The Impact of Russia – Ukraine War on Global Economy

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Abstract:
The invasion of Ukraine by Russia contributed to a notable rise in global prices of food and crude oil petroleum. The surge in the global food price index following the invasion was fueled by supply chain disruptions.. In general, the incursion resulted in a continuous increase in inflation in both belligerent and non-belligerent nations. The following study shows how economic sanctions and regional conflict lead to an international energy crisis. Despite mediating countries like Turkey, it had a disastrous impact not only on geopolitical stability but also on economic development within and outside of Europe. The study used to assess the impact of Russia's invasion of Ukraine on global trade and business. This paper investigates the global economic growth and consequences of the Russia-Ukraine war over a four month period from December 2021 to March 2022. Russia invaded Ukraine on the 24th of February 2022.

Keywords: Supply chain disruption, inflation, energy crisis, Geopolitical stability, global business, economic growth, economic sanctions

Introduction:
After months of threatening military manoeuvres and negotiations in bad faith, on 24 February 2022, Russia launched an all-out assault on Ukraine. European leaders and the European Parliament have condemned this unprovoked and unjustified military aggression in the strongest possible terms, as it grossly violates international law and undermines European and global security. Ukraine applied for EU membership on 28 February, and Moldova followed with its own application on 3 March. The European Council granted candidate country status to both countries on 23 June 2022. During the first month of fighting, Ukrainians repelled many Russian attacks, conducted counter-offensives and liberated some areas, most significantly around the capital Kyiv. On 2 March, the UN General Assembly (UNGA) adopted a resolution reaffirming Ukraine's sovereignty and territorial integrity with a broad majority. The Cities throughout Ukraine have been partially destroyed by the conflict, and thousands of civilians have been killed and injured. Over 5.2 million refugees, primarily women and children, have reportedly fled to neighbouring countries, according to the UNHCR. Furthermore, even though 5.5 million internally displaced individuals have already returned to their homes, the International Organization for Migration believes that more than 6.2 million people have been internally displaced as of June 23. Resolutions passed by the European Parliament have brought attention to the plight of women and children escaping the conflict. In order to really harm the Russian economy, the EU and its allies, both inside and outside of NATO, have enacted harsh sanctions. Russia's war in Ukraine has disrupted the supply of natural gas for many European countries, triggering an energy crisis and affecting energy security. We simulate the medium-term effects of these trade disruptions and find that most European countries have limited GDP

losses but those more dependent on Russian natural gas face moderate losses. European fossil fuel consumption and emissions are reduced and after accounting for the war impacts, achieving Europe's emission targets becomes slightly less costly. In terms of energy security, the war eliminates European energy dependency from Russian imports, but most of the natural gas and oil imports will be substituted by other suppliers. The trade disruptions triggered by the Russian invasion of Ukraine are expected to generate modest economic losses for European countries in the medium term. In particular, the Russian shutoff of gas exports to the EU resulted in very high energy prices during 2022 and 2023, and significant economic losses for the European countries that are most dependent on Russian natural gas imports.

Impact of Russia –Ukraine War on Global supply chain disruption

The war disrupted global supply chains through export and import bans, restrictions on commercial flights, and increased security checks at refugee camps. This led to scarcity and increased the price of imported goods. Today geopolitics becomes the major challenge for supply chains. During last three years majority of logistics challenges were connected to military conflicts and political instability, including the war in Ukraine. The war created different challenges: blockade of Ukrainian seaports, shortage of freight transport, including trucks and railcars, shortage of car drivers, fuel deficit, overstocked warehouses, increased lead times, increased logistic costs, energy supply disruptions. In general, Ukrainian companies adapted to war conditions. They redirected cargo to ports of other countries and diversify supply routes. They restructured fuel supply systems and increased use of road transport. Danube ports rose trans-shipment of cargo.

The blockade of Ukrainian seaports, the lack of trucks and railcars for freight transportation, he scarcity of drivers for automobiles, the gasoline crisis, overstocked warehouses, longer lead times, higher logistic al expenses, and interruptions in the electricity supply are only a few of the difficulties brought on by the war.Ukrainian businesses generally adjusted to the conditions of the war.

They diversified supply routes and rerouted goods to ports in other nations.

They expanded the use of road transportation and reorganized petroleum delivery networks.

Danube ports increased freight transshipment.

Ukrainian supply chain managers keep a close eye on emerging opportunities in the freight industry and take advantage of every tiny chance to convey cargo in whatever manner they can.

For Ukrainian businesses, implementing European regulations to expedite processes and integrate into E U supply networks is a top goal.

Impact on Energy crisis

The war led to a global energy crisis, with energy prices rising sharply. This was due to a number of factors, including Russia's refusal to allow foreign cargoes to pass through its waterways and airspace. At least when compared to the proportion of overall energy imports to domestic energy consumption, the EU countries' transition from less gas to more renewable power could also improve their energy security.

Since the EU will continue to import large amounts of natural gas, but the primary suppliers will be Norway, the US, Qatar, and Algeria rather than Russia, natural gas prices are not anticipated to rise significantly in the medium future. Additionally, we discover that the GDP effects of building a new pipeline between China and Russia will be negligible for both nations. Russia's natural gas exports will still fall by about 75% of their pre-war levels, and the increased trade volumes are insignificant enough for China to have a significant macroeconomic impact. However, the new connection between the two nations would boost natural gas production. China's production of power and falling electricity costs result in a negligible rise in energy use and greenhouse gas emissions. In general, from the countries in our model, Italy, Germany, and the Rest EU region are the most affected by Russia's war in Ukraine, with the largest GDP losses and higher natural gas consumer prices changes. This is a result of their initial high dependency on Russian natural gas imports and their relatively large share of electricity generation using natural gas. However, other European countries can be more severely affected by the war, in particular Central and Eastern European countries that also depend heavily on Russian energy imports, such as Austria, Czechia, Slovakia, Hungary and Bulgaria. In our model these countries are aggregated in the Rest of EU region, which also includes countries that are not expected to be as affected by the war, and hence, the average effect for the region is not as large as it will be for these specific countries.

The direct and indirect impact of the war on inflation and Cost-of-living crisis

The high energy prices led to record inflation figures in October 2022. This was due to businesses and households struggling to pay their energy bills, which in turn drove up the price of food and other goods. Since Russia was a major energy supplier during the invasion, all European countries have seen significant increases in energy and food prices. The price of food has also increased both directly due to the fact that Russia and Ukraine are major producers of agricultural products and indirectly because energy is a crucial input for the production and transportation of food. Energy and food inflation has further increased other prices, at least through input-output structures (energy and food are inputs to the production of many goods and services), automatic indexations of many goods and services. The energy and food shocks are frequently perceived as "supply shocks," which would seem to call for a significant drop in aggregate demand to balance supply and demand, it's crucial to keep in mind that rising energy and food prices also result in a sharp decline in household purchasing power; in such a situation, raising policy interest rates may not be warranted. The conflict has hit food security around the world**.** Before the war, Ukraine and Russia were together the world's largest exporter of wheat – responsible for over a third (36%) of wheat exports. They also exported more than half of the world's sunflower oil. It happened when communities all over the world were trying to get back to "business as usual" following the two exhausting years of the pandemic. In an attempt to satisfy the renewed demand for goods and services, businesses had to deal with disorganized supply chains and began charging their clients more for manufacturing. The Food and electricity, two essential necessities, were severely squeezed by Russia's invasion on Ukraine. Sanctions against Russia and decreased productivity from both nations were the causes of this. Costs continued to rise, leading to inflation rates that significantly exceed pay increases. The global cost of living issue has raised the risk of famine and negatively impacted people's health and well-being, particularly for the poorest people.

Impact on Stock market and Global Business

Firms with strong ties to Russia experienced a substantial fall in share prices. It is obvious that both consumers and multinational corporations have been impacted by the conflict. Stock market data shows that companies with close connections to Russia, either through ownership or trade, had a significant decline in share values after the invasion. The trade ties with Russia resulted in an average 1.53% decline in the value of each nation's overall stock market index. The average reliance of businesses on Russia prior to the war was 0.25%. This implied, for instance, that a company producing $1 billion would have $2.5 million in total exports and imports to and from Russia. High trade exposure to Russia caused a median loss of 0.47 percentage points, while the average loss for all countries was 0.8 percentage points. The median loss for companies with a Russian affiliate was 0.52 percentage points, while the average loss was 0.73 percentage points. Operating through both routes, the losses are significant. The extent of total losses is significantly influenced by geography. Europe bears the brunt of losses: East European nations are among the most impacted by trade ties, while West European nations are most impacted by ownership ties. European equity markets were among the worst-hit by the Russia-Ukraine war, given Europe's proximity, but were also the quickest to recover. The war accelerated the divide between countries, sectors and factors. The Global equity markets experienced a shaky year since the Russian invasion. The conflict had some stark economic and investment repercussions such as the exodus of some big multinational companies from Russia and the exclusion of Russian companies.

Impact on Economic growth and Development

The global economy is estimated to have contracted by 0.17 percent in 2022. Russia's economy is projected to decline by 0.7 percent in 2022 and by 1.21 percent in 2023. Ukraine's economy sustained severe losses, shrinking by more than 30% in 2022, according to early national estimates. Following the conflict's conclusion, extensive and costly restoration work will be required. Throughout this time, the international community has consistently supported Ukraine. According to the most recent data from the Russian Federal State Statistics Service, the Russian economy contracted by 2.1% in 2022, significantly less than the initial estimates of 10 to 15%. This was because export earnings remained strong despite the war and various sanctions. The picture for the Russian economy in the near future is still unclear, though. In 2022, the year of the Russian invasion, Ukraine's GDP contracted by 29.1%. In 2022, steel production in Ukraine dropped by 71% due to Russian destruction or occupation of key steel plants; exports fell 35% in 2022 compared to the previous year. Russia is still dealing with an extraordinary number of economic penalties two years after its full-scale invasion of Ukraine. Approximately €260 billion (£222 billion) of its central bank assets have been frozen, and it has been shut out of major international financial services. Most Western aircraft are prohibited from entering Russian airspace, and Russian ships are prohibited from entering western ports. A formal cap has been placed on the purchase or processing of Russian oil sold for more than US$60 per barrel (current global prices range from $80 to $100). Additionally, it is theoretically against the law to sell Russia anything that the military might employ. Sanctions have had a certain impact. The IMF estimates that Russia's GDP is about 7% less than what was predicted before the war. Sanctions have had a certain impact. The IMF estimates that Russia's GDP is about 7% less than what was predicted before the war. Russia's economy has not collapsed in spite of all of this. However, it appears to have changed significantly and is now solely focused on the protracted conflict in Ukraine, which is really propelling economic expansion. The IMF really predicts that Russia's GDP would expand by 2.6% this year. Compared to the UK (0.6%) and the EU (0.9%), there is a substantial increase. In a similar vein, Russia's budget deficit, or the amount the government must borrow, is expected to stay below 1% of GDP, whereas the UK's is 5.1% and the EU's is 2.8%.

Impact of Russia –Ukraine War on GDP Growth

Major economies including the US, UK, EU, and China experienced GDP falls between 0.5 % and 3 %. According to World Bank estimates, rebuilding Ukraine would cost roughly $349 billion, which is more than the country's pre-invasion GDP and three times the total amount of financial, humanitarian, and military aid committed to Ukraine since the war began. It is also undoubtedly much higher now. Exports of oil and gas were Russia's primary economic interaction with the West. These exports are unlikely to be restored to pre-invasion levels. Still, Russia remains the world's largest exporter of wheat and forestry products, and a source of strategic resources such as nickel, cobalt, and platinum. Regardless of the outcome of the war, Western companies will remain reluctant to return to Russia, or invest in it in the future. The risks are simply too high. The main economic exchange between Russia and the West was the export of gas and oil. It is improbable that these exports will return to their pre-invasion levels. In addition to being a supplier of vital resources like nickel, cobalt, and platinum, Russia continues to be the world's top exporter of wheat and forestry goods. Western businesses will continue to be hesitant to invest in or return to Russia, regardless of the war's conclusion. The dangers are just too great. Immediately after Russia's invasion of Ukraine in February 2022, economic activity contracted by 4.4 % (see Figure 1) and the country was close to a financial crisis as households queued to withdraw cash from banks. The ruble lost more than 40% of its external value in a matter of few days. A swift interest rate hike to 20% and the introduction of capital controls stabilised the situation in the financial markets, and the overall economy started to recover. Recovery was boosted by increase in public spending, first in construction and later in military procurement. Housing construction also benefited from large subsidies. Immediately after Russia's invasion of Ukraine in February 2022, economic activity contracted by 4.4 % (see Figure 1) and the country was close to a financial crisis as households queued to withdraw cash from banks. The ruble lost more than 40% of its external value in a matter of few days. A swift interest rate hike to 20% and the introduction of capital controls stabilised the situation in the financial markets, and the overall economy started to recover. Recovery was boosted by increase in public spending, first in construction and later in military procurement. Housing construction also benefited from large subsidies. While higher public spending has underpinned much of the growth in recorded GDP, Russia's federal government deficits have remained relatively small, at approximately 2% of GDP in 2022 and 2023. Revenues from, for example, oil taxes have remained high despite the oil embargo and the oil price cap imposed on Russian oil countries by coalition of countries against Russia's war on Ukraine.

In short, available data show that the Russian economy is progressively becoming militarised. Economic activity is dominated by increased government spending and supported by high revenues from energy exports. The structure of the economy has changed as more and more resources have been poured into waging the war. Some sectors and some regions have been winners in Russia's new war-oriented economy. This is especially true for some of Russia's poorest regions, where the war has offered many people upward social mobility that was not available in the preceding decades of Russia's reintegration into global economy. At the same time, the economy is approximately at full capacity so that further increases in military production will likely to be met with high inflation or further decreases of the civilian economy. Moreover, uneven growth across sectors and regions due to exploding military spending creates distortions not only for the current economy but also for future dynamics.

Economic sanctions and Global Impact:

Russia has been under sanctions since 2014 when Russia illegally annexed Crimea and sent its troops to the Donbas. Full-scale invasion triggered many rounds of sanctions from the EU countries, the US, the UK and many other allies. In a surprise move, Western countries froze the international assets of the Bank of Russia that were invested in their jurisdictions on 24 February 2022. The frozen assets were worth some $300 billion. On 21 May 2024, the EU decided to use the proceeds (around €3 billion) from these frozen funds to support Ukraine.

Economic sanctions constrained the Russian government in its ability to wage war, but the implementation and design of sanctions blunted their effectiveness. For example, restrictions were incomplete and phased in gradually. Some Russian banks continue to have access to SWIFT, a bank messaging system. Europe's deadline for stopping import of Russian oil was in December 2022 rather than February 2022 and the oil price cap neutralised some of the effects of the EU embargo, which originally included an embargo on the provision of services for Russian seaborn oil. These deficiencies gave the Russian government ample space to find workarounds and exploit loopholes. For instance, as no decision had been made to stop trade with Russia and Europe remained dependent on Russian energy, it was necessary to leave certain channels for cross-border transactions open. Gazprombank, one of Russia's largest banks, and Raiffeisen Bank, a large Austrian bank, are exempted from sanctions. Not surprisingly, the Russian financial system has been able to adapt.

However, a macroeconomic environment supportive to Russia for an extended period, authorities' preparations in recent years and their policy response, as well as support for Russia from countries outside of the sanctions coalition.

At the same time, Russia's ability to finance the war critically depends on energy exports and thus remains vulnerable to future sanctions. Furthermore, the Russian economy continues to rely heavily on Western technology, a potential choke point. Finally, secondary sanctions can significantly tighten the screw and therefore inhibit Russia's economic and military capabilities.

Conclusion:

The global economic consequence of the invasion was a global supply chain disruption. This manifested through rising prices including rising energy prices and commodity prices and a rise in food prices, thereby leading to a rise in global inflation. The empirical results in the paper showed that Russia's invasion of Ukraine led to a significant increase in the world price of food and crude oil. The rise in the world food price index after the invasion was driven by a significant increase in the price of dairy and oils. Stock prices plunged on the invasion date. The rise in inflation in Russia and Ukraine after the invasion was followed by a rise in inflation in countries that imposed severe sanctions on Russia, and in countries that were not involved in the conflict in any way. Overall, the invasion had spillover effects on combatant and non-combatant countries. Imposing sanctions to force Russia to withdraw its military operations in Ukraine was a necessary action. But the sanctions did not have isolated economic effects on the sanctioned country. Rather, it affected other countries through economic spillovers, reflected in the price in world food price. The Russia-Ukraine invasion has shown that sanctions against a warring country is not an optimal solution because it produces spillover effects to other countries who are not part of the conflict, especially when the warring countries are trade partners of other countries who are not involved in the war.

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