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THE RICOCHET EFFECT OF SANCTIONS ON RUSSIA: EXPLORING THE UNFORESEEN ECONOMIC AND GEOPOLITICAL CONSEQUENCES

Serhii Druchyn

Warsaw, March 2025

Serhii Druchyn

THE RICOCHET EFFECT OF SANCTIONS ON RUSSIA: EXPLORING THE UNFORESEEN ECONOMIC AND GEOPOLITICAL CONSEQUENCES

Introduction

Economic sanctions, as a component of international diplomacy and state policy, represent a complex mechanism aimed at influencing a state's behavior through non-military means. In today's geopolitical landscape—characterized by increased global interdependencies and rapid technological advancements—sanctions have become a key instrument in the toolkit of international policy. This evolution underscores a strategic shift from traditional military engagement to economic measures designed to enforce compliance or effect policy change in targeted states, as detailed by Hufbauer, Schott, Elliott, and Oegg (2007).

The conceptual framework governing economic sanctions distinguishes between multilateral and unilateral sanctions. Multilateral sanctions, which arise from international consensus and are facilitated by organizations such as the United Nations, emphasize the global community's commitment to upholding international norms and responding to severe breaches of international law. In contrast, unilateral sanctions are driven by the strategic imperatives of individual states, highlighting the inherent complexity in balancing national interests with the principles of global governance (Marossi & Bassett, 2015).

The ethical and legal dimensions of economic sanctions occupy a central role in the discourse regarding their legitimacy and effectiveness. Given their potential to significantly impact both targeted states and their populations, sanctions must be grounded in robust ethical and legal frameworks. These frameworks ensure that sanctions not only fulfill their intended diplomatic and political objectives but also adhere to the overarching principles of international law and human rights, thereby safeguarding the welfare of affected communities (Early & Schulzke, 2019).

In the era of globalization, the influence of non-state actors and technological innovations on the dynamics of economic sanctions is growing. These factors compel a re-evaluation of traditional sanction models, advocating for a more sophisticated and comprehensive approach. Such an approach must encompass a wider range of ethical, legal, and practical challenges associated with sanctions, ensuring that they remain consistent with the goals of international diplomacy and the tenets of global governance (Alexander, 2009).

Globalization has also taken on a different meaning during its renaissance. In the third decade of the 21st century, globalization slowed significantly, mainly due to the intensification of Cold War sentiments. After Russia's invasion of Ukraine in 2022, there was a fundamental disconnection from the Russian economy. Currently, Russia is the most sanctioned country in the world (Castellum.AI, 2025). At the same time, the trade war between the USA and China is intensifying, and the threat of a massive conflict in the Middle East is growing. All these events are leading to a renewed polarization of the world and its division into two camps, similar to the period from 1945 to 1991. However, the leader of the latter camp has now changed, with China now jointly leading with Russia. Such polarization of the world will inevitably result in the imposition of even more sanctions and the escalation of larger trade wars (hopefully not conventional wars).

In the face of these challenges, discussions about economic sanctions are becoming increasingly popular, as they provide important insights into their application and effects. Sanctions are a complex diplomatic tool that combines the enforcement of international norms with national interests. However, their costs often outweigh the potential benefits achieved through such measures. The effectiveness of sanctions is conceptualized in various ways within the existing literature. **This paper aims to address this challenge by examining the theoretical foundations underlying sanctions, identifying the specific sanctions currently in place, and analyzing their impact on the global economy.**

The paper is structured to provide a comprehensive analysis of economic sanctions, with a particular focus on those imposed on Russia and their global repercussions. The first section establishes the theoretical foundations of sanctions, exploring their definitions, types, and the economic theories that underpin their implementation and effectiveness. The second section examines the evolution of sanctions in the third decade of the 21st century, highlighting the unprecedented scope and intensity of recent measures. The third section analyzes Russia's position as the most sanctioned country in history, detailing the multiphase expansion of restrictive measures and Russia's adaptive strategies. The fourth section evaluates the domestic economic impact on Russia, revealing a paradoxical situation of short-term resilience amid growing structural vulnerabilities. The fifth section introduces and explores the concept of the "ricochet effect"—the unintended consequences of sanctions on the economies of sender countries and third parties, with a particular focus on Europe's energy security, inflation, and industrial strain. Finally, the conclusion synthesizes these findings, highlighting the complex interplay between sanctions' efficacy and their systemic costs in a multipolar world.

Theoretical Foundations

Economic sanctions are a common tool in international relations, used by countries to influence the behavior of other states without resorting to military action. These measures are intended to restrict the economic activity of the target country to achieve political or economic objectives. The theoretical foundations of sanctions are rooted in various disciplines, including economics, political science, and international relations (Eyler, 2007). Economic sanctions are defined as the deliberate withdrawal from customary trade or financial relations for the purposes of foreign policy and security. They can be comprehensive—affecting all economic relations—or targeted, focusing on specific sectors or individuals. The primary goal of sanctions is to change behavior, punish, isolate, and signal disapproval. Sanctions aim to force the target country to change its policy or conduct, particularly in areas such as human rights, nuclear proliferation, or military aggression (Baldwin, 2020). They can serve as a punitive measure to isolate and stigmatize the target country within the international community (Hufbauer et al, 2007). Furthermore, sanctions can be used to signal condemnation of certain actions by the target country to both domestic and international audiences (Galtung, 1967).

Sanctions can generally be divided into trade sanctions, financial sanctions, and smart sanctions (Doxey, 1980). Trade sanctions include the restriction of imports or exports to and from the target country. For example, the United States imposed trade sanctions on Cuba, which severely limited its trade with the outside world (Renwick, 1981). Financial sanctions restrict access to international financial markets and may include measures such as asset freezes, bans on financial transactions, and restrictions on investments (Steil and Litan, 2006). Smart sanctions—often overlapping with financial or trade tools—aim to minimize humanitarian impact by focusing on specific individuals, entities, or sectors, such as political elites or strategic industries (Cortright and Lopez, 2002).

The effectiveness of sanctions is often analyzed using various economic theories, including classical trade theory, game theory, and public choice theory. Classical trade theory suggests that by limiting trade, sanctions can reduce the economic welfare of the target country, thereby pressuring its government to change its policy (Hufbauer et al., 2007). Game theory models the strategic interactions between the sanctioning country and the target country. Sanctions can be seen as part of a larger game, in which each side anticipates the other's reactions and takes appropriate measures (Martin, 1992). Public choice theory examines how interest groups in both the sanctioning and target countries influence the implementation and effectiveness of sanctions, emphasizing the role of domestic politics in decisions regarding sanctions (Kaempfer and Lowenberg, 1988).

Sanctions can affect the target country in several ways. From an economic perspective, sanctions can lead to a reduction in GDP, an increase in inflation, and currency devaluation in the target country. The resulting economic hardships may pressure the government to change its behavior (Eyler, 2007). From a political perspective, by weakening the target country's economy, sanctions can undermine the legitimacy of the ruling regime and strengthen the position of opposition groups (Baldwin, 2020). Humanitarian consequences are also significant; comprehensive sanctions can have serious repercussions by restricting the population's access to basic goods and services. This has led to a shift toward smart sanctions, which aim to mitigate these negative impacts (Cortright and Lopez, 2002).

The effectiveness of sanctions depends on various factors, including international support, economic interdependencies, and the resilience of the target country. Sanctions are more effective when there is broad international backing and cooperation. Unilateral sanctions are often less effective due to the availability of alternative markets and financial backers for the target country (Galtung, 1967). The economic interdependence between the sanctioning country and the target country plays a significant role. Sanctions are more effective when the target country is heavily reliant on economic relations with the sanctioning country (Eyler, 2007). The political and economic resilience of the target country, including its ability to find alternative trading partners and sources of financing, can weaken the effectiveness of sanctions (Miyagawa, 1992).

Sanctions in the 3rd decade of XXI century

The third decade of the 21st century has marked a turning point in the use of economic sanctions as a tool of international statecraft. Unlike previous periods, when sanctions were typically limited in scope and applied in response to isolated events, recent years have seen a dramatic escalation in both their frequency and intensity. This trend reflects not only the growing polarization of global politics but also the increasing reliance on economic pressure as a substitute for direct military intervention. In particular, the sanctions imposed following Russia's annexation of Crimea in 2014 and its full-scale invasion of Ukraine in 2022 illustrate how sanctions have evolved from targeted diplomatic measures into a comprehensive geoeconomic strategy with global ramifications.

Evolution of Sanctions Since 2000

The first two decades of the 21st century have witnessed a marked intensification in both the frequency and scope of economic sanctions. Initially employed as tools to constrain hostile behavior during the Cold War, sanctions have evolved into increasingly complex and targeted instruments of economic coercion. This transformation reflects structural changes in the

international system, as well as the growing availability of legal and financial mechanisms to implement and enforce restrictions across jurisdictions.

According to Morgan, Syropoulos, and Yotov (2023), the number of active sanctions cases has increased significantly since the early 2000s, reflecting both a normative shift and an institutional adaptation to new forms of international conflict. Their findings, based on the Global Sanctions Data Base, indicate that sanction episodes initiated after 2000 tend to rely more on financial measures, asset freezes, and travel bans, rather than traditional trade embargoes. This reflects a broader move toward so-called *smart sanctions*, aimed at maximizing political impact while minimizing humanitarian consequences.

Empirical evidence compiled by Hufbauer, Schott, Elliott, and Muir (2012) reinforces this trend, identifying at least 17 new major sanction episodes initiated between 2000 and 2012. These included actions against states such as Zimbabwe (2002–), Sudan (2004–), Syria (2004–), North Korea (2006–), Iran (2006–), Myanmar (2007–), and Libya (2011), among others. While the motivations varied—ranging from nuclear proliferation to human rights violations—these cases were typically characterized by multilateral coordination, particularly among the United States, the European Union, and, in some cases, the United Nations Security Council.

From a strategic perspective, sanctions during this period increasingly relied on the international financial system as an enforcement tool. The extraterritorial reach of U.S. law, combined with the centrality of Western financial institutions, enabled a form of *weaponized interdependence* (Farrell & Newman, 2019), in which access to capital markets, payment systems (e.g., SWIFT), and dollar-clearing mechanisms became central levers of influence.

This evolution has not only increased the technical sophistication of sanctions but also broadened their objectives. Sanctions are no longer employed solely to compel behavioral change; they also serve to signal political values, deter future violations of international norms, and isolate regimes deemed to undermine global stability.

Russia as the most sanctioned country in the history

The sanctions regime imposed on the Russian Federation following its aggression against Ukraine constitutes an unprecedented case of multilateral economic coercion directed at a G20 economy. According to data from early 2025, Russia has become the most sanctioned state in modern history, subject to 24,387 individual restrictive measures, of which 21,692 have been imposed since the full-scale invasion of Ukraine in February 2022 (Castellum.AI, 2025). This represents not merely

a change in quantitative intensity but a qualitative transformation in the role of sanctions as instruments of systemic economic containment.

Multiphase Expansion and Escalation

The evolution of sanctions against Russia can be analytically divided into four distinct phases. The initial phase, initiated in 2014 following the annexation of Crimea, involved targeted financial sanctions and export controls focused on dual-use technologies and offshore drilling equipment. Despite limited scope, these measures introduced the logic of sectoral sanctions coordinated among the EU, United States, and their partners.

The second phase (2018-2021) constituted a response to human rights violations and extraterritorial aggression, including the poisoning of Sergei Skripal and cyberattacks. This stage was characterized by increasing utilization of extraterritorial enforcement mechanisms, particularly within the U.S. sanctions architecture, and growing institutional capacity within the EU to adopt autonomous sanction designations.

The third phase, commencing in February 2022, entailed the rapid and massive imposition of restrictive measures by over 40 countries, including all G7 members, the EU, Switzerland, Japan, South Korea, and Australia. This phase expanded the sanctions regime to encompass:

- Freezing of foreign exchange reserves held by the Central Bank of Russia, amounting to approximately $280 billion (U.S. Department of the Treasury, 2023);
- Suspension of SWIFT access for seven major Russian financial institutions;
- Comprehensive prohibitions on exports of advanced technologies, machinery, aircraft components, and semiconductor elements;
- Price caps and embargoes on Russian crude oil and refined petroleum products;
- Import restrictions on coal, aluminum, gold, steel, and—since 2024—diamonds and helium;
- Prohibitions on professional services, including legal, auditing, engineering, and consulting.

The fourth phase (2023-2025) reflects a transition toward regulatory tightening and circumvention control. Measures adopted during 2024-2025 increasingly target third-country intermediaries, logistics firms, shipping registries, and providers of financial infrastructure enabling indirect trade with sanctioned Russian entities. For instance, the EU's 16th sanctions package (February 2025)

incorporated over 80 new designations and introduced restrictions on cryptocurrency exchanges and more than 150 vessels associated with circumventing oil sanctions (European Council, 2025).

Strategic Objectives and Structural Orientation

The cumulative logic of the sanctions regime diverges from traditional punishment-oriented approaches. Rather than seeking immediate behavioral modification, the predominant strategic objective is to systematically weaken Russia's structural capacity to sustain military aggression and geopolitical assertiveness. This includes long-term decoupling from Western financial systems, technology value chains, and critical infrastructure. The sanctions architecture targets foundational sectors of the Russian economy, including:

- Energy and raw materials sectors, where measures affect investment flows, extraction technology, and maritime transport capabilities;
- Advanced manufacturing, particularly industrial electronics, precision tools, and microprocessors;
- Financial architecture, where dollar and euro-denominated transactions are restricted and reliance on Western capital markets is systematically dismantled;
- Scientific cooperation networks, including expulsions from European research frameworks and prohibitions on dual-use research collaboration.

This approach aligns with what Farrell and Newman (2019) conceptualize as “weaponized interdependence” — a strategic use of central positions in global economic networks to exert coercive pressure on adversaries. In this logic, sanctions do not merely aim to punish but to disrupt key flows of capital, information, and goods by exploiting systemic chokepoints.

Institutional Mechanisms and Legal Frameworks

The sanctions regime is underpinned by an increasingly sophisticated set of legal and institutional instruments. Within the European Union, restrictive measures are enacted under Articles 29 and 215 of the Treaty on the Functioning of the European Union (TFEU), enabling both individual designations and sectoral measures. The establishment of a centralized Sanctions Envoy position in 2023 has enhanced enforcement coherence across member states. The United States has primarily relied on executive orders and legislation such as CAATSA and IEEPA, facilitating rapid implementation of asset freezes, export prohibitions, and secondary sanctions.

Significantly, the role of compliance networks—financial institutions, insurers, logistics providers, and certification agencies—has become central to enforcement efficacy. The indirect effect of

reputational and regulatory risk has generated substantial over-compliance in the private sector, amplifying the economic impact beyond the explicit legal framework.

Russia's Adaptive Strategies

Despite the comprehensive nature of Western sanctions, the Russian state has implemented a series of adaptive measures to mitigate their impact:

- Reorientation of trade flows toward China, India, Türkiye, and the UAE;
- Expansion of parallel import mechanisms, frequently channeled through Eurasian Economic Union (EAEU) member states;
- Import substitution policies aimed at accelerating domestic production in information technology, agricultural products, and manufacturing sectors;
- Development of alternative payment infrastructures, including SPFS and MIR systems, though their international adoption remains constrained.

Nevertheless, these adaptations remain partial and asymmetric in their effectiveness. While Russia has succeeded in maintaining fiscal surpluses through oil and gas revenues—primarily by redirecting exports to Asian markets—its high-technology sectors face critical shortages of inputs, undermining the country's capacity for industrial renewal. Furthermore, import substitution strategies in sensitive domains such as aircraft maintenance, semiconductor manufacturing, and pharmaceutical production have demonstrated limited efficacy.

Fragmentation and Global Economic Implications

The implementation of sanctions has illuminated the increasing fragmentation of the global economic order. While Western economies have largely maintained policy alignment, major Global South countries have adopted neutral or ambivalent positions. This asymmetry not only diminishes enforcement effectiveness but creates opportunities for sanctions arbitrage, particularly in commodities markets and logistics networks. The expanding role of third-country intermediation hubs underscores the necessity for coordinated secondary measures—whose legitimacy remains contested under international legal frameworks.

Concurrently, the broader macroeconomic consequences of sanctions, including energy price volatility, supply chain disruptions, and inflationary pressures, have elicited concern among policymakers in sanctioning states. The fundamental challenge lies in calibrating economic coercion instruments to minimize unintended domestic economic costs while maintaining pressure on the target economy.

The Domestic Economic Impact: Russia Under Pressure

The unprecedented scale and structural orientation of the sanctions regime imposed on the Russian Federation since 2022 have generated profound domestic economic consequences. While short-term indicators suggested a degree of macroeconomic resilience in the immediate aftermath of the invasion of Ukraine—buoyed by high energy revenues and aggressive state intervention—emerging evidence points to growing constraints on Russia's fiscal sustainability, technological capacity, and long-term development prospects.

This section examines the internal economic effects of sanctions with a focus on five key dimensions: (1) trade reorientation and external balance; (2) monetary stability and inflation dynamics; (3) industrial production and technological access; (4) fiscal pressures and public spending; and (5) structural adaptation and substitution strategies. Drawing on international data sources and secondary literature, the analysis highlights the asymmetric distribution of costs across sectors and time horizons, as well as the complex interplay between state responses and external constraints.

The economic sanctions imposed on Russia since the annexation of Crimea in 2014—and significantly expanded after the full-scale invasion of Ukraine in February 2022—have created one of the most extensive coercive regimes in the modern global economy. With over 24,000 active measures in place as of early 2025 (Castellum.AI, 2025), Western policymakers expected a prolonged and deep economic crisis in Russia. Yet the initial forecasts of collapse have failed to materialize. Instead, what has emerged is a paradox: a sanctioned state experiencing a short-term rebound in key macroeconomic indicators while simultaneously confronting mounting structural constraints.

Russia's real GDP grew by 3.6% in 2023, recovering from the 1.2% contraction recorded in 2022, and continued to expand in early 2024, with a reported year-on-year increase of 4.6% in January and 7.7% in February. Industrial output in Q1 2024 rose by 5.6%, supported by manufacturing growth of 8.8%—a figure rarely observed in post-Soviet Russia. The unexpectedly strong GDP growth in early 2024—4.6% year-on-year in January and 7.7% in February—has been partially attributed to robust domestic demand, driven by real wage growth (+10% y/y), historically low unemployment (2.7%), and a renewed expansion in consumer credit.

However, this rebound is not indicative of broad-based economic health. Analysts widely agree that growth has been disproportionately driven by military Keynesianism—a state-led surge in spending on defense, social transfers, and import substitution programs (CRS, 2024). Military expenditures, which accounted for 4.1% of GDP in 2022, are projected to rise to 6.2% by 2025,

reflecting the increasing militarization of public finances (CRS, 2024). This orientation has come at the expense of civilian investment and long-term productivity growth.

The fiscal outlook remains stable in the short term, due largely to sustained energy revenues and capital controls. Nonetheless, the government deficit has widened, and pressure on non-military public services has increased. Inflation reached 7.8% in April 2024—almost double the Central Bank of Russia's 4% target—forcing policymakers to maintain an unusually high policy rate of 21%, among the highest in Russia's post-2000 history. While this has helped to stabilize the ruble and dampen speculative outflows, it has also contributed to a growing burden on households and small enterprises.

The structural composition of GDP has also changed. Prior to the war, Russia's economy remained heavily reliant on the extractive sector, but the sanctions have disrupted technological inputs, particularly in energy infrastructure, aviation, and industrial machinery. This disruption has not led to full decoupling but rather to substitution through lower-quality imports from China, Türkiye, and Central Asian countries. According to estimates by the EconPol consortium, Russia in 2023 managed to secure between 60% and 170% of sanctioned high-priority items (such as advanced microchips and machine tools) compared to 2021 levels, depending on assumptions about quality deterioration (Astrov et al., 2024). These substitutions often involve higher logistical costs, lower performance, and increased dependency on a narrower set of suppliers.

The challenges of technological backwardness are also evident in the defense-industrial sector. While the volume of output has increased, qualitative constraints persist. The loss of Western components has disrupted supply chains, and despite some success in domestic production, key bottlenecks remain in areas such as optics, avionics, and precision engineering (Flach et al., 2023). Import substitution has proven effective in basic goods (e.g., consumer electronics), but high-tech sectors have suffered from deteriorating innovation ecosystems and limited R&D cooperation.

Adaptation strategies have focused on external reorientation and internal substitution. Trade flows have shifted dramatically: in 2021, over 36% of Russian imports came from the EU; by late 2023, China alone accounted for more than 38% (Jánošová, 2023). Bilateral trade with Türkiye and Kazakhstan has also surged, often serving as conduits for re-exported Western goods. Nevertheless, the effectiveness of these channels is diminishing due to increasing Western pressure on banks and logistics operators in third countries. In late 2023 and early 2024, new U.S. executive orders and EU anti-circumvention measures created delays and cancellations in shipments—even in transactions denominated in yuan or dirhams (Astrov et al., 2024)

Finally, the macroeconomic gains conceal growing long-term vulnerabilities. Potential GDP growth has declined relative to pre-war projections. In a counterfactual scenario modeled by the Vienna Institute for International Economic Studies, Russia's real GDP in 2023 would have been 1.1% higher had the war and sanctions not occurred (Astrov et al., 2024). Moreover, the current expansion is consumption-led and state-driven, with little contribution from private investment. Business sentiment remains weak, especially in export-oriented and high-tech industries.

In summary, the Russian economy has weathered the initial shock of sanctions through state-led adaptation, favorable terms of trade, and realignment with non-Western partners. However, this resilience is fragile and uneven. The combination of inflationary pressure, structural technological degradation, fiscal militarization, and international isolation raises serious concerns about the long-term viability of Russia's current economic model under sanctions.

The "Ricochet" Effect

The unprecedented sanctions regime imposed on Russia following its 2022 full-scale invasion of Ukraine has triggered renewed interest in the indirect and often unintended economic consequences of economic coercion. While considerable scholarly attention has focused on the effectiveness of sanctions in changing state behavior or impairing the target's economic capabilities (Hufbauer et al., 2007; Morgan et al., 2023), less examined—but increasingly relevant—are the so-called "ricochet effects": adverse spillovers experienced by sender states or third-party economies.

This section presents a structured review of the literature on the ricochet effects of sanctions, with a particular emphasis on Western sanctions imposed on Russia after 2022. It synthesizes conceptual definitions, theoretical debates, and empirical evidence that highlight how sanctions can generate economic and political costs not only for the sanctioned country but also for those who impose them or operate within the affected global system.

Conceptualizing the Ricochet Effect

The term ricochet effect is not systematically defined in the sanctions literature, but it broadly refers to the unintended negative consequences of sanctions for actors other than the target. Scholars have described these outcomes using various conceptual lenses, such as spillover effects (Flach et al., 2023), domestic costs for the sender state (Early, 2015), or consequences arising from political backlash and policy distortion (Kaempfer & Lowenberg, 2007). These costs can manifest as trade disruptions, inflationary pressures, political instability, or erosion of institutional credibility in the sanctioning states.

Early (2015) documents in detail how sanctions can economically and politically backfire on sender countries—by triggering export losses, job cuts, and lobbying pressure from affected industries. Kirshner (1997) argues that the effectiveness of economic sanctions depends not on their aggregate economic impact, but on how they affect domestic political structures—both in the target and potentially in the sender country. He emphasizes that poorly focused sanctions can undermine strategic objectives and even disrupt the sender's long-term economic positioning.

Ricochet effects may arise through several transmission mechanisms:

1. Price effects: Sanctions may disturb global commodity markets, particularly in energy, food, and metals, driving up prices and increasing input costs for sender countries and their allies (IMF, 2023).

2. Supply chain disruptions: Especially in highly integrated economies, trade sanctions may restrict access to intermediate goods, delay production cycles, and lead to deindustrialization in exposed sectors (Flach et al., 2023).

3. Overcompliance and uncertainty: Fear of secondary sanctions or regulatory penalties can lead to risk-averse behavior among firms, amplifying the initial intent of sanctions but also disrupting legitimate trade.

4. Inflationary transmission: Higher import prices due to disrupted trade channels or elevated global energy prices can translate into domestic inflation, prompting monetary tightening and financial stress (Jánošová, 2023).

These mechanisms imply that sanctions should be analyzed not merely in terms of bilateral sender-target dynamics, but as interventions in a global economic system, capable of generating unintended and complex feedback loops.

Theoretical perspectives differ in their treatment of these effects. Realist and strategic schools often view ricochet costs as a necessary price for geopolitical signaling or containment (Kirshner, 1997), whereas institutionalist and liberal economists emphasize the need for cost-benefit assessment, compensation mechanisms, and multilateral coordination to mitigate secondary harm (Kaempfer & Lowenberg, 2007).

Recent literature on the Russia sanctions specifically points to Europe as the region most affected by ricochet effects. The sharp increase in energy prices, shifts in global supply chains, and the cost of adapting industrial capacity have been highlighted as primary channels through which sanctions have rebounded on the EU economies (Astrov et al., 2024; Jánošová, 2023).

Ricochet Effects in Europe: From Energy Shock to Inflation and Industrial Strain

Among the most immediate and far-reaching ricochet effects of sanctions imposed on Russia have been the consequences for Europe's energy security, macroeconomic stability, and industrial competitiveness. The European Union's coordinated decision to reduce its dependence on Russian fossil fuels—particularly natural gas—was one of the central pillars of its response to the invasion of Ukraine. However, this transition, implemented under emergency conditions and geopolitical pressure, generated severe short- and medium-term costs for key member states and sectors.

Prior to 2022, Russia supplied over 40% of the EU's natural gas, 25% of its oil, and roughly 45% of its coal imports (International Energy Agency, 2022). In 2021 alone, European payments to Russia for energy exceeded €100 billion. With the imposition of sanctions, particularly the EU embargo on Russian coal (August 2022), crude oil (December 2022), and oil products (February 2023), coupled with Russia's curtailment of pipeline gas deliveries, energy prices surged to historic highs. European gas prices (Dutch TTF benchmark) peaked above €300/MWh in August 2022—more than tenfold the pre-crisis average (Bruegel, 2023).

This price shock had wide-reaching implications for both consumers and firms. Due to the EU's marginal pricing model, elevated gas prices drove up wholesale electricity prices, eroding household purchasing power and business margins. According to the International Monetary Fund (2023), energy inflation accounted for more than half of headline inflation in several EU countries during 2022. In Germany, Austria, and the Baltic States, annual inflation exceeded 10%, peaking above 20% in Estonia and Lithuania. These pressures prompted EU governments to introduce large-scale energy subsidies and price caps, with combined fiscal costs exceeding €650 billion by the end of 2023 (Bruegel, 2023).

The macroeconomic ripple effects soon reached monetary policy. Faced with multi-decade highs in inflation, the European Central Bank launched an aggressive tightening cycle in 2022, raising interest rates from zero to 4.5% within 18 months. While intended to anchor inflation expectations, this policy shift increased borrowing costs for households and firms. Small and medium-sized enterprises (SMEs), already vulnerable due to input price volatility, faced deteriorating access to credit and declining investment intentions, particularly in Southern and Eastern Europe (European Central Bank, 2023).

The industrial sector was hit particularly hard. Energy-intensive industries such as chemicals, steel, paper, and glass experienced sharp contractions or shutdowns due to unmanageable energy input costs. German chemical giant BASF announced the downsizing of its Ludwigshafen complex in late 2022, citing long-term energy cost differentials between Europe and other regions (Reuters,

2023). A broader trend of industrial relocation and capacity reduction raised concerns about the EU's long-term manufacturing competitiveness.

Moreover, the rapid shift toward liquefied natural gas (LNG) imports, necessary to replace lost Russian supply, involved higher marginal costs and significant infrastructure constraints. Landlocked countries lacking regasification terminals faced additional logistical and pricing pressures. Although the crisis accelerated investments in renewables and energy efficiency, the EU simultaneously expanded LNG infrastructure and prolonged support for fossil gas, including subsidies and import guarantees. According to Ember (2025), these short-term measures risk locking in new fossil dependencies and undermining the bloc's long-term decarbonisation goals.

In retrospect, the 2022–2023 energy and inflation shock in Europe highlights the economic costs of abrupt geopolitical decoupling in the absence of infrastructural readiness. Scholars have increasingly characterized this episode as a case where foreign policy priorities outpaced market and institutional capacities (Astrov et al., 2024; Flach et al., 2023). The experience underscores the necessity for more resilient energy systems, stronger burden-sharing mechanisms within the EU, and anticipatory planning to mitigate the domestic fallout of international economic sanctions.

Conclusions

The sanctions imposed on Russia in response to its aggression against Ukraine have triggered one of the most extensive and sophisticated economic coercion regimes of the 21st century. As the most sanctioned country in modern history, Russia has become both a test case for the evolving architecture of global sanctions and a focal point for assessing their broader systemic consequences. This article has examined the multidimensional impact of this sanctions regime—both on Russia's internal economic dynamics and on the international order more broadly.

Three key conclusions emerge.

First, while sanctions failed to induce a rapid economic collapse, they have significantly reshaped the structure of the Russian economy. Although macroeconomic indicators such as GDP and industrial output have rebounded in the short term—thanks to high military spending, redirected trade flows, and state intervention—these gains conceal growing long-term vulnerabilities. Russia faces rising inflation, weakening technological capabilities, and growing dependence on a narrow set of non-Western partners. The resulting model is one of militarized and consumption-driven growth, but without durable foundations for innovation or diversification.

Second, the sanctions have produced profound ricochet effects on the economies of the sender countries, especially in Europe. The sudden disruption of energy flows from Russia exposed deep

infrastructural and policy asymmetries within the EU. The inflationary surge and energy crisis of 2022–2023 revealed both the costs of rapid decoupling and the limits of reactive policy-making. While public subsidies and monetary tightening helped contain some of the effects, the burden has fallen unevenly across sectors, countries, and social groups, raising questions about political cohesion and strategic resilience.

Third, sanctions have contributed to the growing fragmentation of the global economic system. Third-party countries—ranging from India and Türkiye to Central Asian states—have leveraged the emerging gray zones of trade to benefit economically, while many developing economies have suffered from higher import prices and market instability. At the same time, efforts to bypass Western financial channels and reduce dollar dependence point to a shifting international landscape in which sanctions are both a symptom and a driver of geopolitical realignment.

In sum, the sanctions regime against Russia has demonstrated both the power and the limitations of economic statecraft in a multipolar world. While effective in disrupting key sectors and signalling collective disapproval, sanctions also carry significant unintended costs.

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