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Alexander Sandkamp

EU-China Trade Relations: Where Do We Stand, Where Should We Go?



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OVERVIEW/ÜBERBLICK

- In the aftermath of the Covid-19 pandemic, China's share in European trade has fallen continuously. Nevertheless, the country remains the EU's largest source of imports (20.5 percent in 2023) and its third largest export destination (8.7 percent).
- This apparent dominance of China is put into perspective when incorporating intra-EU trade. For example, Germany – Europe's largest economy – sent 6.1 percent of its exports to China, but 55 percent to EU members states. For imports, the Chinese and European shares are 11.5 percent and 52.7 percent, respectively.
- Decoupling the EU from China (i.e. almost eliminating bilateral trade) would permanently reduce European real income by 0.8 percent in the long-run. In terms of gross domestic product in 2023, the EU would forego 136 billion EUR of value added every year. Short-term effects are likely to be stronger.
- China dominates global production of important products such as laptops and mobile phones as well as raw materials including Germanium and Gallium that are critical for the green energy transition. A trade disruption might thus both delay the energy transition and increase its costs.
- To reduce specific dependencies, the EU should intensify its efforts to diversify procurement by increasing the attractiveness of alternative suppliers. Finding the courage to move forward in the negotiation of free trade agreements with potential strategic partners such as Australia and the Mercosur countries would strengthen the EU's geopolitical position and increase prosperity among partners.

Keywords: China, European Union, Germany, international trade, decoupling

- Im Nachgang der Covid-19-Pandemie ist der Anteil Chinas am europäischen Handel kontinuierlich gesunken. Dennoch bleibt das Land die größte Importquelle der EU (20,5 Prozent im Jahr 2023) und ihr drittgrößtes Exportziel (8,7 Prozent).
- Diese scheinbare Dominanz Chinas relativiert sich, wenn man den Intra-EU-Handel mit einbezieht. Deutschland – die größte europäische Volkswirtschaft – lieferte beispielsweise 6,1 Prozent seiner Ausfuhren nach China, aber 55 Prozent in die EU-Mitgliedstaaten. Bei den Einfuhren liegen die chinesischen und europäischen Anteile bei 11,5 Prozent bzw. 52,7 Prozent.
- Eine Abkopplung der EU von China (d.h. ein weitgehender Wegfall des bilateralen Handels) würde das europäische Realeinkommen langfristig um 0,8 Prozent senken. Bezogen auf das Bruttoinlandsprodukt im Jahr 2023 würde die EU jährlich auf 136 Milliarden EUR an Wertschöpfung verzichten. Kurzfristig dürften die Auswirkungen stärker sein.

- China dominiert die weltweite Produktion von wichtigen Produkten wie Laptops und Mobiltelefonen sowie von Rohstoffen wie Germanium und Gallium, die für die grüne Energiewende entscheidend sind. Eine Handelsunterbrechung könnte daher sowohl die Energiewende verzögern als auch deren Kosten erhöhen.
- Um spezifische Abhängigkeiten zu verringern, sollte die EU ihre Bemühungen um eine Diversifizierung der Beschaffung verstärken, indem sie die Attraktivität alternativer Lieferanten erhöht. Den Mut zu finden, die Verhandlungen über Freihandelsabkommen mit potenziellen strategischen Partnern wie Australien und den Mercosur-Ländern voranzutreiben, würde die geopolitische Position der EU stärken und den Wohlstand aller Beteiligten erhöhen.

Schlüsselwörter: China, Europäische Union, Deutschland, internationaler Handel, Entkopplung

Alexander Sandkamp

University of Kiel;
Kiel Institute for the World Economy
Kiellinie 66
24105 Kiel
Tel.: +49 431 8814 225
Email:
alexander.sandkamp@ifw-kiel.de



EU-China trade relations: Where do we stand, where should we go?

Alexander Sandkamp¹

1 INTRODUCTION

China is one of Europe's largest trading partners and with a share of 14.6 percent of EU 27 trade in 2023 second only to the United States (16.7 percent, Eurostat, 2024). Against the backdrop of increasing geopolitical tensions between the EU and China over Taiwan's independence, Russia's war in Ukraine but also concerns regarding human rights and supply shortages following China's Zero Covid policy, this interdependence seems to be turning into a liability. Consequently, the European Commission is looking for ways to reduce interlinkages with China (European Commission, 2022).

In its endeavour to reduce dependence on China, the European Commission (together with the governments of member states such as Germany) has recently shifted its approach from "decoupling" towards "de-risking". While the former may be interpreted as a policy induced reduction in trade with China, the latter emphasizes the need for diversification and self-reliance in strategic sectors (European Commission, 2023). Nevertheless, even the more drastic decoupling is not completely off the table – think of a military conflict between China and Taiwan which could cause an escalating spiral of sanctions and counter sanctions between China and the political West.

This policy brief aims to contribute to a better understanding of the potential costs of such a decoupling, by shedding more light on current trade relations between the EU and China. It shows that while China is the largest source country of European imports, its overall economic significance is much smaller once EU domestic production is taken into account. Nevertheless, China dominates the supply of several products in the electronics industry and of critical raw materials needed for a successful energy transition. This dependence makes the EU vulnerable not only to political blackmail but also to production disruptions in China more generally. The EU should react by providing EU companies with incentives to diversify their procurement away from China without cutting trade ties completely.

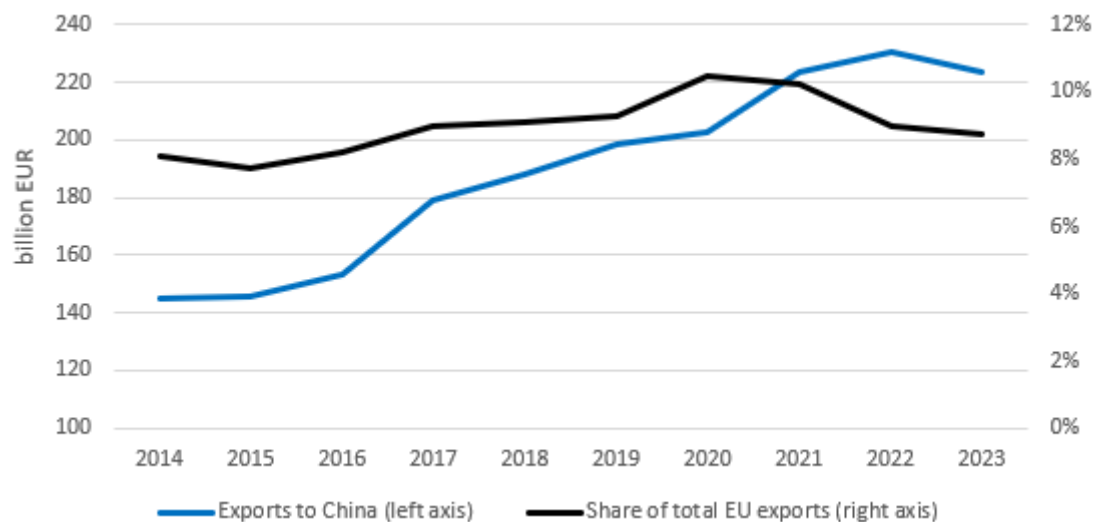
¹ This policy brief is an updated and slightly amended version of the book chapter *Industry Dependency Risk Assessment and Realistic Policies*, published in *Sustainable? Competitive? The EU's Industrial Autonomy – Facts and Fantasies*, ELF Study 7, 2024, edited by Francesco Capelletti and Gerard Pogorel.

2 CHINA HAS BECOME INCREASINGLY IMPORTANT FOR THE EU

Figure 1 shows the development of EU 27 exports to China over the past ten years both in absolute terms and as a share of total EU exports. Bilateral exports have increased continuously until 2022, even though growth slowed during the height of the Covid-19 pandemic in 2020. In 2022, EU exports to China peaked at 230 billion EUR, before falling slightly to 224 billion EUR in 2023, which constitutes 8.7 percent of the total. This made the country the third largest destination of EU exports, behind only the US (19.7 percent) and the UK (13.1 percent).

While China's share in total EU exports increased more or less continuously until its peak of 10.5 percent in 2020, it has been declining since 2021. Even though exports to China continued to grow until 2022, they did so at a smaller rate than exports to the rest of the world. It is not yet clear whether this constitutes a trend reversal. Instead, it could reflect a temporary weakness in Chinese expenditure, driven by the country's zero-Covid strategy and a troubled construction sector. Nevertheless, this development should be welcomed as it demonstrates that aggregate dependence on China (measured as the country's share in total EU exports) can be reduced without trading less with China, but simply by increasing trade activities with other regions.

Figure 1:
EU 27 exports to China, in billion EUR

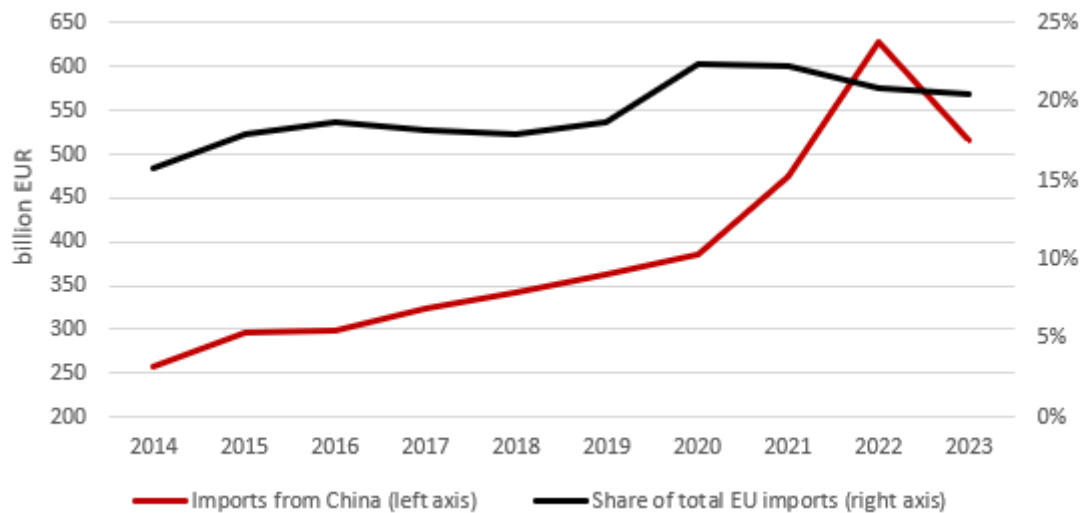


Source: Data from Eurostat (2024).

A similar development can be seen for EU imports from China, as Figure 2 indicates. Imports from China continuously increased from 2014 to 2022, reaching 627 billion EUR in 2022. Even though imports from China declined to 515 billion EUR in 2023, China remains the largest source country of EU imports (20.5 percent), ahead of the US (13.8 percent) and the UK (7.1 percent). However, with imports from the rest of the world increasing at a faster pace since 2021, the Chinese share has already been falling since its peak of 22.4 percent in 2020. While

the EU is hence far from independent from China, the trend is currently moving towards de-risking.

Figure 2:
EU 27 imports from China, in billion EUR



Source: Data from Eurostat (2024).

3 TRADE STATISTICS DO NOT PAINT THE WHOLE PICTURE

Such trade statistics – while being important – do only paint an incomplete picture. They omit the importance of intra-EU trade as well as member states' own productive capacity. Take Germany – the EU's largest economy – as an example. In 2023, 6.1 percent of German exports went to China (Destatis, 2024). One reason why this figure is smaller than the EU's 8.7 percent is that it takes into account Germany's exports to other EU member states, which accounted for 55 percent of the country's exports that year. Similarly, China's share in German imports in 2023 was 11.5 percent (recall the EU value was 20.5 percent), whereas the EU accounted for 52.7 percent of Germany's total imports. The EU remains its own most important trading partner.

Looking at trade statistics alone is, however, not sufficient to determine China's economic importance for EU member states because they disregard domestic production. Looking once again at Germany, Sandkamp et al. (2023) show that China's direct share in German consumption was 1.4 percent in 2018 (most recent available data). China's share of intermediate products used for production in Germany (which is different from consumption because it also includes goods deemed for export) is only 0.6 percent.

In addition to such direct dependencies, indirect linkages also play a role. Indirect linkages to China exist, if a product imported from a third country is produced in that country using inputs from China. Indirect linkages are highly relevant when considering production disruptions in

China – such as zero-Covid – that potentially affect all importers of Chinese products. Similarly, trade disputes between China and say the US would disrupt Chinese exports to the US, in turn affecting US exports to the EU that are produced with the help of Chinese inputs. Including such indirect linkages increases the share of Chinese value added in German consumption (production) to 2.7 percent (1.5 percent). These indirect interdependencies mean that even if a country completely eliminated its imports from China, its dependence would not yet be reduced to zero.

4 IN THE LONG-RUN, DECOUPLING FROM CHINA IS POSSIBLE BUT COSTLY

Given these interdependencies, Felbermayr et al. (2023) model the impact of a decoupling between the EU and China. This is done by simulating a doubling in trade barriers, which would reduce trade between the two economies by around 97 percent (Table 1). In this scenario, some production would shift back to the EU, while most of the remaining imports would be diverted away from China and towards other source countries. China would do the same, resulting in the almost complete elimination of bilateral trade.

Table 1:
Long-run change in exports and real income following decoupling, in percent

| | Change in bilateral exports | | Change in real income | |
|--------------------------|-----------------------------|-------|-----------------------|-------|
| | EU | China | EU | China |
| Decoupling EU 27 - China | -97.7 | -96.2 | -0.8 | -0.9 |

Source: Felbermayr et al. (2023).

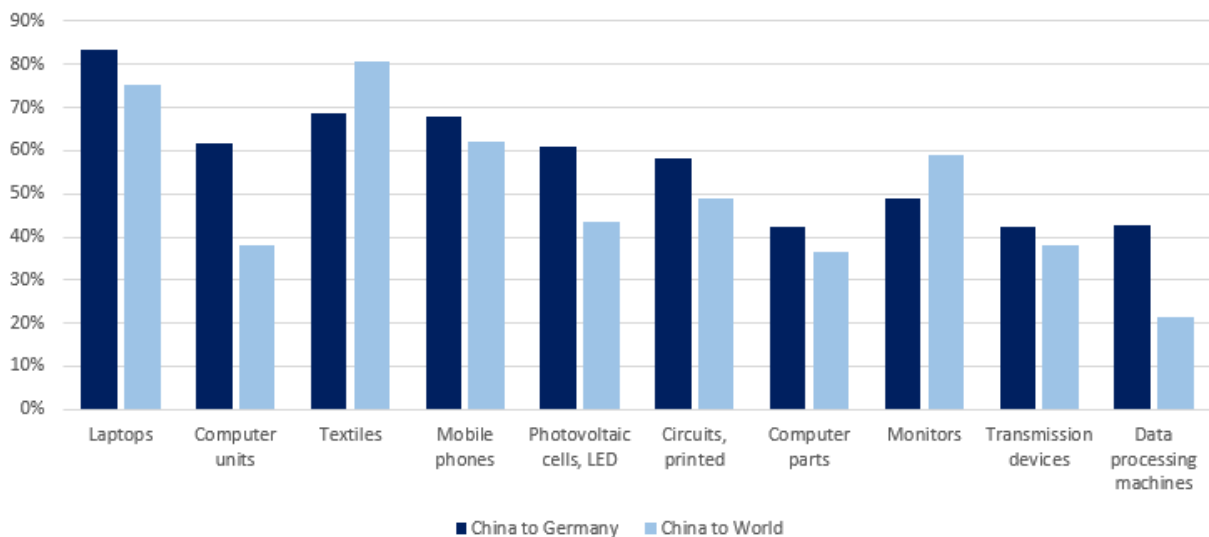
Such decoupling would permanently reduce real income in the EU by 0.8 percent (Table 1). Measured in terms of GDP in 2023, this means that the EU would forego 136 billion EUR of value added every year compared to a scenario in which trade relations remained unaltered. For China, the permanent loss would be 0.9 percent of GDP. These losses may seem bearable at first glance, but the findings should be taken with a pinch of salt. The simulated results are long-run effects which are only realised once trade has been fully redirected and production has relocated. This is a process that can be expected to take more than ten years. In the short- to medium-run, the impacts may be expected to be more severe, as the following section explains.²

² For Germany, a study by Baqaee et al. (2023) estimates short-run costs of around 5 percent of gross national income, while long-run costs amount to up around 1.5 percent.

5 EXTREME DEPENDENCE FOR INDIVIDUAL PRODUCTS MAKES DECOUPLING DIFFICULT IN THE SHORT-RUN

In the short-run, decoupling from China would be costlier because China is the dominant supplier of a large variety of products imported into the EU, which cannot be easily substituted. Looking once again at Germany, Figure 3 shows that Europe's largest economy imports 83 percent of its laptops from China. At the same time, China is responsible for 75 percent of global exports. The first number suggests that there is at least some room for diversification. However, if the entire EU and possibly other western economies such as the United States decouple from China at the same time – for example because of an escalating conflict between China and Taiwan – this would inevitably result in a scramble for the remaining suppliers, at least in the short-run. This is true for many product groups such as mobile phones (68 percent import share) and photovoltaic cells and LEDs (61 percent).

Figure 3:
Chinese share in German and world imports for selected HS6 product groups 2021, in percent^a



^a Only product groups with a Chinese export value to Germany of at least one billion EUR are shown.

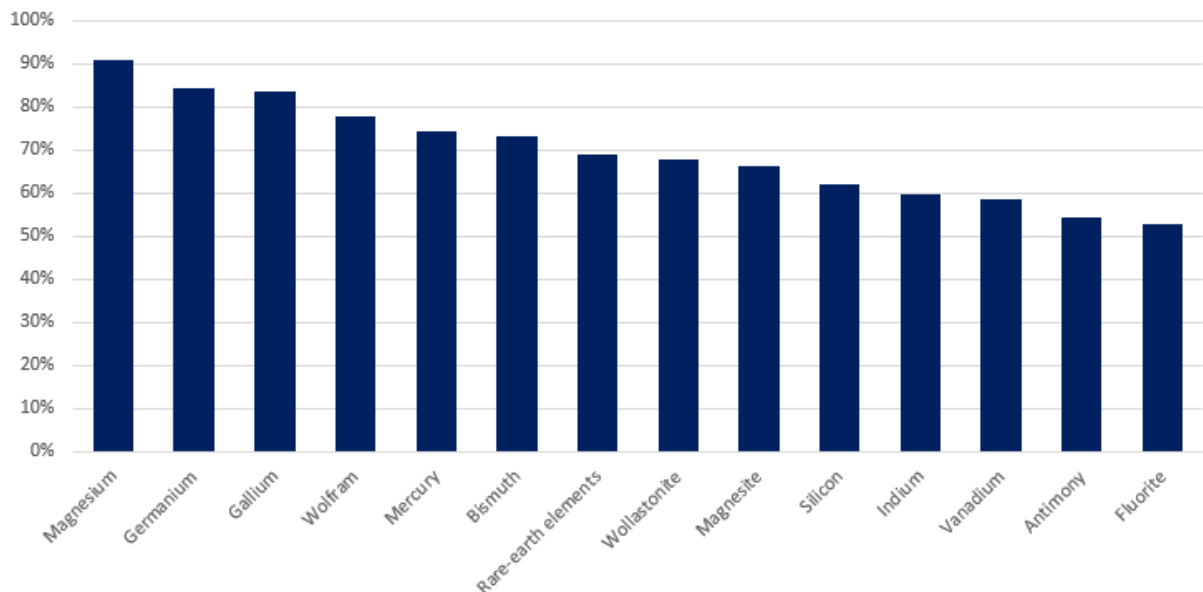
Source: Sandkamp et al. (2023).

Out of the 6,791 (HS8 digit) products Germany imported from China and Taiwan in 2021, 127 saw a Chinese share of more than 80 percent (Sandkamp et al. 2023). These include the rare earth elements scandium and yttrium (used for example for the production of LEDs and electrodes), antimony (used for semiconductors) and Germanium (semiconductors). The 80 percent threshold is of course arbitrary, yet it illustrates the important role China plays in the supply of many products to European economies.

6 ENERGY TRANSITION WOULD BE DELAYED WITHOUT CHINA

China not only dominates German imports of critical raw materials such as Germanium (which China announced would become subject to export restrictions in 2023), but also global production. When measuring dependence on China, the latter seem to be the relevant metric, as many raw materials are only imported from China indirectly, i.e. through the import of products which use these resources as inputs. To better understand China's role in critical raw materials, Figure 4 illustrates the country's share in global production of selected raw materials. China is by far the largest producer of magnesium (used for fuel cells), Germanium, Gallium, Indium and Silicon (used for photovoltaic cells), as well as rare-earth elements (used for wind power stations and electric motors).

Figure 4:
China's share in global production of raw materials, in percent^a



^a Only includes raw materials for which China's share in global production is larger than 50 percent.

Source: Sandkamp et al. (2023), data from German Mineral Resources Agency (2021).

As the above examples illustrate, many of these raw materials are critical for the European energy transition. The good news is that most of them can in principle be sourced from other countries. The bad news is that setting up production facilities usually takes years. A sudden disruption in imports from China can thus be expected to slow down the energy transition significantly. The current dependence on China in this area thus constitutes a trade-off between sustainability and industrial sovereignty.

7 DE-RISKING CAN BE ACHIEVED BY FACILITATING TRADE WITH OTHER COUNTRIES

With the raw materials act and the European Chips act, the European Commission is reiterating its intention to move towards EU industrial sovereignty. Successful de-risking requires a coherent strategy that avoids the temptation of pouring subsidies on highly visible flagship projects. Simply shifting manufacturing (back) to Europe will not eliminate dependence on China. After all, a semi-conductor manufacturing or battery plant does not lead to strategic autonomy if the silicon and lithium needed to run them continue to be imported exclusively from China. In addition, limited (human) resources mean that the EU cannot – and should not – strive to produce everything itself.

While a short-term fix may be close to impossible, there are a lot of steps the EU could and should take in order to regain independence from Chinese suppliers in the medium to long run. By emphasizing de-risking over decoupling, the European Commission is already moving in the right direction. Forcing European companies to stop importing from China would put the EU in exactly the position it is trying to avoid – being cut off from critical resources which are essential for the success of the energy transition. In addition, such a ban might induce European companies to simply shift production outside the EU.

Instead, the EU should strive to diversify its procurement of those resources, as well as other products currently dominated by China. This can be achieved by increasing the attractiveness of other potential source countries relative to China. If it becomes cheaper to import products from other countries, these will almost automatically gain market share. One way to reduce the cost of importing from other countries is through free trade agreements. They can lower both tariffs as well as non-tariff barriers, both of which artificially increase trade costs. Potential partners in this regard include Australia (e.g. for magnesium and rare earths) and Malaysia (rare earths). However, negotiations on a trade agreement between the EU and Australia broke down in October 2023, while those with Malaysia have been frozen for several years (Godart et al., 2023).

In addition to directly increasing the competitiveness of suppliers in partner countries, free trade agreements also increase planning certainty. If potential miners know that they can export raw materials cheaply and reliably to the EU, they will have stronger incentives to invest in new mines. Brazil is an example of a country which has large reserves of rare earths but currently does not count towards the largest exporters (Godart et al., 2023). Securing access to critical raw materials is thus an important reason to finally reach a deal on the EU-Mercosur trade agreement.

Investment protection agreements and sector specific investment credit guarantees might also help boost foreign direct investment of European companies in the extraction and processing of critical raw materials in partner countries. For example, the German government recently limited the amount of guarantees granted for investment in China while at the same time improving financing conditions for investments in countries deemed strategically important (Sandkamp, 2024). From a development perspective, the EU should find ways to encourage the

processing of raw materials already in the country in which they are extracted. Building downstream industries could help resource rich economies to move away from merely exporting raw-materials and towards exporting higher value products.

8 DO NOT TRADE LESS WITH CHINA, BUT MORE WITH OTHERS

Although China's share in EU trade has recently fallen, the country remains both the largest source of EU imports as well as one of the most important destinations for European exports. Decoupling would thus entail significant costs for both economies. This is particularly true in the short-run, as many products and raw materials that are predominantly sourced from China would be hard to substitute.

Both the European Commission and individual member states should thus do everything they can to incentivise diversification by reducing trade costs with other potential source countries. Redirecting trade flows this way will take time and may not be sufficient to fully achieve the envisaged de-risking. Other measures such as increased recycling and material efficiency may be at least as important as they simultaneously address industrial sovereignty and sustainability. Incentivising the shift of some production back to Europe may also be part of the solution, although it should be achieved not through subsidies but by raising productivity, e.g. by reducing the bureaucratic burden which binds urgently needed human capital.

Continuing to increase trade with other countries would not only reduce dependence on China. At the same time, it would strengthen the EU's geopolitical position in the world and further increase prosperity both at home and among its partners. By trading more with other countries and not less with China, the EU could master the current challenge by staying true to its conviction of a free and open society.

REFERENCES

- Baqae, David, Julian Hinz, Benjamin Moll, Moritz Schularick, Feodora A. Teti, Joschka Wanner, and Sihwan Yang (2023). Was wäre wenn? Die Auswirkungen einer harten Abkopplung von China auf die deutsche Wirtschaft. Kiel Policy Brief, 170, Kiel Institut for the World Economy.
- Destatis (2024). Genesis-Online Database, international trade. Via internet (11. April 2024) <<https://www-genesis.destatis.de/genesis/online>>.
- European Commission (2022). Opening remarks by President von der Leyen at the joint press conference with President Michel following the meeting of the European Council of 21 October 2022. Via internet (11. April 2024) <https://ec.europa.eu/commission/presscorner/detail/en/statement_22_6322>.
- European Commission (2023). Speech by President von der Leyen on EU-China relations to the Mercator Institute for China Studies and the European Policy Centre. Via internet (11. April 2024) <https://ec.europa.eu/commission/presscorner/detail/en/speech_23_2063>.
- Eurostat (2024). International trade in goods. Via internet (11. April 2024) <<https://ec.europa.eu/eurostat/web/international-trade-in-goods/data/database>>.
- Felbermayr, Gabriel, Hendrick Mahlkow, and Alexander Sandkamp (2023). Cutting through the value chain: The long-run effects of decoupling the East from the West. *Empirica*, 50: 75–108.
- German Mineral Resources Agency (2021). DERA-Rohstoffliste 2021 – DERA Rohstoffinformationen 49.
- Godart, Olivier, Patrick Abel, Eckhardt Bode, Tobias Heimann, Christoph Herrmann, Katrin Kamin, Sonja Peterson, and Alexander Sandkamp (2023). Resilienz der Langfriststrategie Deutschlands zum Klimaschutz. Studie im Auftrag der Wissenschaftsplattform Klimaschutz, January. Via internet (11. April 2024) <https://www.wissenschaftsplattform-klimaschutz.de/files/WPKS_Studie_Resilienz_Mai2023.pdf>.
- Sandkamp, Alexander, Vincent Stamer, Falk Wendorff, Steffen Gans (2023). Leere Regale made in China: Wenn China beim Handel mauert. Kiel Policy Brief, 164, Kiel Institut for the World Economy.
- Sandkamp, Alexander (2024). Gefährdet die Abhängigkeit von Rohstoffen Europas ökonomische Zukunft? Bundeszentrale für politische Bildung, Bonn.
- Sandkamp, Alexander (2024). Industry Dependency Risk Assessment and Realistic Policies, published in Sustainable? Competitive? The EU's Industrial Autonomy – Facts and Fantasies, ELF Study 7, edited by Francesco Cappelletti and Gerard Pogorel.

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Email info@ifw-kiel.de

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