

**Economic Theory**

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**SOCIETAL CONSEQUENCES  
OF MODERN HYBRID WAR:  
KEY DIMENSIONS IN THE CONTEXT  
OF UKRAINE**

**Abstract**

Russian-Ukrainian war is the gravest display of the global tension in the hybrid system where war and peace compete as dominant world orders. In view of this, the paper presents the key dimensions of warfare's societal consequences in the context of the Ukrainian situation. Notably, the ongoing full-scale military conflict has all the characteristics of a hybrid war, unprecedented in its scale in the contemporary history of Europe. In the context of creating a strategic

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vision of postwar recovery goals and long-term development of the Ukrainian state, the societal consequences of a hybrid war waged against Ukraine must be investigated. The example of Ukraine is used as a backdrop for a detailed assessment of societal consequences of a modern hybrid war in three dimensions – demographic, socio-economic, and macrofinancial aspects. Analysis results indicate the risks inherent in offsetting the societal consequences of the Russian invasion into Ukraine. It is concluded that societal methodology is suitable for exploring the current dynamic transformations in society and its integral structures, and that the application of this methodology should be popularized.

### **Key Words:**

military shocks; hybrid warfare; hybrid threats; reconstructive economic recovery; socio-economic development; societal system; societal consequences.

**JEL:** F29, H11, N40, O43, P48.

4 tables, 56 references.

### **Problem Statement and Literature Review**

Russia's full-scale invasion of Ukraine in February 2022 was the most striking manifestation of the global tensions of the hybrid peace-war system that launched the most intense phase of hybrid warfare. The latter combines conventional (traditional) and non-conventional, overt and covert, military and civilian, long-known and ultra-modern approaches, methods and tools of warfare; its ultimate aim is to weaken the enemy's conflict potential and defeat the enemy or the alliance of which it is a member. By all indications, the Russian-Ukrainian military conflict is an illustrative example of a modern hybrid war, unprecedented in its scale in the contemporary history of Europe. Both the phenomenon of this war and its consequences need to be scientifically studied.

One of such consequences is the greatest unity and solidarity of Ukrainians in all the years of independence aimed at responding to the military challenge. Large-scale destruction of housing, infrastructure, businesses, farms, etc.; massive flows of refugees from the war abroad and internally displaced persons; galloping inflation; rapid spread of unemployment and poverty; humanitarian crisis in the frontline areas and in the territories of constant shelling – these are some of the other devastating consequences of the war that Ukrainian society has been suffering from for more than a year and is courageously overcoming with the support of its partners.

Military shocks have a dramatic impact on the transformations in society (structural, institutional, economic, psychological, and other shifts). Therefore, in the context of creating a strategic vision of the postwar recovery goals and long-term development of Ukraine, it is important to study the societal consequences of the current hybrid war waged against Ukraine. This can be achieved by applying a societal approach that reveals the interconnectedness of changes in society and its actors, bringing attention to the dynamics of the societal system (considered a social system unifying basic economic, social, ideological and political structures by classical sociological discourse).

The foundation for the emergence and evolution of the theory of social development was laid by the scientific works of A. Keller (1915), W. Sumner (1959), P. Sorokin (1962), and T. Parsons (1965). J. Mattis and F. Hoffman (2005), J. Bērziņš (2014), A. Polese, R. Kevlihan and D. Beachain (2016), A. Bilal (2021), J. Freedman, G. Hoogensen Gjorv and V. Tahinjanahary Razakamharavo (2021), as well as other researchers focused on defining the content, key characteristics and features of modern hybrid warfare. Reflections on the societal aspects of the current crisis are prompted by the work of S. Hall (2022).

A. Grytsenko's scientific work (2023) was devoted to the study of processes in the global-local hybrid system of peace-war and the application of the societal approach to assessing the consequences of modern hybrid wars. S. Lehne's study (2023) focused on the direct impact of the Russian-Ukrainian war on the emergence of a new world order. The sociological dimension of societal values during the war is presented in a thorough work by S. Dembitskyi (2022).

Ukrainian scientists Sidenko (2018) and Ye. Savelyev and V. Kurilyak (2021) have demonstrated that Ukraine's role and place in the global economic space depend on the results of its European integration. T. Artiomoa (2022) outlined the main impact channels of the consequences of the war in Ukraine on the economy of the European Union.

A number of thorough research papers have been devoted to assessing the impact of military aggression against Ukraine and identifying strategies and approaches to ensuring the reconstructive recovery of the Ukrainian economy in the postwar period (Institute for Economics and Forecasting, 2022; Kindzerskyi, 2022; Amosha & Amosha, 2023). The impact of the Russian-Ukrainian war on

geo-economic shifts in the world economy was studied by O. Borzenko (2023). Financial mechanisms of the post-war recovery of the national economy and relevant recommendations for the state's macro-financial policy are presented in the works of V. Kornivska (2022), T. Krychevska (2022), and O. Moskalenko (2022).

The study by V. Kostrytsia and T. Burlay (2023) focused on identifying social priorities for Ukraine's development in (post)wartime. The expediency of introducing the concept of a social market economy in Ukraine after the end of the war is substantiated in the scientific work of M. Zveryakov (2023).

Taking into account the scientific results presented in these works, new research appears necessary in order to provide a systematic approach to studying the consequences of modern hybrid warfare, in particular, based on the Ukrainian experience, and to assess these consequences in a profoundly dynamic societal dimension.

**The aim of this paper** is to assess the societal consequences of the hybrid war against Ukraine in the framework of the global-local hybrid system of peace-war, which has become a modern form of the changing world order; it is also to show key dimensions of these demographic, macrofinancial and socio-economic consequences. The assessment is important in terms of developing appropriate measures of state policy for the reconstructive recovery of Ukraine's economy in the postwar period. Such recovery does not entail reproduction of the old macroeconomic structure, rather, taking into account the highly educated population and opportunities for its further development through education and science, it involves building a new macro structure based on the use of modern technologies and modern approaches to the spatial localization of production. This nature of postwar reconstruction of Ukraine's socio-economic system would ultimately enable it to avoid the poverty trap and move forward with full integration into the EU (Institute for Economics and Forecasting, 2022).

## **Methodology**

We use the example of Ukraine as a case study to investigate the impact of modern hybrid warfare on the dynamics of societal processes, in particular, in the demographic, socio-economic and macro-financial dimensions, using a systematic approach based on the logical-historical methodology.

Basic general scientific methods of cognition were used to achieve the research goal. In particular, the reflexive method allowed us to turn the process of cognition and transformation of social reality by the subject onto itself and reflect on its own self-change. Using the structural-functional method, we analyzed the changes in the socio-economic systems, which allowed us to identify the charac-

teristic functional relationships between their structural elements at different periods of development, including the war period.

The comparative methodology was used to obtain comparative estimates of the (pre)war dynamics of demographic, macroeconomic and macrofinancial development of Ukraine. Sociological and statistical methods were used to determine the key parameters of the social development of the Ukrainian state engulfed in a hybrid war. A general assessment of the scale of destruction and damage caused by the Russian invasion of Ukraine was made on the basis of statistical and analytical methods.

## **Research Results**

### **The societal concept in political and economic discourse**

The political and economic discourse makes it possible to highlight the peculiarities of the societal approach in the logic of cognition and socio-economic development of society and to find logical links in the progression through world perception, positioning and behavioral changes from one state of social reality to another. Summarizing the history of cognition of social reality and the use of the societal concept in it, it is clear that they are related to the necessity of considering the interaction between society as a whole and its actors. In this regard, it can be argued that *societal* as a category reflects the interaction of society as a whole with its structural elements (social groups, strata, civil units, etc.), which is realized through the simultaneous representation of the integrity of society in individual (group) action and the integration of the individual into the social (Grytsenko, 2023). This definition allows us to point out the advantages of the societal approach compared to other scientific methods. In particular, it allows for a holistic understanding of society in its structural and functional transformations, whose dynamic characteristics have accelerated and intensified due to the transition of the hybrid peace-war system into the critical phase of hybrid war on the territory of Ukraine.

## **Dimensions of the societal consequences of the hybrid war in Ukraine**

Developing an objective view of the impact and consequences of the full-scale hybrid war currently being waged against Ukraine requires not only a deep theoretical understanding, but also an appropriate assessment of their key indicators. As part of this assessment in this article, we present qualitative and quantitative<sup>1</sup> descriptions of the social consequences of this war, organized into several key categories – demographic, socioeconomic, and macrofinancial dimensions.

The internal institutional dimension of the societal consequences of Russian aggression is also extremely important, but it requires a separate study, given its multidimensionality and importance for the deep qualitative transformations of Ukrainian society under the influence of military shocks. In this context, the assessment that experts from the Institute of Sociology of the National Academy of Sciences of Ukraine made of the social values of the Ukrainian population during the war is quite revealing (Dembitskyi, 2022). Researchers have compiled a list of eleven societal-level values that represent desirable or necessary properties of social interaction between different social groups, and each of these values is socially important. According to sociological surveys conducted in July 2022 among citizens of war-torn Ukraine, it appears that the most important social values for Ukrainians are security, strength, order, normativity and equality. At the same time, a relative majority of Ukrainians believe that due to the war, the state may temporarily neglect the values of diversity, development, and selectivity. The explanation for this, as sociologists rightly point out, is the natural need of people to prioritize life and physical survival. If we analyze these data from the perspective of the institutionalism theory, we believe it obvious that people think the state's crucial role is to act as the basic institution of social organization that ensures such survival through the appropriate power structures and competencies. The institutional approach provides an understanding of why Ukrainian society during the war is not only a target of external aggressive influence, but also an active and highly capable actor providing a powerful response to social threats caused by the large-scale armed conflict. It seems that the institutional dimension provides a broader picture of the societal consequences of the Russian-Ukrainian war than the sociological one, and should be studied in depth.

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<sup>1</sup> Note that since February 24, 2022, the vast majority of statistical surveys by the State Statistics Service of Ukraine (SSSU) have been suspended for objective reasons. The available data of the State Statistics Service for 2014-2023 are given without taking into account the temporarily occupied territories of Crimea, Donetsk and Luhansk regions.

### Demographic dimension

Undoubtedly, the most painful consequences of the Russian armed invasion for Ukraine are associated with significant casualties, grief and suffering of people. Data from the Office of the United Nations High Commissioner for Human Rights indicate that since the beginning of the war and as of May 21, 2023, 24,012 war casualties have been officially documented among the civilian population of Ukraine alone, including 8,895 killed and 15,117 wounded (Office of the High Commissioner for Human Rights, 2023). Unfortunately, the actual number of casualties will only be known after the end of hostilities and may be much higher.

The war also led to multimillion internal and external migration, affecting more than a third of the country's population. According to the United Nations High Commissioner for Refugees, as of the end of April 2023, 8.17 million refugees from Ukraine were registered in the countries of the European region, including 5.04 million in the EU under the Temporary Protection Directive, and 2.85 million in the Russian Federation (the latter as of October 2022) (Operational Data Portal, 2023); more than 5.35 million Ukrainians (as of the end of January 2023) have acquired the status of internally displaced persons (UNHCR Regional Bureau for Europe, 2023). Earlier this year, the UN Office for the Coordination of Humanitarian Affairs officially confirmed that 40% of Ukraine's population is in need of *humanitarian assistance*, with 56% of them being women and girls, 23% children, and 15% people with disabilities (International Organization for Migration, 2023), i.e., the most socially vulnerable categories of Ukrainian society.

It is quite obvious that actual demographic data will be obtained after the war is over, but we can already state its shocking impact on the demographic sphere. Even in the pre-war period, experts objectively reported that the demographic crisis of the mid-1990s in Ukraine had turned into a real *demographic catastrophe*. Indeed, as of February 1, 2022, the estimated population of Ukraine was 41.1 million (State Statistics Service of Ukraine, 2022), having decreased by 7.6 million people in just two decades (a figure roughly comparable to the population of Bulgaria) or 15.6%. In January 2022, the *mortality rate* among Ukrainians, in absolute terms, was 3.2 times higher than the *birth rate*, while a decade ago (at the beginning of 2012) this ratio was 1.3 times<sup>2</sup>.

Obviously, under the influence of military shocks in Ukraine, the existing threats to the demographic security of the state will be extremely aggravated: even according to pre-war estimates, Ukraine is classified by UN population ex-

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<sup>2</sup> Calculated based on the data of Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine (n.d.).

perts as a country with the highest relative population decline rate of more than 20% in 2022-2050 (Department of Economic and Social Affairs, 2022). According to the calculations of Ukrainian scientists, the integrated index of demographic security of Ukraine reached a critical level in the pre-war period (Grishnova & Kharazishvili, 2019), and under the influence of the war, it will generate significant threats to the entire system of national security of the state.

As experts rightly note, *stronger labor security* should also be at the top of the agenda for Ukraine's postwar economic recovery. For this purpose, it seems necessary to improve the quality of the labor force and ensure the technological advancement of the domestic industry, which will create new jobs with decent working conditions (Novikova et al., 2022).

The trends of accelerated depopulation, large-scale (labor) migration of Ukrainians abroad, and effective cessation of even simple reproduction of the population in general and the working force in particular have been significantly intensified by the war and will lead to severe losses of human and social capital and labor potential of Ukraine. Ultimately, they will result in a critical reduction of internal resources for long-term socio-economic development. Therefore, even at the start of its post-war reconstruction, Ukraine will need to adopt and implement a comprehensive, inclusive development-based demographic strategy for the long term. Moreover, the National Human Development Strategy, approved by the Decree No. 225/2021 of the President of Ukraine of June 2, 2021, should be revised accordingly and harmonized with the processes of post-war transformation of the Ukrainian society. The Strategy of Economic Security of Ukraine, approved by the Decree No. 347/2021 of the President of Ukraine of August 11, 2021, should also be updated to institutionalize the category of national economic security and clarify the relevant directions of the state policy ensuring it, taking into account the approaches of the National Academy of Social Insurance (USA) to building social pillars of economic security of modern societies (Burlay et al., 2022).

### **Socio-economic dimension**

***International financial assessment of the destruction and necessary reconstruction.*** The war has had a profound shock effect on the socio-economic situation in Ukraine. In order to stabilize it, overcome the devastating consequences of the war and ensure the gradual reconstruction of the Ukrainian economy, a consolidated financial assessment (by sector and region) of the total losses and damages incurred during the first year of the war (February 2022 – February 2023), as well as the need for funds for reconstruction in the short, medium and long term, was prepared jointly by the UN, the World Bank Group, the European Commission and the Government of Ukraine. The assessment was



based on the methodology of these international institutions, assumes an exchange rate of \$1 = UAH 36.57 and is based on the updated priorities for economic recovery outlined by the Government of Ukraine at the Ukraine Recovery Conference in Lugano, Switzerland, in July 2022.

According to this international assessment, the first year of the full-scale war had enormous negative consequences for the macroeconomic, social and environmental sectors of Ukraine, and overcoming these problems and rebuilding on the principle of «building back better» requires significant investment and effort (Table 1).

According to a consolidated estimate by the United Nations, the World Bank Group, the European Commission and the Ukrainian government, the war has caused total damages to the Ukrainian economy of almost \$135 billion over the past year, with the largest toll taken by the housing sector (38%) and transportation (26%). Among the regions, Donetsk, Kharkiv, Luhansk, Zaporizhzhia, Kyiv and Kherson regions were the most affected. The largest economic losses are in trade and manufacturing, accounting for 30% of the total losses, which amount to \$290 billion. The estimated total need for reconstruction and recovery funds for the next three years is \$128.0 billion, and for the next ten years – almost \$411 billion, of which 22% is for transportation, 17% for the housing sector, 11% for energy and more than 10% for social protection and assistance (The World Bank et al., 2023).

**Macroeconomics.** The Russian armed invasion has led to a deep socio-economic crisis in Ukraine, which could have been catastrophic without external financial assistance. According to the State Statistics Service and the National Bank of Ukraine, the main macroeconomic results of 2022 were as follows: *real GDP* declined by 29.1%, the worst figure in 30 years; *consumer inflation* reached 26.6%, and the *GDP deflator* reached 34.3%; *goods exports* decreased by 35.1%, and the *negative balance of foreign trade in goods* increased 2.3 times to \$11.1 billion; *deficit of foreign trade in goods and services* increased 9.6 times to \$25.9 billion; *net inflow of foreign direct investment* in 2022 amounted to \$504 million compared to \$7.5 billion in pre-war 2021; *consolidated balance of payments* showed a deficit of \$2.9 billion, while in 2021 it had a surplus of \$487 million (National Bank of Ukraine, 2023a).

Due to the complete uncertainty of when the war will end, Ukraine's macroeconomic prospects are difficult to predict, but the government is controlling the situation with the help of strong financial support from foreign partners. In March 2023, the IMF approved a new Extended Fund Facility (EFF) program for Ukraine worth \$15.6 billion as part of a \$115 billion international financial package for the period up to 2027, aiming to reduce the country's ultra-high quasi-fiscal risks, support its macroeconomic stability in wartime, and accelerate post-war reconstruction through reforms (IMF European Department, 2023).

Table 1

**Sectoral assessment of total damages, losses and needs for economic recovery in Ukraine, as of the end of February 2023 (billion USD)**

Sector, area (by nominal division)	Damages <sup>1</sup>	Losses <sup>2</sup>	Needs <sup>3</sup> for recovery:	
			2023– 2026	2023– 2033
<b>Social sector</b>				
Housing	50.4	17.2	31.5	68.6
Education and science	4.4	0.8	4.3	10.7
Healthcare	2.5	16.5	3.6	16.4
Social protection and benefits	0.2	4.2	17.8	41.8
Culture and tourism	2.6	15.2	2.3	6.9
<b>Infrastructure sector</b>				
Energy and mining	10.6	27.2	5.7	47.0
Transport	35.7	31.6	14.1	92.1
Digital and telecommunications	1.6	1.6	3.0	4.5
Water supply and sewerage	2.2	7.5	3.9	7.1
Public utilities	2.4	3.0	1.7	5.7
<b>Manufacturing, trade and financial sector</b>				
Agriculture	8.7	31.5	10.2	29.7
Trade and manufacturing	10.9	85.8	12.1	23.2
Irrigation and water management	0.4	0.3	0.1	8.9
Finance and banking	0.0	6.8	6.5	6.8
<b>Other sectors</b>				
Environment, natural resource management and forestry	1.5	0.5	0.5	1.5
Emergency response and civil protection	0.2	0.5	0.4	1.5
Governance and public administration	0.3	1.4	0.2	0.6
Management and control over explosive devices (landmines and unexploded ordnance) and objects	–	37.6	10.0	37.6
<b>Total<sup>4</sup></b>	<b>134,7</b>	<b>289,1</b>	<b>128,0</b>	<b>410,6</b>

Notes: <sup>1</sup> *damages* refers to the direct costs of replacing destroyed and/or damaged tangible assets and infrastructure, taking into account pre-war prices;

<sup>2</sup> *losses* refers to changes in financial and economic flows caused by the war, such as increased operating expenses, loss of income, etc.;

<sup>3</sup> *needs* refers to funds necessary to restore assets to their pre-war condition through measures such as repair and restoration, including costs associated with «building back better» (e.g., energy efficiency, modernization and resilience); factors such as global and domestic inflation, etc. are taken into account when calculating needs. Needs are estimated at market prices as of February 24, 2023.

<sup>4</sup> the figures in the «Total» line may differ by 0.1 from the sum of the figures in the corresponding columns due to rounding applied in the source.

Source: compiled by the authors using the data of The World Bank et al. (2023).

According to the IMF's baseline scenario, which assumes the end of the war in the first half of 2024, this year (2023) the change in Ukraine's real GDP will range from -3% to +1%, domestic demand will decline by 28.9%, net exports will decrease by 4.2%, and consumer inflation will reach 20.0% (Table 2).

Table 2

**Performance of key macroeconomic indicators in Ukraine, actuals for 2021 and IMF forecast for 2022-2027**

No.	Indicator	2021	2022	2023	2024	2025	2026	2027
1	Nominal GDP, UAH billion	5460	4900	6050	7365	8685	9700	10592
2	Real GDP, y/y change, %	3.4	-30.3	[-3 to +1]	3.2	6.5	5.0	4.0
3	Domestic demand, y/y change, %.	12.9	-28.9	1.2	4.7	5.4	4.5	3.1
4	Net exports, y/y change, %	-9.6	-1.4	-4.2	-1.5	1.1	0.5	0.9
5	Consumer prices, change compared to December of the previous year, %	10.0	26.6	20.0	12.5	8.0	6.0	5.0
6	Capital investments, % of GDP	13.8	16.8	18.7	21.8	23.2	24.3	25.0
7	Foreign direct investment	3.8	0.4	0.4	0.4	2.4	4.7	4.8

Source: IMF Communications Department. (2023, Mar 31). IMF Executive Board Approves US\$15.6 Billion under a New Extended Fund Facility (EFF) Arrangement for Ukraine as part of a US\$115 Billion Overall Support Package. Press Release No. 23/101. International Monetary Fund. <https://www.imf.org/en/News/Articles/2023/03/31/pr23101-ukraine-imf-executive-board-approves-usd-billion-new-eff-part-of-overall-support-package>

As shown in Table 2, the IMF forecasts that the relatively rapid recovery of the Ukrainian economy in 2024-2025 will slow down afterwards, in particular due to insufficient attraction of investment resources – the inflow of foreign direct investment to Ukraine will be suspended at the level of pre-war 2021 in the next three years.

**Humanitarian and educational sector.** Ukraine's education sector has been hit hard by the war and is likely to suffer from devastating long-term effects on the volume, quality, and trends in the country's human capital. Over the year of full-scale hostilities, as of February 24, 2023, at least 2772 educational institutions were partially damaged and 454 destroyed, which is about 10% of all educational institutions (at all levels of education) in Ukraine. According to a consolidated international assessment, as of the above date, the war has caused at least \$4.4 billion in damage to educational institutions across Ukraine, and the rebuilding and reconstruction of damaged educational institutions will require \$4.3 billion in the next three years and more than \$10.68 billion between 2023 and 2033 (The World Bank et al., 2023).

The human and material losses of Ukraine's educational sector caused by the war will have an extremely negative impact on the generation of its human capital. For example, the Harmonized Learning Outcomes (HLOs), calculated by the World Bank based on indicators of school closures and reduced effectiveness of online learning, could potentially drop from 481 points to 451 points for Ukraine. The long-term negative effect of war-related educational losses for the country could be very significant: the lost future labor income for each Ukrainian student will exceed 10% per year (Patrinos, 2022).

**Citizen welfare.** The World Bank estimates that as a result of the Russian invasion, more than 8 million Ukrainian citizens now live in poverty, reversing the country's poverty reduction gains made in the 15 years before the war (Bjerde, 2023). According to opinion polls, by the end of 2022, every third Ukrainian family displaced by hostilities or shelling, and about one in four among those not displaced, was practically starving (had insufficient food consumption). Under the influence of the war, the poverty rate in Ukraine increased from 5.5% to 24.1% in 2022 (taking into account the poverty line of \$6.85 per person per day) (European Neighbourhood Policy and Enlargement Negotiations, 2023). In the first year of the war alone, the loss of income of Ukrainian households exceeded \$61.5 billion. According to estimates, the highest levels of monetary poverty are currently observed in Odesa, Luhansk, Kherson, and Kharkiv regions (The World Bank et al., 2023).

Children suffer the most during the war. According to UNICEF, as of the beginning of 2023, more than 472,000 people in Ukraine were forced into poverty for the first time due to the war, and most of them (more than 400,000) were children. According to international humanitarian organizations, by the end of 2022, 3.4 million Ukrainian children were in need of urgent humanitarian assistance; schooling was interrupted for 5.7 million children; and mental health was at risk for almost 1.5 million children (UNICEF Ukraine, 2023).

**Public health.** According to WHO data, in the first year of the war, approximately 15 million people – slightly less than a third of the total population of Ukraine – suffered from poor mental health and needed assistance through enhanced recovery and psychosocial support programs (International Organization

for Migration, 2023). Professional estimates show that at least 40-50% of Ukrainians may need such assistance after the war is over (WHO Ukraine country office, 2023).

**Employment and the labor market.** According to ILO estimates, in 2022, due to the hostilities, the employment rate in Ukraine decreased by 15.5 percentage points, 2.4 million jobs were lost, or almost 14% of all jobs in the country since before the war. Today, the situation on Ukraine's labor market is extremely closely correlated with the continuation / termination of the war, so the forecasted change in employment rate for 2023 ranges from -5.8 percentage points to +6.8 percentage points, respectively (International Labour Organization, 2023).

The Ministry of Economy of Ukraine agrees with the estimate of the unemployment rate in 2022 at 30% (Ukrinform, 2023), while in pre-war 2021, the figure was 9.8%. At the same time, the IMF's forecasts are more optimistic: according to the baseline scenario, the unemployment rate in Ukraine in 2022 was 24.5% but it will not return to the pre-war period until 2025 (Table 3).

As shown in Table 3, the deep collapse in real wages of Ukrainians in 2022 (by 21.1%) will slow down in 2023 (to -2%), and in the next three years will be followed by a slight increase of 4% on average.

Table 3

**Trends in key employment indicators in Ukraine, 2021 actuals and IMF forecasts for 2022-2027**

No.	Indicator	2021	2022	2023	2024	2025	2026	2027
1	Nominal wages (average monthly), y/y change, %	20.8	-5.1	18.6	18.4	15.5	12.2	9.7
2	Real wages (average monthly), y/y change, %	10.5	-21.1	-2.0	2.5	5.0	5.0	4.0
3	Unemployment rate, % (ILO methodology)	9.8	24.5	20.9	11.9	9.7	9.2	8.7

Source: IMF Communications Department. (2023, Mar 31). IMF Executive Board Approves US\$15.6 Billion under a New Extended Fund Facility (EFF) Arrangement for Ukraine as part of a US\$115 Billion Overall Support Package. Press Release No. 23/101. International Monetary Fund. <https://www.imf.org/en/News/Articles/2023/03/31/pr23101-ukraine-imf-executive-board-approves-usd-billion-new-eff-part-of-overall-support-package>

Ukraine's employment sector has suffered tremendously under martial law, but after the war is over, the government will need to pay more attention to reverse the negative long-term trends. Such trends include deteriorating demographics, deepening imbalances and labor shortages in the national labor market, mismatch between labor supply and demand, increasing demographic burden, which generates significant risks of imbalance in national social and pension insurance systems, etc.

In our opinion, the fundamental principles and approaches of the national social policy of the postwar period should be closely correlated with the provisions of the European Pillar of Social Rights (2017), the Comprehensive and Integrated ILO Strategy to Reduce and Prevent Inequalities in the World of Work (2022) and the recent UNGA Resolution on Promoting the Social and Solidarity Economy for Sustainable Development (2023). In particular, given the extraordinary demographic challenges facing Ukraine, the government and other parties to the national social dialogue should make universal and adequate social protection of the population the cornerstone of social policy. Such protection calls for ensuring that every citizen has access to a system of comprehensive, affordable and sustainable social protection throughout his or her life (International Labour Organization, 2022).

### Macrofinancial dimension

One of the most important achievements of 2022 for Ukraine, which survived martial law and large-scale hostilities, was the preservation of macrofinancial stability, ensured by unprecedented credit and other support from international partners. This support and prudent government policy in the economic, financial, and banking sectors helped to avoid the worst effects of the deterioration in key macrofinancial indicators.

**State budget.** According to the Ministry of Finance of Ukraine, the state budget has been reoriented toward military needs, the security of the state's power bloc, and the most necessary social expenditures since the beginning of the war. In total, in 2022, the budget allocated UAH 1537.5 billion or 31.2% of GDP to financing the national security and the defense sector (Ministry of Finance of Ukraine, 2023), which is almost 6 times more than in the previous year. This area remains a priority among expenditure items in the 2023 state budget, with UAH 1141.1 billion or 18.2% of GDP allocated for national security and defense (Ministry of Finance of Ukraine, n.d.-a). The objective multi-fold increase in military spending accounts for the fact that in 2022 the state budget of Ukraine had the highest *deficit* in all the years of independence – UAH 914.9 billion, or 17.6% of GDP (the legislatively defined *state budget deficit* for 2023 is 20.6% of

GDP). Notably, the Budget Code of Ukraine stipulates that the planned threshold of 3% of GDP should not be exceeded, which is easily achievable in peacetime.

The Ministry of Finance also reported that the Ukrainian budget revenues in 2022 came mainly from financial assistance from foreign partners (official transfers from the EU, foreign partners, international organizations, and donor agencies) totaling UAH 481.1 billion, which accounted for 26.9% of total state budget revenues for the year (Ministry of Finance of Ukraine, 2023).

Overall, in 2022, Ukraine received more than \$32 billion in external financial aid (for various institutional recipients). In addition, military assistance from Western partners to Ukraine as of mid-January 2023 was estimated at \$65.4 billion, or 46.5% of 2022 GDP (Bohdan, 2023).

**Public debt.** According to the NBU, Ukraine's gross external debt grew by \$2.3 billion in war-torn 2022 and amounted to \$132.0 billion at the end of the period. In specific terms, the country's gross external debt reached 89.0% of GDP in 2022, compared to 64.6% of GDP in pre-war 2021 (National Bank of Ukraine, 2023b).

Responding to the military shocks and making significant efforts to maintain macro-financial and macroeconomic stability, Ukraine's government has significantly increased its obligations to both external and internal creditors. In 2022, the total amount of public and publicly guaranteed debt of Ukraine increased from UAH 2671.8 billion to UAH 4071.7 billion (Ministry of Finance of Ukraine, n.d.-b), that is from 48.9% to 78.4% of GDP.

**Foreign loans.** The NBU's 2022 report highlights a significant increase (by \$14.1 billion or by more than a quarter) in the external liabilities of the national public administration sector to \$65.3 billion (44.0% of GDP). This is due to net borrowing from the IMF (\$2.3 billion) and other international partners (\$14.7 billion) (National Bank of Ukraine, 2023b).

As mentioned above, in March 2023, the IMF approved a new Extended Fund Facility (EFF) program for Ukraine worth \$15.6 billion for 2023-2027, which is part of a \$115 billion international financial package for the same period. According to the IMF Special Mission, the joint efforts of the Government and the National Bank of Ukraine made it possible to achieve all quantitative and qualitative targets set by the end of December 2022, as well as to fulfill all five of the established structural benchmarks. The latter include submitting a set of tax bills to the Parliament aimed at increasing revenues; the Ministry of Finance taking measures to eliminate budget arrears; developing a conceptual document on reforming the national social security system; establishing a supervisory board of Naftogaz of Ukraine and agreeing on key elements of the banking sector diagnostics (IMF Communications Department, 2023).

According to IMF estimates, in 2023 Ukraine has a total financial deficit of \$42 billion, which will be covered by loans and grants from the EU, the US and

other donors, as well as resources from the International Monetary Fund (International Monetary Fund, n.d.). The main financial contribution will be provided by the Multi-agency Donor Coordination Platform for Ukraine, launched in January 2023 with the participation of representatives of the G7 countries, the EU, the IMF, the World Bank, the European Investment Bank, the European Bank for Reconstruction and Development, etc. In early April of the same year, at a meeting of the Platform's governing committee, the Ukrainian government confirmed that it had covered the budget deficit for 2023 in the amount of \$39.9 billion using loans from the IMF and other donors, as well as the EU's Macro-Financial Assistance Plus package of 18 billion euros (European Commission, 2023).

Such an approach demonstrates that the international community is clearly committed to providing financial and other support to Ukraine to effectively counter Russian aggression, preserve social stability and ensure the reconstructive recovery of the Ukrainian economy and social sphere after the war. At the same time, the rationale of long-term sustainable social development requires consideration of the risks of excessive external credit dependence, building the pillars of national competitiveness in the postwar period on the basis of economic sovereignty and endogenization of macroeconomic growth. South Korea and some Balkan countries, in particular, have successful experience with this approach.

### **Social risks on the path of Ukraine's post-war recovery**

The institutional approach and the results of the above analysis (in the demographic, socio-economic and macro-financial dimensions) of the social consequences caused by the Russian invasion of Ukraine allow us to identify relevant socially significant risks on the way to its post-war recovery (Table 4).

The European Union's experience in developing forecasting and analytical tools such as the vulnerability matrix (Directorate-General for Economic and Financial Affairs, 2022) should be adapted to Ukraine's circumstances and used in shaping public policy in order to properly address the long-term social risks listed in Table 4. Since the outbreak of the war in Ukraine, this tool has become one of the main guidelines for national governments in the EU to develop policies aimed at overcoming dependence on Russian energy resources and countering economic counter-sanctions. This matrix takes into account the EU's geographical proximity and important trade ties with the parties to the Russian-Ukrainian war, which affects the European economy more than other major economies.



Table 4

**Long-term social risks caused by the Russian invasion of Ukraine**

No	Dimension	Risks	State policy for risk prevention
1	Demographic	<ul style="list-style-type: none"> <li>• accelerated demographic decline, entrenchment of the global status of a «country with ultra-high population decline»</li> <li>• the devastating nature of irreversible losses of human, intellectual and social capital</li> <li>• prolonged violation of labor security as a result of irreversible / critical losses of labor potential</li> <li>• increased structural deformations of the national labor market, rising unemployment and precarization</li> <li>• permanent reduction in real incomes, living standards and quality of life, increasing poverty and marginalization of the population</li> </ul>	demographic policy, social policy, employment policy, education policy, health policy, migration policy
2	Socio-economic	<ul style="list-style-type: none"> <li>• degradation of the economic capacity of the state due to large-scale destruction, losses and damages caused by the shocks of war</li> <li>• accelerated deindustrialization, entrenchment of the model of an agrarian-resource state with a minimum of high value-added industries</li> <li>• entrenchment of the resource-based export model of foreign trade (with a limited list of commodities)</li> <li>• exacerbated technological lag, inhibition of investment and innovation processes, inability to create own digital and other metaverse technologies</li> <li>• significant weakening / partial loss of competitiveness of the national economy</li> <li>• deepening socio-economic divergence with the EU countries, slow down in full integration into the EU</li> </ul>	macroeconomic policy, sectoral policy, industrial policy, foreign trade policy, innovation and technology policy, digitalization policy

No	Dimension	Risks	State policy for risk prevention
3	Macrofinancial	<ul style="list-style-type: none"> <li>extremely high level of external credit dependence</li> <li>inability to maintain domestic macro-financial stability at the expense of domestic resources</li> <li>prolonged period of stagflation, uncontrollable inflationary dynamics</li> </ul>	macro-financial policy, debt policy, monetary policy, socio-economic policy
4	Institutional	<ul style="list-style-type: none"> <li>stronger destructive institutions (corruption, shadowing, criminalization, etc.)</li> <li>decline in institutional trust in society</li> <li>hampering the social cohesion and consolidation of citizens</li> <li>increased institutional anomie associated with the dysfunction of social institutions and loss of institutional capacity of some state institutions</li> </ul>	institutional policy, legal policy, socio-economic policy

The European Commission determined the extent of the war's impact on three areas – energy, foreign trade and finance – for each member state and the EU-27 as a whole, calculated 13 vulnerability indicators and ranked them by a composite indicator – their unweighted average. As a result, the European Commission has built a conditional rating that gives an idea of the vulnerability of the EU economies in the context of Russian military aggression and therefore helps to develop a more effective EU policy on sanctions and anti-crisis management.

## Conclusions

In summary, we can state that the *societal approach* to analyzing the consequences of hybrid warfare is distinctive in that it identifies the forms of reflexive interaction between changes in social reality caused by hybrid warfare and changes in their cognition, deconstruction of existing and construction of new social norms and realities.

The hybrid war in Ukraine is the local manifestation of global tensions between major world players in the struggle for world order, which is transforming

both social reality and its actors in real time. Given that this is best reflected by the societal approach, launch of *societal research in global and local dimensions* appears to be a necessary condition for improving the manageability of socio-economic development.

As a result of the war, Ukraine continues to experience significant structural, demographic, socio-economic, institutional and other *societal changes that have a decisive impact on the present and future of Ukrainian society*. They should be properly considered (with due scientific justification) in the process of developing public policy.

The *practical value* of the research results lies in the determined quantitative characteristics of the societal consequences of the Russian-Ukrainian war, presented in the demographic, socio-economic and macro-financial dimensions.

Societal consequences in the *demographic dimension* may mean that the long-standing trends of accelerated depopulation, large-scale (labor) migration of Ukrainians abroad, and de facto cessation of basic reproduction of the population in general and the workforce in particular, will be exacerbated by the war. In turn, this could lead to significant losses of human and social capital, as well as labor capacity of Ukraine and, as a result, to a critical reduction in the internal resources for Ukraine's long-term socio-economic development.

*The socio-economic dimension* of the societal consequences of the war shows that it has had a profound shock effect on the socio-economic situation in Ukraine. According to the consolidated assessment of the UN, the World Bank Group, the European Commission and the Government of Ukraine, the first year of the full-scale military conflict had enormous negative consequences for the macroeconomic, social and environmental sectors in Ukraine. Overcoming these consequences and further rebuilding on the principle of «building back better» will require significant investment funds and efforts, given that the estimated total need for reconstruction and recovery funds for 2023-2026 is \$128 billion, and for 2023-2033 – almost \$411 billion.

One of the ways to enhance social cohesion and unite the state on its path to recovery after the war is to optimize Ukraine's social policy on the basis of human-centered social vector of development, social justice and inclusion. The fundamental principles and approaches of the national social policy post-war should closely correlate with the provisions of the European Pillar of Social Rights (2017), the Comprehensive and Integrated ILO Strategy to Reduce and Prevent Inequalities in the World of Work (2022) and the UNGA Resolution on Promoting the Social and Solidarity Economy for Sustainable Development (2023).

The macrofinancial assessment of the societal consequences of the war suggests that one of the most important achievements of 2022 for Ukraine, which withstood large-scale hostilities, was preservation of macrofinancial stability, en-

sured by unprecedented credit and other support from international partners. This year, Ukraine's total financial deficit of \$42 billion will be covered by the funds from the IMF, loans and grants from the EU, the US and other donors. This clearly demonstrates the international community's willingness to provide further support to Ukraine to effectively counter Russian aggression.

The negative societal consequences of the Russian invasion potentially pose a number of long-term societal (socially significant) risks to Ukraine's post-war recovery. Prevention of these risks should therefore become one of the priorities of state strategy and policy development, and requires the adaptation of relevant modern EU approaches.

Further research on the topic should focus on (i) conducting a comprehensive assessment of societal changes by measuring interrelated changes in social reality and the activities of social actors in the public space formed as a result of the Russian-Ukrainian war, (ii) exploring the emergence of a new world order and the increasing uncertainty and dynamism of social transformations, and (iii) developing appropriate public policy measures for the reconstructive recovery of the socio-economic system of Ukraine after the war.

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