



ANALYSIS

Tools for Resilient Supply Chains

An overview of EU policy

2025

Executive summary

Building resilient supply chains has become a key EU policy objective. Evidence from the OECD, IMF, and other leading institutions shows that diversified and open trade strengthens resilience more effectively than homeshoring, which often reduces efficiency and increases exposure to domestic shocks. The EU's main strategic dependencies are concentrated to a small number of products, largely sourced from non-OECD countries, especially China. The EU has begun to make progress towards strengthening supply-chain resilience with a number of initiatives, including its Economic Security Agenda and Preparedness Union Strategy.

However, the EU's resilience agenda remains fragmented and overly focused on industrial policies aimed at home-shoring production. To align with best practices, the analysis recommends improving risk assessments, deepening two-way cooperation with the private sector, and steering industrial policy toward productivity and innovation. The EU should continue strengthening trade openness through regulatory simplification, harmonisation, and an expanded single market – particularly for services and capital. In addition, the EU should continue building strategic indispensability with trading partners, diversifying trade to trusted extra-EU partners, and developing the EU's economic security partnership offer. Ultimately, the EU's supply-chain resilience will depend less on self-sufficiency and more on assessing and addressing risks related to specific partners – China in particular – while maintaining overall openness, diversification, and underlying market conditions such as good regulation and infrastructure.

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1 Introduction

With trade policy liberalisation and technological advancements lowering the cost of trading, global supply chains have grown longer and more complex as production has fragmented into value chains spanning the world. However, some evidence suggests that since the global financial crisis, the pace of fragmentation of production has slowed (OECD, 2023a). Since then, the world has witnessed a global pandemic, war in Europe and a resulting energy crisis, attacks on ships in the Red Sea, and the geopolitisation of access to technology and raw materials. As a result, more emphasis has been placed on handling dependencies, chokepoints and vulnerabilities in supply chains. The *resilience* of supply chains has become a central objective for policy-makers, who want to ensure that supply chains are aligned with targets for crisis preparedness and economic security. For example, the European Commission has developed an Economic Security Strategy and a Preparedness Union Strategy – and the EU now embeds preparedness and security considerations across legislation and policies.

While the resilience of supply chains inherently relies on international trade, the important role that trade plays in this context is sometimes overlooked. For example, the WTO (2023) notes that the positive role of trade for security is increasingly being overshadowed by concerns about overdependence on foreign suppliers and national security.

This analysis aims to evaluate how the EU uses trade and single market policies to enhance the resilience of supply chains. In practice, this entails analysing how EU policies impact the conditions companies face in trying to build resilient supply chains. The report has three integrated parts. First, we present a summary of existing evidence and best practices on how trade policy can be designed to help strengthen resilient supply chains. Second, we provide an overview of the policy tools that the EU is applying for the same purpose. Third, we compare and analyse the obtained information and suggest areas where EU policies could be adapted to create better conditions for companies to build resilient supply chains.

Three notes can be made on the aim and scope of this analysis. First, examining how EU policies affect companies' capacity to build resilient supply chains does not involve prescribing sourcing decisions to companies. Second, while the focus is on EU external trade policy instruments, relevant single market tools are also included due to their role in supply-chain resilience. Third, following Brandon-Jones et al. (2014), resilience is defined as “the ability to return to normal operations over an acceptable period of time after being disturbed”, while robustness refers to “the ability of the supply chain to maintain its function despite internal or external disruptions”. We treat both concepts as important to promoting resilient supply chains.

2 Supply-chain resilience: an overview of existing evidence and best practices

2.1 An overview of the National Board of Trade's previous work

At the National Board of Trade, we have previously highlighted how trade interacts with resilient supply chains and broader economic security objectives. In a previous report, we discussed the underappreciated role of imports in promoting resilience and highlighted the strong evidence that economic integration strengthens both competitiveness and economic resilience. Diversified import sources help spread risk and manage economic shocks. Imports also provide cost-effective inputs that raise productivity in domestic production, strengthen competitiveness, and boost exports (National Board of Trade, 2023a). Moreover, in another report, we demonstrated that openness to trade and investments strengthens the productivity of EU companies (National Board of Trade, 2021). This benefits the EU economically and geopolitically which, in turn, enhances national and economic security. Also, we noted in National Board of Trade (2025d) that competitive companies are better equipped to manage distortions in supply chains and are instrumental for the resilience of supply chains.

In National Board of Trade (2020), we began exploring the disruptions that resulted from the Covid-19 pandemic. We concluded with a number of recommendations that are listed below and complemented by further insights we have gained since then.

Multilateral or plurilateral agreements improve supply-chain flexibility. While this option admittedly is challenging today, investing in maintaining the rules-based order with its existing rules and agreements should remain a priority. If multilateral or plurilateral efforts fail, one option is to liberalise imports of intermediate goods unilaterally. One example in that regard could be to unilaterally remove all tariffs on inputs such as raw materials, semi-finished goods, and components. At the same time, it should be acknowledged that unilateral trade liberalisation in some cases and for some products could increase dependencies on individual countries, such as China, thereby being counterproductive to diversification. To better understand such potentially risky dependencies, we proposed in National Board of Trade (2025c) to continue enhancing risk assessments and analyses, especially given the increasing availability of high frequency data.

If multilateralism fails, another option is to diversify our network of FTAs and to make them more interregional. One way to do that is by concluding more FTAs, which could also include specific commitments towards crisis-preparedness cooperation. As noted in National Board of Trade (2025a), current EU FTAs already contain some provisions – such as temporary admission of goods and contingency plans to secure food supplies – but significant potential for improvement remains. Drawing on EU trade tools and international initiatives, we suggested measures such as identifying essential goods, developing joint contingency plans, simplifying customs and digital procedures, stress-testing supply chains, and limiting non-market-based measures as a last resort. Accordingly, we recommended that the European

Commission make greater use of existing FTA committees to cooperate on crisis preparedness, negotiate new or updated FTA chapters on trade in crises, and consider complementary trade-related agreements (TRAs) to promote cooperation in this area.

Another way to diversify trade regionally is to streamline and simplify how trade can be conducted with existing FTA partners. In National Board of Trade (2023b), we proposed ways to link the EU's network of FTAs more closely in order to form deeper trade integration areas with the EU at its core. In particular, we proposed that the EU should use this approach in relation to FTA partners that are members of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). This was then further expanded into the idea of creating a rules-based trade coalition in National Board of Trade (2025b). Finally, we noted in the National Board of Trade (2024) a need to simplify and harmonise the EU's FDI screening mechanism as a way of stimulating investments that can strengthen the Union's economic security and resilience.

Finally, in 2020, we concluded that for goods for which EU member states cannot accept even a short interruption of supply, the only way to guarantee full robustness is through stockpiling. In that regard, we noted that the EU could agree on a division of labour with respect to stockpiling of essential goods. Such an agreement would require EU legislation that restricts member states from confiscating essential goods during a crisis. It should be noted that both the pandemic and the war in Ukraine have taught us that such stockpiles can run out quickly. There are also other documented risks with stockpiling, such as waste, coordination failures, mismatch with *future* needs, or inflexibilities with respect to new technologies, standards, or patterns of demand. Therefore, international trade with diversified sourcing and the ability to quickly adapt and scale production is likely much more important (National Board of Trade, 2020; Miroudot, 2020; Miroudot & Weingold, 2024; Ossa, 2023).

2.2 An overview of other notable evidence and best practices

This section gathers policy-relevant results and conclusions from reports that, in turn, compile a larger volume of evidence and best practices from recent years.

2.2.1 Supply chains and resilience: What is the evidence?

According to the OECD (2023b), supply disruptions have the greatest impact when production relies heavily on a few countries or firms. Model simulations show that diversifying suppliers significantly improves resilience to country-specific shocks, while partial onshoring offers only limited additional gains. Furthermore, localised regimes, where economies are less interconnected, are found to be more—not less—vulnerable to shocks (OECD, 2020).

The IMF (2025) analysed the extent to which the diversification of sources of imports mitigates the impact of adverse trade shocks. They find that, because countries cannot immediately reconfigure supply chains in response to shocks, supply chain diversification can improve resilience at the cost of efficiency. Quantifying the resilience-efficiency trade-off suggests that diversifying the sources of targeted

imports – those more exposed to shocks, positioned upstream in the supply chain, and subject to greater rigidities – can enhance expected welfare when the probability of a large trade shock is sufficiently high.

The OECD (2025a) notes that only about 30 per cent of exported products globally are overly concentrated in a few trading partners, suggesting most trade flows are still relatively well diversified. However, data show a 50 per cent rise – up to an average of 400 HS6 level products – in excessive import concentration globally in the early 2020s compared to late-1990s levels, a trend that could increase vulnerability to external shocks. However, the rise is nearly entirely driven by non-OECD countries, while average excessive import concentration in OECD countries has remained relatively stable (OECD, 2024c). Moreover, the OECD (2025a) estimates that efforts to re-localise supply chains could decrease global trade by over 18 per cent and reduce global real GDP by more than 5 per cent. Yet, these measures do not consistently improve resilience. In fact, GDP volatility increased in more than half of the economies modelled, challenging claims that re-localisation is inherently more stable.

The Swedish Agency for Growth Policy Analysis (2025) study the ability of the business sector to withstand and recover from economic shocks by evaluating various resilience strategies using data from 1,828 Swedish industrial companies from 2017 to 2023. They find that the geographical diversification of supply chains and increased company stockpiling of inputs help reduce the sector's vulnerability, while the effects of so-called 'friendshoring' must be assessed on a case-by-case basis. The Swedish Agency for Growth Policy Analysis (2023) find that the risk of supply disruption is lower when inputs are sourced from suppliers in different countries, referred to as geographical risk diversification, but that the return on such diversification at the margin is diminishing. In practice, risk diversification varies considerably according to the size of the enterprise, with larger companies in general diversifying risks more than smaller ones. To some extent, risk diversification also varies according to the industry. Where supply is concentrated on the world market, the scope for risk diversification is reduced.

2.2.2 Evidence on the resilience of EU supply chains

The European Commission (2021; 2022a) notes that reliance on international trade is not a vulnerability but rather helps to sustain diversified supply and demand. Despite severe disruptions in production, transport, and people's mobility, most value and supply chains have shown remarkable resilience. Still, it is noted, specific products can be impacted heavily by external shocks and highlights the importance of better understanding these vulnerabilities. Accordingly, a bottom-up mapping is conducted using external trade flows for more than 5,000 products as a starting point. It identifies 137 products in the most sensitive sectors where the EU can be considered highly dependent on imports from third countries (representing about 6 per cent of the extra-EU import value of goods). Arjona et al. (2023) similarly identify 204 products in sensitive industrial ecosystems where the EU experiences an important level of foreign dependencies. They then categorise a subset of these products as particularly problematic given that their world trade networks can experience what they call Single Points of Failure (SPOF).

The three main foreign sources of EU import value for these dependent products are China (representing about half of import value), Vietnam, and Brazil. The identified dependent products are situated mainly in the energy intensive industries (including raw/processed materials and chemicals), the health care industry (including active pharmaceutical ingredients and other health-related products), and other inputs and products that are relevant to support the green and digital transformation. Out of the 137 products identified as dependencies in the most sensitive sectors, 34 (representing 0.6 per cent of extra-EU import value of goods) could be considered as potentially more vulnerable given their possibly low potential for further diversification as well as substitution with EU production. Examples of such products are rare earths and photovoltaic panels. It is also noted that the EU faces particular challenges in comparison with its global competitors for technologies in the digital ecosystem such as cloud and micro-electronics (European Commission, 2021; 2022).

The European Centre for International Political Economy (ECIPE, 2022; 2025) developed a conceptual framework to measure Europe's trade dependencies. Using this framework, the EU faced import dependencies in 282 product categories, with a value of USD 58.5 billion. Meanwhile, for trade in services (for aggregated sectors), they claim, the EU had no import dependencies. They note, however, that a lack of economic dependencies in services does not mean the EU can overlook its economic security in services. Services trade is a key channel through which technologies that are critical for national security such as advanced mobile communication, AI, quantum computing, and edge and hybrid computing are exchanged and diffused. The EU's approach to economic security in services should be different from that for goods. Because, they note, the EU is the world's largest exporter and importer of services, accounting for a quarter of global exports and imports while enjoying a trade surplus of €163 billion, a strategy for the EU's economic security for services demands policies that are less defensive and more offensive.

For rare earth minerals, the ECB (2025) notes that the Euro area faces significant supply-chain risks due to its dependence on Chinese exports of rare earth elements, both directly and indirectly through third parties. China dominates global production, accounting for 95 per cent of rare earth output, and plays a central role in refining other critical materials such as lithium and cobalt. This dependence underscores China's pivotal position in global supply chains and exposes the Euro area to vulnerabilities from potential geopolitical disruptions, as China supplies about 70 per cent of its rare earth imports. In relation to that, in response to an EIB (2024) survey, prior to China's export controls on raw materials imposed in the autumn of 2025, 37 per cent of EU firms reported that access to commodities and raw materials was a major obstacle, while 34 per cent were affected by disruptions in logistics and transport.

2.2.3 Best practices for improved supply-chain resilience

The OECD (2024a) concludes that efforts to strengthen global supply-chain resilience should prioritise the overall performance of the system rather than a single goal, such as securing supply, without considering trade-offs with efficiency, sustainability, or implementation costs. In such complex adaptive systems, outcomes cannot be centrally controlled. Instead, superior performance depends on aligning stakeholder

interests, managing trade-offs, sharing information, and coordinating actions. Accordingly, the OECD suggests that resilience strategies should be segmented to address two distinct categories of risks: i) business-as-usual disruptions that can be mitigated by standard risk management practices of firms, and ii) unforeseen extreme disruptions where the role of governments is crucial as facilitators and providers of emergency resources. Effective interventions include reducing logistics frictions, regulatory co-operation and flexibility, and fostering an integrated form of emergency preparedness comprised of inventory, backup production capacity, and standby capabilities, followed by regular exchange between public and private stakeholders to stress-test the industrial commons.

The OECD (2024b) concentrates its insights on four key concepts, on which any policy toolkit for supply-chain resilience should build:

1. **Anticipate risks.** While it is impossible to fully predict future shocks, risk management strategies could include: a) categorising and identifying risks, b) determining the role of government, c) establishing early response procedures, and d) using data and scenario analysis.
2. **Minimise exposure to shocks.** Minimising exposure to external risks and promoting growth need not be a zero-sum game. Taking the right actions is an investment that is likely to have benefits extending beyond times of crisis. It also supports the private sector by strengthening the external framework in which supply chains operate, thereby helping to build resilience. This includes: a) investing in physical and digital infrastructure (which also requires having an enabling regulatory framework), b) introducing the concept of agility into regulatory frameworks to ensure necessary flexibility in times of crisis, and c) strengthening public procurement processes in times of crisis.
3. **Invest in public-private sector partnerships.** Close co-operation between the public and private sector is pivotal to the process of boosting supply-chain resilience. National governments provide a regulatory framework in which businesses operate. If done well, this can be conducive to private-sector efforts to build resilience. Closer co-operation with the public sector and efficient information exchange can enable firms to better protect themselves against severe disruptions. This includes: a) supporting the development of firm-level strategies, b) establishing and maintaining public-private frameworks prior to disruption, and c) preparing for selective and co-ordinated stockpiling.
4. **Strengthen international cooperation.** International economic co-operation can boost supply-chain resilience by fostering collaboration, improving regulatory harmonisation, and facilitating cross-border trade. This includes: a) ensuring predictability and transparency within the multilateral trading system, b) strengthening international agreements, c) pursuing international regulatory co-operation and harmonisation, and d) facilitating trade across borders.

3 EU tools for improved resilience in supply chains: an overview of existing policies

Drawing on the evidence and best practices outlined above, policy tools to strengthen supply-chain resilience can broadly be categorised into four areas: risk assessments and intelligence, minimising exposure to external shocks, public-private cooperation, and international cooperation. In this section, we look more closely at policy measures taken by the European Union within these four areas.

3.1 Risk assessments and intelligence

The EU has several risk assessment initiatives. One initiative, launched in 2020, is the European Commission **Strategic Foresight Reports** (see, e.g., European Commission, 2025b). These are annual publications that explore possible future developments, emerging risks, and strategic opportunities facing the European Union. The purpose is to assess how policy can be robust across different scenarios and help shape long-term strategic planning. Moreover, there is an external vulnerability index (EXVI) and a raw materials information system (RMIS), which aim to improve insights on strategic vulnerabilities (European Commission, 2025o; 2025p).

The EU's **Economic Security Strategy** states that the Commission and member states will deepen their analysis of critical supply chains, stress test them, and establish the level of risk. It identifies the following broad and non-exhaustive categories of risks to economic security: 1) resilience of supply chains; 2) physical and cyber security of critical infrastructure; 3) technology security and technology leakage; and 4) weaponisation of economic dependencies or economic coercion. It is noted that these risks can occur along the entire value chain, from knowledge creation and basic research to commercialisation and manufacturing at scale. Since the launch of its Economic Security Strategy, the European Commission, together with member states, has carried out **risks assessments** for four critical technologies (AI, quantum, semiconductors and biotechnology), while six more risk assessments are being planned. In parallel, the Economic Security Agenda established that the EU will enhance its Single Intelligence Analysis Capability (SIAC) in order to increase its ability to detect threats to EU economic security (European Commission, 2023a).

Moreover, under the EU's **Preparedness Union Strategy**, comprehensive risk and threat assessments at EU level will be developed, based on a cross-sector and all-hazards approach, to prevent and respond to crises such as natural disasters or hybrid threats.

Because of the specific **risks pertaining to China**, the EU has developed a multifaceted policy approach of 'de-risking' towards the country. The EU sees China simultaneously as a partner, a competitor, and a systemic rival. In that regard, the EU's overarching strategy is to continue to trade with China but seek to reduce critical dependencies and vulnerabilities, including in its supply chains, and to de-risk and diversify where necessary and appropriate (European Council, 2023a).

3.2 Minimising exposure to external shocks

Minimising exposure includes having strong underlying market conditions, with relevant infrastructure and regulation. The EU is engaged in an overall effort to strengthen its **competitiveness** and enhance overall conditions for trading on and with its single market, for example through its regulatory **simplification agenda** with several omnibus packages. It is also seeking to address structural deficiencies such as insufficient **single market integration**, not least when it comes to the free movement of services and capital (European Commission, 2025g). For 2026, the Commission is expected to launch a proposal for the so-called 28th regime (European Commission, 2025l). The EU also works on **customs and trade facilitation** measures, including through programmes aimed at promoting relevant **infrastructure** such as the Connecting Europe Facility (European Commission, 2025h).

In order to minimise supply chains risks, the EU has also adopted a range of new policy measures. **The Internal Market Emergency and Resilience Act (IMERA)** introduces a preparedness and crisis-response system within the single market. This system, which applies when no specific sectoral measures are in place, promotes transparency and coordination among EU countries and aims to ensure the uninterrupted movement of essential goods, services, and persons across the EU during a crisis. Under the **Preparedness Union Strategy**, the EU will enhance the stockpiling of critical equipment and materials with the help of a stockpiling strategy. It will also advance mutual resilience with candidate countries (European Commission, 2025c; 2025d). The European Commission has also adopted a **contingency plan for transport** to strengthen the resilience of EU transport in times of crisis (European Commission, 2025e; 2025f).

A number of initiatives have also sought to minimise risk exposure in digital supply chains. For example, the **5G Toolbox** establishes a framework for member states to secure their 5G networks through common technical and strategic measures – such as stricter security requirements, supplier risk assessments, and limits on high-risk vendors (European Commission, 2020a). The 5G Toolbox will be followed up with an ICT Supply-Chain Toolbox that expands risk mitigation to other digital technologies (Bertuzzi, 2025). Moreover, the **NIS2 Directive** establishes a unified legal framework to uphold cybersecurity across the EU in 18 critical sectors, including energy, transport, healthcare, finance, water management, and digital infrastructure (European Commission, 2022b).

A number of the EU's recent industrial policy initiatives could also be understood in relation to perceived risks in supply chains. The EU's **Critical Raw Materials Act** and its **Chips Act** provides funding to increase production of critical raw material and semiconductors respectively (European Commission, 2024a; 2024b). Commission proposals for an update to the Chips Act, as well as the establishment of a critical raw materials centre are expected in 2026 (European Commission, 2026l). The **Net-Zero Industry Act**, which aims to enhance European manufacturing capacity for net-zero technologies and their key components, addressing barriers to scaling up production in Europe. Meanwhile, the **REPowerEU Plan** aims to phase out Russian fossil fuel imports by saving energy, diversifying energy supplies, and producing more clean

energy (European Commission, 2025i). Further initiatives for energy security are expected in 2026 (European Commission, 2026l). Similarly, the EU has strategies in place to support or promote supply-chain resilience for **chemicals** and **pharmaceuticals** (European Commission, 2025j; 2025k). In turn, the listed initiatives can be supported by **broadier industrial policy schemes** such as the Strategic Technologies for Europe Platform ('STEP'), Digital Europe, Horizon Europe, NextGenerationEU, Cohesion Funds, and the European Defence Fund.

The EU has also adopted a number of **defensive trade instruments**, which enable a response to trading partners that engage in practices that hamper or distort supply chains. For example, the Anti-Coercion Instrument (ACI) equips the EU with legal and practical tools to deter and respond to economic coercion through measures such as tariffs, trade restrictions, and limits on investment or procurement. It establishes procedures for investigation, stakeholder consultation, and coordination with partners (European Commission, 2023b).

3.3 Public-private cooperation

In the **Economic Security Agenda**, the European Commission is tasked with engaging in a structured dialogue with the private sector to develop a collective understanding of economic security and to encourage due diligence and risk management measures in light of economic security concerns (European Commission, 2023a). The previously mentioned risk assessments, four of which have been undertaken, have collected data from private sector actors.

Under the EU's **Preparedness Union Strategy**, a public-private preparedness taskforce will be created (European Commission, 2025d). For food specifically, the **European Food Security Crisis Preparedness and Response Mechanism (EFSCM)** has led to private stakeholders' organisations representing the food supply chain and input providers being invited to participate in the group of experts where preparedness and EU food security are discussed. (European Commission, 2025f).

3.4 International cooperation

The Commission's (2020b) Communication on the Trade Policy Review establishes an open, sustainable, and assertive trade policy that contributes to more resilient and sustainable value chains. It seeks to promote a stable rules-based trading framework, opening up new markets to diversify sources of supply, and developing cooperative frameworks for fair and equitable access to critical supplies.

The EU is actively seeking to improve conditions for companies to **diversify their trade with new partners** (European Commission, 2025q). The European Commission is actively negotiating or has recently concluded negotiations for free trade agreements with a number of countries including India, the Philippines, Thailand, and Malaysia, as well as Indonesia, the Mercosur countries and Mexico. Moreover, more targeted negotiations have updated previous agreements with new rules, for example, on digital trade with Singapore and Korea (European Commission, 2025m).

The EU is engaging in **discussions on resilient supply chains in the G7**. For example, the G7 leaders' communiqué from 2023 outlines that transparency, diversification, security, sustainability, trustworthiness, and reliability are essential principles on which to build and strengthen resilient supply-chain networks among trusted partner countries, both within and outside the G7. It also reaffirms a strong will to support the wider international community, particularly developing countries, in building their resilience. It also states the intent to enhance resilient supply chains through partnerships around the world, especially for critical goods such as critical minerals, semiconductors and batteries. Finally, the countries state the intent to step up efforts to strengthen channels of communication to address supply disruptions and share insights and best practices, including from respective scenario-based stress testing (European Council, 2023b). In October 2025, the G7 and industry partners announced a first round of strategic projects and measures under the **Critical Minerals Production Alliance** to accelerate the development and security of critical minerals supply chains. This first round of 26 new investments, partnerships, and measures will accelerate and unlock USD 6.4 billion of critical minerals projects, essential in defence, clean energy, and advanced manufacturing supply chains (Government of Canada, 2025).

The EU has also engaged in **trade and technology councils**, partly aimed at discussing supply chains, with India and the US. Moreover, in its cooperation with countries such as Japan and Canada, the EU is seeking to develop **economic security partnerships** (European Commission, 2025n; European Council, 2025).

The EU has entered into **memoranda of understanding (MoU) for critical raw material** access, linked to goals in its Critical Raw Materials Act and with the help of its Global Gateway programme. Those MoUs were entered into with countries such as Rwanda, the DRC, and Zambia. Moreover, the European Commission has launched **Clean Trade and Investment Partnerships (CTIPs)** to strengthen EU diversification of supply chains. The first CTIP, with South Africa, focuses on clean energy, investment, skills, technology, and strategic industries, and will be complemented by a **Global Gateway** investment package (European Commission, 2024c; European Parliament, 2025).

4 Policy fitness assessment: how does EU policy compare to existing evidence and best practices?

The EU has begun undertaking risk assessments and mapping strategic dependencies. It should continue developing these approaches, drawing on today's technology and data access. One goal could be to establish a joint EU platform for intelligence on supply-chain risks based on high-frequency data, which member states and their agencies could access. Moreover, the EU's various risk assessments could benefit from more coherence, as we noted in National Board of Trade (2025c). This will be increasingly important as the EU maps supply-chain risks across sectors and seeks to implement a wide array of economic security initiatives from export controls, FDI screening, data and research security, to industrial policies. Finally, the EU could benefit from stress testing critical supply chains together with important trading partners.

The EU has a relatively large focus on industrial policies to minimise risk. Interventionist industrial policies aimed at re-shoring supply chains may be needed in a few cases where dependency on an unreliable trading partner can jeopardise EU security, for example, in access to certain critical raw materials (National Board of Trade, 2024b). At the same time, it is well-noted in the evidence on supply-chain resilience that risks are concentrated to relatively few products sourced from a few non-OECD countries, primarily China. Therefore, it should be noted that EU competitiveness can be harmed if it develops industrial policy programmes aimed at large-scale home-shoring of production – or if it imposes other trade-distortive policies – for products that can be sourced from reliable trading partners.

The EU is also ramping up efforts on stockpiling. However, experiences from the Covid-19 pandemic and the war in Ukraine show that such strategies are not a panacea. Instead, a diversified supply and high productive capacity, with an agile private sector, are likely to have a greater impact.

Another strategy to improve supply-chain resilience is to promote strategic indispensability, which entails increasing the dependence that trading partners have on EU companies' supply. This area appears relatively under-explored in the EU and could be further emphasised as an avenue to address supply-chain risks. To improve the EU's competitiveness and thereby increase its strategic indispensability, the single market needs further refining. Integration, not least for services and capital, rapidly needs improvement, and trade and competitiveness effects of EU regulation need to be further addressed (National Board of Trade, 2025c). This also means ensuring that the growing Economic Security Agenda is fit for purpose, one example being that the EU's FDI screening could be improved to facilitate more investments from trusted trading partners (National Board of Trade, 2024a).

The public-private partnerships on supply-chain resilience so far appear to be relatively limited, consisting more of plans and the imposition of risk assessments than established two-way cooperation. It will be important for the European Commission and the EU member states to continue working on formats to cooperate with the

private sector on terms that ensure feasibility and benefits of participation for the private sector, as well as the protection of intellectual property, data, and know-how. Specifically, the EU's approach to working with its private sector in risk assessments should be improved.

The EU's efforts to improve conditions for companies to diversify through liberalising trade with more partners is noteworthy: progress is being made with important trading partners. At the same time, there is a need to continue developing the EU's trade offer, for example, with more targeted deals for areas such as critical raw materials and digital trade. In this regard, the EU should continue developing its trade and development offer, including by prioritising more resources toward this area (National Board of Trade, 2025c). In addition, we have suggested that the EU should spearhead the creation of a rules-based trade coalition, which could facilitate trade by simplifying rules of origin among EU FTA partners and promote the creation of new rules for the green and digital economy (National Board of Trade, 2025b).

The EU is cooperating on supply-chain resilience with partners, including in the G7 and in conversations with the CPTPP, as well as bilaterally with countries such as Canada and Japan. At the same time, the EU's approach to including economic security and preparedness agreements could be further improved (National Board of Trade, 2025a; National Board of Trade 2025c). One goal could be to enter into economic security agreements or partnerships, for example, in the G7 or with OECD countries. Moreover, mutual cooperation clauses for preparedness could be included in EU FTAs to a larger degree.

5 Conclusion and policy recommendations

The resilience of supply chains is increasingly a goal of policymakers. Evidence consistently shows that the most effective way to build resilience is through diversified and open trade, not through home-shoring. Studies by the OECD, IMF, and others demonstrate that while bringing production home can reduce some exposures, it also lowers efficiency and can increase vulnerability to domestic shocks. The data also reveal that the EU's strategic dependencies are concentrated in a small set of products where dependence is high on non-OECD countries, primarily China.

The EU has made substantial progress in developing a policy framework to help its private sector strengthen supply-chain resilience. Initiatives such as the Economic Security Strategy, the Preparedness Union, the Critical Raw Materials act and Clean Trade and Investment Partnerships (CTIP) mark important steps toward a more systematic approach to identifying and managing vulnerabilities across value chains. Despite progress, the EU's resilience agenda remains somewhat fragmented and tilted toward industrial policy measures, while the benefits of international trade and diversification through trade policy liberalisation with trusted partners could be further emphasised.

Our **policy recommendations** are to focus on improving risk assessments, ensuring deeper and better two-way public-private cooperation, gearing industrial policy measures towards improved productivity, and strengthening the focus on measures that enhance trade openness. Simplifying rules and harmonising the single market – especially for services and capital – as well as expanding it geographically, will be key to achieving these goals. Other important priorities are building strategic indispensability with trading partners, diversifying trade to trusted extra-EU partners, and developing the EU's economic security partnership offer. Ultimately, the EU's supply-chain resilience will depend less on self-sufficiency and more on assessing and addressing risks related to specific partners – China in particular – while maintaining overall openness, diversification, and underlying market conditions such as good regulation and infrastructure.

References

Arjona, R., Connell, W. and Herghelegiu, C. (2023). An enhanced methodology to monitor the EU's strategic dependencies and vulnerabilities. Publications Office of the European Union, Luxembourg.

Bertuzzi, L. (2025). EU plans for securing tech supply chains to be discussed on Sept 25. MLex. Available at: <https://www.mlex.com/mlex/articles/2389067/eu-plans-for-securing-tech-supply-chains-to-be-discussed-on-sept-25>

Brandon-Jones, E., Squire, B., Autry, C.W. and Petersen, K.J. (2014). A contingent resource-based perspective of supply chain resilience and robustness. *Journal of Supply Chain Management*, 50(3): 55-73.

European Central Bank (ECB) (2025). How vulnerable is the euro area to restrictions on Chinese rare earth exports? Economic Bulletin, Issue 6/2025, Box 1. Available at: https://www.ecb.europa.eu/press/economic-bulletin/focus/2025/html/ecb.ebbox202506_01~44d432008e.en.html

European Centre for International Political Economy (ECIPE) (2022). Should the EU pursue a strategic ginseng policy? Trade dependency in the brave new world of geopolitics. ECIPE Policy Brief No. 05/2022. Available at: <https://ecipe.org/publications/trade-dependency-in-the-brave-new-world-of-geopolitics/>

European Centre for International Political Economy (ECIPE) (2025). Europe's economic security in services. Available at: <https://ecipe.org/blog/europes-economic-security-in-services/>

European Commission (2020a). The EU toolbox for 5G security | Shaping Europe's digital future. Available at: <https://digital-strategy.ec.europa.eu/en/library/eu-toolbox-5g-security>

European Commission (2020b). Trade Policy Review – An Open, Sustainable and Assertive Trade Policy. COM (2021) 66 final. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0066>

European Commission (2021). Strategic dependencies and capacities. Commission Staff Working Document, No. SWD(2021)352 final, DG for Internal market, Industry, Entrepreneurship and SMEs. Available at: [swd-strategic-dependencies-capacities_en.pdf](https://ec.europa.eu/economy_finance/swd-strategic-dependencies-capacities_en.pdf)

European Commission (2022a). EU strategic dependencies and capacities: second stage of in-depth reviews. Commission Staff Working Document, No. SWD(2022)41 final, DG for Internal market, Industry, Entrepreneurship and SMEs. Available at: [DocsRoom - European Commission](https://ec.europa.eu/economy_finance/docs/DocsRoom-European-Commission)

European Commission (2022b). NIS2 Directive: securing network and information systems | Shaping Europe's digital future. Available at: <https://digital-strategy.ec.europa.eu/en/policies/nis2-directive>

European Commission (2023a). An EU approach to enhance economic security. Joint Communication by the European Commission and High Representative, 20 June. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_23_3358

European Commission (2023b). Anti-Coercion Instrument. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_23_6804

European Commission (2024a). Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401252

European Commission (2024b). European Chips Act: The Chips for Europe Initiative | Shaping Europe's digital future. Available at: <https://digital-strategy.ec.europa.eu/en/factpages/european-chips-act-chips-europe-initiative>

European Commission (2024c). EU and Rwanda sign a Memorandum of Understanding. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_24_822

European Commission (2025a). Joint Communication to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the “European Preparedness Union Strategy”. JOIN (2025) 130 final of 26 March 2025.

European Commission (2025b). 2025 Strategic Foresight Report – Resilience 2.0: Empowering the EU to thrive amid turbulence and uncertainty. Available at: https://commission.europa.eu/strategy-and-policy/strategic-foresight/2025-strategic-foresight-report_en

European Commission (2025c). Internal Market Emergency and Resilience Act – Internal Market, Industry, Entrepreneurship and SMEs. Available at: https://single-market-economy.ec.europa.eu/single-market/internal-market-emergency-and-resilience-act_en

European Commission (2025d). EU Preparedness Union Strategy to prevent and react to emerging threats and crises. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_25_856

European Commission (2025e). Protecting EU transport in times of crisis: Commission adopts Contingency Plan for Transport – Mobility and Transport. Available at: https://transport.ec.europa.eu/news-events/news/protecting-eu-transport-times-crisis-commission-adopts-contingency-plan-transport-2022-05-23_en

European Commission (2025f). Ensuring global food supply and food security – European Commission. Available at: https://agriculture.ec.europa.eu/common-agricultural-policy/agri-food-supply-chain/ensuring-global-food-supply-and-food-security_en

European Commission (2025g). 2025 State of the Union Address by President von der Leyen. Available at:

https://ec.europa.eu/commission/presscorner/detail/en/speech_25_2053

European Commission (2025h). Connecting Europe Facility – European Climate, Infrastructure and Environment Executive Agency. Available at:

https://cinea.ec.europa.eu/programmes/connecting-europe-facility_en

European Commission (2025i). REPowerEU. Available at:

https://commission.europa.eu/topics/energy/repowereu_en

European Commission (2025j). Chemicals strategy – Environment – European Commission. Available at: https://environment.ec.europa.eu/strategy/chemicals-strategy_en

European Commission (2025k). A pharmaceutical strategy for Europe – Public Health. Available at: https://health.ec.europa.eu/medicinal-products/pharmaceutical-strategy-europe_en

European Commission (2025l). Commission Work Programme 2026 — Europe’s Independence Moment (COM (2025) 870 final). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52025DC0870>

European Commission (2025m). EU Trade agreements. Available at:

https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

European Commission (2025n). EU and Japan reaffirm close cooperation on trade and economic security – Trade and Economic Security. Available at:

https://policy.trade.ec.europa.eu/news/eu-and-japan-reaffirm-close-cooperation-trade-and-economic-security-2025-05-08_en

European Commission (2025o). EXternal Vulnerability Index (EXVI) – Internal Market, Industry, Entrepreneurship and SMEs. Available at: https://single-market-economy.ec.europa.eu/publications/external-vulnerability-index-exvi_en

European Commission (2025p). RMIS - Raw Materials Information System.

Available at: <https://rmis.jrc.ec.europa.eu/>

European Commission (2025q). EU trade agreements accelerate EU export growth and support diversification. Available at:

https://ec.europa.eu/commission/presscorner/detail/en/ip_25_2569

European Council (2023a). European Council conclusions on China, 30 June 2023.

Available at: <https://www.consilium.europa.eu/en/press/press-releases/2023/06/30/european-council-conclusions-on-china-30-june-2023/>

European Council (2023b). G7 Leaders’ Statement on Economic Resilience and Economic Security. Available at: <https://www.consilium.europa.eu/en/press/press-releases/2023/05/20/g7-leaders-statement-on-economic-resilience-and-economic-security/>

European Council (2025). EU-Canada summit. Available at:

<https://www.consilium.europa.eu/en/meetings/international-summit/2025/06/23/>

European Investment Bank (EIB). (2024). Navigating supply chain disruptions: New insights into the resilience and transformation of EU firms. Available at: <https://www.eib.org/en/publications/20240179-navigating-supply-chain-disruptions>

European Parliament. (2025). Clean trade and investment partnerships: A new instrument in the EU's trade policy toolbox | Think Tank | European Parliament. Available at: [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2025\)769576](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2025)769576)

Government of Canada. (2025). Canada unlocks 26 new investments and partnerships with 9 allied countries to secure critical minerals supply chains. Available at: <https://g7.canada.ca/en/news-and-media/news/canada-unlocks-25-new-investments-and-partnerships-with-9-allied-countries-to-secure-critical-minerals-supply-chains-nr/>

International Monetary Fund (IMF). (2025). Supply Chain Diversification and Resilience. IMF Working Papers 2025/102. Available at: <https://www.imf.org/en/publications/wp/issues/2025/05/23/supply-chain-diversification-and-resilience-567065>

Miroudot, S. (2020). Reshaping the policy debate on the implications of COVID-19 for global supply chains. *Journal of International Business Policy*, Vol. 3/4, pp. 430-442, <https://doi.org/10.1057/s42214-020-00074-6>.

Miroudot, S. and Weingold, B. (2024). Supply chain myths in the resilience and deglobalization narrative: consequences for policy. *Journal of International Business Policy*. Available at: <https://link.springer.com/article/10.1057/s42214-023-00170-3>

National Board of Trade (2020). Improving economic resilience through trade – should we rely on our own supply? The National Board of Trade Sweden. Available at: <https://www.kommerskollegium.se/en/analyses-and-seminars/publications/reports/2020/improving-economic-resilience-through-trade/>

National Board of Trade (2021). An EU Trade Policy for Geopolitical Ends – clashing perspectives and policy recommendations. Available at: <https://www.kommerskollegium.se/en/analyses-and-seminars/publications/reports/2021/an-eu-trade-policy-for-geopolitical-ends/>

National Board of Trade (2023a). The Underappreciated Role of Imports. Available at: <https://www.kommerskollegium.se/globalassets/publikationer/rapporter/2023/the-underappreciated-role-of-imports.pdf>

National Board of Trade (2023b). The Need for Enhanced EU Cooperation with the CPTPP. Available at: <https://www.kommerskollegium.se/en/analyses-and-seminars/conferences-and-seminars/webinar-eu-trade-integration-with-the-asia-pacific/the-need-for-enhanced-cooperation-with-the-cptpp/>

National Board of Trade (2024a). Making the EU Safer, Greener, more Competitive and Digitalised. Available at: <https://www.kommerskollegium.se/analyser-och-seminarier/publikationer/rapporter/2024/making-the-eu-safer-greener--more-competitive-and-digitalised---trade-policy-recommendations--to-the-new-european-commission/>

National Board of Trade (2024b). How to secure the EU's rare earth supply. Available at: <https://www.kommerskollegium.se/en/analyses-and-seminars/trade-policy-insights/critical-minerals--important-pieces-on-the-geopolitical-chessboard/>

National Board of Trade (2025a). The EU's Free Trade Agreements – a tool to enhance crisis preparedness. Available at: <https://www.kommerskollegium.se/globalassets/publikationer/rapporter/2025/the-eus-free-trade-agreements-crisis-preparedness.pdf>

National Board of Trade (2025b). A New Trade Policy Era – the need for a rule-based trade coalition. Available at: <https://www.kommerskollegium.se/en/analyses-and-seminars/publications/reports/2025/a-new-trade-policy-era-the-need-for-a-rule-based-trade-coalition/>

National Board of Trade (2025c). Ten Priorities for the EU's Economic Security Agenda. Available at: <https://www.kommerskollegium.se/globalassets/publikationer/rapporter/2025/ten-priorities-for-the-eus-economic-security-agenda.pdf>

National Board of Trade (2025d). EU – en viktig del av Sveriges försörjningsberedskap. Available at: https://www.kommerskollegium.se/globalassets/publikationer/rapporter/2025/eu-en-viktig-del-av-sveriges_forsorjningsberedskap.pdf

OECD (2023a). Deglobalisation? The reorganisation of global value chains in a changing world. Available at: https://www.oecd.org/en/publications/deglobalisation-the-reorganisation-of-global-value-chains-in-a-changing-world_b15b74fe-en.html

OECD (2023b). Policies to strengthen the resilience of global value chains. Available at: https://www.oecd.org/en/publications/policies-to-strengthen-the-resilience-of-global-value-chains_fd82abd4-en.html

OECD (2024a). Promoting resilience and preparedness in supply chains. Available at: https://www.oecd.org/en/publications/promoting-resilience-and-preparedness-in-supply-chains_be692d01-en.html

OECD (2024b). Resilient-Supply-Chains_Brochure-2025. Available at: https://www.oecd.org/content/dam/oecd/en/events/2024/3/forum-on-critical-supply-chains--policy-tools-for-preparedness-and-responsiveness/Resilient-Supply-Chains_Brochure-2025.pdf

OECD (2024c). Towards demystifying trade dependencies: At what point do trade linkages become a concern? OECD Trade Policy Papers, No. 280. Available at: https://www.oecd.org/en/publications/towards-demystifying-trade-dependencies_2a1a2bb9-en.html

OECD (2025a). OECD Supply Chain Resilience Review: Navigating Risks. Available at: https://www.oecd.org/en/publications/oecd-supply-chain-resilience-review_94e3a8ea-en/full-report.html

OECD. (2020). Shocks, risks and global value chains. Available at:
https://www.oecd.org/en/publications/shocks-risks-and-global-value-chains_cc5f63d4-en.html

Ossa, R. (2023). One year of war in Ukraine. What has been the impact on global trade?, Views of the Chief Economist. World Trade Organization,
https://www.wto.org/english/blogs_e/ce_ralph_ossa_e/blog_ro_23feb23_e.htm.

The Swedish Agency for Growth Policy Analysis (2023). Does risk diversification work? A case study of supply disruptions during the pandemic and measures taken by the Swedish industry to improve resilience. Available at:
https://www.tillvaxtanalys.se/download/18.5b47d90d18bcc1c5bfc2ace/1699962140191/Rapport_2023_15_eng_Does%20risk%20diversification%20work.pdf

The Swedish Agency for Growth Policy Analysis (2025). Global Supply Risks and Resilience. Available at:
https://www.tillvaxtanalys.se/download/18.19705443195e5a6a52168e8c/1743671240890/Rapport_2025_03_Global%20Supply%20Risks%20and%20Resilience.pdf

World Trade Organization (WTO) (2023). World Trade Report 2023: Re-globalization for a secure, inclusive and sustainable future. Available at:
https://www.wto.org/english/res_e/publications_e/wtr23_e.htm

Sammanfattning på svenska

Summary in Swedish

Att bygga motståndskraftiga leveranskedjor har blivit ett centralt politiskt mål för EU. Erfarenheter från OECD, IMF och andra ledande institutioner visar att diversifierad och öppen handel stärker motståndskraften mer effektivt än att politiskt styra hem produktionen, vilket ofta minskar effektiviteten och ökar exponeringen för inhemska chocker. EU:s huvudsakliga strategiska beroenden är koncentrerade till ett litet antal produkter, till stor del från länder utanför OECD, särskilt Kina. EU har börjat göra framsteg mot att hantera dessa risker och stärka leveranskedjornas motståndskraft med ett antal initiativ, inklusive dess agenda för ekonomisk säkerhet och strategin för en beredskapsunion.

EU:s politiska agenda för mer motståndskraftiga leveranskedjor är dock fortfarande fragmenterad och alltför fokuserad på industripolitik som syftar till att flytta produktionen hemifrån. För att anpassa sig till bästa praxis rekommenderar analysen att man förbättrar riskbedömningarna, fördjupar samarbetet med den privata sektorn och styr industripolitiken mot produktivitet och innovation. Att stärka öppenheten i handeln genom regelförenkling, harmonisering och en fördjupad inre marknad – särskilt för tjänster och kapital – kommer att vara avgörande. EU bör också stärka det strategiska beroendet som handelspartner har av unionens producenter, diversifiera sin handel till pålitliga partner och utveckla sitt partnerskapserbjudande för ekonomisk säkerhet. I slutändan kommer EU:s motståndskraft i leveranskedjor att bero mindre på självförsörjning och mer på förmågan att bedöma och hantera risker relaterade till specifika partner – särskilt Kina – samtidigt som den övergripande öppenheten, diversifieringen och underliggande marknadsförhållanden som god reglering och infrastruktur bibehålls.

The National Board of Trade Sweden is the government agency for international trade, the EU internal market and trade policy. Our mission is to facilitate free and open trade with transparent rules as well as free movement in the EU internal market.

Our goal is a well-functioning internal market, an external EU trade policy based on free trade and an open and strong multilateral trading system.

We provide the Swedish Government with analyses, reports and policy recommendations. We also participate in international meetings and negotiations.

The National Board of Trade, via SOLVIT, helps businesses and citizens encountering obstacles to free movement. We also host several networks with business organisations and authorities which aim to facilitate trade.

As an expert agency in trade policy issues, we also provide assistance to developing countries through trade-related development cooperation. One example is Open Trade Gate Sweden, a one-stop information centre assisting exporters from developing countries in their trade with Sweden and the EU.

Our analyses and reports aim to increase the knowledge on the importance of trade for the international economy and for the global sustainable development. Publications issued by the National Board of Trade only reflect the views of the Board.

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