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Russian CHP Imports Tracker | Q2 2026

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Introduction

Export controls are not a new tool of economic statecraft, but the complexity inherent in their enforcement has risen considerably in recent decades due to a world of global supply chains. Nonetheless, **a coalition[1] of countries—led by the EU, US, UK, and Japan—imposed a set of export controls on Russia in response to its full-scale invasion of Ukraine in 2022** that targets critical components Russia imports to fuel its war machine. Sanctions were also imposed on goods that are deemed to be critical for Russia's economy as a whole, seeking to **reduce Russia's ability to prosecute its war in Ukraine and its ability to reconstruct its military afterwards**. The 50 types of war-critical goods restricted by the 2022 export controls were categorized into six tiers in the Common High Priority (CHP) items list, which are described in Appendix Table A1.

While there have certainly been significant challenges in enforcement,[2] we find that the imposition of export controls on critical components has reduced Russia's imports considerably. Despite Russia's greater need for these items—they are, by design, critical to the military-industrial complex during a massive industrial expansion—its total imports have fallen by more than half in value terms for an extended period. Nonetheless, CHP items do still make their way to Russia, albeit with new suppliers or new routes. **China now accounts for approximately 75% of reported CHP exports to Russia, whereas direct exports from sanctions coalition countries have practically disappeared.**

In the **second edition of KSE Institute's Russian CHP Imports Tracker**, we analyze how export controls have affected the **volumes** of critical components that Russia has managed to import, as well as the **price premium** that Russia pays for them. We find that the **volumes of CHP goods that Russia imports fell precipitously** after the imposition of export controls. **The prices that Russia pays for these goods as a whole, and the premium that it pays compared to other importers, did not rise in a consistent manner**. The analysis shows that a significant premium existed for most of the full-scale war; however, it appears to have declined in recent months, which will require further investigation. In addition, **Russia imports CHP goods from China at a considerable premium, which has steadily grown as the full-scale war has dragged on and Russia's dependence on China has deepened.**

Methodology

The difficulties inherent in tracking the efficacy of export controls against Russia are discussed in greater detail in the first edition of the Russian CHP Imports Tracker. These include Russia's refusal to publish product-level trade data since 2022, the incentives for trade partners to obscure their exports to Russia due to the threat of sanctions, and the inconsistent lag with which trade data are often published. For this analysis, we use trading partners' reported exports to Russia in UN Comtrade, supplemented by data from the General Administration of Customs of the People's Republic of China ("Chinese customs") and Taiwan's Directorate General of Customs ("Taiwanese customs"). Despite notable countries with missing (UAE) or partial (HK, Kazakhstan, Malaysia, Thailand, Vietnam) data, this analysis covers the vast majority (~97–98%) of Russia's imports.

[1] The following jurisdictions have imposed export controls on Russia and are part of what we define as the "sanctions coalition" for the purpose of this analysis: Australia, Canada, European Union, Japan, New Zealand, Norway, South Korea, Switzerland, Singapore, Taiwan, United Kingdom, and United States. This group of countries is different from other sanctions areas, for example energy.
[2] See "Challenges of Export Control Enforcement," KSE Institute

Conclusions regarding the effects of export controls on the price premium that Russia pays for CHP goods are heavily dependent on methodological decisions. Chief amongst these decisions are: i) how to **aggregate price calculations** across disparate product types and quantities (e.g., units and kilograms); ii) how to treat **outliers**, which are abundant in international trade statistics; and iii) how to create **benchmark price levels** (e.g., as a global market price or on a seller-by-seller basis). After settling on the specific methodology, robustness checks were run using alternative methods, with contradictory results noted where relevant.

The central aims of the price premium analysis are to determine if Russia has paid more for export controlled goods than it did previously, and whether it has paid more than the global market price. In this edition of the tracker, we do not make any claims regarding causality or statistical significance, rather focusing on a descriptive overview. We define price on a monthly, per-commodity, per-unit basis (i.e., USD/item and USD/kg for each CHP good) for exports to Russia and exports to the world excluding Russia. Prices are capped at the 90th percentile (winsorized) of global prices in a given month to tame outliers.[3] Benchmarks are determined globally (all exporters to all importers) rather than for each individual exporting country because per-exporter price calculations are characterized by high volatility, generally due to natural month-to-month fluctuations in exports of specific CHP goods. The price premium is then calculated by dividing the price that Russia pays for a CHP good by the price that all other importers pay all other exporters for that good. A price premium is to be interpreted as the markup that is paid and not as a ratio of prices; thus, a premium of 0% indicates the same price and one of 100% double the price. Premia are aggregated (both by CHP tier and across the entire CHP list) as a quantity-weighted average and comparable only to prices of the same unit.[4] For robustness' sake, we calculate price premia in three manners: including only observations with item counts (~76% of total value), including only observations with net weight values (~97% of total value), and supplementing item count observations with net weight values (~98–99% of total value). We ultimately opt for the first option for interpretability and simplicity, with its results largely mirroring those of the latter approach.

Trade Dynamics

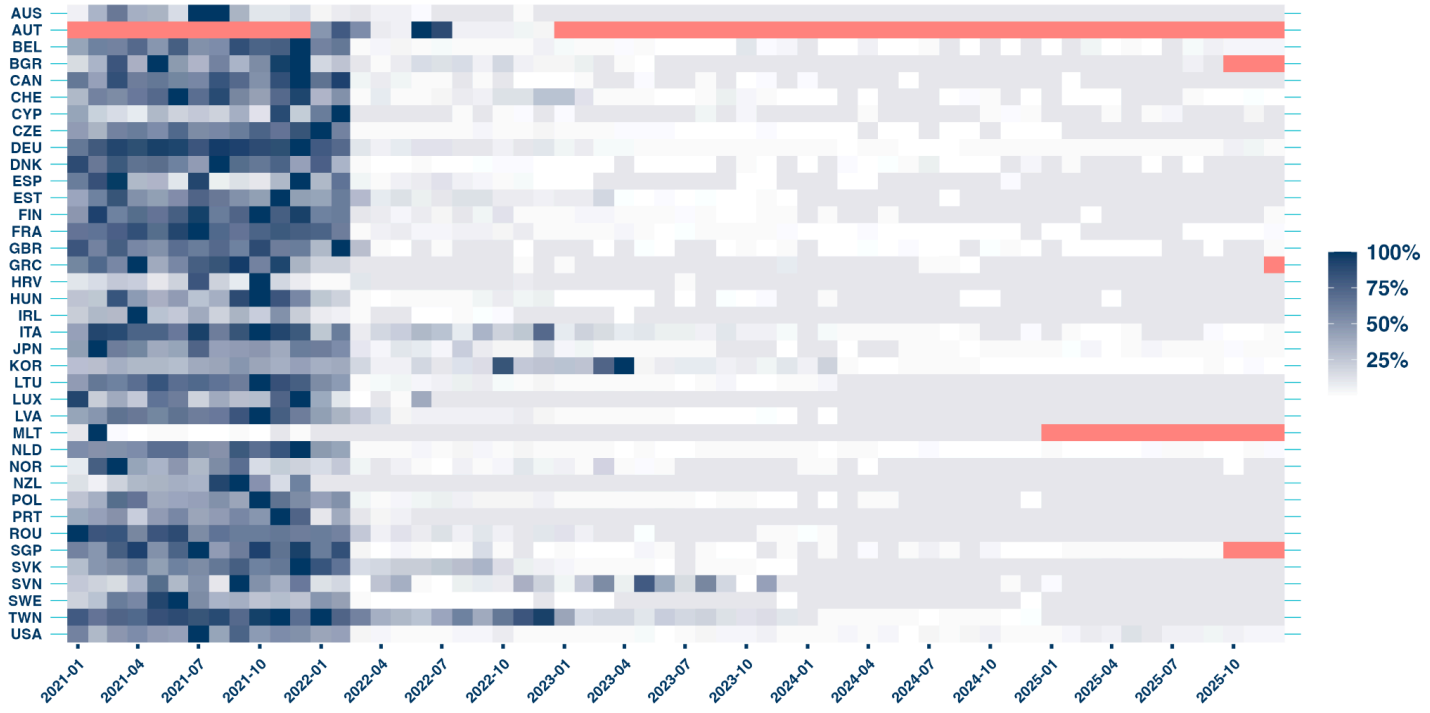
The combination of export controls and sanctions-related derisking caused CHP exports from coalition countries to Russia to plummet after February 2022. Coalition countries that had previously exported the largest amounts of CHP goods to Russia—Germany, the Netherlands, Czechia, and Poland—each reported steep and immediate declines in export flows (see Figure 1 and Appendix Figure A1). While South Korea and Taiwan, global leaders in microelectronics, both continued to report meaningful CHP exports until early 2023, each eventually curbed direct flows to Russia.

Immediately after the imposition of export controls, Russia's reliance on China skyrocketed. From a pre-war level of ~25–30%, the share of Russia's CHP imports that comes from China now hovers around 75–85%. China's share has surged across all six CHP tiers (see Figure 2), though Russia has managed to diversify its suppliers for goods previously purchased from coalition countries to varying degrees within each tier (see Figure 3). Consider, for example, two of the highest value codes in tier 3.A (discrete electronic components): 850440 (static converters) and 852990 (parts for transmission, radar, and display modules). The former was sourced evenly from coalition countries (Germany, the Netherlands, and Denmark most of all) and

[3] Winsorizing prices retains data but comes at the cost of potentially misconstruing observations that are in the top decile of prices due to factors other than truly exceptional prices (e.g., incorrectly reported units).
[4] Aggregation can also be done as a value-weighted average. Both approaches come with their own costs: quantity-weighted averages can be dominated by high-volume cheap flows, whereas value-weighted averages can be dominated by expensive flows and doubly so by price outliers.

China in 2021; by 2023, Chinese supplies had supplanted nearly the entirety of the coalition's volumes, and in 2025 made up 95% of exports reported to Russia. The latter category also saw an increase in China's share from 39% pre-war to 81% in 2025—as suppliers from Vietnam and the coalition dropped out—but, in contrast to static converters, the total value of Chinese exports plummeted by more than 50% in this time. China has not been able to do the same in two important microelectronics categories, 854231 (processors and controllers) and 854239 (other electronic integrated circuits). In both of these categories, it was Hong Kong that subsumed coalition volumes (particularly for the latter case); this could signal that coalition-made products still make up the bulk of the volumes ending up in Russia, merely routed through Hong Kong.

Figure 1: CHP exports to Russia reported by coalition countries, % of individual peak monthly value



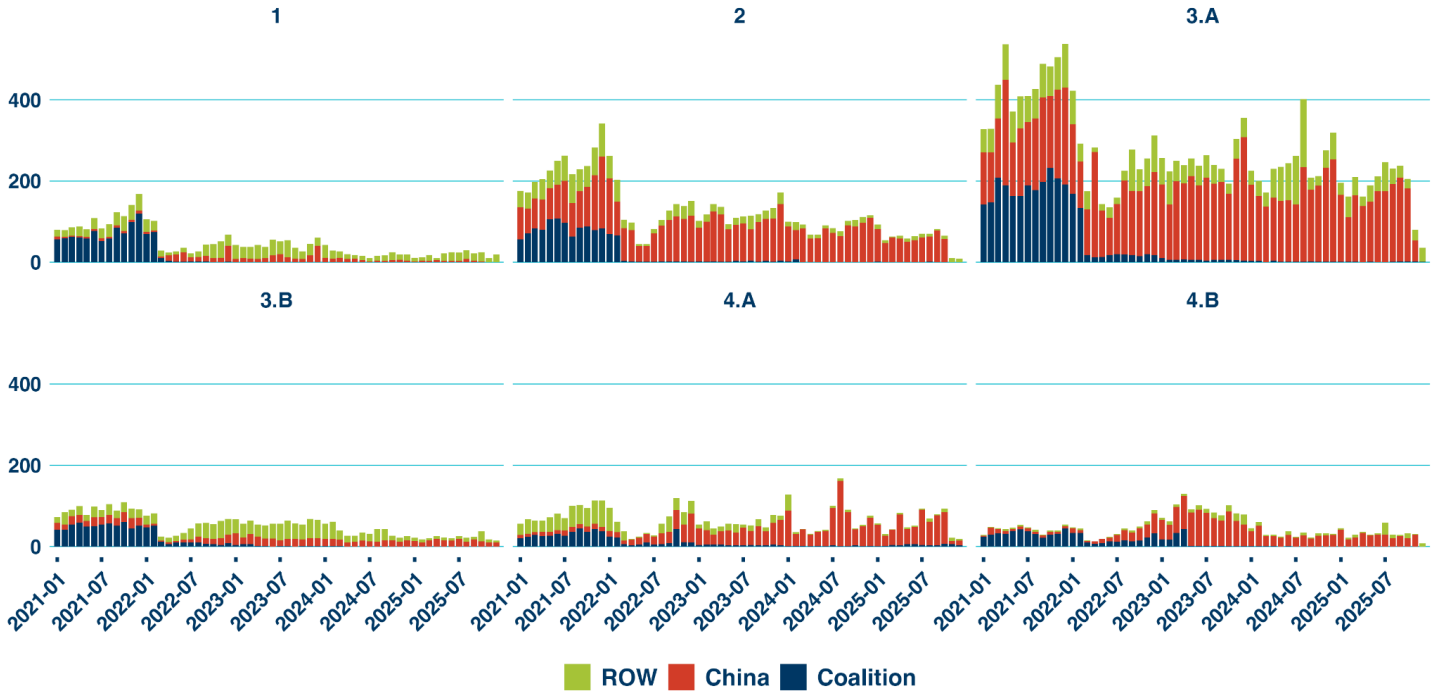
Source: UN Comtrade, Taiwanese customs, KSE Institute

Note: Missing values are represented by red tiles; a value is only "missing" if the country does not report exports to any partner.

There is little evidence that coalition countries have diverted CHP exports previously destined for Russia through members of the Eurasian customs union (EAEU) at scale. It is not feasible, however, to attribute any increase of shipments to other destinations suspected[5] of involvement in export controls circumvention schemes—e.g., Hong Kong, the UAE, Turkey—to sanctions evasion, as they import CHP goods from coalition countries at much greater magnitudes. In the case of suspected EAEU-based circumvention schemes, Kazakhstan is the most common destination. Two tiers stand out: tier 2 (wireless communications) and tier 3.A (discrete electronic components). In the case of the former, the increase in exports to EAEU countries is almost entirely attributable to a single code, 851762 (telecommunications switching/routing apparatus, i.e., network gear). Sweden, the US, and Latvia are the key drivers of this shift, which is particularly notable because the Netherlands, which was Russia's primary supplier before February 2022, does not exhibit the same pattern (see Figure 4).

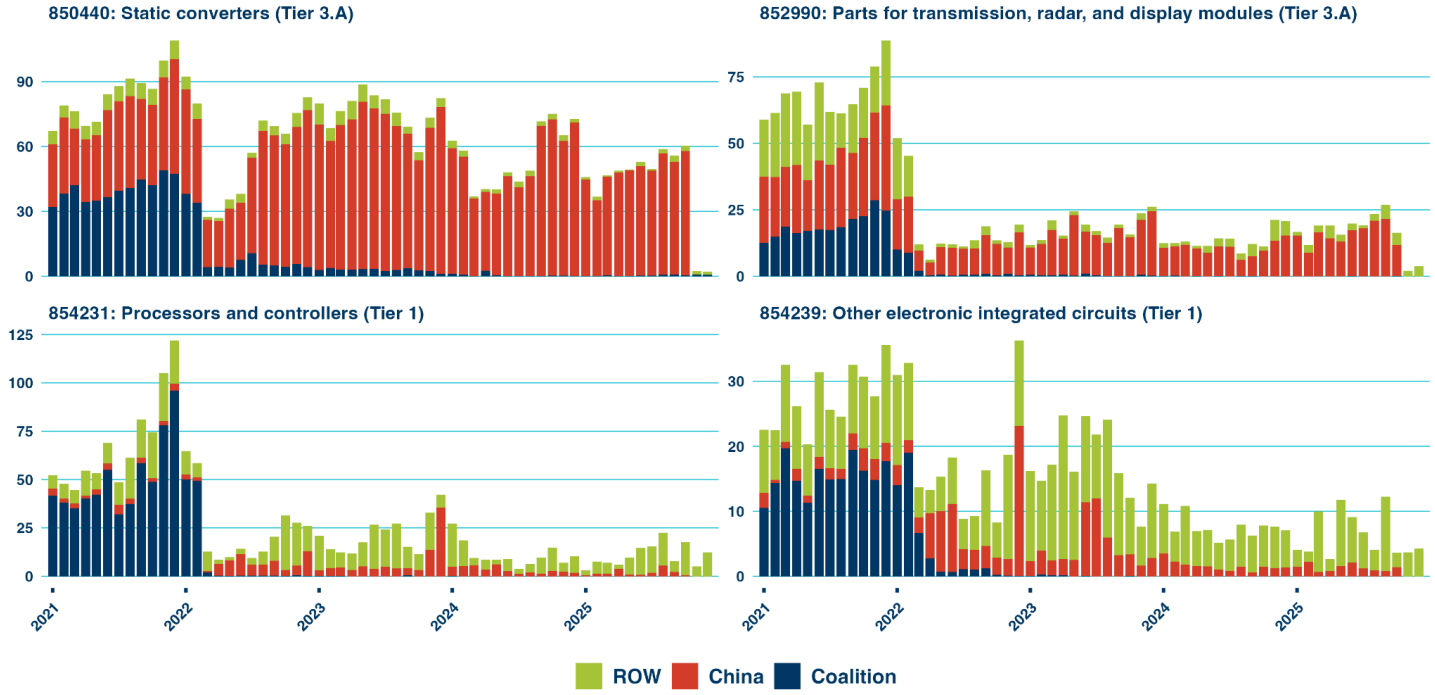
[5] See "Challenges of Export Control Enforcement," KSE Institute

Figure 2: Source of Russian CHP imports by tier, in mln USD



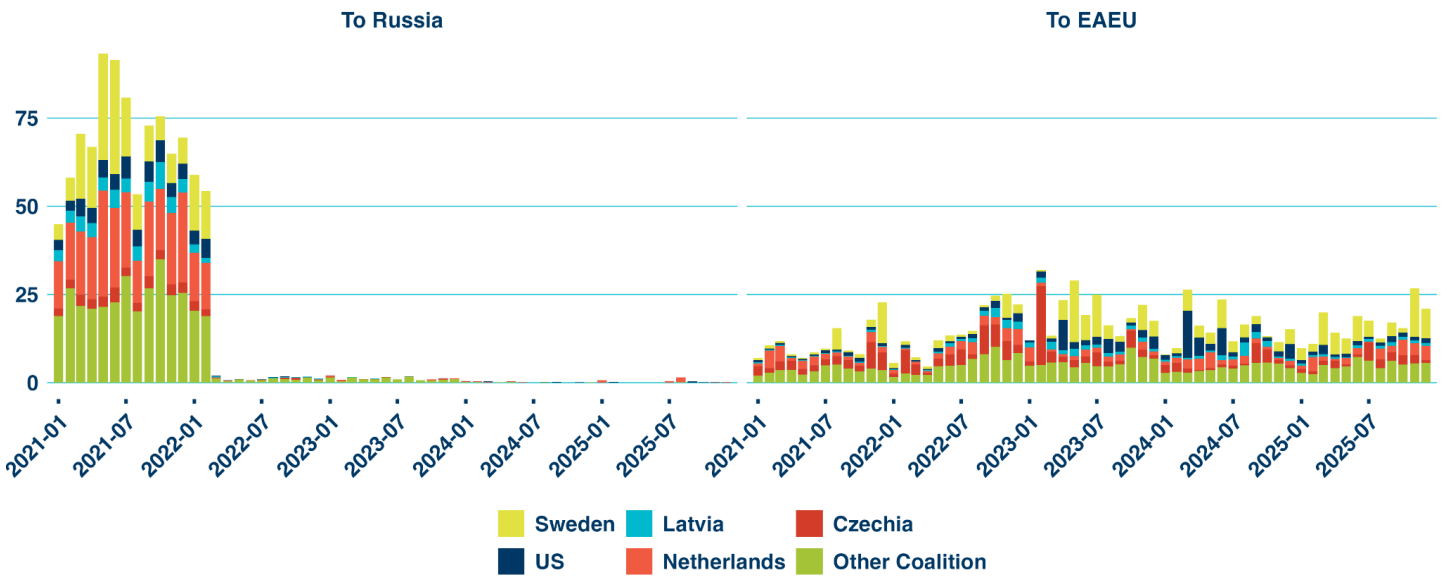
Source: UN Comtrade, Chinese customs, Taiwanese customs, KSE Institute
Note: The drop in values in November–December 2025 is due to incomplete reporting.

Figure 3: Source of Russian CHP imports by code, in mln USD



Source: UN Comtrade, Chinese customs, Taiwanese customs, KSE Institute
Note: The drop in values in November–December 2025 is due to incomplete reporting.

Figure 4: Coalition exports of 851762 (network gear), in mln USD



Source: UN Comtrade, Taiwanese customs, KSE Institute

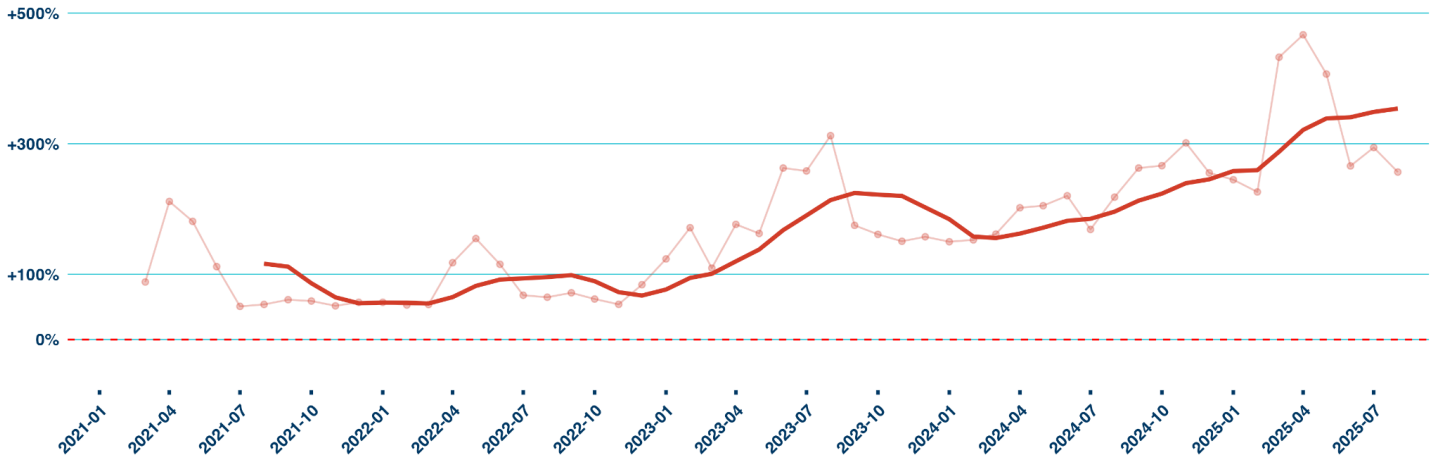
Quantities

Trade flows as reported to Comtrade, while always characterized by a monetary value, are not as consistently accompanied by a quantity. Nearly all observations contain a measurement of net weight, however, which can serve as an alternate quantity unit when the number of items (or thousands of items) is not supplied by the reporting country. This does not ultimately diminish the interpretability of premia calculations—which are purposefully defined to be unitless, and only compare prices within the same unit category—but it does make summary analysis of quantity flows less informative than that of monetary flows. Moreover, the large variation of prices within each CHP tier (i.e., more or fewer items per dollar) makes heavier or more numerous codes dominate most aggregates of tiers.

Prices and Premia

Since its full-scale invasion of Ukraine, Russia has paid an increasing premium for its CHP imports from China. Russia already paid a premium for these products from China in 2021, which could be a result of benign consumer preferences (i.e., Russian industry requiring higher quality or more expensive items than China's global consumers), Russia not purchasing items at sufficient scale, or China taking advantage of a weaker geoeconomic partner. Save for a brief spike coinciding with the onset of sanctions, the premium did not increase until China began to export CHP items to Russia in much greater values in 2023—at which point the premium quickly doubled (see Figure 5). As the war dragged on, the premium that Russia paid China rose in tandem with the share of CHP items that Russia sourced from China, reaching ~300% in 2025. The economic or policy mechanisms that drive short- to medium-term premium trends, however, are less clear. For example, there was no immediate rise in the premium in response to the Biden administration's December 2023 Executive Order 14114, which authorized secondary sanctions against foreign financial institutions facilitating transactions for Russia's military-industrial complex, either when comparing the price Russia pays China to the price that China's other customers pay China, or when comparing the price Russia pays China to the prevailing global price (see Figure 5 and Appendix Figure A2, respectively).

Figure 5: Premium Russia pays China for CHP goods



Source: UN Comtrade, Chinese customs, KSE Institute

Note: 6-month moving average shown in dark red. Calculations end in August 2025 due to incomplete data.

The premium that Russia pays China depends heavily on the CHP tier, with tiers 1 and 2 fetching the smallest premia. Tier 4.B (CNC machines and components), despite being a smaller tier in volume terms, displays noteworthy dynamics (see Figure 6). Crucial for high-precision manufacturing in both the military and civilian sector, it is the only tier for which Russia has managed to *increase* its imports since the imposition of export controls. Prior to its full-scale invasion, Russia sourced the overwhelming majority of its CNC machines and components from coalition countries, which include the world's premier producers. During this period, Russia paid only a modest premium for Chinese products; as Russia scaled up production in its military-industrial complex in 2022–23 and pivoted to Chinese suppliers for its CNC machines, the premium quickly spiked, eventually settling near 300% in 2025. Russia is now left with little to no alternative to Chinese CNC machines and tools—and is not purchasing goods at the scale to be anything but a price-taker—forcing it to accept these premia.

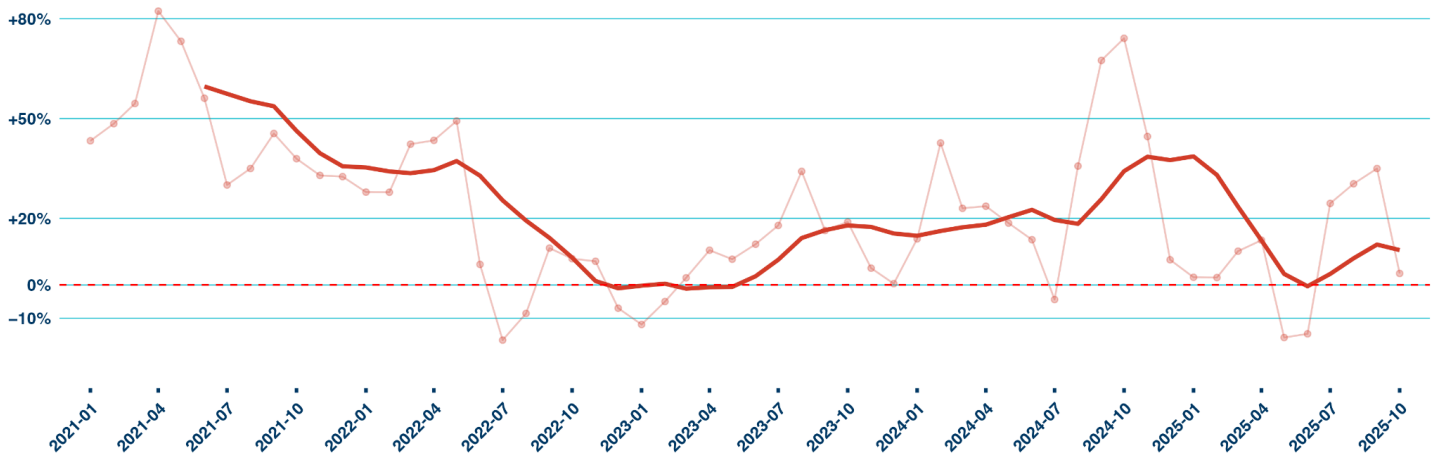
Figure 6: Premium Russia pays China for CHP goods, by tier

Source: UN Comtrade, Chinese customs, KSE Institute

Note: Plots represent month-to-month variation without smoothing. Calculations end in August 2025 due to incomplete data.

The premium that Russia pays China for CHP goods is considerably higher than the one it pays the world as a whole. Compared to an overall premium of around 300% for Chinese CHP goods, the premium Russia pays the world as a whole has sat below 50% for most of the war (see Figure 7). While there are some goods and tiers where Russia still pays a significant premium—tiers 3.B, 4.A, and 4.B—the overall premium is brought down by the prices that Russia pays its non-Chinese suppliers for the two highest value tiers, 2 (a discount) and 3.A (a minimal premium). It is worth noting that this result is not inconsistent with the high overall premium Russia pays China, even though China is the primary source of Russia's CHP imports. This is because Figures 5 and 7 display different calculations: Figure 5 compares the price that Russia pays China to the price that China's non-Russian customers pay; Figure 7 compares the price that Russia pays all of its suppliers to the global market price (i.e., what all importers pay all exporters). Finally, the premium that Russia pays for direct imports from coalition countries has been low but volatile.

Figure 7: Premium Russia pays for CHP goods



Source: UN Comtrade, Chinese customs, Taiwanese customs, KSE Institute
Note: 6-month moving average shown in dark red.

Conclusions and Next Steps

Export controls have drastically reduced Russia's access to war-critical goods, but they have not entirely curtailed it. Previously reliant on the sanctions coalition for more than half of its CHP imports, Russia now imports more than 75% of these goods from China. Direct export flows from sanctions coalition countries to Russia have plummeted since early 2022 and, despite the increased need for CHP goods to feed the war economy, total CHP imports have not recovered to pre-war levels as a result. Nonetheless, Ukrainian authorities regularly discover export-controlled components from Western companies in Russian weapons, indicating that reduced aggregate imports are not the end of the story.[6]

This edition of KSE Institute's Russian CHP Imports Tracker built on the first edition by expanding its analysis to include price premia calculations. Its core finding is that **Russia pays a large and increasing premium for its CHP imports from China but only a moderate premium from the world as a whole**. Future editions of this tracker will address further case studies, integrate new data sources and updated data, and dive deeper into the premium that Russia pays its non-Chinese suppliers for its CHP imports.

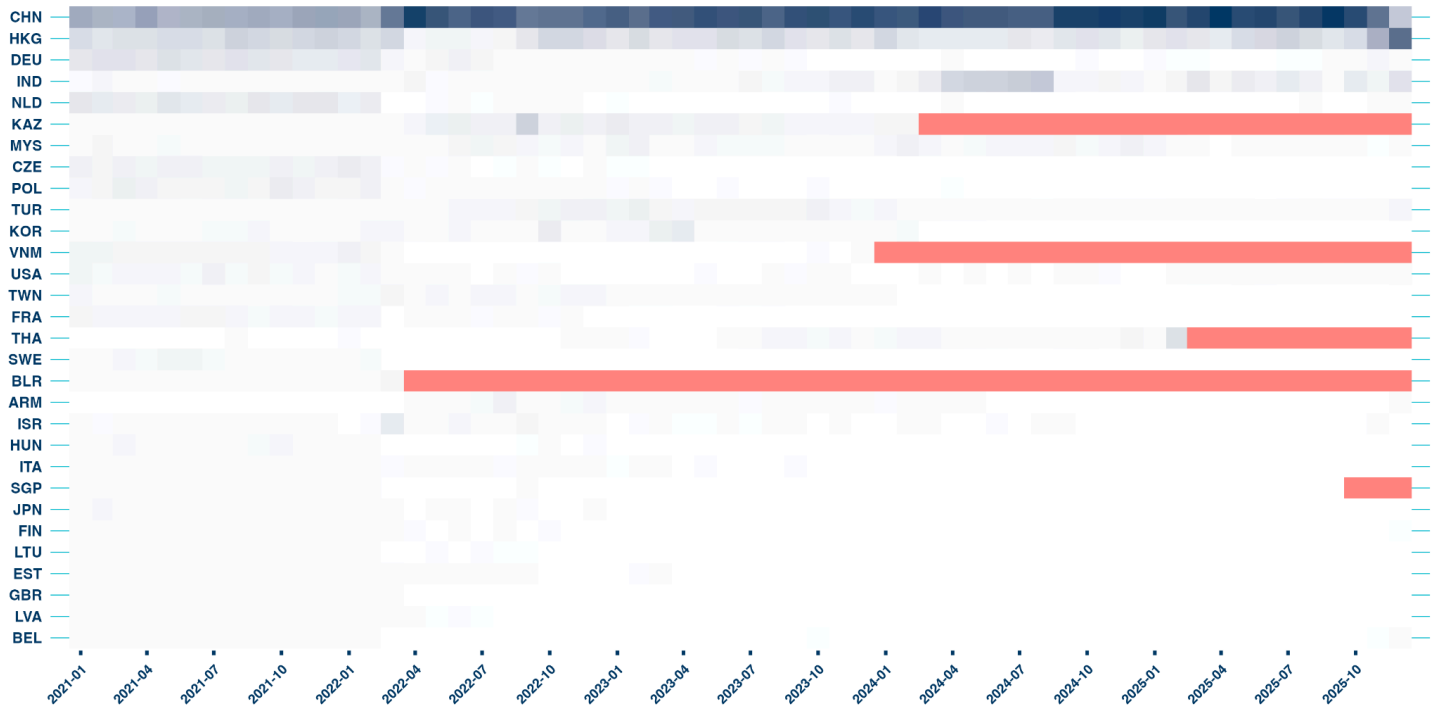
[6] See War & Sanctions

Appendix

Table A1: Common high priority (CHP) items list[7]

Tier	*Description*
1	Items of the highest concern—integrated circuits—due to their critical role in the production of advanced Russian precision-guided weapons systems, Russia's lack of domestic production, and limited global manufacturers.
2	Additional electronics items for which Russia may have some domestic production capability but a preference to source from the sanctions coalition. Includes items related to wireless communications, satellite-based radio-navigation, and passive electronic components.
3.A	Further electronic components used in Russian weapons systems, with a broader range of suppliers. Includes discrete electronic components, navigation equipment, and digital cameras.
3.B	Mechanical and other components utilized in Russian weapons systems, including bearings and optical components.
4.A	Manufacturing, production, and quality testing equipment for electric components, circuit boards and modules.
4.B	Computer Numerically Controlled (CNC) machine tools and components.

Figure A1: Share of reported monthly Russian CHP imports by exporting country

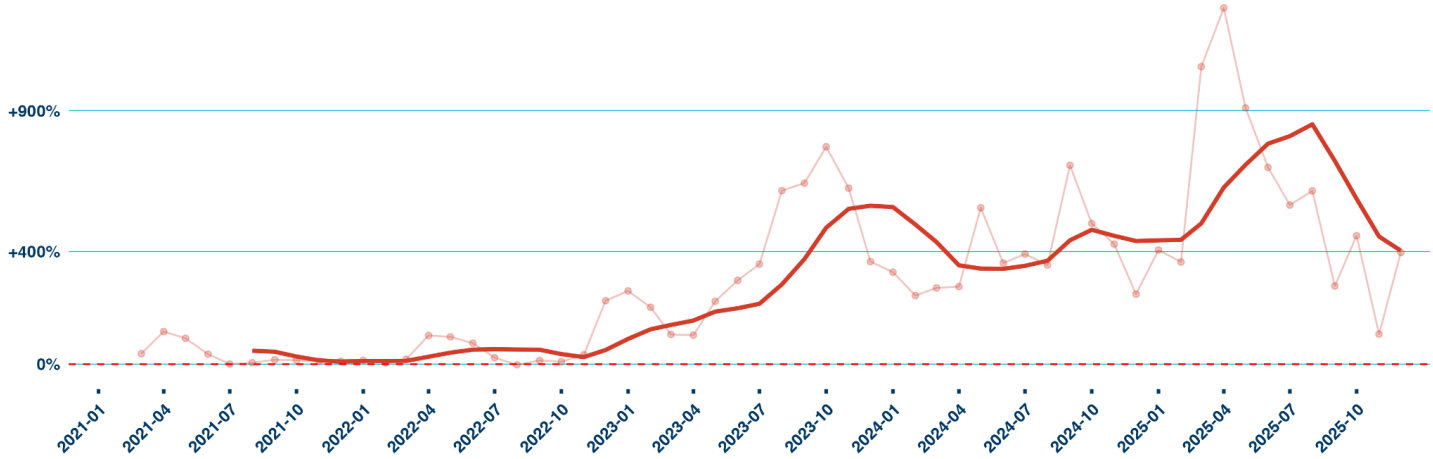


Source: UN Comtrade, Chinese customs, Taiwanese customs, KSE Institute

Note: The drop in values in November–December 2025 is due to incomplete data.

[7] Adapted from the US Bureau of Industry and Security and European Commission. The list is harmonized between the EU, US, UK, and Japan.

Figure A2: Premium Russia pays China for CHP goods, relative to global prices



Source: UN Comtrade, Chinese customs, Taiwanese customs, KSE Institute

Note: 6-month moving average shown in dark red. Excludes codes 845961, 848640, and 854320 due to global price outliers.