The Economic Security Strategy: Regional Trade Vulnerabilities and Economic Dynamics

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Introduction and Context

The renewed interests of academics and policymakers around trade dynamics in Europe reflects rising concerns over economic security amid geopolitical fragmentation, a topic more and more present in political debates. In response to this, the EU has updated its approach to trade, promoting an *Open Strategic Autonomy* for an European *Economic Security Strategy*, aimed to reconcile openness with risk management by identifying and dealing with critical dependencies. The strategy emphasises being "as open as possible, as autonomous as necessary," converging EU trade and industrial policy under Open Strategic Autonomy (Schmitz and Seidl, 2023). Over the years, in fact, the EU has benefited from a favourable global environment where multilateral interdependencies supported economic growth. Recent geopolitical events, however, have changed the way in which we consider trade dependencies. As noted in the Draghi Report (2024), trade dependencies have now turned to be vulnerabilities, because we are at the mercy of strategic players for our economic security.

Key Concepts: Dependencies and Vulnerabilities

Dependencies refer to reliance on a limited number of actors for goods, services, data, infrastructures, skills, and technologies, coupled with limited internal production capacity to substitute imports. Following OECD work, critical trade dependencies are trade links that combine high supply-chain disruption risk – proxied by concentrated sourcing, limited diversification possibilities and weak substitutability via domestic production or alternative inputs – and high economic importance of the product or sector for national welfare. In operational terms, supply risk is often identified where import concentration significantly exceeds global export concentration for a product, indicating under-utilised diversification opportunities, or where extra-EU suppliers dominate in markets with inherently concentrated global supply (e.g. many Critical Raw Materials).

Within this framework, vulnerabilities emerge when such critical dependencies are excessive – for example, when a limited number of suppliers control a large share of imports in sectors that are essential for public welfare or key value chains. This may raise exposure to accidental shocks and deliberate economic coercion by strong partners. Recent analyses, therefore, stress both the need to map and monitor critical dependencies using transparent criteria and to weigh de-risking interventions against the efficiency and insurance benefits provided by openness and diversified global supply chains (Draghi, 2024; European Union, 2024).

Regional Perspective: The Core of Trade Paradigm

Despite the growing importance and interest f policymakers on vulnerabilities, the existing approaches remain largely spatially neutral, overlooking the territorial embeddedness of vulnerabilities and capabilities within European production systems. Europe's economic vulnerabilities to global trade, in fact, stem from strong regional disparities in industrial structures, technological capabilities, and innovative potential, as well as from differing positions within global value chains. As a result, both the conditions that create these vulnerabilities and the impacts of potential disruptions are inherently territorial. The economic significance of these vulnerabilities hinges on each region's unique specialization or "vocation". For instance, high-tech hubs versus agro-industrial areas have extremely different needs which require to be converted in tailored policy interventions rather than one-size-fits-all national approaches.

To the best of our knowledge, this paper is the first to examine trade vulnerabilities through a subnational lens, using Italy as a prime case study. Italy is an interesting case study because it represents a core EU economy characterised by significant internal diversity in its provinces' engagement with global trade. The paper pursues two main goals: first, to conceptually define what trade dependencies and vulnerabilities mean for regional economies; and second, to empirically map these patterns across economic sectors. In doing so, it distinguishes between *market dependence*—the concentration of exports toward a few destination markets—and *supply dependence*—the reliance on a limited set of import sources.

We argue that regional economic security depends on balancing trade dependency risks against the *economic importance* of those trade flows. This perspective integrates an economic dimension, emphasizing the activities that sustain local growth, with a resilience dimension, assessing the capacity to withstand external shocks such as geopolitical tensions or tariff increases, while still preserving the benefits of openness.

Methodology for Measuring Vulnerabilities

The European Commission sets operational criteria for identifying when dependences become vulnerabilities (European Commission, 2021). Dependencies are described along three main dimensions.

First, we look at the concentration of extra-EU partners. If trade is heavily skewed from particular sources, local economies are subject to country-specific supply shocks. Operationally, this is measured by product- or sector-level Herfindahl-Hirschman Index (HHI) on extra-EU imports/exports, with vulnerability threshold set at 0.4.

In pair with this, the second criterion refers to the *importance* of external EU sources. In fact, the value chain of a product or sector discloses vulnerability also if the EU relies heavily on external partners and therefore, it is more subject to external shocks. In practical terms, this is assessed computing the weight of extra-EU trade out of the total trade basket, for imports and exports respectively. Generally, a value of this indicator higher than 0.5 is considered problematic.

Finally, product vulnerability may also emerge from the limited substitutability of extra-EU imports with domestic production. This evaluates whether local production could fulfil the needs currently met by imports in the case of a trade disruption. Following the EU approach, to proxy the EU's internal production capacity, we use total exports—encompassing both intra-EU and extra-EU flows. Therefore, substitutability by local production is quantified through the ratio of extra-EU import value to total EU export value. A value exceeding 1 serves as a risk threshold, indicating that domestic production would fall short of replacing disrupted external supplies and that dependence on extra-EU sources remains substantial (European Commission, 2021). The combination of these indicators diagnoses when dependencies become vulnerabilities.

In terms of data sources, which are always an issue at the regional level, we exploit trade data from Istat's *Commercio estero* dataset, utilising import and export flows at the 2-digit sectoral level (CPAteco 2007 classification) for Italian provinces (NUTS-3 regions), disaggregated by external partner countries. This approach enables computation of regional dependence indicators to evaluate vulnerabilities in local economic systems from both market (export concentration on few partners) and supply (import reliance on limited sources) angles. Regions face dual exposure without the scale to strategically restructure trade flows, amplifying risks in global shocks.

These metrics adapt national-level tools like the Herfindahl-Hirschman Index (HHI) to subnational scales, capturing granularity lost in aggregates. Italy's case reveals high spatial heterogeneity, stressing on the importance to perform regional analyses as policy implications designed for nations are going to have different effects within countries.

References

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