

Trade Sanctions against Russia: Stylized Facts[†]

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After decades of globalization, a trend toward the fragmentation of global trade along geopolitical lines is emerging (Gopinath et al. 2024). Trade sanctions are being employed with increasing frequency, with the sanctions against Russia after its 2022 invasion of Ukraine standing out as one of the most significant examples.

According to some estimates, the newly imposed sanctions on Russia dwarf the stock of all preexisting sanctions against other countries combined (e.g., Castellum 2025). This suggests that the Russian case provides a unique opportunity to study the effects of sanctions when applied on an unprecedented scale and targeting a major economy. However, this unprecedented scale has also created significant challenges for analysis, as the sanctions on Russia were imposed by many countries at different points in time, and no single dataset has managed to cover all of them.

We address this gap by building the first comprehensive dataset on sanctions against exports to (or imports from) Russia. We then use these data to present several key descriptive statistics that remained absent from the policy and academic discussion thus far.

Specifically, we document four stylized facts. First, sanctions banned 33 percent of Russia's pre-2022 imports in value. Second, though most of the sanctions are concentrated in a few high-tech product categories, at least as much import within these categories remained unsanctioned. Third, substantial variation exists in the specific types of banned products across countries, despite the coordinating efforts within the Western coalition. Fourth, most sanctioning countries have already prohibited most of their pre-2022 exports to Russia, limiting their future ability to impose additional trade sanctions.

Our paper is closely related to the literature on trade sanctions and the Russia-Ukraine conflict. Relevant studies include Nigmatulina (2022); Chupilkin et al. (2023); Korovkin and Makarin (2023); Korovkin, Makarin, and Miyauchi (2024), and for recent reviews, see Itskhoki and Ribakova (2024) and Mohr and Trebesch (2024).

The rest of the manuscript is structured as follows: Section I describes the data, Section II presents the stylized facts, and Section III concludes.

I. Data

We compile a detailed dataset of HS codes for goods prohibited from being exported to Russia. For each restricted good and the country imposing the restriction, we also record the date when the restriction came into effect. The resulting dataset covers the period from February 2022 through May 2024 and includes all trade restrictions imposed by the nine major sanctioning countries and blocs—Australia, Canada, the European Union, Japan, Korea, Switzerland, Taiwan, the United Kingdom, and the United States—which collectively accounted for 96 percent of Russia's 2021 imports from

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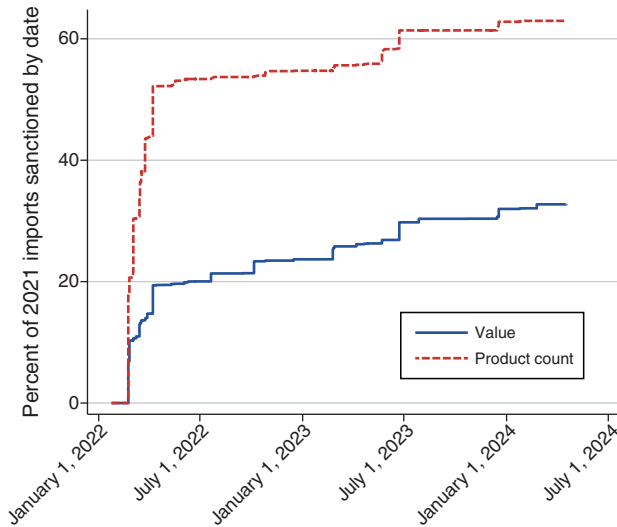


FIGURE 1. PERCENTAGE OF 2021 RUSSIAN IMPORTS SUBSEQUENTLY SANCTIONED BY ANY COUNTRY

Notes: The figure displays the rollout of sanctions from February 2022 onward. The blue solid line shows the share of the sanctioned imports in value, while the red dashed line represents the share of unique HS6 codes sanctioned by any country among all product codes imported by Russia. Both variables are constructed using 2021 trade data and the actual timing of the sanctions.

all sanctioning countries. We assemble this dataset based on the official sources from each of these nine countries or blocs.

We collect the data on sanctions at the most granular product level available. Sometimes, it is at the ten-digit Harmonized System (HS)–code level. However, sanctions are often imposed at a less detailed level; for example, most US sanctions are specified at the six-digit level. Whenever sanctioned goods are defined by a textual description only, we assign the HS code that best aligns with the description. We then follow Pierce and Schott (2012) to harmonize the product codes across the pre- and post-2022 versions of the HS classification.

One important caveat of our data is the presence of numerous exceptions to the lists of sanctioned products. For example, a US firm may obtain an official license to export prohibited goods to Russia. Similarly, Swiss sanctions on luxury watches exclude those priced below a certain threshold. Incorporating all such exceptions is not feasible given the limitations of publicly available data. However, the majority of sanctions imply a complete ban on exports to Russia. Therefore, we report the full lists of sanctioned products without accounting for exceptions and interpret these as an upper bound on the flows actually prohibited by the sanctions.

Combining information on individual products under sanctions makes it possible to conduct analysis with previously unattainable level of detail. We demonstrate these new possibilities by merging our dataset with publicly available UN Comtrade data at the HS6 level to uncover four new sets of stylized facts.

II. Stylized Facts

First, we assess the actual scale of the sanctions imposed on Russian imports. Figure 1 shows the share of 2021 Russian imports that was subsequently sanctioned by any country in our dataset. By the end of the observed period, sanctioning countries had imposed restrictions on 33 percent of the total value of Russian prewar imports. This corresponds to 63 percent of all six-digit product

codes imported by Russia in 2021 being sanctioned by at least one country. And while the majority of sanctions were imposed in the early months of the conflict, subsequent restrictions substantially broadened their scope, increasing the share of sanctioned imports from 20 percent in May 2022 to 33 percent in May 2024.

These sanctions far exceed the scale of recent and historical trade war episodes. For example, during the 2018–2021 US-China trade war, the United States increased tariffs up to 25.8 percent on 18 percent of its imports, while the Smoot-Hawley tariffs of 1930 applied to 27 percent of dutiable products (Fajgelbaum and Khandelwal 2022). It is also worth noting that, as of 2021, Russia's economy ranked among the top ten largest in the world.

Second, we document the distribution of sanctions across product groups. In particular, Figure 2, panel A reports the 20 most sanctioned two-digit product categories, measured by the share of their 2021 imports to Russia (in value), that were later prohibited. The data reveal a clear bias toward technologically sophisticated goods. The most significant sanctions were concentrated in HS2 codes 84, 87, and 85, which include products such as consumer electronics, drones, vehicles, and microchips. Together, these three categories account for approximately two-thirds of Russia's sanctioned imports, illustrating that sanctions were strategically focused on specific high-tech sectors.

However, these sanctions do not cover *all* technologically advanced products. In fact, within the three most targeted product groups, there are roughly as many nonsanctioned imports as sanctioned ones. Moreover, sanctions extend well beyond high-tech sectors. Nearly all product categories include at least some sanctioned items, including basic commodities such as iron and mineral fuels or simple consumer goods with little or no technological component like furniture and beverages.

Third, we analyze the extent to which various countries have sanctioned their exports to Russia. In particular, Figure 2, panel B ranks countries by the volume of their 2021 exports to Russia that were sanctioned while also revealing the total volume of their prewar exports to Russia. Out of all countries, Germany stands out as the country that contributed the most to trade sanctions against Russia, banning around \$22 billion of its own 2021 exports and leaving only \$9 billion untouched. More generally, the European Union accounts for 72 percent of all sanctioned exports to Russia and has placed around 67 percent of its exports to Russia under sanctions.

Still, most of Russia's largest trading partners have already imposed sanctions on most of their prewar exports to Russia by the end of our data, thereby severely limiting their ability to further expand their trade sanctions in the future.

Fourth, we explore the degree to which different sanctioning countries have successfully coordinated their efforts. Coordination on the types of products sanctioned may minimize substitution and rerouting. Out of all sanctioned products in our dataset, almost none are sanctioned by all the countries included. In fact, 57 percent of sanctioned products are restricted by only 4 countries or blocs (with the EU counted as a single entity) or fewer, and 6 percent are sanctioned by only 1 country or bloc.

More specifically, Table 1 presents pairwise correlations between the lists of sanctioned products across countries. While the lists for the European Union and the United Kingdom appear to be most similar to each other, virtually every other pair of countries has coordinated substantially less. In particular, there are very few overlaps between the European Union's list of sanctioned products and those of Australia, Canada, or Taiwan.

III. Conclusion

Trade sanctions are increasingly employed as a tool of geoeconomic coercion (Gopinath et al. 2024; Clayton, Maggiori, and Schreger 2024), with the sanctions against Russia after its 2022 invasion of Ukraine serving as one of the most significant examples, eclipsing both previous sanctions episodes and recent trade wars.

We compile a novel dataset on trade sanctions imposed on the exports to Russia after 2022. Using this dataset, we document four stylized facts regarding the magnitude of sanctions, the key products targeted, the major countries involved, and the degree of cross-country coordination.

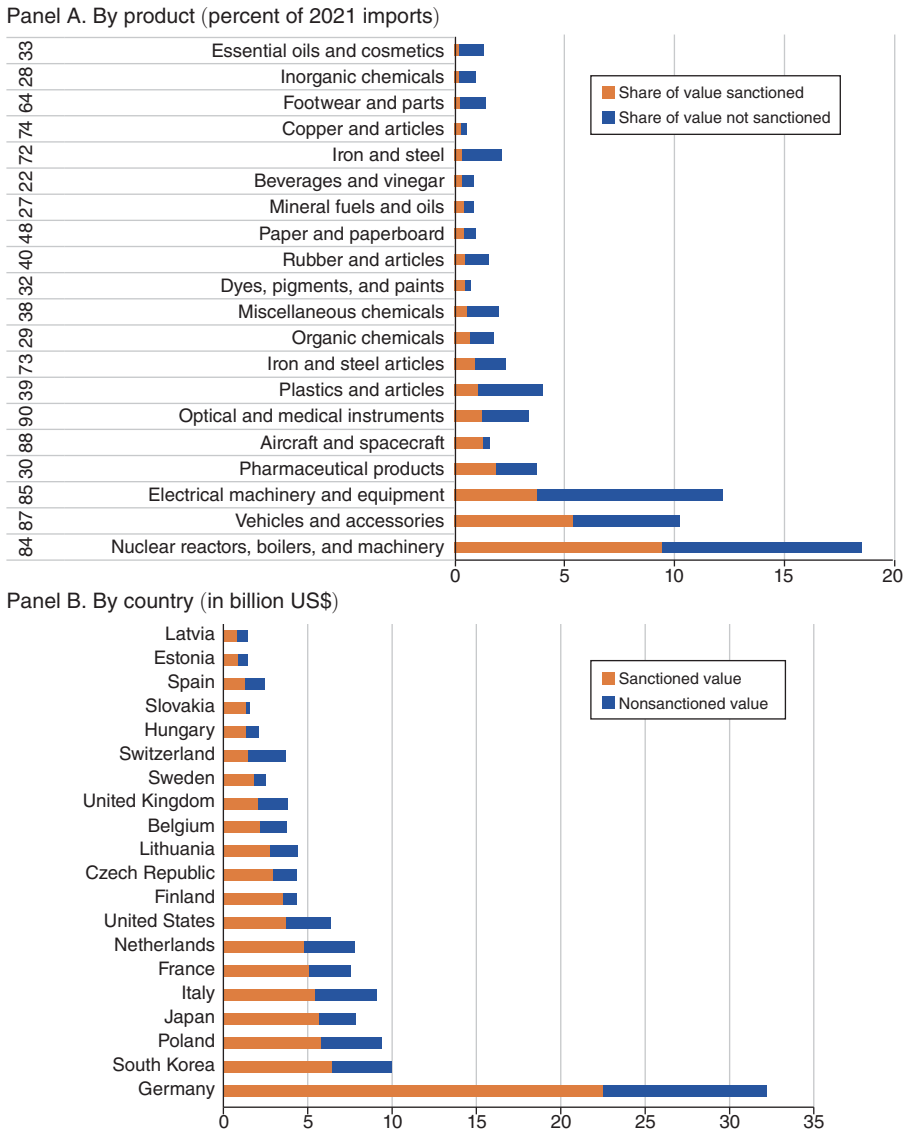


FIGURE 2. VOLUME OF RUSSIAN IMPORTS SANCTIONED

Notes: Panel A displays the top 20 sanctioned two-digit product categories. Each bar shows the share of a category in Russia’s total 2021 imports, with the first segment (in orange) indicating the portion of the category that was sanctioned. Panel B similarly displays the top 20 countries with the highest value of sanctioned exports to Russia. The total length of each bar represents the size of each country’s 2021 exports to Russia (in billion US\$), while the first segment (in orange) highlights the sanctioned portion of its export value.

This dataset provides a unique opportunity to study the impact of trade sanctions with a previously unattainable levels of detail. In a companion paper (Egorov et al. 2024), we combine this dataset with a series of additional data sources to examine the impact of trade sanctions on Russian imports, firm performance, and the broader economy.

TABLE 1—CORRELATION OF SANCTIONED PRODUCT LISTS ACROSS COUNTRIES

	AU	CA	CH	EU	GB	JP	KR	TW	US
AU: Australia	1								
CA: Canada	0.4099	1							
CH: Switzerland	0.4763	0.2571	1						
EU: European Union	0.1335	0.1599	0.6246	1					
GB: Great Britain	0.1688	0.1851	0.6237	0.9217	1				
JP: Japan	0.2669	0.3443	0.2356	0.5294	0.5278	1			
KR: South Korea	0.1890	0.2492	0.2911	0.4094	0.4095	0.5141	1		
TW: Taiwan	0.2088	0.1842	0.1769	0.1900	0.1834	0.2518	0.4520	1	
US: United States	0.3791	0.4059	0.2312	0.5164	0.5447	0.7794	0.5265	0.2251	1

Notes: The table displays pairwise correlations between the sets of six-digit products eventually sanctioned by different countries. Each correlation coefficient is calculated based on the correlation between two binary variables, where each variable indicates whether a specific six-digit product code was sanctioned by a particular country or bloc. These variables are defined over the universe of six-digit codes imported by Russia in 2021.

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