

Theoretical and Practical Research in Economic Fields

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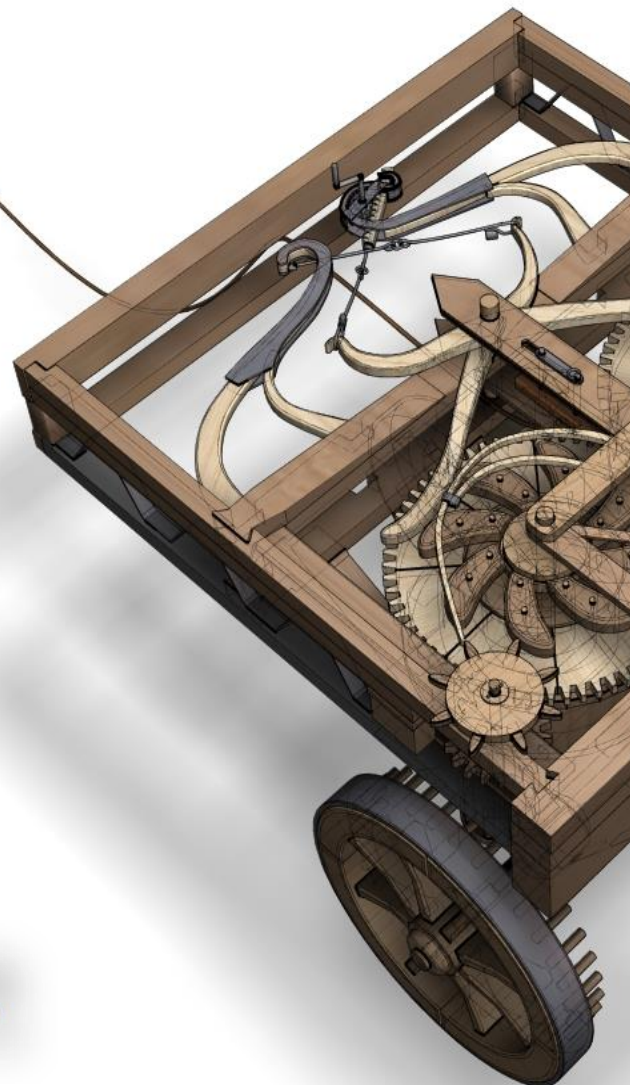
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Call for Papers Fall Issue 2024

Theoretical and Practical Research in Economic Fields

Many economists today are concerned by the proliferation of journals and the concomitant labyrinth of research to be conquered in order to reach the specific information they require. To combat this tendency, **Theoretical and Practical Research in Economic Fields** has been conceived and designed outside the realm of the traditional economics journal. It consists of concise communications that provide a means of rapid and efficient dissemination of new results, models, and methods in all fields of economic research.

Theoretical and Practical Research in Economic Fields publishes original articles in all branches of economics – theoretical and practical, abstract, and applied, providing wide-ranging coverage across the subject area.

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The advisory board of the journal includes distinguished scholars who have fruitfully straddled disciplinary boundaries in their academic research.

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This Special Issue was created at the request of a group of researchers from Ukraine. It is a response to the challenging situation of Ukrainian scholars due to the Russian invasion as well as the growing demand for knowledge on Ukrainian issues.

We would like to express our endless thank to our colleagues, scholars from Ukraine who are working amid the war on topics that are important for all. Also, we thank all our international authors for their valuable contributions to this Issue.

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The Impact of Economic Recession on the Financial Support of State Functions during Crisis Situations

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Abstract: The state faces significant challenges in fulfilling its functions during a recession, and crises only exacerbate the problems that arise. However, it is precisely during crises that adequate social security, defense, and other state functions are critically important for ensuring national and individual public interests. The purpose of the study was to analyze the impact of economic recession on the level of financial support for state functions during a crisis. The study used methods of statistical analysis, comparative analysis, analogy, abstraction, and generalization. As a result of the study, the revenues of the state budget of Ukraine and its financing were analyzed as the main sources of financial support for state functions. It was found that the share of tax revenues decreased from 85.37% in 2021 to 45.04% in 2023, which poses a threat to the state's ability to perform its functions. Significant budget financing amounts (31094 million USD in 2022 and 42479.15 million USD in 2023) positively influenced the country's defense capability but led to an increase in the state debt. Insufficient gold and foreign exchange reserves and the state debt reaching the GDP volume are the most negative trends. By analyzing international experience, it was determined that Ukraine should pay high attention to optimizing internal revenue sources, especially tax revenues, through fiscal incentives and ensuring tax discipline. It is also necessary to develop long-term strategies for repaying the state debt and international cooperation. The research results can be useful for government officials in the process of developing budget and tax policies.

Keywords: economic recession; crisis; tax policy; budget policy; government debt; tax revenues; international support.

JEL Classification: H60; H71; H72.

Introduction

The war in Ukraine began during a global economic recession caused by COVID-19 (Gangopadhyaya and Garrett 2020; Jomo and Chowdhury 2020; Sulkowski 2020). Therefore, the Ukrainian experience is crucial in the context of the topic of the study, which involves investigating the issues of financial support for the functions of the state during crisis situations (war) under the influence of an economic recession (caused by COVID-19).

The functions of the state are the key areas and aspects of its activity that reveal the essence of the state's activity and its social purpose.

Functions can be internal and external. Internal functions include economic, social, legal, law enforcement functions, environmental protection, cultural, and informational functions, and sometimes fiscal function is also distinguished. External functions primarily consist of ensuring national security, as well as building international relations and integration (Doronin 2020; Tkachenko 2020).

The financial support for the functions of the state primarily occurs through the resources of the budget, so the sources of funding and the directions of budget expenditures are a central aspect of the study (Adolph *et al.* 2020; Fatmawati 2022). Budget revenues consist of tax and non-tax revenues (Clemens and Veuger 2020; Wang and Kim 2023). Another important source, especially in critical situations, is funds from international organizations or other countries. Thus, the amounts of funds received in the form of taxes, non-tax revenues, and international assistance determine the potential within which the state can perform its functions.

Under conditions of the war in Ukraine, another important source of funding for the functions of the state is budget financing through international loans, grants, and military bonds (Domestic Government Loan Bonds - OVDP). However, these sources lead to an increase in the state debt (Barreyre and Delalande 2020; Hilton 2021; Law *et al.* 2021), so optimizing internal revenue sources, especially tax revenues, becomes particularly important in times of crisis (Sarker 2020; Deb *et al.* 2021; Dougherty and de Biase 2021). International experience shows the effectiveness of tax incentives, but the stimulation measures must be adapted to national conditions (Hlushchenko and Melnyk 2021).

The aim of the research was to analyze the impact of economic recession on the level of financial support for state functions in crisis conditions. The research objectives were:

- To analyze the revenues of the state budget of Ukraine as the main source of financing for state functions.
- To analyze the expenditures of the state budget of Ukraine as the instrument through which the state fulfills its functions.
- To analyze the state debt of Ukraine and compare the debt levels with the levels of gold and foreign exchange reserves and gross domestic product (GDP).
- To evaluate international experience in applying fiscal measures in crisis conditions.

The novelty and the most important asset of the work is the determination of the specifics of the impact of the economic recession on the financing of the functions of the state in the conditions of war as one of the most destructive crisis phenomena. Very little research has been devoted to financing the functions of the state under martial law. At the same time, this is an important direction, because the level of ensuring national security and, ultimately, the outcome of the conflict depends on the state's performance of its functions in wartime conditions.

1. Literature Review

Most scientific works related to the research topic focus on fiscal policy, as tax revenues are the main source of budget funding and thus financing of state functions. Some studies also touch upon the optimization of budget policy as a whole.

Gordiienko (2023) examines fiscal policy in crisis situations, using Ukraine as a case study. The country faced significant financial difficulties due to the military invasion by the Russian Federation. The researcher notes that before the invasion, tax revenues accounted for about 85% of budget revenues, but after the invasion, this figure decreased to 60%, which may threaten the proper performance of state functions. Also, referring to Ukraine's experience, Holovan (2022) explores tax policy in conditions of martial law. The researcher notes that the economy should be stimulated by reducing tax rates. The reduction of the tax burden, as noted by the researcher, is possible through the abandonment of certain non-market functions of fiscal authorities, such as oversight and punitive functions. Kaneva and Halaburda (2022) study aspects of Ukraine's budget policy, on which the execution and proper financing of state functions largely depend. The priority goals of budget policy in conditions of martial law are ensuring the defense of the country and social security, which constitute the execution of the defensive and social functions of the state. The researchers note that in conditions of martial law, international support plays an important role in financing the budget as a source of financial support for state functions.

Research outside of Ukraine often reveal the peculiarities of budgetary and fiscal policies of countries in the context of the COVID-19 pandemic. The consequences of the pandemic and governments' responses to its challenges are often compared to those during the Great Recession or the 2008 Global Financial Crisis. Benmelech and Tzur-Ilan (2020) analyze the fiscal and monetary policy tools of countries around the world in the crisis caused by COVID-19. The study pays special attention to comparing the fiscal policies of developed countries and developing countries. Alberola *et al.* (2021) also touch upon the topic of fiscal policy possibilities of countries with different levels of development during the pandemic. The fiscal responses of developing countries were significantly more limited than those of developed countries. Researchers link this to the limited fiscal space of developing countries. Gallagher *et al.* (2020) characterize the role of the International Monetary Fund (IMF) in the context of the COVID-19 pandemic. Special attention in the study is given to the position of developing countries.

Rubin and Willoughby (2021) compare budget policy strategies in the US during the global financial crisis (Great Recession) and the COVID-19 pandemic. The differences in the government's response to the crisis are related, among other things, to the fact that during the Great Recession, the economic downturn occurred slowly, which gave a chance to carefully consider the response. In contrast, the onset of the pandemic was sudden, and the government was not prepared for it. Wilson (2020) also refers to the US experience regarding the measures taken by the state during the Great Recession and the COVID-19 pandemic. The researchers note that the stimulus programs in both cases were similar, except for the Paycheck Protection Program, which had no analogs in countering the consequences of the Great Recession.

Faria-e-Castro (2021) examines the fiscal policy of the United States in the context of COVID-19. The researcher notes that the shock caused by the pandemic has spread from the services sector to other sectors, causing a significant recession. The researcher identifies the most effective tax policy tools in crisis conditions, disregarding the fact that fiscal policy may be able to reduce the duration and the impact of the shock.

In the work of McNichol *et al.* (2020), that focuses on the United States, it is emphasized that to overcome a future deep economic recession due to COVID-19, states will need significant fiscal relief. Similar to the previously mentioned study, researchers note the insufficient support for states from federal policy.

During any crisis, financial and other support for the state's ability to fulfill its functions becomes a top priority as a guarantee of protecting national and public interests. At the same time, every crisis also presents hidden opportunities. The COVID-19 crisis, which caused a recession, unfolded suddenly - similar to the war in Ukraine - and in some ways prepared the government to act promptly and effectively, including in the field of fiscal and budgetary policy. Therefore, it is worth exploring whether the experience of applying fiscal and budgetary instruments in the context of COVID-19 can be used in the current crisis in Ukraine.

2. Methodology

2.1. Research Procedure

The first stage of the research involved analyzing the revenues of the state budget of Ukraine as the main source of funding for state functions. The structure and trend of revenue volumes to the state budget were analyzed, as well as the amounts of funding from foreign countries, international organizations, and through government bonds.

The second stage of the research involves analyzing the expenditures of the state budget of Ukraine as an instrument through which the state performs its functions. The main directions of expenditure before and after the full-scale invasion were characterized.

Within the third stage, an analysis of Ukraine's state debt was carried out. The trend in the change of internal and external state debt, particularly after the start of the war, was disclosed. A comparison of the debt volumes with the volumes of gold and foreign exchange reserves and GDP was conducted, and analytical conclusions were provided.

The fourth stage is aimed at evaluating the global experience of applying fiscal measures in times of crisis. At this stage, the research determined the ratio of used fiscal measures to additional expenditures, lost revenues, capital injections, loans and guarantees in developed countries, developing countries with market economies, and low-income developing countries. Based on the analysis conducted, recommendations for Ukraine were provided.

2.2. Sample

The sample for the study includes Ukraine, as Ukrainian experience is important in the context of researching state function financing issues during crises (war) influenced by economic recession (caused by COVID-19), as well as other countries worldwide with different levels of economic development. It is anticipated that studying the fiscal responses of countries with different levels of development to the COVID-19 pandemic will provide valuable experience for Ukraine.

The following indicators were used in the study:

- main items of revenues of the state budget of Ukraine (million UAH);
- financing of the general fund of the state budget of Ukraine from international partners (million USD);
- expenditures of the state budget of Ukraine (functional classification) (share in total volume, %);
- expenditures of the state budget of Ukraine (functional classification) (million UAH);
- external and internal state debt of Ukraine guaranteed by the state (million UAH);
- dynamics of Ukraine's external state debt and gold reserves from 2009 to 2023 (million USD);
- dynamics of Ukraine's total state debt and GDP from 2009 to 2023 (million UAH);
- fiscal measures of the country in response to the COVID-19 pandemic (developed economies, % of GDP);
- fiscal measures of the country in response to the COVID-19 pandemic (countries with market economies, developing, % of GDP);
- fiscal measures of the country in response to the COVID-19 pandemic (low-income developing countries, % of GDP);
- fiscal measures announced by several European countries (% of GDP).

The data for analysis are available in the public domain on such resources as the Ministry of Finance (2024), the Center for Economic Strategy (2024), the International Monetary Fund (2021), and others.

2.3. Methods

During the analysis of economic indicators, statistical analysis was used, which allowed to characterize trends and structure. Comparative analysis was employed to compare Ukrainian experiences with international practices, focusing on fiscal measures and incentives. Methods such as analogy, abstraction, and generalization were used to form recommendations for Ukraine based on the researched international experience.

3. Results

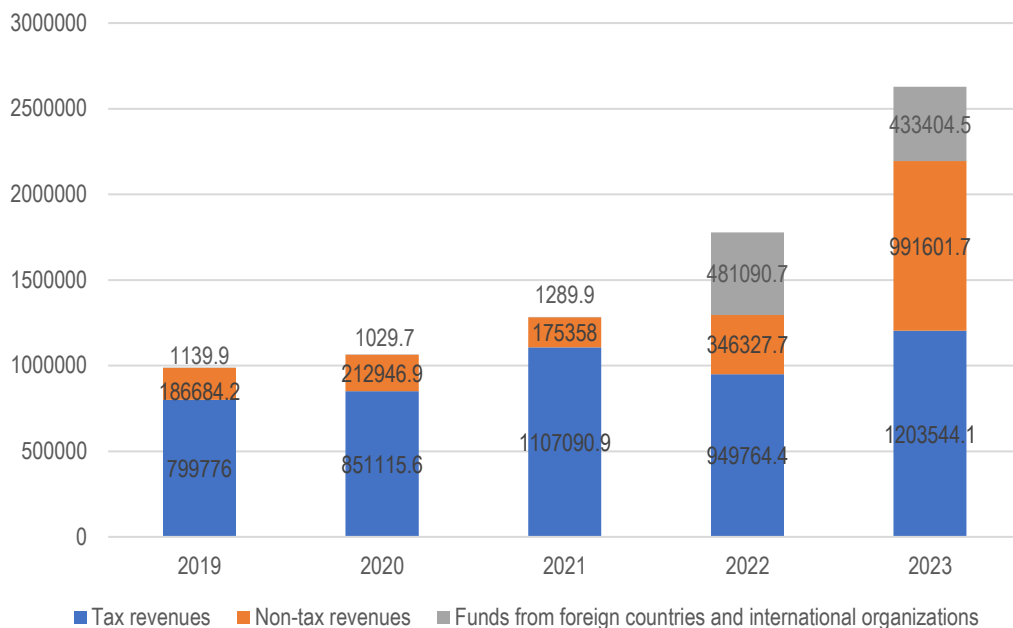
3.1. Analysis of Revenues of the State Budget of Ukraine as the Main Source of Financing State Functions

Considering international experience, the key source of funding for state functions is the state budget. Accordingly, the volume of budget revenues reveals the potential for the state to perform its functions. Using the example of revenues to the state budget of Ukraine, it can be noted that the main source of budget replenishment is tax revenues. They constitute the largest share of state budget revenues, however, after the full-scale invasion, this share changed significantly. If in 2019-2021 the share of tax revenues ranged from 79.1% (in 2020) to 85.37% (in 2021), then in the year of the invasion the share of tax revenues decreased to 53.14%, and in the following year, 2023, to 45.04%. The reduction in the share of tax revenues can be a threat to the state's performance of its functions, which underscores the relevance of improving fiscal policy and developing an effective tax reform.

The shortage of budget resources for the state to perform its functions leads to increased attention to non-tax revenues, the importance of which, as well as their share in the budget revenue structure, is steadily increasing. In 2019, 2021, and 2022, the share was slightly less than 20%, in 2021 – 13.52%. In 2023, the share of non-tax revenues significantly increased - to 37.11%. Among the main reserves for the growth of non-tax revenues in modern crisis conditions are budgetary institutions' revenues, which in 2023 accounted for about 82% of non-tax revenues, as well as revenues from property and entrepreneurial activities, which accounted for over 12% in the structure of non-tax revenues (Ministry of Finance 2024). Thus, it can be concluded that the role of non-tax revenues in budget balancing is significant and tends to increase.

Another important source for budget replenishment in critical conditions, particularly after a full-scale invasion, is international aid. The amount of funds from foreign countries and international organizations amounted to only 0.1% of the budget revenue until 2022. After the full-scale invasion, this indicator increased to 26.92% in 2022, and then decreased to 16.22% in 2023 (Ministry of Finance 2024). The structure and trend of changes in the volume of state budget revenues from 2019 to 2023 are presented in Figure 1.

Figure 1. Main Revenue Items of the State Budget of Ukraine (Million UAH)



Source: prepared by the author based on Ministry of Finance (2024)

Table 1. Financing of the General Fund of the State Budget of Ukraine from International Partners (Million US Dollars)

International Partner	2022	2023	2024
EU	7961	19530	4878
USA	11980	10950	
IMF	2693	4475	881
Japan	581	3626	2131
Canada	1889	1757	1471
World Bank	1385	660	
Great Britain	1040	998	515
Germany	1584	105	
European Investment Bank	720		
France	437		
Italy	330		
Netherlands	318		
Norway	21	190	295
Spain		96	3
Denmark	51		
Switzerland	49		
Finland		36	
Switzerland		30	
Lithuania	22		
Ireland		21	
Latvia	16		
Austria	11		
Belgium	5	3	
Island	0,5	2	
Albania	1		
Estonia		0,1	
Total	31094,5	42479,1	10174

Source: prepared by the author based on Ministry of Finance (2024)

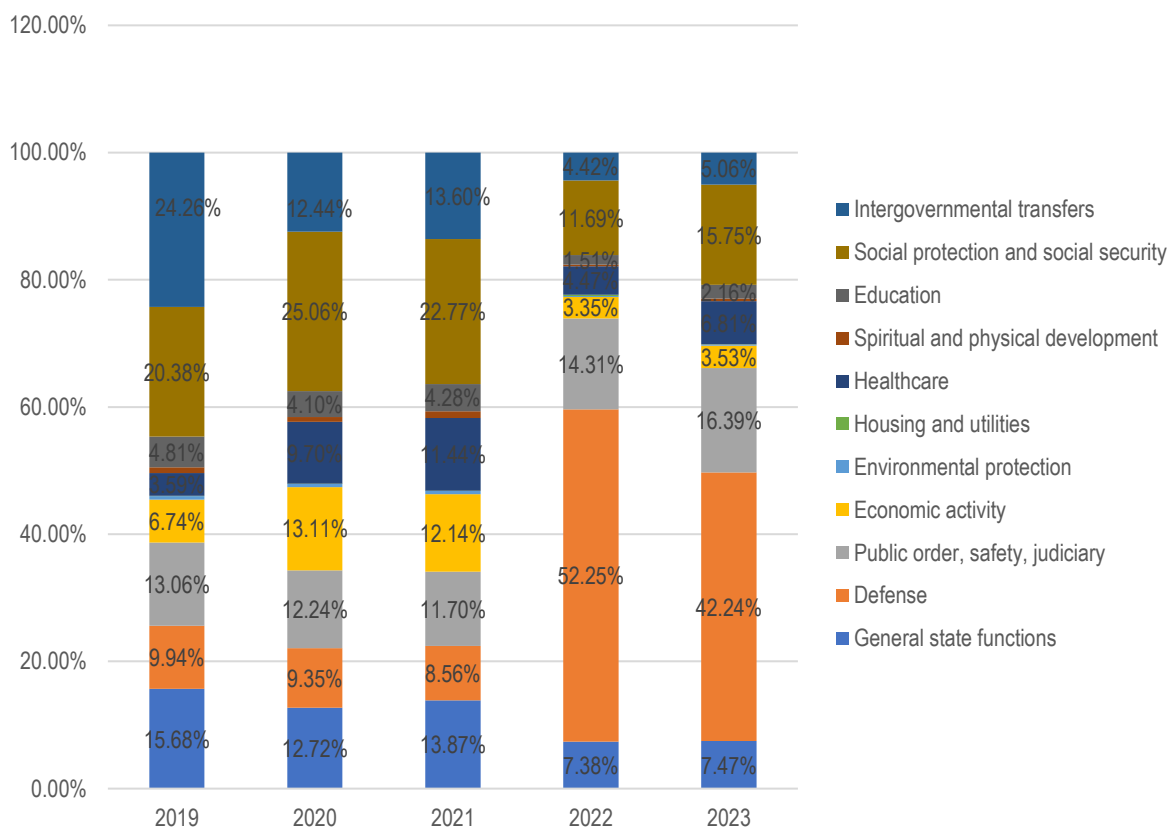
Sources of the state budget financing of Ukraine include military bonds, bilateral loans and grants, and loans from international financial organizations. Table 1 provides sources of financing the general fund of the state budget of Ukraine from international partners for the period after full-scale invasion.

In 2022, the main sources of financing for the state budget of Ukraine were also the National Bank of Ukraine (70,000 million UAH) and government domestic loan bonds (65,105 million UAH). In 2024, the amount of financing from government domestic loan bonds amounted to (as of February 7) 1,087 million US dollars (Ministry of Finance 2024).

3.2. Analysis of the State Budget Expenditures of Ukraine as an Instrument Through Which the State Performs Its Functions

If we consider state budget revenues as a source of financing for the functions of the state, then state budget expenditures can be defined as an instrument through which the state directly performs its functions. Figure 2 shows the structure of state budget expenditures of Ukraine for 2019-2023.

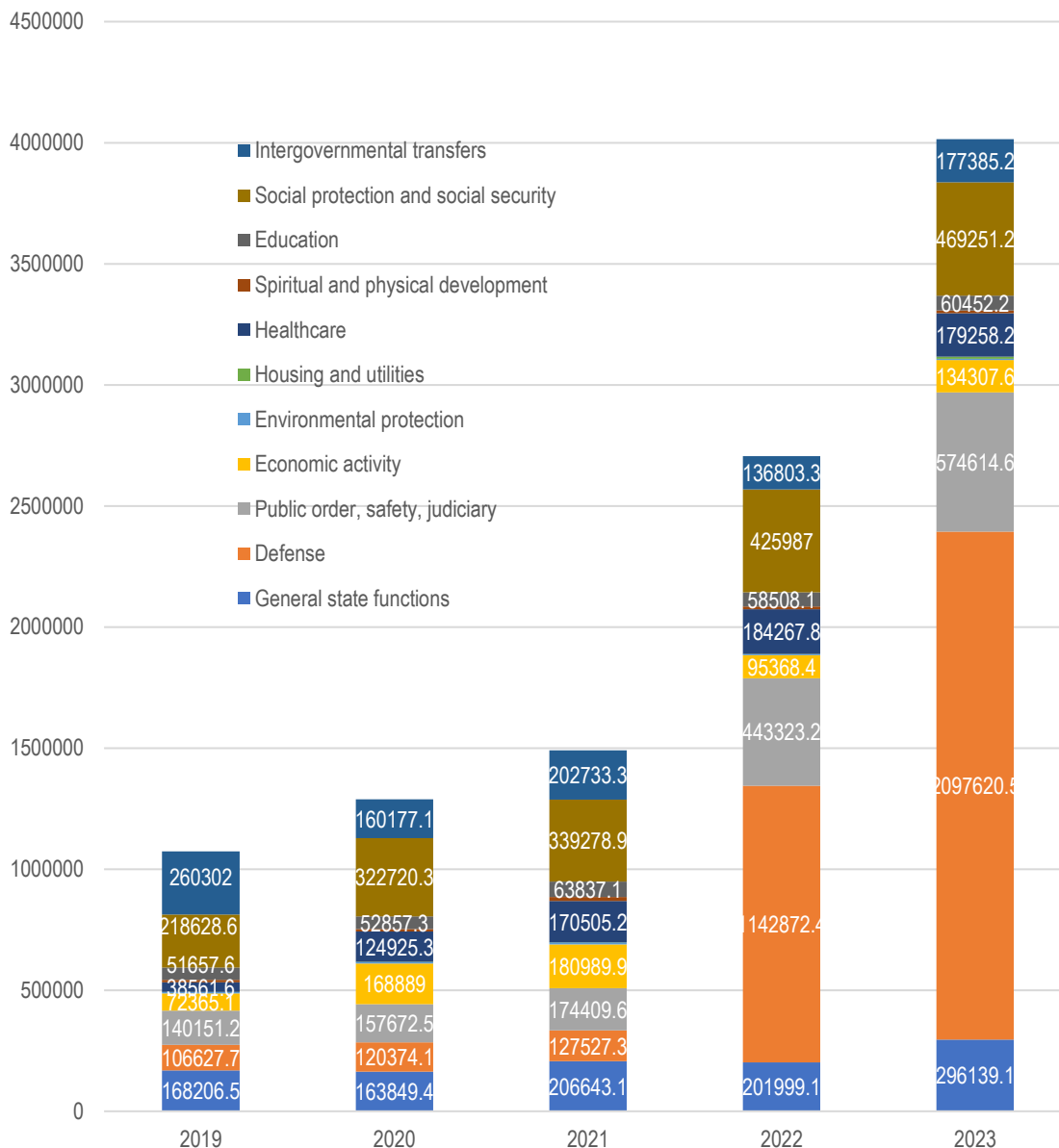
Figure 2. Expenditures of the State Budget of Ukraine (functional classification) (share in total volume, %)



Source: prepared by the author based on Ministry of Finance (2024)

As shown in Figure 2, prior to the full-scale invasion, the structure of state budget expenditures was dominated by social protection and welfare. After the invasion in 2022, more than half of the budget expenditures were directed towards the country's defense needs. It is worth noting that directing a large amount of expenditure towards defense requires proper control over its use and increased transparency. In 2023, this indicator decreased by approximately 10%. At the same time, there was a noticeable increase in the share of expenditures on public order, security, and judicial authority. Figure 3 shows the amounts of expenditures in monetary terms.

Figure 3. Expenditures of the State Budget of Ukraine (functional classification) (million UAH)



Source: prepared by the Author based on Ministry of Finance (2024)

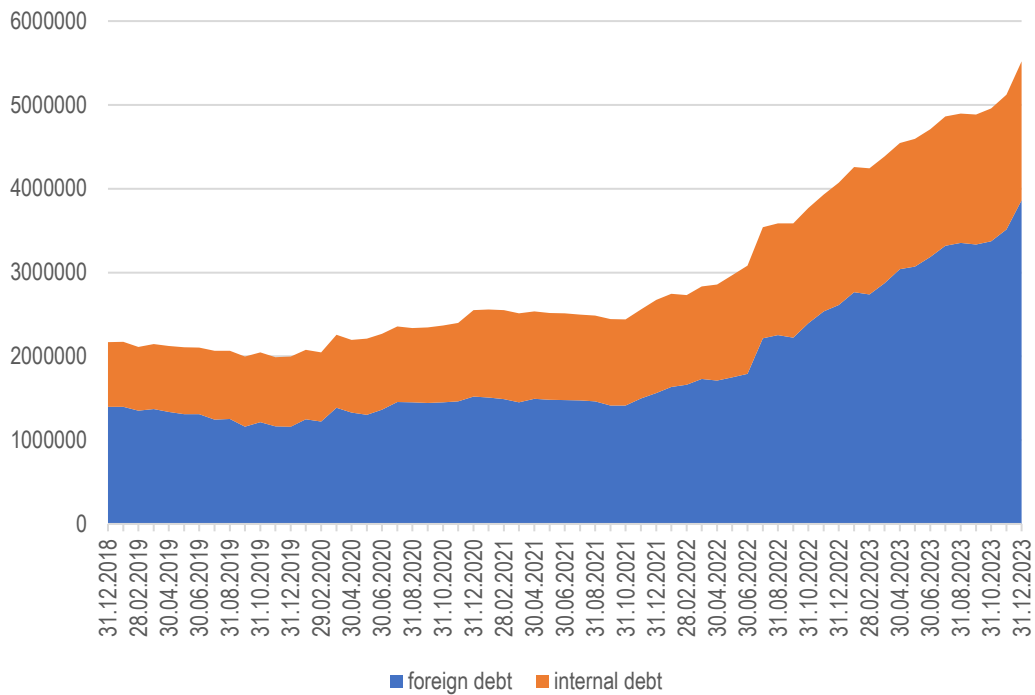
Figure 3 shows that despite a significant reduction in the share of the expenditure structure due to increased defense spending, important expenditures such as social protection and welfare, healthcare, and environmental protection have increased in volume.

Thus, the reduction in the share of expenditures in the overall structure of state budget expenditures did not occur due to a reduction in the volume of funds allocated but compared to the increase in the share of defense spending. This indicates that the state seeks to fulfill its functions to the maximum even in extraordinary circumstances, providing citizens with all the necessary support.

3.3. Analysis of Ukraine's State Debt and Comparison of Debt Levels with Gold and Foreign Exchange Reserves and GDP

In the context of the above, it is also important to examine the dynamics of Ukraine's state debt. This indicator was significant both before the full-scale invasion and after it, undergoing significant changes due to the need for additional financing of the state budget. The dynamics of Ukraine's state debt is shown in Figure 4.

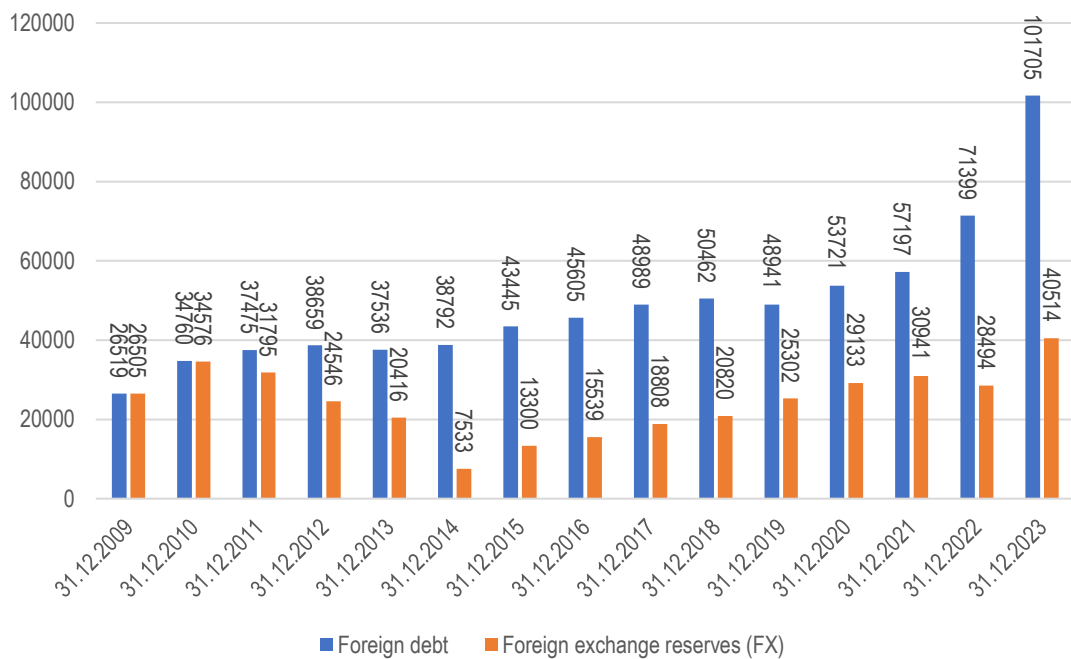
Figure 4. Ukraine's State and State-Guaranteed External and Internal Debt (Million UAH)



Source: prepared by the author based on Ministry of Finance (2024)

Figure 4 shows a steep increase in the volume of state debt, which began after February 2022 when the Russian-Ukrainian war started. This growth was mainly due to the increase in the volume of external debt, as Ukraine received significant amounts of loans from international financial organizations and bilateral loans and grants. When comparing the volumes of external state debt and foreign exchange reserves of Ukraine, rather concerning results emerge (Figure 5).

Figure 5. Dynamics of Ukraine's External State Debt and Foreign Exchange Reserves from 2009 to 2023 (million USD)

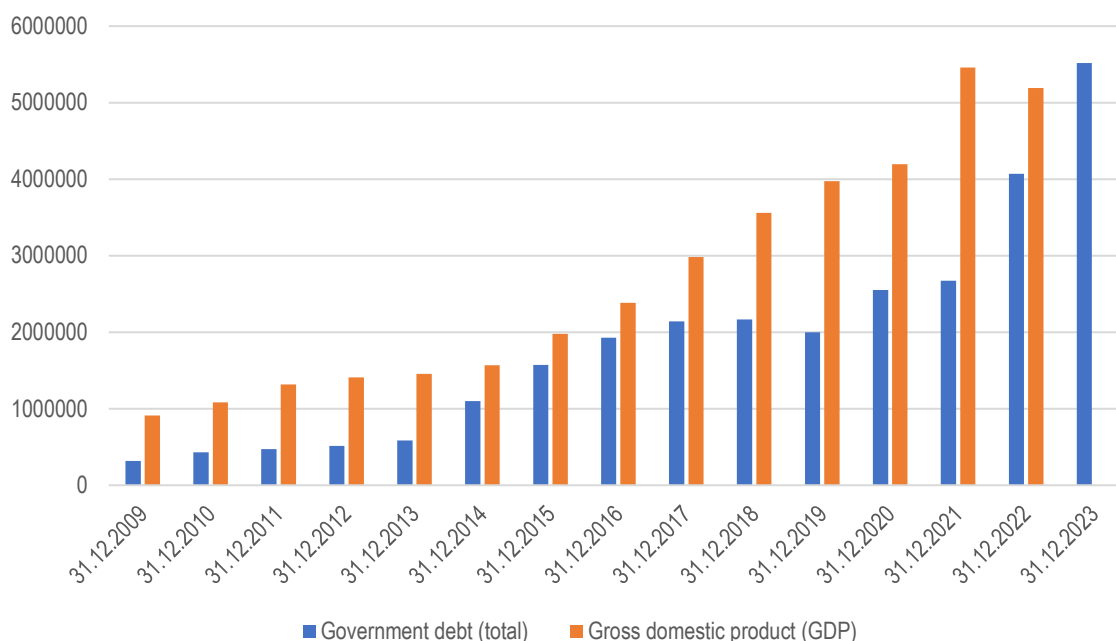


Source: prepared by the author based on Ministry of Finance (2024)

Foreign exchange reserves can serve as an additional source for repaying external debt, and a significant predominance of the volume of external debt over foreign exchange reserves indicates the risk of financial

problems, instability, and even default. As Figure 5 shows, as of the end of 2023, Ukraine's external state debt exceeds the volume of foreign exchange reserves by more than 2.5 times. Comparing the volume of state debt to GDP of Ukraine also demonstrates disappointing results (Figure 6).

Figure 6. Dynamics of the total state debt and GDP of Ukraine from 2009 to 2023 (million UAH)



Source: prepared by the author based on Ministry of Finance (2024)

As of December 31, 2023, the state debt significantly exceeded the GDP figure at the end of the previous period. It is likely that the state debt almost equaled or exceeded the GDP in 2023, even if the Ministry of Economy's estimates of GDP growth by 5-5.5% are realized (Center for Economic Strategy 2024).

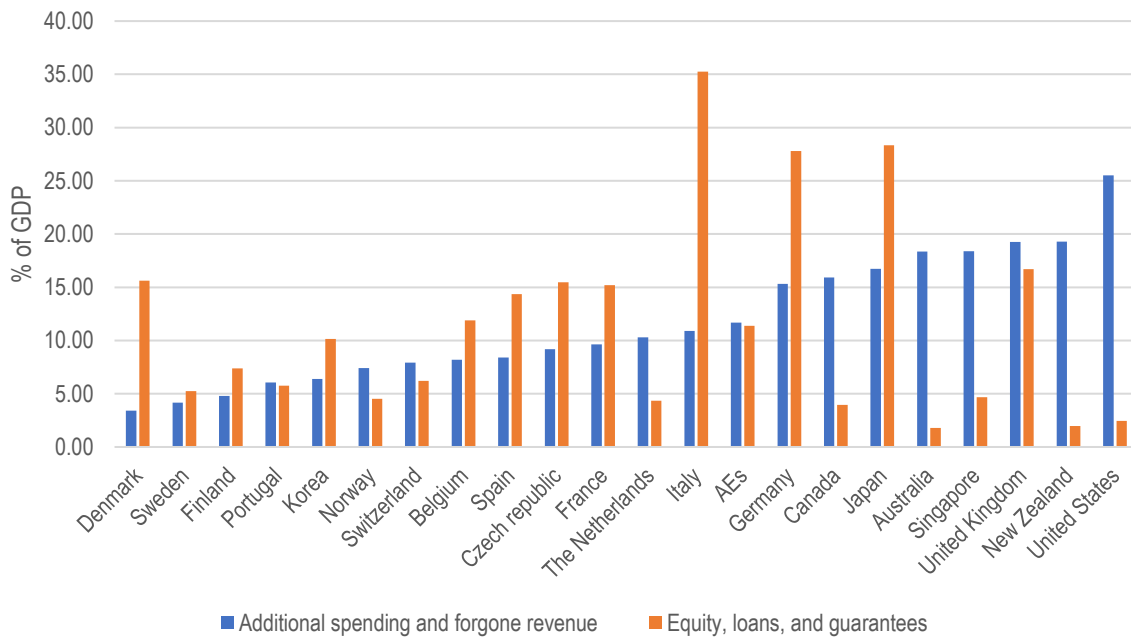
3.4. World Experience in Implementing Fiscal Measures in Times of Crisis

In the previous sections, it was established that the sources of financing Ukraine's state budget in the conditions of full-scale invasion were military bonds, bilateral credits, grants, and credits from international financial organizations. This, among other things, led to an increase in the state debt, which significantly exceeds the volume of foreign exchange reserves and practically equals the GDP volume. In addition, since the beginning of the war in Ukraine, the state has received significant amounts of international support, which is a positive factor. However, the amount of funds tends to decrease. In such conditions, an important task for improving the economic situation is to stimulate domestic revenue sources of the budget, which will ensure the state's performance of its functions and enhance financial stability.

Internal sources of budget revenue include tax and non-tax revenues. However, as the analysis shows, the share of tax revenues to the budget has significantly decreased. It is the author's opinion that in the situation that has developed for Ukraine, it is important to identify ways to increase tax revenues without resorting to measures that will increase the tax burden on businesses and the population. In this context, it is advisable to turn to international experience in the use of fiscal measures in times of crisis.

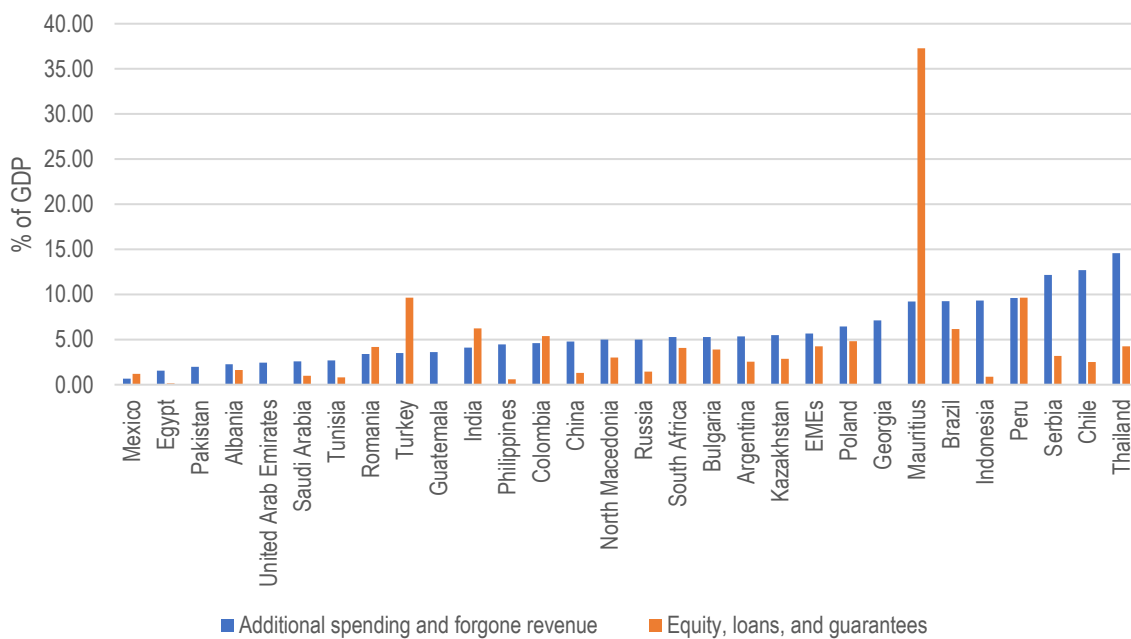
In general, the goals of fiscal policy in countries around the world during the pandemic were to preserve lives and health, provide support for the economy for the period necessary to achieve the desired level of vaccination, ensure long-term goals of socio-economic development through proper financing, and prevent excessive growth of public debt. Except for vaccination issues, all these goals are relevant for Ukraine in the conditions of martial law. This allows us to move on to consider specific directions and measures of fiscal policy of countries. Figures 7-9 contain the main fiscal measures of countries with a breakdown into: 1) additional expenses and unrealized revenues, and 2) capital injections, loans, and grants.

Figure 7. Fiscal Measures of Countries in Response to the COVID-19 Pandemic (advanced economies, % of GDP)



Source: prepared by the author based on the International Monetary Fund (2021)

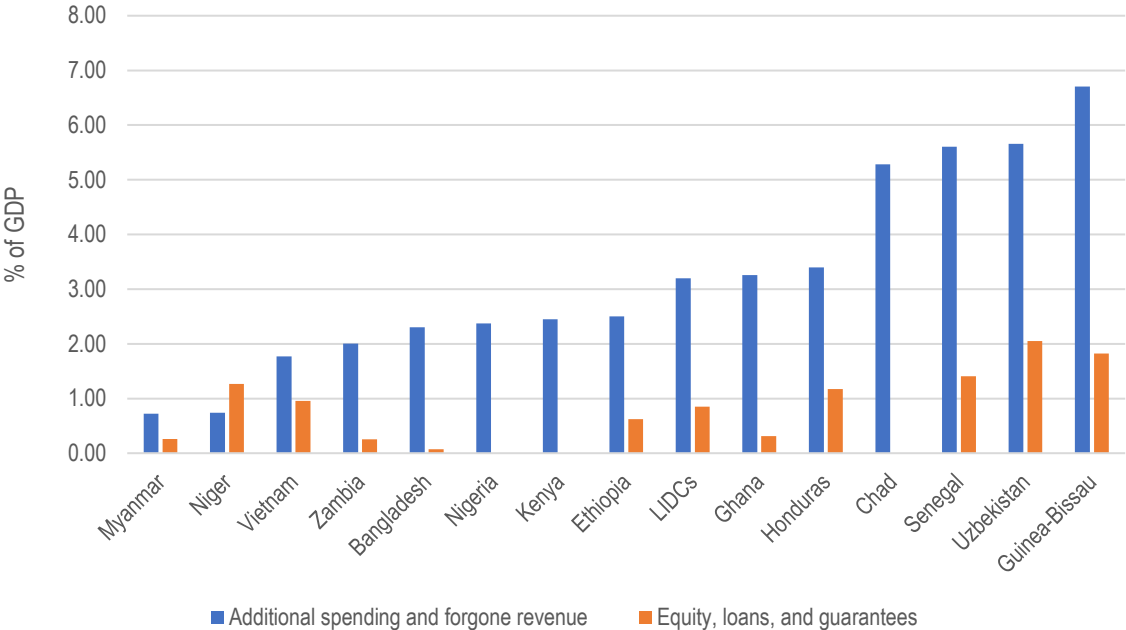
Figure 8. Fiscal Measures of Countries in Response to the COVID-19 Pandemic (developing market economies, % of GDP)



Source: prepared by the author based on the International Monetary Fund (2021)

Figures 7-9 show that the size and structure of measures taken by countries vary depending on the group of countries. Thus, the highest fiscal stimulus is observed among developed countries: the average value of additional expenditures and foregone revenues is 11.69%, and the average amount of capital inflows, loans, and guarantees reaches 11.38%. For countries with developing market economies, these indicators are 5.67% and 4.55%, respectively, and for low-income countries, they are 3.2% and 0.85% respectively. Regarding Ukraine, it is known that in 2020, 3.4% of GDP was spent on additional expenditures and foregone revenues. These data characterize the fiscal space of the countries under study and therefore their ability to apply fiscal stimuli.

Figure 9. Fiscal Measures of Countries in Response to the COVID-19 Pandemic (low-income developing countries, % of GDP)

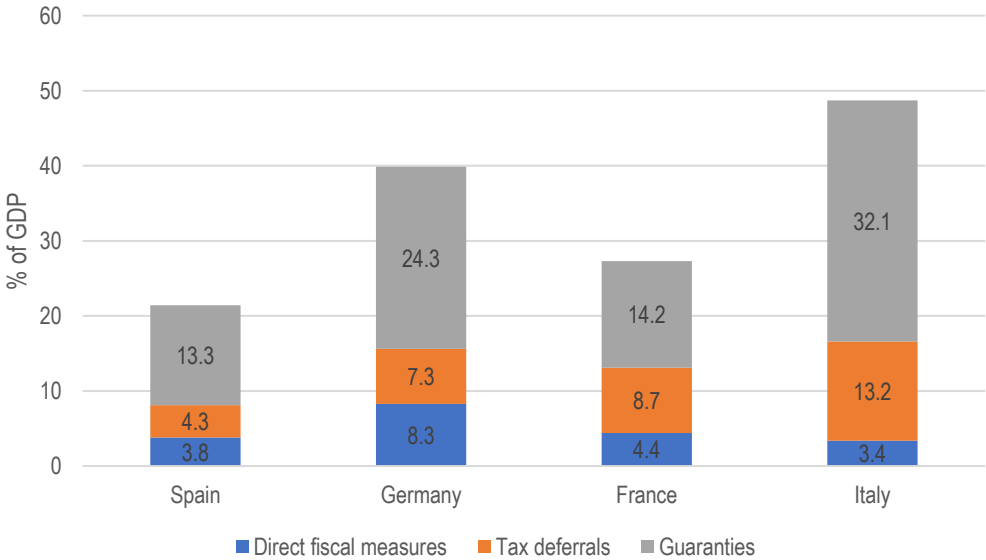


Source: prepared by the author based on the International Monetary Fund (2021)

* Data in Figures 7-9 are presented as of September 27, 2021, as a percentage of GDP (weighted by GDP in US dollars)

Among the specific fiscal measures, countries have applied deferrals and relaxations regarding tax payments, cash payments and subsidies, moratoriums on certain obligations, investment in company development, guarantees, loans, and partial unemployment. For example, in such developed economies as France, Spain, Germany, and Italy, fiscal measures in the directions presented in Figure 10 were announced.

Figure 10. Fiscal Measures Announced by Several European Countries (% of GDP)



Source: prepared by the author based on Leandro (2020)

Thus, the scale and strategies of fiscal measures vary significantly among developed countries, so adopting the experience of other countries in any case requires adaptation to national conditions. At the same time, all countries allocated the most resources to the 'Guaranties' direction, and the least (except for Germany) to direct impact measures, such as VAT reduction, temporary layoffs for workers, etc.

In Ukraine, even before the war, the implementation of a tax reform was planned. The reform focused on reducing tax rates along with implementing measures to combat tax evasion, including improving VAT administration, improving access to tax payment information, and introducing control systems, including on personal expenses. However, in the conditions of war, the direction of reform has changed. In such conditions, it is important to ensure funding for the main functions of the state not only through international assistance but also using internal capabilities. Among the measures introduced in wartime are the suspension of deadlines, temporary exemption from liability for violations of tax obligations for persons who have not fulfilled them due to the consequences of direct participation in hostilities, determining certain aspects of VAT, excise tax, single tax, corporate income tax.

For Ukraine, it is important to develop its own strategy of tax incentives. However, there are certain obstacles on this path that limit the possibilities of applying tax incentives. As a developing country, Ukraine faces a high level of tax burden on the economy, further exacerbated by the need for additional financing in wartime. Therefore, an important task for it is debt restructuring and reduction of state expenditures, which is extremely difficult in wartime, as the country has to resist invaders. Among the promising directions for improving the situation, it is worth noting the creation of new jobs, stimulation of investments in government bonds, introduction of NBU instruments for preferential targeted refinancing of bank loans for priority projects, adjustment of the NBU accounting rate according to the nominal GDP growth rates.

4. Discussion

The study identified that in a crisis situation, financing the budget through loans, grants, and other means is crucial for the state to fulfill its functions, although it leads to an increase in the national debt. International aid is also an important source of funds, but stimulating internal sources for their receipt is advisable. One of the most important internal sources of budget revenue is tax receipts.

In the research by Kaneva and Halaburda (2022), the main sources of filling the state budget of Ukraine were revealed, allowing the state to perform its functions under the conditions of martial law. Nakovtsi emphasize the importance of such a source of budget revenues as international support. While agreeing with this statement, it should be emphasized that the volumes of international support can be unstable, so the government should also focus on optimizing internal sources of budget revenue. A wider range of directions for improving the financial support of the state's functions in a crisis situation, taking into account internal capabilities, is outlined in Gordiienko's work (2023). The study identifies key areas for supporting the Ukrainian economy, including attracting international support from partners (including grants), implementing business support programs, setting the unified tax rate at 2%, relocating businesses while preserving thousands of jobs, and implementing various credit programs (e.g., for businesses and agricultural enterprises).

Holovan (2022) reveals the benefits of the tax reform that was planned in Ukraine before the war. The goal of such reform was to build a simple and economically fair tax system with minimal time and effort spent on tax calculation and payment, aimed at ensuring sustainable economic development, as well as a sufficient level of funding for the state and local budgets. This reform focused on budget funding through the service function of fiscal authorities, rather than through financial penalties and overpayments. Although the reform direction has changed during the war, the main idea of transitioning from a punitive to a service function remains relevant and can contribute to the optimization of tax policy.

Benmelech and Tzur-Ilan (2020) conclude that countries with high credit ratings and higher incomes announced more extensive fiscal policies during COVID-19. These countries were limited in their use of conventional monetary policy tools as they entered the crisis with very low interest rates, which did not allow them to further reduce rates to stimulate spending and investment. At the same time, these countries employed more unconventional instruments, such as guarantees provided by central banks, relaxation of macroprudential rules, asset purchases, restrictions on dividend payments and share buybacks by financial institutions. Researchers note that more concern is raised by countries with lower incomes and credit ratings, which are likely to be unable to effectively apply fiscal policy tools in crisis conditions. Specifically, in Ukraine, after the full-scale invasion, the National Bank raised its interest rate from 10 to 25 percent. This measure aimed to curb inflation and discourage the conversion of hryvnia to foreign currency. After inflation slowed and the hryvnia stabilized, the interest rate was gradually reduced to 15 percent.

In studies exploring the features of fiscal policy in the context of COVID-19, scholars often emphasize the effectiveness of fiscal measures such as tax breaks and other support measures for households and businesses. Alberola *et al.* (2021) note the significant impact of appropriate fiscal measures on the financial capacity of developed countries during the COVID-19 pandemic and, consequently, on their ability to fulfill their functions. Such

fiscal measures were aimed at providing adequate support to companies and households, mitigating the slowdown in economic activity, positively impacting the labor market, and preventing individual companies from bankruptcy. McNichol *et al.* (2020) note that significant fiscal breaks are necessary during a crisis (using the example of the U.S. during COVID-19). This should allow states to avoid negative consequences, such as a sharp reduction in spending, which could deepen the recession. The uncertainty regarding the duration and depth of the crisis only underscores the need to extend fiscal breaks. Faria-e-Castro (2021) identifies unemployment assistance as a stabilization tool for borrowers' incomes, and liquidity support programs as a stabilization tool for employment in affected sectors, as the most effective instruments for economic stabilization. Wilson (2020) highlights five components describing the U.S. fiscal policy response to the COVID-19 pandemic: transfers to individuals, transfers to state and local governments, government consumption through direct federal purchases of goods and services, tax reserves, and grants and non-repayable loans to businesses (including the Paycheck Protection Program).

In the context of the war in Ukraine, support for citizens and businesses is also crucial. However, alongside this, there are important tasks such as developing long-term strategies for repaying the national debt, implementing effective tax reforms without excessive tax burdens on businesses and the population, increasing transparency in the use of funds (including in the turnover sector), and more.

Studying the budget policy strategies of the United States during the Great Recession and the COVID-19 pandemic, Rubin and Willoughby (2021) note that during the Great Recession, mostly conventional budget policy tools were used, including access to reserve funds, personnel and program transformations, spending cuts, as well as increased revenue through tax increases, fees, and payments. During the Great Recession, federal stimulus funds contributed to budget balancing. The key difference in budget policy in the context of the COVID-19 pandemic is that federal aid was mostly directed to companies and individuals, forcing states to independently address budget deficit issues. In Ukrainian conditions, measures in the field of social support and tax reduction are more appropriate, although it is important to ensure tax discipline.

Gallagher *et al.* (2020) notes that the COVID-19 pandemic has highlighted the instability of the global financial system and the Global Financial Safety Net, which includes various levels such as national currency reserves, central bank swap lines, and financial resources of global financial institutions (e.g., IMF). The researcher points out the insufficient resources of the IMF to support countries in crisis and the lack of coordination in measures among the international community. From this, it can be summarized that today the economies of the world are affected not only by the consequences of the post-COVID-19 downturn but also by global crisis trends in financial security. For Ukraine, which is experiencing its own crisis related to the invasion, this is particularly critical because IMF resources are an important source of funding for its budget. At the same time, these trends underscore the importance of optimizing internal revenue sources as the main source of funding for state functions.

Conclusion

Economic recession negatively affects the ability of the state to perform its functions. At the same time, the proper performance of these functions is the essence and a top priority for any state, especially in crisis conditions. The main sources of funding for state functions are the state budget and internal and external borrowing.

Based on the research results, it is worth emphasizing the need to optimize internal sources of funding for state functions. Primarily, this includes tax revenues, the share of which in Ukraine has significantly decreased since the beginning of the war. This requires the implementation of various fiscal measures, including tax incentives and support for businesses and households. At the same time, it is necessary to ensure proper tax discipline.

As the research has shown, defense expenditures dominate the structure of Ukraine's state budget expenditures. This requires increased attention to the proper use of funds, increased accountability, and transparency.

The reduction in international aid forces the government to seek new opportunities for international cooperation. International loans can lead to disruptions in the state's financial stability, contributing to the growth of the state debt, but they are a necessary measure in times of war.

The increase in the state debt, its significant predominance over gold and foreign exchange reserves, and its size as a percentage of GDP are the most alarming trends. Therefore, the state needs to pay attention to the development of long-term strategies for debt repayment and restructuring. Further research directions may include the development of proposals for the formation of such strategies.

Credit Authorship Contribution Statement

The authors equally contributed to the present research, at all stages from the formulation of the problem to the final findings and solution.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Declaration of Use of Generative AI and AI-assisted Technologies

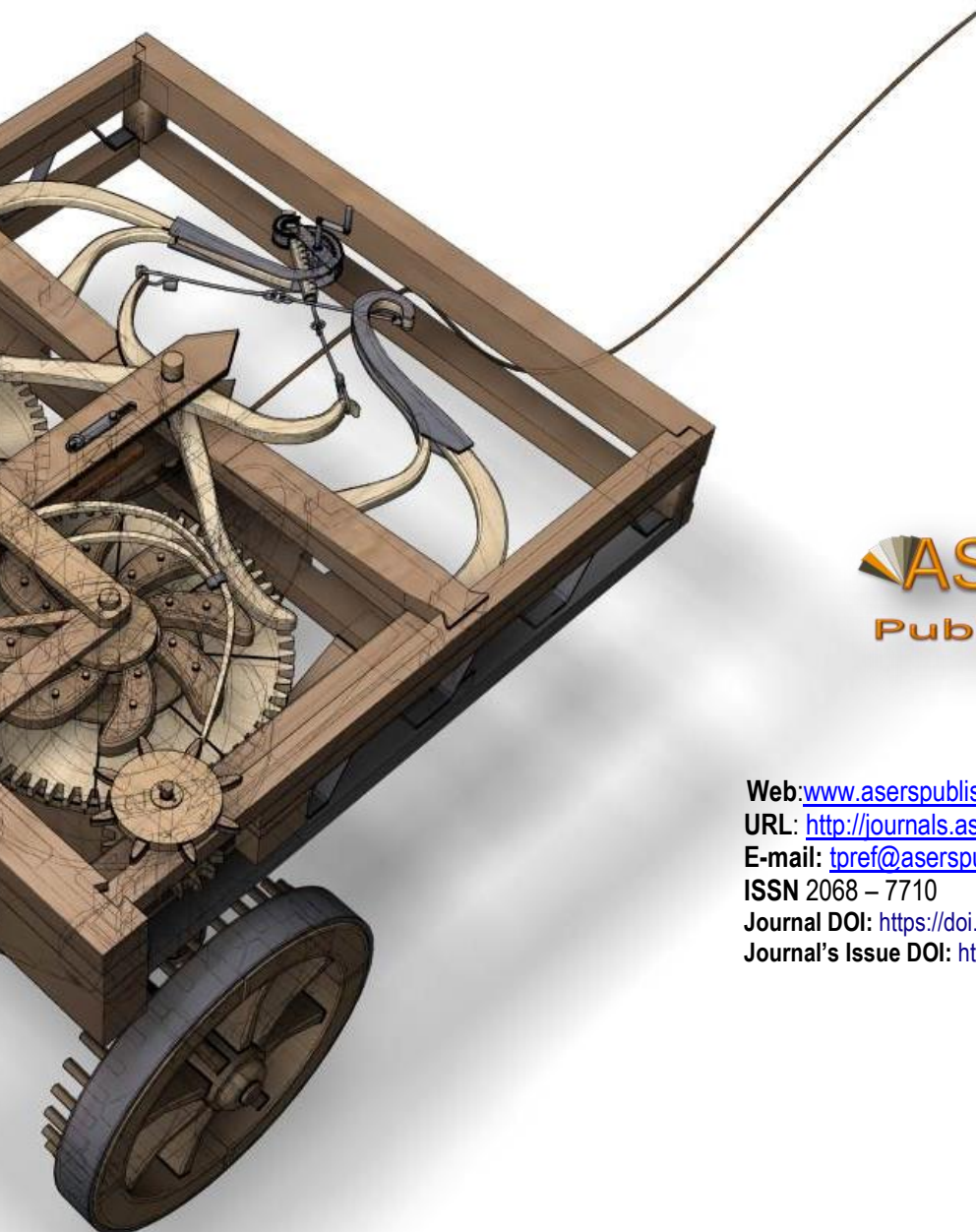
The authors declare that they have not used generative AI and AI-assisted technologies during the preparation of this work.

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