors suffered the most.

For farmers, who accounted for about 35% of the structure of Ukrainian exports, the pandemic even played into their hands. The industry was unlikely to face a decline in global demand in 2020, while

the onslaught of food demand from entire countries could not be ruled out. Metallurgists risked a difficult situation, but a devalued hryvnia would partially help them.

According to authors, the pandemic crisis may divide countries not into rich and poor, but into developed and developing ones. It could divide the countries into those with synergy between the government and the central bank and those where there is a kind of bipolar scattering of state regulation in the form of separation of the government and so-called independence of the central bank. The conditions of the post-quarantine economy would require enormous incentives and devaluation measures from Ukraine. Developed countries prepared packages that would amortize the crisis – 20-25% of GDP, in developing countries – 10-15%. Ukraine created a reserve fund of 60 billion UAH (1.5% of GDP), but it was not enough.

The actions of the Parliament of Ukraine significantly supported small businesses during the pandemic in 2020–2022. It adopted three packages of legislative initiatives that had a positive impact on business. They concerned the exemption of small businesses from the single social contribution, the abolition of inspections and penalties for various violations. At the same time, according to the authors, the Cabinet of Ministers of Ukraine introduced a very strict lockdown throughout the country, despite the level of mobility in each region. As a result, public transportation and air traffic were stopped, and borders were closed. All the harmful consequences of such decisions were not calculated.

According to KPMG's CEO Outlook (2020), the transformation of the economy through a pandemic has led to radical changes in approaches to working with human capital and changes in the skills required of employees. The massive acceleration of focal digitalization is occurring. Business needed people who could implement digital technologies in companies,

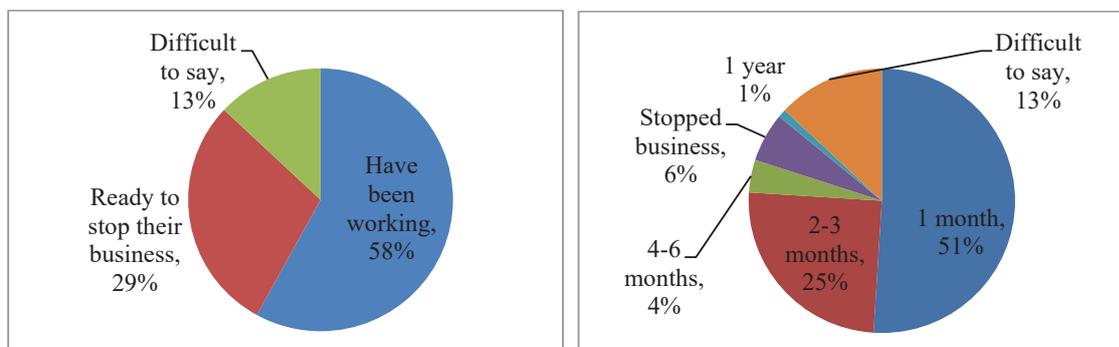


Figure 3. The Activity of Ukrainian Business during Quarantine in 2020

Sources: compiled by the authors based on the SUP

work digitally with each other, with customers and suppliers, and create added value. According to the survey, 42% of Ukrainian managers (69% globally) plan to reduce office space and introduce remote working for some employees after the pandemic. This could become a new norm and lead to a revision of the qualification requirements for employees. Some skills and jobs would become obsolete, lose relevance, and become a thing of the past. On the other hand, remote work expanded the potential pool of human resources, and companies actively changed hiring strategies and planned work formats.

Most CEOs expected their companies to grow profitably over the next three years, which could be directly related to how quickly they could make the necessary digital changes. Unfortunately, on February 24, 2022, the Russian invasion of Ukraine began, resulting in massive loss of life, population displacement, and significant infrastructure damage.

The impact on economic activity was enormous: real GDP contracted sharply, inflation rose significantly, trade was severely disrupted, and the fiscal deficit widened to unprecedented levels. In the immediate aftermath of the invasion, the authorities moved quickly to adjust monetary and exchange rate policies to preserve financial and exchange rate stability. More recently, the exchange rate has been devalued to reverse a significant loss of international reserves, which has helped to stabilize foreign exchange reserves and maintain overall macroeconomic and financial stability. Fiscal policy has been geared to prioritize spending on defense, social services, humanitarian needs, and, where possible, some repair of critical infrastructure.

The war is estimated to have affected areas that accounted for about 15 percent of prewar GDP, compared with about 40 percent in March 2022 (IMF, 2022). Economic activity, policies, and fiscal and external financing gaps continued to be driven by war-related developments.

The current account moved into surplus as substantial current transfers (grants) more than offset the large and widening trade deficit. Trade fell sharply as the war initially disrupted activity, but as the conflict became more localized, imports recovered faster than exports. The loss of critical seaports (such as Mariupol) and the blockade of the Black Sea coast prevented bulk shipments of agricultural and metallurgical goods in July 2022. Agricultural exports rebounded somewhat in August, aided by the grain corridor allowing exports via seaports, but remain about 30 percent below 2021 levels. Meanwhile, imports have fallen less than exports, by 20 percent year-over-year, reflecting continued demand for essentials such as fuel and equipment.

In particular, Ukraine experienced a significant shortfall in grain export receipts in 2022. Ukraine's cereal export volume was around 30.5 million tons (Mt) in 2022, compared to 50.8 Mt in 2021, resulting in a shock to export receipts of more than USD 4 billion, contributing to the large external financing gap. Critical current public sector spending had a large import component for fuel, medicines, and equipment to rehabilitate damaged critical infrastructure. In 2022, limited export capacity, loss of access to international capital markets, capital outflows, foreign exchange transactions by Ukrainian migrants, and a decline in FDI inflows also contributed to the large external financing gap. In addition to a large loss of life, more than one-third of Ukrainians have either left the country or been internally displaced, and infrastructure damage is estimated at around 60 percent of 2021 GDP (IMF, 2022).

In addition to the emergency measures taken immediately after the outbreak of the war, the devaluation of the exchange rate in July 2022, following an increase in the NBU's key policy rate from 10 to 25 percent in June, together with a tightening of capital controls, helped to boost international reserves. NBU purchases of government war bonds in the primary market were largely sterilized and base money growth remained contained.

In 2022 Ukrainian business remained an active participant in the fight for Ukraine's independence, 93% of companies were involved in helping the country during the war, including 67.1% who joined the volunteer activity. In addition, Ukrainian entrepreneurs showed positive signs of recovery. 70% of enterprises were fully or partially active, and 15.6% did not change the scope of work or even increased it (CID, 2022).

Ukraine's small and medium-sized businesses continued to recover at the end of 2022. The Ukrainian Business Index (33.9) increased, indicating that businesses have begun to restore employment, build inventories, and expand their customer base. 28% of employees were laid off by SMEs since the end of February 2022. Business expectations for performance in 2022 remained at half (54%) of the previous year's sales. It was also influenced by the unpredictability of development and government actions, as well as the actual lack of access to financial resources to replenish working capital and implement development projects (CID, 2022).

The lack of financial resources in the country – namely, insolvency of customers, unavailability of credit funds and business equity, etc. – was the biggest obstacle to business recovery during the war.

5. Survey methodology and findings

According to the methodology for calculating an integral estimate of progress in achieving the goals, the Ministry of Development of Economy, Trade and Agriculture of Ukraine (2019, p. 17) has introduced an innovative method for Ukraine. It is a methodology for detailed estimation of each of the 17 goals in terms of national indicators. Based on calculations according to this methodology, analysis of estimated data, and their comparison with the target values of indicators for 2020, the goals are ranked in terms of their probability of achievement (high, medium, low, and very low). As a result, Ukraine has managed to ensure progress in 15 out of 17 goals.

The calculation methodology takes into account three criteria of the indicator's movement, such as direction (activity is goal-oriented or not); speed (movement is fast, slow, steady, etc.); pace (action requires average acceleration, significant, etc.). The index is calculated for a medium trend based on the analysis of changes in the indicator over the last five years and requires at least three years of data. This method involves three successive steps: calculation of the average annual growth rate; calculation of the required (target/theoretical) growth rate to reach the target; calculation of the ratio between the required and actual growth rates.

As a result, the degree of achievement for some goals varies somewhat: 80% – on track (high likelihood of success); 60-80% – needs specific acceleration (medium likelihood of success); 20-60% – needs significant acceleration (low likelihood of success); 20% – unattainable even if this momentum is maintained (unattainable by 2020) (Figure 4).

The first stage shows that the progress estimate is calculated for each indicator for which there is sufficient data for calculation (there is data for the five-year period 2015–2020, where 2015 is a base year and 2020 is a target year). The second step shows that the target value is calculated for all indicators for which 2020 is also a target year. It is calculated as the sum of the average weighted value of each hand (its contribution to the achievement of the goal). All indicators are given equal weight and progress can be assessed. The third stage shows the calculated indicator for each goal, which serves as the basis for ranking all 17 goals. The fourth step shows that several indicators are not targets for 2020. Therefore, existing progress is assessed. Therefore, the progress estimate for these goals is revised with additional scores. As a result, the forecast increases by one category for one goal and decreases for five goals.

According to the UN Agenda (2015, pp. 8–10), the main economic challenges are: (I) building a strong economic foundation for all countries with

sustainable economic growth essential for their prosperity; (II) building dynamic, sustainable, innovative and people-centered economies, promoting youth employment and women's economic empowerment; (III) benefiting from a healthy and educated workforce with the knowledge and skills needed for productive and fulfilling work and full participation in society; (IV) to strengthen the productive capacities of least developed countries in all sectors, including through structural transformation; (V) to adopt policies which increase productive capacities and employment; financial inclusion; sustainable agriculture and industrial development; access to affordable and modern energy services; sustainable transport systems and resilient infrastructure; (VI) to make fundamental changes in the way of its production and consumption goods and services; (VII) to accelerate the reduction of global greenhouse gas emissions and addressing adaptation to the adverse impacts of climate change, to tackle water pollution and strengthen cooperation on land degradation and drought; (VIII) to refrain from applying any unilateral economic, financial or trade measures not in accordance with international law and the Charter of the United Nations that impede the full achievement of economic and social development.

According to the authors, based on these UN SDGs, Ukraine should achieve higher levels of economic productivity through diversification, technological modernization and innovation, including a focus on high value-added sectors and labor-intensive industries after the war. It should also be noted that the country should strive to decouple economic growth from environmental degradation in accordance with the 10-Year Framework of Programs on Sustainable Consumption and Production. One of the most prominent features of these goals is to strengthen the capacity of domestic financial institutions to promote and expand access to banking, insurance, and financial services for all types of businesses.

According to the goals of the UN Agenda (2015, p. 20), each country must promote inclusive and sustainable industrialization and significantly increase the share of industry in employment and gross domestic product. In this case, Ukraine should improve the access of small industrial and other enterprises to financial services, including affordable credit, and their integration into value chains and markets, especially after the war. In terms of upgrading infrastructure and retrofitting industries, the government is required to make them sustainable, with greater efficiency in resource use and greater adoption of clean and environmentally friendly technologies and industrial processes.

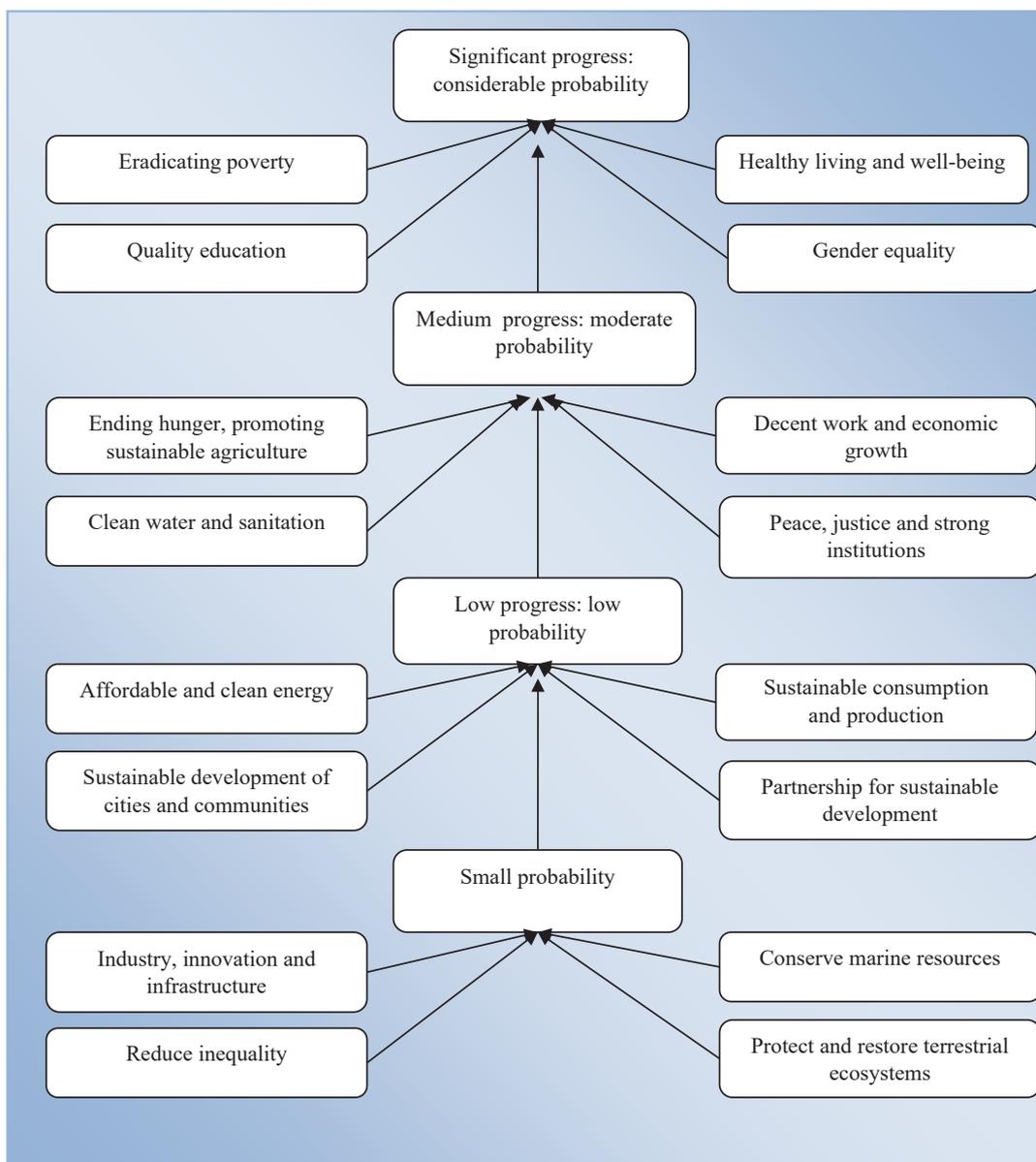


Figure 4. Estimation Model of the SDGs' Achievement Progress in Ukraine

Sources: developed by the authors based on (Ministry for Development of Economy, 2019)

The Cabinet of Ministers presented the state "Economic Stimulus Program to Overcome the Negative Consequences Caused by COVID-19" (Cabinet of Ministers, 2020). The purpose of the program was to introduce a comprehensive system of measures to stabilize the sustainable development of the Ukrainian economy, increase employment by preserving existing jobs and stimulating the creation of new ones. The government planned 230 measures, some of which have already been implemented. It was a "road map" based on the proposals of ministries, local authorities, business representatives and leading experts.

Measures have been developed to support the economy in many sectors, such as industry,

agriculture, energy, transport and infrastructure, information and communication technologies, services (trade, hotels and restaurants, education, creative industries, personal services). The program also includes support for small and medium enterprises, foreign exchange stimulation and investment attraction.

Thus, the National Bank of Ukraine began to ease monetary policy quite sharply. In 2020 the discount rate fell to 8% over the year. Financial incentives through monetary policy (in particular, lower interest rates on loans) were used by all countries, and Ukraine was no exception. In 2022, the NBU introduced administrative FX controls and capital controls to preserve FX liquidity and channel it to

priority imports. Limited interbank FX trading was allowed to facilitate the purchase of critical imports. Banks could access unsecured funding with a maturity of up to one year for up to 30 percent of their retail deposits at end-January (IMF, 2022).

In 2022, NBU enforcement actions have been suspended for violations of prudential requirements related to capital, liquidity, credit risk, net open FX positions, and for delays in prudential reporting. Audits of banks' financial statements and regular bank stress tests have been postponed. Loans restructured during the martial law period were exempted from reclassification for credit risk, some regulatory risk weights were reduced, and banks were prohibited from lending to related parties, capital distributions (dividends and share buybacks), and bonus payments.

Despite all these efforts and large external official multilateral and bilateral support, a prolonged war would exacerbate infrastructure damage, population displacement, economic hardship and an increase in poverty. Further pressure on gas stocks and contingent liabilities of state-owned energy companies and the banking sector could add to the already high financing needs.

6. Conclusions

According to the authors, as part of sustainable development, post-war companies should increase their activities in the field of renewable energy and ecology, as well as support environmental projects in any way possible, thus contributing to the achievement of the 6th, 7th and 13th Global Goals for Sustainable Development, which the United

Nations has set for 2015. Ukrainian companies should be aware of their environmental impact and strive to reduce it by developing their sustainability orientation, including sustainable business and sustainable management.

Today, companies and individuals who want to start or support sustainable projects in Ukraine face two major challenges: lack of support from local and state authorities; and inefficient and ineffective legal framework and policies, e.g. lack of laws and regulations on environmental protection, lack of fiscal, economic and industrial policies in the field that would facilitate the implementation and operation of green initiatives.

In addition to the war, businesses face problems in attracting investment, corporate, tax and intellectual property issues. Despite these problems, business should support the following sectors: renewable energy, low-carbon transportation, low-carbon buildings, sustainable water and waste management, sustainable land use, and climate change. The authors estimate that Ukraine will need 5-7 years to recover the potential lost during the COVID-19 pandemic and the war.

The arguments presented suggest that the systemic issues of economic challenges to implementation are as follows: (I) policy and institutional coherence, (II) multi-stakeholder partnerships, (III) data, monitoring and accountability. According to the paper, Ukraine should strengthen its macroeconomic stability, including by coordinating policies and strengthening multilateral partnerships that mobilize technical and financial resources to support the achievement of the SDGs in the post-war country.

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