Market evolution: Telecommunication equipment (CN 8517) — 2015–2025

Introduction

The product group CN 8517, which covers smartphones, network infrastructure and related parts, sits at the heart of the digital economy. This report examines the European Union's extra-EU trade in these goods between 2015 and 2025, drawing exclusively on the figures provided by the linked market dashboard. Over the ten-year window, the data reveal a structurally deepening trade deficit, a dramatic rebalancing of supplier relationships, and a sharp rise in unit values – all against the backdrop of a Union increasingly reliant on imports to meet its connectivity needs. The analysis is organised around three main themes: the widening trade gap and the price-value disconnect, the geopolitical reshaping of supply chains, and the internal reorganisation of EU production and trade hubs.

1. The widening trade gap and the price-value disconnect

Import values surge while export stagnation reveals deepening dependency

Extra-EU imports of CN 8517 goods grew from €62.5 billion in 2015 to €78.6 billion in 2025, an increase of 25.6 %. In contrast, exports barely moved, declining from €28.0 billion to €27.0 billion (–3.7 %). The resulting trade deficit widened from €–34.5 billion to €–51.6 billion, a deterioration of 49.3 % General Overview. The trajectory was not linear: after a pandemic-induced dip in 2020, imports shot up to a peak of €83.5 billion in 2022 before easing, while exports remained range-bound throughout.

Quantity declines but unit prices climb, suggesting a quality and technology upgrade

The tonnage of exported equipment fell by more than a third (from 146.8 thousand tonnes to 94.4 thousand tonnes), yet export value was virtually unchanged, implying a 49.9 % rise in the average export price. Import quantities were broadly flat (–0.8 %), while the average import price rose 26.6 % General Overview. This pattern points to a shift towards higher-value products on both sides of the ledger – notably smartphones and advanced network equipment – rather than simple volume expansion.

Net import reliance reaches record-high, highlighting EU vulnerability

A longer view provided by the autonomy indicators shows that the EU's net import reliance for this product group soared from 36.4 % in 2003 to 84.4 % in 2024 Net Import Reliance. By 2025 the deficit had become so entrenched that the EU depended on external suppliers for almost all its incremental demand. Such extreme reliance, combined with record trade intensity and export propensity values, signals that the sector is deeply embedded in global value chains but also exposed to supply disruptions.

2. Geopolitical forces reshape supply chains

China remains the indispensable supplier, yet its weight starts to recede

China is the dominant source of extra-EU imports, with deliveries rising from €36.8 billion to €40.3 billion over the period. However, the import concentration Herfindahl-Hirschman Index (HHI) fell from 3,736 to 3,033 (–18.8 %), indicating a gradual diversification Concentration HHI. China's share hit its zenith in 2022 (€52.7 billion) but then retreated, reflecting both conscious supply-chain de-risking and the rise of alternative producers.

India and Vietnam emerge as pivotal alternative sourcing hubs

The most spectacular growth among import partners came from India. Shipments ballooned from a mere €0.14 billion to €6.3 billion (+4,504 %), largely driven by smartphone assembly. Vietnam also saw a robust 52.2 % increase, reaching €12.6 billion, while Taiwan's exports of chips and networking equipment surged by 327.5 % to €4.3 billion Top Partners. These three economies now form a diversified Asian supply base that complements China, reducing risk even if absolute dependency remains high.

Export markets: the post-Brexit UK slide contrasts with steady US growth

On the export side, the United Kingdom remained the largest market in value terms, but deliveries crumbled from €8.3 billion to €4.5 billion (–45.4 %). The decline accelerated after 2020, as regulatory divergence and new trade frictions reduced the UK's role as a distribution hub for EU-made telecom gear. The United States, in contrast, absorbed €4.0 billion worth of EU exports in 2025, a jump of 51.7 % relative to 2015. Switzerland and Norway held relatively stable positions, while China and the United Arab Emirates both recorded double-digit percentage declines Top Partners.

Sanctions obliterate trade with Russia

Among the starkest shocks visible in the data is the virtual disappearance of Russian trade. EU exports to Russia plummeted from €1.16 billion in 2015 to only €2.8 million by 2025 (–99.8 %), a collapse accelerated by the post-2022 sanctions regime. The corresponding supply shock was so severe that the model identifies a near-total exit from the Russian market, with export quantity down to just 12 tonnes in 2024, compared with a baseline of 6,465 tonnes during 2015-2022 Supply Shocks.

3. Internal EU reconfiguration: production hubs and value-chain integration

The Netherlands and Czechia consolidate as the union's telecom gateways

Intra-EU trade statistics, though not the primary focus, reveal which member states act as entry and exit points for extra-EU flows. The Netherlands is by far the largest importer and exporter, handling €32.3 billion of imports and €10.5 billion of exports in 2025, a testament to the Rotterdam-Antwerp logistics corridor. Czechia recorded the most dramatic structural shift on both flows: its imports climbed 160.1 % (to €8.0 billion) and its exports surged 139.7 % (to €2.4 billion), reflecting its emergence as an assembly platform for smartphones and network hardware Top Reporters. By contrast, traditional manufacturing powers such as Germany and France saw only modest import growth or outright export declines (France: –52.0 %).

Specialisation maps reveal a deepening East-West divide within the EU

Analysis of revealed comparative advantage (RSCA) in 2025 shows that the most specialised exporters are small, central and eastern member states. Luxembourg (RSCA 0.57), Czechia (0.50), Estonia (0.42) and Slovakia (0.38) lead the ranking, while western economies like Ireland (–0.73), Belgium (–0.61) and France (–0.51) appear disengaged from the sector's export specialisation Specialisation Map. This pattern points to a relocation of assembly and re-export activity towards the east, driven by cost advantages and foreign investment in electronics manufacturing.

Domestic production expands but fails to keep pace with import dependency

EU production data (with partial estimates) indicate that the volume of domestically manufactured CN 8517 articles rose from approximately 47.9 million units in 2015 to 72.5 million

units in 2024 Production Volumes. Yet the value of production, while increasing from €5.3 billion to €9.7 billion, remains dwarfed by the import bill. A striking illustration comes from the product segment breakdown: under CN 851713 (smartphones), the EU imported roughly 131.6 million devices in 2025, while it exported only 16.4 million, underlining a humongous consumption gap that domestic factories cannot fill Product Segment Comparison. At the same time, network equipment (CN 851762) has become the leading export segment (€17.0 billion in 2025) and its import counterpart also grew substantially, confirming that the EU's strength lies more in advanced infrastructure than in final consumer devices.

Conclusion

The decade 2015-2025 has turned the EU from a modest net importer of telecom equipment into a deeply import-reliant region, with a trade deficit of over €51 billion and a net-import reliance ratio above 84 %. The value of units traded rose sharply, reflecting technological upgrading rather than volume increase. Geopolitically, supply chains have undergone a profound diversification: China remains central but is flanked by fast-growing suppliers like India, Vietnam and Taiwan, while export flows have been severed from Russia and eroded with the United Kingdom. Inside the EU, the Netherlands and Czechia have become pivotal trade and assembly hubs, while domestic production grows but remains insufficient to offset the import bill. These dynamics expose a sector that is highly interconnected and competitive in network equipment, yet dangerously dependent on foreign sources for the smartphones that now dominate daily life.
