

## Impacts of EU-China Trade Decoupling on Global Value Chains: Insights from a CGE Model Analysis

BATModel Deliverable 4.4 –

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### HIGHLIGHTS

- A policy experiment was conducted using the Modular Applied GeNeral Equilibrium Tool (MAGNET) to examine the effects of EU-China trade decoupling.
- Two versions of the MAGNET model were used: the standard version and the Global Value Chain (GVC) version.
- The study focused on the EU's imposition of trade barriers on 17 Chinese commodities, leading to a halving of their import share.
- Results indicated similar impacts on major economic indicators in both model versions, with notable shifts in global supply chains and value-added structures.
- The EU is projected to experience a slightly greater GDP decline compared to China due to higher dependency on imports from China.
- Policy recommendations emphasize the need for strategies to mitigate economic impacts and enhance supply chain resilience.

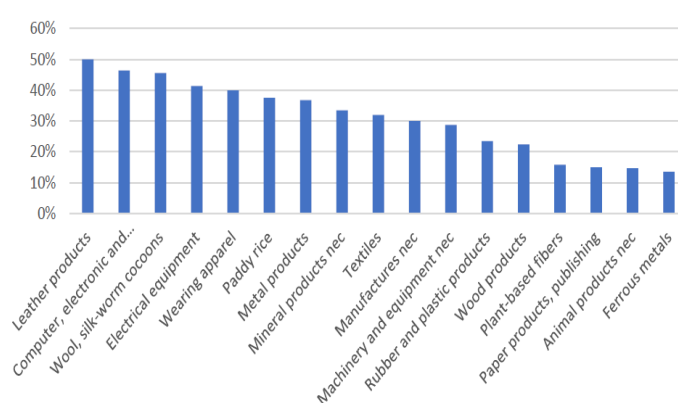
The study reveals that EU-China trade decoupling results in a greater GDP decline for the EU due to its higher dependency on Chinese imports, causing significant shifts in global supply chains and value-added structures, and underscores the need for diversified supply sources, adaptive trade policies, and increased investment in R&D to mitigate these impacts and enhance economic resilience.

### INTRODUCTION

Global value chains (GVCs) integrate production processes and supply chains across countries, driven by cost reduction, market openness, and technological advancements. China's rise as a central player in the global economy influences trade integration. Growing geopolitical tensions and strategic decoupling between major economies pose risks to these networks. The EU's economy, reliant on international trade, faces challenges from these disruptions, affecting essential products critical for societal and economic stability. Understanding the strategic dependencies and impacts of trade decoupling is crucial.

China increased industrial capacity, particularly in renewable energy products, worries the EU at a time when China's domestic demand is weak and other trading partners, such as the US, are limiting access to their markets. This leaves Europe as an important target for an overflow of China's exports, and European business claims that the EU trade deficit is partially explained by China's state subsidies and barriers to foreign companies.

Targeted commodities with an above-average import share from China



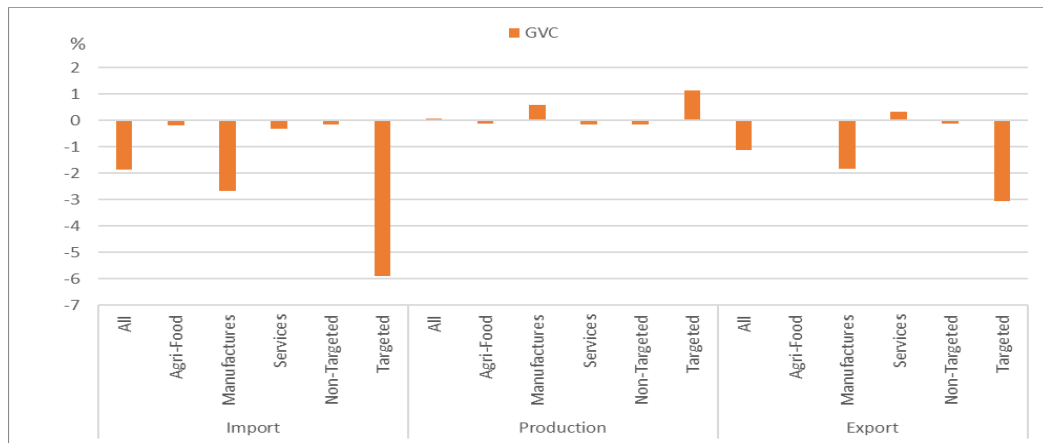
## DATA AND METHODS



This study employs the Modular Applied GeNeral Equilibrium Tool (MAGNET), a multi-sector, multi-region, dynamic computable general equilibrium model. The analysis involves the standard version and a newly developed GVC module, which allows for a detailed examination of value-added movements across borders and their impact on GVCs. The policy experiment simulates a decoupling scenario where the EU imposes trade barriers on selected Chinese commodities. The EU's import share from China for 17 targeted commodities is halved, reflecting a non-tariff measure.

The model aggregation includes 51 commodities/sectors and 16 world regions, capturing key trading partners and potential reshoring options.

Response in EU's import, export and production in key commodity groups



## MAIN RESULTS

- The EU experiences a **greater decline in GDP** compared to China due to the EU's higher dependency on Chinese imports for the targeted commodities, making it harder for the EU to absorb the import shock domestically.
- The EU's domestic production and imports from other exporters increase for the targeted commodities, while **overall exports decline** to meet domestic demand. Non-targeted commodities also see declines in production and trade due to supply chain effects and resource reallocation.
- The **decrease in the EU's imports from China** affects both the value-added originating from China and the EU's domestic value added re-imported from China.
- **Different regions experience varying impacts** based on their trade relationships with the EU and China. Some benefit from increased EU demand, while others face heightened competition from displaced Chinese exports.
- The **EU increases domestic production and imports** from alternative suppliers of the 17 commodities with above-average import shares from China, but overall economic efficiency declines due to the disruption of optimized supply chains.

## POLICY RECOMMENDATIONS

1. **Diversification of Supply Chains:** To mitigate the risks of over-dependence on a single country, the EU should diversify its supply sources. This could involve fostering trade relationships with other regions and investing in domestic production capabilities for critical sectors.
2. **Enhancement of Trade Policies:** The EU needs to develop flexible trade policies that can quickly adapt to geopolitical shifts, including mechanisms for rapid response to trade disruptions and promoting fair trade practices globally.
3. **Support for Affected Industries:** Industries heavily impacted by the trade decoupling should receive targeted support: financial assistance, retraining programs, and incentives for innovation and adaptation.
4. **Strengthening GVC Resilience:** Policies to increase the resilience of GVCs are essential. This involves improving transparency in supply chains, encouraging the adoption of advanced technologies, and fostering collaboration among international partners to ensure smooth operation and recovery from disruptions.
5. **Investment in Research and Development:** Investing in R&D can help the EU develop new technologies and processes that reduce dependency on external suppliers. This also includes promoting sustainable practices that align with long-term environmental goals.