The Impacts of War in Ukraine on Economic Management and Global Trade Dynamics

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Abstract: The political and historical context in which the Russia-Ukraine War is taking place is complex, among the major implications are economic consequences. This essay considers the impact of politics and history on the dynamics of economics—trade, inflation, and energy markets. The war's effects on the expenses to EU nations aiding Ukraine should be taken into account, namely in the form of higher spending and financial strains. Through historical analysis and projection, it projects these nations' economic paths, highlighting the urgent need for strategies that can help them become robust and stable over the long term.

Key words: Trade, Budget, Risks, Management, Cyber Security

JEL classification: F51, E31, H56

1. Introduction

The war in Ukraine has severely damaged the EU economy by means of increased prices, rising inflation and supply chain instabilities. The EU imposed sanctions against Russia, decreased dependence on the energy supplies that come from Russia and helped Ukraine with more than 88 billion euro. (*The European Council on the day Russia's war began*) They seek to improve autonomy and reduce vulnerability.

Major challenges include still food, security and recovery, along with CPI (consumer price index) evolving neck and neck with geo-political conditions.

2. International Impact

Both nations claim Kyivan Rus' as a shared heritage, but Ukraine's identity was shaped by foreign domination. After its 1991 independence, Ukraine began seeking closer relations with the EU and NATO, significantly raising tensions following the annexation of Crimea in 2014. The 2022 invasion was devastating not only from an economic point of view.

Important sectors, including agriculture, were destroyed. Emergency measures have been taken, including currency controls and international aid. Reconstruction costs, which will surpass $400 billion (*Russian Invasion of Ukraine Could Have Lasting Impacts On Global Economy, Environment | College of Natural Resources News*), require global financial support.

Military help to Ukraine exceeds $100 billion from all around the globe, straining budgets amid inflation. The ones that benefit from this are the defense industries, but public finances might face some pressure from the rising energy costs.

Europe's shift from Russian energy increased demand for liquified natural gas, driving global prices up. Emerging economies struggled to secure resources, deepening inequality.

All of the supporting nations face inflation and higher living costs due to energy and food price surges. Increased defense spending expanded U.S. and EU production, which created jobs and fostering technological advances.

The Russia-Ukraine war has had significant impacts on management across various sectors. In Poland, as of October 2024, 56.6% of manufacturing companies reported minor negative effects, while 5.1% of transportation and storage companies faced threats to their stability. Globally, the war has led to an increased focus on business continuity and resiliency (29% of companies), as well as a rise in cyber attacks (22%). Many foreign companies have responded by withdrawing from Russia (543 companies) or suspending operations (505 companies). In Southeast Asia, the war's primary impact has been increased energy and food prices, causing economic hardship (68.4% of respondents in 2024). This has forced managers to adapt to new economic realities and supply chain challenges. The conflict has also affected workforce dynamics, with some sectors in Poland experiencing both outflows and inflows of Ukrainian workers. Overall, managers have had to navigate complex challenges resulting from the war.

The early forecasts of the effect of the war in Ukraine on the world economy are as follows: world GDP growth, which is already projected at between 3.1-3.7% in 2022 and it is expected to go lower by 0.7-1.3%; trade growth is halved-between 2.4-3.0% and sometimes expected levels as low as 0.5% in gloomy scenarios. As became obvious, however, the trade and production actually showed better resilience than had previously been anticipated. Thus, the heights of GDP growth were revised by showing a 3.4% increase along with a 3.5% increase in merchandise trade by 2022. (Figure 1) Consumption, eased bottlenecks in supply chains, lowered shipping costs, and commodities accounted for this. In value, global cross-border merchandise trade amounted to USD 2.5 trillion, growing 4% compared to the previous year, indicating steady activities for the second quarter of 2022. Mirror estimates of exports show Ukraine's total exports fell by 30% between March and November 2022 compared to 2021, while Russia's increased by 15.6%, largely driven by

primary goods like fuels and cereals. However, high prices suggest Russia's export volumes might have slightly declined. These trends highlight the flexibility of firms and the multilateral trading system's resilience amid disruption.

Figure 1. World merchandise trade volume in 2022
Source: www.wto.org

3. Local Impact

Figure 2. Euro evolution in Ukraine – 5 years analysis
Source: Google Finance

As Ukraine continues to endure the economic and social impacts of Russia's full-scale invasion, the euro (EUR) has shown a significant upward trajectory against the Ukrainian hryvnia (UAH). Analyzing the euro-hryvnia exchange rate over the past five years reveals key moments of economic stress and stabilization influenced by the war, central bank policy, and broader global dynamics.

Pre-War Stability (2019 – Early 2022):

Prior to the outbreak of war, the EUR/UAH exchange rate displayed relative stability, fluctuating between 29 and 33 UAH per euro. This period was characterized by moderate macroeconomic fluctuations, a managed floating exchange rate, and growing international reserves. Ukraine's economy, while vulnerable, showed signs of gradual strengthening.

The Impact of War (Early 2022):

A significant turning point is visible on the chart in early 2022—coinciding with Russia's full-scale invasion of Ukraine in February of that year. The euro initially experienced a sharp dip, followed almost immediately by a rapid increase, surging to around 36–37 UAH.This sharp rise reflects a combination of factors:

- Market panic and capital outflows
- A sudden weakening of the hryvnia

- Government-imposed currency controls and suspension of the free-floating exchange rate
- Surge in demand for foreign currency amid uncertainty

This period marked a crucial test for Ukraine's financial system, with the National Bank of Ukraine (NBU) stepping in to stabilize the currency through interventions and restrictions.

Continued Volatility and Gradual Climb (2022 – 2025):

In the years following the invasion, the euro continued to gain value against the hryvnia, albeit more gradually. Fluctuations in 2023 and 2024 correspond to shifting war dynamics, international aid inflows, and global economic conditions.

By May 2025, the euro reached 46.03 UAH, reflecting an overall increase of 61.53% over the 5-year period. This appreciation underscores the lasting impact of the conflict on Ukraine's currency and economy. Contributing factors include:

- Ongoing military spending and economic disruption
- Inflationary pressures
- Foreign debt servicing and reliance on international support
- A relatively stronger euro in global markets

Ukraine's economy contracted by more than 30% in 2022 (*IMF*), affected by war conditions that were ongoing in the country. Slowly, recovery sets in, and GDP has grown by 3.9 % year-on-year during the first eight months of 2024 (*Ukrainian Ministry of Economy*). Reports ascribe this gradual recovery to electricity access, higher business confidence, and improved consumer confidence (*World Bank*).

The war with Russia has affected Ukraine's management, which has revolutionized its core before and during the war. Before the war Ukraine was rated a "defective democracy," scoring 6.8 out of 10 in 2022 in the Bertelsmann Transformation Index (BTI) from a political transformation point of view. The war has wreaked widespread destruction with reconstruction needs, estimated at $411 billion (over the period 2023-2033 - *World Bank*). The sectors that will need the most recovery include transport ($92 billion), housing ($69 billion) and energy ($47 billion) (*World Bank, IMF*). Ukraine's political management has been advancing since the beginning of the war, its BTI score in 2024 climbed to 7.05. (Figure 2) This indicates improved governance, in spite of the continuing war (*BTI 2024*).

Figure 3. Ukraine Transformation Index in 2024
Source: Bertelsmann Stiftung Transformation Index website

The war has had devastating humanitarian consequences, with the United Nations verifying civilian deaths of 12,162 people as of February 2024.

It created shortages of medicines in Ukraine and damaged healthcare facilities, with oncology patients particularly affected (*Ukraine Health Organization*). Ukraine has received massive military assistance from Western states, and international help has been critical, though less than was hoped for.

The agriculture sector has undergone great indirect losses. Here, indirect losses are expected to exceed $83 billion at the end of 2025 (*World Bank*). These indirect losses have resulted because of reduced harvests, interrupted exports, increased production costs, and measures to rejuvenate agricultural land. The harvest of cereals and oilseeds is expected to decrease from the entire harvest of 107 million metric tons in 2021 to some 77 million metric tons in 2024 (*FAO*).

Of this total, 2.5% of arable land is reported unusable due to landmines, which would amount to a loss every year in GDP of more than $11 billion, approximately 5.6% of the national wealth of Ukraine as of 2021 (*IMF, UNDP*). The cost of safe demining of Ukraine is estimated at $34.6 billion (*UNDP*).

The government of Ukraine is making all the efforts needed to transform the economy from the consumption of raw materials to the production of value-added goods. For instance, it is introducing grants, loans, and industrial parks to encourage the resettlement of small and medium-sized enterprises, including those that have been relocated to relatively

safer areas. However, the economy is still 78 percent of pre-war size with an estimated reconstruction cost of $486 billion (*Ukrainian Ministry of Economy, World Bank*).

Beginning on January 1, 2025, Ukraine will massively increase the prices for domestic consumers of gas four times to cover revenues lost as a result of the suspension of Russian gas transit after the expiration of the transit agreement with Russia. The new tariff stands at about 502 hryvnias per 1,000 cubic meters, which was formerly 124 hryvnias (*Ukrainian Gas System Operator*).

The response of foreign companies in Russia as well as investors is not a favorable one, many companies suspended their activity or completely stopped all of their operations. (Figure 4) This leads to the loss of foreign investors by Russia, affecting the supply chain (*OECD)*.

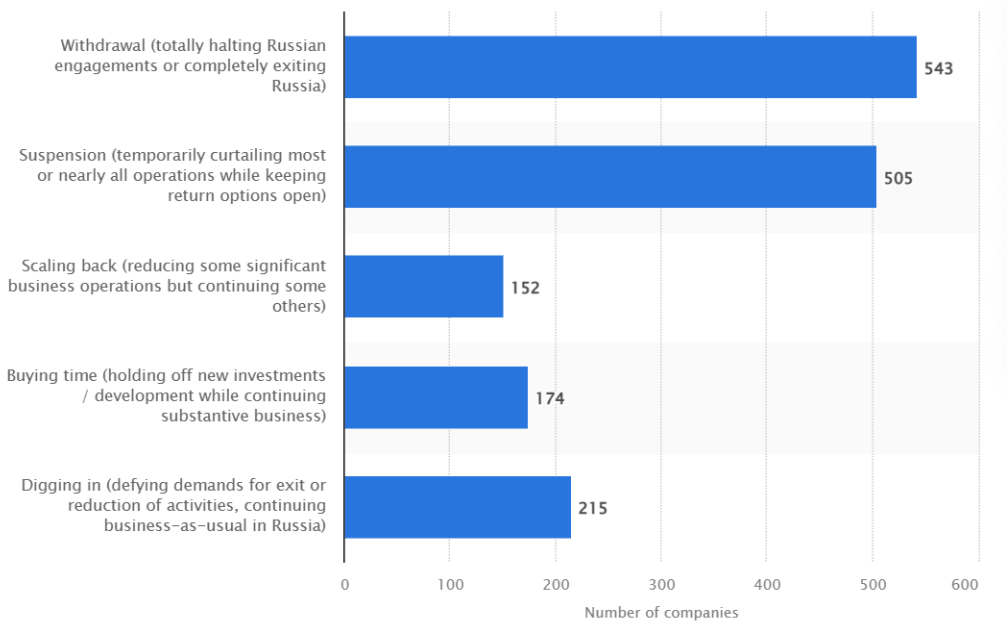

Figure 4. Number of foreign companies in Russia by response to the war in Ukraine, 2024
Source: Statista website

4. AI implications

In a thought-provoking TED Talk, Alexandr Wang emphasizes the critical importance of a nation's ability to swiftly adapt to new technologies. He argues that the landscape of warfare has dramatically evolved, with modern threats now including indestructible facial recognition drones, sophisticated cyberattacks, and large-scale data breaches. Drawing a historical parallel, Wang points out that during the Second World War, the countries that emerged victorious were those most capable of quickly adopting and implementing technological innovations.

Today, this lesson is more relevant than ever. China has surged ahead in artificial intelligence (AI) development, positioning itself as a global leader in technological capabilities. This progress highlights the strategic need for countries to not only access cutting-edge tools but also foster deep collaborations with technology firms, cybersecurity experts, and specialized IT professionals. Simply relying on publicly available information or open-source intelligence is no longer sufficient to ensure national security in the digital age.

A contemporary example of technology's transformative role in warfare can be seen in the ongoing conflict between Russia and Ukraine. Despite a significant imbalance in military investments and resources, Ukraine has managed to mount a formidable defense by leveraging modern technologies and strategic management.

Before the war, Russia's annual military budget was approximately $65 billion, dwarfing Ukraine's $6 billion. Russia also had a considerable advantage in terms of manpower and equipment, fielding an estimated 900,000 troops and 1,300 aircraft, compared to Ukraine's 200,000 soldiers and 130 aircraft.

Yet, Ukraine's resilience on the battlefield is largely attributed to its adoption of advanced military technologies. These include drones, AI-powered targeting systems, and Javelin anti-tank missiles. These smart systems not only enhance battlefield effectiveness but also aid in damage assessment, real-time data analysis, and predictive modeling—empowering commanders with crucial information for making swift, informed decisions.

Moreover, strategic military management has proven to be a decisive factor. Ukraine's defense strategy benefits from skilled leaders who are adept at integrating technology with tactical operations, reinforcing the idea that intelligent leadership is as vital as advanced weaponry.

5. Conclusions

Despite the devastating impact on Ukraine's domestic economy, the global economic system—particularly trade and production networks—demonstrated unexpected resilience. Early predictions of severe global economic downturns were somewhat mitigated by flexibility in supply chains, eased bottlenecks, and strong commodity markets. However, these adaptations came at the cost of increased global inequality, as energy and food price surges disproportionately affected emerging economies. This underscores the urgent need for diversified, sustainable supply chains and resource equity in future global crises.

One of the most striking insights from the conflict is that Ukraine's ability to leverage cutting-edge military technology and strategic management offset Russia's numerical superiority in defense spending, troops, and equipment. AI, drones, and targeted defense systems not only improved military efficiency but reshaped the principles of modern warfare. This highlights a transformative shift: in 21st-century conflicts, technological agility and data-driven command may prove more decisive than raw military scale.

The EU's rapid decoupling from Russian energy dependence marks a critical shift toward energy autonomy and geopolitical independence. However, this strategic move also sparked inflationary pressures, energy shortages, and new fiscal burdens—especially in military spending and aid. While it fostered technological innovation and job creation, it simultaneously strained public finances and widened inequalities. Europe must now balance its long-term sovereignty goals with short-term socio-economic vulnerabilities.

Across sectors and regions, the war has become a case study in crisis management and organizational adaptation. Companies worldwide have strengthened their focus on business continuity, cybersecurity, and workforce flexibility. Meanwhile, Ukraine itself underwent a governance transformation under wartime stress, improving political management and policy responsiveness, as indicated by its rising Transformation Index. This suggests that extreme external shocks can catalyze institutional innovation and structural reform—if supported by targeted international aid and internal resilience.

With reconstruction costs projected to exceed $486 billion, Ukraine's recovery will demand an unprecedented global effort. Beyond immediate physical rebuilding, Ukraine must regenerate its economy, de-mine contaminated land, and pivot from raw material extraction to value-added production. This recovery will serve as a litmus test for the international community's commitment to equitable development, sustainable finance, and post-conflict rehabilitation. It also invites the question: how can global governance frameworks better support nations emerging from complex hybrid wars?

Alexandr Wang's insights frame the war in Ukraine as a clear validation of the strategic centrality of AI and cybersecurity in modern geopolitics. As China advances rapidly in AI, and Ukraine demonstrates the practical utility of intelligent defense systems, it becomes evident that national survival and sovereignty will increasingly depend on technological foresight, digital infrastructure, and cyber capacity—not just conventional arms. Future conflicts may be won not on the battlefield, but in server rooms and decision-making algorithms.

Research methodology

The article was made with the help of materials found on the internet, in books, Ted talks and annual reports from WTO.

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