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THE IMPLICATION OF SANCTIONS ON
RUSSIAN ALUMINIUM IMPORTS FOR EU
INDUSTRY, COMPETITIVENESS AND
CONSUMERS

The EU proposal to completely ban Russian aluminium is negative for the European Union:

- It will raise aluminium prices for EU manufacturers, hurting competitiveness in automotive, aerospace, and other manufacturing sectors;
- The aluminium industry in Europe – which directly employs approximately 230,000 people in the EU and supports an additional one million jobs indirectly – will be threatened;
- It will result in job losses of up to 20,000 people in manufacturing sectors in Germany;
- It diverts cheaper Russian aluminium to non-sanctioning countries such as China, putting European manufacturers at a permanent cost disadvantage;
- China is likely to gain significantly from this scenario as it enters a buyer's market for Russian aluminium; and
- The ban will ultimately make EU manufacturers (particularly in the automotive sector) less competitive against their Chinese peers.

EXECUTIVE SUMMARY

The EU adopted its 16th sanctions package on 24th February 2025 and this includes a direct ban on EU imports of primary aluminium from Russia. While the objective of these measures is well-intentioned, they will ostensibly inflict economic harm on Europe without significantly impacting Russia, ultimately amounting to virtue signalling at the expense of the broader strategic interests of the EU.

An EU ban on Russian aluminium will further disrupt Europe's metal supply chains. It will trigger cost inflation, production curtailments, and a likely reduction in manufacturing competitiveness. A 20-30% price surge is likely once Russian volumes are removed and alternative suppliers charge premiums. Immediately, a range of sectors from automotive and aerospace to packaging and construction would absorb the brunt of these increases, potentially reducing industrial output and costing thousands of jobs if firms cannot pass along higher prices.

Financial markets will respond with swift gains in aluminium futures, mirroring past sanction episodes, and equity valuations might decline for major aluminium-consuming sectors.

Over a year or more, new trade flows could eventually stabilise supply, but the EU's reliance on more expensive sources – coupled with limited domestic smelting capacity due to high energy costs – would impose a lingering price disadvantage.

Historical precedents, ranging from the 2018 Rusal sanctions to the 2022 ban on Russian steel, demonstrate that bans frequently prompt trade diversion and rerouting rather than full elimination of commodity exports. EU member states, especially those in France, Germany, Italy, Austria, Hungary, Sweden and Slovakia, will take a significant share of the economic burden, with higher costs, output declines, and inflationary pressures that will persist well beyond the initial shock.

Chinese manufacturing is also likely to benefit as Russia will divert aluminium at discounted prices to countries that do not impose a ban. China has already benefited substantially from similar embargoes on energy and copper.

The perverse outcome is that European manufacturers will face higher input costs while Chinese competitors gain access to the same materials at substantial discounts – with secondary products making their way back to the EU. This will erode EU manufacturing competitiveness precisely when European industries are already struggling against Chinese imports.



SUMMARY OF IMPACTS BY COUNTRY

Germany:

- Major impact on the automotive sector (Volkswagen, BMW, Mercedes) through increased production costs, resulting in lower profit margins and/or higher prices
- Germany's reduced domestic aluminium production is now too low (a result of high energy costs) to mitigate impacts
- Additional pressure on machinery and electrical industries that use aluminium for equipment and cables, eroding Germany's export competitiveness

France:

- The aviation sector (Airbus, Dassault) will be heavily affected, requiring new supply contracts and higher costs for aviation-quality aluminium
- Largest European aluminium smelter (Dunkirk) has reduced production due to energy costs, limiting domestic supply options
- Automotive (Peugeot, Renault) and packaging sectors face increased costs, with pass-through to consumer prices

Italy:

- Broad manufacturing base affected, particularly auto (Stellantis), packaging, and construction sectors
- Italy's large number of SMEs in metalworking will be vulnerable as they are less able to absorb price increases
- Italy's historical reliance on Russian raw materials will disrupt supply chains for downstream fabricators unless alternatives are found

Austria:

- Specialised aluminium products industry (e.g., AMAG) faces higher costs for primary aluminium
- Integration with German auto supply chain exposes Austrian suppliers to same challenges as German manufacturers
- Lacks large primary smelting capacity, making it fully exposed to global aluminium price increases

Hungary:

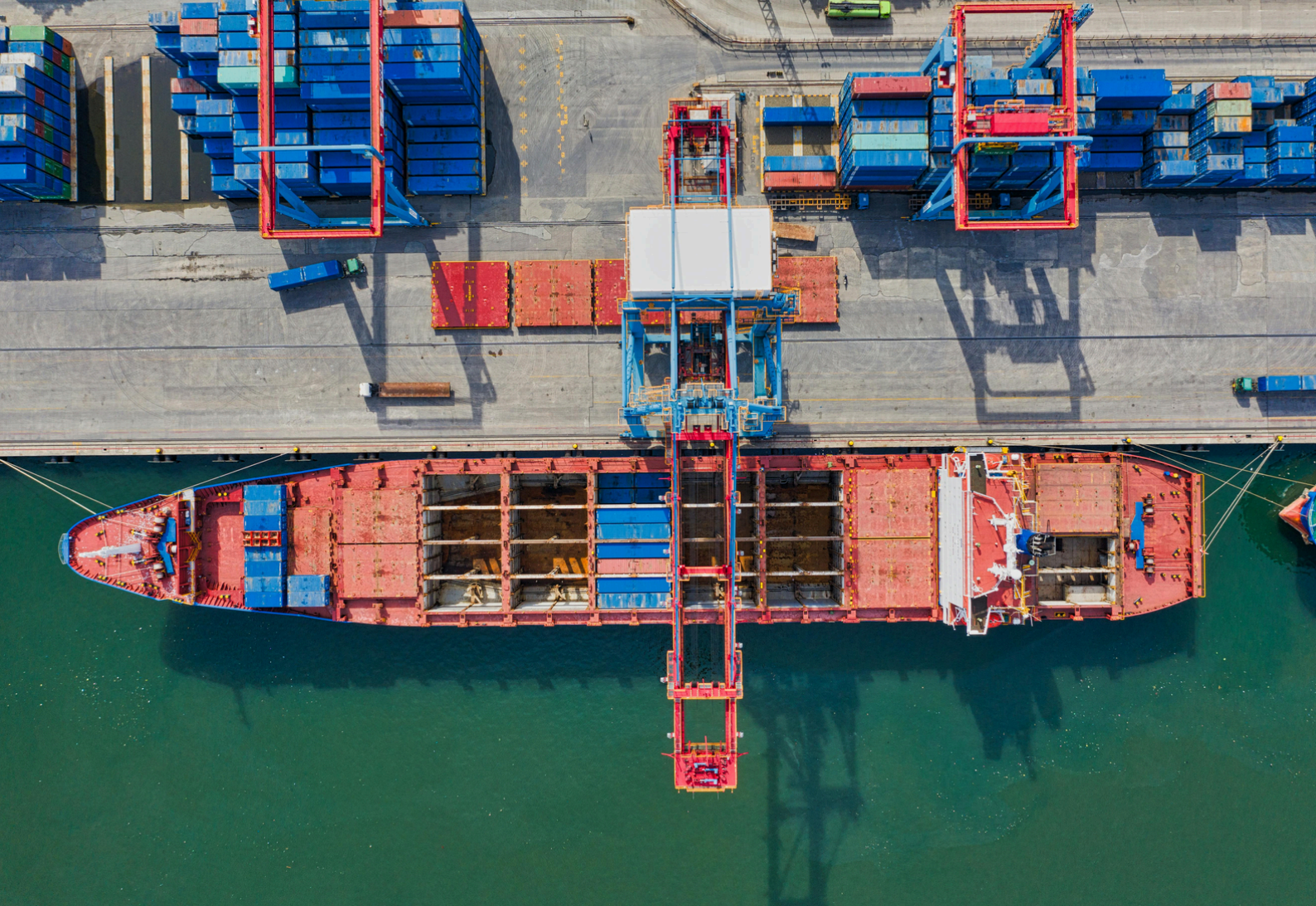
- Auto sector orientation (Audi, Mercedes-Benz, Suzuki) is particularly vulnerable, especially Audi's Győr facility
- Zero significant primary aluminium production makes the country entirely dependent on imports
- Government likely to push for gradual implementation of sanctions due to economic concerns

Sweden:

- Kubal plant in Sundsvall – Sweden's only aluminium smelter – is threatened by cost pressures, with flow-on effects;
- A total of 500 direct and 5,000 indirect jobs will be impacted
- A number of Swedish sectors will be affected: Automotive (Volvo, Scania, Koenigsegg): Aerospace/Defence (Saab); Packaging (Tetra Pak); Machinery & Manufacturing (Sandvik, Atlas Copco)

Slovakia:

- Extremely vulnerable due to recent closure of its only primary aluminium smelter (Slovalco) in 2022
- Now imports 100% of aluminium needs, directly impacting its significant auto industry (Volkswagen, Kia, Jaguar Land Rover, PSA)
- More severe economic impact likely due to the combination of zero domestic production and high reliance on automotive manufacturing



BACKGROUND

EU-Russia Aluminium Trade

Before 2022, Russian aluminium consistently accounted for roughly 18–20% of the European Union's total primary aluminium imports [1,2].

This share reflected both competitive pricing and the availability of specialised alloys that were especially valuable in sectors like automotive, packaging, and construction.

Although many European firms began reducing Russian purchases once the conflict in Ukraine intensified, Russia remained a critical supplier to certain downstream users unable to source from elsewhere on short notice.

The formal EU ban is therefore a threat to multiple industries, where contingency plans for alternative suppliers are constrained by issues of capacity, cost, and logistics.

Price Volatility

In early 2022, aluminium prices surged beyond USD 3,000 to 4,000 per tonne, driven by heightened geopolitical tensions and anticipation of potential curbs on Russian exports [3].

A significant portion of this rise stemmed from fear-driven speculation rather than purely fundamental supply shortage. This was backed up by the European Commission, which found that 20 to 30% of the 2022 aluminium price spike represented a "fear premium" [4].

Low global inventory levels, combined with ongoing logistical and shipping disruptions from the COVID-19 pandemic, compounded price swings. These factors made aluminium (a critical input for sectors as diverse as aerospace, automotive, and packaging) particularly sensitive to potential supply disruptions from major exporters like Russia.

[1] CRU Group Data: "Aluminium Market Outlook 2022–2023." Q4 2022 <https://www.crugroup.com/analysis/aluminium-market-outlook/>

[2] European Commission Staff Working Document (SWD(2023) 22 final): "Impacts of the Ukraine Conflict on EU Commodity Markets and Supply Chains." <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2023:22:FIN>

[3] Europe Aluminium. Quarterly Reports on Aluminium Market Trends (2022–2023). <https://european-aluminium.eu/resource-hub/market-updates/>

[4] European Commission, *ibid.*

Past sanctions

Historical use of sanctions demonstrates how markets can react rapidly. This is the case when a supplier is removed fully or partially. In 2018, the US imposed sanctions on Rusal. Rusal accounted for about 6–7% of global primary aluminium output.

This triggered an immediate 30% jump in London Metal Exchange (LME) prices.[5] These measures were later relaxed, but the episode indicated how quickly aluminium markets can be influenced by supply disruptions.

Similarly, the 2022 EU ban on Russian steel demonstrated a clear functioning of trade diversion. Sanctioned Russian suppliers redirected shipments to non-sanctioning countries at lower prices, while EU buyers faced tighter supply and higher prices.

[5] “Aluminium extends rally on supply fears after U.S. sanctions on Rusal” (available at: <https://www.reuters.com/article/us-russia-sanctions-rusal-lme/aluminium-extends-rally-on-supply-fears-after-u-s-sanctions-on-rusal-idUSKBN1HK0UX>).



PROJECTED ECONOMIC IMPACTS

Cost increases

A complete, EU-wide ban on Russian aluminium could result in a price surge of around 20–30% [6].

Similar to the 2018 Rusal sanctions, a ban would force European aluminium users into more expensive or logistically challenging supply options.

Manufacturers in automotive, aerospace, packaging, and construction sectors would be particularly affected, as unique properties and specifications can often make substitution difficult.

Research indicates that around 25% of the aluminium price hike in 2022 was driven by speculation. This indicates that panic, uncertainty – and speculating opportunities – can exacerbate even moderate physical supply deficits [7].

Macro effects

A substantial aluminium cost surge would transmit quickly into reduced industrial output and a drag on GDP within the EU.

Economic analyses estimate that a 10–20% increase in metals prices can curtail GDP growth by around 0.1–0.3 percentage points in industrialised regions, especially where a high volume of metal is imported [8].

If prices rose by 20–30%, the overall impact could reasonably approach 0.2–0.4 points for manufacturing-focused economies, potentially within 12 to 18 months. In addition to lower output, the resultant inflationary pressures could manifest in cost-push pressures across consumer goods and equipment purchases.

[6] Reuters, 10 April 2018: <https://www.reuters.com/article/us-russia-sanctions-rusal-aluminium-idUSKBN1HH0J9>

[7] European Commission, *ibid.*

[8] <https://www.imf.org/en/Publications/WEO/Issues/2022/04/19/world-economic-outlook-april-2022>

This took place when EU energy prices surged in early 2022; higher aluminium costs would similarly impact multiple industrial and consumer markets.

Employment and Household Welfare

Jobs in aluminium-intensive industries are particularly at risk if manufacturers cannot fully absorb or pass on rising metal costs.

Industry associations have cautioned that a reduced supply of 1 million to 2 million tonnes of affordable aluminium could jeopardise between 10,000 and 20,000 jobs [9]. This would largely be in component fabrication and midstream processing.

At the same time, consumers could expect higher prices for cars, appliances, and packaged goods. These rely heavily on aluminium for weight reduction and material efficiency.

Disposable incomes are already under pressure from broader inflationary trends in the EU and across the globe. The impact on lower-income households would therefore be disproportionately large, and this is the pattern seen in previous commodity price shocks.

Country level impacts

France, with its major aerospace (Airbus, Dassault) and automotive (Renault, Peugeot) sectors, relies heavily on aluminium for lightweight structures and specialised alloys that meet strict safety and performance requirements. Domestic smelters, like Dunkirk, have scaled back operations due to electricity costs, so much of the needed aluminium is imported.

Germany, as Europe's largest industrial economy, would be similarly exposed through its automotive giants (Volkswagen, BMW, Mercedes) and machinery sectors, where analysts predict that a 20–30% surge in aluminium costs could shave 0.3–0.4 percentage points off manufacturing output growth [10].

[9] https://european-aluminium.eu/media/2990/european_aluminium_press_release_16_march_2022.pdf with consultant estimates.

[10] Auswirkungen des Krieges in der Ukraine und einhergehender Sanktionen gegen Russland und Belarus auf die deutsche Wirtschaft | Publications | ifo Institute

Italy has a broad manufacturing base – including packaging and construction – that hinges on consistent, affordable aluminium inputs; small and medium-sized metalworking firms could be particularly vulnerable to abrupt price hikes.

Austria's aluminium industry, exemplified by AMAG, mostly processes imported ingots and billets into high-value products. A ban would raise feedstock costs and possibly strain competitiveness.

Hungary hosts major automotive plants (Audi, Mercedes-Benz) that rely on just-in-time deliveries of aluminium engine components; any disruption in metal supply or a cost jump can threaten production schedules and jobs.

Sweden is home to an aluminium smelter in Sundsvall. In the short term, the ban on Russian aluminium will likely result in a spike in spot prices for the European alumina market (alumina being the raw ingredient for aluminium smelting). This will erode profitability for Swedish smelting, combined with high energy prices. Simultaneously, this will add to cost pressures for Swedish aluminium purchasers, who will also be faced with greater competition in end-products. Over the medium term this could ultimately result in demand destruction within the Swedish market, resulting in the loss of 500 direct jobs in smelting and 5,000 indirect jobs in manufacturing. Specifically, this will have a significant impact on Swedish industry reliant on aluminium: namely automotive (Volvo, Scania, Koenigsegg), aerospace/defence (Saab), packaging (Tetra Pak), machinery and manufacturing (Sandvik, Atlas Copco) sectors.

Slovakia, among Europe's top producers of cars per capita, used to rely partly on Slovalco for primary smelting. With that smelter shuttered in 2022 due to soaring energy costs, the country now imports all of its aluminium needs, leaving it vulnerable to any widespread supply realignment or price escalation.



FINANCIAL MARKET IMPLICATIONS

Commodity Prices and Volatility

Aluminium futures on the London Metal Exchange (LME) generally respond sharply to any direct or rumoured restriction on Russian exports, as noted above regarding the the 2018 Rusal crisis and periodic spikes in late 2022 when sanction proposals were put forward.

A formal EU ban will result in another rapid increase. This could equal or exceed the 30% jump observed in 2018.

Elevated price volatility will likely persist until alternative suppliers for the EU are found. This process can take months given capacity constraints, specification requirements and freight considerations.

Stock Valuations

The equities of EU and non-Russian primary aluminium producers and recyclers may see short-term gains as metal scarcity raises premiums and selling prices. However, industries with heavy aluminium usage – such as automotive, aerospace, and certain packaging firms – will experience a poor investor outlook if cost pressures are expected to erode margins or reduce output.

It is well understood that EU smelters cannot simply increase production to offset a ban. Many facilities have shuttered capacity in the face of price surges for energy within the EU energy market. Capacity expansions in the current energy price environment risks additional price hikes for power, reinforcing existing inflationary pressures on both consumers and business.

US additional volatility

In February of this year the Trump administration announced it will place a tariff on all aluminium products in the order of 10 to 25%. Although the aim of the measure is to increase domestic aluminium production, this will not be possible in the short or even medium term, and will ultimately not significantly impact global supply provided US demand remains equal.

Tariffs will be passed on to US businesses and consumers, creating inflationary effects domestically.

However, the tariffs are more likely to create further market volatility as speculators see buying opportunities ahead of tariff implementation.

Further, it is sometimes the case that if a large commodity market (such as the US) imposes tariffs this can effectively bid up the price of raw commodities.



TRADE SUBSTITUTION

Alternative Suppliers

With Russia removed from supplying the EU, buyers need to look to other suppliers: Canada, GCC countries, Norway, Iceland, and India. Each of these possible supply sources presents unique constraints [11].

- Canada's production is mostly committed to the US market;
- Gulf suppliers are physically distant and have existing trade links with Asia;
- Nordic smelters are already near capacity;
- India's suppliers are growing, but freight routes and the low quality (critical for aviation needs) are problematic.

Timeline Constraints

Finding replacement sources will require around 12 months, which means spot-price premiums for generic (e.g unwrought) aluminium will spike.

For specialised segments like aviation, supplier qualification for specific alloys will mean finding new suppliers will take longer.

EU smelters remain constrained by prohibitively high energy costs, as noted above, leading to significant production cutbacks. This limits the EU's ability to offset lost Russian supply with domestic suppliers.

Furthermore, the Carbon Border Adjustment Mechanism (CBAM) adds another layer of cost and administrative complexity that will add to costs and maintain elevated prices for EU purchasers.

[11] CRU Group data



GLOBAL TRADE CONTEXT

Trade Diversion

It is well understood that sanctions on commodities typically result in diversion rather than elimination of trade.

A complete EU ban on Russian aluminium will likely further shift exports to markets such as China, India, or the Middle East, at discounted prices.

EU manufacturers, however, will face higher-cost supply from alternative regions, which will ultimately reduce the competitiveness of European downstream products, particularly the auto sector.

Any disparity in input costs is most evident in export markets, where exporters with lower costs are able to discount accordingly; this has been noticeable with European cars, that have faced significant competition from manufacturers with lower energy costs in South Korea, China and Japan.

Sanctions are not effective

Embargoes on Russian steel in 2022, Iranian oil in 2012, and Venezuelan crude have demonstrated the low efficacy of sanctions, with additional economic costs borne by sanctioning countries.

These policies may achieve strategic goals, but impose very real costs on domestic industries. Developed economies such as the EU that are reliant on key imports such as energy or metals will meet inflationary headwinds and reduced industrial output.

An EU embargo on Russian aluminium will fit this pattern, likely shifting global trade routes without comprehensively choking off Russian exports.



THE BENEFITS FOR CHINA

China stands to gain substantially from Russian aluminium being barred from European markets, as Russia will be left with few reliable buyers and thus be driven to sell metal at discounted prices. Official customs data and trade estimates indicate that China's imports of Russian aluminium rose from around 290,000 tonnes in 2021 to over 1.2 million tonnes by 2023, accounting for upwards of 80% of China's primary aluminium imports at certain points of the year.

When Western buyers shunned Russian metal in 2023, Chinese importers paid around USD 2,162 per tonne for Russian aluminium in August 2023, versus USD 2,355 for Australian-origin metal – roughly an 8% discount [12].

In the automotive sector, inexpensive Russian aluminium lowers the production costs of electric vehicle battery housings, the chassis, and other lightweight components. Chinese automakers, already exporting record volumes, can either pass those savings on to global customers or use the cost advantage to secure additional market share [13].

These arrangements effectively subsidise China's downstream manufacturing, particularly as Western aluminium prices rise in response to supply constraints.

Analysts have observed that China can use discounted Russian metal to produce goods that then flow back to Western markets – essentially filling the gap left by restricted Russian exports [14].

Much of the aluminium produced in Russia is produced with hydropower and therefore considered low carbon. This will flow back to Europe in the form of processed products that will meet European requirements for greenhouse gas reductions and contribute towards the EU's climate and sustainability goals [15].

In practice, the EU blocking Russian primary aluminium, means that European buyers might end up importing more Chinese-made aluminium products, indirectly relying on that same metal after it has been processed in China.

[12] China's strong metal imports not as bullish as they seem | Reuters

[13] China likely dethroned Japan as world's top auto exporter in 2023: China group | Reuters

[14] US announces tariffs on Russian metals including aluminium | articles | ING Think

[15] EU 16th sanctions package – aluminium: the European industry is being deprived of strategic supplies at the worst possible moment – FACE – The Federation of Aluminium Consumers in Europe

As a result, an EU ban not only increases prices for European consumers but further cements China's industrial dominance by allowing Chinese firms to procure Russian aluminium at cut-rate prices. By diverting supply that would otherwise serve the EU, the ban amplifies China's role as a global manufacturing powerhouse – a position it can leverage to reinforce cost advantages in automotive, electronics, and construction exports, to name but a few.

This has happened previously. When the US and UK banned Russian aluminium in 2024, Russia responded by selling more to China, which was already accounting for over 25% of China's aluminium imports by 2023 [16]. A similar pattern has been observed in copper markets, with Russia's copper exports jumping sharply – from 1.8% to 10.4% of China's import mix in one year – following sanctions.

This indicates a broad pattern of China benefiting from sanctions-induced supply shifts. The EU aluminium ban will follow this pattern, with China purchasing the metal that Europe no longer buys – effectively creating a buyer's market for China.

This comes at a critical moment for Europe's carmakers in particular, as they continue to struggle with competitiveness against Chinese manufacturers, imposing tariffs on Chinese imported vehicles at the end of 2024 [17]. It is more than likely that the new ban will effectively undo any of the protections for European carmakers in the short and medium term.

[16]<https://carnegieendowment.org/russia-eurasia/politika/2024/07/china-russia-metal-partners?lang=en#:~:text=Chinese%20data%20confirms%20this%20shift,56%20percent%20in%202021>

[17] European Commission. https://ec.europa.eu/commission/presscorner/detail/en/ip_24_5589



RECOMMENDATIONS

Aluminium imports should be removed from the sanctions package on account of the negative and unproportionate impact that the ban has on European industry, SMEs and consumers across the EU. The sanctions will lead to job losses, disrupt supply chains, and undermine Europe's strategic autonomy as a reliance on Chinese sources for bulk aluminium will be necessary. Moreover, since Europe is already in the grip of a cost of living crisis, measures that will lead to price rises for raw materials is wrong-headed. These will be passed on to consumers, leading to higher prices for goods and services in the EU.

Russia is not popular for obvious reasons, but Europe is between a rock and a hard place. Trading one risky source for another, while increasing the stranglehold that Europe's rivals have on raw materials, is not sensible and does not represent mature policy-making. Politicians and policymakers must strike a balance between political objectives and the economic well-being of the continent.

Over the longer term, Europe needs to aim for a diversification of supply as well as stable access to bulk aluminium, yet extended lead times are needed for substitution to take place. The European Commission's monitoring capabilities are weak, yet they need to reassess the impact of these measures on industry and consumers. Diplomatic tools would also be more effective when dealing with Russia than imposing outright bans without a proper cost-benefit analysis for the EU economy.



CONCLUSION

The proposed EU ban on Russian aluminium is best described as a massive economic miscalculation. Its practical outcomes will likely undermine EU manufacturing competitiveness rather than have any significant impact on Russia's economy.

The ban will create a series of negative impacts: 20-30% price increases for European manufacturers, loss of up to 20,000 manufacturing jobs particularly in Germany, reduced competitiveness in key sectors like automotive and aerospace, and persistent GDP reduction of 0.2-0.4 percentage points across affected economies.

The ban will also accelerate global trade realignment. Russia will divert aluminium at discounted prices to non-banning countries – particularly China, which has already benefited substantially from similar embargoes on energy and copper.

The perverse outcome is that European manufacturers will face higher input costs while Chinese competitors gain access to the same materials at substantial discounts. This further erodes EU manufacturing competitiveness precisely when European industries are already struggling against Chinese imports. Emotions are running high but European Union members should not cut off their nose to spite their face in the desperate search for a silver bullet in the Russia-Ukraine conflict.

