Market evolution: Plastic packaging (CN 3923) — 2015–2025

Introduction

Between 2015 and 2025, the European Union's external trade in plastic packaging, stoppers, lids and caps (CN 3923) expanded strongly, driven by rising demand, production capacity and higher unit prices. The data show a robust increase in both exports and imports, yet imports grew faster, progressively narrowing the trade surplus. This report examines the headline trade dynamics, the shifting geography of suppliers and customers, price shocks and volatility, and the internal specialisation patterns that underpinned the EU's market position.

1. Surging trade values but a narrowing surplus

Headline growth was propelled by both volume and price increases

EU exports of CN 3923 climbed from €4,461 million in 2015 to €6,586 million in 2025, a rise of 47.6 %. Import values increased even more sharply, from €3,943 million to €6,184 million, or 56.8 % (EU trade overview). The expansion was broad-based: export volumes grew 22.5 % (from 1.19 million tonnes to 1.45 million tonnes) and import volumes rose 26.8 % (from 1.15 million tonnes to 1.45 million tonnes). Average unit prices also advanced – export prices by 20.5 % (€3,758 to €4,528 per tonne) and import prices by 23.7 % (€3,442 to €4,258 per tonne) – indicating that both real consumption and cost factors played a role.

Import growth outstripped exports, compressing the trade surplus

The EU's trade balance in this product category remained positive but shrank from a surplus of €518 million in 2015 to €402 million in 2025 (−22.4 %). The erosion of the surplus became particularly visible after 2020, when import values jumped, reflecting stronger domestic absorption and the impact of higher import prices. Nevertheless, the EU preserved its net-exporter status throughout the entire period, underpinned by a large and competitive domestic production base.

Indicator	2015	2025	Change
Exports (€ m)	4,461	6,586	+47.6 %
Imports (€ m)	3,943	6,184	+56.8 %
Trade balance (€ m)	518	402	-22.4 %
Export volume (tonnes)	1,187,171	1,454,653	+22.5 %
Import volume (tonnes)	1,145,453	1,452,479	+26.8 %

2. A reconfiguration of trade partners and supply shocks

China cemented its position as the dominant import source, while Türkiye and Serbia posted dramatic gains

The structure of EU imports became more concentrated, with the Herfindahl-Hirschman Index (HHI) rising from 1,324 in 2015 to 1,430 in 2025 (+8.0 %) (Market concentration). China's imports grew 91.2 %, reaching €1,838 million in 2025 and making it by far the largest supplier. Imports from Türkiye surged by 122.8 % to €634 million, and those from Serbia jumped 297.5 % to €233 million (Top partners by value). Meanwhile, imports from the United Kingdom increased only modestly (+5.7 %), and the United States contributed a steady but growing share (+69.4 %).

Export markets diversified, reducing concentration risks

Export concentration fell markedly: the export HHI dropped from 1,121 to 937 (−16.4 %). While the United Kingdom remained the top destination (€1,520 million in 2025, +22.6 %), emerging partners such as Morocco (+268.2 %) and Serbia (+313.3 %) absorbed a rapidly growing share. The United States (+59.3 %) and Switzerland (+46.9 %) also posted solid increases, while exports to Russia collapsed after 2022, reflecting sanctions and trade disruptions.

Export partner	2015 (€ m)	2025 (€ m)	Change
United Kingdom	1,240	1,520	+22.6 %
Switzerland	516	758	+46.9 %
United States	445	709	+59.3 %
Morocco	122	449	+268.2 %
Türkiye	183	355	+93.5 %
Serbia	70	288	+313.3 %

Import partner	2015 (€ m)	2025 (€ m)	Change
China	961	1,838	+91.2 %
United Kingdom	766	809	+5.7 %
Türkiye	285	634	+122.8 %
Switzerland	482	610	+26.5 %
United States	349	591	+69.4 %
Viet Nam	252	367	+45.6 %

Price shocks exposed vulnerability in specific bilateral relationships

The period was marked by significant price shocks (Volatility analysis). In 2022, export prices to Israel jumped by 25.2 %, and import prices from Switzerland rose by 14.3 %. A year later, export prices to Korea, Republic of, fell by 23.2 % while volumes more than doubled – a pattern that suggests temporary supply gluts or pricing adjustments. Volatility was especially high for imports from the United Kingdom (coefficient of variation 0.33) and exports to Russia (0.40), underscoring the impact of Brexit-related adjustments and sanctions.

3. EU production upscaling and internal specialisation patterns

Domestic production expanded strongly, supporting higher export propensity

EU production of CN 3923 goods rose from €36,894 million in 2015 to €49,843 million in 2024 (+35.1 %) (Production volumes). Output volume increased from 116.5 billion units to 135.9 billion units over the same years. This production growth translated into a higher export propensity, which rose from 12.1 % in 2015 to 13.3 % in 2024 (Export propensity). Trade intensity (exports plus imports relative to production) also climbed from 14.9 % to 22.7 %, signalling deeper integration with non-EU markets (Trade intensity). Meanwhile, net-import reliance edged from –1.42 % in 2015 to –1.17 % in 2024, meaning the EU remained a net exporter but with a slightly smaller margin relative to apparent consumption (Net import reliance).

Member States displayed distinct specialisation profiles

In 2025, the most specialised EU exporters of CN 3923 were Luxembourg (RSCA 0.70), Lithuania (0.52), Malta (0.29), Poland (0.24) and Austria (0.19), reflecting strong niche roles in plastic packaging (Specialisation map). In contrast, Cyprus (RSCA -0.84), Ireland (–0.75) and Finland (–0.46) showed a low trade specialisation in these articles. Large economies such as Germany and Italy operated close to the EU average, while Spain's export value surged by 87.8 % over the decade, indicating a successful ramp-up in production capacity.

The product mix remained concentrated in a few key sub-segments

Exports were dominated by stoppers, lids and caps (CN 392350, €1,363 million in 2025), boxes and cases (392310, €1,842 million), and bottles (392330, €1,010 million) (Product segment breakdown). On the import side, sacks and bags of polyethylene (392321) ranked highest (€1,305 million), closely followed by boxes and crates (392310, €1,295 million). The prominence of these categories reflects the broad use of plastic packaging across food, pharmaceutical and industrial supply chains.

Conclusion

The decade 2015–2025 saw the EU's plastic packaging trade grow substantially in both value and volume, accompanied by a shift in the geographic footprint of its partners. While the Union remained a net exporter, the surplus narrowed as import growth outpaced exports, mainly due to soaring deliveries from China, Türkiye and other low-cost suppliers. Export markets diversified, reducing reliance on traditional destinations, and domestic production scaled up, enabling a rise in export propensity. However, price shocks and volatility in certain bilateral flows signal that the sector remains exposed to external disruptions. The internal specialisation of Member States – with Luxembourg, Lithuania and Poland showing high export specialisation – suggests that the industry's competitiveness is built on a distributed but complementary manufacturing base. Overall, EU trade in plastic packaging appears resilient, yet the evolving pattern of imports and the persistent price volatility warrant close monitoring.

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