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Hegemonic Sanctions and Global Economic Ramifications in the Context of the Russian-Ukrainian Conflict: A Commentary

George Saridakis[a], Constantinos Alexiou[b], Roger Hosein[c], Nirvana Satnarine-Singh[c]

[a] *Kent Business School, University of Kent, UK*
Email: G.Saridakis@kent.ac.uk
[b] *School of Management, Cranfield University, UK*
Email: constantinos.alexiou@cranfield.ac.uk
[c] *Department of Economics, The University of the West Indies, Trinidad and Tobago*
Email: roger.hosein@sta.uwi.edu & nirvana.satnarinesingh@my.uwi.edu

Abstract

The outbreak of the Russian-Ukrainian military conflict has sent chills down the spines of policy makers around the world. In this paper we offer an account of the unfolding military intervention in Ukraine and its concomitant global economic ramifications. By assessing the events that have led up to an apparently inevitable showdown, through the lens of hegemonic order theory, we provide tentative, yet comprehensive, insights into Russia's military incursion. We further discuss the potential impact of the military conflict on international trade and the prices of energy, food, and metals. Whilst the analysis suggests that the efficacy of the economic sanctions will depend on a variety of factors, it is envisaged that the United States (US) is likely to be an important resource player that will, to a certain extent, side-line Russia's gas exports to Europe. Also, countries that primarily trade with Russia and which have refrained from imposing sanctions (e.g., Turkey and China) may benefit from increased trade with the rest of the world. In contrast, many energy- and food-dependent European economies are expected to face increased inflationary pressures in view of the depressed global economic environment and the ongoing supply-side disruption.

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1. Introduction

As the COVID-19 pandemic appears to be dissipating and the major capitalist economies are staggering out of the woods, the world has been startled by yet another crisis, this time military in nature. The Russian-Ukrainian conflict broke out on February 24th, 2022, with unfathomable ramifications for international trade, inflation, and economic growth. The seriousness of this conflict has been described by Kristalina Georgieva, the Managing

Director of the International Monetary Fund (IMF), as '*a powerful earthquake that will have ripple effects throughout the global economy, especially in poor countries.*'

This is by no means the only geopolitical[1] military action (McCormack and Gilbert, 2022) that European soil has witnessed since the Second World War. In 1974, Turkey[2] (a NATO member[3]) invaded Cyprus, displacing one quarter of the country's population, whilst in 1999 NATO initiated a bombing campaign against the former Yugoslavia. Other countries such as for example, Afghanistan, Grenada, Iraq, Libya, Panama, Palestine, Somalia, Syria, Yemen, Vietnam, have also experienced intensifying spells of geopolitical conflicts which are manifested as proxy wars. In this context, it can be argued that the contradiction of capitalism is evident in the struggle for additional sources of profit among capitalists in an economic environment that is blatantly depressed (Alexiou, 2022).

The unfolding military intervention by Russia in Ukraine is multifaceted, resulting mainly from the several years of tension between the two countries, which insidiously escalated from multiple layers of issues that accumulated over these years. Some examples of relevant events that may have contributed to the invasion (see also Mearsheimer, 2014; Chengyi, 2017; Johannesson and Clowes, 2022) include *inter alia* NATO's failure to abide by the reassurances given by James Baker to Mikhail Gorbachev in 1990 related to its Eastern expansion, which may be perceived as threatening or weakening Russian's future position in world's affairs (e.g., economically, politically, militarily)[4]; the political shift and Crimean crisis in 2014[5]; the unfulfillment of various items included in the Minsk agreements; the military modernization and empowerment of Ukraine's armed forces since the Crimean crisis (see also the 2021 US-Ukraine military cooperation statement); the 2021 diplomatic incident between Russia and United Kingdom (UK); and most recently Russia's 'recognition' of the independence of two separatist regions (Donetsk and Luhansk). The conflict also coincides with the completion of the Nord Stream 2 pipeline which could have doubled the energy capacity in the European region, thereby strengthening the economic relationship between Europe and Russia.

The Russian-Ukrainian conflict is already causing unprecedented disruption to global supply chains and demand-side channels, leading to fuel shortages, and pushing the global economy into spiralling inflation. Further, the conflict has triggered a refugee crisis and there are allegations of breaches of international humanitarian and human rights laws. Celasun et al. (2022, p.13), in a study measuring the relative contributions of supply and demand to rising inflation in 2021, stated that '*close to half of that upward swing (in inflation) came from the change in the supply shock component, which had mostly exerted downward pressure on manufactured-goods prices in the pre-pandemic years. The share attributable to supply shocks varies across individual countries; it is estimated at about half for the euro area, 60 percent for Germany and 45–50 percent in the United States and the United Kingdom, and about 40 percent for France and Italy.*'

[1] A full discussion of other potential causes are not discussed here as they are beyond the scope of this article and are best left to economic historians, political scientists, and international relations experts.

[2] Turkey has occupied about 37% of Cyprus since then, which keeps the Cyprus issue alive and on the agenda. Also, in 2021, the Turkish minister of Foreign Affairs Mr. Mevlüt Çavuşoğlu stated that '*Turkey's position on the issue of the Aegean has not changed'*. This statement was made in relation to the 1995 declaration, implying that if Greece were to extend its territorial waters to 12 nautical miles (as it is within its rights to do), this would instigate a *casus belli* (a cause for war).

[3] See www.nato.int for more details on the mission of the North Atlantic Treaty Organization.

[4] Although this goes beyond the scope of this paper, Machiavellian tactics may be used to explain both dishonesty between parties and the use of military force.

[5] Prior to this, the Kharkiv Pact determined Russian-Ukraine relations in terms of a lease on naval facilities in Crimea.

To a certain extent, supply-side bottlenecks might have slowed down economic activity, hence raising inflation. We are of the view, however, that the underlying cause of the supply-side turbulence should also be sought in the realms of the Marxian tradition that relates productive investment with dwindling profitability (see Marx, 1990 translated edition of Marx 1867). In particular, profitability, which is the ultimate driver of productive investment and growth in capitalist economies, has dropped dramatically to near historic lows, leading to decreased levels of industrial output, international trade, investment expenditure, and real GDP growth (see for instance, Alexiou and Trachanas, 2020; Alexiou, et al., 2016). As such, capitalist economies were plagued with anaemic economic growth well before the onset of the COVID-19 pandemic, and obviously long before the military conflict between Russia and Ukraine.

The reaction of the Western capitalist world to Russia's military invasion of Ukraine will therefore be critical to its economic survival. In particular, the response to the conflict by members of the European Union (EU) and NATO was a swift imposition of crippling sanctions on Russia.[6] These include, *inter alia*, a freeze on work on the Nord Stream 2 pipeline project, an array of restrictions on transactions undertaken with the Russian Central bank, bans on SWIFT (Society for Worldwide Interbank Financial Telecommunication) transactions[7], bans on the operations of Russian broadcasters and the sales of broadcasting equipment to several Russian television stations, a cessation of sales of some services, bans on the import of Russian gold, denial of entry to Russian airlines and ships[8], sanctions on individuals, and a termination of the operations of several Russian financial institutions and large state-owned companies within some member countries. The countries that have implemented some or all of these sanctions have also banned exports to and imports from Russia, with the EU proposing a possible phasing-out of Russian oil imports. While this phalanx of sanctions is intended to weaken the Russian economy in relation to its energy revenues and international trade, the potential economic spill-over effects that will be felt by other countries (especially European countries) are likely to be substantial (UNCTAD, 2022). Moreover, economic uncertainty in the commodity markets, given the likely length of the sanctions and the adjustment of the Russian economy to such economic pressures, is also expected to persist.

Allegedly, this conflict has caught the global community by surprise. The true culprit for this incursion, however, should be sought in history that goes back over 1000 years, when both countries emerged from the medieval kingdom known as Kyivan Rus. While it may be intriguing to consider the intertemporal economic and capitalist roots of this war, or to scrutinise the historical aspects of the inherently turbulent relationship between Russia and Ukraine, in this paper we take a different stance by assessing the unfolding military intervention in Ukraine in terms of its concomitant economic global ramifications.

As such, we briefly touch on main aspects of the two economies, before we move on to expounding on the potential parallels between hegemonic theories and the events that led to what was, it now transpires, an inevitable showdown between NATO and Russia. We further expose the key arguments on the effectiveness of imposing sanctions encountered in the

[6] Along with several other responses to support Ukraine, such as offers of humanitarian aid and residency rights to its citizens fleeing the war, hefty military support has also been offered. This has been criticised by various commentators and analysts as being unlikely to contribute towards a diplomatic solution. This paper will not go into detail on these aspects and arguments, focusing instead on economic aspects of the international response, such as the sanctions imposed.

[7] On May 4th 2022, the European Commission removed Sberbank (Russia's largest bank), the Credit Bank of Moscow and the Russian Agricultural Bank from the SWIFT system.

[8] Russian airlines were also forbidden from selling their prime landing slots at the UK airports.

literature, before we discuss the possible effects of the military conflict on international trade, energy, food prices, and rare earth metals. Finally, some concluding remarks wrap up the study.

2. Economic sanctions and their impact

2.1. A brief sketch of the Russian and Ukrainian economies

Currently, there are more than nine million[9] Ukrainians fleeing the war and seeking admission into neighbouring countries, hence adding to the millions of refugees who have already been displaced from Syria. By 11th July 2022, according to the United Nations (UN), more than eleven thousand civilian casualties had been recorded, and these are of course in addition to the combatants' injuries and loss of life. It should be stressed that even before the Russian-Ukrainian conflict, the demographic deficit in the Eastern Europe was on the rise, with the Eastern European population shrinking at a prodigious rate since the collapse of the Soviet Union in the early 1990s. The main reason for the *en masse* emigration from the Eastern part of Europe to the West and into the EU was predominantly the poor economic performance of their economies and the envisaged prosperous life in the West.

In 2021, Russia had a population of 145.9mn and Ukraine a population of 43.5mn[10]. In terms of economic size, based on 2020 nominal GDP data, Russia is a large economy, the 11th largest in the world, while Ukraine is the 55th largest. In 2020, the World Bank calculated Russia's GDP as US$1,488.3bn, compared to Ukraine's US$156.6bn. In other words, the GDP of Russia is nearly ten times that of Ukraine. Socio-economic inequality is also relatively high in Russia (see World Bank data on the Gini Index) with an estimated Gini Index of 36.0 compared to Ukraine's Gini index of 25.6 (both in 2020). World Bank data also shows that Ukrainian exports in 2020 stood at US$60.8bn; this equates to 16% of Russia's for the same year. In 2020, Ukraine imported US$63.2bn in goods and services, whereas the Russian economy imported goods and services to the value of US$304.1bn in the same year. Both countries are rich in natural resources. In 2020 Russia's natural resource rents (% of GDP) stood at 10.99% while Ukraine's were 5.14%. The two economies are also relatively corrupt compared with other European and Central Asian countries. The Corruption Perception Index in 2021 gives both low rankings (suggesting higher corruption), with Russia ranking 136th and Ukraine ranking 122nd out of 180 economies, therefore a lack of transparency might act as a possible breeding ground for conflict (Finel and Lord, 1999).

Expenditure by Russia on its military sector was equal to almost 40% of Ukraine's total GDP in 2020. Ukraine's military expenditure as a % of its GDP increased considerably since 2013 (from about 1.6% in 2013 to 4.1% in 2020) whereas Russia's military expenditure as a % of its GDP remained close to its mean value (4.3%). Compared to Ukraine, Russia is essentially an economic giant, but relative to the US and to the EU as a whole, Russia is a small economy, with a nominal GDP that is around 7% of the US's GDP and 10% of the EU's GDP. Also, its military spending is about 8% and 26% of the US's and EU's military spending, respectively. However, Russia is one of the five recognized nuclear-weapon states (as well as a permanent member of the UN Security Council) along with China, France (EU

[9] This is according to the United Nations' estimates as at 26th July 2022. Budgetary support has been granted to Moldova (one of Europe's poorest countries according to the World Bank) by Germany, so it can host Ukrainian refugees. According to the UN, as at 26th July 2022, Moldova hosted the 4th largest number of Ukrainian refugees. Russia, Poland and Slovakia were the top three host countries for Ukrainian refugees.

[10] These population statistics are based on United Nations data on each economy. For Ukraine, this population data is inclusive of Crimea. See: https://data.un.org/en/index.html.

member), the United Kingdom (ex-EU member), and the United States. Russia has the highest number of nuclear warheads followed by US (6,257 and 5,550 in 2021, respectively)[11]; the nuclear warheads owned by France, United Kingdom, and United States together make up 97% of the warheads owned by Russia (see ACA, 2022). While Russia's economy could not sustain a generalised escalation of the conflict with NATO/EU member countries[12], these countries are deterred from using military intervention to cease the conflict because of the fear of turning a conventional war into a nuclear war[13]. NATO and the EU member countries are however providing military aid to Ukraine, and on 23rd June 2022, the European Council added to this support by granting the country EU candidate status, therefore initiating the process for possibly gaining membership in the future.

2.2. Pertinent considerations

Despite the differences of opinion on the causes of the Ukraine war, few will disagree that this unprecedented military encounter has ushered in a new era of more intense hegemonic rivalries and regional conflicts. The major question that must therefore be addressed in relation to the Russian-Ukrainian conflict is what attitude the international system will take towards this historic evolution of hegemonic rivalries. In strategic analysis, a key theme that has been at the forefront of the debate for more than three decades now, revolves around the way a conflict of hegemonic powers will develop in the Post-Cold War era. While for the last three decades the US has been the dominant power in the international arena, two visible trends can now be readily identified: the emergence of China, and the evolution of formal or informal alliances; these have historically been fluid, changeable, and interchangeable within the international system of hegemonic powers (Siverson and Starr, 1994).

What is unravelling before our eyes is an explicit and inevitable struggle for power, position, and role. In this context, we need to consider the development of a novel multipolar system that not only consists of many hegemonic players (Mariotti, 2022) some of whom, such as China, India[14] and Pakistan,[15] are new, but also of large regional powers such as Iran and Turkey. The Russian-Ukrainian conflict suggests that the power redistribution that emerged after the collapse of the Soviet Union led neither a stable new equilibrium nor to a formally or informally agreed *modus vivendi*. In other words, this conflict has acted as a lagged accelerator of the redistribution of position, roles, power, and interests that emerged in the Post-Cold War era. What the conflict in Ukraine has already shown is that the mindset of the hegemonic states is oriented towards more intense conflicts that take place in different regions, for reasons of national security if not survival, and which are devoid of rational imperative.

There is no shadow of doubt that since the collapse of Soviet Union, Russia has turned into an oligarchic[16] capitalist state adhering to the market rules of capitalism, with labour

[11] Including retired warheads, military strategic and strategic deployed warheads.

[12] On 18th May 2022, Sweden and Finland formally submitted their application to join NATO, hence adding to the already high percentage (i.e., 70%), of the EU members that are part of NATO. The potential economic/political ramifications of such a development are not explored as they fall outside the scope of this paper.

[13] Despite this, there is still a possibility of the war escalating. Peterson and Drury (2011 p.580) noted that '*militarized interstate dispute initiation is more likely when the potential targets of conflict is sanctioned by third party states, particularly when the sanctioning is a large democracy.'*

[14] Russia in conjunction with China, India, Brazil and South Africa (BRICS) have, over past years, emerged as important global economic players.

[15] India and Pakistan (both UN members), although possessing nuclear weapons, are among the states that have not signed the treaty on the Non-Proliferation of Nuclear Weapons (NPT).

[16] According to Varoufakis (2022) President Vladimir Putin has more control over the Russian oligarchs than the American government has over its billionaires, (which is the western term for oligarchs). The US Supreme

exploitation being its dominant element. The successive Russian administrations that followed the post-Soviet chaotic disintegration have managed to create a state network that unifies the fragmented ruling class through coercion, whilst at the same time balancing the interests of others. This prevalent system, whilst being capable of securing the passive consent of an electoral majority, has nevertheless failed to establish a proper institutional framework that promotes active consent.

Russia's ability to impose pressure on subaltern states from a hegemonic stance may be reflected by its recent superimpositions. In particular, based on the concept of 'war without war' and 'occupation without occupation' (Dunn and Bobick, 2014) Russia annexed Crimea (Dabrowsk, 2014), reduced Ukraine's gas transit fees via its Nord Stream 2 pipeline, and assumed responsibility for protecting the citizens of the most recent separatist states. Further, the controversial Nord Stream gas pipeline was expected to increase Europe's reliance on Russia, thereby increasing its dominance in the Euro area (Goldthau, 2016).

A potentially far-fetched theoretical explanation for Russia's evolving military actions might be found in the writings of Gramsci's theory of hegemony, according to which the dominant groups maintain their position through a mix of coercion that emanates from sheer force as well as from the consent through hegemony in civil society. For him, hegemony is a state where the exploiter finds happiness in exploitation. In this context, the use of coercion reflects what he calls 'political society' meaning '*the armed forces, police, law courts and prisons, together with all the administrative departments concerning taxation finance, trade, industry, social security, etc*.' (Simon, 1990, p.71). In the context of the state's domination framework, the '*apparatus of state coercive power' enforces 'discipline on those groups who do not "consent"'* (Gramsci, 2003, p.12).

In challenging hegemony, Gramsci suggested that a 'war of maneuver' and a 'war of position' assume an instrumental role, as these can be effectively understood as points on a continuum spectrum rather than mutually exclusive. Strategically, a 'war of maneuver' embodies the coercive apparatus of the state. The implementation and success of this strategy is contingent upon the nature of the state's hegemony, i.e., its position within civil society.

Gramsci's analysis of 'war of maneuver' and 'war of position' is almost invariably associated with the geographic distinction between the Eastern and Western world. In the East, the state imposed its will without hindrance as the civil society emerged from its old primordial and rigid constructs; in the West, the relationship between the state and civil society was more pronounced and any inconsistencies were readily exposed. As Gramsci remarked, *'The State was just a forward trench; behind it stood a succession of sturdy fortresses and emplacements'* (Gramsci, 2007, p.169).

In passing, it should be stressed that providing a theoretical link that distinguishes state hegemony from international Western hegemony is an onerous task. As such, we tentatively argue that in the context of Gramsci's theory of hegemony (see Bates, 1975; Egan, 2013), Russia's invasion of Ukraine might reflect - at international level and to a certain extent - not only a 'war of maneuver' via open conflict but also a 'war of position' as a means of using propaganda to establish a counter hegemonic movement, by which it can promote its view on the hegemonic order.

Finally, for many western governments and regional pundits, Russia's invasion of Ukraine is an attempt to simply restore the Old Russian Empire on the pretext that NATO has been

Court's 2010 decision allowed corporations to blatantly donate to politicians, hence allowing America's richest 0.01% to account for 40% of all campaign contributions.

expanding uncontrollably to the East, hence threatening stability in the region[17]. This type of analysis somewhat skates over NATO's indirect hegemonic intentions. These have been evident for some time now; not only has NATO been training Ukrainian soldiers for more than two decades, it has apparently also, according to the New York Times[18], been providing real time intelligence in this conflict, as well as supplying military aid and weapons to Ukraine[19]. Also, of importance here is the well documented involvement of US diplomats and the US secret service in toppling the elected Ukrainian president in 2014, who was temporarily replaced by Olexander Turchynov.[20]

Irrespective of the sequence of the events that led up to this conflict, the bottom line is that the explosive environment that has been created threatens not only Ukraine but also, given its economic prowess, the global economy, especially in relation to energy and food resources (Gregory, 2021; Wilson, 2017). It is this we are going to discuss in the next section.

2.3. The economic impact of sanctions

Before unravelling the potential economic impact of sanctions, we briefly explore the key arguments about the effectiveness of imposing sanctions, as explained in the existing literature. Undoubtedly, economic sanctions have always been used as a coercive implement but arguably never, until today, to the extent that they dominate foreign policy. According to Peksen (2019), ever since the demise of the Soviet Union, economic sanctions have been used extensively by the United States, European Union, United Nations, and more recently China, to achieve a wide range of foreign policy objectives. The question of how effective the imposition of economic sanctions is has motivated different stands of the literature to seek answers to a) why countries impose economic sanctions (e.g., Hoffmann, 1967; Wallensteen, 1968; Barber, 1979; Daoudi and Dajani, 1983; Lindsay, 1986) and b) whether economic sanctions work (e.g., Galtung, 1967; Nincic and Wallensteen, 1983; Doxey, 1987; Nossal, 1989).

Providing an answer as to why countries impose sanctions is far from straight forward. Galtung (1967, p. 409) noted that sanctions are imposed, '*to punish the receivers by depriving them of some value and/or to make the receivers comply with certain norms*.' Barber (1979) provided a more comprehensive argument, stating that the decision to impose sanctions can be driven by several different policy objectives. These may be associated with policy targets related to the international status of the sanctioning countries and they are intertwined with the structure and operation of the international system. A different approach was taken by Lindsay (1986) who offered a broader perspective that relates to foreign policy objectives, including compliance, subversion, deterrence, domestic symbolism, and international symbolism. According to Alexander (2009), the use of sanctions has evolved over time; they were primarily aimed at influencing foreign policy and achieving national

[17] Palley (2022, p.1) noted '*the inconsistency between the US's self-proclaimed Monroe doctrine and US rejection of Russia's opposition to eastward expansion of NATO. The Monroe doctrine asserts the US has a right to preclude any foreign military presence in the entire Western hemisphere – and not just on US borders.*'

[18] For more on this, see NY Times publication titled 'U.S. Intelligence Is Helping Ukraine Kill Russian Generals, Officials Say', https://www.nytimes.com/2022/05/04/us/politics/russia-generals-killed-ukraine.html.

[19] According to Lijian (2022), NATO should have been disbanded after the collapse of the Soviet Union. The US has led NATO in pursuing five rounds of eastward expansion, making it the leading instigator of the Ukraine crisis. NATO's membership has increased from 16 to 30 countries and the organization has moved over 1000 kilometres eastward, approaching Russia's borders and pushing it to the wall.

[20] Turchynov was the leader of an ultra-nationalist political party. He was considered to be the right-hand man of Yulia Tymoshenko, the former prime minister imprisoned by President Viktor Yanukovych. Yanukovych unleashed an attack on Russian speaking Ukrainians in the Donbass region, sparking a civil war that lasted 8 years before it culminated in the Russian-Ukrainian conflict.

security objectives but eventually came to be directed at counteracting domestic economic and political tensions.

In gauging the effectiveness of sanctions, we should note Pape's (1997) suggestion that the simple imposition of sanctions appears to work less than 10% of the time, although other commentators favour thresholds that are arguably more reasonable (Elliott, 1998; Baldwin, 1985, 1998; Hufbauer et al., 2007). In this context, sanctions are considered effective even when capitulation is less than total; that is, sanctions could still be considered effective, or at least more effective than ineffective, when they partially achieve the target or even when a negotiated settlement is achieved (see Hufbauer et al., 2007). With respect to the ongoing conflict, Mardones (2022) has found that if Russia is isolated from international trade, its output will suffer a fall that is greater than that experienced by the world's other countries, implying some effectiveness of the current sanctions.

Therefore, in the context of the Ukrainian conflict, it is envisaged that economic coercion is fairly likely to achieve the intended policy objectives by NATO and its allies by inflicting major damage on the Russian economy. As naïve as the argument might appear, this theoretical standpoint posits that the economic hardship inflicted by sanctions will undermine the legitimacy of the Russian leadership, which would subsequently succumb to external pressure. In the following sub-sections, we assess the impact of the conflict on global trade patterns, energy markets, and food prices.

2.3.1. What might be the effect on global trade?

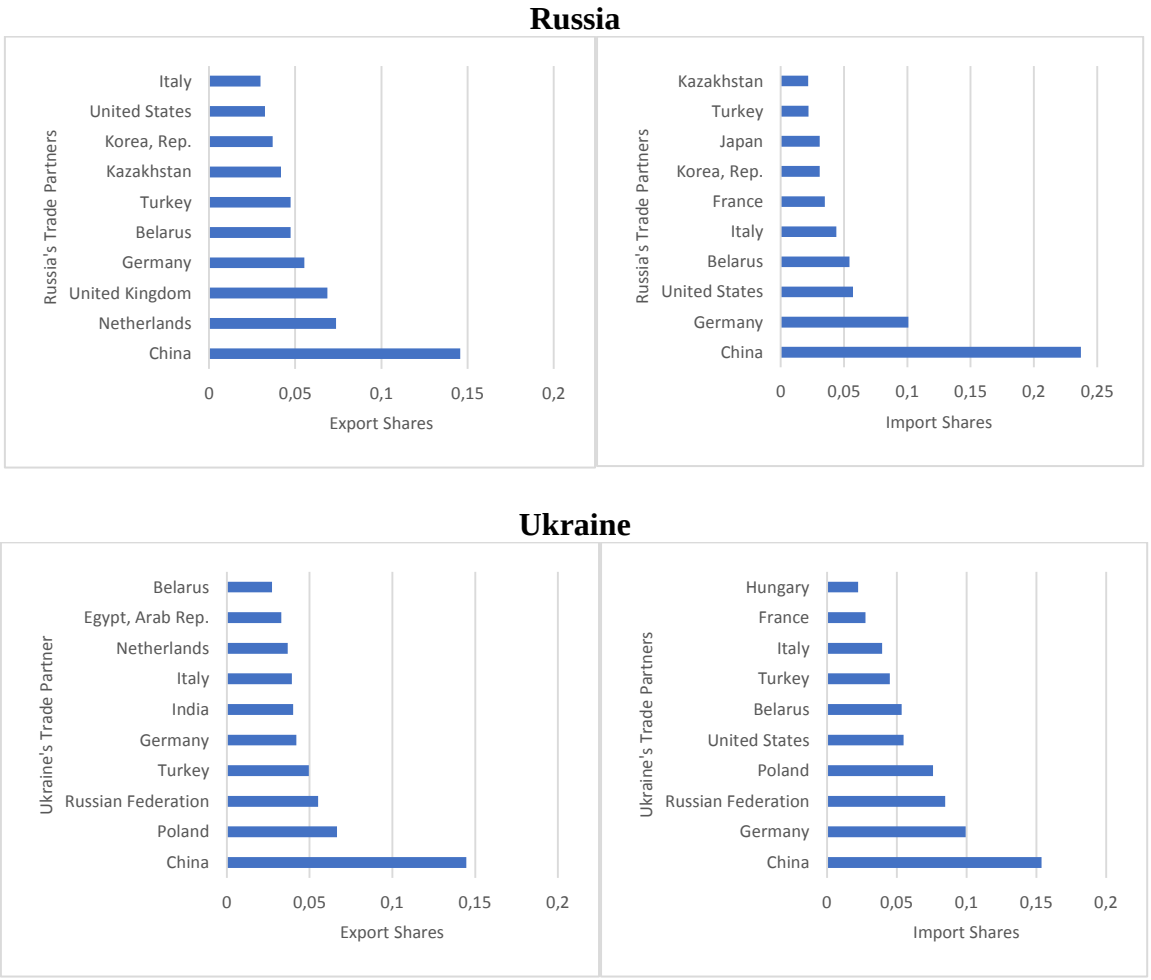
The Russian invasion of Ukraine may have significant implications for global trade, as the sanctions placed on imports from Russia by European[21] and North American economies may cause further global shortages and hence, price increases in various commodity groups. Furthermore, Russia's retaliation[22] by imposing a ban on some of its exports will further reduce trade and complicate the supply dynamics of many products. Ukraine's decision to prohibit exports of food staples[23] as a means of sustaining its population during the war period (see Lang and McKee, 2022) will further intensify the effects of the war on international trade and food security (FAO, 2022a). The effects of sanctions on global trade have been studied from an empirical viewpoint, with many studies offering differing viewpoints on the effects of sanctions and countersanctions in the context of the Russian-Ukraine crisis of 2014 (Bulatova and Abelguzin, 2015). Using a general equilibrium model, Dong and Li (2018) concluded that the European economies' sanctions on Russia were likely to have a more intense impact on Russia, and that Russia's retaliation was expected to negatively affect Europe more than it affects the US. Similarly, in monetary terms, Crozet and Hinz (2020) investigated the effect of sanctions on international trade between Russia and other countries. The study concluded that Russia lost US $54 billion in exports from the start of sanctions in 2014 to the end of 2015. Western countries that imposed sanctions were estimated to lose approximately US $42 billion in exports to Russia, with over 90% of this accruing to the EU countries.

As shown in Figure 1, Russia and Ukraine's decisions to ban the exports of some commodities will affect not only the countries that have imposed sanctions, they will also affect some of their main trade partners, including China and Turkey which absorb around 15% and 5% respectively of the exports of both Russia and Ukraine. Given the interconnectedness of these countries to the rest of the world, these decisions are expected to

[21] Inclusive of the UK.
[22] Russia banned exports of more than 200 commodities on 10th March, 2022.
[23] This was done on 9th March, 2022.

have ripple effects, thereby affecting global trade patterns. On the list of the top ten export destinations for both countries are a number of European countries including Netherlands, UK, Germany, Italy, and Poland. Both countries are also markets for Europe's exports, especially from Germany, Italy, France, and Poland.

Figure 1. Russia's and Ukraine's Top 10 Trade Partners in 2020.



Source: UN Commodity Trade database.
Note: The shares were calculated as Russia's and Ukraine's exports or imports to the partner countries divided by both countries' respective total exports or imports (that is, total trade to/from all trade partners) for the year 2020.

Given Europe's reliance on Russia, we investigate further the strategic dependence of each country on Russia[24]. In particular, we present the strategic dependence of 28 European economies[25] on Russia. The concept of strategic dependence implies that each European country and Russia are in some way mutually interdependent, such that they rely on Russia as

[24] This approach was executed by Rogers et al. (2020) in an assessment of strategic dependence on China, under the conditions that 30% of world's exports of a commodity originated from China, the partner country is a net importer of a commodity and 50% of the partner country's imports were sourced from China.
[25] These include Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, UK, Greece, Croatia, Hungary, Ireland, Italy, Lithuania, Luxembourg, Latvia, Malta, Netherlands, Portugal, Poland, Romania, Slovak Republic, Slovenia, and Sweden. Apart from the UK, these are all members of the EU. Note that UK left the EU on 31st January 2020.

a major source of one or more commodities, while Russia relies on them as a source of wealth or revenue. Data on commodity trade, using HS 4-digit[26] (sectoral trade) classification, was used to test the dependence of these countries on each commodity exported by Russia in 2020.

A country was shown to be strategically dependent on a commodity exported by Russia (denoted as commodity '*k*'), if all of the following three conditions were fulfilled[27]:

- More than 40% of commodity '*k*' (using HS 4-digit classification) was imported from Russia by the European country: $(\left(\frac{Imp_{i,k,rus}}{Imp_{i,k,world}}\right) * 100) > 40$.
- The country should be considered a net importer of the commodity '*k*', such that they import more than they export: $Imp_{i,k,world} > Exp_{i,k,world}$.
- The percentage of Russia's export of the commodity in world exports should be more than 15%. That is, $(\left(\frac{Exp_{r,k,world}}{Exp_{world,k,world}}\right) * 100) > 15$.

Where *Imp* represents imports, *Exp* represents exports, subscript *k* represents the sector or commodity, subscript *i* represents the European country and subscript *rus* represents Russia.

Several European countries are shown to be dependent on Russian exports in sixteen HS 4 sectors (see Table A1) [28]. Out of these sixteen, the number of sectors in which each European economy is deemed as being strategically dependent is presented in Table 1. Estonia is shown to be most reliant on Russia's exports, with 6 sectors meeting all three conditions presented above. It is followed by Czech Republic (5 sectors), Lithuania (5 sectors), Poland (5 sectors), Belgium (4 sectors), Italy (3 sectors), Latvia (3 sectors), Finland (3 sectors), Sweden (3 sectors), Slovak Republic (3 sectors), Hungary (3 sectors), Germany (2 sectors), Bulgaria (2 sectors) Spain (2 sectors), Malta (2 sectors), and Croatia (2 sectors). From the sample, there were four countries that were, given the above conditions, not dependent on Russia: France, UK, Ireland, and Luxembourg. The former Soviet states that were included in the dataset (Estonia, Latvia, and Lithuania) were shown to be more strategically dependent (relative to most other European economies) on Russia's exports, especially in relation to HS 2701 (coal; briquettes, ovoids and similar solid fuel) and HS 2709 (petroleum oils and oils obtained from bituminous minerals, crude). This is presented in Table A1 in the Appendix.

These strategic dependence results corroborate a 2014 study conducted by the EU Commission. This, using a specific concentration index (SCI) for each EU member, showed that some of the least diversified economies with respect to natural gas imports from outside of the Euro area are Latvia, Lithuania, Finland, Estonia, and Austria (see Oxford Institute for Energy Studies, 2014).

[26] The total number of sectors for Russia's exporters in 2020 was shown to be 1,216.

[27] The conditions presented here differ from those presented by Rogers et al. (2020) (see footnote 24) so as to capture the sectors that are expected to have the most ramifications globally. Russia is one of the world's top exporters of petroleum oils and sunflower seed oil; however, according to UN Comtrade data, Russia's exports of these in terms of world trade are 15% and 19% respectively. Therefore, in assessing the strategic dependence of Europe on these crucial sectors (as related to energy and food availability and prices) these threshold values were utilized in place of those presented by Rogers et al. (2020).

[28] Harmonized Commodity Description and Coding Systems (HS 1988/92) at 4-digit level.

Table 1. Each European country's number of strategically dependent sectors (with respect to Russia).

Country	Number of HS 4 sectors	Country	Number of HS 4 sectors
Austria	1	Italy	4
Belgium	4	Latvia	3
Bulgaria	2	Lithuania	5
Croatia	2	Malta	2
Cyprus	1	Netherlands	1
Czech Republic	5	Poland	5
Denmark	1	Portugal	1
Estonia	6	Romania	1
Finland	3	Slovak Republic	3
Germany	2	Slovenia	1
Greece	1	Spain	2
Hungary	3	Sweden	3

Source: Computed from UN commodity trade data.

Finally, there are some potential implications of Russia losing its most favoured nation (MFN) status. The decision of some countries to remove Russia's MFN status will further isolate the country, as higher tariffs can be applied to commodities imported from non-MFN sources (Linetsky, 2011; Tarr, 2007). Further, this decision can subject Russia to other indirect trade barriers in relation to rules of origin and quotas. This will further decrease supply from Russia and contribute to an increase in global price levels for commodities that are exported by Russia including alcohol, precious stones (such as diamonds), and fertilizers. The decision will also cause Russian imports from other countries to become more expensive, therefore decreasing Russian dependency and possibly increasing domestic demand within the economy[29].

2.3.2. What are the implications for the energy market?

The top 10 oil and gas producers globally are presented in Table A2 in the Appendix. As we can observe from Table A1, Russia is a big global player in the energy market. In 2020 Russia produced around 12% of the world's oil output (BP, 2021a). Thus, should its supply capacity, for whatever reason, become disrupted on account of its invasion of Ukraine, global oil prices will likely continue to climb.[30] More than two thirds of the oil produced by Russia is exported (Didenko, 2015; Markus 2022). For example, in 2020, Russia produced around 10.5 mn barrels of oil per day and consumed only around 3.7 mn (US EIA, 2021), with its main export destination being China and several European countries including Germany and Netherlands. Even though a comparably low percentage of Russia's energy exports is imported by the US, its decision on 8th March 2022 to ban oil, gas and coal imports from Russia may still have major impacts on energy availability[31]. One option for the US is to increase production from its various shale fields. At high enough prices, this is feasible, but

[29] As at 11th July 2022 Russia is set to experience a trade surplus, since exports remain sustained while imports into the country fall.

[30] For June 2022, the price of crude oil (WTI) averaged US$114.6 as compared to US$91.7 for February 2022. On Wednesday 16th March, the International Energy Agency (IEA) noted that three million barrels of oil per day were at risk from the sanctions against Russia.

[31] The US imported around 245 million barrels of crude oil and petroleum products from Russia in 2021. Even so, the concern about the possibility of crude oil scarcity prompted the US to make a rare high-level visit to Venezuela.

there still may be labour and infrastructure constraints. Another obvious source is from Canada via the Keystone XL pipeline[32].

Of even greater concern is Russia's standing as a big producer of gas (second largest in the world), and so natural gas prices would also rise. Note that in 2020, more than one third of the natural gas consumed in Europe emanated from Russia[33]. The EU has made many comments in the past about the need to diversify its supply base for natural gas but has not followed through with action. Many countries have harshly condemned the Russian invasion of Ukraine, and Germany has since halted the certification of the Nord Stream 2 pipeline. This move by Germany would result in a potential significant monetary loss for the Russians, as annual consumption of the 55 bcm of gas could generate US$15bn for Gazprom, a Russian owned firm (Riley and Horowitz, 2022). The result for Germany, however, is that it will now have to pay significantly more for natural gas. If, in retaliation, Russia cuts off the gas supply to these European countries, then they will need to source gas from alternative sources, including the US (Mbah and Wasum, 2022).[34] Aside from a price increase because of supply and demand, transportation costs will also need to be accounted for in the final gas prices.

Indeed, the world as a whole is very dependent on natural gas exports from Russia. BP (2021b) showed that around 26% of world pipeline exports and 8% of all Liquefied Natural Gas (LNG) emanate from Russia. Europe is also heavily dependent on diesel fuels from Russia. It would be difficult to replace such energy dependence on Russia, but even if this could be done, other countries would experience shortages in the short term until alternative supply adjustments are in place. This would inevitably change the demand structure and production capabilities of many energy-dependent countries. To compound matters still further, at the end of March 2022, as a means of boosting the value of the ruble, Russia threatened to cut the gas supply to Western economies that were refusing to pay for their gas in rubles, stating that buyers must open ruble accounts in Russian banks. At the end of April 2022, this threat became a reality as natural gas supply to Poland and Bulgaria[35] was halted on account of their decision to continue payments in euros. As a result, some countries have begun to accede to Russia's demands, with a few European economies such as Hungary and Germany, agreeing to the payment scheme. This move, which was intended to increase external demand for the ruble and improve the operations of Russian banks, has, in conjunction with other measures, worked to recover the Russian currency to surpass its pre-war value[36].

2.3.3. What may be the impact on food prices?

Significantly, Ukraine in 2020 had an agricultural sector which stood at 9.3% of GDP. As it stands, Russia is the world's largest exporter of wheat, while Ukraine is the world's fifth largest exporter; in this regard this war will likely result in a sharp increase in wheat prices (together, Russia and Ukraine account for 26% of the world's exports of wheat, see Table A3 in the Appendix). Protracted wars are always expected to give rise to food insecurity (Brück and d'Errico, 2019; Maxwell et al., 2011) and this case is no different (UNCTAD, 2022). The hegemonic power of Russia is further seen in relation to the war's disruption of

[32] In June 2021, the Keystone XL pipeline from Canada to the US was cancelled. Since Russia's invasion on Ukraine and the US's decision to ban Russian oil, there have been calls to restart pipeline operations.

[33] Some sources, including Eurostat, estimate that it is possible that more than 40% of Europe's natural gas imports are sourced from Russia. BP (2021b) estimate that around 33% is sourced from Russia and that around 16% comes from Norway.

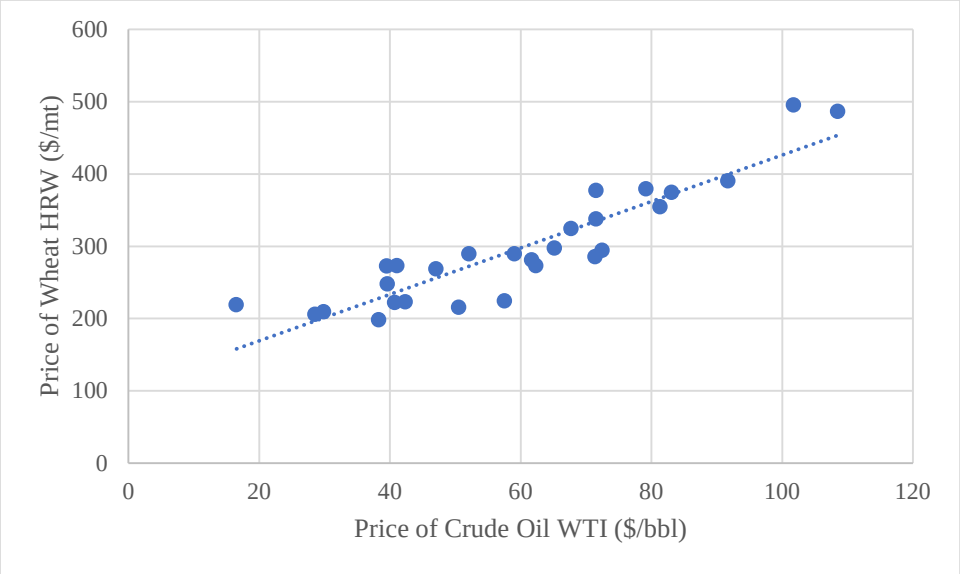
[34] Other alternative sources being considered include the Middle East, Africa and Venezuela.

[35] Both economies were shown to be strategically dependent on Russian oil (see Table A1).

[36] At the end of May 2022, the ruble surpassed its pre-war value, climbing to 0.017US$. Since then, the ruble remained stable around this value.

food supplies to countries that are in no way directly involved, with the European Council president accusing Russia of using food supplies as 'stealth missiles' against developing economies. While it is possible for farms elsewhere to plant more wheat, the nature of crop production means that this supply would not come on stream until mid-2023 and so global food prices may be affected for an extended period of time. For instance, the most recent shock to wheat prices (starting in February-March 2008)[37] saw price stabilization occur around 8 months after the price spike (see Figure A2), which is line with the fact that wheat is usually harvested on average 6-8 months after planting[38]. Therefore, the uncertainly associated with the war, especially combined with the increasing volatility of food production in the context of climate change, means that the persistence of this shock will possibly last longer than anticipated[39]. Further, since Russia invaded Ukraine, many bulk carriers have been diverted away from the Black Sea and others are now stuck in ports where they are unable to offload (Alderman and Gross, 2022). Whilst not all of Russia's cargo ships have been sanctioned, the West dealt Russia a crowning blow when the assets of its biggest banks were frozen[40]. In so doing, trade transactions with Russia were summarily halted.

Figure 2. Scatterplot of oil prices (US$ per barrel) and wheat prices (US$ per metric ton), Monthly from January, 2020 to April, 2022.



Source: World Bank.
Note: HRW means Hard Red Winter. WTI means West Texas Intermediate.

The prices of wheat and oil have increased sharply in recent times (see Figure A1 in the Appendix). Also, as Figure 2 shows, there is some evidence that a rise in the price of crude oil is associated with a rise in the price of wheat. These price increases will undoubtedly have adverse impacts on many economies that heavily rely on food and energy imports, with the World Bank's chief economist stating that the high levels of inflation, instigated by the war, may cause protests and riots in food- and energy-dependent economies (FAO, 2022b; WFP, 2022a). These types of protest have already begun in Sri Lanka, which is experiencing one of its worst economic crises amid high inflation and food shortages. Similarly, in 2007-2008,

[37] On account of various factors, including energy prices and low harvests.
[38] Wheat grown during the winter period is expected to take a longer time to mature compared to wheat grown in spring.
[39] A fall in price will likely occur earlier if the conflict settles.
[40] These include VTM Bank, Otkritie, Novikom, and Sovcom.

high food prices spurred food riots in various countries, including Haiti, Bangladesh, and some of the African economies. Russia and Ukraine feature prominently in the exports of these food items, and a prolonged disruption in their exports of these commodities may have a serious long-term impact on their prices in the global marketplace (WFP, 2022b). This is a perturbing situation as many economies are already experiencing the highest bout of inflation in decades[41](Reinhart and von Luckner, 2022). In the UK, for example, as commodity prices (including energy prices) soar in the context of slower growth, stagflation tendencies can emerge. Indeed, the fear of stagflation looms over many other European countries, as the European Central Bank prepares to raise interest rates in response to global price increases on account of this crisis (Fairless, 2022).

2.3.4. Will there be shortages of essential metals?

Russia is also an important producer of several key metals such as palladium and nickel. The effect of the war is especially significant in relation to the availability and price of palladium, as it is used for making a host of commodities, including automotive exhaust systems and mobile phones. The price of palladium has increased rapidly in recent times (see Table A4 in Appendix) (see also OECD, 2022) with Russia being the world's largest exporter of palladium (Kirkulak-Uludag and Lkhamazhapov, 2017).[42] Further supply chain disruptions by the Russian invasion of Ukraine, as well as rising transportation costs alongside disruption of some trading routes, would put upward pressure on prices. For all the materials that require these metals, disruptions can threaten increased prices for many intermediate products and services.

3. Concluding remarks

The existing conflict has been widely portrayed by the preponderance of western media as a battle between the forces of 'democracy' and the forces of 'autocracy' (Esper, 2022). Irrespective of which dominant ideological approach prevails, the current Russian-Ukrainian conflict - like previous aggressive military interventions - has exposed in the most categorical manner the increasing and inherent economic and social contradictions in the world capitalist economy, which is in line with what Marx envisaged many decades ago.

In this paper we have tentatively considered hegemonic theories that can potentially serve as a framework of analysis to explain, to some extent, the rationale of the unfurling conflict. In particular, we argue that the 'war of maneuver' indicates the speed, the limited appeal, and frontal attack that Russia attempted at the start of the conflict, whilst the 'war of position' in the form of the slow displacement of forces, indicates the affirmation and development of a new vision of the world. We are not suggesting that this is an accurate depiction of the strategic plan of the Russian administration, but we do think that some parallels can be drawn.

Over the last seven years Russia has attempted to insulate itself from external shocks, which gives the impression of prescience if not premeditation. Russia's external debt is relatively

[41] US inflation in May 2022 stood at 8.6%, the highest rate since 1982. The Euro area's inflation rate was 8.6% in June 2022, compared to 5.9% in February 2022, the highest rate the region has experienced since 1986. Some economies' annual inflation rates (in June 2022) reached double digits. These include Lithuania (20.5%), Estonia (22.0%) and Latvia (19.2%) (see Eurostat, 2022). As a result, the Federal Reserve (US) has raised interest rates 0.75 percentage points and the European Central Bank has announced a 50 basis points increase in interest rates, effective 27th July 2022.

[42] South Africa, a major exporter of palladium, is poised to benefit from the restricted supply of this rare earth metal as a result of the Russian-Ukraine war.

low, and its stock of reserves at 2021, according to the World Bank, was US$632.24bn. Russia banked on its war chest of over US$600bn to help support its economy though rough times. It is not clear how much of these reserves is frozen, but some commentators have noted that it may be close to the whole amount; certainly, given that about US$450bn is in foreign currencies or gold, more than 60% is no longer accessible to Russia. Russia could probably sell the rest of the reserves, which are held in gold, to China or India at a discounted price. The sanctions also initially pushed the value of the ruble considerably downwards against the US dollar (from around 0.0133 US$ in January 2022 to a low of 0.00699 US$ on 7th March 2022). However, through various policies, the ruble made a dramatic recovery, causing Russia to lower its interest rates (to 8%) in July 2022, and to ease capital controls that had been set in place as a means of stabilizing the currency. Despite the remarkable comeback of the ruble, inflation in Russia remains high (15.9% as at June 2022) and is projected to fall only to between 12-15% for the remainder of 2022.

Even China is not immune to the commodity price surges. China is a huge importer of energy, food, and raw materials and, given that the prices of these goods have escalated, this creates an issue for China in that the rise in commodity prices is starting from levels that are already high. This would undoubtedly lead to still higher levels of inflation globally. The political risk and uncertainty that followed COVID-19, now exacerbated by the war, may encourage households to save more while also making firms less willing to invest.

The IMF projects that Ukraine's output will contract by 35% in 2022. If the conflict persists, its economic consequences are expected to worsen. This is subject to a caveat, however, as during wartime, real GDP contraction (see, for instance, previous data on Iraq, Lebanon, Syria, Yemen) might amount to 25-35%. In addition, the National Institute for Social and Economic Research (NISER) has estimated that the Russian invasion of Ukraine would lead to a 1.5% fall in Russia's GDP in 2022, and a 2.5% fall by the end of 2023 (see, for example, Liadze et al., 2022). Liadze et al. (2022) also found that inflation in Russia is expected to climb above 20%[43] on account of disrupted trade, lower real income, and a decline in confidence, and that global GDP could decline in 2022[44]. The Russian invasion of Ukraine may lead to a 3% increase in global inflation for 2022, but with proper monetary adjustments, prices are anticipated to recover in 2023. Furthermore, the invasion of Ukraine by Russia and the associated sanctions will lead to a reduction of global trade flows. Note that during the pandemic, global exports fell about 7%, whereas exports from Ukraine fell only about 1.6%[45]. Indeed, the Black Sea Basin is well known to be one of the world's most important locations for the production of grain and agricultural produce[46] and therefore this conflict may threaten global food security.

Moving forward, and based on the preceding analysis, while the imposition of sanctions will undoubtedly affect Russia, the global effects in relation to fuel and food prices are becoming ever more apparent. While some larger countries may be able to absorb the cost of imposing sanctions, the smaller, less developed economies are expected to experience a snowball effect. Specifically, although some energy exporters, including the US, may possibly benefit in the medium to long term from economic sanctions against Russia, European energy-dependent economies, as well as the developing economies, are set to bear the burden of these decisions, especially in relation to rising inflation and suppressed supply.

[43] The Russian central bank anticipates inflation to be between 18% and 23% throughout 2022.
[44] Contrariwise, the IMF projects positive global growth for 2022 (3.6%) and a wider contraction in GDP (-8.5%) for Russia in 2022.
[45] This is according to UN Comtrade data, change in export value between 2019 and 2020.
[46] Ukraine accounts for 25% of the world's chernozem soils so it is a crucial producer of food.

There is no shadow of doubt that the scale of economic sanctions against Russia is unprecedented (Lindstaedt et al., 2022; Papava, 2022). Indeed, their nature and scale are such that their imposition is tantamount to a substitution for military action. This is not a new phenomenon, having been historically used against states/governments that are reluctant to abide by the imperialistic narrative. Indeed, according to Mulder (2022), economic sanctions started to be widely used by imperialist powers after WWI as a novel and powerful kind of coercive implement, which could effectively remove all inclinations to fight even though no military force was being exerted.

The pace at which recent events have been unfolding is so fast and overwhelming that we tend to forget COVID-19's ramifications for global corporate indebtedness, something which has in any case been increasing since 2007. The projected dismal picture of the global economy following the Ukrainian crisis, in conjunction with weaker investment and lower corporate profitability, and the rising global inflation, is bound to lead to many bankruptcies or zombie businesses. On the policy front, central banks have already started hiking interest rates in an attempt to control fast-spiralling inflation. Policies geared towards 'pulling on the string' might lead to the opposite result, i.e., an increase in inflation, when corporate debt is sufficiently high. If such a scenario transpires then the central banks must ultimately choose between a recessionary economic environment or accepting a prolonged spell of stagflation.

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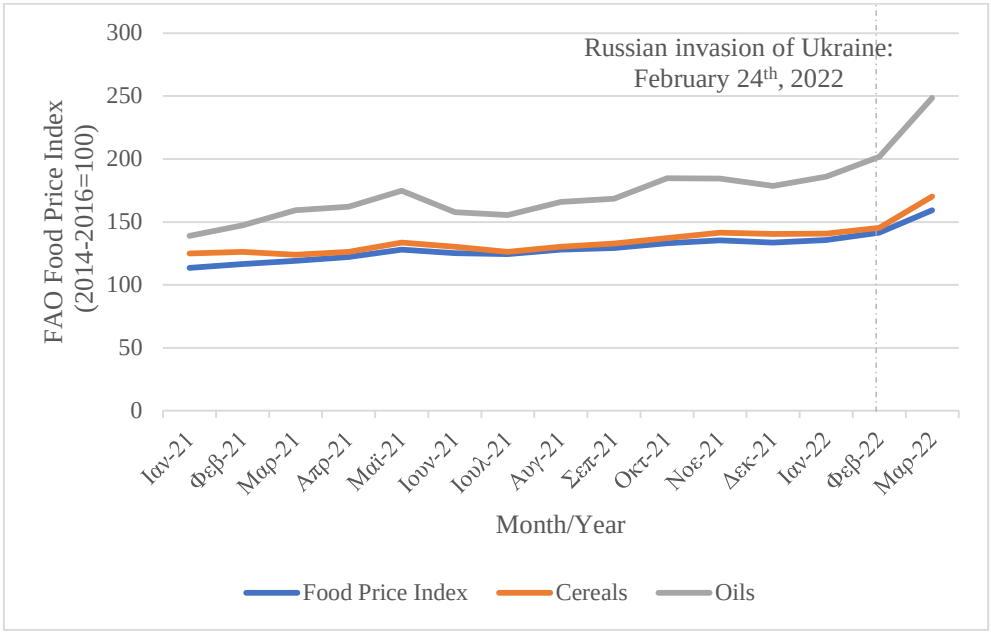
Appendix

Figure A1. FAO Food Price Index (January 2021-March 2022).



Source: Food and Agriculture Organization of the United Nations (FAO).

Figure A2. Monthly wheat price January 2007-April 2022 (nominal US$ per metric ton).

***Source*:** The World Bank.

Table A1. Strategically dependent sectors by countries.

HS code	Product Description	Countries
1001	Wheat and meslin	Malta
1204	Linseed	Italy, Latvia
1512	Sunflower-seed, safflower or cotton-seed oil and their fractions	Estonia
2619	Slag, dross, etc., from the manufacture of iron	Austria, Finland
2701	Coal; briquettes, ovoids and similar solid fuel	Bulgaria, Cyprus, Spain, Estonia, Greece, Croatia, Italy, Lithuania, Latvia, Malta, Netherlands, Poland, Romania, Slovenia
2702	Lignite (excluding jet)	Lithuania
2709	Petroleum oils and oils obtained from bituminous minerals (crude)	Bulgaria, Czech Republic, Estonia, Finland, Hungary, Lithuania, Poland, Slovak Republic
2814	Ammonia, anhydrous or in aqueous solution	Belgium, Estonia, Lithuania, Sweden
2816	Hydroxide and peroxide of magnesium; oxides, hydroxides and peroxides, of strontium or barium	Poland, Portugal
3104	Mineral or chemical fertilizers, potassic	Estonia, Croatia, Lithuania, Latvia
7201	Pig iron and spiegeleisen in pigs, blocks or other	Belgium, Czech Republic, Italy, Poland, Slovak Republic, Sweden
7203	Ferrous products obtained by direct reduction	Belgium, Czech Republic, Germany, Spain, Estonia, Italy, Sweden
7207	Semi-finished products of iron or non-alloy steel	Belgium, Czech Republic, Denmark, Hungary, Poland
7501	Nickel mattes, oxide sinters, intermediate products of nickel metallurgy	Finland
7502	Unwrought nickel	Germany
8401	Nuclear reactors; fuel elements, machinery for isotopic separation	Czech Republic, Hungary, Slovak Republic

Source: Computed with data from UN Commodity Trade database.

Table A2. Top 10 oil and gas producers globally, 2020.

Top 10 Oil Producers in 2020			Top 10 Gas Producers in 2020		
	Thousand barrels per day	% of total		Billion cubic meters	% of total
US	16,476	18.64	US	914.6	23.73
Saudi Arabia	11,039	12.49	Russian Federation	638.5	16.57
Russian Federation	10,667	12.07	Iran	250.8	6.51
Canada	5,135	5.81	China	194	5.03
Iraq	4,114	4.65	Qatar	171.3	4.45
China	3,901	4.41	Canada	165.2	4.29
United Arab Emirates	3,657	4.14	Australia	142.5	3.7
Iran	3,084	3.49	Saudi Arabia	112.1	2.91
Brazil	3,026	3.42	Norway	111.5	2.89
Kuwait	2,686	3.04	Algeria	81.5	2.11

Source: BP Statistical Review, 2021a and 2021b.

Table A3. World's Top exporters of Wheat, Maize, Soybean and Sunflower seed oil for 2020 (in billion US$).

Rank	Wheat		Maize		Soybean oil		Sunflower-seed, safflower or cotton-seed oil	
	Country	**Value**	**Country**	**Value**	**Country**	**Value**	**Country**	**Value**
1	Russian Federation	7.92	United States	9.56	Argentina	3.74	Ukraine	5.32
2	United States	6.30	Argentina	6.05	United States	0.98	Russian Federation	2.47
3	Canada	6.29	Brazil	5.85	Brazil	0.76	Turkey	0.74
4	France	4.54	Ukraine	4.89	Netherlands	0.47	Netherlands	0.73
5	Ukraine	3.59	France	1.72	Russian Federation	0.44	Hungary	0.48
6	Australia	2.70	Romania	1.23	Paraguay	0.42	Bulgaria	0.45
7	Germany	2.12	Hungary	1.02	Spain	0.30	France	0.40
8	Argentina	2.03	Serbia	0.67	Bolivia	0.26	Argentina	0.32
9	Kazakhstan	1.14	South Africa	0.57	Ukraine	0.23	Spain	0.25
10	Poland	1.05	Bulgaria	0.50	Germany	0.16	Germany	0.22

Source: UN Commodity Trade database.

Table A4. Export share and Prices of Nickel and Palladium.

	World Exports 2020 (in billion US$)	Russia Exports 2020 (in billion US$)	Russia's Percentage share (%)	Price at March, 2020	Price at March, 2022
Nickel (HS 2604)	2.84	0.082	2.892	US$ 11,846 per mt	US$ 33,924 per mt
Palladium (HS711021)	23.64	6.45	27.281	US$ 2,133 per t.oz	US$ 2,611 per t.oz

Source: UN Commodity Trade database (Exports), London Platinum and Palladium Market (Palladium Price), World Bank (Nickel Price).

Note: Palladium measured in troy ounces (t.oz) and nickel measured in metric tons (mt). Monthly averages for March 2020 and March 2022 are presented.