

Decoupling Where it Matters? US Imports from China in Critical Sectors

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A number of policies have been recently introduced to reduce US trade dependence in critical goods. The concern behind these policies is that shocks can disrupt access to these critical goods, which can have devastating consequences for the US economy. For instance, the US enacted the CHIPS and Science Act of 2022 to increase domestic production of semiconductors to bypass sources such as Taiwan, which is subject to increasing geopolitical risks.

We study whether growing concern about US-China relations has begun to reshape bilateral trade flows of critical and non-critical goods, and how it contrasts with the trend of the past three decades.

Evolution of US Imports from China: Growth and Reversal

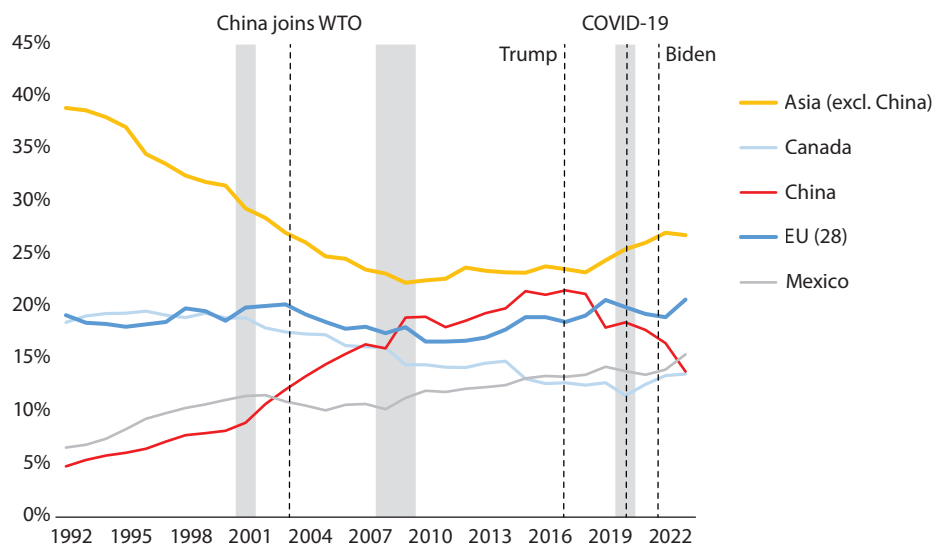
We begin by examining the composition of US imports over time across a sample of countries. Figure 1 shows that the share of US imports from China increased systematically over the past 30 years—from 4.8% in 1992 to a peak

of 21.6% in 2017. The period following China’s accession to the World Trade Organization featured particularly rapid growth.

This trend reverted abruptly in 2017, when the importance of China for US imports began its ongoing decline—from 21.6% in 2017 to 13.9% in 2023.¹ This reversal started with the increase in tariffs beginning in the Trump administration and continuing into the Biden administration, and it was heightened by the COVID-19 outbreak. While multiple factors are behind this reversal in the trend, a potentially important one is growing concern about the risk posed by China in light of heightened geopolitical tensions.

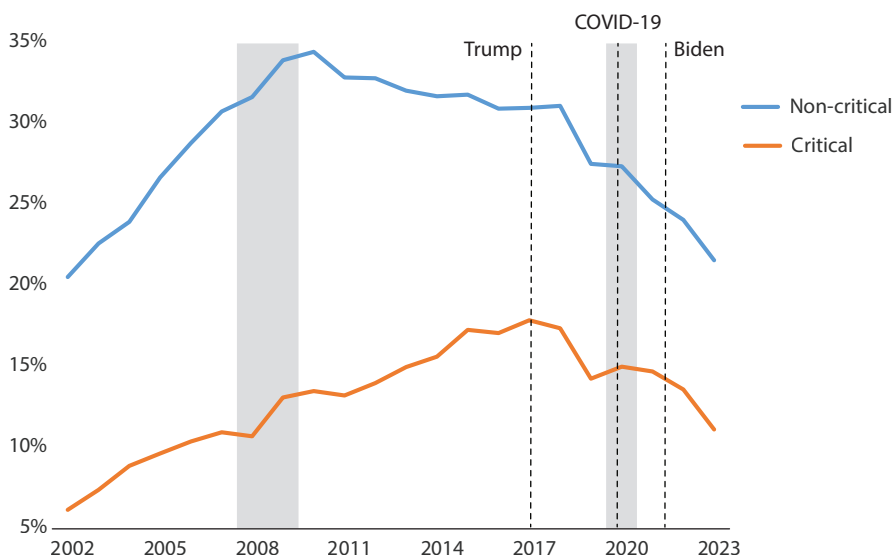
Over this recent period, we observe that US import shares from Asian countries (excluding China) have increased, suggesting a move toward diversifying US imports in the region. While potentially mitigating the risk from exposure to China, these Asian sources may themselves be dependent on China, suggesting that US dependence on China may not be as reduced as it may appear.²

Figure 1
US Imports by Country



SOURCE: US Census Bureau and authors’ calculations.

Figure 2
US Import Share from China



SOURCE: US Census Bureau and authors' calculations.

US-China Decoupling in Critical Sectors

The recent trend toward decoupling from China suggests that either the recently introduced policies have been effective at reshaping international trade flows, or growing concerns about risks are leading firms to optimally restructure their supply chains. Currently, the US imports a wide variety of goods from China, many of which would not significantly affect the US economy if their access were suddenly disrupted. Thus, it is important to examine the extent to which China is an important source of critical goods and, moreover, whether decoupling has been particularly significant across these goods.

Figure 2 partitions aggregate US import dependence from China across critical and non-critical sectors, based on a classification by the Department of Homeland Security's Cybersecurity and Infrastructure Agency (CISA): The agency identifies sectors where threats "could have potential debilitating national security, economic, and public health or safety consequences."³ In particular, the figure plots the share of imports of critical and non-critical goods sourced from China.

Over this period, we find that China has been an important source of imports of non-critical goods, while a more modest yet non-trivial source of critical goods. Moreover, we find that US-China import dependence in critical sectors increased in tandem with aggregate import dependence—from 6.2% of critical goods imports in 2002 to 17.9% in 2017. However, the systematic decline of total US imports from China has been faster in non-critical goods: The

import share from China declined by around 9 percentage points for non-critical goods, while among critical goods it declined by 6.8 percentage points—from 17.9% in 2017 to 11.1% in 2023. These findings suggest that the observed trend in aggregate trade is mirrored to some extent by imports of critical goods and that the observed decoupling is happening across goods and sectors particularly important for the US.

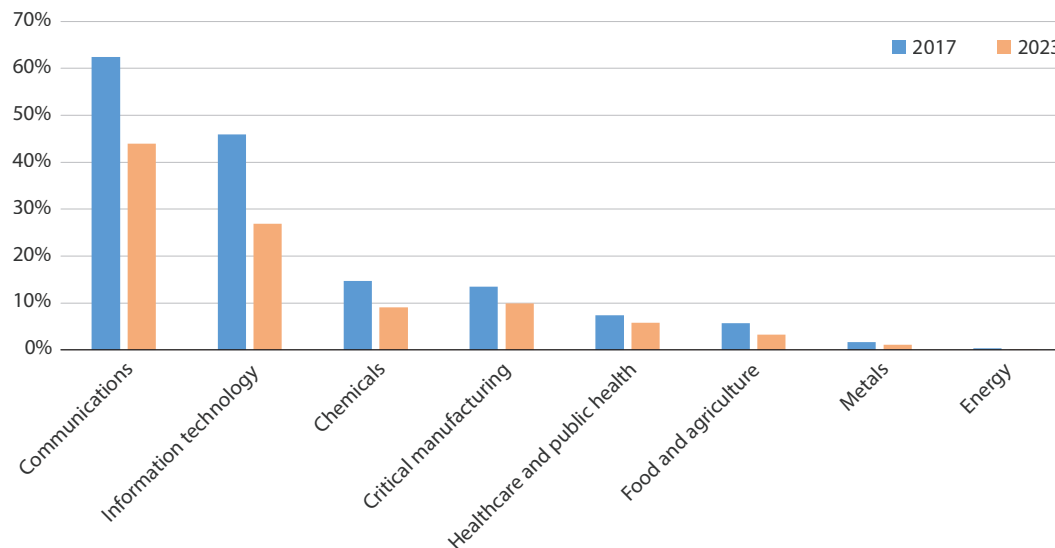
US-China Decoupling in Which Critical Sectors?

We now examine the extent of US-China decoupling across various critical sectors: Figure 3 plots the change in the share of US imports sourced from China between 2017 and 2023.⁴

We find that China is a particularly important source of imports in the communication and information technology sectors: Shares of these imports in 2017 were higher than 60% and 40%, respectively. In contrast, the rest of the critical sectors exhibit much lower dependence on China, with values around or below 10% throughout.

Interestingly, we observe the sharpest reduction of US dependence on China in sectors in which dependence has been the largest: Shares declined from 62% in 2016 to 44% in 2023 for communication-related goods, and from 46% to 27% for information technology goods. These findings suggest the US is on track to reduce its dependence on China in critical sectors that it relies on the most. However, significant exposure remains.

Figure 3
US Imports from China by Sector (% of US sectoral imports)



SOURCE: US Census Bureau and authors' calculations.

Conclusion

While our findings suggest the US is well on its way to reducing its dependence on China, there are important considerations to keep in mind:

First, while reducing trade risks and exposure may be attractive, doing so can also be costly. Industrial policy has a mixed track record at best and is often hard to remove. Similarly, changing suppliers may require paying significantly higher prices. Some of these costs might be passed on to final consumers or affect workers unevenly across sectors. Thus, it is crucial to investigate whether reducing dependence is worth it and when it is a calculated risk to be accepted.

Second, we focus on direct imports from China. However, to the extent that US imports from other countries are produced using inputs from China, the US may nevertheless remain dependent on indirect imports from China, even if direct dependence is reduced.

Finally, import shares may not fully capture the degree of industry exposure to a given country. Some goods may not account for a significant fraction of the total value imported but may be critical for welfare or output. For instance, even though semiconductors are a small fraction of car production costs, shortages of semiconductors had

a significant impact in this industry. Thus, the degree of substitutability of the goods under consideration is critical for evaluating the degree of exposure and dependence. ■

Notes

¹ The value for 2023 includes data up to October; the respective value for 2022 is 16.5%.

² See, for instance, Alfaro and Chor (2023) or Baldwin et al. (2023) for detailed discussions of indirect channels of exposure.

³ See <https://www.cisa.gov/topics/critical-infrastructure-security-and-resilience/critical-infrastructure-sectors> for details.

⁴ See <https://www.cisa.gov/topics/critical-infrastructure-security-and-resilience/critical-infrastructure-sectors> for details about each of the critical sectors. Note that we measure critical manufacturing by focusing on the following NAICS codes: 331 Primary Metal Mfg; 333 Machinery, Except Electrical; 335 Electrical Equipment, Appliances & Components; 336 Transportation Equipment.

References

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