

Market evolution: Electrical machinery and equipment (CN 85) — 2015–2025

Introduction

CN 85 groups a broad set of electrical goods, from electric motors and transformers to smartphones, semiconductors, batteries and domestic appliances. This report examines the European Union's extra-EU trade in these products from 2015 to 2025, using annual data. It identifies the principal trends—a deepening trade deficit, shifting supplier geography, product-segment upheavals and internal specialisation—and relies exclusively on figures from the **EU Trade Dashboard**.

1. A Widening Trade Deficit Driven by Surging Import Volumes and Diverging Prices

EU exports rise in value but shrink in volume, lifting unit prices sharply

EU extra-EU exports of electrical machinery grew from **€165.6 billion** in 2015 to **€234.6 billion** in 2025, a **+41.6 %** increase. Over the same period, however, the shipped volume fell from **7,091 thousand tonnes** to **6,376 thousand tonnes** (–10.1 %). This pushed the average export unit price up by **57.5 %**, from **€23,359/t** to **€36,797/t**.

Imports almost double in quantity while prices fall moderately

Imports surged from **€200.0 billion** to **€349.2 billion** (+74.6 %). This was entirely a volume story: imported quantity jumped by **93.3 %**, from **8,392 thousand tonnes** to **16,223 thousand tonnes**, while the average import price actually fell by **9.7 %** (from **€23,825/t** to **€21,526/t**). Cheaper, high-volume foreign goods poured into the EU.

Trade flow	Indicator	2015	2025	Change (%)
Exports	Value (€ bn)	165.6	234.6	+41.6
	Volume (kt)	7,091	6,376	–10.1
	Unit price (€/t)	23,359	36,797	+57.5
Imports	Value (€ bn)	200.0	349.2	+74.6
	Volume (kt)	8,392	16,223	+93.3
	Unit price (€/t)	23,825	21,526	–9.7
Trade balance	(€ bn)	–34.3	–114.6	–234.0

Source: EU-level trade flows.

The deficit deepens to record levels

The widening gap between import and export values drove the deficit from **–€34.3 billion** in 2015 to **–€114.6 billion** in 2025, a deterioration of **234 %**. The worst point was **2022**, when the deficit hit **–€152.4 billion**, reflecting the post-pandemic demand surge and energy-crisis price effects.

2. Reconfiguration of Key Trading Partners and Geopolitical Shocks

China remains the dominant supplier, but Vietnam and India gain share rapidly

China's role as the EU's top extra-EU source for electrical machinery is undisputed, with imports rising from **€86.2 billion** to **€165.5 billion** (+91.9 %). Nevertheless, the most dynamic growth occurred elsewhere: imports from **Viet Nam** jumped **162.5 %** (to **€23.9 billion**) and those from **India** soared **598.5 %** (to **€10.1 billion**), signalling a diversification of supply. Imports from the **United Kingdom** fell by **45.3 %** (to **€8.4 billion**) after Brexit disrupted integrated value chains.

Import partner	2015 (€ bn)	2025 (€ bn)	Change (%)
China	86.2	165.5	+91.9
Türkiye	3.2	6.5	+104.8
Korea, Republic of	8.1	10.9	+34.0
United Kingdom	15.4	8.4	–45.3
Viet Nam	9.1	23.9	+162.5
United States	14.7	18.1	+23.2
India	1.4	10.1	+598.5

Source: Top extra-EU partners.

Exports pivot to the United States as Russia's market collapses

On the export side, the **United States** became the EU's largest outlet, with shipments rising **88.9 %** to **€40.9 billion**. Sales to **China** also grew healthily (+71.4 %, to **€29.0 billion**). The **United Kingdom** market slipped slightly (–9.4 %), while exports to **Russia** collapsed by **94.9 %** after sanctions, from **€6.7 billion** to just **€0.3 billion**.

Export partner	2015 (€ bn)	2025 (€ bn)	Change (%)
United Kingdom	30.0	27.2	−9.4
United States	21.7	40.9	+88.9
China	16.9	29.0	+71.4
Türkiye	6.6	9.8	+47.4
Norway	4.2	6.5	+53.3
Russian Federation	6.7	0.3	−94.9
Switzerland	8.4	11.7	+39.2

Source: same as above.

Concentrated disruptions: price shocks in key bilateral relations

The decade was punctuated by extreme price events. The **United States** recorded a **285.6 %** price surge in EU imports in 2022, the largest abnormality detected. EU export prices to **Norway** spiked by **97.4 %** in the same year, while import prices from **Viet Nam** and **Türkiye** saw durable, though smaller, upward shifts. These shocks underline the fragility of supply lines in high-tech electrical goods.

Data on price shocks from **volatility & shocks analysis**.

3. Internal Specialisation and Volatile Product Segments

Central and Eastern Europe lead in revealed comparative advantage

In 2025, the highest specialisation in electrical machinery exports (measured by revealed symmetric comparative advantage, RSCA) was found in **Malta (0.49)**, **Hungary (0.42)**, **Romania (0.31)** and **Czechia (0.28)**. These member states act as key assembly and manufacturing centres for automotive and electronics supply chains. In contrast, **Belgium (−0.47)**, **Ireland (−0.40)** and **Spain (−0.30)** were the least specialised, while large economies like **Germany (0.00)** displayed no strong sectoral bias.

Most specialised (2025)	RSCA	RCA
Malta	0.491	2.93
Hungary	0.419	2.44
Romania	0.306	1.88
Czechia	0.280	1.78
Slovakia	0.222	1.57

Least specialised (2025)	RSCA	RCA
Cyprus	−0.514	0.32
Belgium	−0.474	0.36
Ireland	−0.399	0.43
Spain	−0.296	0.54

Source: **Specialisation of EU countries.**

Semiconductors: a volume explosion with collapsing unit prices

Semiconductor devices (HS 8541) dominate extra-EU imports. While the imported quantity ballooned from **396 kt** to **4,504 kt** (+1038 %), the value only rose from **€7.98 bn** to **€14.70 bn** (+84 %) because the average unit price plunged from **€20,151/t** to **€3,265/t** (−83.8 %). A global glut in certain chips and the shift to lower-cost Asian production explain this dramatic price decline.

Semiconductor imports (8541)	2015	2025	Change
Value (€ bn)	7.98	14.70	+84 %
Quantity (kt)	396	4,504	+1038 %
Unit price (€/t)	20,151	3,265	−83.8 %

Source: **Product segment comparison.**

Batteries become a strategic battleground

Electric accumulators (HS 8507) witnessed a nearly eight-fold increase in extra-EU import value, from **€4.06 bn** to **€31.81 bn** (+682 %). EU battery exports rose as well, to **€8.26 bn** (+228 %), but the trade deficit in this segment widened enormously. Import unit prices surged from **€6,914/t** in 2015 to a peak of **€19,895/t** in 2023, before easing to **€13,712/t** in 2025, reflecting the tension between rising demand for e-mobility and industrial scale-up.

Battery trade (8507)	2015	2025	Change
Imports (€ bn)	4.06	31.81	+682 %
Exports (€ bn)	2.52	8.26	+228 %
Import price (€/t)	6,914	13,712	+98 %
Export price (€/t)	4,073	9,425	+131 %

Source: same as above.

Conclusion

Over the 2015–2025 period, EU extra-EU trade in electrical machinery underwent a profound restructuring. Export values grew through quality upgrading, but volumes contracted, while imports boomed in volume at falling unit prices, creating a historically large trade deficit. The supply chain pivoted further toward Asia, with China holding its lead and Vietnam and India emerging as major second-tier suppliers. Geopolitics reshaped export markets: the United States became the top destination, compensating for the collapse of Russian demand and the post-Brexit stagnation of the UK market. Inside the EU, Central European states deepened their specialisation, while semiconductors and batteries emerged as the most volatile and strategically critical product segments. These dynamics underscore the EU's growing import dependency in key electrical goods and the need for robust industrial and trade policies.

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If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at [this address](#).