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A Forward-Thinking Approach to Open Strategic Autonomy

Navigating EU Trade Dependencies and Risk Mitigation

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EXECUTIVE SUMMARY

For the EU, fostering economic interdependence is a more proactive and forward-thinking approach than resorting to defensive measures like eliminating alleged economic dependencies through restrictive regulations, as such actions would negatively impact Member States' economies.

The European Commission and some Member State governments keep pushing for "EU Open Strategic Autonomy". Several EU laws have already been infused with the concept, resulting in a broad spectrum of EU interferences in production, trade, and investment in the Member States. With the "Resilient EU2030 Report on Open Strategic Autonomy", the Spanish Presidency of the Council of the EU in September 2023 presented a new roadmap for how to further reduce external dependencies and strengthen EU technological leadership.[1] Similarly, implementing the EU's Economic Security Strategy initiative, the European Commission presented a list of 10 critical technology sectors aiming to reduce potential economic dependencies and the risk of economic coercion.[2]

This paper shows that EU claims about trade dependencies are not supported by trade data. Except for only few products, such as minerals and energy commodities, there are no critical dependencies on products and services imported from outside the EU. Regarding technology leadership, financial transfers for intellectual property rights indicate that EU businesses and public sectors institutions are benefiting much from advanced foreign technologies and innovation. Many if not most of these technologies are crucial for the EU's international competitiveness, and they cannot easily be replaced by native EU production. At the same time, the EU is a significant exporter of technologies, including ICT and digitally enabled services that are not easily replaceable by non-EU countries. Policymakers should acknowledge the presence of these mutually beneficial interdependencies, as they can act as a hedge against risks like policy-induced disruptions in value chains and economic coercion.

EU policymaking needs to recognise that trade and investment interdependencies, which include advanced technologies, are unavoidable. Trade interdependencies are critically important for maintaining competitive economies and high living standards in the EU. To mitigate potential risks, the EU should promote trade and investment relationships with trustworthy and like-minded partners, such as the US and OECD countries. EU policymakers should leverage trade interdependencies by increasing the competitiveness of EU exports, which act as a safeguard against dependency and the risk of economic coercion. Rather than limiting imports, the EU and Member State governments should initiate supply-oriented structural reforms to enhance the capacity and efficiency of production factors within the EU, which would ultimately bolster Europe's export performance.

[1] Spanish Presidency of the Council of the European Union (2023). Resilient EU2030: a roadmap for strengthening the EU's resilience and competitiveness. 15 September 2023. Available at https://spanish-presidency.consilium.europa.eu/en/news/the-spanish-presidency-presents-resilient-eu2030-roadmap-to-boost-european-union-open-strategic-autonomy/.

[2] See European Commission (2023). Communication on European Economic Security Strategy". 20 June 2023. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023JC0020. Also see European Commission (2023). Commission recommends carrying out risk assessments on four critical technology areas: advanced semiconductors, artificial intelligence, quantum, biotechnologies, press release, October 2023. Available at https://ec.europa.eu/commission/presscorner/detail/en/ip_23_4735.

Key take aways

- Trade data demonstrates that the EU does not have critical dependencies on products and services imported from outside the EU, except for a few niche areas like energy commodities and some raw materials.
- Trade in ICT and digitally enabled services is by no means a one-way-street for the EU. Trade data reveals that the total value of EU exports in digital and digitally enabled services to both the US and the rest of the world is roughly equivalent to the total value of EU imports.
- Trade in intellectual property shows that EU businesses benefit much from foreign innovation and technology, especially in areas like biomedical and digital technologies, indicating the importance of continued international technology cooperation.
- The EU should avoid a general fear of dependency and instead tailor EU policies to specific products and export countries, focusing on diversifying suppliers and increasing inventories for critical items.
- In certain sectors like cloud services and ICT technologies, the EU must continue to rely on non-EU providers. The EU should not pursue discriminatory regulations that could harm economic development in the Member States.
- Subsidies, while considered in various sectors, are a costly and typically ineffective attempt for bridging the technology gap. The cost of duplicating technical infrastructure the creation of production capacities is substantial, coming at the expense of other important policy goals, such as housing, education, and sustainability.
- The EU should not pursue an excessively value-oriented policy, with the effect of discriminating against foreign businesses. Inward-looking trade, investment, and industrial policies send a dangerous message to the global community, empowering foreign governments to impose additional trade and investment barriers.
- The EU should seriously promote regulatory cooperation with like-minded democracies as the US and OECD countries.
- EU policymaking needs to embrace supply-side policies, such as competitive taxation of businesses and workers, professional skills development, and, generally, deregulation and harmonisation through the deepening of the EU Single Market.

1. INTRODUCTION

The EU Strategic Agenda for 2019-2024 outlines the imperative for the EU to enhance its ability to independently safeguard its interests, uphold European values, the European way of life, and contribute to shaping the global future.[3] The European Council Conclusions from October 2020, emphasised the necessity of attaining "strategic autonomy" while simultaneously maintaining an open economy.[4] And with its 2022 trade policy communiqué on "Open Strategic Autonomy", the European Commission reconsidered the EU's trade and investment priorities to better and more assertively drive a process towards "fairer and more sustainable globalisation".[5]

It is difficult to present a clean taxonomy of the EU's strategic autonomy policies. After all, stressing the need for economic resilience, technological sovereignty or geopolitical influence has aspired a promising way of political storytelling to restore (lost) trust in EU institutions and gain support for EU-level policymaking. In the broad field of economic policymaking, we can broadly distinguish policy initiatives based on four central concerns:[6]

1. EU interventions seeking industrial and trade policy objectives through direct interventions in favour of EU businesses, such as reducing perceived dependencies on non-EU suppliers, underinvestment in R&D, and industrial modernisation, where interventions are generally geared to conferring advantages to EU businesses over those from outside the EU.

2. EU interventions aimed at correcting proclaimed market failures (primarily) in the EU, including perceived market power and collective action problems (environmental impacts), but also ethical concerns related to fundamental rights.

3. EU interventions intended to correct proclaimed market failures related to production and processing methods with extra-territorial reach, including value chain resilience and environmental standards.

4. Contingent EU interventions in response to trade measures or behaviour by non-EU governments, including responses to perceived trade restrictive or distortive policies, or actions sought to remedy what the EU perceives to be a shortcoming in the multilateral toolkit.

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[3] Council of the European Union (2019). A new strategic agenda for the EU – 2019 – 2024. Available at https://www.consilium.europa.eu/en/eu-strategic-agenda-2019-2024/.

[4] European Council conclusions, 1-2 October 2020. Available at https://www.consilium.europa.eu/en/press/press-releases/2020/10/02/european-council-conclusions-1-2-october-2020/.

[5] European Commission (2020). EU Open Strategic Autonomy and the Transatlantic Trade Relationship. Available at https://www.eeas.europa.eu/delegations/united-states-america/eu-open-strategic-autonomy-and-transatlantic-trade-relationship_en.

[6] This broad classification is inspired by discussions with Frontier Economics. ECIPE commissioned Frontier Economics, a consultancy, with a study to estimate the costs of the EU's strategic autonomy agenda. The study will be released in autumn 2022.

For each category, relevant EU policy initiatives are outlined in Table 1 below. Most, if not all of these EU policies are motivated by the objective to create EU resources or, generally, to become less dependent on non-EU supply of goods, services, and technology.

TABLE 1: (BROAD) TAXONOMY OF STRATEGIC AUTONOMY POLICIES AND PROPOSED INITIATIVES BY MAJOR CATEGORY

Category 1	Category 2	Category 3	Category 4
Measures aimed to achieve long-term industrial and trade policy objectives (including geo-strategic objectives)	Measures aimed at correcting market failures in the EU associated with products and activities	Measures primarily aimed at correcting market failures related to production and processing methods, with extra-territorial reach	Contingent measures in response to trade measures or behaviour by non-EU jurisdictions
• EU Foreign Investment Screening Mechanism • EU Chips Act • EU Emergency Framework Regarding Medical Countermeasures • EU Dual Use Regulation • EU Hydrogen Strategy • EU Pharmaceutical Strategy • EU Revised Renewable Energy Directive • EU Space Package • EU Standardisation Strategy • EU State Aid and IPCEI (Important Projects for Common European Interest) exemptions	• EU Artificial Intelligence Act (AI) • EU Digital Levy • EU Cybersecurity Certification Scheme for Cloud Services (EUCS) • EU Green Bond Standard • EU Data Governance Act • EU Data Act • EU Digital Markets Act (DMA) • EU Digital Services Act (DSA)	• EU Corporate Sustainability Due Diligence Regulation • EU Deforestation Free Products Regulation • EU Sustainable Batteries Regulation	• EU Anti-coercion instrument • Carbon Border Tax Adjustment Mechanism (CBAM) • Amendment of the EU Blocking Statute • EU Foreign Subsidy Instrument • EU International Procurement Instrument • Review of the EU Enforcement Regulation for trade Disputes

Source: Frontier Economics and ECIPE. It should be noted that these categories cannot be clearly delineated from each other. Some measures in category 1 include measures intended to address perceived market failures related to R&D. Some measures in category 2 also seek to enhance the competitive position of EU industries, while some category 3 measures can have extra-territorial reach. Also, some measures in category 4 can help address prevailing market failures such as asymmetric information about the extent of state aid and negative externalities caused by greenhouse gas emissions.

New EU initiatives, first and foremost the EU Economic Security Strategy of June 2023, suggest that the EU could in the future increasingly rely on defensive, more inward-oriented economic policies. The strategy sets out a set of ambitious policy objectives that are widely accepted. However, it also points to several perceived risks identified by the European Commission to threaten Europe's competitiveness and reduce the EU's resilience to shocks and coercive measures by non-EU governments. These risks include:

- **Supply Chain Risks**: Risks related to price surges, unavailability, or scarcity of critical products, especially those related to the Green Transition, energy supply, and pharmaceuticals.

- **Infrastructure Security Risks**: Risks related to physical and cyber-security of critical infrastructure, including the potential for disruptions or sabotage in areas

like pipelines, power generation, and electronic communication networks. These could compromise the secure and reliable provision of goods, services, and data security in the EU.

- **Technology Security and Leakage Risks:** Risks associated with technology security and technology leakage, including espionage or illicit knowledge leakage. These risks could undermine the EU's technological advancements, competitiveness, and access to leading-edge technology. Products include dual-use technologies like Quantum, Advanced Semiconductors, and Artificial Intelligence, as they could enhance military or intelligence capabilities in potentially adversarial countries.

- **Economic Coercion Risks:** Risks of weaponisation of economic dependencies, where third countries may use trade or investment measures to coerce the EU, its Member States, or businesses into changing their policies.

Building on the objectives of the Economic Security Strategy, the European Commission recently presented a list of 10 critical technology sectors, for which the Commission is planning to conduct a systematic risks analysis.[7] Amongst them are sectors such as advanced semiconductor, AI technologies, and quantum computing technologies as well as biotechnologies.

While the outcomes of these sector reviews remain to be seen, the stated objective of the Commission is to develop and implement "any precise and proportionate measures to promote, partner or protect on any of these technology areas, or any subset thereof."[8] While the EU's Economic Security Strategy is explicitly underpinned by the principles of proportionality[9], previous policies suggest that disproportionate, discriminatory and costly measures cannot be ruled out. As outlined in Section 4, for example, the economic costs of "strategic autonomy policies" are significant, depriving the EU, especially smaller EU Member States, of potential economic growth and, as such, economic development. Costly and typically inefficient measures include subsidies and other isolationist policies, such as import tariffs, discrimination against foreign suppliers in public procurement, and non-tariff trade barriers, of which many come on the heels of calls for more national, economic, technological, and cyber security.

The recent "Resilient2030" report has highlighted certain misconceptions, which also serve as a cautionary signal that some EU policymakers may support new policies that seek to isolate the EU from global competition or to exclude non-EU companies from EU markets. The Resilient2030 report also largely builds on the EU's Economic Security Strategy. The report, which was prepared by the Spanish Presidency of the Council of the EU outlines a "comprehensive, balanced and

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[7] See European Commission (2023). Communication on European Economic Security Strategy". 20 June 2023. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52023JC0020. The Commission recommends carrying out risk assessments on four critical technology areas: advanced semiconductors, artificial intelligence, quantum, biotechnologies. 3 October 2023. Available at https://ec.europa.eu/commission/presscorner/detail/en/ip_23_4735. Also see Annex to the Economic Security Strategy: List of 10 critical technology areas for the EU's economic security.

[8] European Commission (2023) Recommendation on critical technology areas for the EU's economic security for further risk assessment with Member States. See Recommendation 15. 3 October 2023. Available at https://defence-industry-space.ec.europa.eu/system/files/2023-10/C_2023_6689_1_EN_ACT_part1_v8.pdf.

[9] To ensure that measures are commensurate with risks and precisely target goods, sectors, or industries to mitigate unintended consequences on the European and global economy.

forward-looking approach to ensure the EU's Open Strategic Autonomy and global leadership by 2030."[10] It identifies several strategic vulnerabilities in key sectors, including technology, digital services, and raw materials. Nine lines of EU initiatives in sectors deemed "strategic" are intended to improve the resilience and global competitiveness of the EU in these strategic industries.[11] The actions proposed by the Spanish Council Presidency include, amongst others, the expansion of native EU production capacities, the monitoring foreign ownership in strategic sectors, contingency plans for shortages, expanding trade with like-minded countries, and a rebalancing of the EU's economic relations with China.

Even though the authors explicitly emphasise that economic cooperation with "non-like-minded states" should be put to the test, opponents of free trade and economic globalisation could see themselves encouraged to adopt a new policy of economic isolation of the EU. What is remarkable about the report of the Spanish Presidency is that it explicitly questions foreign ownership structures of companies operating in the EU. But it is not just this novelty that is out for discussion. The authors of the report are also critical of the role non-EU companies play in advancing economic development in the EU, claiming that "[t]he presence of foreign companies also poses a challenge to the industrial development of the EU. There is a substantial body of research that demonstrates that the dominance exerted by big tech, energy and food companies in the US has resulted in less innovation, higher prices for consumers, lower wages for workers and reduced entrepreneurial activity. The danger now is that this same pattern could happen in the EU, at a time when these things are more necessary than ever."[12]

The literature cited by the authors of this report is by far not representative.[13] It is selective and biased. It entirely disregards the efficiency gains, scaling effects, research and knowledge transfers, innovation, as well as the employment opportunities and consumer welfare that especially large companies bring about through their imports and investments in the EU. Such claims also negate the empowerment of individual entrepreneurs and SMEs in the EU, which benefit from numerous economic opportunities through the availability of products and services.

By denouncing the "presence of foreign companies", the report of the Spanish Presidency implicitly calls into question the political rationale underlying 60 years of European economic integration and the liberalisation of international trade. Disapproving "big tech, energy and food

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[10] Spanish Presidency of the Council of the European Union (2023). Resilient EU2030: a roadmap for strengthening the EU's resilience and competitiveness. Available at https://spanish-presidency.consilium.europa.eu/en/news/the-spanish-presidency-presents-resilient-eu2030-roadmap-to-boost-european-union-open-strategic-autonomy/.

[11] The list includes digital services, and raw materials and semi-processed goods in four critical sectors: energy, digital-tech, health and food.

[12] Spanish Presidency of the Council of the European Union (2023). Resilient EU2030: a roadmap for strengthening the EU's resilience and competitiveness. 15 September 2023. Available at https://spanish-presidency.consilium.europa.eu/en/news/the-spanish-presidency-presents-resilient-eu2030-roadmap-to-boost-european-union-open-strategic-autonomy/.

[13] Ibid. See footnote 137 of the report: American tech giants are making life tough for startups. (2018, June 2) The Economist, https://www.economist.com/business/2018/06/02/american-tech-giants-are-makinglife-tough-for-startups; Bräuning, F., Fillat, L F., and Joaquim, G. (2022) Cost-price relationships in a concentrated economy. Federal Reserve Bank of Boston Research Department, https://www.bostonfed.org/publications/current-policy-perspectives/2022/cost-pricerelationships-in-a-concentrated-economy.aspx. De Loecker, J., Eeckhout, J., and Unger, G. (2020) The rise of market power and the macroeconomic implications. The Quarterly Journal of Economics 135(2), 561-644. doi:10.1093/qje/qjz041; Akcigit, U., and Ates, S T., (2023) Ten facts on declining business dynamism and lessons from endogenous growth theory. American Economic Journal: Macroeconomics 13(1), 2021: 257-98. doi:10.1257/mac.20180449).

companies in the US" neglects the advance state of technology, productivity, and prosperity.[14] To the authors' credit, they seem to recognise some benefits from the presence of foreign companies, such as the significant advantages of foreign companies, particularly in job creation and innovation, maintaining commercial reciprocity with countries like the US.

Given the potentially substantial cost associated with implementing new EU policies aimed at enhancing resilience and autonomy, it is crucial to restrict these policies exclusively to critical areas where empirical evidence unequivocally reveals substantial risks to Europe's "economic security," while considering key political attributes of EU partner countries. At the same time, the European Commission's avowed commitment to proportionality mandates that EU policymaking should employ a rational cost-benefit analysis to pursue only the measures deemed essential on matters of economic security and resilience.

This paper shows that EU trade dependencies are actually very low and where they exist, they are essentially negligible. We also argue that policymakers should not be blind to economic interdependencies, or "commercial reciprocity", as stated in the Spanish Presidency report. EU trade and investment is not a one-way street. European firms are intricately woven into global production and distribution networks, which essentially function as a safeguard against actions by non-EU governments aimed at harming the European economy. And we argue that those calling for an "EU versus the rest of the world" approach should distinguish between Europe's long-standing trade and security partners, on the one hand, and authoritarian regimes on the other. Authoritarian regimes, due to their inherent characteristics, do not adhere to the rule of law and the principles of a market-driven economy and can indeed exert substantial influence over their companies operating within the EU. Accordingly, the EU should have different approaches for its long-standing trade and security partners, with which it shares common values, and for authoritarian regimes, which may not share these values and could potentially wield adverse influence over EU governments, as addressed by the EU Anti-Coercion Instrument adopted in October 2023[15], and companies operating within the EU.

The paper is organised as follows. In Section 2, we closely examine trade in goods and services data to assess the magnitude of trade dependencies frequently cited by EU policymakers and extensively referred to in the context of recent EU policy initiatives. Section 3 provides an account of investment data showing how deeply European companies are integrated into the global economy, especially with advanced economies and like-minded partners. Based on our findings, we discuss implications for the debate about the future course of the EU's open strategic autonomy in Section 4.

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[14] See ECIPE (2023). If the EU was a State in the United States: Comparing Economic Growth between EU and US States. Available at https://ecipe.org/publications/comparing-economic-growth-between-eu-and-us-states/?_gl=1*d1k90x*_up*MQ..*_ga*MTAyOTE5MjMxMi4xNjk0NzcwNzkx*_ga_T9CCK5HNCL*MTY5NDc3MDc5MS4xLjAuMTY5NDc3MDc5MS4wLjAuMA.

[15] European Council (2023). Trade: Council adopts a regulation to protect the EU from third-country economic coercion. 23 October 2023. Available at https://www.consilium.europa.eu/en/press/press-releases/2023/10/23/trade-council-adopts-a-regulation-to-protect-the-eu-from-third-country-economic-coercion/.

2. DEPENDENCIES IN EU TRADE IN GOODS AND SERVICES

In an earlier ECIPE publication,[16] we developed a framework for classifying EU import dependencies. In this framework, EU imports are defined as dependent when the imported product fulfils two conditions simultaneously. The first condition is that EU imports from outside the EU represent a considerable share of EU's production which is proxied as the sum of intra-EU imports. These are the goods that EU Member States buy and sell among themselves and by definition is also equal to intra-EU exports – and EU exports to outside the EU (extra-EU exports). The second condition is that the goods that the EU buys mostly from outside the EU must be supplied by only a few countries.

To define the first condition, EU imports from outside the EU must be equal to or higher than 75% of EU total imports and extra-EU exports. This threshold is seen as sufficient, as EU companies below 75% still produce 25% of the EU total imports and extra-EU exports which means that EU businesses have the know-how to produce that product and can scale up production in the event of a crisis. And keep in mind that imports and exports are just one part of the supply of a product: European countries also produce for their own domestic consumption. Hence, imports within the EU and exports outside the EU are lower than EU production since part of EU production is not sold to other EU and non-EU countries but consumed in the EU country where it is produced. So, this indicator underestimates EU production capacity.

The second condition is measured through the Herfindahl–Hirschman Index (HHI). In our framework, when the HHI is equal to or larger than 0.25, the imported product qualifies as dependent. This threshold of 0.25 is also used in competition policy to define a market in which production is highly concentrated on a few suppliers. When calculating the HHI, we include the market share of intra-EU imports and extra-EU exports, but we only sum the square of the market share in EU total imports and extra-EU exports of non-EU countries since we want to identify those products in which the EU is dependent on non-EU countries.

In the scope of this paper, a similar framework will be used to analyse trade in goods as well as trade in services of the EU to identify dependencies. A similar analysis was also conducted by the European Commission[17], and the results have been used to motivate more defensive industrial and trade policy However, our analysis differs from the Commission in four important aspects:

1. We use a higher level of product disaggregation. Our analysis assesses dependency in close to 9,000 product categories while the European Commission focuses on 5,000 product categories.

[16] See ECIPE (2022). Should the EU Pursue a Strategic Ginseng Policy? Trade Dependency in the Brave New World of Geopolitics. Available at https://ecipe.org/wp-content/uploads/2022/04/ECI_22_PolicyBrief_TradeDependency_05_2022_LY02.pdf?_gl=1*eqnmsl*_up*MQ..*_ga*ODkwNzQwMzAyLjE2OTg5MDc4MDc.*_ga_T9CCK5HNCL*MTY5ODkwNzgwNy4xLjAuMTY5ODkwNzgwNy4wLjAuMA.

[17] European Commission (2021). Strategic dependencies and capacities. Commission Staff Working Document. Available at https://ec.eu- ropa.eu/info/sites/default/files/swd-strategic-dependencies-capacities_en.pdf.

2. We account for EU production that is exported outside the EU directly in our two indicators by including extra-EU exports into the first and the second indicator.

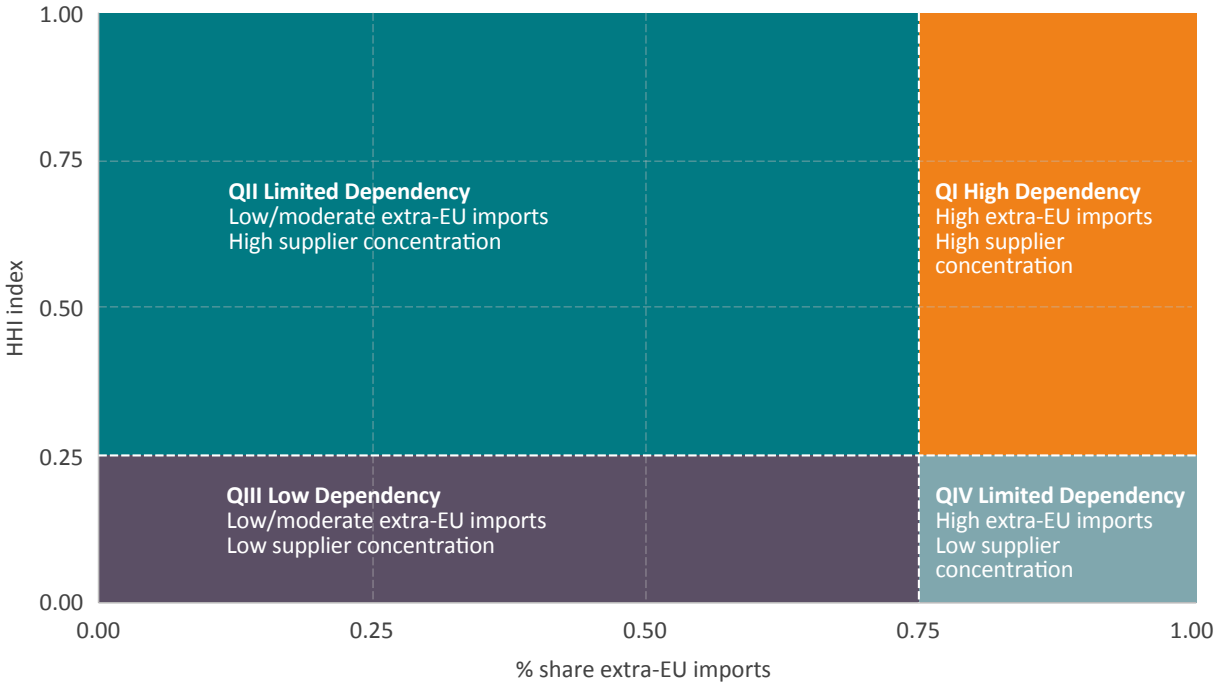
3. The third difference are the thresholds that define a product as dependent, and the indicators used to measure trade dependency. Our first indicator (the value of EU total imports and extra-EU exports coming from outside the EU) is set at 75% while the European Commission uses a threshold of 50% and excludes the EU production that is exported outside the EU. It appears that the Commission's thresholds were intentionally chosen to make dependency appear larger, without regard to country diversity of supply and economic and innovation dynamics. Our second indicator, the HHI, is a proxy for market concentration and uses a threshold of 0.25 when the European Commission used a threshold of 0.4 and does not consider intra-EU imports and extra-EU exports in its calculation of the HHI.

4. We use two indicators while the European Commission uses an additional indicator for a product to qualify as dependent. We believe this additional indicator – which defines a product as dependent when EU exports are lower than EU imports – is problematic for two reasons. First, given the aggregation in trade statistics, there are different types of products included in each product category. As a result, the imported and exported products within one product category are not necessarily the same products. The second reason is that, conceptually, we disagree with the idea that there is a problematic dependence just because EU imports are greater than EU exports.[18]

Figure 1 visualises the model. In quadrant one, we include those goods with high extra-EU imports and high concentration of suppliers. In quadrant two, we include goods with low or moderate extra-EU imports and high concentration of suppliers. In quadrant three, we include goods with low or moderate extra-EU imports and low concentration of suppliers. Finally, in quadrant four, we include goods with high extra-EU imports and low concentration of suppliers. To summarise, quadrant one includes goods that qualify as trade dependent while quadrant three includes goods where the EU has low dependency. Goods in quadrant two and four have limited dependency because EU imports from outside the EU are relatively low or because the EU has a large pool of external suppliers from which to buy the imported goods.

[18] Due to much more limited data on services trade, we pursue a different approach for the analysis of trade dependences in EU services trade.

FIGURE 1: IMPORT DEPENDENCY CONCEPTUAL FRAMEWORK



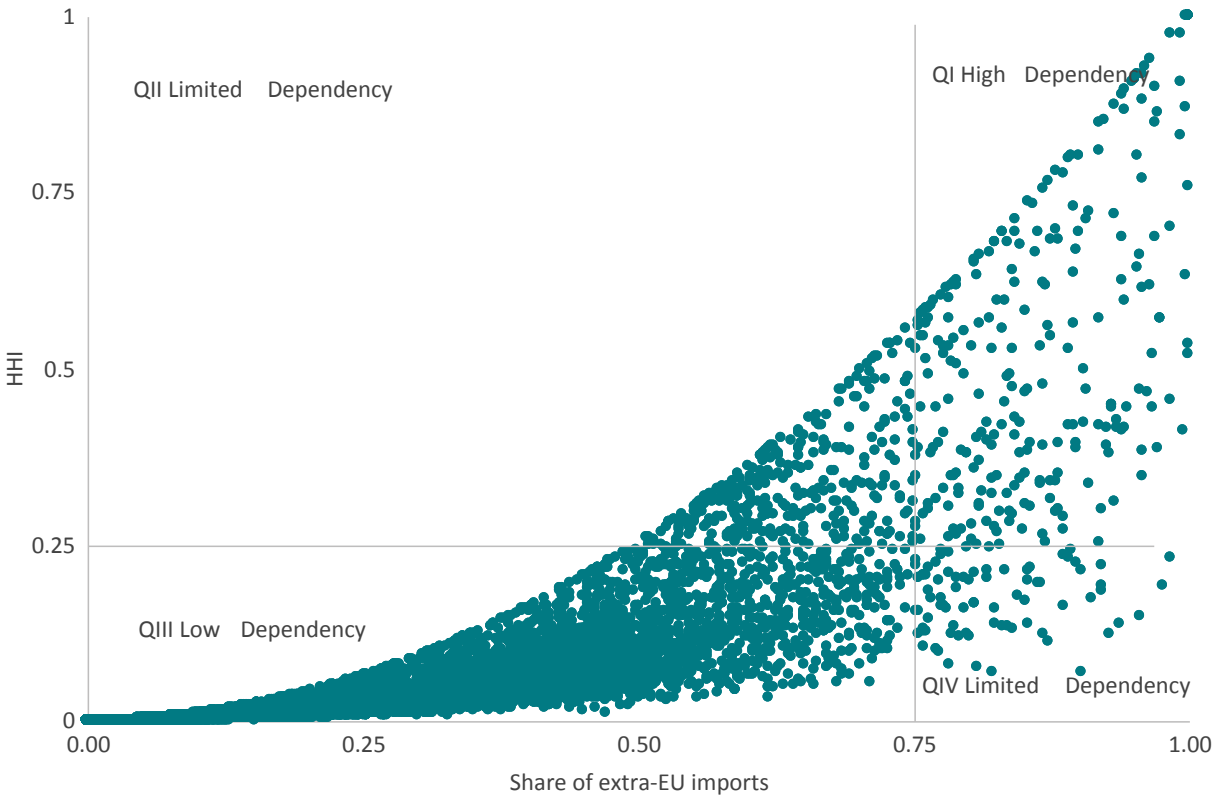
2.1. Calculating EU Trade Dependencies in Trade in Goods

We gather more than 124,000 observations of EU imports from close to 9,000 product categories in 2022 to assess in which products the EU is dependent on other countries. In that year, the EU imported a total of EUR 7 trillion, 42% was imported from outside the EU (i.e. extra-EU imports) and 58% was imported from within the EU (intra-EU imports), and exported a total of EUR 6.7 trillion. The result of our analysis is presented in Figure 2: EU import dependency in goods (2022).

Figure 2 shows that 282 products representing 0.82% (EUR 58 billion) of EU total import values can be defined as dependent in our framework (quadrant one). Table 1 in the Annex lists all the 282 products, their import values, and main supplying country to the EU.

Similarly, there were 8,220 products with extra-EU import values worth EUR 2.2 trillion in quadrant three where the share of EU imports of the products was below 75% and the HHI index was also under 0.25. These represent 31% of the EU's total imports in value. In quadrant two, where the share is less than 75% and HHI is greater than 0.25, there were 291 products representing 1.1% of EU total value of imports. Finally, in quadrant four, with the share of EU imports greater than 75% and HHI less than 0.25, there were 82 products worth 5.7% of EU total value of imports.

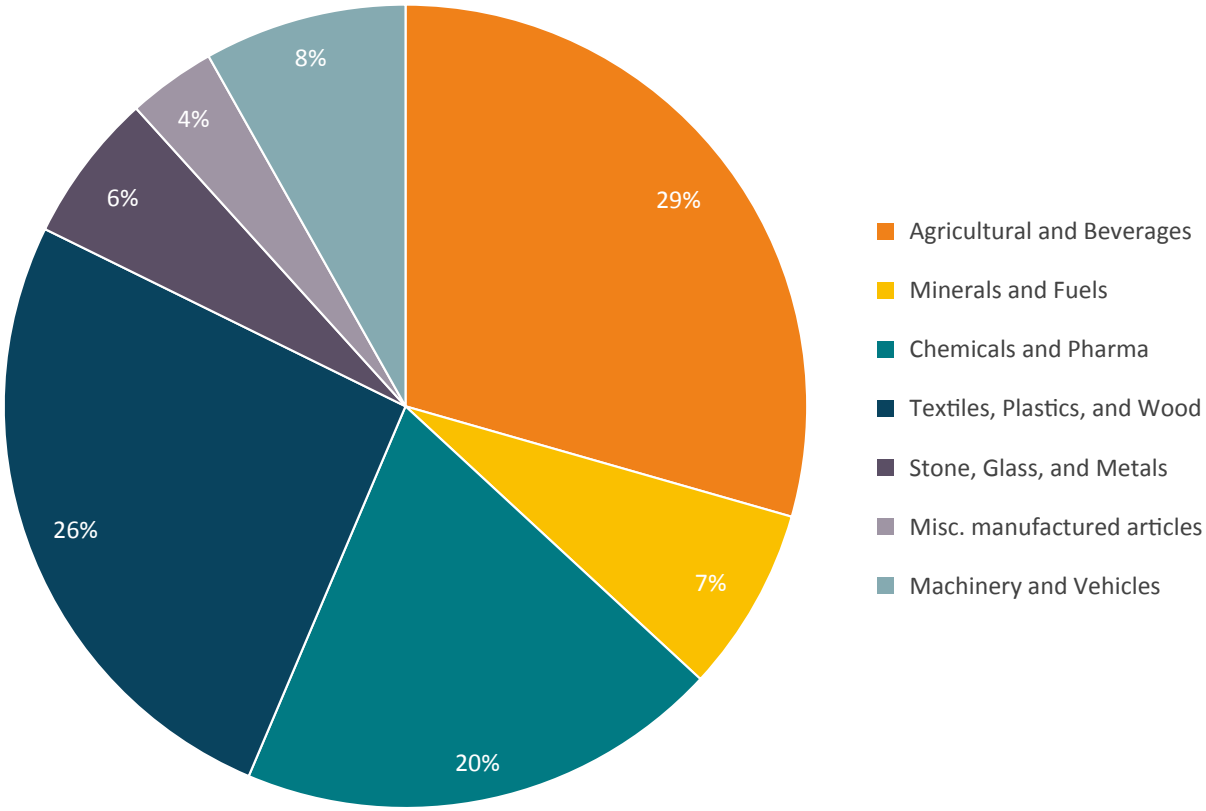
FIGURE 2: EU IMPORT DEPENDENCY IN GOODS (2022)



Source: Author's Calculations, Eurostat

If we focus our attention on quadrant one which shows the products where the EU is dependent on other countries, Figure 3 shows that some of these products are not critical to the EU economy, either because they can be easily substituted or because the economy can operate without them. These are, for example, agriculture and beverages, textiles, plastic and wood products, and a mix of manufacturing products like artificial flowers, wigs, or watches. In other cases, like minerals, fuels, or some spirits, products qualify as dependent because they are only extracted – and imported – from certain geographical areas. Other goods belonging to the chemical and pharmaceutical or the stone, glass, and metals industry such as insulin and quartz could be more difficult to replace. As can be seen in Figure 3, minerals and fuels, chemical and pharmaceuticals, and machinery and vehicles represent 35% of the product categories and the 59% in value of extra EU imports from the 282 product categories defined as dependent.

FIGURE 3: EU IMPORTS OF DEPENDENT PRODUCTS (QI) BY ECONOMIC SECTOR (2022)



Source: Author's Calculations, Eurostat

Figure 4 and Figure 5 show the largest suppliers of these 282 product categories in terms of the share of import values and the share of product categories. The most important countries behind these 282 products were China (82 products and EU import value of EUR 8.6 billion), Russia (7 products and EU import value of EUR 7.3 billion), and the United States (31 products and EU import value of EUR 4.7 billion). The EU is also dependent on the imports of certain products from Switzerland, the United Kingdom, Indonesia, Morocco, Philippines, India, South Korea, Malaysia, Turkey, Canada, and Guinea. As mentioned above, Table 1 in the Annex includes the full list of the 282 product categories and the country name of the most important supplier for each product category.

FIGURE 4: SHARE OF EU IMPORTS VALUE OF DEPENDENT PRODUCTS (QI) IN 2022 BY COUNTRY

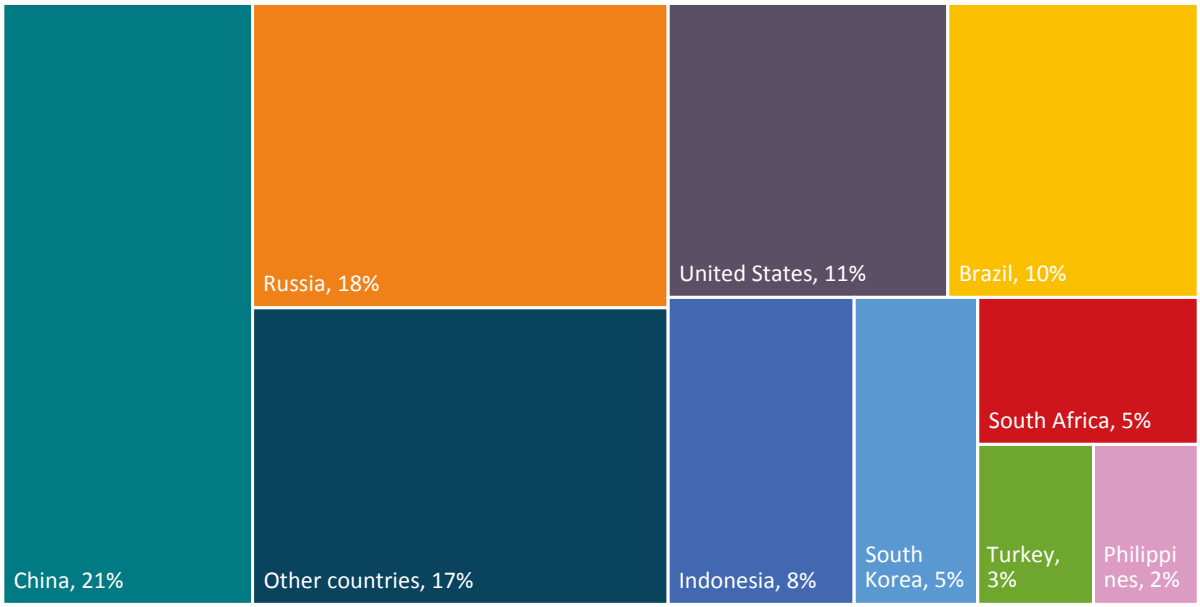
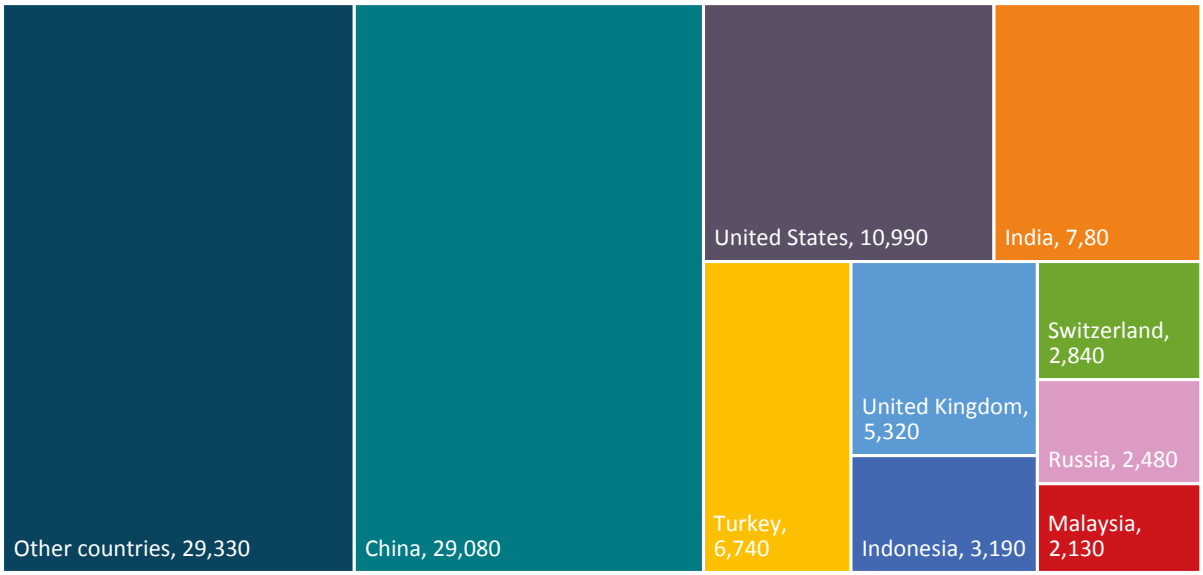


FIGURE 5: SHARE OF NUMBER OF DEPENDENT PRODUCTS (QI) IN 2022 BY COUNTRY



China stands out for two reasons. Firstly, China is the largest source of goods on which the EU is dependent. Secondly, according to some analysts, China is willing to utilise its dominant position in the production of certain goods, as well as the size of its economy, to reach its political goals. The actions taken by the Chinese Government against Lithuania as a response to the strengthening of diplomatic ties between Lithuania and Taiwan are a good example.

Nonetheless, the threat of the Asian giant is also relative. As mentioned, the EU is dependent on the production of goods coming from China in 82 product categories with import values from China that represent 0.3% of EU imports from abroad. Table 2 in the Annex presents these 82 products in more detail. The table includes many agricultural goods like bamboo and ginseng

as well as textiles such as silk that can hardly be considered vital for the European economy. At the same time, the EU is also dependent on Chinese chemicals and pharmaceutical ingredients, rare earths like scandium and some machinery that could impact the European economy to a greater extent.

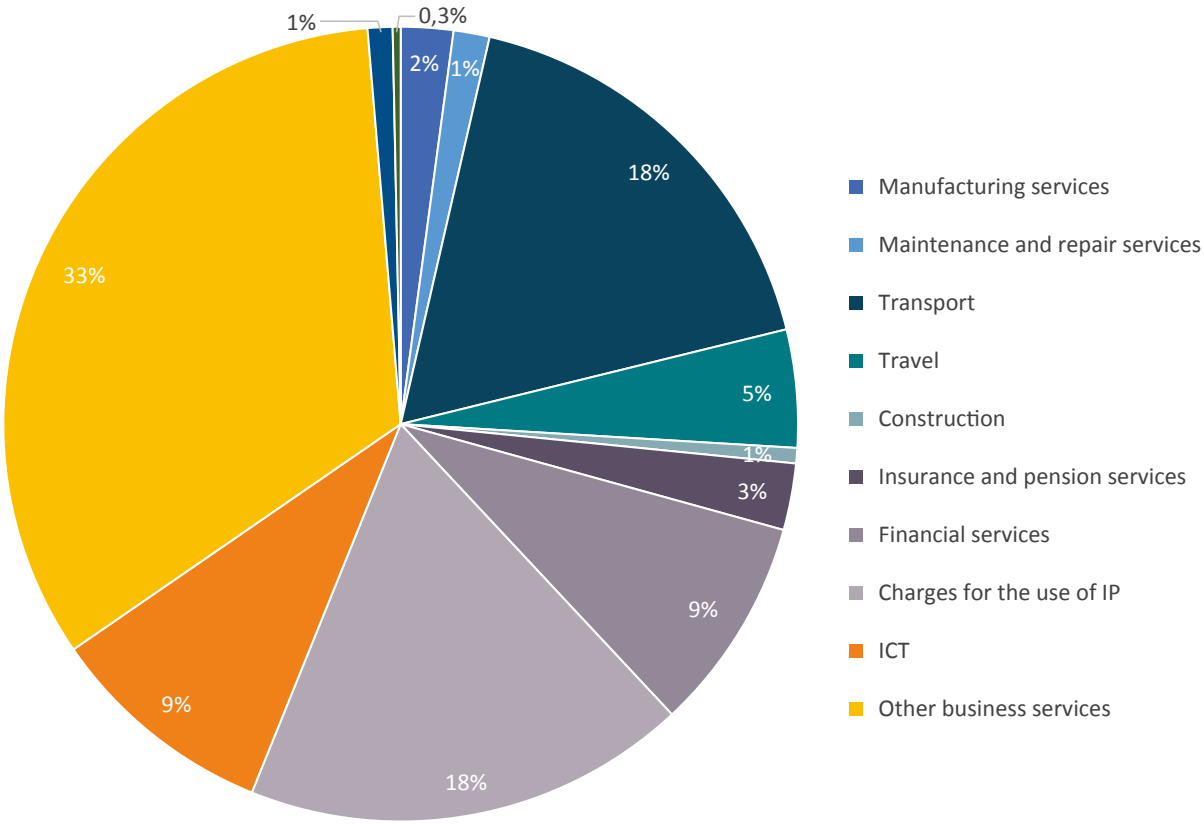
Russia also stands out as one of the main countries on which the EU is dependent for some products. In numbers, the EU depends on Russia for the supply of 7 products, 2% of the 282 product categories, but 18% in terms of the import value of these 282 products. These products are mostly gas and fuels, accounting for 87% of the EU's dependent import values on Russia.

2.2. Calculating EU Trade Dependencies in Trade in Services

We look at 12 services categories at the most aggregated level[19] in 2021 to assess in which service categories the EU is dependent on other countries. In that year, the EU imported a total of EUR 1.8 trillion, 50% was imported from outside the EU (i.e. extra-EU imports) and 50% was imported from within the EU (intra-EU imports), and exported a total of EUR 2 trillion. Looking closer at the services categories (Figure 6: Share of import of service categories from outside the EU (2021)), we find that other business services were the largest imports from outside of the EU making up 33% of EU imports from abroad. This was followed by charges for the use of IP and transport services at 18%.

[19] At higher levels of disaggregation, data was missing. There was also not sufficient data for 2022, which is why the data for 2021 has been analysed.

FIGURE 6: SHARE OF IMPORT OF SERVICE CATEGORIES FROM OUTSIDE THE EU (2021)



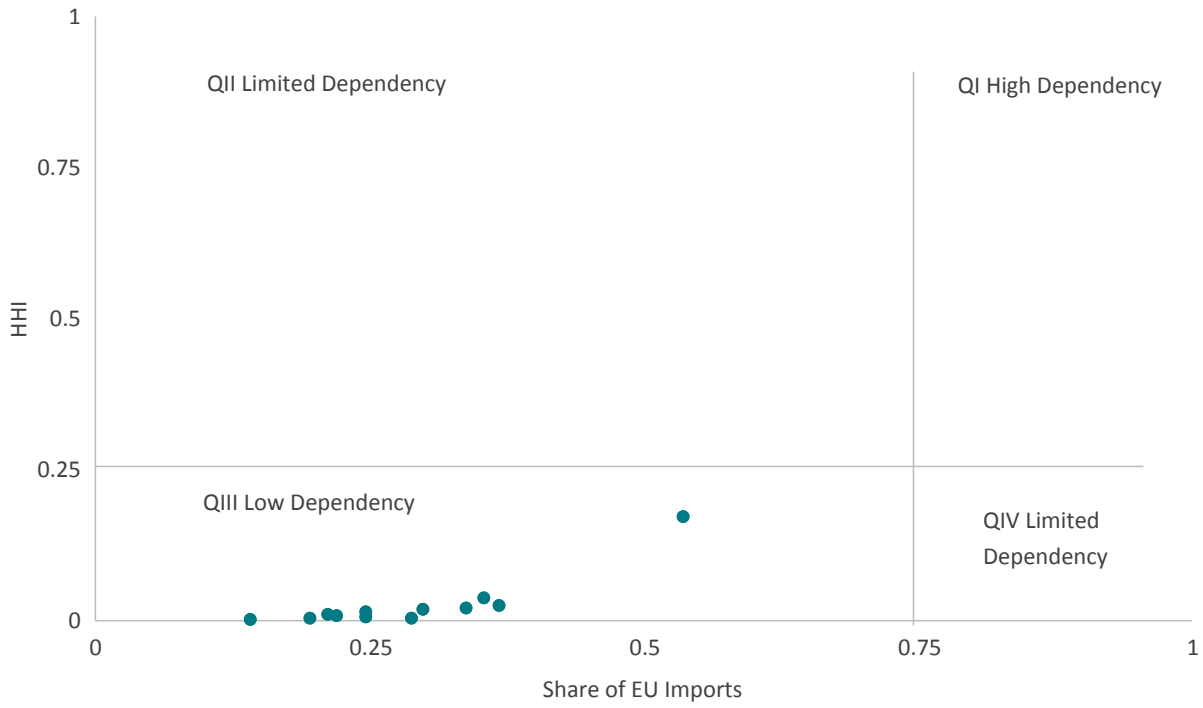
Source: Author's Calculations, Eurostat

The result of our analysis is presented in Figure 7: EU import dependency in services (2021), which demonstrates that none of the services categories can be defined as dependent in our framework (quadrant one). The graphical representation of the analysis, however, provides additional transparency as to what would happen if we changed the thresholds that define a service category as dependent. For instance, if our first indicator (the share of EU total imports and extra-EU exports coming from outside the EU) changes from 75% to 50%, and the second indicator (HHI) changes from 25% to 15%, the number of services deemed as dependent will increase to one, i.e. services on charges for the use of IP. EU imports from abroad for this category were worth EUR 170 billion with the United States being the largest supplier (74% market share).

All service categories lie in QIII of the current framework, i.e., they face low dependency. However, as can be seen from the graph, the indicator value for services on charges for the use of IP is an outlier and has much higher values for both indicators. It has a value of 53% for indicator 1 and a value of 0.17 for indicator 2. These findings suggest that both EU businesses and public sector institutions are reaping substantial benefits from advanced (patented) foreign technologies and innovations. A considerable portion of these technologies is indispensable for the EU's global competitiveness and cannot be readily substituted with domestically produced alternatives. Some policymakers would call them "critical". However, contrary to energy commodities, for examples, the EU also plays a vital role as a major exporter of advanced patented technologies, including ICT and digitally enabled services that are not easily replaceable by countries outside

the EU. As recently analysed by the European Intellectual Property Office (EUIPO), taking both goods and services trade into account, between 2017– 2019, 80.5% of EU extra-EU imports and 80.1% of extra-EU exports were generated by IP-intensive industries.[20] Also, the trade surplus in IP-intensive industries was EUR 224 billion, contributing more than three quarters of the total EU trade surplus

FIGURE 7: EU IMPORT DEPENDENCY IN SERVICES (2021)



Source: Author's Calculations, Eurostat

Figure 8: Share of EU import value of services in 2021 by country and Figure 9 show the largest suppliers of the service categories in terms of the share of import values and the share of product categories. The most important countries behind the 12 services were United States as the largest supplier for 6 of the services and providing imports worth EUR 285 billion to the EU. This was followed by the United Kingdom supplying 5 service categories to the EU worth EUR 48 billion and China supplying one service category to the EU worth EUR 4.4 billion. However, the total import value of services supplied by these three countries accounted for only 35% of EU import values of services from abroad. This further corroborates our findings on low risk of dependency in services imports of the EU.

[20] EUIPO (2022). IPR-intensive industries and economic performance in the European Union. Available at https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/IPR-intensive_industries_and_economic_in_EU_2022/2022_IPR_Intensive_Industries_FullR_en.pdf.

FIGURE 8: SHARE OF EU IMPORT VALUE OF SERVICES IN 2021 BY COUNTRY

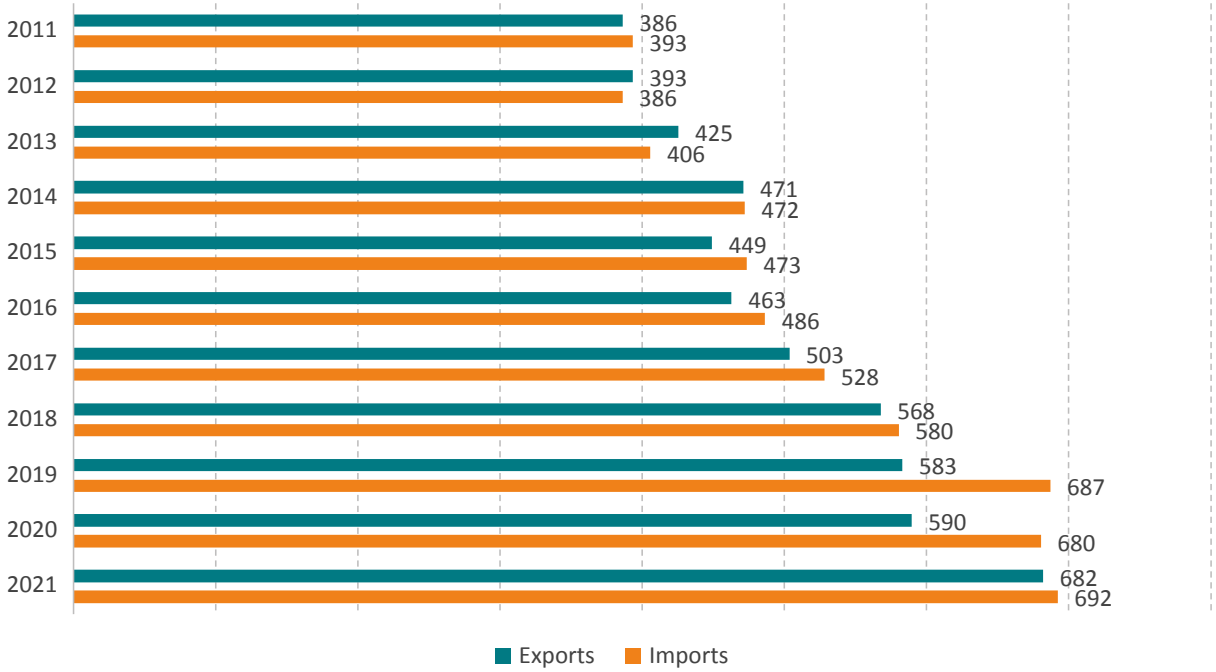
FIGURE 9: SHARE OF NUMBER OF SERVICES IN 2021 BY COUNTRY

The threat of dependency on China or Russia is significantly lower in the case of EU imports of services. This is because, not many services fall in the category of high dependency and China and Russia do not stand out as large suppliers to the EU in imports of services. Only for one service category, China was the largest supplier. This was in EU imports of manufacturing services. Even then, EU imports from China in this category were worth EUR 4.4 billion and only accounted for 22% of EU imports of manufacturing services from abroad.

In the EU's political discourse, it repeatedly emerges that the EU is a digital laggard. This is actually true in some technology areas, e.g., in advanced cloud services and computing capacities.

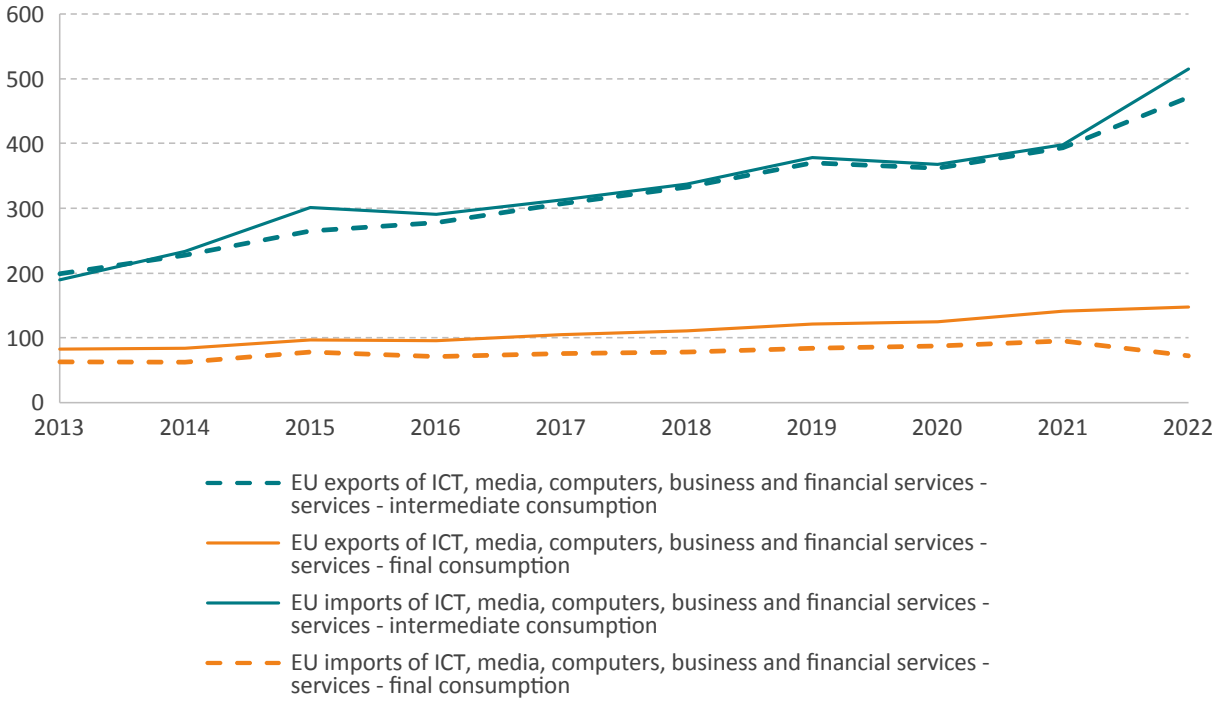
However, numerous EU-based companies excel in digital exports, deriving advantages from imported technologies and services, thus contributing to balanced digital trade overall. Trade data demonstrates that the EU has been and still is a strong exporter of digital and digitally enabled services to the rest of the world. The data also demonstrates that total EU exports of ICT and digitally enabled services roughly matches the value of total EU imports of ICT and digitally enabled services (see Figure 10: Extra EU digital and digitally enabled services trade, in billion USD). This applies to both intermediate consumption, i.e., B2B trade, and final consumption. In 2022, for example, EU imports of "ICT, media, computers, business, and financial services" for intermediate consumption – e.g., inputs by a process of production – from non-EU countries amounted to approx. EUR 515 billion. EU exports amounted to approx. EUR 471 billion (see Figure 11: EU trade in digital and digitally enabled services for intermediate consumption and final consumption, in million EUR).

FIGURE 10: EXTRA EU DIGITAL AND DIGITALLY ENABLED SERVICES TRADE, IN BILLION USD



Source: Eurostat. Note: the digital and digitally enabled services include: insurance and pension services (SF), financial services (SG), charges for the use of intellectual property (SH), telecommunications, computer and information services (SI), other business services (SJ), and personal, cultural, and recreational services (SK).

FIGURE 11: EU TRADE IN DIGITAL AND DIGITALLY ENABLED SERVICES FOR INTERMEDIATE CONSUMPTION AND FINAL CONSUMPTION, IN MILLION EUR



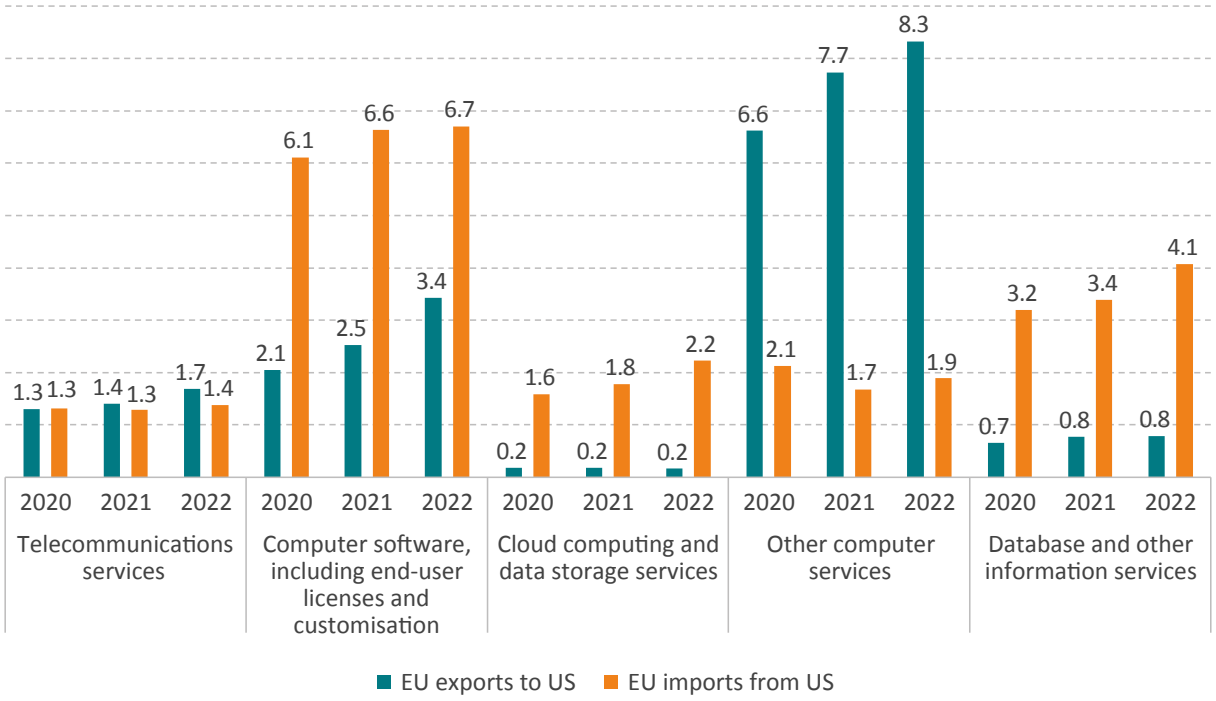
Source: Eurostat, International trade in services and (BPM6). Note: 2022 data is provisional.

The US is frequently seen as a systemic competitor in technology and the digital economy, with concerns over the excessive dominance of US companies and their perceived negative impact on European economies, as outlined in the Resilient2030 report by the Spanish Council Presidency.[21] Despite showing a trade deficit in international cloud services trade, however, trade in ICT and digitally enabled services is not a one-way-street for the EU. Recent trade data reveals that the total value of EU exports in digital and digitally enabled services to the US is roughly equivalent to the total value of EU imports from the US. In other words, contrary to popular notions, EU exports of ICT services to the US nearly match US exports of digital services to the EU (Figure 12: EU27-US trade in ICT services by sub-category, 2020-2022, in billion USD).[22]

[21] Spanish Presidency of the Council of the European Union (2023). Resilient EU2030: a roadmap for strengthening the EU's resilience and competitiveness. Available at https://spanish-presidency.consilium.europa.eu/en/news/the-spanish-presidency-presents-resilient-eu2030-roadmap-to-boost-european-union-open-strategic-autonomy/.

[22] In trade statistics, "other computer services" is a category encompassing diverse services related to computer and information technology. These services include IT consulting, maintenance, data processing, software development, web-related services, training, and research and development activities. They are essential for businesses and organizations to leverage technology effectively. See, e.g., UNCTAD Manual for the Production of Statistics on the Digital Economy 2020. Available at https://unctad.org/system/files/information-document/tdb_ede4_2020_nonpaper01_en.pdf.

FIGURE 12: EU27-US TRADE IN ICT SERVICES BY SUB-CATEGORY, 2020-2022, IN BILLION USD



Source: US Bureau of Economic Analysis (BEA). Note: due to relatively low bilateral trade values, news agency services, which statistically is a component of ICT services, have been excluded from the data.

3. EU INVESTMENT INTERDEPENDENCIES

FDI data shows that European companies are heavily involved in the global economy and would have much to lose if international trade were increasingly distorted or restricted by non-EU governments inspired by EU policies.

FDI statistics demonstrate the extent to which the EU is integrated in global commerce, mostly with other advanced economies. The US is both the largest contributor of inward FDI in the EU and the largest recipient of investment from EU Member States (29% and 25% respectively, see Table 2: Top 20 partner countries for FDI stock (average FDI, 2016-2021)). Also, contrary to popular notions, the EU FDI in the US exceeds US FDI in the EU. The US invests mainly in the EU in computer and electronics and transportation sectors. Large foreign participation in domestic EU sectors is also to be found in financial services and manufacturing sectors such as petroleum and chemical industries.[23] Finally the share of FDI exposure from China and Hong Kong is relatively small, around 3%, for both inward and outward positions (see Table 3).

It is important to note that investments to and from offshore financial hubs can distort countries' reported investment shares because of special purpose entities (SPEs) that are set up abroad for tax reasons, among other purposes. Their operations mainly focus on channelling transactions

[23] See, e.g., ECB. (2023). The EU's Open Strategic Autonomy from a central banking perspective. Available at https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op311~5065ff588c.en.pdf.

between entities outside the country where they are headquartered, and the problem is that ultimate investor countries are invisible in FDI statistics. If in turn FDI are restated in terms ultimate investor, inward FDI from the US double, and those from China would triple.[24] Overall the implications of ownership structures and intermediation of transactions highlight the complexity of the global financial linkages between firms and countries.

TABLE 2: TOP 20 PARTNER COUNTRIES FOR FDI STOCK (AVERAGE FDI, 2016-2021)

	Inward FDI (billion ECU/ EUR)	Share of total (%)		Outward FDI (billion ECU/ EUR)	Share of total (%)
United States	2,102.4	28.6	United States	2,306.4	24.9
Offshore fin. centers	1,507.3	20.5	United Kingdom	1,906.6	20.6
United Kingdom	1,306.3	17.7	Switzerland	966.0	10.4
Switzerland	715.0	9.7	Offshore fin. centers	741.1	8.0
Canada	288.8	3.9	Brazil	308.5	3.3
Japan	194.5	2.6	Canada	302.1	3.3
Hong Kong	161.4	2.2	Russia	266.1	2.9
Singapore	134.0	1.8	Singapore	225.3	2.4
Russia	128.8	1.7	China	196.2	2.1
Norway	84.1	1.1	Mexico	165.4	1.8
UAE	71.9	1.0	UAE	137.6	1.5
South Africa	65.1	0.9	Australia	123.6	1.3
China	59.6	0.8	Hong Kong	97.6	1.1
Israel	52.1	0.7	Norway	88.7	1.0
Mexico	47.1	0.6	Japan	87.7	0.9
South Korea	28.4	0.4	India	77.0	0.8
Qatar	27.6	0.4	Kazakhstan	59.7	0.6
Saudi Arabia	24.4	0.3	Türkiye	57.6	0.6
Türkiye	21.7	0.3	Chile	54.0	0.6
Australia	19.3	0.3	South Korea	48.7	0.5

Source: Eurostat.

[24] Also see ECB. (2023). The EU's Open Strategic Autonomy from a central banking perspective. Available at https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op311~5065ff588c.en.pdf.

TABLE 3: INWARD AND OUTWARD FDI POSITION OF THE EU, IN BILLION EUROS

		Net outward FDI flows		Net outward FDI stock
	2018	2019	2020	2019
Financial and insurance activities	-272.2	87.5	-58.1	5,763.3
Manufacturing	-269.2	-8.3	-161.5	3,324.1
Wholesale and retail trade; repair of motor vehicles and motorcycles	-14.1	-231.3	1.6	1,028.1
Professional, scientific and technical activities	59.8	10.6	25.9	950.4
Information and communication	-61.3	-14.5	-6.3	534.1
Real estate activities	33.2	14.1	9.6	414.3
Transportation and storage	8.2	110.4	0.7	352.0
Administrative and support service activities	8.7	-9.2	-3.2	278.0
Construction	10.6	52.8	-9.6	132.9
Accommodation and food service activities	-2.3	80.2	-3.0	42.3
		Net inward FDI flows		Net inward FDI stock
	2018	2019	2020	2019
Financial and insurance activities	-697.9	-158.8	-44.7	5,884.9
Manufacturing	130.6	124.8	34.5	4,358.7
Professional, scientific and technical activities	39.3	86.0	-21.3	1,799.6
Wholesale and retail trade; repair of motor vehicles and motorcycles	-17.7	50.7	-23.3	1,277.8
Information and communication	-44.2	10.2	61.7	512.3
Transportation and storage	7.2	15.5	-9.4	356.0
Mining and quarrying	-2.0	-1.2	-0.5	352.9
Administrative and support service activities	5.5	-40.9	-22.6	274.5
Real estate activities	17.8	21.4	17.0	272.5
Construction	1.8	4.5	-9.8	239.9

Source: Eurostat. Note: The sectors are ranked according to the FDI stock position.

FDI is an important driver of international trade, which, due to significant intra-firm trade, is only partly covered by official trade statistics. Trade and investment statistics mostly focus on cross-border transactions between countries and sectors. Since the 1980s, with the advent of

global value chains (GVC) and the internationalisation of production networks, a growing share of global trade has taken place between multinational enterprises (MNEs) and their affiliates across borders (intra-firm), vertically and horizontally. In contrast, arm's length trade refers to cross border transactions for goods and services between independent firms. Although intra-firm is a well-known phenomenon in business strategy decisions, there is a systematic lack of aggregated data that prevents any quantification of global patterns of such trade. As a result, the sparse empirical literature on the subject tends to mainly focus on the US, Japan, and part of OECD countries without any consistent research at the EU level.

Given the latter has strong economic linkages with other advanced countries, some results are nonetheless worth highlighting to understand the characteristics and determinants of such trade. For example, Lanz and Miroudot (2012)[25] find that intra-firm manufacturing exports in 9 OECD countries represent 16% of total exports and more strikingly that intra-firm trade accounts for one third of the world trade under certain assumptions. Moreover, the authors find that a greater proportion of intra-firm trade takes place between advanced economies, notably among OECD countries, that are more capital and skilled-labour intensive. In the US, R&D and management consulting services account for the largest shares of exports and imports in intra-firm services. Focusing on EU-US trade linkages, Lakatos and Fukui (2013)[26] explore the role of multinationals in intra-firm trade, which accounted for 50% of EU-US trade in goods in 2012. Nonetheless there is significant variation at the EU level regarding US related party trade. For instance, such trade is greatest in countries such as Belgium and the Netherlands for US intra-firm exports (50% and 45% respectively), and lowest with Greece (6%) and Latvia (2%). Also transatlantic intra-firm trade in goods is largely concentrated a few sectors such as chemical, machinery, and electronic products. Between 2002 and 2012, for example, intra-firm exports of US companies to the EU for chemicals increased from 27% to 36%.

4. IMPLICATIONS FOR EUROPE'S DEBATE ON OPEN STRATEGIC AUTONOMY

The data presented above shows that there are no critical dependencies on products and services imported to the EU. At the same time, European companies are heavily involved in the global economy and would have much to lose if international trade was increasingly distorted or restricted by non-EU governments inspired by EU policies.

There are only very few "dependencies" in some niche markets, such energy commodities, and certain raw materials. In addition, charges for intellectual property rights indicate that EU businesses rely heavily on foreign innovation and technology, ranging from biomedical innovation to green and digital technologies. However, the conclusion should not be that the EU should break away from foreign supply or try to limit competition from abroad. Any policy intervention should be tailored to the specific product and the specific export country.

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[25] Lanz, R., and Miroudot, S. (2011). Intra-Firm Trade: Patterns, Determinants and Policy Implications. OECD Trade Policy Papers 114, DOI: 10.1787/5kg9p39lrwnn-en. Available at https://ideas.repec.org/p/oec/traaab/114-en.html.

[26] USITC (2013). EU-US Economic Linkages: The Role of Multinationals and Intra-Firm Trade. Available at https://www.usitc.gov/publications/332/rn201311b.pdf.

Given the small size of the EU imports in which the EU can be considered dependent, it is not advisable to base Europe's new industrial and trade policies on a general fear of dependency and apply new policies in many sectors or even horizontally (as in the case of investment monitoring or data localisation). Many of these products are easy to substitute and the economy can function without them. For the select few products where dependency is an economic concern, the EU can reduce dependencies by improving the diversity of suppliers, increasing inventories (stock-piling) and offering incentives.

In some services and technology areas, such as cloud services and computing capacities, the EU will continue to rely on non-EU providers. However, it is not accurate to claim the presence of one-sided dependencies in the realm of cloud and digital services. As demonstrated by the data above (Figure 10: Extra EU digital and digitally enabled services trade, in billion USD to Figure 12: EU27-US trade in ICT services by sub-category, 2020-2022, in billion USD), EU companies exhibit robust digital and digitally enables services exports, contributing to balanced digital trade – and as such economic interdependence – with both the US and the rest of the world. Also, as recently estimated by an ECIPE study, industrial policy support under the guise of discriminatory cybersecurity arrangements, which would exclude non-EU cloud services providers from operating in the EU, would lead to significant losses in Member States' aggregate economic activity and drive a big wedge between economic growth in the EU and the growth of non-EU economies.[27] Smaller EU countries would be disproportionately impacted by GDP losses compared to larger countries. In the most restrictive scenario with broad critical sector coverage, short-term losses in aggregate GDP would be most pronounced in Cyprus (-10.2%), Luxembourg (-9.3%), Malta (-8.5%), the Netherlands (-5.8%), Belgium (-5.4%), Denmark (-4.9%), Ireland (-4.7%), and Sweden (-4.6%). The largest EU economies, Germany, France, Italy, the Netherlands, and Spain would generally experience the highest absolute losses in economic output.

Subsidies have recently been considered in many sectors, including technology development general and the creation of production capacities in tech-intensive industries, such as semiconductors and batteries. Subsidies, however, are complex and costly. While subsidies might work for well-understood products, such as agricultural commodities and active pharmaceutical ingredients, incentivising EU research and production of high-technology solutions, including large-scale data infrastructure and advanced chipsets, are unlikely to lead to success if the aim is to keep pace with the rapidly advancing innovation and global technology competition. Also, several EU Member State governments have recently expressed concerns and urged caution in relaxing EU state aid rules to support, for example, the green industry, fearing it could harm competition within the EU.[28]

The EU is already experiencing a technology gap, which has been growing over the past decade.[29] Corporate data reveals that the EU's underperformance in technology development, investment,

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[27] ECIPE (2023). The Economic Impacts of the Proposed EUCS Exclusionary Requirements: Estimates for EU Member States. Available at https://ecipe.org/publications/eucs-immunity-requirements-economic-impacts/?_gl=1*1p9f6nf*_up*MQ..*_ga*MTI3MDI2NjcwMi4xNjk3ODE3Mjc2*_ga_T9CCK5HNCL*MTY5NzgxNzI3Ni4xLjAuMTY5NzgxNzI3Ni4wLjAuMA.

[28] Euractiv (2023). Eleven EU countries urge "great caution" in loosening state aid rules. 15 February 2023. Available at https://www.euractiv.com/section/economy-jobs/news/eleven-eu-countries-urge-great-caution-in-loosening-state-aid-rules/.

[29] See, e.g., EU industrial R&D investment scoreboard reports. Available at https://iri.jrc.ec.europa.eu/scoreboard.

and international competitiveness is largely caused by European businesses struggling to successfully grow and invest in international markets. A recent analysis of corporate data conducted by McKinsey (2022) shows that between 2014 and 2019, large European companies with more than USD 1 billion (EUR 930 million) in annual revenue were on average 20% less profitable than their US counterparts. Also, European businesses' revenues have grown 40% less than those of US companies, and European businesses spent about 40% less on corporate R&D (see Figure 7)[30] Also, as analysed by the European Commission, the EU holds a much lower number of both larger and smaller R&D investors than the US, in the four high-tech sectors that are key to the aggregate EU R&D intensity gap vis-à-vis the US.[31] The amount of additional investment to duplicate infrastructure and capacities would be enormous. Obviously, this would come at the expense of other important policy goals, such as housing, education, sustainability, etc.).

Generally, subsidies accommodated by trade controls and discriminatory regulation cannot substitute for the benefits that Europeans and others draw from trade and technological openness. Take imported cloud services. Cloud services have become a crucial component of Europe's economy, fostering collaboration, competitiveness, and innovation. They offer equal access to global data and resources, benefiting businesses of all sizes. Additionally, cloud solutions are transforming public services and enhancing government efficiency. Industry forecasts indicate that cloud services and transversal cloud-based technologies like AI applications, quantum, and edge computing will experience consistent growth in innovation and are increasingly finding broader applications across various industries. Overall, the global market for IT services is highly competitive and dynamic, with global cloud service providers competing against a broad range of IT service providers of varying scale, including on-premises hardware vendors, private and co-located data centre providers and software providers.

Leaving aside raw material shortages, in the long-term supply-side measures are the most effective for improving production capacity, especially for technology-intensive goods and services and help gain the required well qualified professionals. EU policymaking should therefore prioritise supply-side measures, such as competitive taxation, skills development, deregulation, and harmonisation, while promoting regulatory cooperation with like-minded countries rather. The EU and Member State governments must abstain from adopting excessively value-oriented policies that by design or implicitly discriminate against foreign businesses.

The political obsession with trade dependencies belies the need for bold but unpopular structural reforms. Strategic autonomy still is a defensive strategy that conveys an unintended message to the global community. Measured by many initiatives in the realm of economic and technology policymaking, the EU's strategic autonomy agenda is a backward-looking endeavour. It risks becoming a blueprint for economic nationalism, globally – a justification for governments

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[30] McKinsey (2022). Securing Europe's competitiveness – Addressing its technology gap. September 2022. Available at https://www.mckinsey.com/~/media/mckinsey/business%20functions/strategy%20and%20corporate%20finance/our%20insights/securing%20europes%20competitiveness%20addressing%20its%20technology%20gap/securing-europes-competitiveness-addressing-its-technology-gap-september-2022.pdf. Also see McKinsey (2023). The economic potential of generative AI The next productivity frontier. Available at https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-AI-the-next-productivity-frontier#/.

[31] European Commission Joint Research Centre (2020). The EU vs US corporate R&D intensity gap: Investigating key sectors and firms. Available at https://joint-research-centre.ec.europa.eu/system/files/2020-03/jrc120008.pdf.

outside Europe, especially developing countries, to erect new trade and investment barriers on their own. EU policymakers not only risk alienating Europe economically by reducing the openness and exposure of EU industries to international competition and innovation. They also risk isolating the EU politically by pushing a regulatory agenda that will in many cases not be mirrored by major partner countries, such as the larger group of economically developed OECD countries. With new subsidies, discriminatory industrial policymaking and the inflated use of values as an excuse for unique EU action, the EU is paving the way for more government intervention and fewer binding rules in the global economy.

The EU's strategic autonomy paradigm and the many policies it defends are rooted in a broader set of geopolitical clashes questioning the role of government in society. Most of the EU's strategic autonomy ambitions are inherently guided by a "European Union First" impulse. It manifests itself in the assumption that EU law-making is somehow superior to – or at least different from - law-making in other parts in the world, including countries that have shared values and common interests.

This sense of superiority encompasses values underpinning policy choices in economic, trade and technology policymaking. Given the persistent issues in the EU's Single Market[32], strategic autonomy aspirations represent a relapse to old policy making, that of EU Member States independently designing and enforcing rules without considering the economic and political costs of regulatory fragmentation and the risk of economic disaggregation.

Shielding Europeans from foreign competition, however, is what many EU policy initiatives aim to achieve. This is risky for many reasons. European companies are deeply integrated into international markets and value chains, and they have by and large been able to deepen their internal integration as well as to re-orient themselves towards higher skilled and higher value-added service activities.[33] They contribute to global prosperity through international trade and investment. At the same time, European welfare is dependent on global welfare and prosperity growth. EU policies whose intention or effect is to distort, or event break up international value chains undermine economic development and prosperity in the EU.

The costs of the policies outlined in Table 1 are high. New initiatives towards "European standards" and the management of "EU value chains" would also disproportionally impact small EU Member States. A recent study from the Kiel Institute for the World Economy, for example, focuses on increasing market access barriers in the EU and regulatory heterogeneity (regulatory decoupling).[34] The authors investigate the trade impacts from preferential public procurement rules, tax breaks, other subsidies for EU suppliers, as well as import quotas and bans on selected

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[32] See, e.g., ECIPE (2022). European strategic autonomy – What role for Europe's fragmented single market? Available at https://ecipe.org/blog/european-strategic-autonomy-single-market/. Also see ECIPE (2023). What is Wrong with Europe's Shattered Single Market? – Lessons from Policy Fragmentation and Misdirected Approaches to EU Competition Policy. Available at https://ecipe.org/publications/europes-shattered-single-market-eu-competition-policy/.

[33] IW Cologne (2022). Global value chains of the EU member states. Available at https://www.iwkoeln.de/studien/galina-kolev-thomas-obst-policy-options-in-the-current-debate.html. For an earlier data-intensive analysis, also see ECB (2013). Global value chains – a case for Europe to cheer up. Available at https://www.ecb.europa.eu/home/pdf/research/compnet/policy_brief_3_global_value_chains.pdf?fcccc5651bee912e1698e1019c8b3969.

[34] Kiel Institute for the World Economy (2021). Pursuit of economic autonomy can be costly for EU countries, 30 July 2021. Available at https://www.ifw-kiel.de/publications/media-information/2021/pursuit-of-economic-autonomy-can-be-costly-for-eu-countries/.

goods. Large countries with a high exposure to international trade, such as Germany and France, would indeed suffer high absolute losses in domestic production and trade. At the same time, small countries, such as Ireland, Malta, Belgium and the Baltics, would be more strongly affected in relative terms, with losses being largest if non-EU countries were to mirror EU policies or retaliate. Small businesses in the EU will find it harder to do business in non-EU countries if governments increase market access barriers through new regulation of regional standards that are difficult to comply with (prohibitive). Negative impacts from regulatory diffusion and retaliation, which accumulate over time, are usually ignored in EU impact assessments.

A study by Frontier Economics and ECIPE[35] also finds the costs of strategic autonomy policies to be significant. It is highlighted that, if implemented, "these initiatives are likely to impose costs on EU imports and exports, which would reduce EU living standards". Depending on the stringency of the measures involved and the degree of retaliation by EU trading partners that are confronted with EU trade measures, real income would fall by several billion euros annually, with the highest reduction in income and welfare being estimated for scenarios in which retaliation by partners' kicks in. The negative effects on trade and economic activity result from the fact that the EU's own measures depress extra-EU imports and exports, causing, for example, annual losses in total exports between some USD 30 billion and USD 65 billion. It is highlighted that certain EU policy inventions may increase trade within the EU, but this increase would be insufficient to compensate for lost trade with jurisdictions outside the EU including the US and OECD countries. In essence, it is stated, the policy measures envisioned under strategic autonomy collectively act as an EU law-induced tax on Europe's trade with the rest of the world.

The EU's economic strength and international openness are the prime roots driving its high living standards, resilience, and global geopolitical influence. EU Member States can look back on decades of robust economic growth, but the rates of growth have been poor for a long time. The consequences are now increasingly visible: China is not only catching up but surpassing in many industries. In the transatlantic relationship, the EU risks becoming the junior partner, driven by its profound and rising technology, productivity, and income gap vis-à-vis the United States. In fact, if EU Member States were states in the US, many of them would belong to the group of poorest states. And if the growth trend continues, the prosperity gap between the average European and American in 2035 will be as big as between the average European and Indian today.[36]

EU policymakers have paid little attention to these developments. In fact, the EU's economic discourse is strangely distant from the ambition to get back to high rates of economic growth. Although the EU Commission is aware of some global trends, the EU's structural weaknesses are downplayed. At the same time, attempts are being made in many areas to use defensive measures to prevent competition from abroad, especially in technology-driven industries.[37]

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[35] Frontier Economics and ECIPE (2022). Measuring the impacts of the EU's approach to opens strategic autnomy. Available at https://ecipe.org/wp-content/uploads/2022/11/Strategic-Autonomy-Impacts.pdf.

[36] See ECIPE (2023). If the EU was a State in the United States: Comparing Economic Growth between EU and US States. Available at https://ecipe.org/publications/comparing-economic-growth-between-eu-and-us-states/?_gl=1*d1k90x*_up*MQ..*_ga*MTAyOTE5MjMxMi4xNjk0NzcwNzkx*_ga_T9CCK5HNCL*MTY5NDc3MDc5MS4xLjAuMTY5NDc3MDc5MS4wLjAuMA.

[37] Prominent examples are the EU Digital Markets Act, the EU Data Act, the EU AI Act and the EU Cloud Cybersecurity Framework (EUCS).

Many of these attempts are justified by making references to "European values". The recurring references to European values, however, create the perception that people outside Europe have different values that could threaten Europeans' way of life. This perspective centres around the idea that EU trade and technology regulation presents a fundamental choice between European values, on the one hand, and the freedom to do business with non-Europeans on the other. Some EU policymakers advocate for measures like data sovereignty, aiming to convey the impression that Europe needs to isolate itself from the rest of the world to achieve greater digital autonomy. However, true digital sovereignty in Europe relies on citizens and firms having access to key technology services and the ability to understand, use, and modify these services in line with fundamental rights.

Importantly, Europe's desire to protect citizens and support businesses is not unique, as many OECD countries, including EU member states, have ratified the Universal Declaration of Human Rights and are considering laws in areas of interest to the EU. These countries have also established numerous committees and working groups that cover various policy areas, including trade and technology regulation. Instead of trying to set global standards on its own, the EU should pursue closer market integration and regulatory cooperation with trusted international partners like the G7 and OECD countries. This approach aligns with the EU's self-interest in advocating for a rules-based international order with open markets, rather than disintegrating from partner countries. The potential consequences of new trade restrictions, increased policy fragmentation, and economic disintegration would come at a high cost for Europeans. With poor economic indicators and low rates of economic growth, coupled with the shifting global economic landscape towards Asia, defensive, isolationist or outright protectionist policies would ultimately diminish its influence and make it a junior partner in international fora.

5. CONCLUSIONS

The EU's claims regarding trade dependencies are greatly overstated. Our analysis reveals that only 282 products, representing just 0.82% of EU total imports, can be classified as "dependent". However, not all of these products can be deemed crucial for the EU economy, as some, like exotic items such as live camels and bamboo, have very limited importance for Europe's economy. Conversely, products like minerals, fuels, and certain chemical and pharmaceutical items, such as insulin, are considered "dependent" due to their geographic sourcing and potential difficulty in replacement. Accordingly, EU policymaking should only address a very narrow list of sensitive products to overcome critical dependencies. EU's services imports generally exhibit low dependencies overall. However, the exception lies trade in intellectual property, indicating a substantial reliance on foreign innovation across various EU industries. FDI and trade data shows that European companies are heavily involved in the global economy and would have much to lose if international trade were increasingly distorted or restricted by non-EU governments inspired by EU policies.

In certain technology-intensive sectors, such as cloud services and digital technologies, EU economies and their development will remain "reliant" on non-EU providers in the foreseeable future. EU policymakers should generally avoid adopting discriminatory measures that could negatively impact economic development in the EU. While subsidies have been under

consideration across multiple sectors, they are a costly and typically inefficient means for closing the EU's technology and productivity gap. The enormous amount of additional investment needed to duplicate technical infrastructure and production capacities would come at the expense of other important policy priorities, such as housing, education, sustainability.

The EU's current pursuit of open strategic autonomy is based on misconceptions about economic dependencies and potential harms, which may lead to inward-looking trade, investment, and industrial policies that could hinder international cooperation and economic growth, especially in small EU Member States. The EU and Member State governments must abstain from adopting excessively value-oriented policies that by design or implicitly discriminate against foreign businesses. With poor economic indicators and low growth rates, coupled with the shifting global economic landscape towards Asia, the EU risks diminishing its influence and becoming a junior partner in international fora.

To tackle low growth and inflation (stagflation) and close the EU's profound technology gap, the EU Member States must pursue supply-side policies while increasing cooperation with like-minded countries such as the US and the larger group of OECD countries. EU policymaking should prioritise competitive taxation, skills development, deregulation, and harmonisation, while promoting regulatory cooperation with like-minded countries.

ANNEX

TABLE 4: LIST OF 282 PRODUCT CATEGORIES IN WHICH THE EU IS DEPENDENT ON THE REST OF THE WORLD (2022)

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Live camels and other camelids [Camelidae]	01061300	2.29	Chile
Frozen sheep legs	02044250	103.57	New Zealand
Meat of sheep and goats, salted, in brine, dried or smoked, with bone in	02109921	0.26	Norway
Fresh or chilled southern hake "Merluccius australis"	03025415	19.62	Chile
Frozen sockeye salmon [red salmon] "Oncorhynchus nerka"	03031100	134.54	United States
Frozen tilapia "Oreochromis spp."	03032300	30.01	China
Frozen carp "Cyprinus spp., Carassius spp., Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus, Catla catla, Labeo spp., Osteochilus hasselti, Leptobarbus hoeveni, Megalobrama spp."(2017-2500);Frozen carp "Cyprinus carpio, Carassius carassius, Ctenopharyngodon idellus, Hypophthalmichthys spp., Cirrhinus spp., Mylopharyngodon piceus"(2012-2016)	03032500	6.52	Myanmar
Frozen cod "Gadus macrocephalus"	03036390	78.52	Russia
Frozen ray's bream "Brama spp."	03038960	1.09	South Africa
Frozen fillets of tilapia "Oreochromis spp."	03046100	62.65	China
Frozen fillets of catfish "Pangasius spp., Silurus spp., Clarias spp., Ictalurus spp."	03046200	170.23	Vietnam
Frozen fillets of Nile perch "Lates niloticus"	03046300	54.61	Tanzania
Frozen fillets of Cape hake "shallow-water hake" "Merluccius capensis" and deepwater hake "deepwater Cape hake" "Merluccius paradoxus"	03047411	287.55	Namibia
Frozen fillets of hake "Merluccius spp." (excl. cape hake, deepwater hake and Argentine hake)	03047419	106.53	United States
Frozen fillets of blue grenadier "Macruronus novaezelandiae"	03047950	68.57	New Zealand
Frozen fillets of redfish "Sebastes spp." (excl. Sebastes marinus)	03048929	17.89	China
Frozen surimi of Alaska pollack "Theragra chalcogramma"	03049410	92.86	United States
Frozen surimi of fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae (excl. Alaska pollack "Theragra chalcogramma")	03049510	50.88	United States
Frozen meat, whether or not minced, of hake "Merluccius spp." (excl. fillets and surimi)	03049550	63.34	Namibia
Dried herrings "Clupea harengus, Clupea pallasii", even salted but not smoked (excl. fillets and offal)	03055430	0.20	Ukraine
Scallops and other molluscs of the family Pectinidae, frozen, even in shell (excl. genera Pecten, Chlamys and Placopecten)	03072295	73.96	Peru

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Mussels "Perna spp.", frozen, even in shell	03073290	27.20	New Zealand
Frozen, even in shell, stromboid conchs "Strombus spp."	03078400	4.66	Jamaica
Frozen sea urchins "Strongylocentrotus spp., Paracentrotus lividus, Loxechinus albus, Echinus esculentus"	03082200	9.98	Turkey
Live, fresh, chilled, smoked, dried, salted or in brine, jellyfish "Rhopilema spp."	03083080	0.80	China
Milk and cream of a fat content by weight of > 45%, in immediate packings of <= 2 l, not concentrated nor containing added sugar or other sweetening matter	04015091	6.20	United Kingdom
Fromage fribourgeois, Vacherin Mont d'Or and TÍte de Moine (excl. grated or powdered and for processing)	04069018	42.89	Switzerland
Pigs', hogs' or boars' bristles and waste of such bristles	05021000	17.14	China
Badger and other brush making hair and waste thereof	05029000	7.16	China
Ivory, unworked or simply prepared, its powder and waste (excl. cut to shape)	05071000	0.27	Botswana
Raw natural sponges of animal origin	05119931	2.97	Bahamas
Artichokes, uncooked or cooked by steaming or by boiling in water, frozen	07108080	44.08	Egypt
Mushrooms and truffles, provisionally preserved, e.g., by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions, but unsuitable in that state for immediate consumption (excl. mushrooms of the genus "Agaricus")	07115900	44.39	China
Capers provisionally preserved, e.g. by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions, but unsuitable in that state for immediate consumption(2007-2500);Vegetables provisionally preserved, e.g., by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions, but unsuitable in that state for immediate consumption (excl. onions, olives, capers, cucumbers and gherkins, fruits of the genus Capsicum or of the genus Pimenta, other than sweet peppers, sweetcorn, mushrooms and mixtures of vegetables)(1988-2001)	07119070	37.15	Morocco
Dried wood ears "Auricularia spp.", whole, cut, sliced, broken or in powder, but not further prepared	07123200	7.07	China
Dried shiitake "Lentinus edodes", whole, cut, sliced, broken or in powder, but not further prepared	07123400	4.80	China
Yams "Dioscorea spp.", fresh, chilled, frozen or dried, whether or not sliced or in the form of pellets	07143000	19.59	Ghana
Yautia "Xanthosoma spp.", fresh, chilled, frozen or dried, whether or not sliced or in the form of pellets	07145000	0.97	Costa Rica
Sultanas	08062030	301.19	Turkey
Fresh durians	08106000	7.14	Thailand
Pawpaws, provisionally preserved, e.g. by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions, but unsuitable in that state for immediate consumption	08129030	0.49	Thailand

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Dried apricots	08131000	137.71	Turkey
Dried fruit of genus Capsicum or Pimenta, neither crushed nor ground (excl. sweet peppers)	09042190	134.21	China
Cinnamon and cinnamon-tree flowers (excl. cinnamon "Cinnamomum zeylanicum Blume" and crushed and ground cinnamon)	09061900	30.09	Indonesia
Canary seed	10083000	37.48	Canada
Fonio "Digitaria spp."	10084000	0.08	Burkina Faso
Soya beans, whether or not broken (excl. seed for sowing)	12019000	8333.45	Brazil
Groundnuts, shelled, whether or not broken (excl. seed for sowing, roasted or otherwise cooked)	12024200	867.41	Argentina
Lupine seed for sowing	12092950	84.98	Australia
Ginseng roots, fresh, chilled, frozen or dried, whether or not cut, crushed or powdered(2017-2500);Ginseng roots, fresh or dried, whether or not cut, crushed or powdered(1988-2016)	12112000	15.66	China
Bamboos	14011000	72.65	China
Rattans	14012000	15.47	China
Crude palm oil, for technical or industrial uses (excl. for manufacture of foodstuffs)	15111010	841.01	Malaysia
Palm oil and its liquid fractions, whether or not refined, but not chemically modified, for industrial uses (excl. for production of foodstuffs and crude)	15119091	1500.52	Indonesia
Crude cotton-seed oil (excl. for technical or industrial uses)	15122190	10.72	United States
Crude coconut oil, for technical or industrial uses (excl. for manufacture of foodstuffs)	15131110	256.78	Philippines
Crude coconut oil, in immediate packings of > 1 kg or put up otherwise (excl. for technical or industrial uses)	15131199	902.76	Philippines
Solid palm kernel and babassu oil fractions, whether or not refined, but not chemically modified, in immediate packings of > 1 kg or put up otherwise	15132919	206.89	Malaysia
Palm kernel and babassu oil and their liquid fractions, whether or not refined, but not chemically modified, for technical or industrial uses (excl. for manufacture of foodstuffs and crude)	15132930	209.55	Indonesia
Castor oil and fractions thereof, whether or not refined, but not chemically modified, for production of aminoundecanoic acid for manufacture of synthetic textile fibres or artificial plastic materials	15153010	81.28	India
Mussels, prepared or preserved (excl. in airtight containers, and merely smoked)	16055390	107.87	Chile
Abalone, prepared or preserved (excl. smoked)	16055700	0.05	Chile
Cane molasses resulting from the extraction or refining of sugar	17031000	234.67	India
Cocoa paste, wholly or partly defatted	18032000	317.84	Cote d'Ivoire

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Asparagus, prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)	20056000	218.65	China
Bamboo shoots, prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)	20059100	37.54	China
Pineapples, prepared or preserved, containing added sugar but no added spirit, with a sugar content of > 13% but <= 17%, in immediate packings of a net content of > 1 kg	20082059	59.91	Thailand
Citrus fruit, prepared or preserved, containing added spirit, with actual alcoholic strength of > 11,85% mas (excl. with sugar content of > 9%)	20083039	0.62	Turkey
Grapefruit segments, prepared or preserved, containing added sugar but no added spirit, in immediate packings of a net content of > 1 kg	20083051	2.55	Turkey
Palm hearts, prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit (excl. prepared or preserved with vinegar)	20089100	34.85	Ecuador
Cranberries "Vaccinium macrocarpon, Vaccinium oxycoccos, Vaccinium vitis-idaea", prepared or preserved, containing added spirit, with a sugar content of <= 9% by weight and of an actual alcoholic strength of > 11,85% mas (excl. preserved with sugar but not laid in syrup, jams, jellies, marmalades, purée and	20089329	0.70	Canada
Mixtures of fruit or other edible parts of plants, prepared or preserved, containing added spirit, of an actual alcoholic	20089734	0.27	South Korea
Mixtures of fruit or other edible parts of plants, prepared or preserved, not containing added spirit or added sugar, in immediate packings of a ne...	20089796	0.33	United Kingdom
Pineapple juice, unfermented, Brix value <= 20 at 20°C, containing added sugar (excl. containing spirit)	20094192	17.23	Costa Rica
Bourbon whiskey, in containers holding > 2 l	22083019	166.94	United States
Blended malt Scotch whisky, in containers holding > 2 l	22083049	20.79	United Kingdom
Single grain and blended grain Scotch whisky, in containers holding > 2 l	22083069	35.33	United Kingdom
Scotch whisky, in containers holding > 2 l (other than single malt, blended malt, single grain and blended grain whisky)	22083079	69.17	United Kingdom
Rum and other spirits obtained by distilling fermented sugar-cane products, of a value > 2 ø/l of pure alcohol, in containers holding > 2 l (excl. rum with a content of volatile substances [other than ethyl and methyl alcohol] of >= 225 g/hl of pure alcohol "with a 10% tolerance")	22084091	323.36	United States
Gin, in containers holding > 2 l	22085019	62.79	United States
Tequila in containers holding > 2 l	22089075	60.04	Mexico
Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of palm nuts or kernels	23066000	351.53	Indonesia
Products containing nicotine substitutes, intended for inhalation without combustion (excl. containing nicotine or tobacco substitutes)	24041990	85.65	China

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Emery; natural corundum, natural garnet and other natural abrasives, whether or not heat-treated	25132000	43.39	China
Crude mica and mica rifted into sheets or splittings	25251000	6.38	India
Mica waste	25253000	0.52	India
Natural steatite, whether or not roughly trimmed or merely cut, by sawing or otherwise, into blocks or slabs of a square or rectangular shape, and talc, uncrushed or unpowdered	25261000	33.66	India
Feldspar	25291000	362.92	Turkey
Leucite, nepheline and nepheline syenite	25293000	42.81	Norway
Aluminium ores and concentrates	26060000	809.41	Guinea
Precious-metal ores and concentrates (excl. silver ores and oncentrates)	26169000	2935.26	South Africa
Antimony ores and concentrates	26171000	11.86	Turkey
Ores and concentrates (excl. iron, manganese, copper, nickel, cobalt, aluminium, lead, zinc, tin, chromium, tungsten, uranium, thorium, molybdenum, titanium, niobium, tantalum, vanadium, zirconium, precious-metal or antimony ores and concentrates)	26179000	14.69	Mexico
Slag, ash and residues containing mainly niobium or tantalum	26209920	10.86	Thailand
Slag, ash and residues containing mainly titanium	26209960	165.39	Canada
Gas oils of petroleum or bituminous minerals for undergoing a specific process as defined in Additional Note 5 to chapter 27	27101931	2798.65	Russia
Fuel oils of petroleum or bituminous minerals for undergoing a specific process as defined in Additional Note 5 to chapter 27 (excl. containing biodiesel)	27101951	5488.10	Russia
Waste oils containing polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)	27109100	0.04	Philippines
Propane of a purity of < 99%, liquefied, for undergoing a specific process as defined in Additional Note 5 to chapter 27	27111291	2464.84	United States
Butanes for undergoing a specific process as defined in Additional Note 5 to chapter 27, liquefied (excl. of a purity of >= 95% of N-butane or isobutane)	27111310	663.81	United States
Butanes for undergoing chemical transformation, liquefied (excl. for specific processes specified in Additional Note 5 to chapter 27 and butanes of a purity of >= 95% of N-butane or isobutane)	27111330	0.05	South Korea
Blend of 1-alkenes containing by weight >= 80% of 1-alkenes of a chain-length of >= 24 but <= 28 carbon atoms	27129091	7.78	Qatar
Residues of petroleum oil or of oil obtained from bituminous minerals for the manufacture of carbon of heading 2803	27139010	46.57	United Kingdom
Bituminous or oil-shale and tar sands	27141000	49.18	Turkey
Tellurium	28045090	112.79	Canada
Phosphorus (excl. red phosphorus)	28047090	282.71	Kazakhstan

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Strontium and barium	28051910	5.00	China
Europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium, of a purity by weight of >=95% (excl. intermi...	28053030	1.31	China
Scandium, of a purity by weight of >=95% (excl. intermixtures and interalloys)	28053040	0.52	China
Sulphur dichloride	28121600	0.49	India
Chlorides and chloride oxides of phosphorus (excl. phosphorus oxy-, tri- and pentachloride)	28121910	0.33	China
Vanadium oxides and hydroxides	28253000	185.99	Russia
Sodium dichromate	28413000	61.44	South Africa
Salts of oxometallic or peroxometallic acids (excl. chromates, dichromates, peroxochromates, manganites, manganates, permanganates, molybdates, tungstates "wolframamtes", zincates and vanadates)	28419085	3470.76	South Korea
Silver compounds, inorganic or organic, whether or not chemically defined (excl. of mercury and silver nitrate)(2007-2500);Silver compounds, inorganic or organic, whether or not chemically defined (excl. silver nitrate)(1988-2006)	28432900	294.08	United Kingdom
Natural uranium, worked [Euratom]	28441030	379.73	Canada
Mixtures of uranium and plutonium [Euratom] (excl. ferro-uranium)	28442059	3.94	United States
Cermets containing uranium depleted in U 235 or compounds of this product	28443011	0.04	Turkey
Boron enriched in boron-10 and its compounds	28452000	0.86	United States
Borides	28500090	9.25	United Kingdom
m-Xylene	29024200	20.20	United States
Pentafluoroethane "HFC-125", 1,1,1-trifluoroethane "HFC-143a" and 1,1,2-trifluoroethane "HFC-143"	29034400	37.29	China
Ethylene dibromide "ISO" "1,2-dibromoethane"(2022-2500);Hexachlorobenzene (ISO) and DDT (ISO) "clofenotane (INN), "1,1,1-trichloro-2,2-bis[p-chlorophenyl]ethane"(1988-2011)	29036200	0.61	Israel
Dichlorotrifluoroethanes	29037200	12.37	China
Halogenated derivatives of acyclic hydrocarbons containing two or more different halogens, perhalogenated only with fluorine and chlorine, n.e.s.	29037790	8.31	China
Trichloronitromethane "chloropicrin"	29049100	10.15	United States
1-Naphthol	29071510	2.48	China
Dinoseb (ISO) and its salts	29089100	4.10	United Kingdom
Phenylacetone "phenylpropan-2-one"	29143100	0.31	India
Esters of phenylacetic acid	29163910	2.84	India

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Malonic acid, its salts and esters	29171910	23.36	China
Parathion (ISO) and parathion-methyl (ISO) "methyl-parathion"	29201100	0.12	China
Trimethyl phosphite	29202300	0.38	India
m-Phenylenediamine of a purity by weight of >= 99% and containing <= 1% by weight of water, <= 200 mg/kg of o-phenylenediamine and <= 450 mg/kg of p-phenylenediamine	29215111	19.46	United States
m-Phenylenebis(methylamine); 2,2'-dichloro-4,4'-methylenedianiline; 4,4'-bi-o-toluidine; 1,8-naphthylenediamine	29215950	37.20	Japan
Aminohydroxynaphthalenesulphonic acids and their salts	29222100	3.76	India
Anthranilic acid and its salts	29224300	4.51	China
Ethinamate (INN)	29242400	0.17	China
Fenproporex (INN) and its salts; methadone (INN)-intermediate "4-cyano-2-dimethylamino-4,4-diphenylbutane"	29263000	0.16	United States
2,2'-Thiodiethyl bis[3-"3,5-di-tert-butyl-4-hydroxyphenyl"propionate]	29309040	3.28	United States
2,4,6-Tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide	29314600	0.09	China
Fentanyls and their derivatives, with nitrogen hetero-atom[s] only, containing an unfused pyridine ring, whether or not hydrogenated, in the structure (excl. products of 2933.33)	29333400	6.78	United Kingdom
3,6-Dichloropyridine-2-carboxylic acid	29333925	21.00	China
Fluroxypyr (ISO) methyl ester	29333950	151.10	China
4-Methylpyridine	29333955	0.71	India
Dextromethorphan (INN) and its salts	29334930	6.10	India
Malonylurea "barbituric acid" and its salts	29335200	12.24	China
Diazinon (ISO)	29335910	3.12	Japan
Indole, 3-methylindole "skatole", 6-allyl-6,7-dihydro-5H-dibenz"c,e"azepine "azapetine", phenindamine (INN) and their salts; imipramine hydrochloride "INNM"	29339920	15.18	Switzerland
Insulin and its salts, used primarily as hormones	29371200	763.18	United States
Norephedrine and its salts	29394400	0.53	India
Medicaments containing insulin, not in measured doses or put up for retail sale(2002-2500);Medicaments containing insulin, not in measured doses or put up for retail sale(1988-2001)	30033100	5.04	United States
Quebracho extract	32011000	29.42	Argentina
Wattle extract	32012000	15.00	South Africa
Terpenic essential oils of lemon, incl. concretes and absolutes	33011310	206.17	United States
Terpeneless oils of lemon, incl. concretes and absolutes	33011390	90.02	United States

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Photographic film "incl. instant print film", in rolls, sensitised, unexposed, without perforations, width <= 105 mm, for colour photography "polychrome" (excl. that of paper, paperboard or textiles and negative film of a width of >= 75 mm but <= 105 mm and of a length of >= 100 m for the manufacture of instant-picture film-packs)	37023197	11.44	United States
Fatty acid distillate	38231930	1160.25	Indonesia
Waste organic solvents, halogenated	38254100	0.69	Switzerland
Non-plasticised cellulose acetates, in primary forms	39121100	135.31	United States
Smoked sheets of natural rubber	40012100	249.80	Thailand
Full grains leather, unsplit and grain splits leather, in the dry state "crust", of whole hides and skins of bovine "incl. buffalo" animals, with a surface area of > 2,6 m^2 "28 square feet", without hair on (excl. further prepared and East India kip of	41044151	136.32	Argentina
Skins of sheep or lambs, in the dry state "crust", without wool on (excl. further prepared and pre-tanned only, and Indian hair sheep skins, vegetable pre-tanned, whether or not having undergone certain treatments, but obviously unsuitable for immediate use for the manufacture of leather articles)	41053090	72.73	Nigeria
Indian goat or kid skins, in the dry state "crust", without wool on, vegetable pre-tanned, whether or not having undergone certain treatments, but obviously unsuitable for immediate use for the manufacture of leather articles	41062210	10.44	India
Hides and skins of goats or kids, in the dry state "crust", without wool on, whether or not split (excl. further prepared and pre-tanned only and vegetable pre-tanned Indian goat or kid hides and skins of subheading 4106.22.10)	41062290	28.10	India
Tanned or dressed whole furskins of rabbit or hare, and pieces or cuttings thereof, assembled, without the addition of other materials (excl. 'drop...	43023025	0.38	China
Wood in chips or particles, of eucalyptus	44012210	213.54	Uruguay
Virola, imbuia and balsa, sawn or chipped lengthwise, sliced or peeled, of a thickness of > 6 mm, planed (excl. end-jointed)	44072291	0.75	Ecuador
Teak, sawn or chipped lengthwise, sliced or peeled, of a thickness of > 6 mm (excl. planed, sanded or end-jointed)(2022-2500);Baboen, mahogany "Swietenia spp.", imbuia and balsa, sawn or cut lengthwise, sliced or barked, with a thickness of > 6	44072390	24.44	Myanmar
Dark red meranti, light red meranti and meranti bakau, sawn or chipped lengthwise, sliced or peeled, of a thickness of > 6 mm, end-jointed, whether or not planed or sanded	44072510	21.24	Malaysia
Dark red meranti, light red meranti and meranti bakau, sawn or chipped lengthwise, sliced or peeled, of a thickness of > 6 mm (excl. such products planed, sanded or end-jointed)	44072590	66.29	Malaysia
White lauan, white meranti, white seraya, yellow meranti and alan, sawn or chipped lengthwise, sliced or peeled, of a thickness of > 6 mm, end-jointed, whether or not planed or sanded	44072610	0.05	United Kingdom

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
White lauan, white meranti, white seraya, yellow meranti and alan, sawn or chipped lengthwise, sliced or peeled, of a thickness of > 6 mm (excl. planed, sanded or end-jointed)	44072690	1.91	Malaysia
Tropical wood sawn or cut lengthwise, sliced or peeled, of a thickness of > 6 mm, planed, or end-jointed, whether or not planed or sanded (excl. abura, acajou d'Afrique, afrormosia, ako, alan, andiroba, aningrÈ, avodirÈ, azobÈ, balau, balsa, bossÈ clair, bossÈ foncÈ, cativo, cedro, dabema, dark red meranti, dibÈtou, doussiÈ, framirÈ, freijo, fromager, fuma, geronggang, ilomba, imbuia, ipÈ, iroko, jaboty, jelutong, jequitiba, jongkong, kapur, kempas, keruing, kosipo, kotibÈ, koto, light red meranti, limba, louro, maÁaranduba, mahogany, makorÈ, mandioqueira, mansonia, mengkulang, meranti bakau, merawan, merbau, merpauh, mersawa, moabi, niangon, nyatoh, obeche, okoumÈ, onzabili, orey, ovengkol, ozigo, padauk, paldao, palissandre de Guatemala, palissandre de Para, palissandre de Rio, palissandre de Rose, pau Amarelo, pau marfim, pulai, punah, quaruba, ramin, sapelli, saqui-saqui, sepetir, sipo, sucupira, suren, tauari, teak, tiama, tola, virola, white lauan, white meranti, white seraya and yellow meranti)	44072996	60.91	Brazil
Small boards for the manufacture of pencils, of coniferous wood, of a thickness of <= 6 mm	44081091	12.18	Indonesia
Sheets for veneering, incl. those obtained by slicing laminated wood, for plywood or for other similar laminated wood and other wood, sawn lengthwise, sliced or peeled, of a thickness of <= 6 mm, planed, of dark red meranti, light red meranti and meranti bakau (excl. end-jointed) (2002-2500);Veneer sheets and sheets for plywood, whether or not spliced, and other wood, sawn	44083121	1.85	United Kingdom
Small boards for the manufacture of pencils, of a thickness of <= 6 mm, of tropical wood (excl. white lauan, sipo, limba, okoumÈ, obeche, acajou d'Afrique, sapelli, virola, mahogany "Swietenia spp.", palissandre de Rio, palissandre de Para and palissandre de Rose)(2017-2500);Small boards for the manufacture of pencils, of a thickness of <= 6 mm, of abura, afrormosia, ako, alan, andiroba, aningrÈ, avodirÈ, azobÈ, balau, balsa, bossÈ clair, bossÈ foncÈ, cativo, cedro, dabema, dibÈtou, doussiÈ, framirÈ, freijo, fromager, fuma, geronggang, ilomba, imbuia, ipÈ, iroko, jaboty, jelutong, jequitiba, jongkong, kapur, kempas, keruing, kosipo, kotibÈ, koto, louro, maÁaranduba, mahogany (excl. "Swietenia spp."), makorÈ, mandioqueira, mansonia, merawan, mengkulang, merbau, merpauh, mersawa, moabi, niangon, nyatoh, onzabili, orey, ovengkol, ozigo, padauk, paldao, palissandre de Guatemala, pau Amarelo, pau marfim, pulai, punah, quaruba, ramin, saqui-saqui, sepetir, sucupira, suren, tauari, teak, tiama, tola, white meranti, white seraya and yellow meranti(2002-2016);Small boards for the manufacture of pencils, of wood, of a thickness of <= 6 mm, of abura, afrormosia, ako, alan, andiroba, aningrÈ, avodirÈ, azobÈ, balau, balsa, bossÈ clair, bossÈ foncÈ, cativo, cedro, dabema, dibÈtou, doussiÈ, framirÈ, freijo, fromager, fuma, geronggang, ilomba, imbuia, ipÈ, iroko, jaboty, jelutong, jequitiba, jongkong, kapur, kempas, keruing, kosipo, kotibÈ, koto, louro, maÁaranduba, mahogany (excl. "Swietenia spp."), makorÈ, mansonia, mengkulang, merawan, merbau, merpauh, mersawa, moabi, niangon, nyatoh, onzabili, orey, ovengkol, ozigo, padauk, paldao, palissandre de Guatemala, pau marfim, pulai, punah, ramin, saqui-saqui, sepetir, sucupira, suren, teak, tiama, tola, white meranti, white seraya and yellow meranti(1996-2001)	44083970	2.00	Indonesia
Chopsticks of bamboo	44191200	22.49	China

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Mats, matting and screens, of bamboo plaiting materials, flat-woven or bound together in parallel (excl. those of plaits or similar products of plaiting materials worked lengthwise)	46012190	21.78	China
Mats, matting and screens, of rattan plaiting materials, flat-woven or bound together in parallel (excl. those of plaits or similar products of plaiting materials worked lengthwise)	46012290	2.58	China
Plaiting materials, plaits and similar products of bamboo plaiting materials, flat-woven or bound together in parallel (excl. those of plaits or similar products of plaiting materials worked lengthwise; mats, matting and screens; wallcoverings of heading 4814; parts of footware or headgear)	46019290	9.63	China
Plaits and similar products of rattan plaiting materials worked lengthwise, whether or not assembled into strips (excl. twine, cord and rope; parts of footware or headgear)	46019305	1.94	China
Plaiting materials, plaits and similar products of rattan materials, flat-woven or bound together in parallel, made of plaits or similar plaiting m...	46019310	0.19	China
Plaiting materials, plaits and similar products of rattan plaiting materials, flat-woven or bound together in parallel (excl. those of plaits or si.	46019390	1.57	China
Basketwork, wickerwork and other articles, made directly to shape from bamboo plaiting materials or made up from goods of bamboo plaiting materials of heading 4601, and articles of loofah (excl. wallcoverings of heading 4814; twine, cord and rope; footware and headgear and parts thereof; vehicles and	46021100	67.37	China
Bottle envelopes made directly from straw or from vegetable plaiting materials of heading 4601 (excl. of bamboo and rattan)	46021910	4.08	China
Pulp of cotton linters	47061000	141.03	United States
Silkworm cocoons suitable for reeling	50010000	0.51	Thailand
Yarn spun from silk waste, unbleached, scoured or bleached (excl. that put up for retail sale)	50050010	22.39	China
Crĺpes, containing >= 85% silk or silk waste by weight, unbleached, scoured or bleached	50072011	54.14	China
Pongee, habutai, honan, shantung, corah and similar far eastern fabrics, wholly of silk, plain-woven, unbleached or not further processed than scoured (excl. those mixed with noil or other silk waste or with other textile materials)	50072021	6.36	China
Densely-woven fabrics containing >= 85% silk or silk waste by weight, unbleached, scoured or bleached (excl. crĺpes, and pongee, habutai, honan, shantung, corah and similar far eastern fabrics wholly of silk)	50072051	38.86	China
Greasy shorn wool, incl. fleece-washed wool, neither carded nor combed	51011100	327.29	Australia
Carbonised wool, neither carded nor combed	51013000	32.08	Australia
Hair of Kashmir "cashmere" goats, neither carded nor combed	51021100	420.75	China
Hair of alpaca, llama or vicuna, neither carded nor combed	51021930	7.19	Peru
Hair of camel or yak, or of angora goats, Tibetan goats or similar goats, neither carded nor combed	51021940	9.81	China

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Coarse animal hair, neither carded nor combed (excl. wool, hair and bristles used in the manufacture of brooms and brushes, and horsehair from the mane or tail)	51022000	3.43	China
Hair of Kashmir "cashmere" goats, carded or combed	51053100	34.09	China
Fine animal hair, carded or combed (excl. wool and hair of Kashmir "cashmere" goats)	51053900	82.96	Peru
Cotton, neither carded nor combed, rendered absorbent or bleached	52010010	115.50	Turkey
Single cotton yarn, of uncombed fibres, containing >= 85% cotton by weight and with a linear density of 192,31 decitex to < 232,56 decitex "> MN 43 to MN 52" (excl. sewing thread and yarn put up for retail sale)	52051300	54.39	Turkey
Multiple "folded" or cabled cotton yarn, of uncombed fibres, containing >= 85% cotton by weight and with a linear density of 125 decitex to < 192,3...	52053400	1.67	India
Multiple "folded" or cabled cotton yarn, of uncombed fibres, containing >= 85% cotton by weight and with a linear density of < 125 decitex "> MN 80" per single yarn (excl. sewing thread and yarn put up for retail sale)	52053500	1.16	Turkey
Multiple "folded" or cabled cotton yarn, of combed fibres, containing >= 85% cotton by weight and with a linear density of 106,38 decitex to < 125 decitex "> MN 80 to MN 94" per single yarn (excl. sewing thread and yarn put up for retail sale)	52054600	10.66	India
Single cotton yarn containing predominantly, but < 85% cotton by weight, of combed fibres and with a linear density of >= 714,29 decitex "<= MN 14" (excl. sewing thread and yarn put up for retail sale)	52062100	0.97	Turkey
Single cotton yarn containing predominantly, but < 85% cotton by weight, of combed fibres and with a linear density of 192,31 decitex to < 232,56 decitex "> MN 43 to MN 52" (excl. sewing thread and yarn put up for retail sale)	52062300	9.30	Indonesia
Single cotton yarn containing predominantly, but < 85% cotton by weight, of combed fibres and with a linear density of 125 decitex to < 192,31 decitex "> MN 52 to MN 80" (excl. sewing thread and yarn put up for retail sale)	52062400	3.64	Turkey
Single cotton yarn containing predominantly, but < 85% cotton by weight, of combed fibres and with a linear density of < 125 decitex "> MN 80" (excl. sewing thread and yarn put up for retail sale)	52062500	0.89	Turkey
Plain woven fabrics of cotton for the manufacture of bandages, dressings and medical gauzes, containing >= 85% cotton by weight and weighing <= 100 g/m², unbleached	52081110	1.83	India
Plain woven fabrics of cotton, containing >= 85% cotton by weight and weighing > 100 g to 130 g/m², unbleached, with a width of > 165 cm	52081219	130.04	Pakistan
Woven fabrics of cotton, containing >= 85% cotton by weight and weighing <= 200 g/m², unbleached (excl. those in three-thread or four-thread twill, incl. cross twill, and plain woven fabrics)	52081900	147.51	Pakistan
Woven fabrics of cotton, containing predominantly, but < 85% cotton by weight, other than those mixed principally or solely with man-made fibres or principally or solely with flax, weighing <= 200 g/m≤, bleached	52121290	7.20	Pakistan
Single flax yarn, put up for retail sale	53061090	1.78	China

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Single yarn of jute or of other textile bast fibres of heading 5303	53071000	14.37	Bangladesh
Multiple "folded" or cabled yarn of jute or of other textile bast fibres of heading 5303	53072000	17.92	Bangladesh
Coconut "coir" yarn	53081000	7.60	India
Hemp yarn (excl. that put up for retail sale)	53082010	3.31	China
Ramie yarn, with a linear density of >= 277,8 decitex "<= MN 36"	53089012	0.83	China
Woven fabrics of jute or of other textile bast fibres of heading 5303, unbleached, of a width of <= 150 cm	53101010	17.82	India
Woven fabrics of jute or of other textile bast fibres of heading 5303, unbleached, of a width of > 150 cm	53101090	18.62	India
Filament yarn of polypropylene, incl. monofilament of < 67 decitex, single, with a twist of > 50 turns per metre (excl. sewing thread, yarn put up for retail sale and textured yarn)	54025300	22.97	Turkey
Multiple "folded" or cabled filament yarn of polypropylene, incl. monofilament of < 67 decitex (excl. sewing thread, yarn put up for retail sale and textured yarn)	54026300	132.08	Turkey
Woven fabrics containing predominantly, but < 85% polyester staple fibres by weight, mixed principally or solely with carded wool or carded fine animal hair, unbleached or bleached	55151311	0.44	Morocco
Tiles, of vegetable textile materials or coarse animal hair, tufted "needle punched", whether or not made up (excl. carpet tiles with an area of > 1 m^2)	57039020	9.19	India
Cotton gauze (excl. narrow woven fabrics of heading 5806)	58030010	8.42	China
Gauze of silk or silk waste (excl. narrow woven fabrics of heading 5806)	58030030	0.17	China
Handmade lace in the piece, in strips or in motifs (excl. fabrics of heading 6002 to 6006)	58043000	0.53	Turkey
Unbleached or bleached fabrics, knitted or crocheted, of artificial fibres, of a width of > 30 cm (excl. warp knit fabrics "incl. those made on galloon knitting machines", those containing by weight >= 5% of elastomeric yarn or rubber thread, and pile fabrics, incl. "long pile", looped pile fabrics,	60064100	36.86	China
Knitted or crocheted bedspreads (excl. bedlinen, quilts and eiderdowns)	63041100	13.22	China
Bed nets, warp knit, antimalarial	63042000	2.12	China
Protective face masks (excl. filtering facepieces FFP according to EN149, and other masks conforming to a similar standard for masks as respiratory protective devices to protect against particles)	63079095	237.77	China
Hat-shapes, plaited or made by assembling strips of any material (excl. blocked to shape, with made brims, lined, or trimmed)	65020000	9.07	Ecuador
Artificial flowers, foliage and fruit and parts thereof, and articles made of artificial flowers, foliage or fruit, by binding, glueing, fitting into one another or similar methods, of plastics	67021000	519.07	China
Wigs, false beards, eyebrows and eyelashes, switches and the like, of human hair, and articles of human hair, n.e.s.	67042000	156.36	China

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Wigs, false beards, eyebrows and eyelashes, switches and the like, of animal hair or textile materials (excl. synthetic textile materials)	67049000	33.60	China
Sheets of optical glass, drawn or blown, but not otherwise worked (excl. glass coloured throughout the mass "body tinted" opacified, flashed or hav...	70049010	1.42	South Korea
Glass envelopes, incl. bulbs and tubes, open, and glass parts thereof, without fittings, for cathode ray tubes	70112000	0.54	United States
Imitation coral and similar glass smallwares (excl. articles thereof and imitation pearls, precious and semi-precious stones)	70181090	12.24	China
Quartz, piezoelectric, of synthetic or reconstructed stone whether or not worked or graded, but not mounted or set	71041000	6.62	China
Dust and powder of natural or synthetic precious or semi-precious stones (excl. dust and powder of diamonds)	71059000	1.55	China
Monetary gold	71082000	0.25	Switzerland
Non-alloy pig iron in pigs, blocks or other primary forms, containing by weight <= 0,5% phosphorus, and >= 0,1% but < 0,4% manganese	72011030	143.05	Russia
Ferrous products obtained by direct reduction of iron ore, in lumps, pellets or similar forms	72031000	1101.91	Russia
Semi-finished products of stainless steel, of rectangular "other than square" cross-section, containing by weight >= 2,5% nickel	72189110	528.44	United Kingdom
Semi-finished products of high-speed steel, of square or rectangular cross-section, hot-rolled or obtained by continuous casting the width measuring < twice the thickness	72249003	7.34	Switzerland
Unwrought tungsten, incl. bars and rods of tungsten obtained simply by sintering	81019400	8.91	China
Unwrought zirconium and zirconium powders, containing < 1 part hafnium to 500 parts zirconium by weight	81092100	20.32	United States
Zirconium waste and scrap, containing < 1 part hafnium to 500 parts zirconium by weight (excl. ash and residues containing zirconium)	81093100	5.06	United States
Articles of beryllium, n.e.s.	81121900	8.25	United States
Articles of thallium, n.e.s.	81125900	0.13	Russia
Unwrought niobium "columbium"; niobium "columbium" powders	81129240	47.45	Brazil
Articles of germanium, n.e.s.	81129940	6.36	China
Spark-ignition reciprocating or rotary internal combustion piston engine, of a cylinder capacity <= 250 cm^3 (excl. those for aircraft or marine propulsion and reciprocating piston engine of a kind used for vehicles of chapter 87)	84079010	234.41	China
Gear finishing machines for working metals, metal carbides or cermets (excl. those in which the positioning in any one axis can be set up to an accuracy of at least 0,01 mm)	84614090	34.17	Switzerland
Permanent magnets of metal and articles intended to become permanent magnets after magnetization (excl. chucks, clamps and similar holding devices)	85051100	1458.70	China

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Plasma and vacuum arc furnaces, of a kind used solely or principally for the manufacture of printed circuits or printed circuit assemblies	85143210	0.33	China
Coin-operated or disc-operated record-players	85192010	1.75	United States
Flat panel display modules, whether or not incorporating touch-sensitive screens, without drivers or control circuits, of liquid crystals	85241100	593.70	China
Flat panel display modules, whether or not incorporating touch-sensitive screens, without drivers or control circuits, of organic light-emitting diodes "OLED"	85241200	388.59	Malaysia
Flat panel display modules, whether or not incorporating touch-sensitive screens, with drivers or control circuits, of liquid crystals(2022-2500);Recording media (excl. those for sound or image recordings, discs for laser reading systems, magnetic tapes, cards incorporating a magnetic stripe and goods of	85249100	3058.66	China
Flat panel display modules, whether or not incorporating touch-sensitive screens, with drivers or control circuits, of organic light-emitting diodes "OLED"	85249200	1004.28	China
Cathode ray television picture tubes, incl. video monitor cathode ray tubes, colour	85401100	2.26	Singapore
Television camera tubes	85402010	1.99	United States
Portable interactive electronic education devices primarily designed for children (excl. toys of 9503 00 87)	85437007	9.48	China
Spent primary cells and primary batteries, sorted by chemical type, not containing lead, cadmium or mercury	85491310	0.57	United Kingdom
Frames for cycles (excl. for motorcycles)	87149110	1861.38	China
Front forks for cycles (excl. for motorcycles)	87149130	914.66	Taiwan
Parts of front forks, for cycles (excl. for motorcycles)	87149190	197.07	Taiwan
Handlebars for bicycles	87149910	138.97	Taiwan
Luggage carriers for bicycles	87149930	102.13	China
Air combat simulators and parts thereof	88052100	39.70	United Kingdom
Unmanned aircraft, for remote-controlled flight only, of an unladen weight > 2000 kg (excl. for passenger carriage)	88062920	8.77	United States
Unmanned aircraft, with maximum take-off weight > 150 kg, of an unladen weight <= 2000 kg (excl. for passenger carriage or for remote-controlled flight only)	88069910	51.64	Turkey
Floating or submersible drilling or production platforms	89052000	755.06	Indonesia
Light vessels, fire-floats, floating cranes and other vessels, the navigability of which is subsidiary to their main function (excl. seagoing vessels, dredgers, floating or submersible drilling or production platforms; fishing vessels and warships)	89059090	220.83	China
Complete watch movements, unassembled or partly assembled "movement sets" (excl. with balance wheel and hairspring)	91101190	2.53	Switzerland

Product description	Product code	Extra-EU Imports (million euro)	Largest Supplier
Incomplete watch movements, assembled	91101200	2.11	Switzerland
Cases for wrist-watches, pocket-watches and other watches of heading 9101 or 9102, of base metal, whether or not gold- or silver-plated	91112000	21.53	China
Mechanisms for musical boxes	92099950	1.33	China
Parts of golf clubs	95063910	20.30	China
Cricket and polo balls	95066910	1.67	China

TABLE 5: LIST OF 82 PRODUCT CATEGORIES IN WHICH THE EU IS DEPENDENT ON CHINA (2022)

Product description	Product code	Value of EU imports from China (million euro)	Product category
Frozen tilapia "Oreochromis spp."	03032300	30.01	Agricultural and Beverages
Frozen fillets of tilapia "Oreochromis spp."	03046100	62.65	Agricultural and Beverages
Frozen fillets of redfish "Sebastes spp." (excl. Sebastes marinus)	03048929	17.89	Agricultural and Beverages
Live, fresh, chilled, smoked, dried, salted or in brine, jellyfish "Rhopilema spp."	03083080	0.80	Agricultural and Beverages
Pigs', hogs' or boars' bristles and waste of such bristles	05021000	17.14	Agricultural and Beverages
Badger and other brush making hair and waste thereof	05029000	7.16	Agricultural and Beverages
Mushrooms and truffles, provisionally preserved, e.g., by sulphur dioxide gas, in brine, in sulphur water or in other preservative solutions, but unsuitable in that state for immediate consumption (excl. mushrooms of the genus "Agaricus")	07115900	44.39	Agricultural and Beverages
Dried wood ears "Auricularia spp.", whole, cut, sliced, broken or in powder, but not further prepared	07123200	7.07	Agricultural and Beverages
Dried shiitake "Lentinus edodes", whole, cut, sliced, broken or in powder, but not further prepared	07123400	4.80	Agricultural and Beverages
Dried fruit of genus Capsicum or Pimenta, neither crushed nor ground (excl. sweet peppers)	09042190	134.21	Agricultural and Beverages
Ginseng roots, fresh, chilled, frozen or dried, whether or not cut, crushed or powdered(2017-2500);Ginseng roots, fresh or dried, whether or not cut, crushed or powdered(1988-2016)	12112000	15.66	Agricultural and Beverages
Bamboos	14011000	72.65	Agricultural and Beverages
Rattans	14012000	15.47	Agricultural and Beverages
Asparagus, prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)	20056000	218.65	Agricultural and Beverages
Bamboo shoots, prepared or preserved otherwise than by vinegar or acetic acid (excl. frozen)	20059100	37.54	Agricultural and Beverages
Products containing nicotine substitutes, intended for inhalation without combustion (excl. containing nicotine or tobacco substitutes)	24041990	85.65	Agricultural and Beverages
Emery; natural corundum, natural garnet and other natural abrasives, whether or not heat-treated	25132000	43.39	Minerals and Fuels
Strontium and barium	28051910	5.00	Chemicals and Pharma

Product description	Product code	Value of EU imports from China (million euro)	Product category
Europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium, of a purity by weight of >=95% (excl. intermi...	28053030	1.31	Chemicals and Pharma
Scandium, of a purity by weight of >=95% (excl. intermixtures and interalloys)	28053040	0.52	Chemicals and Pharma
Chlorides and chloride oxides of phosphorus (excl. phosphorus oxy-, tri- and pentachloride)	28121910	0.33	Chemicals and Pharma
Pentafluoroethane "HFC-125", 1,1,1-trifluoroethane "HFC-143a" and 1,1,2-trifluoroethane "HFC-143"	29034400	37.29	Chemicals and Pharma
Dichlorotrifluoroethanes	29037200	12.37	Chemicals and Pharma
Halogenated derivatives of acyclic hydrocarbons containing two or more different halogens, perhalogenated only with fluorine and chlorine, n.e.s.	29037790	8.31	Chemicals and Pharma
1-Naphthol	29071510	2.48	Chemicals and Pharma
Malonic acid, its salts and esters	29171910	23.36	Chemicals and Pharma
Parathion (ISO) and parathion-methyl (ISO) "methyl-parathion"	29201100	0.12	Chemicals and Pharma
Anthranilic acid and its salts	29224300	4.51	Chemicals and Pharma
Ethinamate (INN)	29242400	0.17	Chemicals and Pharma
2,4,6-Tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide	29314600	0.09	Chemicals and Pharma
3,6-Dichloropyridine-2-carboxylic acid	29333925	21.00	Chemicals and Pharma
Fluroxypyr (ISO) methyl ester	29333950	151.10	Chemicals and Pharma
Malonylurea "barbituric acid" and its salts	29335200	12.24	Chemicals and Pharma
Tanned or dressed whole furskins of rabbit or hare, and pieces or cuttings thereof, assembled, without the addition of other materials (excl. 'drop...	43023025	0.38	Textiles, Plastics, and Wood
Chopsticks of bamboo	44191200	22.49	Textiles, Plastics, and Wood
Mats, matting and screens, of bamboo plaiting materials, flat-woven or bound together in parallel (excl. those of plaits or similar products of plaiting materials worked lengthwise)	46012190	21.78	Textiles, Plastics, and Wood
Mats, matting and screens, of rattan plaiting materials, flat-woven or bound together in parallel (excl. those of plaits or similar products of plaiting materials worked lengthwise)	46012290	2.58	Textiles, Plastics, and Wood

Product description	Product code	Value of EU imports from China (million euro)	Product category
Plaiting materials, plaits and similar products of bamboo plaiting materials, flat-woven or bound together in parallel (excl. those of plaits or similar products of plaiting materials worked lengthwise; mats, matting and screens; wallcoverings of heading 4814; parts of footware or headgear)	46019290	9.63	Textiles, Plastics, and Wood
Plaits and similar products of rattan plaiting materials worked lengthwise, whether or not assembled into strips (excl. twine, cord and rope; parts of footware or headgear)	46019305	1.94	Textiles, Plastics, and Wood
Plaiting materials, plaits and similar products of rattan materials, flat-woven or bound together in parallel, made of plaits or similar plaiting m...	46019310	0.19	Textiles, Plastics, and Wood
Plaiting materials, plaits and similar products of rattan plaiting materials, flat-woven or bound together in parallel (excl. those of plaits or si.	46019390	1.57	Textiles, Plastics, and Wood
Basketwork, wickerwork and other articles, made directly to shape from bamboo plaiting materials or made up from goods of bamboo plaiting materials of heading 4601, and articles of loofah (excl. wallcoverings of heading 4814; twine, cord and rope; footware and headgear and parts thereof; vehicles and	46021100	67.37	Textiles, Plastics, and Wood
Bottle envelopes made directly from straw or from vegetable plaiting materials of heading 4601 (excl. of bamboo and rattan)	46021910	4.08	Textiles, Plastics, and Wood
Yarn spun from silk waste, unbleached, scoured or bleached (excl. that put up for retail sale)	50050010	22.39	Textiles, Plastics, and Wood
Crĺpes, containing >= 85% silk or silk waste by weight, unbleached, scoured or bleached	50072011	54.14	Textiles, Plastics, and Wood
Pongee, habutai, honan, shantung, corah and similar far eastern fabrics, wholly of silk, plain-woven, unbleached or not further processed than scoured (excl. those mixed with noil or other silk waste or with other textile materials)	50072021	6.36	Textiles, Plastics, and Wood
Densely-woven fabrics containing >= 85% silk or silk waste by weight, unbleached, scoured or bleached (excl. crĺpes, and pongee, habutai, honan, shantung, corah and similar far eastern fabrics wholly of silk)	50072051	38.86	Textiles, Plastics, and Wood
Hair of Kashmir "cashmere" goats, neither carded nor combed	51021100	420.75	Textiles, Plastics, and Wood
Hair of camel or yak, or of angora goats, Tibetan goats or similar goats, neither carded nor combed	51021940	9.81	Textiles, Plastics, and Wood
Coarse animal hair, neither carded nor combed (excl. wool, hair and bristles used in the manufacture of brooms and brushes, and horsehair from the mane or tail)	51022000	3.43	Textiles, Plastics, and Wood
Hair of Kashmir "cashmere" goats, carded or combed	51053100	34.09	Textiles, Plastics, and Wood
Single flax yarn, put up for retail sale	53061090	1.78	Textiles, Plastics, and Wood
Hemp yarn (excl. that put up for retail sale)	53082010	3.31	Textiles, Plastics, and Wood

Product description	Product code	Value of EU imports from China (million euro)	Product category
Ramie yarn, with a linear density of >= 277.8 decitex "<= MN 36"	53089012	0.83	Textiles, Plastics, and Wood
Cotton gauze (excl. narrow woven fabrics of heading 5806)	58030010	8.42	Textiles, Plastics, and Wood
Gauze of silk or silk waste (excl. narrow woven fabrics of heading 5806)	58030030	0.17	Textiles, Plastics, and Wood
Unbleached or bleached fabrics, knitted or crocheted, of artificial fibres, of a width of > 30 cm (excl. warp knit fabrics "incl. those made on galloon knitting machines", those containing by weight >= 5% of elastomeric yarn or rubber thread, and pile fabrics, incl. "long pile", looped pile fabrics,	60064100	36.86	Textiles, Plastics, and Wood
Knitted or crocheted bedspreads (excl. bedlinen, quilts and eiderdowns)	63041100	13.22	Textiles, Plastics, and Wood
Bed nets, warp knit, antimalarial	63042000	2.12	Textiles, Plastics, and Wood
Protective face masks (excl. filtering facepieces FFP according to EN149, and other masks conforming to a similar standard for masks as respiratory protective devices to protect against particles)	63079095	237.77	Textiles, Plastics, and Wood
Artificial flowers, foliage and fruit and parts thereof, and articles made of artificial flowers, foliage or fruit, by binding, glueing, fitting into one another or similar methods, of plastics	67021000	519.07	Misc. manufactured articles
Wigs, false beards, eyebrows and eyelashes, switches and the like, of human hair, and articles of human hair, n.e.s.	67042000	156.36	Misc. manufactured articles
Wigs, false beards, eyebrows and eyelashes, switches and the like, of animal hair or textile materials (excl. synthetic textile materials)	67049000	33.60	Misc. manufactured articles
Imitation coral and similar glass smallwares (excl. articles thereof and imitation pearls, precious and semi-precious stones)	70181090	12.24	Stone, Glass, and Metals
Quartz, piezoelectric, of synthetic or reconstructed stone whether or not worked or graded, but not mounted or set	71041000	6.62	Stone, Glass, and Metals
Dust and powder of natural or synthetic precious or semi-precious stones (excl. dust and powder of diamonds)	71059000	1.55	Stone, Glass, and Metals
Unwrought tungsten, incl. bars and rods of tungsten obtained simply by sintering	81019400	8.91	Stone, Glass, and Metals
Articles of germanium, n.e.s.	81129940	6.36	Stone, Glass, and Metals
Spark-ignition reciprocating or rotary internal combustion piston engine, of a cylinder capacity <= 250 cm^3 (excl. those for aircraft or marine propulsion and reciprocating piston engine of a kind used for vehicles of chapter 87)	84079010	234.41	Machinery and Vehicles
Permanent magnets of metal and articles intended to become permanent magnets after magnetization (excl. chucks, clamps and similar holding devices)	85051100	1458.70	Machinery and Vehicles

Product description	Product code	Value of EU imports from China (million euro)	Product category
Plasma and vacuum arc furnaces, of a kind used solely or principally for the manufacture of printed circuits or printed circuit assemblies	85143210	0.33	Machinery and Vehicles
Flat panel display modules, whether or not incorporating touch-sensitive screens, without drivers or control circuits, of liquid crystals	85241100	593.70	Machinery and Vehicles
Flat panel display modules, whether or not incorporating touch-sensitive screens, with drivers or control circuits, of liquid crystals(2022-2500);Recording media (excl. those for sound or image recordings, discs for laser reading systems, magnetic tapes, cards incorporating a magnetic stripe and goods of	85249100	3058.66	Machinery and Vehicles
Flat panel display modules, whether or not incorporating touch-sensitive screens, with drivers or control circuits, of organic light-emitting diodes "OLED"	85249200	1004.28	Machinery and Vehicles
Portable interactive electronic education devices primarily designed for children (excl. toys of 9503 00 87)	85437007	9.48	Machinery and Vehicles
Frames for cycles (excl. for motorcycles)	87149110	1861.38	Machinery and Vehicles
Luggage carriers for bicycles	87149930	102.13	Machinery and Vehicles
Light vessels, fire-floats, floating cranes and other vessels, the navigability of which is subsidiary to their main function (excl. seagoing vessels, dredgers, floating or submersible drilling or production platforms; fishing vessels and warships)	89059090	220.83	Machinery and Vehicles
Cases for wrist-watches, pocket-watches and other watches of heading 9101 or 9102, of base metal, whether or not gold- or silver-plated	91112000	21.53	Misc. manufactured articles
Mechanisms for musical boxes	92099950	1.33	Misc. manufactured articles
Parts of golf clubs	95063910	20.30	Misc. manufactured articles
Cricket and polo balls	95066910	1.67	Misc. manufactured articles