



The Economic Consequences of Russia's War on Ukraine

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This paper develops and formalizes remarks at the C.D. Howe Institute's International Economic Policy Council meeting on March 23, 2022.

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1 MISJUDGEMENT AND MADNESS

Only a little more than six months after the symbolic photo of a US helicopter evacuating US embassy staff out of Kabul¹ was taken, Russia invaded Ukraine. This came hot on the heels of an accord between China and Russia that recognized each other's respective "interests" in Taiwan and (implicitly) Ukraine. Western perspectives on the accord evolved rapidly, from Singleton (2022) writing in *Foreign Affairs* there is essentially "nothing to see here", to Brookings' Kim (2022) who, following the invasion, was trying to fathom China's role – "who knew what when". This was followed by a Biden-Xi video call in which Xi is quoted as saying: "The US has misperceived and miscalculated China's strategic intention" (Wang, 2022). In Europe, Christoph Heusgen, the foreign policy adviser of former German Chancellor Angela Merkel, stated on German TV "We misjudged Putin" (Karnitschnigg, 2022). All hunches were wrong.

1 BBC News. "Why is the Taliban's Kabul victory being compared to the fall of Saigon?" *BBC*, 16 August 2021 <<https://www.bbc.com/news/world-asia-58234884>>. For the comparison to the exit from Saigon, see BBC (2021).

The extent to which long-held judgements have been shell-shocked by this event is attested to by the slew of commentaries following the invasion on the theme “everything has changed”:

- From the US-based Wilson Center: “Why Putin’s War on Ukraine Will Change Everything” (Kusa, 2022);
- From Brussels-based Carnegie Europe: “Russia’s Invasion of Ukraine Changes Everything” (Dempsey, 2022);
- From the UK’s *New Statesman*: “We are in a different world now” (Cliffe, 2022); and
- From China’s business press: “Political traditions and policy principles upheld for decades were overturned in just a few days as Russian bombs flattened cities in Ukraine ... setting off profound changes to a world order that has been in place since the end of the Cold War” (Caixin Global, 2022).

Part of the shock is that the invasion is an anachronism – this atavistic war does not belong in our century. Russia’s “special military operation” involves a 19th Century empire builder,² informed by a muse (Alexander Dugin) who believes the wrong side won WWII (Von Drehle, 2022), launching a 20th Century war of territorial expansion,³ with mechanized destruction, bludgeoning cities with missiles and artillery behind a nuclear blackmail threat. All this has unfolded on a ground prepared by 21st Century disinformation mills,⁴ and supported at home by a medieval bonding of church and state.

On the latter point, Vladimir Putin has articulated his view concerning the unity of Slavic peoples and Kyiv as the “mother of all Russian cities” (Putin, 2021), while Moscow Patriarch Kirill has denounced the “forces of evil” (the West) “struggling against the unity of two Slavic peoples” (one of which, of course, is fighting tooth and nail against that forced assimilation, which it considers cultural and national genocide):

“This show of loyalty completes the rapprochement between the Orthodox Church and the Kremlin that has been underway since Vladimir Putin’s return to the presidency in 2012. Employed to further a politics of conservatism, faith becomes justification for war” (*Le Monde Diplomatique*, 2022, commentary to a reprint of Llobet, 2018).

This is a reminder that not all the world lives in the 21st Century. It may be that the major conflicts of the 21st Century will be over technology and the economic rents that flow to the new general purpose technologies built on big data, machine learning and artificial intelligence (Ciuriak, 2020). However, not everyone has moved on from dreams of territorial expansion, even if there’s no money in it (unlike during Tsarist times when land was the source of wealth and power, or during the 20th Century, when petrostates made Oligarchs rich). By the same token, when the world is unmoored from rational behaviour, it becomes analytically intractable. Which makes this particular war almost unfathomable.

2 As Mearsheimer (2015) describes Vladimir Putin. On Putin’s dream of restoring the Russian Empire built by the Tsars, see Kalb (2022).

3 On Putin’s openly stated goals to create a “Greater Novorossiya” – a territory on the Black Sea coast stretching from Donbass in the East to Crimea in the West, see Basora and Fisher (2014): and Talant (2022).

4 On Russia’s demonization of Ukraine, see Popken and Cobiella (2017). On the information and influence war aimed at the United States, Sullivan (2022), quoting Fiona Hill, a former presidential aide: “And now, after a few years of their [former US president Donald Trump and Fox News host Tucker Carlson] apologetic rhetoric on behalf of Russia, Putin “has got swaths of the Republican Party” and “masses of the U.S. public saying, ‘Good on you, Vladimir Putin,’ or blaming NATO, or blaming the U.S. for Russia’s invasion of Ukraine.”

2 JUNK BONDS AND IMPLICATIONS

2.1 *Immediate Reactions – a Watershed Moment*

An immediate consequence of the invasion was to set into sharp relief that the international institutional framework created to prevent wars of territorial expansion has self-evidently broken down with the transition to a multipolar world. The United Nations has not intervened as it did in Korea, notwithstanding an overwhelming condemnation of the invasion, just as it failed to intervene in the first of Russia's invasions of Ukraine in 2014. The nuclear powers that guaranteed Ukraine's territorial integrity in exchange for giving up its nuclear weapons (the Budapest Memorandum⁵) have failed to honour their word. One of those, Russia, is the party violating Ukraine's territorial integrity; the other two, the United States and the United Kingdom, have not intervened. If word is bond, the words of the incumbent institutional framework and its architects now have junk bond status (this was already grasped following Russia's invasion of Crimea in 2014. (Yost, 2015).

The implications have not been lost on other nations facing Russia: under a striking headline, "Defeated Axis Powers Germany and Japan Rearm After Ukraine Invasion," Chrysopoulos (2022a) reports on both German and Japanese moves to rearm.

Germany recalculated things very quickly, with Chancellor Scholz pronouncing a "Zeitenwende," or watershed moment (Schmies, 2022). This was

followed by announcements of Germany's intent to buy 35 new F-35 fighter jets from the United States, as well as 15 additional Eurofighters for electronic warfare,⁶ and a commitment to longer-term development of the Franco-German-Spanish Future Combat Air System (FCAS), which is slated to come into use in 2040 (Hille, 2022). Germany's defence budget was boosted to €100 billion in a special session of the Bundestag on Germany's response to Russia's invasion on the 27th of February (Deutsche Welle, 2022). While Germany had increased its defence spending and issued a new white paper on collective security following Russia's annexation of Crimea, the new moves have been described as "nothing less than a revolution" in German military policy (Major and Mölling, 2022).

For its part, Japan, which is already rated as the fifth largest military power in the world (Chrysopoulos, 2022b), moved rapidly to join western sanctions, has lodged diplomatic protests over unannounced naval manoeuvres by the Russian navy in the disputed Kiril islands (Ryall, 2022), and scrambled air force jets after an intrusion by a Russian helicopter into Japanese air space; moves that are interpreted as Russian sabre-rattling. Japan is expected to completely overhaul its posture on Russia in its National Security Strategy review due later this year, from "opportunity" to "threat" (Agence France-Presse, 2022a).

5 United Nations. 1994. "Memorandum on security assurances in connection with Ukraine's accession to the Treaty on the Non-Proliferation of Nuclear Weapons." *United Nations Treaty Collection* <<https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280401fbb>>.

6 The Eurofighter features electronic countermeasures systems to jam airborne and ground-based radar systems and warn its pilots of missiles attacking it; see Eurofighter (2019).

2.2 Security Relationships and Economic Integration

A review of the literature suggests that a profound change in security relationships has significant implications for international economic relationships.

A Rand Corporation study commissioned by the US Air Force on the impact of US security commitments concluded that a doubling of US personnel commitments could increase US bilateral trade by as much as 15%, depending on the service, while a doubling of treaties could expand US bilateral trade by 34%. The study also concluded that US personnel commitments and number of treaties had a strong positive effect on overall global trade (Egel et al., 2016). Haim (2016) similarly finds that large-scale security structures (“alliance communities”) are important predictors of economic relations between states, including trade and investment links. Meanwhile, Long (2008) concludes that both violent armed conflicts and expectations of domestic or interstate conflict are negatively correlated with bilateral trade levels.

At the firm level, Ramcharran (1999) provides empirical evidence on the role of perceived country risk on multinational firm investment decisions. Similarly, Busse and Hefeker (2005) find that political stability is a highly significant determinant of FDI. The direct threat of nationalization of international businesses in Russia that comply with sanctions (Whalen, 2022) underscores the increased country risk for Russia. The preliminary OECD analysis of the impact of the war calibrates the increase in the country-risk premium for Russia at 1,000 basis points; for Ukraine about 500 basis points, with spillover effects on other emerging markets (OECD, 2022). This is consistent with the increase in the Russian Central Bank’s policy rate from 9.5% to 20% to reflect the changed external conditions (Ostroff, 2022a); interbank lending rates in Russia rose by

even more as the spread over the policy rate widened (Ostroff, 2022b). Bond rates rose by less (220 to 250 basis points) following re-opening of trading, but this was not reflective of market conditions given Central Bank purchases: a portfolio trader was quoted as saying “There’s no longer a market in Russia” (Karunungan and Carson, 2022).

The war also raises country risk for China indirectly. Firms must now consider China’s post-invasion reaffirmation of its “no limits” partnership with Russia, and its expression of “sympathy and support” for Russia’s security demands even as the latter violates the sovereignty of a much smaller country, while hiding behind a nuclear shield, which undermines Beijing’s claims to neutrality and defence of state sovereignty (Kim, 2022). The era of China’s “peaceful rise” ended on 24 February 2022; that is a material change in its risk profile.

Generally, we can conclude that the much-discussed movement from a unipolar to a multipolar global order with the relative decline in US power (set in new and sharp relief by the US exit from Afghanistan), in conjunction with a significant increase in the real and perceived risk of conflict caused by the Russian invasions of Ukraine, should have an overall dampening effect on global trade and a sharper negative impact on trade across security divides. This inevitably entails a consequential loss of efficiency gains from specialisation, economies of scale, and the diffusion of information and know-how (OECD, 2022: 6). The role of *alliance communities* is particularly important since, even in the absence of formal dyadic (i.e., bilateral) security treaties, being within such a community has relatively stronger impacts on trade and investment than direct dyadic treaties. Insofar as causality runs from trade to peace (as per the trade-peace hypothesis; see, e.g., Polachek and Seiglie, 2007), the reduction in trade and investment across the more pronounced security divides also works to increase the possibility of conflict.

3 ECONOMIC COSTS

Russia, Belarus, and Ukraine were expected to comprise an economy with GDP of about US\$2 trillion in 2022 (about the size of Canada's economy in 2021) before the invasion, or almost 2% of the US\$100 trillion global economy (IMF, 2021); together they accounted for a similar percentage of global trade.

For Ukraine, the economic consequences of the current war are, of course, catastrophic. Ukraine faces a massive economic contraction due to the combination of: destruction of Ukrainian economic infrastructure; trade blockade (see below); and workforce decline due to military enlistment, war casualties (in the tens of thousands), and mass dislocation of households (an estimated 10 million, or one-in-four Ukrainians is now displaced, including about 3.5 million who have fled abroad). In the first month of the war, half of Ukrainian businesses shut down completely, while the other half is operating well below capacity; some 90% of the country's population could fall below the poverty line (UNDP, 2022).

For economic activity, the most recent IMF guesstimate placed the expected decline in GDP at up to -35% in real terms based on evidence from previous wars with a similar scale of destructiveness (Elliott, 2022).⁷ Ukraine's Economy Minister Yulia

Svyrydenko upped this to -55% or US\$112 billion (Agence France-Presse, 2022b). Compared to an IMF-forecast US\$23 billion gain, this implies a swing of -US\$135 billion.

Russia also faces a steep contraction given supply chain disruptions from border closure, shipping companies exiting the Russian market (see below), and the shutdown of airspace (which interrupts the supply of high-value, time-sensitive airborne cargo from the west). Added to that are a collapse of business and consumer confidence, an exodus of FDI (over 400 international firms have closed shop or suspended operations in Russia (Sonnenfeld and Tian, 2022; Sonnenfeld et al., 2022), and an exodus of young people, many of them closing up businesses and moving abroad to start over.

As regards the GDP implications, preliminary estimates of the negative impact in real terms range from an IMF estimate of -7%, to JP Morgan's -12.5%, to the Institute for International Finance's -15% (Liesman, 2022). Tacking on the steep devaluation of the rouble (on the order of -25% (see, e.g., Daniel, 2022), and treating this as a real exchange rate depreciation,⁸ the Russian economy could shrink by as much as 40% in US dollar terms in 2022. Since the IMF had forecast a gain of US\$56 billion for Russia in 2022, this represents a negative swing of US\$715 billion.

7 On the economic costs of a magnitude 7 war, which the Russian invasion constitutes for Ukraine, see Thies and Baum (2020). Their estimates suggest wars of this scale reduce per capita GDP by 16 to 24%.

8 The market exchange rate for the rouble has fluctuated over a very wide range since the invasion, falling very steeply then recovering much of the ground, supported by strong intervention by the Russian authorities. The equilibrium rouble exchange rate must be considerably lower post-invasion than pre-invasion for several reasons. First, the terms of trade for Russia have worsened: (a) it is selling its oil at a discount and faces higher transportation costs as shippers are turning off their transponders to avoid identification as they sell into particular markets; and (b) it is facing much higher tariffs abroad, part of which will be absorbed by Russian exporters in the form of lower prices. Second, the exodus of elite talent (discussed further below) represents a write down of Russia's human capital stock and thus of its economic potential. Third, it is making a heavy investment to acquire an asset that it is destroying in the process; this is a very bad investment that reduces the net worth of the enterprise (Russia) that is making it. If the rouble's pre-invasion exchange rate against the US dollar of about 83 was roughly its equilibrium value, a short-term return to that level because of intervention by the central bank would make the rouble unsustainably over-valued.

Belarus will not be spared and will likely experience a similarly heavy decline as Russia. The swing from a forecast gain of US\$5 billion to a 40% decline amounts to a US\$31 billion difference.

The value of GDP of the three economies in US dollar terms would, on these assumptions, swing down by about US\$880 billion.

For the rest of the world, a reduction in growth is being mooted, given the supply chain disruptions, sharply higher energy and food costs, higher interest rates, and reduced business and consumer confidence. Let's pencil in a reduction in global growth prospects outside of the Ukraine-Russia-Belarus group of 0.5%. For the US\$100 trillion global economy, this would be equivalent to a loss of US\$500 billion. The actual negative impact could be much greater. The European Commission's forecast for EU27 growth released in early February 2022 called for 4% growth (European Commission, 2022). Since the invasion, a recession is not being ruled out for Europe (McKinsey, 2022). This would represent a swing of about -US\$700 billion in the EU alone.

To this must further be added the impairment of corporate assets. Stocks on the Moscow Exchange (MOEX) sank by 33% the day after the invasion, an indication of market views of the economic implications of the war. Notably, MSCI, a division of Morgan Stanley that manages various indexes used by portfolio investors, declared the Russian market to be "uninvestable" following the invasion and removed it from its global indexes (Associated Press, 2022). Where things finally stand will come into sharper focus when companies report the impairment of their assets, both tangible and intangible (impairment must be reported annually; see, e.g., Fujita, 2022, for KPMG's guidance). The Russian equity market capitalization as of January 2022 was estimated at US\$773 billion (Associated Press, 2022). A one-third write-down is a loss of about US\$260 billion.

This could be dwarfed by the write-down of the value of European corporate assets as a whole.

Table 1: Summary of Economic Costs of the War

Source of Cost	US\$ Billions
Value of GDP (Ukraine, Russia, Belarus)	880
Value of GDP (Rest of World)	500
Material Damage (Ukraine)	210
Value of Corporate Assets (Russia)	260
Value of Corporate Assets (EU27 + UK)	150
Total	2,000

Source: Calculations by the author.

The market capitalization of the top six European exchanges as of January 2021 was about US\$15 trillion (Statista, 2022). European markets went into a steep decline, falling about 20% from their January highs to close to record lows compared to US stocks (Secker, 2022). Some of this is structural, reflecting reduced long-term growth potential in Europe from the now sharply higher security divide on its Eastern flank – a new "iron curtain" that has descended between Russia and the rest of Europe. By how much is guesswork for the moment; if it is even 1% lower, that represents a write-down in the value of European corporate assets of US\$150 billion.

To this must be added the cost of physical damage to Ukraine's infrastructure and buildings – Ukraine's Economy Minister Yulia Svyrydenko placed the current infrastructure damage at US\$119 billion and counting, plus damage to private property, including housing, of US\$90.5 billion (Agence France-Presse, 2022b).

Summing up these admittedly very notional and conservative estimates, we arrive a figure of about US\$2 trillion (Table 1). Putin's war is very expensive for the world.

Finally, there are the human costs, which defy easy calculation, but are clearly enormous. Death, injury, displacement from homes and work, the trauma of war, and the emotional stress for hundreds of millions who are outside the warzone, but exposed to its brutality in their news feeds. Some back-of-the-

envelope calculations hint at the enormity of these human costs.

While, to an individual, life is priceless, governments do put a value on a statistical life (VSL). Methods vary by country; different methodologies yield very different results; and the estimates also vary widely for different regions, with higher VSLs for wealthier countries. A meta-analysis of VSL studies conducted for the OECD by Biaisque (2012) found a mean VSL converted to 2022 US dollars on the order of US\$4 million (excluding high and low estimates). For Poland, which is reasonably representative for Eastern Europe, the estimate was about US\$1 million in 2022 dollars.

- It is likely that ca. 25,000 lives that have already been lost in this war, including combatants and civilians; this places the VSL lost at ca. US\$25 billion and counting.
- Heavy stress shortens life expectancy by 2.8 years by one estimate (Härkänen et al., 2020). PTSD is known to shorten life expectancy of soldiers (Elder et al., 2009) and many refugees also suffer from life-shortening war-related PTSD (Buhmann, 2014). It is thus not unreasonable to conclude that even those who survive a brutal war will lose years of their life. On the back of the envelope, 44 million Ukrainians losing 2.8 years = 123 million years of life lost. Given a median life expectancy in Ukraine of about 30 years (median age = 41; life expectancy = 71), this yields 4 million statistical lives lost for a foregone VSL of US\$4 trillion.
- We can also do the calculation for the EU27. If we assume that the 447 million citizens in the EU27 experience just 1% of the stress of those directly exposed to the war – for example, due to the stress generated by newly aroused fear of nuclear war and the no-longer-negligible risks of Russian invasion of EU member states openly discussed on Russian media – and take into account the EU VSL of US\$4.8 million in 2022 dollars (based on Navrud and Lindhjem, 2011, estimate of median EU27 VSL, converted to US\$ at 2022 prices), the comparable calculation = US\$1.5 trillion.

- And what about the investment that people make in their homes and communities from which they are uprooted? Assuming people invest several times annual household earnings in their homes, the loss to the 3.5 million Ukrainian refugees abroad who have abandoned theirs would be on the order of some US\$40 billion.

Even without an exhaustive calculation, the human cost of this war can be seen to be a sizeable multiple of the purely economic damages. But as mentioned, this is just estimation; life is priceless.

4 TRADE IMPLICATIONS

As Putin's two-day war continues into its second month, trade is disrupted through three principal mechanisms:

- the shutdown of Ukraine's exports;
- spiking costs of trading with Russia, in terms of disrupted container flow, higher insurance costs, and substantially increased logistics costs at borders; and
- sanctions on Russia, which bite in multiple ways, including the shutdown of airspace, which eliminates airborne cargo.

Overall, Russian import volumes for the week of 2-8 March were 40% below the level recorded in the week of 16-22 February immediately before the war (Reuters, 2022a).

4.1 Disruption of Ukraine's Exports

Ukraine is a major wheat exporter accounting for about 10% of global wheat supplies and about 50% of global sunflower seed oil. Nearly 80% of Ukraine's grain exports are shipped through the Black Sea ports. Ukraine is also an important exporter of such metals as nickel, copper, and iron and is a manufacturer of key supply chain inputs into computer microchips, such as palladium, platinum, and neon. About 90% of neon, which is used for chip lithography, originates from Russia, and 60% of this is purified by one company in Odesa (Schiffing and Kanellos, 2022).

One of the key companies in the supply chain for developing vaccines was shut down in Kyiv, even as new waves of COVID-19 build. Ukrainian ports have been closed by the Ukrainian military with approaches mined and are under attack by Russian forces. Even if a corridor were provided, insurance would be either prohibitively expensive or unavailable to sustain a voyage (Graham and Pe'er, 2022). Meanwhile, rail traffic has been diverted away from Ukraine because of the risks.

4.2 *Spiking Trade Costs*

While Russia's industrial and agricultural production has not been impaired by the war, its trade has been disrupted as the result of businesses exiting the Russian market, even when sanctions are not in place.

One factor is insurance costs: for example, insurance premiums on shipping have gone from pre-invasion rates of 0.025% to as high as 5% (Graham and Pe'er, 2022).

A related factor is logistics costs. Several major shipping companies – Maersk, MSC, Hapag-Lloyd, and Ocean Network Express – halted service to Russia because of operational difficulties, including delays and detention of cargo by customs authorities checking for sanctioned items in cargo heading to Russia (Almendral, 2022). One consequence is a disruption of established patterns of container flow: a lack of containers flowing into the Russian market translates into a lack of containers to ship Russian exports to countries still doing business with it. Notably, Maersk pulled completely out of the Russian market and is seeking to extract some 50,000 containers stranded in Russia and to liquidate its assets (Reuters, 2022b). Maersk accounted for one-third of the container traffic in Russia (Rytvinskaya, 2022). As the aphorism goes, amateurs talk strategy; professionals talk logistics.

There is also the effect of being shamed for participating in the Russian market – and being shunned by investors. For example, a list of US

companies indicating whether they have exited Russia or chosen to stay has been published by the Yale School of Management (Sonnenfeld et al., 2022). As noted by Sonnenfeld and Tian (2022), the day the list came out, “many of the companies we identified as remaining in Russia saw their stocks drop 15% to 30%, on a day where the key market indexes fell only two to three percent.” Meanwhile, the list of prominent companies exiting the market has provided management in other companies with a benchmark to present to their Boards. As Graham and Pe'er (2022) put it, “The costs of trading with Russia are simply too high – both optically and literally.”

4.3 *Sanctions*

The effectiveness of sanctions in influencing state behaviour is much debated; however, it is generally agreed that the sanctions imposed on Russia for its invasion are unprecedented in their breadth and force (Mulder, 2022; Spisak, 2022). Western sanctions include inter alia:

- restrictions on export to Russia of high-tech components (which is one of the factors raising trade costs for non-sanctioned exports, as containers must be checked);
- suspension by some 15 members of the WTO of most favoured nation (MFN) status for imports from Russia (in Canada's case, this means that Canadian tariffs on imports from Russia rise to 35% across the board);
- a cancellation by Germany of Nordstream II, turning that investment into a white elephant; and restrictions on imports of Russian oil by the United States and the United Kingdom;
- a shut-down of airspace to Russian airlines (which cuts off the flow of time-sensitive high-value goods that typically choose air cargo, much of which is in the cargo holds of scheduled passenger airlines), and restrictions on Russian ships from using ports;
- a ban on foreign investment into the Russian economy;

- a range of financial sanctions, including the freeze on some US\$400 billion of the US\$630 billion in foreign assets of the Central Bank of Russia – an unprecedented move – exclusion of several major state-owned Russian banks from the global interbank clearing system (SWIFT), a freeze on the assets of a large number of Russian and Belarussian banks, and a range of other restrictions on financial transactions involving Russian parties; and
- seizure of the overseas assets of Russian oligarchs associated with Vladimir Putin.

While not all states are participating, it is notable that many Chinese companies are verifying that their business with Russia does not put them offside on Western sanctions that would expose them to secondary sanctions (Du and Wadhams, 2022).

Russia has, of course, responded with counter-sanctions of its own, including restrictions on exports of telecoms, medical, vehicle, agricultural, and electrical equipment, as well as some forestry products; freezing foreign portfolio investment in Russia; issuing a threat of nationalization of foreign-owned businesses; and imposing a reciprocal ban on the use of Russian airspace and ports (Leggett, 2022). These measures compound the effect on trade of the measures taken against Russia, given the symmetric effects of trade restrictions on both exports and imports (Lerner Symmetry; Lerner, 1936).

4.4 *The Cumulative Effect*

The cumulative effect of the various measures is likely much greater than the sum of the individual components since, in a complex production ecosystem, the wide range of measures raises the probability of one or another of the elements in the supply chain breaking down, with cascading effects through the production system. Thus, whereas US tariffs and specific technology export restrictions had relatively limited impacts on China, the wider range of sanctions on a much thinner production ecosystem in Russia is likely to have much greater impacts.

5 CONSEQUENCES OF THE WAR: LONGER-TERM IMPLICATIONS

The short-term costs of the war are to be measured in the trillions of dollars. The dynamic effects will add to this considerably. There are no positive offsets.

For Ukraine, the longer-term costs are incalculable at the moment. Once again it faces invasion by those bent on empire: Putin's Russia follows in the footsteps of Nazi Germany and the Mongol Golden Horde. How it rebuilds and what that implies for its economic orientation will be determined by the outcome of the hostilities.

For Russia, while its Eurasian economy will reorient relatively quickly towards the East, the European part of its economy faces a very steep decline, cut off from its natural trading partners in Europe. With the exodus of its young, urban elite seeking to escape the war, the new repression, and the isolation imposed by the new Iron Curtain that has descended on Russia's western flank, the 21st Century economy that was developing will almost certainly wither. Volpicelli (2022) reports estimates from RAEK, a Russian technology trade group, that between 50,000 and 70,000 tech workers had already left Russia by the third week of March, and perhaps 70,000 to 100,000 more could leave in April. Armenia and Georgia are first stops for many as they seek to make new lives elsewhere (Arraf, 2022). Russia is at economic war with the West and that war will continue regardless of the outcome of Russia's kinetic war with Ukraine.

For Europe, Russia pulled a gun on it and Europe cannot unsee that. As Žižek (2022) writes:

Russian Foreign Minister Sergei Lavrov has gone so far as to suggest that the only comprehensive solution would be to demilitarize all of Europe, with Russia with its army maintaining peace through occasional humanitarian interventions. Similar ideas abound in the Russian press. As the political commentator Dmitry Evstafiev explains in a recent interview with a Croatian publication:

“A new Russia is born which lets you know clearly that it doesn’t perceive you, Europe, as a partner. Russia has three partners: USA, China, and India. You are for us a trophy which shall be divided between us and Americans. You didn’t yet get this, although we are coming close to this.

Europe is as unlikely to accept “occasional humanitarian interventions” by Russia as Ukraine has been to greet Putin’s “spetsoperatsiya” (“special military operation”) forces with bread and salt. Exposure to weaponization of economic interdependence will be intolerable for Europe.

For China, the “no limits” pact has served to undermine the multilateral system that enabled its economic rise. While Beijing appears to be distancing itself to some extent from the appearance of its support for the war, a good part of the damage has already been done. Trade over the China-Europe Railway – a major part of China’s Belt and Road Initiative – will continue but it will effectively end in Russia and Belarus. The indefinite loss of access to European markets means the overall volume on this line will plummet, making it effectively a heavily subsidized white elephant. Similarly, China’s Polar Silk Road ambitions will likely end in Russia as well. China will find that, in Russia, it has acquired a second North Korea – and should hardly relish that fact – it already has one.

Insofar as one may use the metaphor of a “watershed” to describe the turn the world economy took when the Russian army invaded, the economic scenery on this side of the watershed looks significantly different from the side the world departed. Trade will be less multilateral and more regional. Security divides will be set in sharp relief – including in the digital domain. The lessons learned from the role of social media in preparing the ground for the war and influencing its progress will be translated into regulation; e.g., can democracies

continue to allow social media to be dominated by bots operating influence campaigns that sow division? Why not require platforms to verify that accounts are real people before they are empowered to post – licences are required to drive a car after all, and that is much less potentially damaging to society at large.

The international institutional framework created during the era of US hegemony will need to be reformed, repurposed, or replaced. Whether we are talking the UN, the WTO, or the various G-Xs. they simply do not seem to be fit for purpose, neither for the technological conditions of the 21st Century economy, which incentivize a new “Great Game”, nor for the geopolitical realities of the post-US hegemonic era, which have unleashed the anachronistic old “Great Game” now unfolding in Ukraine.

To the economic costs may be added the damage to global cooperation. Even as the world’s attention was focussed on the reports from the battlefields in Ukraine, the temperature over both poles reached unimagined highs (“absurd” in the words of climatologists; Seibt, 2022) and the pandemic found new wind in its sails through a new variant Ba2.

The 1862 poem by Pavlo Chubynsky, on which Ukraine’s national anthem is based, starts with the words: “Ще не вмерла Україна” – “Ukraine has not yet perished.” Around the world, the blue and gold of the Ukrainian flag light up buildings and monuments, and the sentiment “Today, we are all Ukrainians” is heard repeatedly as people stand with Ukraine and against autocracy and war. As we approach tackling what in all appearance is a perfect storm of challenges in the days and years ahead, with full understanding that the odds in life are always against, those opening words take on new meaning: defiance and hope. The generation that takes over from Putin’s dying generation – sadly, my generation – will need both in abundance.

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