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Geopolitics and trade in the euro area and the United States: de-risking of import supplies?



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Abstract

Based on granular data at the product level, this paper looks at whether and how the euro area and the United States have modified their import sourcing strategies since 2016, the role played by geopolitical tensions and the potential impact on import prices. It considers two different, but not mutually exclusive, changes to sourcing strategies for a given product: (i) increasing the number of sourcing countries and (ii) reducing the import market share of the main supplier country. Data suggest that both regions have, on average, increased the number of sourcing countries, particularly for products that are mostly imported from "geopolitically distant" countries (based on UN General Assembly voting records). Broadening the number of supplier countries has come at a cost; however, it has affected only a small share of total imports, with modest implications for inflation and the terms of trade. At the same time, evidence of a reduction in the import share of the main supplier country is more mixed and is generally associated with a shift towards cheaper – but not necessarily geopolitically closer – countries, suggesting that cost considerations take precedence over supply chain resilience and national security concerns.

Keywords: fragmentation, geopolitics, diversification, rebalancing

JEL codes: F14, F51, F62

Non-technical summary

Trade tensions, the COVID-19 pandemic and the war in Ukraine have highlighted vulnerabilities in foreign sourcing of intermediate and final goods, heightening appreciation of geopolitical risks. This occasional paper looks at how that is affecting trade patterns. It uses detailed product-level information in order to understand how US and euro area firms' sourcing strategies have changed since 2016 and ascertain the potential costs of those changes. It focuses on two non-mutually exclusive strategies aimed at lowering risks of supply chain disruption for a given product: (i) diversification of sourcing countries (extensive margin) and (ii) rebalancing by reducing the market share of the main supplier country (intensive margin). We then assess whether those shifts have a geopolitical dimension.

We find that both regions have diversified, increasing the number of sourcing countries on average for each product. That has accelerated since the pandemic, especially in the euro area. Geopolitical risks have played a role here: diversification has been stronger for products where the euro area and the United States used to rely particularly heavily on imports from geopolitically distant countries (e.g. China, Russia and Iran). Diversification has come at a cost, as the new sourcing countries are, on average, more expensive than the previous suppliers. However, the impact on aggregate prices has been small: over the period 2016-23, products from new countries accounted for a very small share of total imports (0.2-0.3%), implying modest effects on inflation and the terms of trade.

Furthermore, while there have been strong declines in China's share of total US imports since 2018 and in Russia's share of total euro area imports since 2022, evidence of rebalancing away from other geopolitically distant countries (i.e. reductions in the market shares of such supplier countries) is less clear. In general, geopolitically distant countries' shares of total euro area and US imports remain high. Indeed, China's share of total euro area imports has increased by 3 percentage points (a rise of 15%) since 2016. For those products where the United States and the euro area have reduced their reliance on a main supplier, rebalancing seems to have primarily reflected cost concerns – i.e. a desire to shift towards cheaper sourcing countries – rather than supply chain resilience or national security considerations. Indeed, evidence suggests that rebalancing towards geopolitically close countries is costly, implying a shift towards imports that are 20-40% more expensive on average.

1 Introduction

In recent years, a series of adverse shocks – US-China trade tensions, the pandemic and the war in Ukraine – have highlighted vulnerabilities related to foreign sourcing of intermediate and final goods and intensified the risk of geoeconomic fragmentation (i.e. the creation of economic blocs along geopolitical lines). Being more outward-oriented than the United States and China, the euro area may be particularly exposed to such fragmentation risks (Baba et al., 2023).

Understanding how sourcing is changing matters because, as surveys show, firms can adopt different strategies to address fragmentation risks, with different economic outcomes. Firms can use three broad strategies to adjust their sourcing. First, they can diversify sourcing across more countries. Second, they can rebalance their foreign exposure (i.e. reduce their dependence on one or two main countries, reducing those countries' shares of total imports), possibly shifting towards countries that are geographically closer (near-shoring) or geopolitically closer (friend-shoring). And third, they can switch to domestic suppliers, leading to a relocation of production in the home country (re-shoring).¹

Different de-risking strategies can have different implications for global and euro area trade.² In some cases, they could lead to further globalisation or a reconfiguration of sourcing patterns (potentially resulting in more localised or regionally focused supply networks). Alternatively, they could result in deglobalisation if economies become more inward-looking. Domestic and foreign production and investment could be significantly affected, and pricing dynamics could be altered. Obtaining prompt insights into ongoing developments is therefore useful in order to anticipate potential implications.

1.1 Contribution of this paper and key findings

This paper looks at how the euro area and the United States have adjusted their sourcing strategies since 2016 and assesses the potential costs of those shifts. First, it assesses whether sourcing patterns have been adjusted and in which direction – i.e. it looks at whether countries have diversified their imports (increasing the range of countries they import from) and/or rebalanced their imports (reducing the market share of the main supplier country).³ Second, it assesses whether such

¹ In the same way as sourcing, production activity can also be shifted to geographically or geopolitically closer countries, moved closer to a country's main sales markets or even shifted to the home market. Furthermore, firms may decide to adjust business processes, by moving from a "just in time" to a "just in case" model and holding larger inventories. While these aspects are potentially relevant, they cannot be investigated using trade data, so they lie beyond the scope of our analysis here.

² In addition, these strategies also differ significantly in terms of the costs and time required (Crowe and Rawdanowicz, 2023).

³ With our data, it is not possible to tell whether goods come from an independent supplier or a branch (i.e. whether it is the source or the place of production that has changed).

shifts in trade patterns have a geopolitical dimension. Finally, the paper quantifies the impact that such reorganisation of supply chains may have on import prices.

The assessment focuses on two possible strategies: diversification and

rebalancing. Throughout the analysis, it should always be borne in mind that diversification and rebalancing may occur either separately or at the same time. Chart 1 provides a visual example of how the two concepts relate to each other, with the starting point being a scenario where a country imports a given product from countries A and B (the latter being the main supplier). Sourcing can become more diversified, moving from two to four sourcing countries, without changing the market share of the main supplier (panel a); in the same vein, rebalancing can occur without increasing the number of suppliers (panel b).4

Chart 1

(percentages of total imports)

Diversification vs rebalancing - a visual example



Source: ECB

This assessment focuses on developments since 2016 using detailed

product-level data. We focus on developments since 2016 because this appears to be the point at which geopolitical considerations began to play a stronger role in trade relations, with the election of Donald Trump and the beginning of trade tensions between the United States and China. The analysis is based on product data at the six-digit level of the World Customs Organization's Harmonised System (HS) classification, corresponding to very detailed product characteristics.⁵ This high level of granularity allows us to track the number of countries from which economies import each product and the prices charged. Another advantage of using

This paper does not seek to quantify the potential benefits of such de-risking strategies. Such benefits are likely to come in the form of enhanced resilience and lower welfare costs in the event of future geopolitical shocks. Benefits can also stem from a reduced risk of the home country being blackmailed by a geopolitically powerful sourcing country. Reducing strategic dependence on potentially unfriendly autocratic states is an insurance policy that enhances welfare if done efficiently, as it reduces the expected costs of geopolitical shocks.

The HS6 classification allows cross-country comparison at a highly granular level. For instance, code 040110 corresponds to "dairy produce; milk and cream, not concentrated, not containing added sugar or other sweetening matter, of a fat content not exceeding 1% (by weight)".

product-level data is their timeliness. For example, product-level data are available with a three-month lag, while firm-level data typically have a two-year lag.⁶

Our paper contributes to the fast-growing body of empirical literature that is using granular product-level data to explore whether seemingly stable aggregate trends are masking a redirection of trade flows between countries, potentially signalling geopolitical fragmentation (Alfaro and Chor, 2023; and Freund et al., 2023). To the best of our knowledge, our paper is one of the first to provide a highly disaggregated comparative analysis of the euro area and the United States with emphasis on the price implications of fragmentation – an aspect that has been relatively underexplored in previous research.

We find evidence of diversification, which has increasingly had a geopolitical dimension. The euro area and the United States have both diversified, increasing the number of sourcing countries for each product on average. Geopolitical risks have played a role here: diversification has been stronger for products where the euro area and the United States used to rely particularly heavily on imports from geopolitically distant countries. Diversification has come at a cost, as the new sourcing countries are, on average, more expensive than the previous suppliers.

In contrast, evidence of rebalancing is more limited. Aggregate data show strong declines in imports from China to the United States post-2018 and imports from Russia to the euro area post-2022. However, evidence of rebalancing away from other geopolitically distant countries is less clear. For those products where the euro area and the United States have rebalanced, this seems to have primarily reflected cost concerns – i.e. shifts towards cheaper sourcing countries – rather than supply chain resilience or national security considerations.

1.2 An overview of the literature

Geopolitical tensions have dominated newspaper headlines and prompted numerous ad hoc surveys, indicating that firms' sourcing strategies are indeed gradually shifting. When asked about potential changes to their sourcing strategies, half of all firms responding to the EIB's 2023 Investment Survey (both EU and US firms) have changed or are planning to change their sourcing strategy by increasing the number of countries they import from and increasing their inventories (European Investment Bank, 2023). The tendency towards greater diversification of input sourcing is also confirmed by a recent ECB survey of leading firms operating in the euro area, with data showing that geographically and geopolitically closer countries are being favoured (Attinasi et al., 2023b). National surveys on geopolitical risks coordinated by the Banca d'Italia, the Banco de España and the Deutsche Bundesbank have also included small firms (Balteanu et al., 2024). These surveys reveal that a significant percentage of companies have taken steps to mitigate their sourcing risk from China – 40% in Germany, 30% in Italy and 22% in Spain.

⁶ However, the granular product-level data only give us a broad picture and do not tell us whether particular types of firm – such as multinationals or small and medium-sized enterprises – pursue particular sourcing strategies.

Additionally, between 20% and 27% of firms in these countries are considering taking similar action by the end of 2024.

Empirical analysis, however, yields mixed evidence depending on the region that is being looked at. Available empirical literature on fragmentation mostly focuses on the US economy, looking at the trade restrictions that were introduced during the Trump administration. Freund et al. (2023), for example, find significant reshaping of US global supply chains owing to tariffs imposed on Chinese imports since 2018, with declines in China's shares of total US imports for the set of products that were subject to the additional tax. Instead, firms have increased their imports from large developing economies which are firmly embedded in Chinese supply chains, particularly for strategic goods. Countries such as Vietnam, Thailand, South Korea and Mexico have emerged as major winners in global export markets, partly by providing substitutes for products subject to the US-China tariffs (Fajgelbaum et al., 2024; and Alfaro and Chor, 2023).

On the euro area side, trade data have not yet shown any significant deglobalisation of production chains. Aggregate indicators of global value chains suggest that no reconfiguration of the euro area production chain has yet taken place, as no noticeable shift in the sourcing of intermediate goods has been observed (Di Sano et al., 2023). This is supported by firm-level data: Di Stefano et al. (2022) found that the pandemic did not trigger significant reshoring among Italian multinational firms. Similarly, de Lucio et al. (2023), using a representative sample of Spanish manufacturers involved in global value chains, found no evidence of a shift towards sourcing from countries that were geographically or geopolitically closer to Spain.

A number of studies estimate the possible trade and welfare consequences of the world fragmenting into blocs. With a focus on the EU, Attinasi et al. (2023a) quantify the economic costs of hypothetical fragmentation scenarios using the multi-country, multi-sector model devised by Baqaee and Fahri (2023). They find that a decoupling of the global economy into a western bloc and an eastern bloc (broadly comprising advanced and developing economies respectively) would reduce EU output and trade, as well as raising prices, while welfare losses would generally be more muted. Campos et al. (2023) estimate that the world fragmenting into three trade blocs (western, eastern and neutral) would have important effects on trade between them, reducing trade flows by 22-57% in the most extreme scenarios (involving the withdrawal of the eastern bloc from the World Trade Organization (WTO)). Although smaller than trade losses, welfare losses would still be sizeable, with the largest losses seen in the eastern bloc. Goes and Bekkers (2022) and Felbermayr et al. (2023) find, using general equilibrium models, that the global economy decoupling into two blocs results in significant welfare losses.

2 Evidence of trade diversification and rebalancing

2.1 Geopolitical dimension of diversification

The euro area has progressively diversified import sources over the past two decades, although there is no sign that this process has accelerated significantly relative to the past. Since the election of Donald Trump as US President in 2016, diversification in the euro area has continued, with a gradual increase in the number of sourcing countries per product and a slight acceleration since the pandemic (Chart 2); this increase can also be observed for goods of strategic importance.^{7,8} However, this represents the continuation of a process that has been ongoing for some years now. In contrast, there has barely been any diversification in the United States. Interestingly, in 2023 the euro area had, on average, two-thirds more sourcing countries per product than the United States, and 20% more for strategic goods. As shown in Chart A2, diversification appears to have increased more strongly in the euro area than in the United States since 2016, even after controlling for the initial number of sourcing countries per product.

⁷ See Chart A1 in the annex. Strategic goods are as defined in the list in European Commission (2021). The European Commission identified strategic dependencies related to specific imported inputs "in the most sensitive ecosystems where the EU can be considered highly dependent on imports from third countries", based on three indicators: (i) concentration, as measured by the Herfindahl-Hirschman Index and the market share of non-EU supplying countries; (ii) the importance of demand, calculated as extra-EU imports' share of total EU imports; and (iii) substitutability, calculated as the ratio of extra-EU imports to total EU exports. For the United States, we construct a similar set of products, adapting the European Commission's methodology to fit US data (see Box 1 for details). More descriptive statistics on strategic goods (geographical distribution and concentration by sourcing country) can be found in Box 3 for both the euro area and the United States.

⁸ Policy initiatives such as the CHIPS Act and the Inflation Reduction Act in the United States and the European Chips Act, the Net-Zero Industry Act and the Critical Raw Materials Act in Europe have a common goal of reducing dependence on critical products and inputs.

(averages and medians) Average – euro area Average – United States Median - United States Median – euro area 50 45 40 35 30 25 20 15 10 5 0 2011 2014 2017 2020 2023 2002 2005 2008

Number of sourcing countries per product

Source: Trade Data Monitor.

Notes: Products are defined at HS6 level. Data for the euro area refer to extra-euro area imports.

Box 1. Identifying strategic dependencies: adapting the EU approach to the US context

Ivelina Ilkova

The pandemic underscored the vulnerability of the EU economy to disruptions in the supply of specific products and inputs. This awareness led to the emergence of the concept of "strategic goods" – critical foreign inputs essential for EU production. In response, the European Commission developed a list of strategic goods/dependencies, based on criteria such as high EU demand, reliance on concentrated sources and limited substitutability. No such list is currently available for the United States. This box explains how we address this gap, outlining the methodology used, discussing its limitations, and proposing adaptations to suit both the US and the EU contexts.

In the staff working document European Commission (2021), a methodology for identifying strategic dependencies is developed. Essentially, that methodology combines quantitative and qualitative analysis with the aim of creating a list of strategically important products where the EU is strongly dependent on foreign suppliers. The methodology can be broadly divided into two steps. First, the list of HS products is filtered, reducing it from 5,000 to roughly 390 goods. This is done by computing the following three core dependency indicators (CDIs), with products selected based on critical values specific to each CDI:

• *CDI*₁ captures the concentration of EU imports coming from non-EU countries. For each product, it is calculated using the Herfindahl-Hirschman Index, as defined below:

$$CDI_1 = \sum_{i=1}^n (s_i^2)$$

where s_i is the market share of the non-EU country and *n* is the total number of source countries. A value of 0.5 means the product is supplied by two countries. The higher the value, the fewer countries supply this product to the EU. The critical value above which the concentration is considered too high is $CDI_1 > 0.4$.

• *CDI*₂ aims to measure the importance of extra-EU imports in total demand. In other words, it identifies products which are mainly supplied by foreign sources, instead of locally through intra-EU trade. The critical value is 0.5 and the formula used to calculate it is as follows:

$CDI_2 = \frac{Value \ of \ extra-EU \ imports}{Total \ value \ of \ EU \ imports}$

• *CDI*₃ is used to measure the substitutability of extra-EU imports with EU production. This ratio seeks to measure the extent to which EU production can cover import needs in the event of disruption. EU exports are used as a proxy for EU production, and the critical value is 1:

 $CDI_3 = \frac{Value \ of \ extra-EU \ imports}{Total \ value \ of \ EU \ exports}$

In a second step, the list is narrowed down further by selecting goods used in "the most sensitive industrial ecosystems", such as digital, health, aerospace and defence, and electronics sectors. The staff working document does not provide an explicit list of the sectors that are considered part of these sensitive ecosystems, making it difficult to fully replicate the results. However, the European Commission recently published a list of Critical Technology Areas,⁹ which we used to build a list of the HS2 sectors that are part of sensitive ecosystems (with the exact HS2 codes being inferred).

The above methodology cannot be applied in full to the United States. There are two reasons for this. First, CDI_2 – which measures the importance of demand – requires data on both intra- and extra-US trade. Owing to the unavailability of data on intra-US trade flows, CDI_2 cannot be calculated for the United States unless a reasonable proxy for domestic demand at the HS6 level can be found. Second, the identification of sensitive ecosystems in the European Commission's working document was done specifically for the European context and might not fully apply to the United States. We address this limitation by referring to the list of Advanced Technology Products published by the United States Census Bureau,¹⁰ which defines ten key technological areas for the United States and provides a list of HS codes for the sectors in those key areas.

Working within those constraints, this paper adapts the European Commission's methodology to build a US list of strategic goods. Here is a step-by-step description of the process carried out:

- 1. Data obtained for imports and exports at HS6 level for one specific year (with 2019 chosen here, following the Commission's methodology) approximately 5,000 products
- 2. CDI₁, CDI₂ and CDI₃ calculated for the EU, and CDI₁ and CDI₃ calculated for the United States
- 3. List filtered based on the critical values defined above
- Remaining products filtered based on HS2 sectors considered part of sensitive ecosystems, using either the Commission's list of Critical Technology Areas or the US list of Advanced Technology Products

⁹ See the list of Critical Technology Areas published by the European Commission.

¹⁰ See the list of Advanced Technology Products published by the US Census Bureau.



Sources: Trade Data Monitor, European Commission and authors' calculations. Notes: CDI1, CDI2 and CDI3 cluster products according to concentration, importance in EU demand and importance in EU supply respectively. Following the European Commission's methodology, the composition of the strategic products is based on the year 2019. Products are defined at HS6 level. Sources: Trade Data Monitor, US Census Bureau and authors' calculations. Notes: CDI1 and CDI3 cluster products according to concentration and importance in US supply respectively. In order to mirror the European Commission's methodology, the composition of the strategic products is based on the year 2019. Products are defined at HS6 level.

Final

112

1,193

CDI₃

778

The final lists for the EU and the United States consist of 126 and 112 products respectively (**Chart A**), accounting for approximately 4% and 6% of total imports respectively.¹¹ **Chart B** shows the number of products in each HS2 chapter.

Chart B

Composition of strategic dependencies



United States

(number of products)

Total products

5,285

2,113

CDI₁

Sources: Trade Data Monitor, European Commission and authors' calculations. Notes: Following the European Commission methodology, the composition of the strategic products is based on the year 2019. Products are defined at HS6 level. Sources: Trade Data Monitor, US Census Bureau and authors' calculations. Notes: To mirror the European Commission methodology, the composition of the strategic products is based on the year 2019. Products are defined at HS6 level.

¹¹ As a comparison, the 137 products identified by the European Commission account for approximately 6% of the total value of EU imports.

However, diversification appears to have had a growing geopolitical dimension, with both the euro area and the United States diversifying the sourcing of products that are imported more from countries that are geopolitically aligned with China. We assess whether diversification has had a geopolitical dimension by classifying supplying countries as "friends"/geopolitically close (for example, G7 countries, EU Member States, Australia, South Korea and Türkiye) or "non-friends"/geopolitically distant (for example, China, Russia, Iran, North Korea and Syria) according to how they voted on the question of UN sanctions against Russia.¹² Abstaining countries are considered neutral and assigned to the geopolitically close group. An event study then estimates, separately for the euro area and the United States, whether, for a given imported product, having a geopolitically distant country as the main supplier affects the number of suppliers relative to products that are mainly sourced from a geopolitically close country. Chart 3 suggests that diversification of import sources since 2016 has been much stronger for products where the euro area and the United States used to rely more heavily on geopolitically distant countries for their imports. One might expect this trend to emerge earlier in the United States than in the euro area, consistent with the timeline of trade disputes between the Trump administration and China. However, our analysis shows that in both the euro area and the United States, diversification intensified from 2021, peaking with Russia's invasion of Ukraine. Among geopolitically distant countries, the increased diversification appears to be driven largely by China, as the impact ceases to be significant when China is excluded from the sample (Chart A3). This result is consistent with evidence of firms shifting to a "China-plus-one" strategy (Basu and Ray, 2022) - i.e. reducing their reliance on China by moving operations to other countries such as Vietnam, Indonesia or Thailand.

¹² In line with economic literature, "geopolitically close" countries are defined as those that voted in favour of sanctions against Russia on the question of UN General Assembly Resolution ES-11/3 – namely, the Member States of the European Union, Albania, Andorra, Antigua and Barbuda, Argentina, Australia, the Bahamas, Bosnia and Herzegovina, Canada, Chad, Chile, Colombia, the Comoros, the Democratic Republic of the Congo, Costa Rica, Côte d'Ivoire, Dominica, the Dominican Republic, Ecuador, Fiji, Georgia, Grenada, Guatemala, Haiti, Honduras, Iceland, Israel, Jamaica, Japan, Kiribati, Liberia, Libya, Liechtenstein, Lithuania, Malawi, the Marshall Islands, Mauritius, Micronesia, Moldova, Monaco, Montenegro, Myanmar, Nauru, New Zealand, North Macedonia, Norway, Palau, Panama, Papua New Guinea, Paraguay, Peru, the Philippines, Saint Lucia, Samoa, San Marino, Serbia, the Seychelles, Sierra Leone, South Korea, Switzerland, Timor-Leste, Tonga, Türkiye, Tuvalu, Ukraine, the United Kingdom, the United States and Uruguay. The "geopolitically distant" countries are Algeria, Belarus, Bolivia, Burundi, the Central African Republic, China, Congo, Cuba, Eritrea, Ethiopia, Gabon, Iran, Kazakhstan, Kyrgyzstan, Laos, Mali, Nicaragua, North Korea, Russia, Syria, Tajikistan, Uzbekistan, Vietnam and Zimbabwe.





(differences in the number of sourcing countries compared with goods sourced from geopolitically close countries)

Sources: Trade Data Monitor and authors' calculations

Notes: The shaded areas indicate 95% confidence intervals. Data are based on an event study looking at the number of sourcing countries for a product when the main sourcing country was geopolitically distant (rather than geopolitically close) in 2014-16. See equation (1) in Box 2 for more details of the specification.

Box 2. Database and event study specifications

This box provides an overview of the database used in the paper and the econometric specifications applied in the event studies. It provides details of the regressions presented in Chart 3 and Chart 6, as well as outlining the various robustness checks that were conducted to ensure the soundness of the results.

We use a product-level dataset from Trade Data Monitor. This contains annual import flows over the period 2014-23 for the United States and all euro area countries, from all trading partners, at HS6 level in euro and kilograms. To get the euro area picture, we aggregate the individual euro area country import flows and only keep extra-euro area trade, which then allows a useful comparison with the United States. The dataset has a monthly frequency, but we use an annual frequency to reduce volatility by product and avoid issues linked to products not being traded every month. The high level of granularity in the dataset allows us to track the number of sourcing countries, price changes (proxied by unit values) and patterns for specific products considered strategic (see Box 1), while still maintaining timely analysis (a three-month lag, compared with two years for firm-level data).

We first estimate the effect that the rise in geopolitical tensions and the COVID-19 pandemic have had on diversification in the euro area and the United States. We employ an event-study design tracking the number of sourcing countries per HS6 product for each region. The treatment group is the set of products whose main sourcing country was geopolitically distant in 2014-16; the control group is the set of products whose main sourcing country was geopolitically close over the same period. The reference year is 2016 – the year that Donald Trump was elected. The pre-treatment phase to test for the possible presence of pre-trends is 2014-16. The specification is as follows:

number country suppliers_{it} = $\sum_{k=-2}^{7} \beta_k$ time dummy_{kt} × geo_politic distant dummy_i + FE_i + FE_t + ε_{it} (1)

where *number country suppliers*_{*it*} is the number of sourcing countries for HS6 product *i* at time *t* (where *t* takes an annual frequency), *k* is the number of years after 2016, geo_politic distant dummy_{*i*} is a dummy variable that takes the value 1 if the main supplier of product *i* between 2014 and 2016 was a geopolitically distant country and is interacted with a dummy for each year between 2014 and 2023 (excluding 2016, which is our reference point). *FE*_{*i*} and *FE*_{*t*} are product and time fixed effects respectively. This setting allows us to identify the year when the effect began and check for the presence of a potential pre-trend. Equation (1) is estimated separately for the euro area and the United States.

Chart 3 shows the estimated β_k for the euro area and the United States. Our findings hold under multiple robustness checks. In particular, the results do not change (i) when medical equipment (the trade flows for which displayed very unusual behaviour during the pandemic) is excluded, (ii) when products that are not imported every year between 2016 and 2023 are excluded, (iii) when neutral countries are pooled with the geopolitically distant countries (treatment group) instead of the geopolitically close countries (control group), and (iv) when pandemic-related restrictions in the main sourcing country are controlled for using the Oxford stringency index.¹³ Furthermore, the results remain largely unchanged when controlling for the main partner's share of imports. When focusing only on strategic goods, the results show endogeneity problems, so these are not reported here.

We then estimate a similar model for imports, in order to quantify the impact that the rise in geopolitical tensions has had on the exposure of the euro area and the United States to geopolitically distant countries in the area of strategic goods.¹⁴ We employ an event-study design comparing import levels from geopolitically distant and geopolitically close countries for strategic goods. The treatment group is the set of products that were imported mainly from a geopolitically close country in 2014-16; the control group is the set of products that were imported mainly from a geopolitically close country in 2014-16. The database includes volumes of extra-euro area imports of strategic goods from all trading partners at HS6 level (see Box 1 for a definition).¹⁵ The specification is as follows:

 $\ln imports_{ijt} = \sum_{k=-2}^{7} \beta_k time \ dummy_{kt} \times \text{geo_politic distant dummy}_j + FE_{ij} + FE_t + \varepsilon_{ijt} \ (2)$

where the dependent variable is the natural logarithm of imports from main sourcing country *j* to the euro area of HS6 strategic product *i* at time *t*. The specification follows the same structure as equation (1). **Chart 6** shows the estimated β_k of two different regressions (one for the euro area and one for the United States) using econometric specification (2).

¹³ The focus of this study is on the role of geopolitics in shaping trade; however, the pandemic may have influenced the results. To ensure the results are robust, we control for mobility restrictions.

¹⁴ We carry out the same estimation for all goods, but the presence of pre-trends does not allow any causal inference.

¹⁵ Chapter 27 of the HS classification (mineral fuels, mineral oils and products of their distillation; bituminous substances; and mineral waxes) has been omitted to ensure that our results are not driven by the gas crisis that followed Russia's invasion of Ukraine.

2.2 Limited rebalancing: persistent reliance on geopolitically distant sourcing countries

While some diversification of import sources has taken place, evidence of rebalancing away from geopolitically distant countries – i.e. reductions in countries' reliance on main suppliers from such economies – is more mixed. This section looks at whether data point to such rebalancing. In order to gain an overview of the broad trends, we first look at the aggregate picture, before zooming in to examine developments at the product level.

Chart 4

(percentage points)

Changes in shares of the euro area's import market, 2016-23



Source: Trade Data Monitor.

Notes: Data are based on deflated import values. Chapter 27 of the HS classification (mineral fuels, mineral oils and products of their distillation; bituminous substances; and mineral waxes) has been omitted.

Chart 5

Changes in shares of the US import market, 2016-23

(percentage points)



Source: Trade Data Monitor.

Notes: Data are based on deflated import values. Chapter 27 of the HS classification (mineral fuels, mineral oils and products of their distillation; bituminous substances; and mineral waxes) has been omitted.

Aggregate data show strong shifts away from China in US imports and away from Russia in euro area imports, but there is more limited evidence of rebalancing elsewhere. China's share of euro area imports has increased by 3 percentage points since 2016, while its share of US imports has decreased by 11 percentage points (Chart 4, Chart 5 and Chart A7).¹⁶ Since 2022, the euro area has had greater exposure to China than the United States (

Chart A8).¹⁷ Russia's share of imports has declined in both the euro area and the United States, in line with the sanctions imposed and the related embargo.¹⁸ However, these two examples are the exception: when China is excluded, geopolitically distant countries' aggregate shares of both euro area and US imports have remained stable overall; neither region has significantly shifted imports away from those countries. Indeed, when Russia is also excluded, the market shares of geopolitically distant sourcing countries actually increased in 2022 and 2023.

Evidence at the product level underlines the fact that rebalancing – i.e.

reductions in reliance on a main supplier – is limited. Instances of the United States or the euro area reducing reliance on geopolitically distant countries as main suppliers of specific products have been much more difficult to identify. Looking at the results of an event study comparing import developments at the product level, it is difficult to draw conclusions on whether diversification was triggered by geopolitical tensions, as the presence of a pre-trend suggests that products in the treatment and control groups were not systematically different before the event (Chart A9). When focusing on strategic goods, there is limited evidence that the euro area and the United States have substantially rebalanced away from geopolitically distant countries (Chart 6).

¹⁶ When looking at strategic goods, the euro area and the United States share a common trend, with a negative shift starting in 2022 and continuing in 2023 (

Chart A6)

¹⁷ The United States may not have reduced its dependence on supply chains linked to China as much as it seems. Alfaro and Chor (2023) document a shift away from China and towards Mexico and Vietnam in US imports, but they also show rising inflows of Chinese trade and foreign direct investment in those two countries. They conclude that the United States continues to be indirectly exposed to China.

¹⁸ While direct trade flows have decreased, there is evidence of sanctions being circumvented via third (non-sanctioned) countries (see, for example, Brooks and Johnson, 2024). We do not control for such indirect flows in this analysis.



Change in the importance of a main sourcing country for strategic goods when it is a geopolitically distant country

Sources: Trade Data Monitor and authors' calculations.

Notes: The shaded areas indicate 95% confidence intervals. Data are based on an event study comparing import levels for strategic goods from geopolitically distant and geopolitically close countries. See equation (2) in Box 2 for more details of the specification.

Box 3. Comparison of the sources of strategic goods imported by the euro area and the United States

This box examines and contrasts the euro area and the United States in terms of their

dependence on strategic goods. As explained in Box 1, strategic goods are, by construction, products where the EU is reliant on a very limited number of countries. As **Chart C** shows, China is the main sourcing country for most strategic goods in both the euro area and the United States, with the euro area being more heavily reliant. China not only holds a dominant position – exporting more than twice as many strategic goods as the second largest provider – but it actually strengthened its position between 2016 and 2023. The United States is the second largest supplier of strategic goods to the euro area, with 14 products. No other country supplies more than seven strategic goods to the euro area.

Chart C









Source: Trade Data Monitor.

Notes: This chart shows, for each country, the number of strategic goods for which the country in question is the main supplier to the euro area. Only the first 15 main sourcing countries are covered.

United States (number of strategic products) 2016 2023 35 30 25 20 15 10 5 0 South Koles United Kingdom Switzerland SouthAfrica +alathstan Singapore France TUNKIYE Chir Gern

Source: Trade Data Monitor.

Notes: This chart shows, for each country, the number of strategic goods for which the country in question is the main supplier to the United States. Only the first 15 main sourcing countries are covered.

For strategic goods, China and the United States both have dominant shares of the euro area's import market. Understanding the market structure is crucial in assessing whether the euro area and the United States can adapt and reduce their dependence on a particular country. Chart D shows, for each main supplier, the market share for each product where it holds the top position. Not only is China the main sourcing country for 33 strategic goods imported by the euro area, it also has over 50% of the euro area's import market for 75% of these products. For the United States, this figure increases to 90%.

Chart D

Number of strategic goods provided by main sourcing countries, broken down by market share





Source: Trade Data Monitor.

Notes: This chart shows, for each country, the number of strategic goods for which the country in question is the main supplier to the euro area, broken down by its market shares for the various goods. Data relate to 2023.

Source: Trade Data Monitor.

Notes: This chart shows, for each country, the number of strategic goods for which the country in question is the main supplier to the United States, broken down by its market shares for the various goods. Data relate to 2023.

After examining the number of sourcing countries, we now look at imports of strategic goods in value terms. The euro area's imports of strategic goods predominantly originate from two geopolitically distant countries, China (54%) and Vietnam (9%), and one geopolitically close country, the Czech Republic (8%) (Chart E). The United States exhibits a similar profile: it, too, is dependent mainly on China (69%) and Vietnam (13%), with a different third sourcing country, India (4%).

Chart E



Shares of import markets for strategic goods

Source: Trade Data Monitor.

Notes: Data are based on deflated import values in 2023. Chapter 27 of the HS classification (mineral fuels, mineral oils and products of their distillation; bituminous substances; and mineral waxes) has been omitted.



Source: Trade Data Monitor.

Notes: Data are based on deflated import values in 2023. Chapter 27 of the HS classification (mineral fuels, mineral oils and products of their distillation; bituminous substances; and mineral waxes) has been omitted.

3 Current and potential effects on prices

So far, we have shown some notable shifts in trade patterns – particularly in terms of diversification, though less so for rebalancing. Our analysis shows that these shifts have, at least in part, been driven by the recent intensification of geopolitical tensions. As firms adapt by using alternative suppliers, understanding how this change in sourcing affects import prices becomes essential for navigating the complex relationship between trade, inflation and monetary policy.

3.1 The cost of diversification and rebalancing

The diversification process that has been observed so far has proved to be rather costly, with new sourcing countries tending, on average, to be more expensive. Chart 7 shows that, for the same product, suppliers from new sourcing countries tend to be more expensive than existing suppliers.¹⁹ On average, the median price charged by a supplier in a new sourcing country is 50% higher in the euro area and 75% higher in the United States. This difference between new and existing sourcing countries in terms of prices has been fairly stable over time in the euro area.^{20,21} However, the impact on aggregate import prices is small: on average over the period 2016-23, flows of products from new countries accounted for a small share of total imports (0.2-0.3%), suggesting that they only had a limited impact on aggregate prices.

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¹⁹ The mean is also positive here. However, owing to outliers, we prefer to focus on the median only. Some of the outliers make little sense economically (e.g. new prices that are 500 times the old ones). This could, in part, be related to the use of unit values as a proxy for product-level import prices. This choice is not devoid of limitations, as detailed in Berthou and Emlinger (2011). The present analysis is restricted to those products for which the unit of measurement is unchanged over the period 2014-23.

²⁰ In order to have a meaningful comparison, only new country-product flows that remained in place for at least two years are used for the calculation. When that constraint is removed, prices are lower in the first year than in the second. Figures for 2023 should therefore be disregarded, as that constraint could not be applied.

²¹ This may, in part, represent the fixed cost of establishing new relationships with sourcing countries. However, data show that the price of new product-country flows tends to decrease only very gradually, with a moderate decline one year after the new trade flow is established and no additional decrease after two years (Chart A10).



Price difference between new and pre-existing product-country flows

Source: Trade Data Monitor.

Notes: This chart shows the median difference in price between a product from a new sourcing country (i.e. a product not imported from the sourcing country in the previous year) and the same product from pre-existing sourcing countries (i.e. a product already imported from the sourcing country in the previous year). To avoid bias resulting from occasional importers, only product-country flows that are in place for at least two years are included (with the exception of data for 2023). Products are defined at HS6 level.

Instances of rebalancing – i.e. situations where the euro area or the United States has reduced its reliance on a main country supplier for a particular product – seem to have mostly reflected cost concerns, rather than supply chain resilience or national security considerations. In both the euro area and the United States, rebalancing away from main country suppliers has primarily shifted imports towards cheaper sourcing countries. Chart 8 shows, for both the euro area and the United States, price differences between (i) sourcing countries whose share of the relevant import market has increased and (ii) sourcing countries whose share has fallen or remained stable. Since 2016, the euro area and the United States have, on average, tended to move imports towards cheaper sources, although there is some evidence of a change after Russia's invasion of Ukraine in 2022, when both shifted to less cheap sourcing countries.

Where geopolitical concerns may have played a role, this seems to have come at a cost. Indeed, shifting imports from a main supplier in a geopolitically distant country towards a geopolitically close supplier is associated with median price increases of 30% and 40% in the euro area and the United States respectively (Chart 9). Shifting from one geopolitically close country to another has a broadly neutral impact on import prices.

Price differences between sourcing countries whose import shares have increased and those whose shares have fallen or remained stable

(median percentage differences) Euro area United States 2 0 -2 -4 -6 -8 -10 -12 -14 -16 -18 -20 2023 2016 2017 2018 2019 2020 2021 2022

Source: Trade Data Monitor.

Notes: This chart shows the difference in price between a product from sourcing countries whose market share has increased (relative to the previous year) and the same product from sourcing countries whose market share has decreased or stagnated. Products are defined at HS6 level.

Chart 9

Price differences between geopolitically distant and geopolitically close groups depending on the direction of the shift



Source: Trade Data Monitor.

Notes: Only HS6 products that have experienced rebalancing (i.e. reductions in the market shares of main suppliers) from one year to the next are included; a product can therefore appear more than once if several shifts took place over several years. This chart shows the median price difference between a main supplier, categorised as geopolitically close or geopolitically distant, and the country that gained the most in terms of market share, categorised as geopolitically close or geopolitically distant.

3.2

Price implications of shifting towards geopolitically close sourcing countries

When shifting sourcing towards geopolitical allies, rebalancing tends to be costly. Chart 10 shows that, on average, for the same product, imports from geopolitically distant countries tend to be about 20% cheaper in the euro area and 40% cheaper in the United States.²² In the same way, China and authoritarian regimes more broadly tend to be significantly cheaper than their democratic counterparts. Near-shoring could be a good compromise for the euro area, with the prices of geographically close countries being close to those of competitors further away.

²² The median is very stable over time. However, the volatility of differences in prices is very high across HS6 products, as reported in Chart A11. Chart A11 reproduces Chart 10 Differences between country groupsbut adds the interquartile ranges.



Differences between country groups in terms of import prices

Source: Trade Data Monitor.

Notes: This chart shows, for example, that, for the euro area, geopolitically distant countries are, on average, 23% cheaper than geopolitically close countries for the same imported product. Products are defined at HS6 level. For the euro area, "geographically close" countries are defined as EU Member States outside the euro area and other countries that are within 5,000km. For the United States, the two "geographically close" countries are Mexico and Canada. Democracies are defined using the Economist Intelligence Unit's democracy index for 2022.

Looking ahead, changing the status quo by reducing the import share of the main current supplier would be costly for most of the products sourced by the euro area and the United States. Indeed, on average across products, the largest supplier is usually cheaper than the second largest, which is usually cheaper than the third largest (Chart 11).²³ Thus, rebalancing towards the second or third largest supplier is usually costly. Economic rationality would suggest that the first supplier of a given product is always the cheapest, which is why it is chosen first. However, according to data, this is, on average, not the case for roughly 40% of the products imported by the euro area and the United States (Chart 12). This suggests that other considerations could be at play, such as differences in product quality (which may not be fully reflected in price data) and/or a need for stronger resilience to adverse shocks (e.g. reduced dependence on countries judged to be risky). Indeed, the evolution over time of the number of products for which the first supplier is not the cheapest appears to be fairly stable, suggesting that non-price considerations including those related to supply chain resilience - have not become more prominent in recent years.

²³ Endogeneity (i.e. lower prices for large purchase volumes) cannot be excluded, however. The results are therefore on the upper bound.

Price comparisons between the first, second and third largest sourcing countries

(median percentage differences)



Source: Trade Data Monitor. Note: Products are defined at HS6 level.

Chart 12

Deviation in the ranking of suppliers based on their price differences

(percentages of products)

Euro area – second country supplier cheaper than first country supplier
 United States – second country supplier cheaper than first country supplier



Source: Trade Data Monitor. Note: Products are defined at HS6 level.

4 Conclusions

This paper looks at how the euro area and the United States have adjusted their import sourcing strategies since 2016, focusing on diversification and rebalancing. It looks at the possible influence that geopolitical tensions may have had on these changes and the potential impact on import prices.

We find modest evidence of the reconfiguration of sourcing patterns for euro area and US imports over the past few years. Both regions have diversified, increasing the average number of sourcing countries per product. That has accelerated since the pandemic, especially in the euro area. Our results suggest that geopolitics has played a role, as diversification has been significantly stronger for products where the euro area and the United States used to rely more heavily on imports from geopolitically distant countries. That diversification has come at a cost, as the new sourcing countries are, on average, more expensive than the previous suppliers, possibly suggesting that firms are willing to forgo some cost efficiency in exchange for more resilient supply channels. However, the impact on aggregate prices is small: the flow of products from new countries accounts for a small share of total imports, with limited influence on aggregate prices.

At the same time, evidence of rebalancing away from geopolitically distant countries – i.e. reductions in reliance on main country suppliers for particular products – is less clear. Overall, the euro area and the United States remain highly dependent on countries that are geopolitically aligned with China. Important exceptions here are the reduction in euro area imports from Russia after 2022 and the strong decline in US imports from China since 2018. Where rebalancing away from the main sourcing country has occurred, the impact on import prices depends on whether the shift is towards geopolitically distant or geopolitically close countries. In the case of the former, rebalancing is associated with a lower median price, suggesting that cost concerns take precedence over supply chain resilience and national security considerations. In the case of the latter, by contrast, rebalancing towards geopolitically friendly countries implies a shift towards more expensive products, especially in the United States.

Overall, our findings suggest that, in both the United States and the euro area, diversification seems to be the favoured strategy when seeking to increase supply chain resilience. Measures aimed at significantly rebalancing and, in particular, reducing exposure to geopolitically distant sourcing countries have been much less evident. Although evidence of a substantial reconfiguration of trade relations has been limited so far, an intensification could be expected in the coming years. When asked about changes to the geographical distribution of cross-border sourcing of inputs over the next five years, growing percentages of firms plan to (i) import inputs from a more diverse range of suppliers from different countries (65%) and (ii) import inputs from geographically closer countries (54%) (Attinasi et al., 2023b).

Firm-level data are required in order to analyse this in more depth. Firm-level data would allow us to test the two strategies at firm level, seeing the extent to which these occur within the same firm and whether they tend to differ across different types of firm. In the same way, these data would allow us to see whether (i) all firms are adapting or (ii) only the largest are doing so, driving aggregate results. In addition, they would allow us to look at whether, within each firm, these two strategies are implemented for all imported goods or only for specific ones. Finally, firm-level data would give us a clearer picture of dynamics at the extensive margin, which tends to be blurred at the aggregate level, especially when looking at the euro area as a whole.

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Annex

Chart A1

Number of sourcing countries per strategic good



Sources: Trade Data Monitor and European Commission. Notes: Products are defined at HS6 level. Data for the euro area refer to extra-euro area imports.

Chart A2

Diversification in 2023 depending on the number of sourcing countries in 2016



Source: Trade Data Monitor.

Note: Data refer to the change seen between 2016 and 2023.

Diversification strategies when the main sourcing country is geopolitically distant, excluding China

(differences in the number of sourcing countries when the main country supplier is geopolitically distant, rather than geopolitically close) Euro area United States 2.5 2.0 1.5 1.0 0.5 0.0 -0.5 -1.0 -1.5 -2.0 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

Sources: Trade Data Monitor and authors' calculations.

Notes: The shaded areas indicate 95% confidence intervals. Data are based on an event study looking at the number of sourcing countries for an HS6 product when the main sourcing country in 2014-16 was geopolitically distant, rather than geopolitically close. The sample includes extra-euro area imports from all trading partners except China at the HS6 level. The reference year is 2016. The chart shows the estimated β k of two different regressions (one for the euro area and one for the United States) using the following econometric specification: *number country suppliers*_{it} = $\sum_{k=-2}^{7} \beta_k$ *time dummy*_{kt} × geo_politic distant dummy_t + *FE*_t + *FE*_t + ε_{tt} , where the dependent variable is the number of sourcing countries for HS6 product *i* at time *t*. The treatment group is the set of products whose main sourcing country was geopolitically distant in 2014-16, while the control group is the set of products whose main sourcing country was geopolitically close in 2014-16.

Chart A4

Differences between euro area diversification strategies depending on whether the main geopolitically distant sourcing country is geographically close or distant

(differences in the number of sourcing countries when the main country supplier is (i) both geopolitically and geographically distant and (ii) geopolitically distant and geographically close, compared with a situation where the main country supplier is geopolitically close)



Sources: Trade Data Monitor and authors' calculations.

Solves: The bate individual and adults calculations. Considering the shaded areas indicate 95% confidence intervals. Data are based on an event study looking at the number of sourcing countries for an HS6 product when the main sourcing country is (i) both geopolitically and geographically distant and (ii) geopolitically distant and geographically close, compared with a situation where the main country supplier is geopolitically close. "Geographically close" countries are defined as EU Member States outside the euro area and other country supplier is geopolitically close. "Geographically close" countries are defined as EU Member States outside the euro area and other countries that are within 5,000km. The sample includes extra-euro area imports from all trading partners at HS6 level. The reference year is 2016. The chart shows the estimated βk using the following econometric specification: number country suppliers_{it} = $\sum_{k=-2}^{r} \beta_k$ time dummy_{kt} × geo_politic distant dummy_i × non – near dummy_i + *FE*_i + *FE*_i + *t*_{it}, where the dependent variable is the number of sourcing countries for HS6 product *i* at time *t*. The treatment group is the set of products whose main sourcing country was geopolitically distant in 2014-16.



Breakdown of euro area and US imports by region

Source: Trade Data Monitor. Notes: "Europe excluding EU" includes Russia. "North America" comprises all countries north of Panama. "South America" comprises Panama and all countries south of Panama.

Chart A6

Changes to import market shares for strategic goods, by country group



Source: Trade Data Monitor.

Notes: This chart shows, Notes: This chart shows, mineral oils and products of their distillation; bituminous substances; and mineral waxes) has been omitted.

Changes to total import market shares, by country group



- Euro area geopoliticallydistant countries' share
 United States geopoliticallydistant countries' share
 Euro area China's share
 United States China's share



Source: Trade Data Monitor.

Notes: This chart shows aggregate shares of total imports by volume. Chapter 27 of the HS classification (mineral fuels, mineral oils and products of their distillation; bituminous substances; and mineral waxes) has been omitted.

Chart A8

Total import market shares by country group



Source: Trade Data Monitor.

Notes: This chart shows aggregate shares of total imports by volume. Chapter 27 of the HS classification (mineral fuels, mineral oils and products of their distillation; bituminous substances; and mineral waxes) has been omitted.



Changes in the importance of a main sourcing country when it is geopolitically distant

Source: Trade Data Monitor.

Notes: The shaded areas indicate 95% confidence intervals. Data are based on an event study comparing import levels for goods from geopolitically distant and geopolitically close countries. See equation (2) in Box 2 for more details of the specification. All types of good are included.

Chart A10

Price differences between new product-country flows and pre-existing ones

(median percentage differences)



Source: Trade Data Monitor.

Notes: For the series labelled "new at time t", this chart compares prices in year t for (i) product-country flows which are new in year t and (ii) product-country flows that already existed in year t-1, conditional on those new flows still being in place in year t+1 (except for 2023). For the series labelled "new at time t+1" and "new at time t+2", the chart compares prices in years t+1 and t+2 respectively for the same flows. Products are defined at HS6 level.



Differences between country groups in terms of import prices

Source: Trade Data Monitor. Notes: "Geopolitically close" countries are defined as countries that abstained or voted in favour of sanctions against Russia on the question of UN General Assembly Resolution ES-11/3. For the euro area, "geographically close" countries are defined as EU Member States outside the euro area and other countries within 5,000km. For the United States, the two "geographically close" countries are Mexico and Canada. Democracies are defined using the Economist Intelligence Unit's democracy index for 2022.

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