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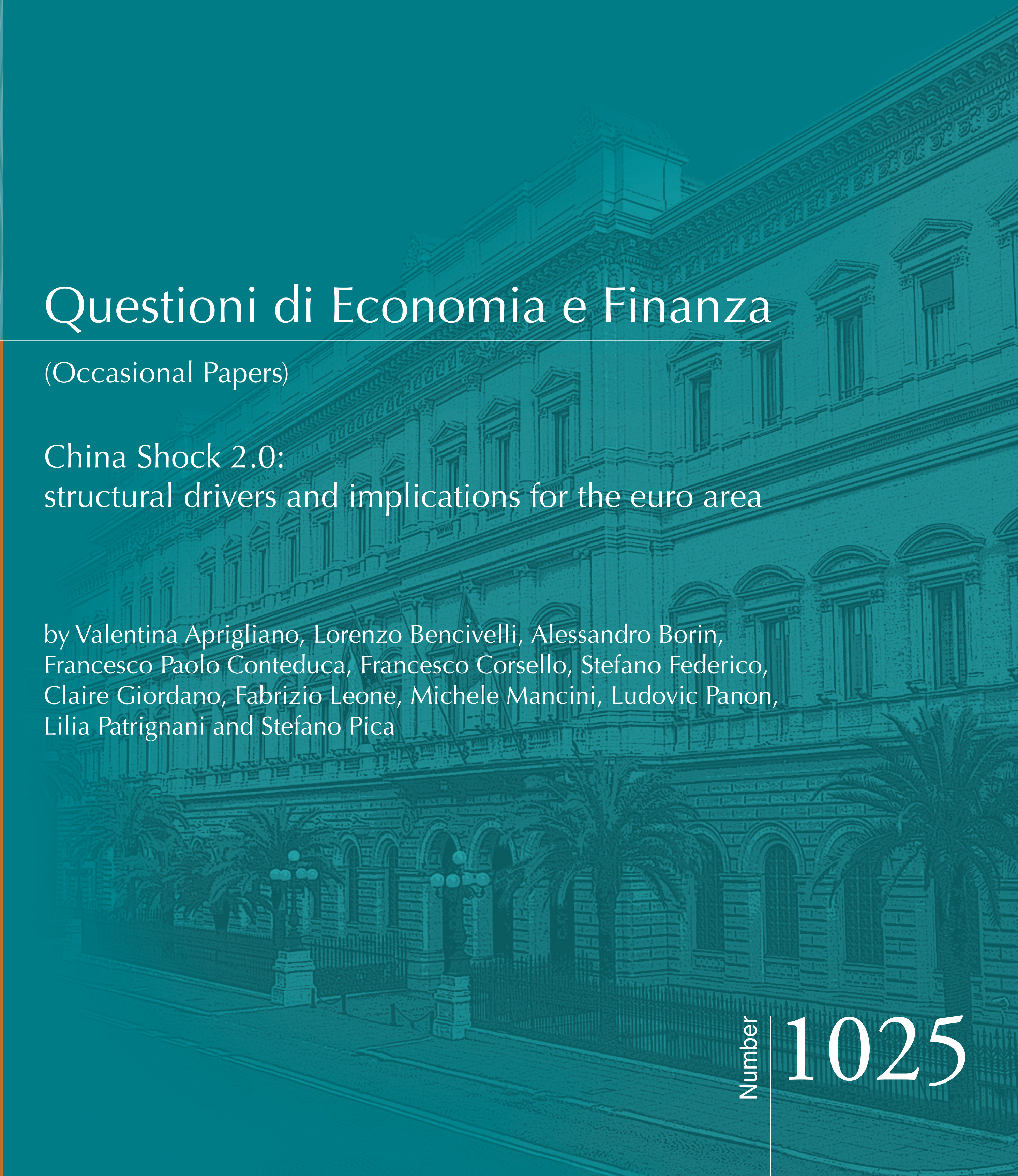

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(Occasional Papers)

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by Valentina Aprigliano, Lorenzo Bencivelli, Alessandro Borin, Francesco Paolo Conteduca, Francesco Corsello, Stefano Federico, Claire Giordano, Fabrizio Leone, Michele Mancini, Ludovic Panon, Lilia Patrignani and Stefano Pica

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The series is available online at www.bancaditalia.it .

ISSN 1972-6643 (online)

Designed by the Printing and Publishing Division of Banca d'Italia

CHINA SHOCK 2.0:
STRUCTURAL DRIVERS AND IMPLICATIONS FOR THE EURO AREA

by Valentina Aprigliano*, Lorenzo Bencivelli*, Alessandro Borin*,
Francesco Paolo Conteduca*, Francesco Corsello*, Stefano Federico*, Claire Giordano*,
Fabrizio Leone*, Michele Mancini*, Ludovic Panon*, Lilia Patrignani* and Stefano Pica*

Abstract

In the aftermath of the COVID-19 pandemic, China's goods exports have expanded strongly while imports have remained subdued, pushing the country's trade surplus to record levels and raising concerns about a new 'China shock'. This paper analyses the recent surge in Chinese exports and investigates its economic implications for the euro area and its main countries. We show that around three quarters of China's export growth since late 2023 has been driven by domestic factors rather than external demand. Weak domestic demand emerges as the main driver of the export surge, consistent with firms redirecting output abroad as domestic absorption weakens, while subsidies and technological upgrading also make a significant contribution. The shock spreads to the euro-area economy through three main channels. First, lower Chinese import prices exert sizeable disinflationary pressures: focusing on 2025 alone, the decline in Chinese import prices is estimated to lower consumer prices of non-energy industrial goods by about 1 per cent over three years. Second, stronger import competition weighs on manufacturing activity and reduces investment, especially in transport equipment and intellectual property, with possible adverse effects on innovation and long-term growth. Third, the technological upgrade in China and the subsequent increase in Chinese penetration in third markets significantly weakens euro-area export performance.

JEL Classification: F14, F62, E31, E22.

Keywords: China shock, Chinese exports, euro area, disinflation, import competition.

DOI: 10.32057/0.QEF.2026.1025

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1. Introduction

Since the pandemic, Chinese goods exports have expanded strongly, rising by about 50 per cent in real terms, while imports have remained broadly stagnant; as a result, the merchandise trade surplus has reached unprecedented levels, amounting to around USD 1.2 trillion in 2025.

Unlike the early-2000s episode triggered by WTO accession and driven by low-cost manufacturing integration, the current phase, often labelled "China shock 2.0", unfolds in a markedly different policy context, shaped by geopolitical tensions and protectionist pressures, with greater reliance on trade remedy instruments, industrial policy, export controls, and investment screening.

China shock 2.0 reflects an investment- and policy-driven model that, on the one hand, fosters technological innovation and upgrading and, on the other hand, generates persistent overcapacity relative to domestic demand, with transmission operating not only through quantities but increasingly through prices and competitive pressures. This gives rise to three key features. First, rapid technological upgrading—particularly in green technologies—has expanded China's export capacity and shifted its export composition toward more sophisticated, capital-intensive, and strategic products, bringing its firms into more direct competition with producers in advanced economies. This process has been supported by targeted industrial policies and large-scale public support (IMF, 2026a). Second, the resulting increase in China's export capacity and global market presence is contributing to rising critical dependencies among trading partners, both for selected raw materials and key components in green and ICT technologies (Panon et al., 2025; Borin et al., 2025; Balteanu et al., 2024). Third, China's rising price competitiveness—driven by nominal exchange rate depreciation and a prolonged period of domestic deflation—has intensified downward price pressures in both domestic and third-country markets. At the same time, cheaper Chinese inputs can generate gains for importing economies by lowering production costs, easing inflationary pressures, and supporting downstream competitiveness (Amicucci et al., 2026).

These developments have important implications for the euro area, operating through price, production, investment, and trade channels.

This work examines the structural forces underpinning the recent surge of Chinese exports and studies its implications for the euro area and its main economies. First, we document the main features of China's exceptional export dynamics and assess the extent to which this performance reflects global demand conditions as opposed to factors originating within China itself. Second, we investigate the main domestic drivers of the shock, focusing on weak domestic demand, technological upgrading, state support, and the possible role of trade diversion following the 2025 US tariffs. Finally, we analyze the economic effects of these developments for the euro area through both price and real-side channels.

Our main findings are as follows. According to our estimates, approximately three-quarters of China's recent export growth appears to have been driven by China-specific domestic factors. Weak domestic demand is the most important quantitative driver, while subsidies and technological upgrading make a less significant, though meaningful, contribution. The China shock has relevant implications for the euro area. First, it is disinflationary: lower Chinese import prices reduce consumer prices of non-energy industrial goods, with the decline in Chinese unit values since early 2025 implying a cumulative effect of about 1% over three years. Second, the shock weighs on euro-area manufacturing, production, and investment, especially in chemicals, machinery, electronics, and transport equipment; the estimated impact peaks at about -0.5% for total investment and is stronger for transport equipment and, notably, intellectual property, pointing to risks for innovation and long-term growth. Third, the effects are uneven across countries and sectors, with Germany appearing the most exposed and Italy also vulnerable in some manufacturing segments. Fourth, stronger Chinese competition in third markets has structurally weakened euro-area export performance, in particular for Germany; conversely, there is no evidence of strong trade diversion of China's exports from the US market to euro-area destinations in 2025 as a result of particularly high US tariffs on imports from China.

The remainder of this work is organized as follows. Section 2 documents the main features of China's recent export boom against the backdrop of weak import growth. Section 3 assesses the extent to which this performance reflects global demand conditions as opposed to China-specific factors. Section 4 examines the main domestic drivers of China shock 2.0, with particular attention to weak domestic demand, technological upgrading, subsidies, and the possible role of trade diversion following the 2025 US tariffs. Section 5 discusses the implications for the euro area and its main economies through price, production, investment, and export channels. Section 6 concludes and draws out the main policy implications.

2. China's recent export boom amid stalling imports

Since 2020, robust export growth combined with persistently weak import growth has sharply widened the goods trade surplus, pushing it to unprecedented levels. Although the two series have moved closely together for an extended period, after the pandemic Chinese goods exports in real terms have expanded by about 50%, while imports growth has been muted (Figure 1a).[1] As a result, China's merchandise trade surplus reached a record high of 1.2tn USD in 2025. Measured as a share of China's GDP, the merchandise surplus remains below the levels observed prior to the Global Financial Crisis, following the expansion into foreign markets after its accession to the WTO in 2001. However, given the much larger size of the Chinese economy today, its contribution to global imbalances is now almost twice as large relative to world GDP (IMF, 2026b).

After a decade of broad stability or moderate rise, China's global export market share has accelerated again since the pandemic, with growth picking up in recent years. Between 2022 and 2025, China's share of global imports has increased by more than 3 percentage points in volume terms, an expansion that echoes developments during the early-2000s "China shock" (Figure 1b). By contrast, following the pandemic, the export market shares of the euro area - and, to a lesser extent, the United States - have declined after a prolonged period of relative stability dating back to the global financial crisis.

China's export shares increased despite two major waves of US tariff hikes and broader geopolitical decoupling as these shocks accelerated a reorientation toward fast-growing emerging markets. Since 2018, escalating US–China trade tensions have resulted in successive rounds of tariffs covering most of their bilateral trade (Bown, 2021). In this period, the US import share from China has fallen by about 13 percentage points, reaching roughly 10% in 2025, including a 4-percentage-point decline in 2025 alone. At the same time, global trade has become increasingly shaped by geopolitical considerations, with trade flows rising within geopolitical blocs and declining across blocks (Attinasi and Mancini, 2024).[2] However, rather than weakening China's overall export

[1] While merchandise trade has displayed such remarkable dynamics, service trade and other current account components have been more muted. In this note, unless differently specified, we will focus on the trade in goods.
[2] These tensions have prompted firms in advanced economies to revise sourcing and production strategies to reduce their reliance on China, both as a supplier and as a production hub (Conteduca et al., 2025; Balteanu et al., 2024; McKinsey, 2023).

performance, these shocks have accelerated the ongoing reorientation of exports toward fast-growing emerging markets (Sheng et al., 2025). Chinese market penetration has risen especially sharply in Africa and Latin America, where its import share has increased markedly, bringing China's share of total imports in both regions to about 23%.

China's recent exceptional export performance was favored by the improvement in price competitiveness and by its technological upgrading.

Since 2022 China's real effective exchange rates (REERs) has strongly depreciated, mainly due to the deflationary trend of domestic and export prices in combination of broadly stable nominal currency (Figure 2). This gain has gone hand in hand with a competitiveness loss of similar magnitude by the US. Over the same period, the appreciation of the euro-area REER has been less marked than that of the US, but accelerated in 2025.

China's recent export strength also reflects a broader technological upgrading that has shifted production away from labor-intensive consumer goods and toward more sophisticated, capital-intensive, and strategic industries. Chinese firms have strengthened their position in upstream manufacturing and green-transition industries, while the composition of exports has progressively shifted toward more advanced and higher value-added products.[3] Based on the metrics proposed by Hausmann et al. (2014), the average complexity of China's export basket has increased steadily over the past two decades (Figure 1c). While this transformation has been supported by state backing and industrial policy (IMF, 2024), it has also benefited from the rise of an innovation ecosystem of exceptional scale, built on massive R&D investment, a vast STEM talent pool, and dense networks of technology clusters and industrial parks (Kennedy, 2026), and privileged access to rare earth minerals—a critical input for advanced manufacturing and green-transition technologies in which China controls a dominant share of global supply and processing capacity (IEA, 2025). Chinese firms have strengthened their position in upstream manufacturing and strategic sectors, with the clearest gains visible in green-transition industries.[4]

At the same time, weak domestic demand in China, coupled with a strategic push for greater technological and industrial self-sufficiency, has led to subdued import growth. Weak household consumption—held back by a prolonged property downturn, falling real estate investment, and subdued consumer confidence—has weighed on demand for import-intensive goods, particularly intermediate and consumer products. Structural policies have further contributed to import weakness by promoting the substitution of foreign inputs with domestic ones, compounding the cyclical drag and contributing to a steady decline in imports from advanced economies and a broader reshaping of China's trade structure (Al-Haschimi et al. 2025). More fundamentally, China has progressively become

[3] During the first Chinese export boom, right after its accession to the WTO, Chinese import penetration in foreign markets rose most strongly in consumer-oriented sectors, notably electronics (+17.6 percentage points, between 2000 and 2007) and textiles (+14.5). More recently, China's export structure has become increasingly similar to that of advanced economies, with a stronger presence in advanced manufacturing (de Soyres et al., 2025). While remaining a global leader in both textiles and electronics, with market share close to 30% in both, China expanded its presence in upstream, capital-intensive, and strategic industries, such as machinery, chemicals, electrical equipment, and fabricated metal products, reaching in 2025 shares above 30% in many of these sectors in Africa, Latin America and Asia.

[4] In emerging economies, China's share of electric vehicle imports has exceeded 60% in 2025, while its penetration in other transition-related products has reached around or above 30% across Africa, Latin America, and Asia, and are also substantial in advanced economies, standing at about 18% in the EU and 14% in the United States.

less reliant on imported inputs in key manufacturing and technology sectors, in line with its long-term strategy of self-reliance (de Soyres and Moore 2024).

3. Domestic origins of China's exceptional export performance

To understand the sources of China's export performance, it is essential to distinguish between gains driven by China-specific factors and those simply reflecting favorable global and foreign demand conditions. The strong performance of Chinese exports may reflect several factors. On the one hand, it could reflect robust growth in demand in destination markets where China already has a strong presence, as well as rising foreign demand for products in which China – alongside other exporters – enjoys a comparative advantage. For example, this may partly reflect the rapid expansion of global demand for goods and intermediate inputs related to the green transition, such as electric vehicles, batteries, and solar panels, industries in which China has established a dominant position in global markets. Likewise, the strong penetration of Chinese exports into fast-growing regions such as Southeast Asia and Africa may have contributed to export growth exceeding the pace of world trade. On the other hand, export strength may also be driven by factors originating within China itself, such as an expansion of production capacity induced by domestic policies such as industrial strategies and subsidies. This distinction matters because the underlying source of export growth carries different economic and policy implications. If export strength is mainly driven by external demand, it may largely reflect cyclical or market-specific developments abroad; if instead it is driven by China-specific domestic factors, it may point to structural changes in China's supply of goods to global markets, with potentially broader implications for international competition, trade balances, and policy responses in partner economies.

We employ an econometric framework to disentangle the contribution of China-specific factors from that of global demand in explaining China's export performance. To isolate the component of export growth that can be attributed more directly to China-specific factors, we rely on the decomposition framework developed by Amiti et al. (2024).[5] Through this approach we decompose trade growth into three broad elements: common global trends affecting all countries and sectors, changes in foreign demand that are specific to certain importers and products, and "supply" factors originating in individual exporting countries[6] In this context, "supply" factors should be interpreted broadly as capturing changes in the conditions under which Chinese goods are supplied to international markets – including quantities, prices, product quality, and other dimensions of export competitiveness. These factors are not necessarily driven only by narrowly defined domestic supply shocks; for example, changes in export prices may also reflect domestic demand conditions or other external factors shaping the pricing and market strategies of Chinese firms abroad.

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[5] The framework is applied to trade volumes. Information on trade flows in values and quantities comes from the Trade Data Monitor (TDM). To construct the dependent variable in equation (1), we first compute growth rates in export quantities at the country pair–product–year–quarter level. We then aggregate these growth rates to the country pair–industry–year–quarter level using lagged export values as weights. Industries are defined according to the OECD TiVA classification.

[6] Operationally, we construct exporter- and importer-side measures of supply and demand shocks, respectively, using exporter–sector–quarter and importer–sector–quarter terms estimated from quarterly volume trade data. For Chinese supply, we aggregate China's supply-side shock at the sector–quarter level to the quarterly level, using weights based on China's own exports in the same sector and quarter of the previous year. On the demand side, we aggregate importer–sector–quarter shocks by collapsing both the importer and sector dimensions using lagged trade flows from the previous year.

To isolate supply-side and demand-side factors driving China's export performance, we project four-quarter export quantity percentage changes for industry h from exporter i to importer j in quarter t, $\Delta_4 q_{hijt} = \frac{Q_{hijt} - Q_{hij,t-4}}{Q_{hij,t-4}}$, on importer-industry-time fixed effects, α_{hjt}, and exporter-industry-time fixed effects, β_{hit},

$$\Delta_4 q_{hijt} = \alpha_{hjt} + \beta_{hit} + \varepsilon_{hijt}. \qquad (1)$$

We estimate this equation using weighted least squares with four-quarter lagged export values weights. The coefficient α_{hjt} isolates changes in export quantity attributable to demand-side factors in the importer country j, while β_{hit} isolates changes due to "supply" factors in the exporter country i, for each industry h and quarter t. Following Amiti et al. (2024), we make the interpretation of the estimated coefficients easier by normalizing them to be deviations from their respective medians. Hence, the idiosyncratic demand shocks read as $\tilde{\alpha}_{hit} = \hat{\alpha}_{hit} - \bar{\alpha}_{ht}$, where $\hat{\alpha}_{hit}$ is the estimated fixed effect and $\bar{\alpha}_{ht}$ is the median value of $\hat{\alpha}_{hit}$ at quarter t for industry h. The idiosyncratic "supply" shocks are defined as $\tilde{\beta}_{hit} = \hat{\beta}_{hit} - \bar{\beta}_{ht}$, where $\hat{\beta}_{hit}$ is the estimated fixed effect and $\bar{\beta}_{ht}$ is the median value of $\hat{\beta}_{hit}$ at quarter t for sector h.[7] The global shock is defined as the sum of the median demand and median supply shocks, $\bar{\alpha}_{ht} + \bar{\beta}_{ht}$. We estimate Equation (1) on a panel where the unit of observation is a combination of exporter-importer-sector (TIVA)-quarter to ensure we have enough variation to identify the parameters of interest. However, our focus lies specifically in the "supply" factors driving changes in export quantity from China.[8]

Since late 2023, China's export surge has been driven predominantly by domestic factors, with especially strong contributions from a small set of manufacturing sectors. Around 75 percent of Chinese export growth has been driven by Chinese domestic factors, with the remaining share explained by the common global component and foreign demand (Figure 3a). By contrast, between 2018 and 2022 domestic factors played a much more limited role, accounting for less than 10 percent of overall export growth. More than half of the recent export boom driven by domestic factors is concentrated in just four sectors – electronics, electrical equipment, machinery, materials (Figure 3b). Chinese exports driven by domestic factors have also played a key role at the global level, accounting for about 40% of total trade growth (excluding the US) recorded since the end of 2023 (Figure 4).

4. China shock 2.0 and its main domestic drivers

We now examine the underlying determinants and relative importance of the domestic factors that appear to be the main drivers of China's recent export boom. The sharp increase in export volumes has been favored by a broad-based decline in export prices and by a marked technological and qualitative upgrading of Chinese products. In turn, these developments appear closely linked to a rapid expansion of manufacturing capacity and intensifying domestic competition in a context of persistently weak domestic demand, unable to absorb the increase in production. This condition – commonly referred to as "overcapacity" – has frequently been identified as one of the main roots of China's growing export competitiveness and its expanding presence in global markets.[9]

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[7] By construction, the weighted average of the residuals is zero. Hence, after aggregating at a higher-level, the residuals do not contribute to the decomposition of the aggregate growth rate of the quantity index.

[8] Since we are concerned with changes in Chinese exports beyond the US market, we exclude the US from the estimation sample both as an exporter and as importer.

[9] Structural overcapacity refers to the persistent expansion of production capacity beyond what can be absorbed by domestic demand at economically sustainable prices, characterized by its durability across business cycles and its concentration in policy-favored sectors. More recently, since July 2025, the Chinese government has

China's structural overcapacity is shaped by two core features of its growth model: heavy state-directed investment in selected industrial sectors and soft budget constraints that weaken market discipline. Two mechanisms have been at play. First, chronically weak private consumption and high savings have long supported rapid capital accumulation, while state-directed credit and the central role of state-owned or state-backed firms have steered resources toward priority industries (Boullenois et al. 2024; Liu 2025). The deep crisis in the real estate sector has reinforced this pattern, as state financial institutions have redirected resources from construction toward manufacturing, further expanding productive capacity. Second, soft budget constraints, especially for state-owned enterprises and firms backed by local governments, have reduced the likelihood that inefficient producers leave the market. Preferential access to credit, debt rollovers, and selective bailouts have allowed unprofitable firms to survive and, in some cases, continue expanding, preventing excess capacity from being absorbed through firm failure. At the same time, competition among local governments to attract large firms—through tax breaks, subsidized land, and financing guarantees—has further amplified incentives to invest and expand, reinforcing chronic oversupply and intensifying price competition (Xu, 2011). Yet these same features have also helped propel China toward, and in some cases beyond, the technological frontier in several strategic industries.

Although quantifying excess capacity in China is inherently challenging, a range of macroeconomic and sectoral indicators can shed light on its scale and persistence.

- **Producer and export prices have undergone a prolonged period of deflation.** The producer price index (PPI) began to decline in late 2022 and has remained in negative territory since then, with export prices following a similar path (Figure 5a). Over 2023-2025, the sharpest falls in producer prices were concentrated in capital-intensive industries such as cement, steel, metal products, electrical machinery, and chemicals (Figure 5b). Across the ten largest manufacturing industries, export unit values declined alongside domestic producer prices, even as export volumes expanded rapidly. These patterns suggest that exports have served less as a response to stronger foreign demand than as an outlet for surplus production.[10]
- **Inventories are on a stark upward trend**, signaling a growing imbalance between supply and (domestic and foreign) demand and suggesting that firms are unable to fully absorb excess output through market channels (Figure 6a).
- **Capacity utilization data show that utilization rates in 2024-2025 remain markedly below their 2017–19 average** in a number of manufacturing industries, with particularly large gaps in automobiles, electrical equipment and heavy construction-related industries like cement (Figure 6b). Chemical sectors appear closer to historical norms, suggesting a more balanced demand–supply configuration.

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emphasized the need to curb "involution" (i.e., excessive price competition) in several traditional sectors (e.g., iron and steel, glass) and emerging industries (e.g., solar panels, electric vehicles, batteries, chemicals). This "anti-involution" campaign includes restrictions on new local industrial policy subsidies not aligned with national priorities and efforts to promote industry-level coordination to stabilize prices and reduce capacity. While these measures may alleviate overcapacity in specific sectors, such as solar, they are unlikely to provide a comprehensive solution in the absence of stronger demand-side drivers.

[10] When domestic capacity persistently exceeds local demand, firms are compelled to sell abroad to sustain capacity utilization and cash flow. Under soft budget constraints, losses exert less pressure to cut output or exit the market, so prices cease to play a market-clearing role and instead become instruments for absorbing excess supply. As a result, aggressive export pricing appears structural rather than cyclical, especially in capital-intensive industries where high fixed costs make continued utilization essential.

- **In the manufacturing sector, the share of loss-making firms rose by 10pps in the last five years** (Figure 7a)**. Profit margins relative to turnover declined from 7 to 4%** (Figure 7b), with considerable differences among sectors both in level and dynamics. Traditional productions, especially those linked to construction, such as steel, work at near zero profit, just below pre-pandemics period. In the automobile industry, profit-turnover ratio has halved compared to the pre-pandemics, now standing at 4%. In pharmaceuticals profits are consistently higher than the rest of the manufacturing sector and on a higher level compared to pre-pandemics. This evidence is consistent with firms compressing markups across the board to compete for market share. Among them, least productive firms easily slip into the negative profits territory and survive on the back of bank support or government subsidies (Garcia-Herrero and Xu, 2025).

Overall, excess capacity appears most acute in construction-related heavy industry and parts of capital-intensive manufacturing, where falling prices and weak utilization signal persistent supply-demand imbalances. The clearest signs are in cement and metal products, where sharp price declines coincide with weak or declining capacity utilization. Steel shows a similar pattern: producer prices have fallen markedly in recent years (around -7.8 percent), while utilization rates have remained broadly stable, suggesting that excess supply is being absorbed through exports rather than domestic production cuts. Electrical machinery also exhibits broad-based slack, whereas chemicals and pharmaceuticals show more limited signs of imbalance.

Growing overcapacity after 2022 is reflected in the changing relationship between domestic demand and export growth, which turned negative in this period. To capture this shift in a synthetic way, we regress quarterly growth in real domestic sales—using the sectoral data from Al-Haschimi et al. (2025)—on real export growth across 29 sectors. The results point to a clear break: before 2023, there is no systematic relationship between the two, whereas from 2023 onward the association becomes negative, with weaker domestic demand linked to stronger export growth (Figure 8). This pattern is consistent with firms redirecting output abroad as domestic markets become less able to absorb existing capacity.

Other domestic factors behind the recent surge in Chinese exports include rapid technological upgrading and extensive state support. Over the last ten years, China has invested heavily in product quality, production efficiency, supply-chain sophistication, and the capacity to move into more complex, higher-value sectors, especially in green-transition sectors. These accumulated gains likely helped Chinese firms expand exports in recent years as well. Indeed, exports of green-transition products, such as electric vehicles, lithium batteries and photovoltaic cells, substantially increased not only towards non-US markets, but also to the US, despite two waves of tariffs (Figure 9a). At the same time, industrial policy has helped reinforce this shift by channeling financial support toward priority sectors, lowering production costs, and sustaining capacity expansion. In this respect, subsidies have likely complemented technological upgrading, accelerating China's penetration of global markets. In fact, compared with other economies, Chinese producers have benefited from significantly higher subsidy intensity—measured as the ratio of government grants, tax concessions, and below-market borrowing to total revenues—based on data from the OECD MAGIC database (Figure 9b).[11]

Chinese exports may also have been boosted by flows of Chinese products destined to the US that have been re-directed to other regions after the imposition of 2025 tariffs. Following successive

[11] For China, the database covers around 140 leading companies across 14 key manufacturing sectors, with a particular focus on heavy industry, capital goods, and industrial raw materials.

waves of US tariffs targeting China—and, to a lesser extent, other countries—Chinese exports to the United States fell by about 20% in 2025. At the same time, exports to other destinations surged, particularly to Africa (+26%), Asia (+10%) and the EU (+8%). Part of such increases may reflect trade diversion triggered by US tariffs. So far, however, there is little evidence that these measures have led to substantial and broad-based diversion, especially toward the European market (Le Roux and Spital, 2026; Schulte et al., 2026). Indeed, Chinese exports to the EU of products targeted by US tariffs followed a pattern similar to that of products exempted from those tariffs (Figure 10).

We shed light on the relative contribution of the main domestic drivers behind China's export boom, namely weak domestic demand, technological upgrading, subsidies and US tariffs. We provide a quantitative assessment of the relative contribution of the mechanisms explaining China's export growth driven by domestic factors by estimating the following equation at the quarter t sector h level between 2022 and 2025:

$$\tilde{\beta}_{h,CN,t} = \alpha_0 + \alpha_1 \text{US\_Tariff}_{h,CN,t} + \alpha_2 \text{US\_Tariff}_{h,CN,t-1} + \alpha_3 Dom_{h,CN,t} + \alpha_4 Dom_{h,CN,t-1} + \alpha_5 Green_{h,CN} + \alpha_6 Subsidy_{h,CN} + \varepsilon_{h,CN,t}. \qquad (2)$$

The left-hand side variable is the China-specific supply-side idiosyncratic export shock obtained from Equation (1). On the right-hand side, we include the year-on-year change in US tariffs on Chinese products and its lag, the change in Chinese domestic demand and its lag, the share of green products in each industry,[12] and the intensity of subsidies in each industry (computed as an average between 2015 and 2021).[13] We standardize variables to have mean zero and unit variance in the sample and report robust standard errors.

Among all candidate mechanisms, we find evidence that industries facing a larger decline in domestic demand are those with the strongest export growth towards non-US markets. Export growth towards non-US markets is concentrated among industries with larger drop in internal demand, followed by those receiving more subsidies, having a larger share of domestic products, and facing higher US tariffs (Figure 11a). Changes in domestic sales explain 58% of the total variation in Chinese idiosyncratic export shock (Figure 11b).[14] The share of government subsidies explains 23% of the variation. The share of green products within each industry explains an additional 11% of the variation, while changes in US tariffs on China explain the remaining 7%.

The finding that the weakness in domestic demand is the main driver of export growth is robust across a range of alternative specifications. Our baseline specification in Figures 10a and 10b includes the average subsidy intensity at the industry level as a control, constructed from the OECD MAGIC database, which is available only for a subset of TIVA sectors. Our finding that declining internal demand is the primary driver of Chinese export growth remains unchanged when this control is excluded from Equation (2), which allows us to expand the estimation sample (Figure 12a).

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[12] Specifically, we compute the share of HS6 products classified as "green" according to Attinasi et al. (2024) within each TIVA sector.

[13] Because industries in the OECD MAGIC database do not correspond neatly to OECD TiVA sectors, we assume that subsidy intensity is constant within each TiVA sector and equal to the value observed for the corresponding OECD MAGIC subsector.

[14] Figure 11b reports the results of a Shapley decomposition (Huettner and Sunder, 2012) of Equation (2). The Shapley decomposition checks which regressors have more explanatory power in sample by removing each regressor from the estimating equation at the time and computing the average change in the overall regression R-squared.

The domestic drivers behind China's export boom do not appear to be the same as those underlying its weak import growth. Using the decomposition framework described above, we also isolate the component of import changes driven by domestic factors and assess whether the variables associated with the recent export surge also help explain sluggish imports. The regression results suggest that this is largely not the case: only a modest decline in imports is associated with greater specialization in green-transition technologies, while weak domestic demand, US tariffs, and subsidies do not show a significant relationship with import dynamics (Figure 12b). This points to the relevance of other forces, including policies aimed at technological self-sufficiency—such as Made in China 2025—and a broader reorientation of imports toward domestic suppliers and geopolitically aligned partners (Al-Haschimi et al., 2025).

5. The effects of the China shock on the EA and its main economies

Having examined the domestic determinants of China shock 2.0, we now turn to its economic effects, with a particular focus on the euro area. We focus on three main transmission channels. The first is the direct transmission of Chinese excess capacity and low inflation into lower euro area inflation via imports. The second is a domestic real-side channel, operating through weaker production and investment. The third is an external channel, affecting export performance as China increasingly competes with European goods in global markets.

5.1. Price channel

In 2025, euro-area imports from China represent nearly 22% of total extra-EA imports and span a broad range of low- and mid-tech consumer manufactures, alongside intermediate inputs. In 2025, the euro area imported over €430 billion worth of manufactured goods from China, accounting for almost 22 percent of total extra-euro area imports. The euro area's import exposure to China is heavily concentrated in machinery and electrical/electronic goods (Figure 13). The largest slices of euro-area imports from China are electrical machinery and apparatus, a broad category that includes many consumer durables such as household appliances and electrical equipment, followed by telecommunications and sound-recording equipment and office machines and data-processing equipment. Together with general and specialized industrial machinery, these categories account for a sizable share of the China basket and sit at the core of Europe's dependence on Chinese supply.

Looking at China's penetration in extra-euro-area imports, China's share is particularly high for the key electronics and machinery clusters, confirming that China is the euro area's dominant external supplier across large segments of the electronics and equipment value chain. High penetration also extends to several consumer-related manufactured items that are less high-tech but broadly used by households (as furniture, textiles, footwear and travel goods/handbags), as well as other durable goods, including road vehicles and parts. China also supplies a wide range of manufactured inputs used along the production chain, such as manufactures of metals and organic chemicals.

Overall, the picture is one of a dual dependence: a strong reliance on China for technology-intensive equipment and electronics, alongside a broad-based exposure in low- and mid-tech manufactured goods. This combination suggests that the China shock is transmitted to euro-area prices not only through a narrow set of strategic goods, but also through a wide range of consumer products and intermediate inputs that are pervasive in household consumption and production chains.

Rising import volumes signal intensifying competitive pressure from China, while the decline in import unit values in 2025 points to renewed price competition. Import volumes strengthen markedly from 2024, indicating a broad-based increase in competitive pressure on euro area producers (Figure 14, left panel). At the same time, import unit values fall through 2025, with the decline becoming more pronounced after the latest US tariff announcements. The volume expansion is widespread across sectors, implying a broad competitive impulse rather than a shock confined to a few industries (Figure 14, right panel). By contrast, the drop in unit values is more concentrated and driven mainly by lower-tech/basic goods, most notably iron & steel and chemicals, while tech-intensive categories show smaller declines or even increases. Overall, recent price compression appears concentrated outside high-tech sectors, where demand conditions and strategic considerations may have limited downward pricing.

Competitive pressures on euro area producers, driven by China increasing its exports toward Europe, exert disinflationary effects on consumer inflation. Using local projections, we estimate that a 1% temporary decline in the unit value index (UVI) of imported Chinese manufactured goods lowers non-energy industrial goods (NEIGs) prices by approximately 0.15% over a three-year horizon (Figure 15a). Given that the UVI has fallen by roughly 6.5% since the start of 2025, this would imply a cumulative decline in NEIGs prices of around 1% over three years. Figure 15b further reveals considerable heterogeneity in the pass-through across product categories. The response is strongest for high-tech goods (e.g. IT equipment), housing-related items (e.g. household appliances and utensils), and transport equipment, whereas low-tech products such as garments and footwear display more limited sensitivity.

"China-sensitive" items typically record low or negative inflation, and after the spike associated with the energy crisis and supply bottlenecks, they have returned to making a negative contribution to NEIG inflation since 2024. The decomposition in Figure 16 shows that the China-sensitive basket (a sizeable share of the HICP NEIGs basket, around 40% in 2026) is frequently below zero, consistent with persistent import-price disinflation in segments most exposed to Chinese pricing, particularly technology-related goods. This negative contribution was temporarily interrupted in 2022–23, when supply bottlenecks and energy-related cost pressures pushed NEIG inflation sharply higher and lifted most components. From 2024, however, the China-sensitive contribution falls back rapidly and turns negative again, becoming a key force dragging aggregate NEIG inflation down and helping explain why goods inflation has remained very subdued through 2025.

5.2. Production and investment channels

Manufacturing in the euro area is more challenged by the "China shock 2.0", which has shifted the playing field toward more high-value production, representing the backbone of the European industrial sector, like chemicals (7.2% of total industrial production), machinery and equipment (10.2%), metal products different from machinery and equipment (including weapons and ammunitions; 8.1%), computer and electronics (7.2%) and transport equipment (10%). Chinese import shares in these sectors overall increased over time (Figure 17) while the industrial production in the same sectors has been shrinking since the end of the pandemic crisis. Consistent with this pattern, the correlation between the Chinese import shares and the euro area industrial production has moved more persistently into negative territory in sectors such as chemicals, machinery and equipment, and automotive industry (Figure 18).

It follows that an increase in Chinese price competitiveness affects euro area investments, especially for transport equipment and intellectual property. We explore to what extent Chinese competition may hold back investments in the euro area and across the major countries through an analysis carried out at disaggregated level for both type of investments (total and intellectual property) and sectors (products), selected among the most exposed to the increasing Chinese import pressure. Unsurprisingly, the impact of Chinese competition is heterogeneous across countries and sectors. This result strictly depends on the production specialization of each country and its position within the global network.

Using the fine breakdown of the trade flows provided by the Standard International Trade Classification,[15] we calculate the Chinese unit import values for total manufactured goods (only for the euro area), chemical products, electrical equipment and transport equipment and use them as a measure of China competition pressure. We estimate a VAR as in Lenza, Primiceri 2022, including GDP, Chinese UVI, gross fixed investments, business and consumer survey, HICP and the interest rate of bank loans to NFCs over the period 2005 January – 2025 November, and use a Cholesky identification scheme. A one standard deviation shock to the Chinese unit values (corresponding to a more than 3.0% drop) has a negative and long-lasting impact on capital accumulation in the euro area, entailing a -0.5% fall in total investments at the peak (Figure 19). The effect is even more pronounced for investments in transport equipment, albeit less persistent, and for those in intellectual property (Figure 20), that would be dragged down for a long period. These results are consistent with the structural crisis of the automotive sector in Europe, as the electrification of mobility ramped up. Car industry in Europe struggled to keep pace with the EU regulation over carbon emissions initially, while Chinese producers, thanks to generous public incentives and to the full control over the supply chain (refined raw material and battery manufacture), flooded the European market with affordable electrical vehicles.[16] The transport equipment industry is one of those investing most in R&D. The share of R&D over value added in the automotive sector ranges from almost 24% in Germany to 10% in Spain[17] and from 21% in France to almost 13% in Germany for the sector producing other transport equipment. This may explain in part the negative and persistent effect on investments in intellectual property as well.

Digging deeper into different countries and products, some heterogeneity comes out across EA's major countries. A negative shock on Chinese UV of transport equipment has an overall negative effect on total investments (Figure 21a). German investments are dented at impact by -0.6% and a negative peak of 0.6% after five quarters; in Italy the impact is positive for the first periods, while it turns negative from the fourth quarter and remains negative in the long run. When it comes to intellectual property investments (Figure 21b), the impact is negative and long-lasting throughout the major countries and in the euro area overall. This poses a material risk to innovation capacity, that may backfire on industrial growth in the medium-long term.

Increasing penetration of Chinese chemical products have a favorable downward effect on input costs, that may encourage total investments overall (Figure 22a). China's chemical manufacturing and exports are indeed focused mainly on upstream products like basic petrochemical intermediates and polymers, serving rubber and plastics industries, automotive, packaging and pharmaceutical industry. However, this puts under strain the chemical industry in Germany and Italy, whose specialization is quite the same. For such a reason, investments in intellectual property in Germany and in Italy (adding up to almost 9% and 4% in the two countries, in terms of R&D spending over the sectoral value added) may be hurt severely with long lasting effects. Chemical industry in France is instead more

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[15] Source: Eurostat.

[16] Bencivelli et al., "*The rise of the electric vehicle in China and its impact in the EU*", Banco d'España Economic Bulletin 2024/Q4.

[17] Data up to 2022. See Andini et al., *Ricerca, innovazione e trasferimento tecnologico in Italia*, Bank of Italy Occasional Papers, 954/2025.

specialized in high-value specialties, that are more R&D-intensive and less exposed to Chinese competition. The impact on investments in intellectual property is indeed almost null in France (Figure 22b).

Increasing Chinese competition in metalworking and power-generating machinery results in heterogenous effects on machinery and equipment investments across EA's countries (Figure 23). In principle, lowering prices of investment goods foster demand and capital accumulation. Although the effect is positive overall, some exceptions emerge. China has been catching up with Germany as producer of high-precision industrial machinery, and this translates into a negative albeit slight impact on German investments. For the same reason, France investments react negatively in the very short term to increasing competition in power-generating machinery, whose production is deeply rooted in France economy and linked to the nuclear power production.

5.3. External channel

Increased competition from China has also weighed on export performance in the euro area. Building on the evidence for production and investment, we now turn to exports as a key transmission channel of China shock 2.0.

China's growing export shares in high-technology sectors has led to a reduction in the main euro-area countries' corresponding shares, especially in Germany. Based on Eurostat's classification,[18] we distinguish between "high" and "low-technology" sectors. An outcome of China's technological upgrading is its 2.5 percentage-point gain in export market shares in the former sectors between 2017 and 2024, reaching nearly 20 per cent. Over the same period the main euro-area economies (bar Spain) recorded declines in these same shares, especially Germany. Conversely, China's export market share in low-technology sectors remained broadly stable, with only Germany amongst the largest euro-area countries registering a significant decline in these sectors' shares.

The impact of China shock 2.0 on exports is not uniform across countries but reflects differences in export structures and their overlap with China's specialisation, with Germany's exports being more vulnerable. During China shock 1.0, competitive pressures were concentrated in traditional manufacturing sectors, implying that countries more specialised in these products were more exposed; in this respect, Italy exhibited the highest overlap of its export structure with China among the main euro-area economies (Bugamelli et al., 2018; Fabiani et al., 2019), as measured by an "export similarity" index à la Finger and Kreinin (1979) and Schott (2008), computed on CEPII-BACI data at the HS6 level (Figure 24). Conversely, during China Shock 2.0, although the index has increased for all four euro-area economies, the overlap between Germany and China's foreign sales has become the highest.

The decline in euro-area countries' export market shares since 2017 was more pronounced the higher the competition from China. We classify sectors into three categories of "high", "medium" and "low-competition" from China, depending on the magnitude of increase in China's export market share over the 2017-24 period.[19] We compute both the percentage change in euro-area countries' export market shares within each group and its contribution to the overall variation in aggregate export market

[18] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:High-tech_classification_of_manufacturing_industries

[19] High-competition sectors from China include transport equipment, rubber and plastic, chemicals and pharmaceuticals. Medium-competition sectors include minerals, metals, electronics, machinery and electrical equipment, and other manufacturing goods. Low-competition sectors include sectors in which China registered either a marginal increase (agri-food) or a decline (fashion).

shares. Declines in overall export market shares were primarily driven by contractions in sectors exposed to medium and, especially, high competition from China (Figure 26). This effect was particularly evident in France and Germany, where export shares fell across all sectoral categories, with larger declines in more exposed sectors. In Italy and Spain, by contrast, losses in medium- and high-competition sectors were partly offset by gains in low-competition segments, resulting in a more contained overall decline.

Consistent with these aggregate patterns, econometric estimates point to a negative relationship between Chinese penetration and export growth. Figure 27 shows the estimated impact of increased competition from China on export growth in the main euro-area countries. Coefficients measure the change in log exports associated with a 1 percentage point increase in China's import share in the same importer–HS2 product cell over the period 2017–2025. All estimates are negative and are statistically significant in all countries except Spain, indicating that higher Chinese market penetration is generally associated with lower export growth across main EA countries. For Italy, a 1 pp increase in China's import share is associated with a 0.9 per cent lower growth of Italian exports in the corresponding market–product cell. While point estimates suggest some cross-country heterogeneity, confidence intervals largely overlap, pointing to broadly similar exposure to China's competitive pressure. Figure 28 reports sector-specific estimates of the impact of increased competition from China on Italian export growth. The negative effect is present across most sectors, but its magnitude varies substantially. The strongest adverse impact is observed in electronics and transport equipment. This heterogeneity suggests that China's competitive pressure is more pronounced in sectors where Chinese producers have rapidly expanded their technological capabilities.

The stronger competitive pressures exerted by Chinese firms have also been accompanied by a decline in the importance of the Chinese market as a destination for euro-area exports across all major economies. The decline has been particularly pronounced for Germany, where exports to China fell from more than 8 per cent of total goods and services exports in 2021 to slightly above 5 per cent in 2025. By comparison, the share stood below 4 per cent in France, slightly above 2 per cent in Italy and around 1.5 per cent in Spain. This decline reflects both subdued Chinese domestic demand and China's rapid gains in competitiveness and technological capabilities, which have reduced its dependence on imported foreign products. These patterns are especially evident in the case of German automotive exports, which fell by more than 50 per cent in value terms over the last three years, partly reflecting the growing preference of Chinese consumers for electric vehicles, a segment increasingly dominated by domestic Chinese producers.

On top of the structural shifts associated with the China shock 2.0, concerns have emerged about possible trade deflection effects stemming from US tariffs on Chinese goods; these do not seem to have materialized in 2025. During the 2018-19 US-China trade war, there is evidence that these effects materialised: according to estimates in Emlinger et al. (2026), the EU absorbed roughly one-third of the decline in US imports from China in tariff-affected sectors. However, the 2025 trade measures have been more broadly applied and not limited to China. In an *ex ante* exercise aimed at gauging the potential reallocation of Chinese exports towards third markets after this recent set of tariff hikes, Federico et al. (2025) estimated that between 0.3 and 1 per cent of Italy's goods exports could be displaced, depending on the assumed trade elasticities, with somewhat smaller effects for the other major euro-area economies. However, *ex post* evidence points to only limited trade diversion towards the euro area so far. ECB (2026) finds that the increase in Chinese exports following the 2025 US tariffs has been concentrated mainly in Africa and ASEAN countries, with no significant redirection towards the euro area. Similarly, Schulte et al. (2026) document only modest diversion effects, largely confined to a narrow set of highly exposed products. Overall, the recent rise in Chinese exports to the EU appears to be driven predominantly by structural forces—such as gains in competitiveness linked to technological upgrading in key manufacturing sectors, subdued domestic demand in China, and the depreciation of its real effective exchange rate—rather than by tariff-induced trade rerouting.

While the China shock 2.0 may generate some positive supply-side effects through cheaper intermediate and capital goods imports, for European manufacturing exporters these gains are likely to be outweighed, on aggregate, by the adverse demand effects associated with stronger Chinese competition. As China is an important supplier of intermediate inputs and capital goods, increased import penetration from China may reduce production costs for downstream firms through lower input prices. While this channel is not negligible, simple calculations for Italian manufacturing exporters suggest that its quantitative relevance remains limited relative to the output-competition channel. For the universe of Italian manufacturing exporters, imports from China account for only around 1–2 per cent of production costs. Even after incorporating indirect input linkages, which approximately double the estimated exposure, the input channel remains limited when compared with China's roughly 20 per cent share of global manufacturing exports. Moreover, lower input prices from China are unlikely to provide a specific competitive advantage to euro-area exporters, as firms from other advanced or emerging economies can benefit from similar cost reductions. This interpretation is consistent with recent contributions, including Aghion et al. (2025), which emphasises the importance of the output-competition channel relative to input-cost effects.

6. Conclusions and policy implications

China's recent export surge is boosting the country's external surplus, while intensifying global competition and strategic dependencies. It is primarily driven by domestic factors, notably weak internal demand, policy support, and technological upgrading. For the euro area, the shock is disinflationary and is associated with weaker investment and reduced export performance in third markets.

Over the same period China's imports were held back by the combination of weak domestic demand and industrial policies aiming at greater technological and industrial self-sufficiency. Private consumption—held back by the prolonged property downturn, falling real estate investment, and subdued consumer confidence—has weighed on demand for import-intensive goods. Structural policies have amplified import weakness by promoting the substitution of foreign inputs with domestic ones, contributing to a steady decline in imports from advanced economies and a broader reshaping of China's trade structure (Al-Haschimi et al., 2025; de Soyres and Moore, 2024).

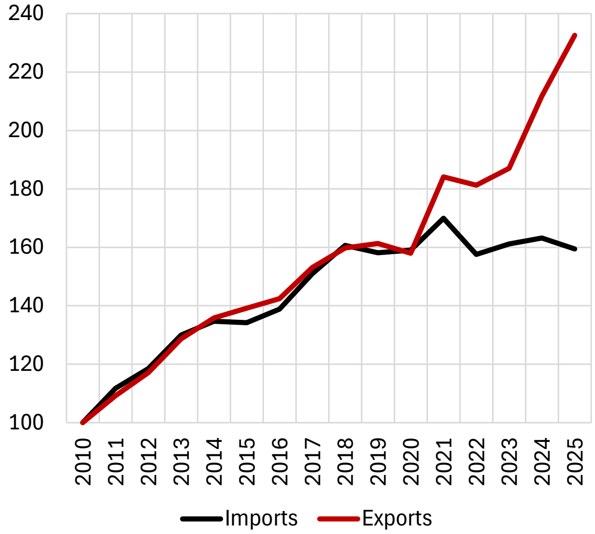
Recent geopolitical tensions in the Middle East, including disruptions to energy flows through the Strait of Hormuz, may further shape China's external position. While exposing the country to higher energy costs, these developments could have a relatively limited impact compared with its trading partners, because China has ample energy inventories and may be able to accelerate its green transition more rapidly. At the same time, higher fossil-fuel prices could accelerate global demand for energy-saving and renewable technologies, potentially reinforcing China's competitiveness and further supporting its strong position in green technologies (Conteduca et al., 2025; Della Corte et al., 2024).

However, the sustainability of China's expanding trade surplus—rooted in its export-led growth model—has increasingly been questioned (IMF, 2025; Banca d'Italia, 2026). Although Chinese authorities have acknowledged the need to rebalance growth toward domestic demand, policy measures to date appear insufficient, with continued emphasis on supporting strategic manufacturing sectors. This may further exacerbate trade tensions with major partners.

Europe's response to China shock 2.0 calls for an approach that is neither purely defensive nor unconditionally open. In sectors where Chinese inputs are cost-efficient and technologically advanced—especially in clean technologies—maintaining openness can support the EU's decarbonisation goals and ease cost pressures. Selective attraction of Chinese investment may also help close technological gaps, provided it is coordinated at the EU level and safeguards critical know-how. At the same time, Europe's economic interests may warrant protection where competition is distorted by large-scale subsidies or non-market practices, using WTO-consistent instruments and engaging China to address such distortions. As a negotiating lever, the EU could also make use of its own strategic advantages in areas where China depends on European capabilities and assets. This approach might be coupled with targeted de-risking: reducing critical dependencies in the most sensitive upstream segments, especially critical raw materials, key components, and strategic ICT and clean-tech technologies.

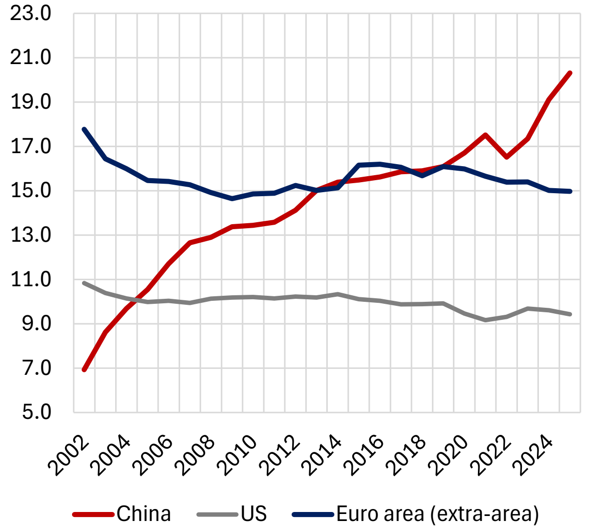
Europe's response ultimately hinges on strengthening its competitiveness. This entails a sustained increase in investment, supported by deeper capital market integration and, where appropriate, the systematic use of common debt issuance (Panetta, 2024). At the same time, EU-level industrial policies may need to assume a more prominent role in guiding structural transformation and supporting strategic sectors (Giordano et al., 2025). Strengthening innovation capacity, particularly in advanced technologies such as AI development and adoption, appears essential to preserving competitiveness, reducing external vulnerabilities, and ensuring long-term growth.

Fig. 1a: Chinese exports and imports
(volumes, 2010=100)



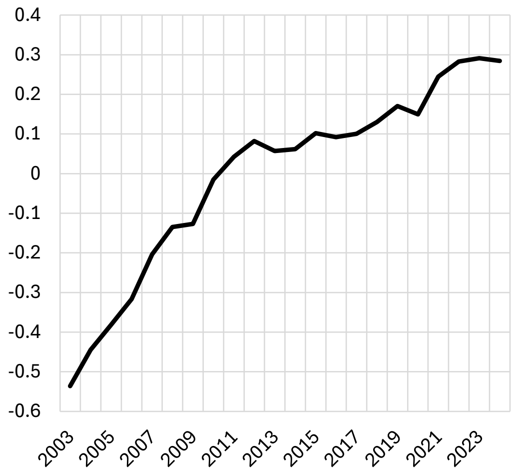
Sources: Banca d'Italia estimates based on Eurostat and IMF WEO national accounts

Fig. 1b: Export shares
(% share of global imports net of intra-EA trade)



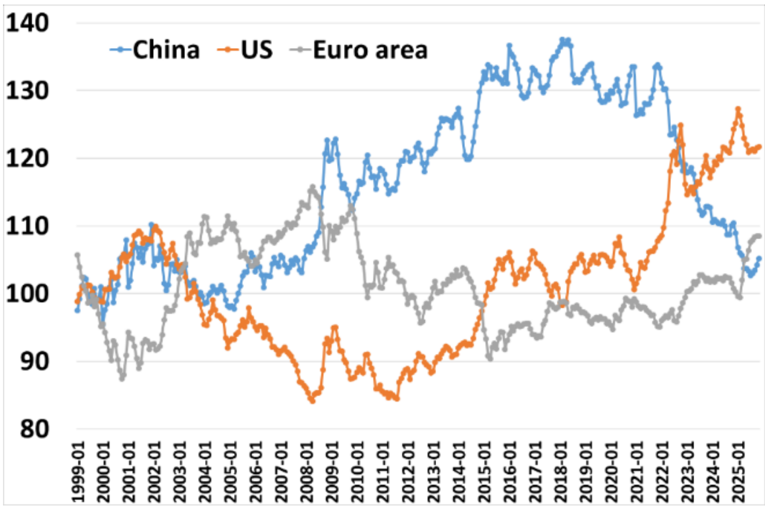
Sources: Banca d'Italia estimated based on Eurostat and IMF WEO national accounts.

Fig. 1c: Evolution of complexity index of Chinese exports
(index)



Sources: CEPII-BACI data, 2003-2024 and product complexity index developed by Hausmann et al. (2014).

Fig. 2: Producer price index-deflated real effective exchange rates
(1999=100)



Sources: Banca d'Italia estimates for China and US, ECB Statistical Data Warehouse for the euro area.

Fig. 3a: Decomposition of Chinese exports growth
(contributions to the YoY % change)

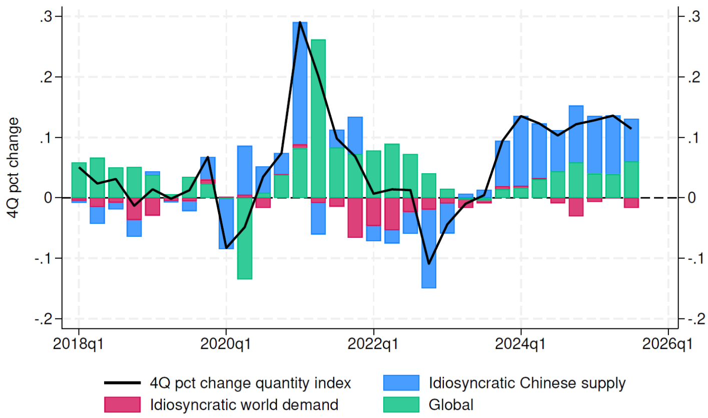
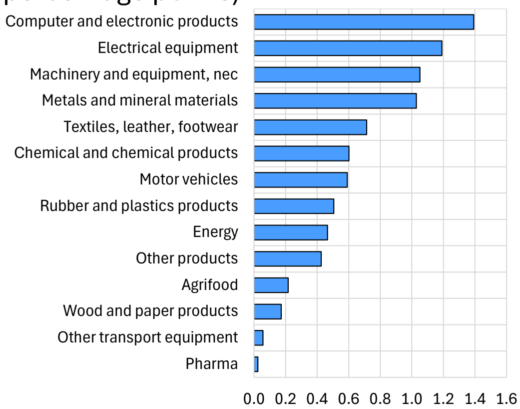
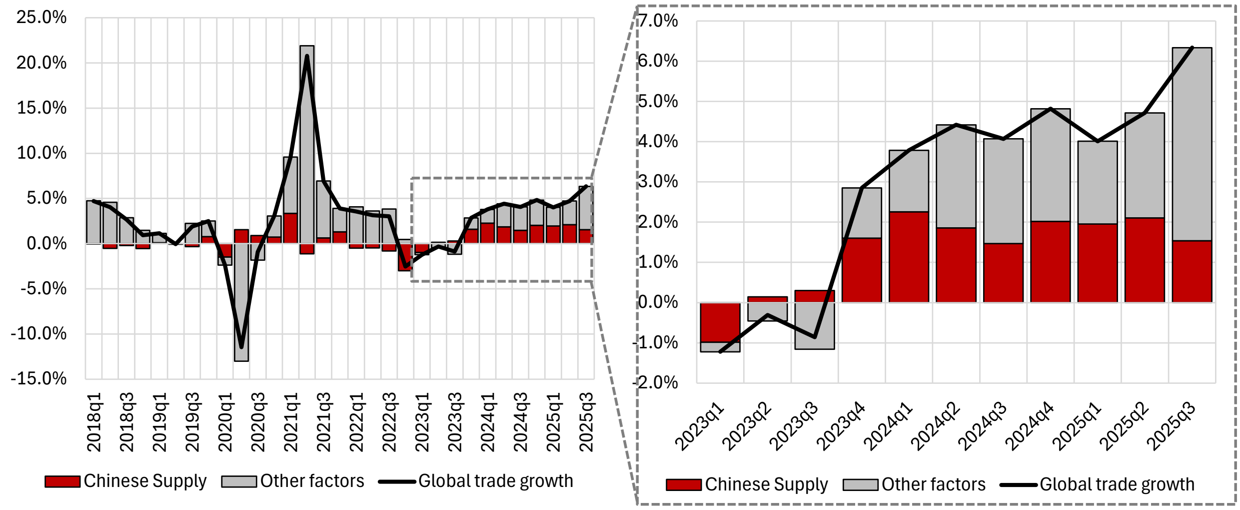


Fig. 3b: China export shock, by sectors
(median across 2023Q4-2025Q3. percentage points)



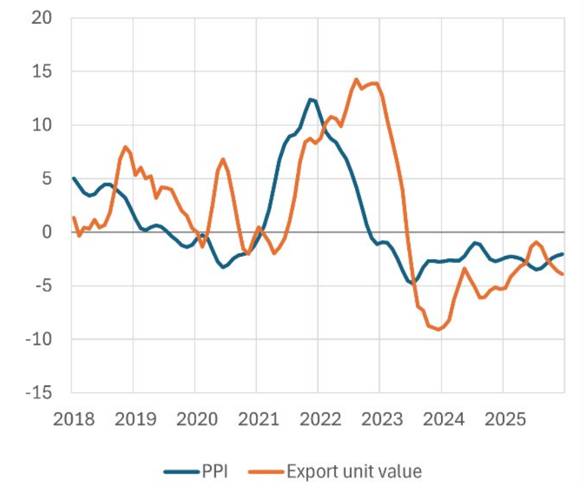
Source: Decomposition of Chinese export volumes based on the framework developed by Amiti, Itskhoki, and Weinstein (2024), "What Drives U.S. Import Price Inflation?," AEA Papers and Proceedings, 114, 106–111.

Fig. 4: Global exports (ex US) and the China shock 2.0
(YoY % change)



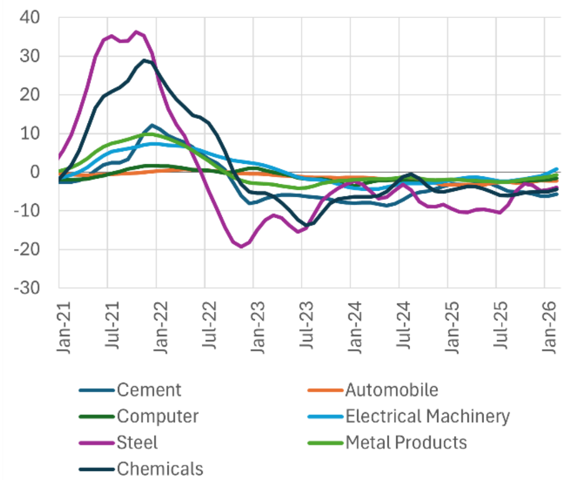
Source: Decomposition of Chinese export volumes based on the framework developed by Amiti, Itskhoki, and Weinstein (2024), "What Drives U.S. Import Price Inflation?," AEA Papers and Proceedings, 114, 106–111. Global trade flows excluding the US are reported in the chart.

Fig. 5a: PPI and export unit price
(y-o-y pct change, 3mma)



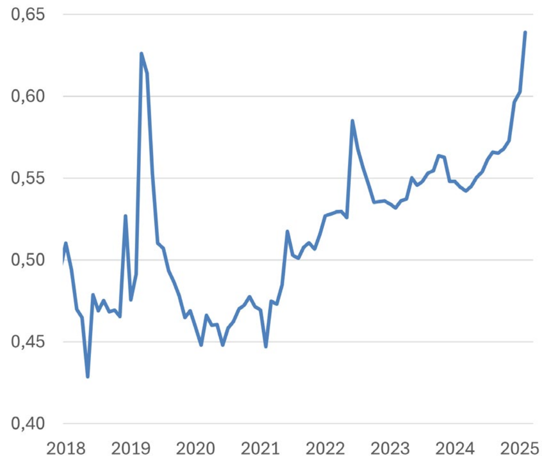
Source: National Bureau of Statistics China and General Administration of Customs.

Fig. 5b: PPI by sector
(y-o-y pct change, 3mma)



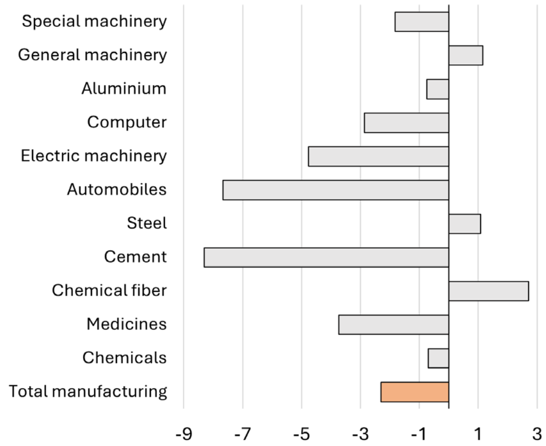
Source: National Bureau of Statistics China.

Fig. 6a: Inventory to turnover ratio



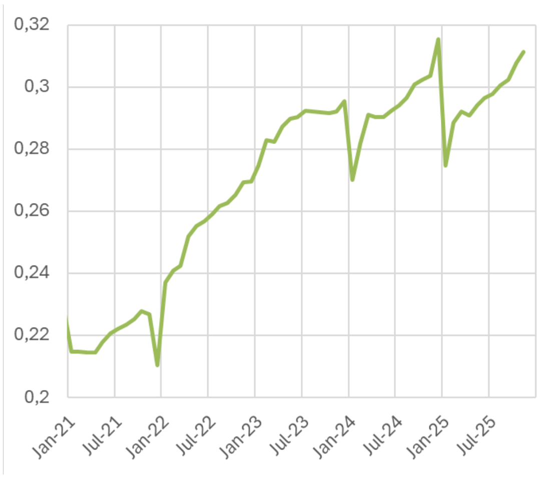
Source: National Bureau of Statistics China.

Fig. 6b: Capacity utilization rate by sector
(2024-25 vs 2018-19 averages)



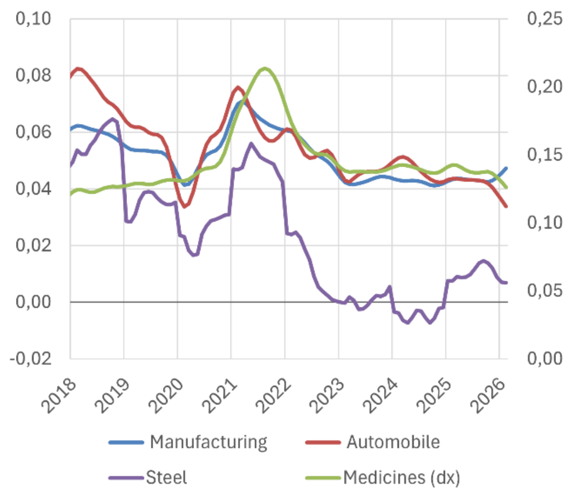
Source: National Bureau of Statistics China.

Fig. 7a: Share of loss-making firms



Source: National Bureau of Statistics China.

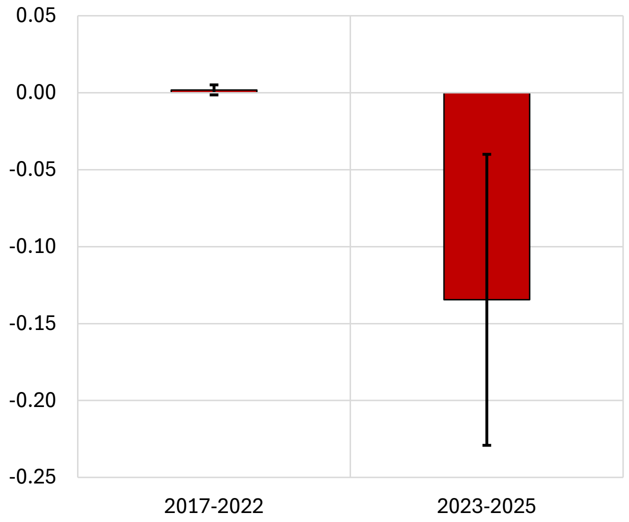
Fig. 7b: Profit over turnover
(seasonally adjusted)



Source: National Bureau of Statistics China.

Fig. 8: Domestic sales and exports

(estimated coefficient $g_{t,s}^{exports} = \beta g_{t,s}^{domestic\ sales} + \alpha_t + \alpha_s + \varepsilon_{t,s}$)

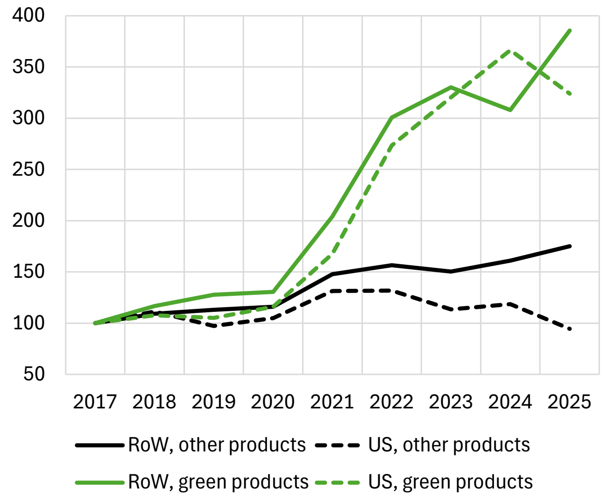


Sources: authors' calculations based on data from Al-Haschimi, A., Dvořáková, N., Le Roux, J., & Spital, T. (2025). China's growing trade surplus: why exports are surging as imports stall. Economic Bulletin Boxes, 7.

Notes: regression at the quarter-sector level, q-o-q growth rates of real domestic sales and real exports.

Fig 9a: Chinese exports, green products

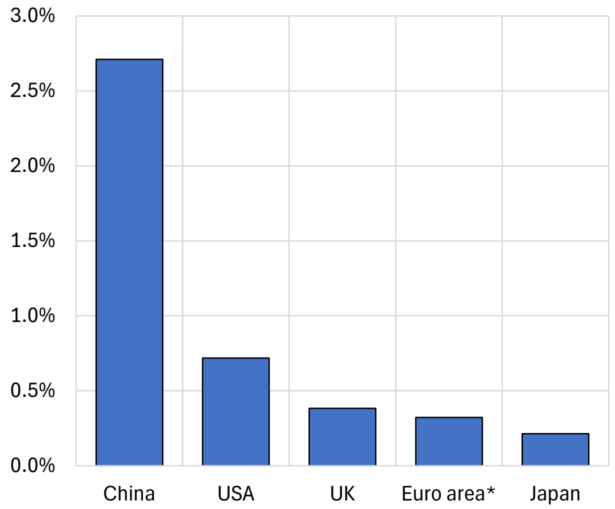
(2017=100)



Sources: authors' calculations based TDM data. Green products are defined as in the IRC Report (2024), Navigating a fragmenting global trading system: insights for central banks." European Central Bank Occasional Papers 365.

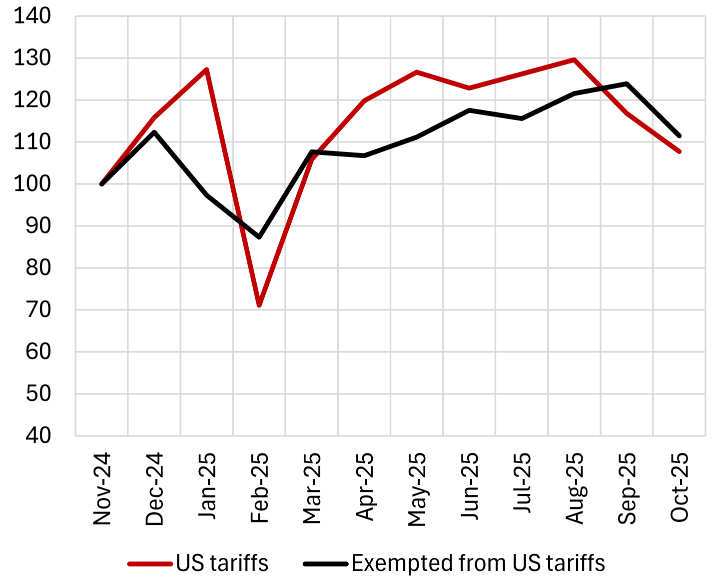
Fig 9b: Subsidies' intensity by country before 2023

(% share of subsidies over firms' revenues, 2010-2022)



Sources: authors' calculations based on OECD Magic Database. *: The euro area is proxied using available data for Austria, Belgium, Germany, Spain, Finland, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Slovakia.

Fig: 10: Chinese exports to the euro area hit by US tariffs (Nov-2024=100)



Sources: authors' calculations based TDM data and US tariffs data from Conteduca, Mancini, Borin (2025), Roaring tariffs: The global impact of the 2025 US trade war, VoxEU column.

Fig. 11a: China-origin shock and its determinants
(regression result, standardized coefficients)

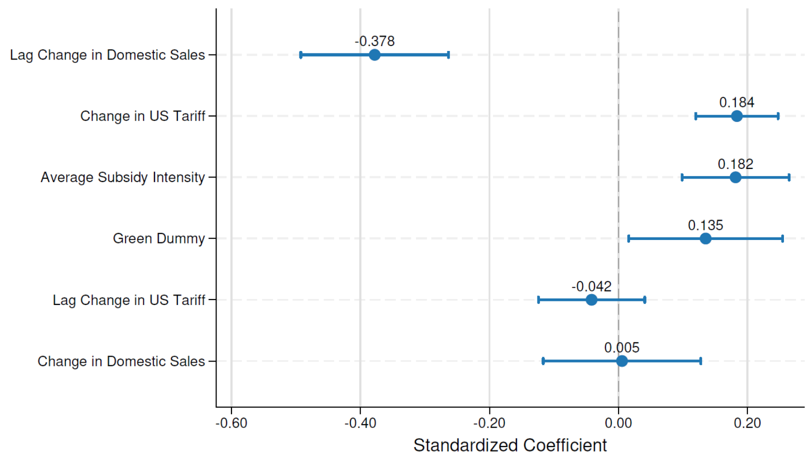
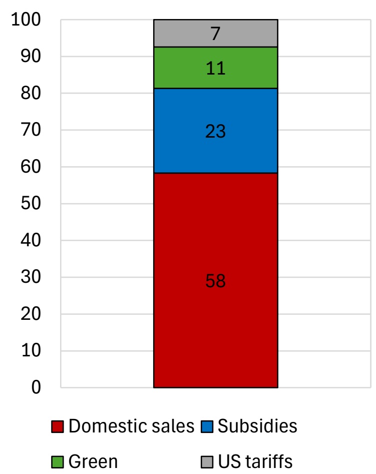


Fig. 11b: Determinants of the China shock
(percentage points)



Notes: Coefficients are obtained from sector-quarter level regressions where the dependent variable is the year-on-year change in Chinese exports explained solely by the China-specific origin factor, as estimated using the Amiti et al. (2024) decomposition. Regressors include: the year-on-year change in real domestic sales from Al-Haschimi et al. (2025), and its lag; the year-on-year change in US tariffs on Chinese products, and its lag; 2015–2021 average subsidy intensity from the OECD MAGIC database; and the average 2017–2025 share of green-transition-related products in each sector. Right-hand chart reports the Shapley R2 decomposition based on the estimated model.

Fig. 12a: China-origin shock and its determinants (robustness)
(regression result, standardized coefficients)

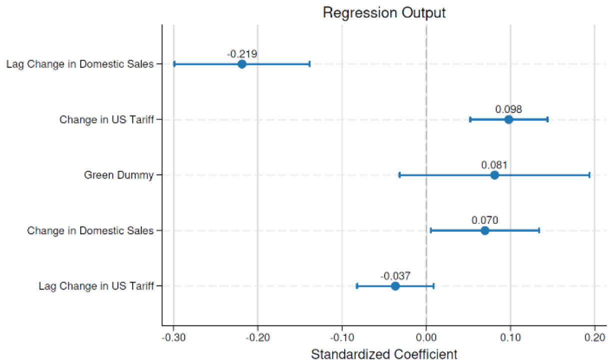
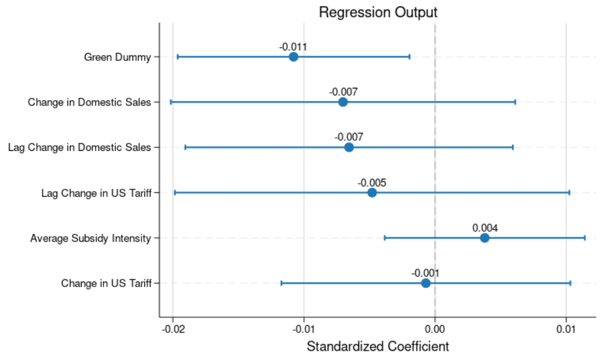
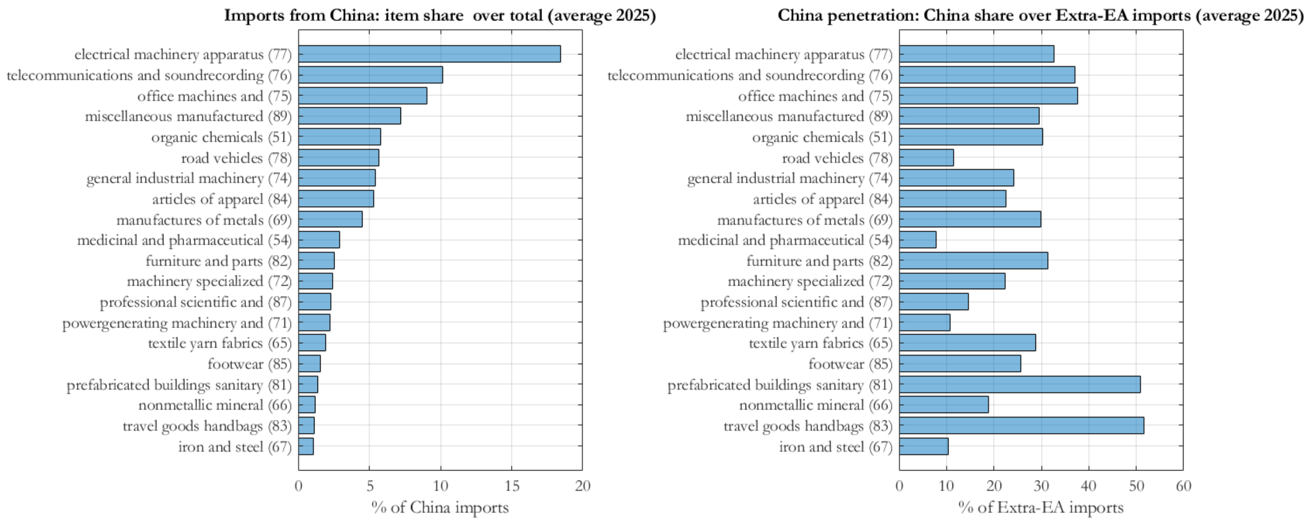


Fig. 12b: China-destination shock and its determinants
(regression result, standardized coefficients)



Notes: The left panel shows the same specification as in Figure 10a but excluding average subsidy intensity as a regressor. The right panel shows the same specification as in Figure 10a but using Chinese idiosyncratic import shocks as the dependent variable.

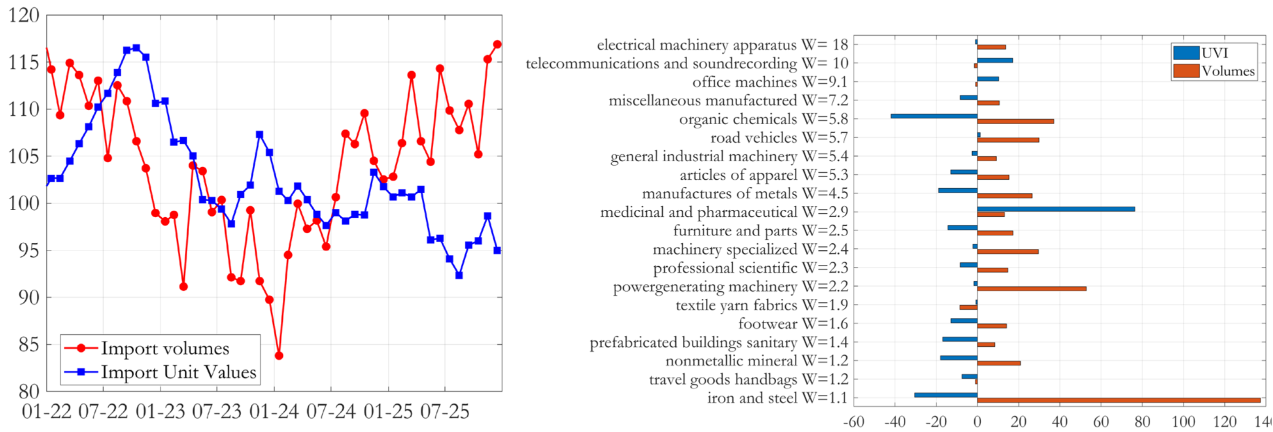
Figure 13: China exposure across euro-area goods imports: concentration vs penetration



Source: authors' elaborations on Eurostat data. **Note:** the left panel ranks product groups by their importance within euro area imports from China (composition of China-sourced import of manufactured goods); the right panel measures dependence on China within each product group (China's share of extra-EA imports).

Figure 14: Euro-area imports of manufactured goods from China: volumes and unit values

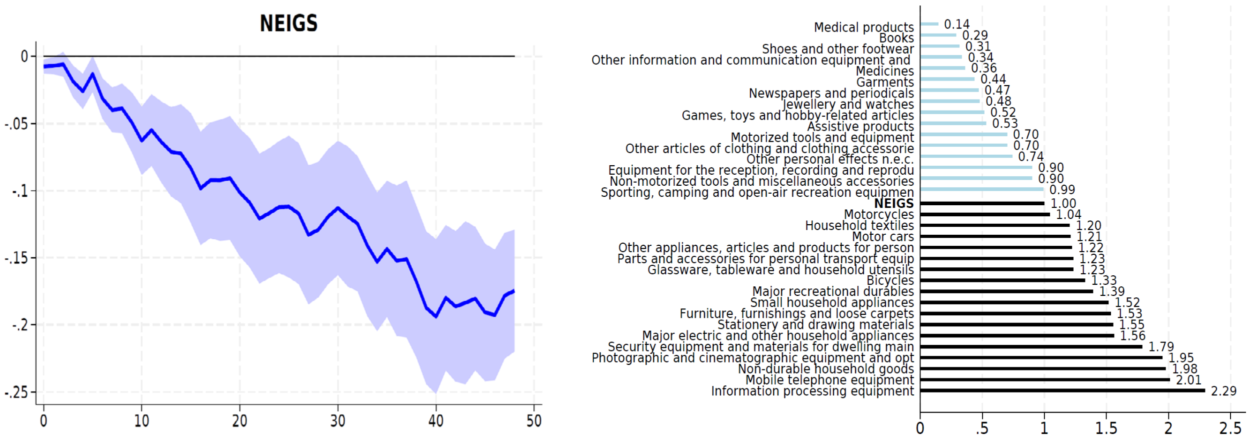
volumes and unit value indices (2024 = 100) | volumes and unit values y-o-y changes in Dec25, by product group



Source: authors' elaborations on Eurostat data. **Note:** the left panel reports import volume and unit value indices for euro area imports of manufactured goods (SITC sections 5–8) from China (rebased to 2024 = 100). The right panel reports authors' calculations from product-level COMEXT data: for each product group, the UVI is computed as the ratio of total import value to total import quantity, and bars show the y/y % change in December 2025 (vs December 2024) in volumes and UVI; W denotes the product-group weight (import value share).

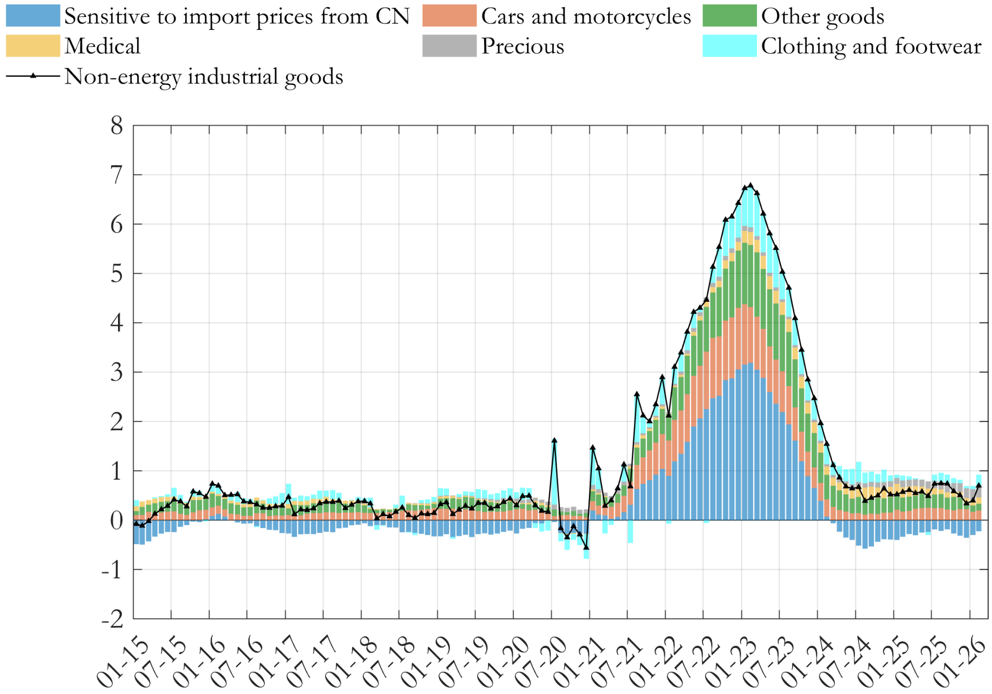
Figure 15: Pass-through from China import unit values to euro-area NEIG inflation

Impulse response of NEIGs inflation to China UVIs | cumulated 3-year responses to a China UVI drop, by NEIG item



Source: authors' elaborations on Eurostat and ECB data. **Note:** the left panel shows the estimated local-projection impulse response (with confidence bands) of euro area aggregate NEIG inflation to a shock in China import unit values (UVI); the right panel, using the same LP framework at the item level, shows cumulated 3-year impulse responses to a drop in China UVI, scaled by the aggregate NEIG response to highlight heterogeneity across components.

Figure 16: Decomposition of euro-area NEIG inflation by main components

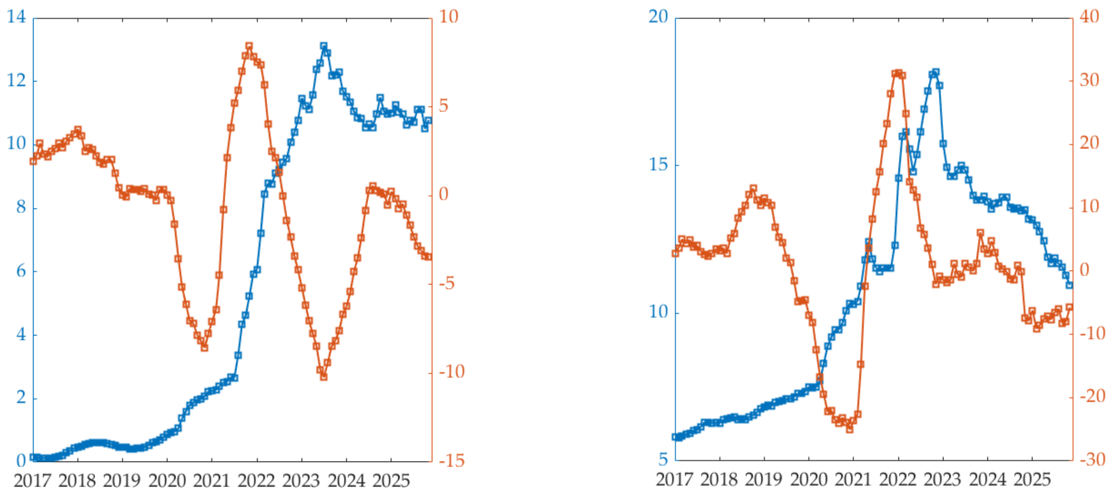


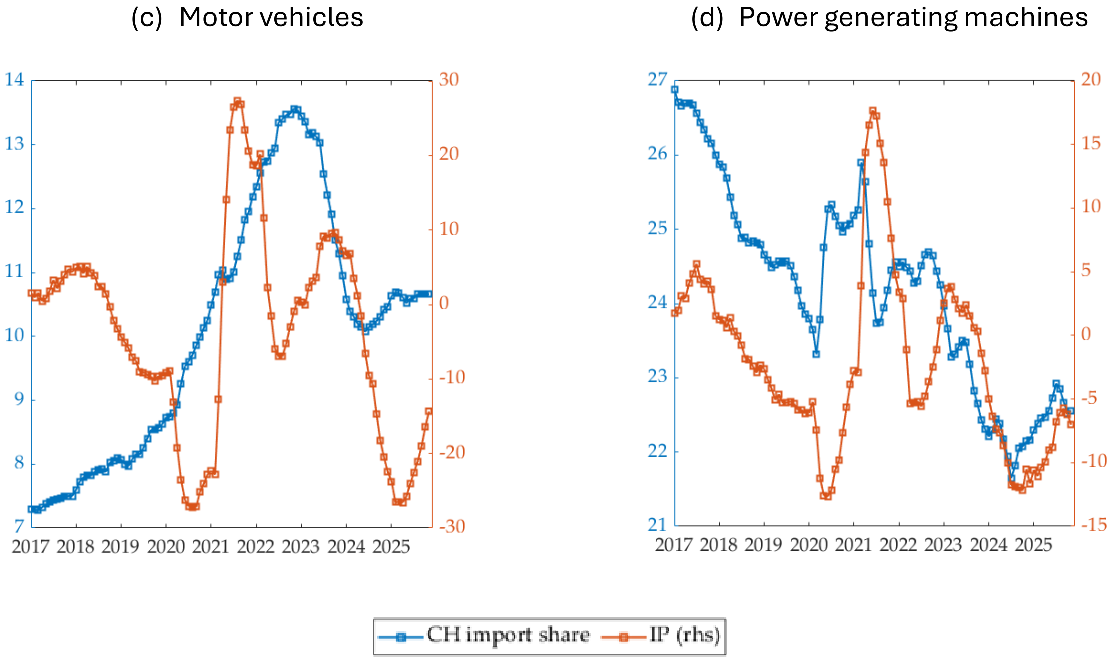
Source: authors' elaborations on Eurostat data. **Note:** the figure decomposes euro area NEIG consumer inflation (y/y) into contributions from selected sub-components (stacked bars), with the black line reporting aggregate NEIG inflation. The "China-sensitive" group aggregates NEIG items identified as most responsive to China import unit value (UVI) shocks based on the local-projection impulse-response analysis shown in the previous figure.

Figure 17: Euro-area import shares from China and industrial production

(a) Chemicals

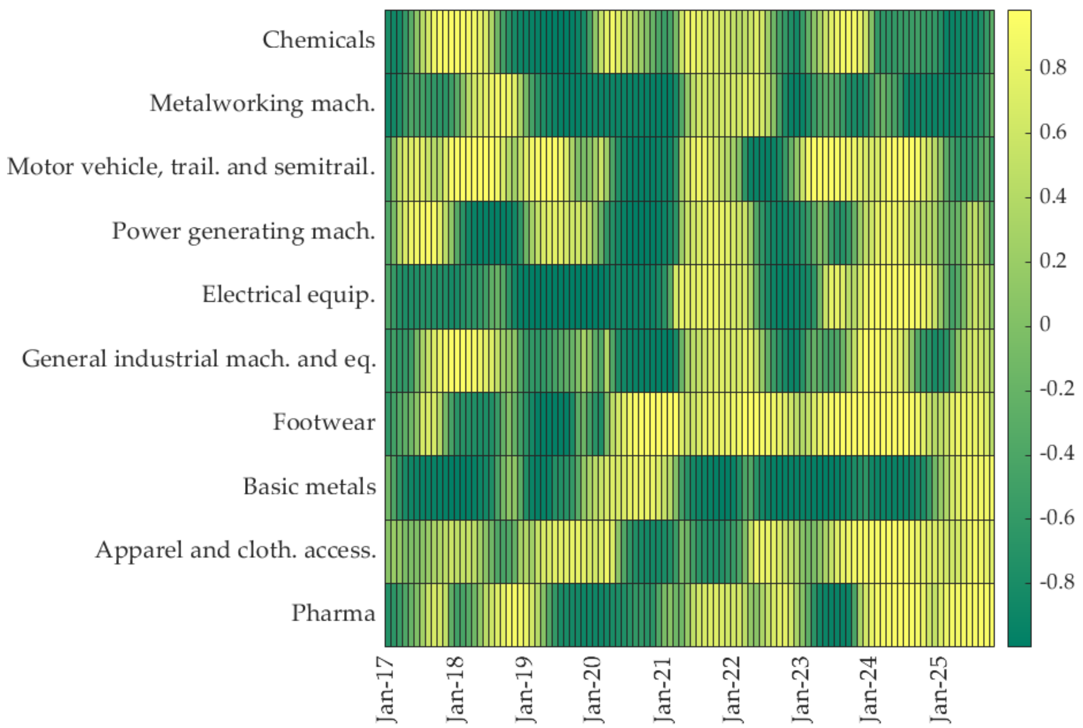
(b) Metalworking machines





Source: Bank of Italy calculation on Eurostat data. **Note:** import shares are filtered with 12-term moving average; year-on-year percentage change of the industrial production filtered with 12-term moving average.

Figure 18: Correlation between euro-area import shares from China and industrial production



Source: Bank of Italy calculations on Eurostat data.
Note: rolling correlation between industrial production y-o-y growth (mave-12) and import shares (mave-12; import values).

Figure 19: Impulse Response Functions for euro-area total investment of a shock to manufacturing import unit values from China

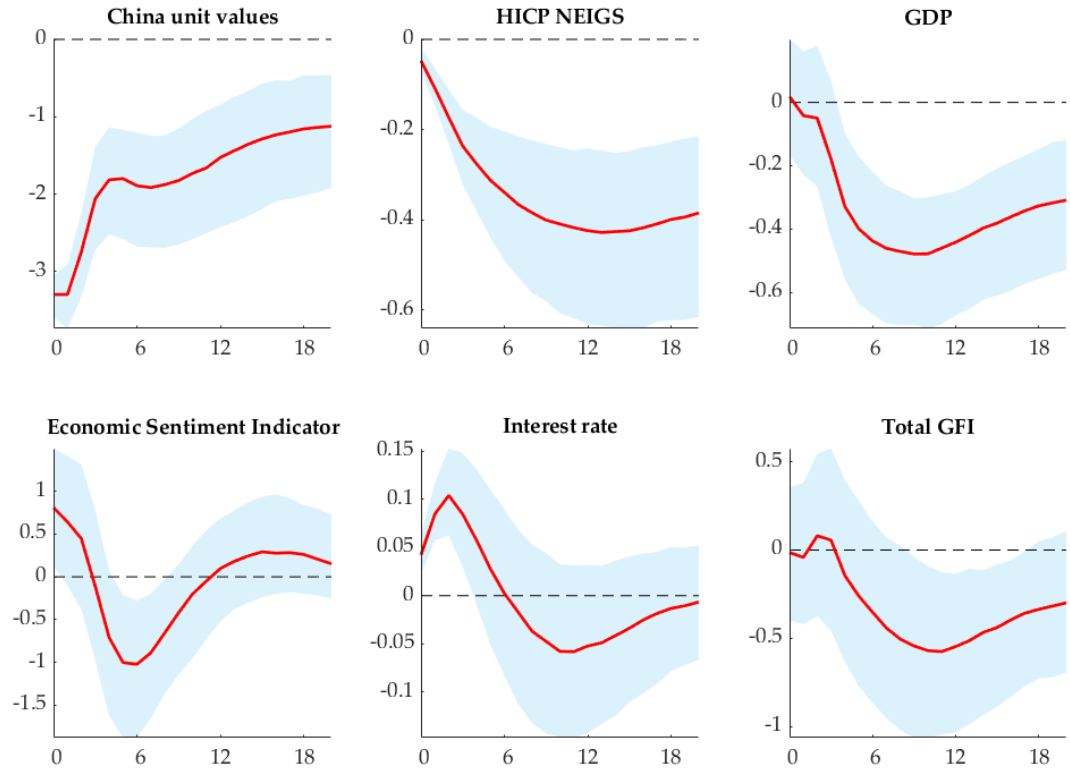


Figure 20:

Impulse Response Functions for euro-area total investment of a shock to manufacturing import unit values from China by investment type

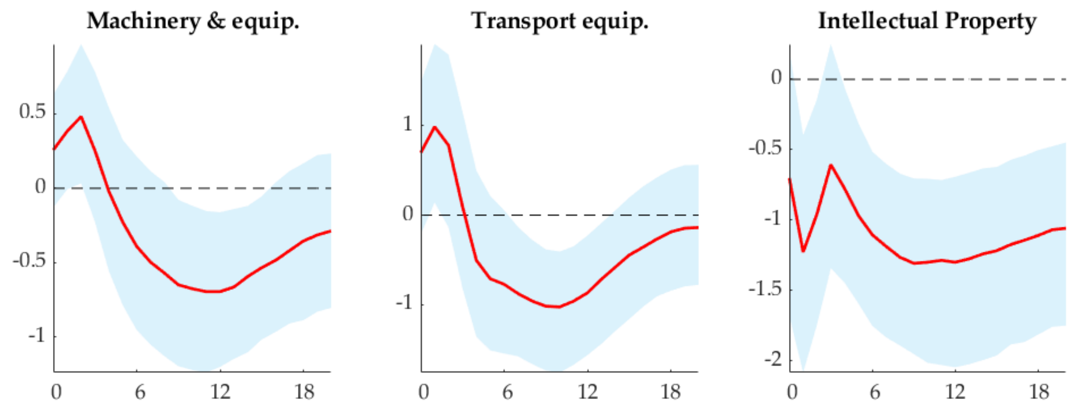


Figure 21:

Impulse Response Functions for euro-area total investment of a shock to manufacturing import unit values from China for transport equipment by investment type

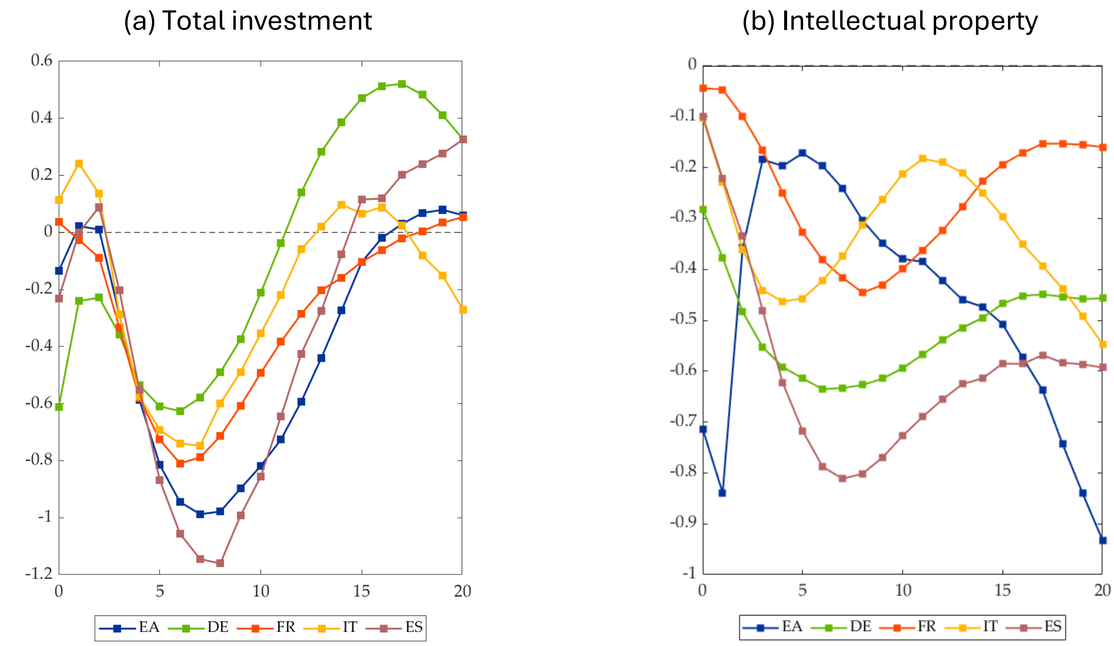


Figure 22:

Impulse Response Functions for euro-area total investment of a shock to manufacturing import unit values from China for chemicals by investment type

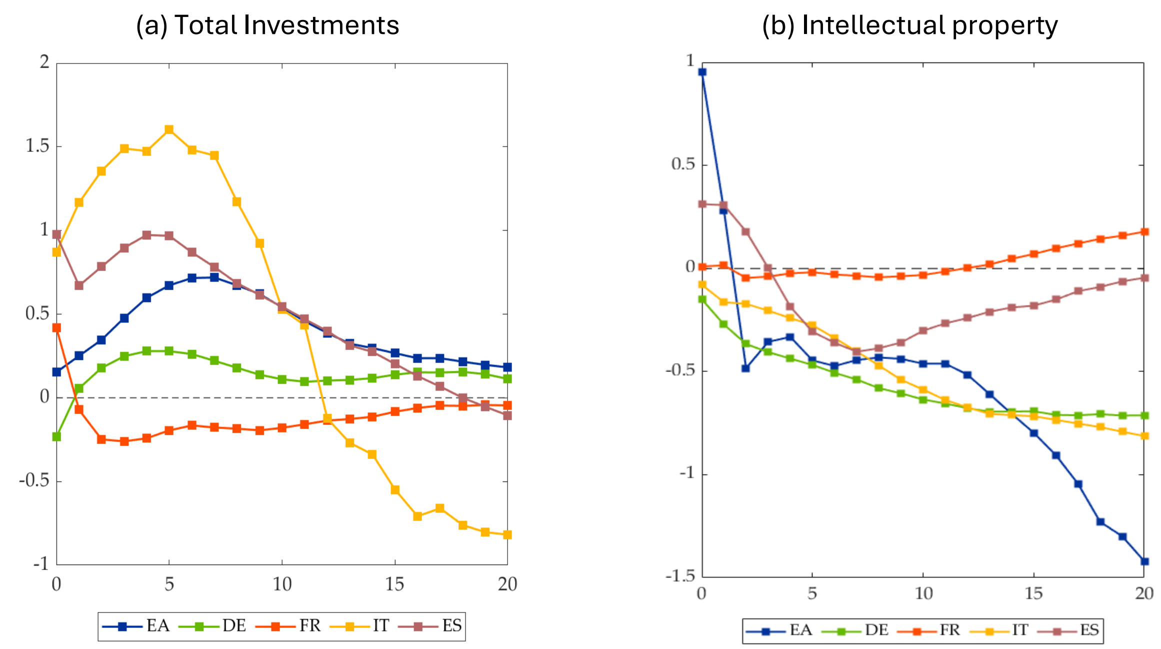


Figure 23:

Impulse Response Functions for euro-area total investment of a shock to manufacturing import unit values from China for

metalworking and power machines

(a) Metalworking Machinery (b) Power-Generating Machinery and Equipment

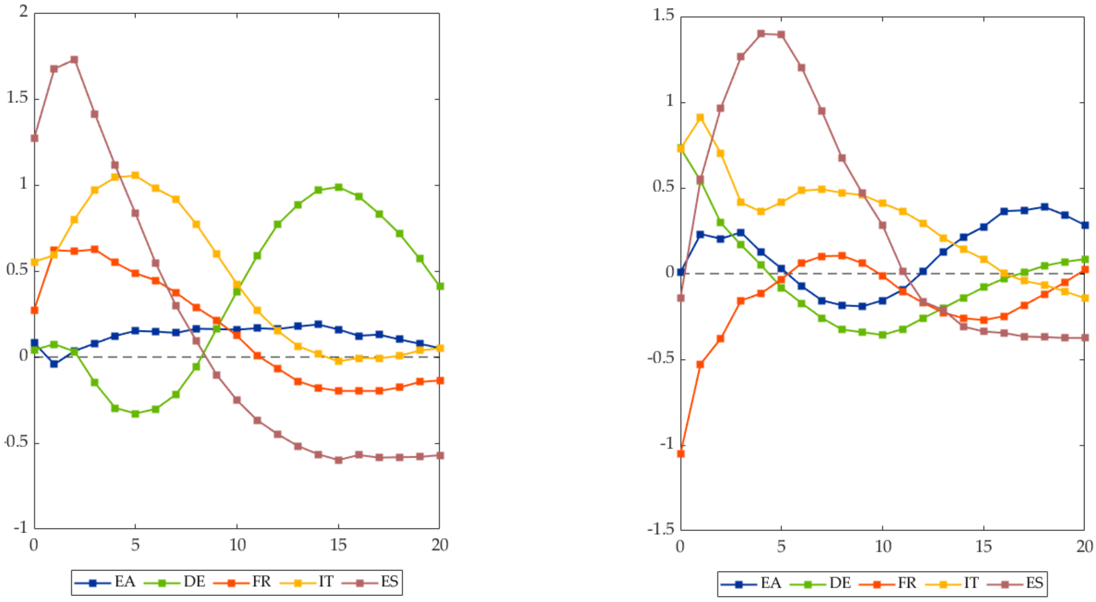
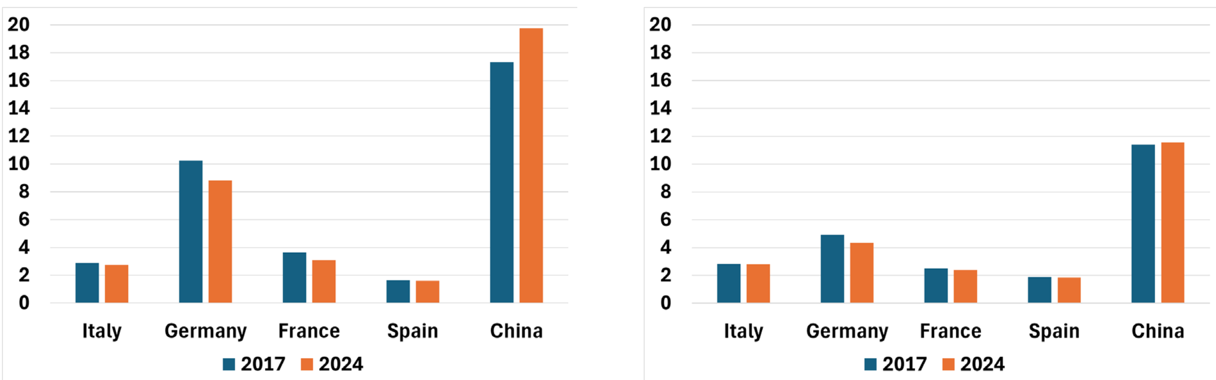


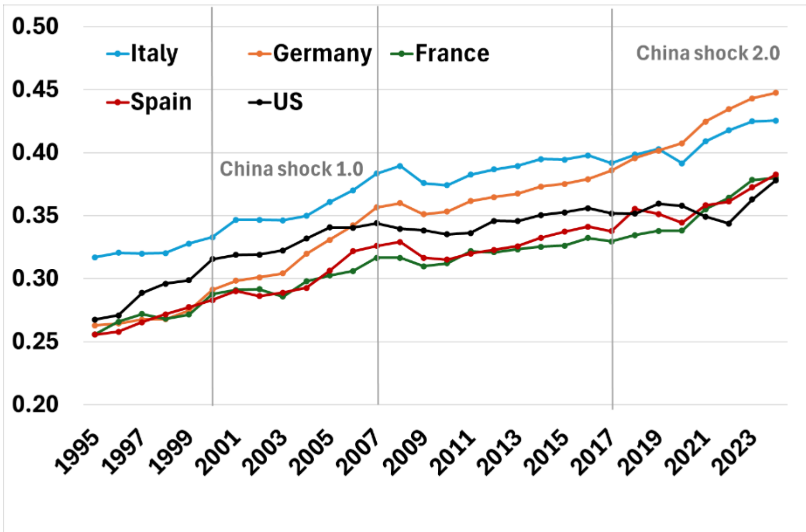
Figure 24: Sectoral export market shares of China and the main euro-area economies
(percentage shares)

High-technology sectors **Low-technology sectors**



Source: authors' calculations on CEPII-BACI. **Note:** sectors are classified according to Eurostat's definition of technological content. "High-technology sectors" include both high and medium-high technology sectors; "low-technology sectors" include both low and medium-low technology sectors.

Figure 25 – Selected economies' goods export similarity relative to China



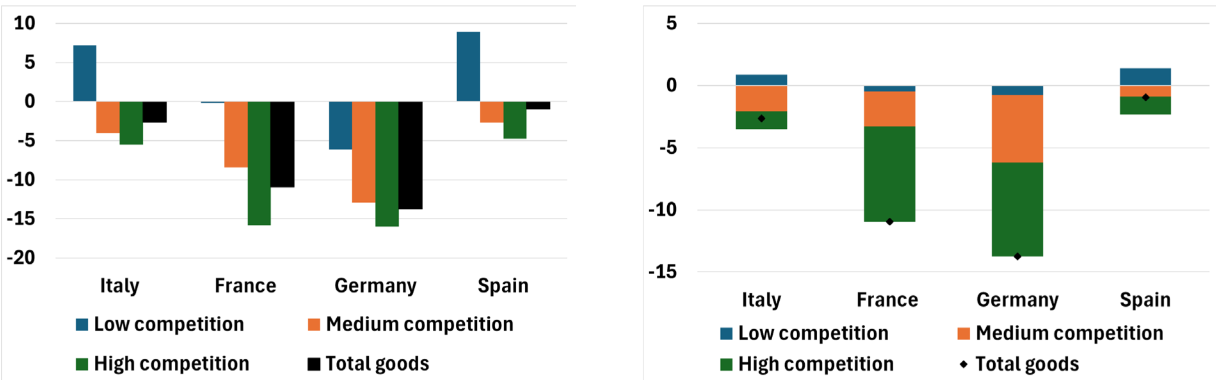
Source: authors' calculations on CEPII-BACI data at the HS 6-digit level.

Note: The export similarity index is computed as $ESI_t^{iCN} = \sum_p \min\,(s_{tp}^i, s_{tp}^{CN})$ where s_{tp}^i is the share of country *i*'s exports of product *p* on its total exports in year *t* and s_{tp}^{CN} is the corresponding share for China. The index is zero if the two countries do not share any product in common in their export bundle and one if the product distribution of their exports is identical.

Figure 26 – The main euro-area economies' export market share changes and the intensity of competition from China

a) Changes in export market shares, 2017-24
(percentage changes)

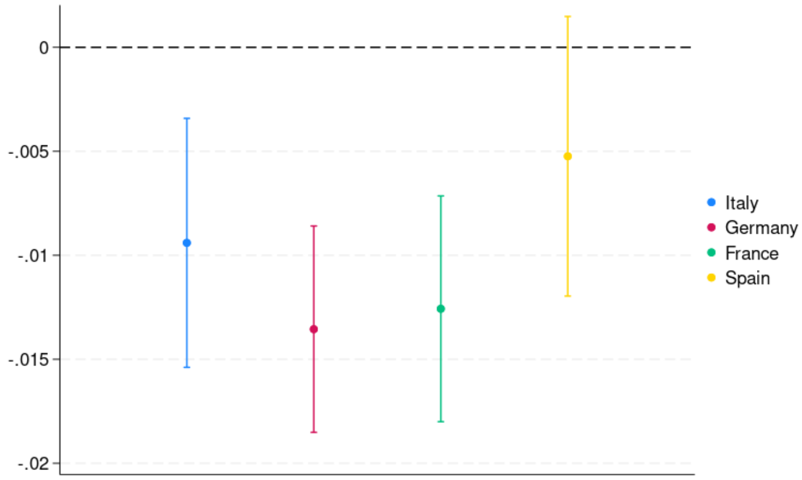
b) Contributions to the total change in export market shares, 2017-24
(percentage points)



Source: authors' calculations on CEPII-BACI data.

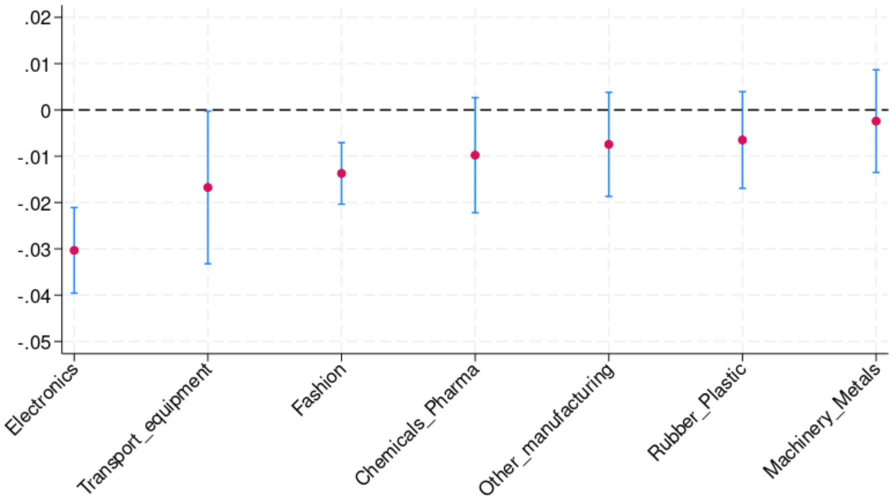
Notes: High competition from China includes transport equipment, rubber and plastic, chemicals and pharmaceuticals. Medium-competition includes minerals, metals, electronics, machinery and electrical equipment, and other manufacturing goods. Low-competition includes sectors in which China registered either a marginal increase (agri-food) or a decline (fashion).

Figure 27. Impact of China shock 2.0 on main EA countries' export growth *(Effect of a 1 pp increase in China's import share; log points)*



Source: elaborations on TDM. The figure reports the estimated coefficient of the change in China's import share on the growth of Italian exports. The dependent variable is the log change in export values by destination market and HS2 product between 2017 and 2025. The key regressor is the change in China's import share in the same importer–HS2 product cell. The regression is weighted using initial trade values and includes importer and HS2 product fixed effects. Standard errors are two-way clustered by importer and HS2 product. The sample includes 112 importing countries.

Figure 28. Impact of China shock 2.0 on main Italy's export growth in selected sectors *(Effect of a 1 pp increase in China's import share; log points))*



Source: elaborations on TDM. The figure reports the estimated coefficient of the change in China's import share on the growth of Italian exports in selected sectors. The dependent variable is the log change in export values by destination market and HS2 product between 2017 and 2025. The key regressor is the change in China's import share in the same importer–HS2 product cell. The regression is weighted using initial trade values and includes importer and HS2 product fixed effects. Standard errors are clustered by importer. The sample includes 112 importing countries. Agri-food and energy sectors are not reported.

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