**Introduction**

In response to Russia’s full-scale invasion of Ukraine in 2022, the West imposed an unprecedented set of sanctions on the Russian economy. Never before had such a large economy been subjected to such severe restrictions in such a short period of time. This novelty of the Russian sanctions meant that their effects were initially difficult to predict. Forecasts of Russia’s economic development, as well as economic indicators such as the ruble exchange rate, fluctuated wildly in the first months after the sanctions were imposed, illustrating the extreme uncertainty about their impact.

Two years later, the fog of economic warfare has lifted. Economists and policymakers have a much clearer view of what sanctions against Russia can achieve—and what goals may be out of reach, at least at a reasonable cost to the West itself. In many ways, Russia has fared much better than both Russian and Western economists expected. But there are also clear successes of the sanctions policy. This essay reflects on the experience of the past two years and suggests concrete goals that U.S. sanctions policy should pursue in the longer term.

Western sanctions can be broadly categorized into measures targeting Russian imports (especially the technology embargo), Russian exports (energy primarily, but not only), and financial sanctions against Russian banks and the government. In addition, a large number of Russian officials, businessmen, and propagandists have been sanctioned, but the economic impact of these listings is likely to be negligible.

The technology embargo has been a partial success, making it much more difficult for Russia to import Western machinery and parts. It makes the Russian economy less efficient and effectively blocks it from future technological progress. At the same time, it has not caused a collapse of industrial capacity and is unlikely to do so in the future.

The concrete impact of sanctions on Russian technology imports varies greatly from industry to industry. In most cases, Russian companies were able to circumvent the restrictions with indirect imports via third countries, domestic solutions, or Chinese alternatives, albeit at lower quality and higher prices. Only a few Russian industries have seen their output plummet, most notably the automotive industry, which was dominated by Western companies before the full-scale invasion.

Russia’s military production has increased significantly since the start of the full-scale invasion, as the Russian government ramped up spending on the war. Sanc-
tions have slowed this capacity expansion and made it more expensive but have not effectively stopped it. Most of the components and raw materials used in the military industry are domestically sourced. Russia also makes many of the machine tools it uses to produce its weapons.\(^1\) Russia is still dependent on Western parts, especially electronics and semiconductors, but has been able to import large quantities of these components through China and other non-sanctioning countries.\(^2\) The prices of these indirect imports are much higher, with some semiconductors costing Russia twice as much as before the war.\(^3\) But these additional costs pale in comparison to Russia's total military spending, which is expected to exceed $100 billion in the year 2024.

Russia's oil and gas production has also been surprisingly resilient to technology sanctions. In the coming years, Russian energy majors could even increase production by relying on in-house service providers and indigenous technologies.\(^4\) One exception is liquid natural gas (LNG) production and transportation, which has been more sensitive to technology sanctions because Russia has less experience in this field and its largest LNG producer, Novatek, relied heavily on Western partners in the past.

The effect of export sanctions on Russian energy, metals, timber, etc., is more direct and easier to measure. The biggest losses have been in energy exports: While commodity price fluctuations mask the magnitude of lost revenue, oil exports are significantly lower than they would be in a no-sanctions scenario. Because of the G7 oil price cap and the EU oil import embargo, Russia must offer discounts on its crude and oil products that exceeded $10 per barrel for most of 2023.\(^5\) For a single dollar per barrel in discounts, Russia loses about $2.5 billion in revenue annually. Russia suffered a similar blow to its gas revenues, but that was self-inflicted: By cutting off gas supplies to the EU, Russia ended a business that generated more than $30 billion in most years.\(^6\) Gazprom is unable to divert its gas from Western Siberia to alternative markets and has been forced to cut production significantly.

Financial sanctions against Russian banks and payment systems complicate all external economic relations for Russia, both with Western and non-sanctioning countries. Financial sanctions result in higher transaction costs for all trade and capital transfers to and from Russia. Many foreign banks outright refuse to work with Russian clients because of the cost of due diligence, the potential sanctions risks, and the small size of the Russian market.

The added layer of complexity created by financial sanctions worsens Russia's terms of trade, as both Russian exporters and importers bear the additional costs, which are likely to sum up to several billions of U.S. dollars per year. The threat of secondary financial sanctions is also a potent tool to enforce trade sanctions because it motivates banks in third countries to scrutinize their business relationships with Russia, making circumvention more difficult.\(^7\)

The freezing of Russia's Central Bank reserves was arguably the boldest measure taken by the West in response to the full-scale invasion of Ukraine. So far, Russia has not missed these reserves, as high commodity prices have meant ample inflows of hard currency. However, this does not diminish the effect of this measure: The currency reserves were Russia's insurance policy against a sudden loss of export revenues. Not having this insurance makes Russia more vulnerable because a drop in commodity prices would immediately send the ruble plunging and inflation soaring. The remaining liquid reserves denominated in Chinese yuan are not an adequate safety cushion for this scenario.

Taken together, Western sanctions have cost Russia its economic future and made it less resilient to economic shocks. Undoubtedly, Russia is slowly losing technological ground, and living standards for Russians are unlikely to improve. However, today's export revenues leave the Kremlin with more than enough economic resources to rebuild and even expand its military potential. The Russian economic status quo may prove sustainable despite the huge expenditures on the war in Ukraine as long as export revenues do not decline significantly.
Proposal

The war in Ukraine has turned Russia into a much more militarized power that is also much more hostile and openly aggressive toward the West. There is no reason to expect Putin’s regime to collapse anytime soon, making a shift in Russian foreign policy unlikely, while the risks of further escalation of Russia’s war remain high. This means that Russia will remain a threat to U.S. interests, and especially to its allies in Europe, for many years to come. It is therefore prudent to take a long-term view of sanctions policy.

It is often said that sanctions on Russia will show a stronger effect in the long run, but this should not be taken for granted. It is true that Russia is operating with an aging stock of Western equipment and machinery that was purchased before the sanctions and may be difficult to replace once it breaks down. Russia is also suffering from an exodus of foreign investment and has no way of building new cutting-edge industries, as Chinese investors are not coming to the rescue. Without productivity-enhancing investment, Russia will clearly be worse off in the long run as the war, emigration, and demographic trends shrink its workforce.

However, Russian companies are also learning how to adapt to sanctions. Over time, imported Chinese machinery will replace an increasing share of Western capital stock. Moreover, the most acute transportation bottlenecks that still impede trade along alternative trade routes, such as overland transit to China, will be overcome over time as the government invests in new railways and roads connecting to non-sanctioned countries.

Under today’s sanctions regime, the most likely scenario is that Russia’s economy will be able to operate and produce at current levels in the longer run, even provided Western sanctioners continue their fight against evasion tactics, put pressure on third countries involved in sanctions evasion, and don’t make it too easy for Russia to adjust. This would still allow the Russian regime to survive politically in most scenarios and to build up Russia’s military potential because it can use its ample export revenues to compensate for the inefficiencies caused by sanctions. Therefore, Russia’s longer-term economic potential boils down to the question of how well it will be able to export oil and gas, which make up the bulk of Russia’s export earnings.

If the goal is to significantly weaken Russia in the long term, sanctions need to be adjusted to make a more significant dent in Russian oil revenues. Current U.S. policy aims at “maintaining the volume of energy supplied, while minimizing the profit earned from it,” with the G7 oil price cap being the key instrument to achieve this. This is a prudent strategy in the short run because an abrupt reduction of Russian oil supplies would cause global oil prices to rise, which would be economically and politically risky in the context of heightened inflation in the West.

However, if the volume of Russian oil exports is to be maintained in the long term, this limits the prospects for reducing Russian oil revenues effectively. Despite its successes, the G7 oil price cap will most likely remain vulnerable to circumvention tactics because of its complexity. This is why—as a long-term goal—the U.S. should aim to reduce the volume of Russian oil exports. Over a multi-year horizon, global oil markets are more flexible and could adjust to a gradual reduction of Russian supply. A concrete and realistic goal of economic containment of Russia could be to reduce its crude oil and oil product exports by two million barrels per day by 2030, which would deprive Russia of another $50 billion in annual export revenues at today’s oil prices.

Due to the resilience of Russian oil production, a reduction in Russian export volumes would have to be achieved by targeting its shipping logistics. Some of Russia’s oil is out of reach for sanctions because it flows directly to China and Kazakhstan via pipelines. The natural target for further tightening oil sanctions is Russian crude transported by ship from ports in the Baltic and Black Sea. Before 2023, these shipments were mostly going to the EU. Since the EU introduced its oil import embargo, most of the oil has been redirected to other markets, primarily to India, Turkey, and China, which in the process saved billions of dollars...
because of the discounts Russian exporters are offering.  

Designing the right policy to limit Russian oil exports is challenging because it should avoid excessive volatility in the oil market and unnecessary collateral damage to bilateral relations with importers of Russian oil. This can only be achieved through a comprehensive policy that combines targeted coercive measures with diplomacy. A sensible first step would be a bolder crackdown on circumvention of the existing oil price cap, consisting of aggressive sanctioning of ships in the Russian shadow fleet as well as traders and banks involved. In combination with a gradual lowering of the price cap, this could already take some Russian oil off the market, while importers such as India and Turkey would continue to enjoy lower prices on the remaining volumes for some time.

At a later stage, the measures could be tightened further to lock in more Russian oil. Rather than targeting all Russian oil flows at once, sanctions should focus on oil coming from specific Russian ports in order to phase in the ban gradually and limit oil price volatility. One possible tool is a ban on the provision of maritime services to ships carrying Russian oil on specific routes, similar to measures originally planned in the EU’s 6th sanctions package. The timing of these measures will have to be opportunistic, depending on the situation on the global energy markets. The strategy for this can be prepared now to be implemented when energy markets are well supplied.

If sanctions against Russian oil logistics, i.e., the ships, traders and financial institutions involved, are not sufficient to reduce Russian crude oil exports, the threat of sanctions against buyers of Russian oil can be considered. However, this should only be used as a last resort if a constructive dialogue with India and Turkey on imports of Russian energy fails, in order to avoid damaging bilateral relations and overusing sanctions against third countries.

A second strategic goal of U.S. sanctions should be to keep West Siberian gas in the ground. Because of Russia’s decision to cut off exports to Europe, Gazprom now has huge spare capacity in its western gas fields. The U.S. should work with its European allies to replace Russia’s remaining pipeline exports to the EU and try to block the development of new export routes, whether by pipeline or new LNG capacity. In this context, the U.S. should make clear that it will sanction companies involved in the construction of Power of Siberia 2, a proposed pipeline project that could allow Gazprom to divert West Siberian gas to China via Mongolia.

In addition to exporting gas, Russia processes large amounts of natural gas to produce commodities such as plastics, ammonia, and fertilizers. Natural gas accounts for most of the cost of production, making these commodities an indirect way for Russia to export its gas, including to the West: In 2023, the EU and U.S. imported Russian fertilizer for over $3 billion. Western fertilizer producers have found it difficult to compete with Russian imports and have criticized this new dependence. The West originally decided not to sanction Russian fertilizers because of high global food prices and inflation in 2022-2023. However, as world markets normalize, an end to direct imports from Russia should be considered to avoid giving Moscow an indirect outlet for its natural gas. Targeting Russian plastics production, such as the planned Baltic Chemical Complex, would also help to keep West Siberian gas in the ground.

Third, sanctions policy should enable the outflow of hard currency from Russia as much as it restricts the inflow of export revenues to Russia. While the optics of hard currency outflows are often problematic from a political perspective, because they involve Russians consuming imported goods, traveling, and sending their savings abroad, these activities can help undermine Russia’s macroeconomic stability in the long run by weakening the ruble and driving up inflation. Of course, the West cannot force Russians to spend and export capital, so the focus of sanctions should be on avoiding too many restrictions on hard currency moving out of Russia.

For example, imports of finished consumer goods into Russia weaken Russia’s trade balance and ultimately the ruble. This is not an argument for lifting existing measures on luxury goods, which would send the
wrong signal. But new sanctions should focus strictly on machinery and intermediate goods that are key to Russian supply chains, not on consumer goods without military or industrial applications. If Russians save more of their income because they don’t see good opportunities to spend it, this would make it easier for the government to finance the war while avoiding inflation.

Similar policy trade-offs exist with respect to Russian capital outflows. From an economic perspective, there should be no additional barriers for Russian companies or citizens—especially those who have left the country—to move their funds out of Russia. In fact, it may be beneficial to have a dedicated channel for these outflows that can be monitored, such as through a Western bank, to ensure that these funds are not used to pay for sanctioned imports. While capital outflows may not be a major problem for Russia at the moment, as the ruble is seen as relatively stable by Russians, a weakening of the Russian currency could trigger a rush for the exits, similar to what happened in the early weeks of Russia’s full-scale invasion.

### Impact

Unfortunately, the outcome of economic sanctions is not fully controlled by the West, as external conditions play a crucial role. A period of higher oil prices is enough to offset the effect of most of the measures imposed on the Russian economy. Therefore, a realistic long-term impact of sanctions is to further erode Russia’s economic resilience through falling export revenues, making it as difficult as possible for the regime to rebuild its foreign exchange reserves and fiscal buffers. If external conditions become less favorable, this would plunge Russia into a deep economic crisis and force the Russian regime into a difficult trade-off between economic stability and military aggression.

The stability of the ruble and the level of inflation are key to the Kremlin’s longer-term policy options. As long as the regime can keep inflation under control, it will have no problem financing its war spending, whether through the remaining assets of its National Welfare Fund, additional public debt, or, eventually, with the direct help of the Central Bank. High inflation would turn economic problems into political problems, as rising prices are felt acutely by the population. A weaker ruble would also exacerbate the effects of the technology embargo by making circumvention more expensive in ruble terms.

A desired side effect of sanctions is the creation of leverage for negotiations, which could become relevant in the long run. Russia is unlikely to become less confrontational under Putin, and conflicts are certain to remain under his successor. However, it may be useful to have leverage for a future negotiating scenario with a post-Putin government that may be in economic trouble and seek a less confrontational foreign policy.

The problem is that most trade and financial sanctions lead to economic adjustments that are permanent, in Russia’s case the rebuilding of supply chains with China, which make it less interesting for the target country to see these sanctions lifted. What any future Russian government, especially under economic duress, would be keen to see is (1) the unfreezing of the Russian Central Bank’s reserves and (2) the lifting of restrictions on energy exports, as both would mean the immediate availability of hard currency. Although short-lived and controversial, the 2015 Iran nuclear deal demonstrated that it is possible to use sanctions relief in negotiations when the economic benefit to the sanctioned country is concrete and immediate.

The fate of Russia’s Central Bank reserves is unclear at this point. It cannot be ruled out that they will have to be seized to arm Ukraine or pay for its reconstruction in the coming years. The West should therefore aim to have another card up its sleeve when the time comes, even if it is in the distant future. A significant restriction on Russian oil exports could provide this leverage.

Sanctions alone will not stop Russia from being a threat in the long run. But if designed properly, they will limit Russia’s economic and military potential and better position the West to take advantage of the opportunities that will inevitably arise at some point—be it a period of lower oil prices or political upheaval in Moscow.
Endnotes

1  Cooper, J. (2024). The machine tool industry of Russia at a time of war and sanctions. Post-Communist Economies, 1–35. https://doi.org/10.1080/14631377.2024.2325787


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