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Article

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Intereconomics

Suggested Citation: Felbermayr, Gabriel; Janeba, Eckhard (2024) : Improving supply security: Guidelines and policy proposals, Intereconomics, ISSN 1613-964X, Sciendo, Warsaw, Vol. 59, Iss. 3, pp. 146-153,
https://doi.org/10.2478/ie-2024-0031

This Version is available at:
https://hdl.handle.net/10419/301410

DOI: 10.2478/ie-2024-0031

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Intereconomics, 2024, 59(3), 146-153

JEL: F13, F51, L5

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Improving Supply Security: Guidelines and Policy Proposals

Supply security is threatened by technical, business, natural and policy shocks, as well as geopolitical tensions. Is there a rationale for policy intervention? If yes, what are efficient and effective measures that achieve de-risking? This article first explains why private incentives do not generally lead to an optimal diversification of supply sources, and then discusses measures that strengthen protection against and resilience in the face of shocks. Governments should refrain from policies that further disincentivise diversification such as the *ex post* skimming of excess profits when adverse shocks force the halt of production and should work on framework conditions that facilitate diversification. Importantly, most measures are best taken at the EU level.

In recent years, various shocks, including pandemic-related production interruptions abroad, disruptions of maritime transport routes caused by pirates or extreme weather as well as politically imposed sanctions and counter-sanctions, have led to bottlenecks in supply chains. These have had a lasting impact on industrial production and triggered, at least partly, higher prices. Increasing geopolitical tensions and higher climate risks make such disruptions more likely.

The EU has a higher degree of openness than the US or China. It is, therefore, more exposed to external disruptions of supply chains. Because of its lack of a common foreign policy and a military, it is also more vulnerable to opportunistic behaviour of foreign powers that seek to employ asymmetric economic interdependence as a geo-economic weapon. This danger became clear in 2021 and 2022, when Russia first raised uncertainty about gas supplies to Europe and eventually massively cut its exports.

A major reason for the supply risks and for high procurement prices for important raw materials and intermediate products was and still is the partly low diversification of the supplier portfolio of European companies or the supply channels through which they obtain their imports.

Against this background, many countries have begun to fundamentally rethink their foreign economic policies, which have often led to a much more active industrial policy. Both the United States and the EU are stepping up efforts to secure their strategic autonomy and to reduce blackmail opportunities due to one-sided dependencies. The focus is on China and Russia, but the list of potentially problematic suppliers has grown longer in recent years.

This paper presents the difficulties arising in the identification of strategic dependencies. It derives welfare-economic justifications for government interventions in supply chains. It elaborates general regulatory principles for supply chain regulation. Finally, it discusses measures that should lead to an improvement in the diversification of the supplier portfolio.

Identifying strategic dependencies

How can strategic dependencies be identified? Objective answers are hard to come by because the available data are incomplete and circumstances are constantly changing. Therefore, there is a risk that government interventions are poorly calibrated. The following passages highlight some fundamental premises for evidence-based economic policy in the supply chain context.

The need for a European perspective

The first such premise is that strategic dependencies and crisis preparedness need to be discussed at the EU level.

Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

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Within the EU single market, production networks are densely interconnected. Moreover, member states have ceded trade policy and other relevant competences – such as some regulation of foreign investments – to the EU.[1] Therefore, interdependencies should be examined at the EU level, not only at the national level; economic policy responses must also be primarily sought and found at the EU level.

What is considered scarce depends on the context

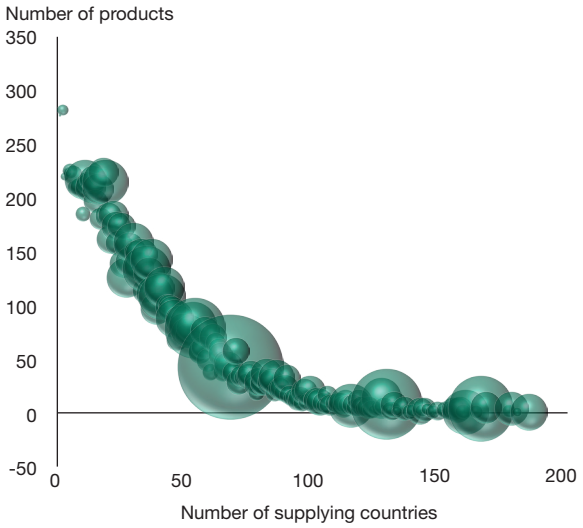
The second premise is that the perception of scarcity is highly context dependent. During the pandemic, a lack of medical face masks was reported; shortly after, there was talk of shortages of reagents and glass vials for the manufacturing of tests and vaccinations, leading to price increases. Based on rumours, bank-run-like effects can lead to shortages, even if the security of supply is not actually at risk at all. In addition to sensitive communication, reliable, up-to-date and readily available real-time data can help avoid such episodes.

Besides such rather anecdotal cases, supply problems are also discussed from an industrial policy perspective. Around the introduction of electric vehicles, dependencies on electronic components such as chips have become more apparent. Shortages have weighed on the output of the German motor vehicle industry in 2021 and 2022. However, in the meantime, the chip shortage has receded and there are already warnings of oversupply.[2]

In the case of rare metals, which are important to produce batteries as well as wind turbines, the focus also changes constantly when new deposits are found or developed,[3] and when innovations make substitutes possible or savings achievable. Especially in metals, boom and bust cycles and high price volatility are the rule rather than the exception.

There is a danger that hectic policy measures that curb these fluctuations are counterproductive because increasing supply typically takes time and therefore their effect often only kicks in when shortages are already decreasing. Ill-considered policies geared to short-term needs also run the risk of failing to keep future shortages in mind. Thus, a poorly designed government commodity policy would not reduce but rather fuel price volatility.

Figure 1
Supplier diversification of EU imports



Note: The size of the bubbles is proportional to the import value. 280 products come from a single supplier, 779 products are supplied by at most three countries.

Source: Own elaboration based on Comtrade Data for 2019.

Information: Incomplete and asymmetric

The most important data source for identifying dependencies at the product level is trade statistics. They are detailed and comparatively timely, but only refer to goods; services data are much less complete. Based on detailed product-level trade data, various authors have analysed the degree of diversification of EU imports. For example, in 2019, out of 10,280 products imported by the EU, 779 products came from a maximum of three different supplier countries (see Figure 1).

Also, in 2019, China accounted for more than 50% of global exports for almost 600 of around 5,000 products contained in the globally harmonised trade statistics (Jean et al., 2023).

Alarming as these numbers may seem, on their own, they are not informative. They must be complemented with production data, which are not available at the same level of granularity as trade data. Moreover, if no production of a certain product in a certain country in a situation of relatively free international trade is observed, one cannot infer anything about the capabilities that can be mobilised in a situation of crisis. Technological dependencies from foreign countries, too, are rarely well observed, as they go beyond material inputs but could be crucial in a situation of conflict. Finally, elasticities of substitution between products or sources are notoriously hard to estimate,

1 See, e.g. Article 6 paragraph 9 last sentence Regulation (EU) 2019/452.
2 See, for example, the reports in the *Frankfurter Allgemeine Zeitung* on 9.1.2023 ("Autohersteller leiden weiter unter Chipmangel") and in *Neue Zürcher Zeitung* on 10.9.2022 ("Nach dem Chip-Mangel kommt das Überangebot").
3 For example, on 16 February 2023, the *The Economist* reported that the metal cobalt was suddenly superabundant.

because there are no reliable price data. Information is, therefore, incomplete.

It would be naïve to believe that the missing data could be easily obtained by surveying companies. Supply chain data are sensitive because they allow for the drawing of conclusions on firms' productivities and vulnerabilities. Hence, information is also asymmetric.

Insights from macro data

What we know about vulnerabilities is, therefore, either highly partial and thus prone to misinterpretation, or based on relatively aggregate data.

One can obtain a comprehensive picture about aggregate dependencies from balance of payments (BoP) statistics, where trade in services as well as primary and secondary incomes are shown in addition to trade in goods.[4] The comprehensive BoP-perspective reveals that the EU's external economic relations are actually quite balanced. This is highly relevant from a geo-economic perspective because asymmetrical bilateral relations are particularly vulnerable to political abuse (Mattoo and Staiger, 2020). A bilaterally balanced BoP-position with a trade partner does, however, not imply the absence of one-sided strategic dependencies, because foreign goods can have a higher criticality in domestic value networks than vice versa.

To convincingly identify strategic dependencies, an appropriate analytical framework must not only capture European trade and production data but also incorporate global input/output relationships and production opportunities. Furthermore, information on the substitutability of goods and services by alternatives in production and consumption is needed. Felbermayr and Krebs (2023) have used such a model to study various disruptive scenarios for Germany. The key insights, which also hold for other EU countries, are

- The economy is dependent not only on imports of raw materials and industrial supplies, but also on imports of services.
- Moreover, macroeconomically relevant vulnerabilities exist not only vis-à-vis China, but also vis-à-vis other important trading partners such as the USA, UK or Switzerland.

4 Primary income refers to income from all types of foreign investment; it includes income from the posting of workers. Secondary incomes are payments without reciprocation. They are relatively insignificant in quantitative terms.

Evidence-based micromanagement is hard

There are additional complications because firms continuously adjust to changing circumstances. They also react to public policy interventions, e.g. by redirecting their sourcing, by acquiring or selling vertically integrated units, or by changing their pricing policies. Hence, the nodes in input/output networks at the company level are endogenous and changeable. A reliable and objective identification of strategic goods (or services) is very hard.

Moreover, there is a danger that lists of industries or goods worthy of protection are drawn up based on special interests rather than general welfare and may be used to subsidise domestic production, prohibit takeovers of domestic suppliers by foreign rivals, or restrict exports of goods or technologies.

That does not imply the complete rejection of such lists; they are necessary for many policies. However, there is the need for clear rules and processes that set out transparently how the list entries are generated. It is important that policies to secure the supply of raw materials and industrial inputs are based on principles that do not take specific products of firms as starting points, but instead set a regulatory framework that is helpful for many configurations of potential supply crises.

Welfare-theoretic foundations

Do firms optimally diversify?

Do companies have the correct incentives to sufficiently diversify their supply chains? Firms can insure against supply shocks by diversifying their supplier base. However, including actors other than the cost-minimal supplier in the portfolio raises costs. Firms must balance supply risks against costs. Their choice depends on many factors: the nature and strength of the correlation of the shocks, the loss of profit due to non-delivery, the possibility of varying sourcing quantities at short notice, the costs of different suppliers for different quantities of inputs, the fixed costs that arise for each active buyer-seller relationship,[5] the costs of alternative hedging options, such as warehousing or traditional insurance.

In general, one cannot expect the decentrally chosen degree of diversification to correspond to the social optimum because of externalities, lack of full information, absence of perfect competition and other distortions. Importantly, as shown by Grossman et al. (2023), when a producer cannot supply the market anymore, besides lost

5 See, for example, the overview article by Antras and Chor (2022).

profits, there is also a loss to consumers which is not fully incorporated in firm-level decision-making ("consumer surplus externality"). Hence, firms under-diversify, thereby justifying state intervention.[6]

The situation is exacerbated when distortions interact at individual stages of a supply chain, for example, when incomplete information hinders the operation of price signals along the supply chain beyond the buyer. Then, the buyer's behaviour generates a potentially negative externality on further (downstream) firms that cannot be (fully) internalised by contracts (Liu, 2019). In other words, in complex supply networks, systemic risks can arise that are not addressed by market activity alone.

The security externality

Procurement decisions of domestic companies can have an impact on a country's security: a strong concentration of procurement of an essential input on one supplier country makes a government vulnerable to blackmail by that supplier country.

However, domestic "strategic autonomy" does not enter the decision-making calculus of companies because it has characteristics of a public good: companies are not willing to incur higher costs to improve their governments' strategic autonomy through better diversification because the respective contribution of each company on its own has only a very small effect on its own success. Therefore, under-diversification occurs.

In the presence of such security externalities, state intervention can be justified by the divergence of individual economic and total economy rationality.

Moral hazard through rescue policies

These problems are exacerbated if companies can count on government support measures such as short-time allowances, liquidity assistance or subsidies in the event of a supply disruption. All of these reduce the incentives to invest in their own supply security. To eliminate the problem, governments would have to be able to commit *ex ante* – i.e. before shocks occur – that there will be no support measures, even if this causes major economic distortions. However, such "no-bail-out" commitments are rarely credible. The resulting "moral hazard" reinforces the problems mentioned above and drives an even larger wedge between the socially optimal degree of diversification and the one resulting from decentralised decisions.

6 There is the theoretical possibility of over-diversification, which is discussed in Grossman et al. (2023).

Excess profit taxation

If an industry is hit by a supply chain crisis, firms within that industry that have diversified their supply relationships continue production of final goods while firms that have not will have to stop. Output available to consumers falls, and the resulting scarcity drives prices up. Firms unable to produce register losses, those that invested in diversification benefit from high price and record bumper profits. In such an environment, public opinion tends to turn against the firms that continue producing and blames them for causing "greedflation". In the recent crisis, governments have responded by increasing profit taxes for such firms (e.g. in the electricity sector).

Such *ex post* excess profit taxation is highly problematic, as the concept of excess profits is ill-defined and the uncertainty in tax policy resulting from ad hoc adjustments of tax rates puts off investment. Most importantly, if firms expect a skimming of profits in supply chain crises, they lose any incentives to incur the *ex ante* costs of diversifying their supply chains. Therefore, to encourage risk-conscious behaviour, governments should credibly renounce any form of excess profit taxation.

General policy principles

Because the future needs of European industry and the nature of possible disruptions affecting supply chains are unknown today, the best strategy is to create general structures that increase security of supply and improve resilience to shocks. We will now turn our attention to government instruments, safeguards against protectionist abuse, and the need for a regulatory framework that targets the security externality and moral hazard problem.

Decoupling and friendshoring are not the solution

Eppinger et al. (2022) show that a decoupling from individual supplier countries would not contribute to supply security. While European economies might experience less significant negative effects from disruptions in foreign supplies if they relied less on imports, the costs of decoupling are orders of magnitude higher than the benefits of reduced dependence. Even if one were to allow security policy arguments to apply alongside economic considerations, these would have to be given an extremely high monetary valuation for the calculation to turn around. In addition, if domestic supply suffers an adverse shock while foreign supply is restricted, the damage would be tremendous.

Starting from a situation of well-diversified supply networks, it obviously does not make sense to concentrate

procurement on friendly countries ("friendshoring") because this reduces the diversity of domestic supply relationships. Conversely, expanding supply networks to countries with which friendly relations exist may make good sense from a security perspective if diversification for critical products that cannot easily be substituted is improved in this way.

Expand reciprocity of bilateral dependencies

Mattoo and Staiger (2020) show that bilateral dependencies can be abused for opportunistic deployment. The attractiveness of such behaviour can be reduced by the (tacit) threat of countermeasures. However, this requires the existence of a potential threat. It is therefore important not only to have a good grasp and understanding of one's own dependencies, but also of trading partners' dependencies on European inputs and technologies.

Gehrke and Ringhof (2023) recommend expanding technological leadership positions in a targeted manner to maintain sustainable pressure points vis-à-vis trading partners. The best instrument for this is a smart innovation and technology promotion policy that specifically seeks to strengthen comparative advantages instead of compensating for comparative disadvantages.

Coordination of policy interventions

Policymakers should ensure that other foreign policy initiatives do not have counterproductive effects on security of supply. All measures relevant to foreign trade should be examined regarding their intended and unintended as well as direct and indirect effects on the security of supply, especially regarding the question of whether they promote or impede diversification.[7] All measures should be coordinated as far as possible with partner countries.

Measures to promote diversification

"Breathing tariffs"

"Breathing tariffs" are import duties that vary with global market conditions or with import shares. They could be used to discourage the excessive dependence on few supply sources. Indeed, a targeted (second-best) policy would be to design bilateral tariffs that increase in the share of sourcing obtained from the trade partner in question. Such a quota tariff violates the most favoured nation principle of WTO law but could possibly be defended with the help of legitimate national security objectives under Article XXI of the General Agreement on Tariffs and Trade (GATT, National Security Exception). Of course, where the EU still has external tariffs on inputs or raw materials, it can vary them within the framework agreed under WTO law, i.e. without discriminating against trading partners. This cannot directly promote diversification, because the system would have to be applied equally to all trading partners. However, the price effects of shortages could be mitigated in this way. It could also provide incentives to develop alternatives to the respective imported goods.

Trade agreements

The EU should push for trade agreements that minimise import tariffs or non-tariff restrictions on trade. However, this requires a strategic shift: instead of focusing primarily on opening new sales markets for European goods and services, the security of supply for its own economy must gain in importance as a strategic goal for EU trade policy. The EU must conclude agreements with countries that are particularly important for the procurement of raw materials.

Often resource-rich countries have been granted unilateral trade advantages by the EU in the context of the Generalised System of Preferences, making access to the European market conditional on compliance with human or environmental rights. In times of greater scarcity of raw materials and high prices, the conditions for granting preferences should be reviewed and adjusted if necessary. The negotiation and adoption of agreements on critical minerals – a process the EU has started with the USA or Chile, for example – is welcome even if it is a step away from comprehensive free trade agreements under Article XXIV GATT.

International investment agreements

In many cases, it is not possible to diversify the supplier base because there are only a few countries where certain raw materials are produced or because the production capacities are limited. It can therefore make sense for European companies to invest in countries rich in raw materials to find alternative sources of supply. Because legal certainty is often not sufficiently guaranteed in these countries, investment promotion and protection agreements (international investment agreements, IIAs) have been concluded in the past. These have fallen into disrepute since the discussion about the Transatlantic Trade and Investment Partnership agreement. However, if for-

7 The proposed EU Corporate Sustainability Due Diligence Directive is an interesting example. In its design, the effects on diversification of EU supply relationships do not seem to have received substantial attention by lawmakers.

eign investments are perceived as too risky and cannot be properly insured, they are not made. The result can be that the procurement base of domestic companies is not sufficiently diversified.

Trade and investment guarantees

EU countries maintain well-functioning systems of export credit insurance. These can be adapted to give companies incentives to better diversify their sales markets, for example by making the conditions dependent on how high the share of EU companies in the target markets already is. Moreover, instruments to insure import transactions are much less developed.

Many EU countries grant guarantees for foreign investments, but only under certain conditions and if an IIA is available. It would make sense to take the criterion of securing the supply of raw materials into account when granting guarantees.

Securing transport corridors

For raw materials and industrial primary products to reach Europe safely and at good prices, efficient and secure transport infrastructure is needed. The Chinese Belt and Road Initiative is aimed precisely at opening procurement and sales markets for its own benefit; development policy goals take a back seat. Infrastructure such as ports, road or rail connections are in principle available to all trading partners of the countries in which they are developed. In practice, however, it often turns out that access is not equal and Chinese companies are favoured (Bluhm et al., 2018). It is important that Europe, e.g. in its Global Gateway approach,[8] makes attractive offers to countries in the Global South. In addition to the human rights situation, arguments such as the country's own security of supply or geostrategic influence should find their way into investment decisions made by publicly financed development banks. Furthermore, the protection of transport routes must be given higher priority (see, for example, Sandkamp et al., 2022). The recent announcements by the EU and the USA to push ahead with the development of an India-Middle East-Europe Economic Corridor and a Trans-African Corridor within the framework of the Partnership for Global Infrastructure and Investment are therefore to be welcomed.[9]

When diversification is not possible: Strategic reserves, urban mining and R&D

It is rarely feasible or desirable to fully control all supply risks through diversification. In the case of products, the manufacture of which is associated with strong economies of scale (such as battery cells or computer chips), an increase in the global number of production sites is associated with substantial cost increases. In such markets, purely market-based processes lead to a sub-optimally small number of producers in the presence of a security externality. Therefore, it may be justified to promote the location, establishment or scaling of production facilities in the EU (or even abroad) with subsidies.[10] However, the correct calibration of subsidy policy is difficult. The risk of subsidy races is high and there is a threat of global overcapacity.

For products where there are only a few sources of supply or where the risks over the possible suppliers are highly correlated, the establishment of strategic stocks may be necessary, as for example with mineral oil, preferably at the EU level. However, because stockpiling is expensive when interest rates are positive, there are limits to this strategy. The government should consider providing additional fiscal incentives to build sufficient stocks of critical inputs. It should ensure that companies can create storage capacities, which requires appropriate zoning and the approval of storage buildings.

A second means of improving the security of supply of poorly diversifiable products is through fiscal and regulatory subsidies for recycling. "Urban mining" is the extraction of valuable raw materials, such as copper, silver and gold from waste, such as that produced by shredding old cars or recycling wind turbines. This requires suitable facilities in the EU and cooperation among member states. Above all, it needs a minimum of planning certainty, because if commodity prices fall on the world markets, the processing plants will no longer be profitable.

A third sensible approach is to direct research policy towards exploring technological substitutes for raw materials or intermediate products that are difficult to diversify.

Government as buyer

In many areas, the state is itself active as a buyer, albeit often indirectly, e.g., the market for medical products is heavily dominated by demand from public health insur-

8 https://www.consilium.europa.eu/en/policies/global-gateway/.
9 https://ec.europa.eu/commission/presscorner/detail/en/ip_23_4421.

10 Modern research on the meaningfulness of industrial policy is less sceptical than older research, both in terms of its theoretical foundation and empirical evidence (see, for example, Liu, 2019).

ance schemes. In the last few decades, there has been a strong focus on reducing the pecuniary costs for the health system, for example with mandatory discounts for the pharmaceutical industry, which has reacted by outsourcing and concentrating on the cheapest suppliers. At the same time, health insurance authorities do not seem to have prioritised security of supply sufficiently, presumably because this would have entailed additional costs. As a result, bottlenecks arose when shocks occurred. In such highly regulated markets, the lack of diversification is not always a result of market failure, but occasionally of government or regulatory failure.

In these markets, it is necessary for member states to consider and coordinate the effects of one's own measures on the integrity of the EU internal market. In other EU states, there is concern that Germany is offering up to 50% higher prices to the pharmaceutical industry to secure its own supply of medicines, which can endanger the security of supply in other countries.

New markets for supply security

Finally, newly created markets can counteract the tendencies towards suboptimal low diversification or stockpiling described above.[11]

Governments could commit in advance to the purchase of a predetermined quantity of the respective product at a certain price. This instrument is known as Advance Market Commitment (AMC). To use AMCs to prepare for crises, there should be a clear definition of when the obligation to purchase by the public sector takes effect. The trigger could be, for example, that the market price of the commodity exceeds a certain level.

When such AMCs are in place, companies can better plan for crises. This reduces the concern that the government will intervene in market prices or tax (windfall) profits in these situations, as they have previously contractually committed to these AMCs. This makes investments in alternative supply channels and stockpiling more attractive.

Another option comes in the form of capacity markets, which are found in the electricity market and are used in the USA or France (Cramton et al., 2013). Electricity producers apply for contracts on the capacity market, with which they enter into the obligation to supply electricity at a predetermined price at certain times. In return, they receive payment on the capacity market.

11 Innovative market design can also contribute to easing the situation after a crisis has occurred, see, e.g. Cramton et al. (2020).

A European supply security office

For effective and efficient supply security management, the public sector needs comprehensive and adequate information. In addition, competences are needed for the development and implementation of preventive measures, which must be synchronised and harmonised across the EU. Following the Scientific Advisory Board of the German Ministry for Economic Affairs and Climate Action, we therefore propose the establishment of a European supply security office (ESSO).[12]

As we have argued above, *ex post* government support measures may compromise firms' incentives to diversify. Thus, governments should create clear structures and rules for the insurance of supply chain risks. However, governments regularly cannot deny state support in the event of a risk materialising. Therefore, it is appropriate for the government to be aware of the risks and, under certain circumstances, to intervene in a forward-looking regulatory manner if high vulnerabilities build up in companies or sectors.

ESSO should collect, systematise and provide quality-assured relevant information and carry out corresponding analyses.[13] In addition to internalising cross-border effects within the EU, an EU institution can use economies of scale absent at the national level.

ESSO should monitor and assess systemic risks in European supply networks and develop measures to limit systemic risk and introduce them into the political process. It could assess and evaluate measures taken by member states or third countries regarding their impact on European security of supply. It could design and supervise crisis resilience audits (stress tests) recommended in the EU's draft Raw Materials Act and accredit private auditors. Finally, it could be tasked with coordinating joint strategic reserves.

ESSO could produce or commission reports on potential systemic risks in supply networks and give specific mandates to expert groups to assess supply chain risks.

12 The provisional deal on Europe's crisis preparedness in the IMERA/SMEI dossier reached on 1 February 2024 establishes an Internal Market Emergency and Resilience Board. It remains to be seen whether this Board will establish itself as a forum for fruitful discussions on matters relating to supply security from a European perspective.

13 Experience with the European Systemic Risk Board (ESRB) can be used here. The ESRB is responsible for macro-prudential oversight of the EU financial system and for the prevention and mitigation of systemic risk. As part of its mandate, the ESRB monitors and assesses systemic risks and issues warnings and recommendations as appropriate.

It could publish, like the ESRB risk dashboard, a set of quantitative and qualitative indicators of systemic risk in European supply networks.

ESSO should be integrated into the interaction of national and European institutions in such a way that redundancies, unclear responsibilities and additional bureaucracy are avoided. Because questions of international security of supply are inherently connected with political, especially foreign policy, aspects, for which the responsibilities are shared between the EU and the member states, a European supply security office should not be constructed as an independent agency with its own decision-making powers but should work with the European and national institutions.

Conclusions

Our economic model depends on secure and largely unhindered access to world markets. In recent years, this system has come under threat as various trading partners have sought to exploit Europe's dependence on certain supplies from abroad and on certain export markets to obtain foreign policy concessions. At the same time, the COVID-19 pandemic has highlighted how vulnerable domestic supply chains and security of supply can be.

Given incomplete and asymmetric information, it is impossible to draw up lists of critical goods, technologies, or sectors according to objective standards for the purpose of financial support by the general government or deriving foreign trade policy measures.

To avoid the emergence of dependencies, an appropriate regulatory framework is needed that can internalise the existing security externality. We have proposed several measures that make it easier for companies to diversify their supply networks, such as free trade agreements, and the promotion and facilitation of foreign investment to develop alternative sources of supply.

A European perspective is central to both the assessment and the development of economic policy responses. Not only does competence for most foreign economic policy fields lie at the EU level, the integrity of the internal market and its dynamism are the best insurance against attempts from abroad to instrumentalise any dependencies. To ensure that national policies and initiatives are optimally dovetailed with the European level, a European supply security office should be established to harmonise the collection of data on supply chains, develop uniform stress tests and monitor the impact of national policies on the internal market.

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