



# Air Cargo, Trade, and Economic Growth in 2025

## Providing resilience amidst policy uncertainty

### Executive summary

2025 was an unusually volatile year for global trade, marked by rapidly shifting US trade policy and exceptionally high levels of policy uncertainty. In response, businesses worldwide adapted through two main strategies: frontloading shipments to the United States to pre-empt higher tariffs and redirecting trade towards alternative markets. Air cargo played a critical enabling role in both adjustments. It supported USD 157 billion in frontloaded US imports in the first quarter of 2025 and facilitated the rapid expansion of new trade lanes, helping global trade grow by 2.4%—far exceeding expectations held by major international institutions in spring 2025.

Beyond its role in adapting to trade policy shocks, air cargo was also central to the AI investment boom that emerged as a key driver of growth in 2025. Air transport carried more than two thirds of AI related goods<sup>1</sup>, enabling the timely delivery of high value, time sensitive equipment and inputs. As AI investment contributed materially to economic growth—global GDP expanded by 3.2% despite significant headwinds—air cargo helped ensure that this investment was not constrained by logistical bottlenecks.

Looking ahead, air cargo is likely to remain a cornerstone of global trade resilience. In a context of continued trade policy uncertainty and sustained demand from AI related sectors, its ability to support rapid adjustment and structural adaptation will remain critical into 2026 and beyond.

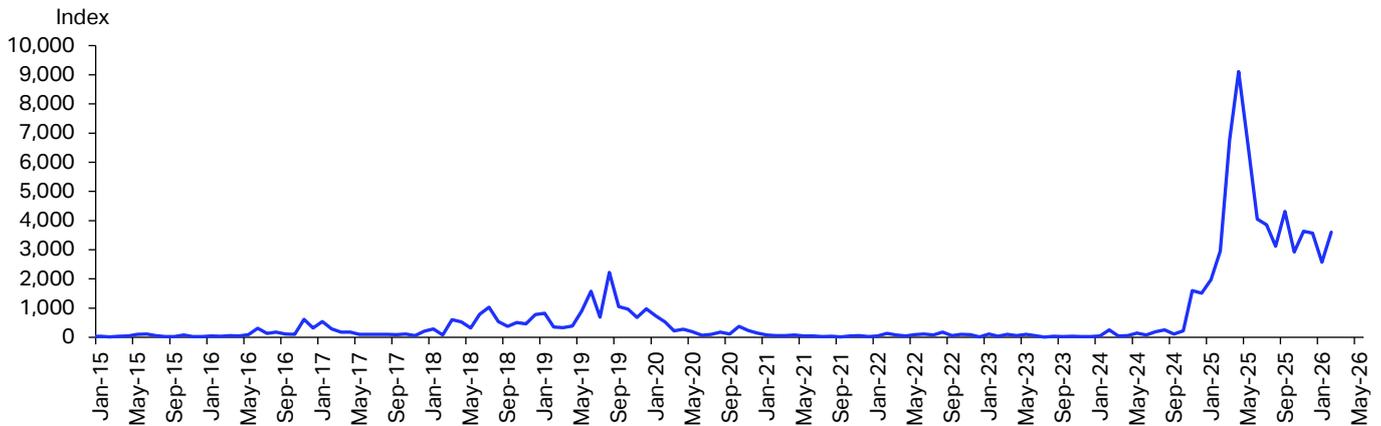
### Background: Key trade policy and trade trends in 2025

2025 was characterized by an unusually restrictive and volatile trade policy environment in the United States, affecting global economic activity. Average applied US tariffs rose to around 17%, a level last observed in the 1930s. Tariff increases were not the only source of friction, though. Other measures, including the curtailing of the de minimis exemption that previously allowed low value shipments to enter the United States duty free and supported the rapid expansion of e commerce, further constrained market access. In addition, trade policy changed frequently, and market participants faced limited clarity regarding timing and product coverage of new tariffs. As a result, trade policy uncertainty rose to record levels (Chart 1).

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<sup>1</sup> Unless otherwise stated, quantitative results on trade by air that refer to global aggregates are based on a consistent sample of countries reporting detailed trade-by-mode data between 2015–25 and should be interpreted as indicative of global patterns rather than fully exhaustive. Figures for individual countries reflect complete national data.

**Chart 1: US trade policy uncertainty index, January 2015 = 100, January 2015–February 2026**



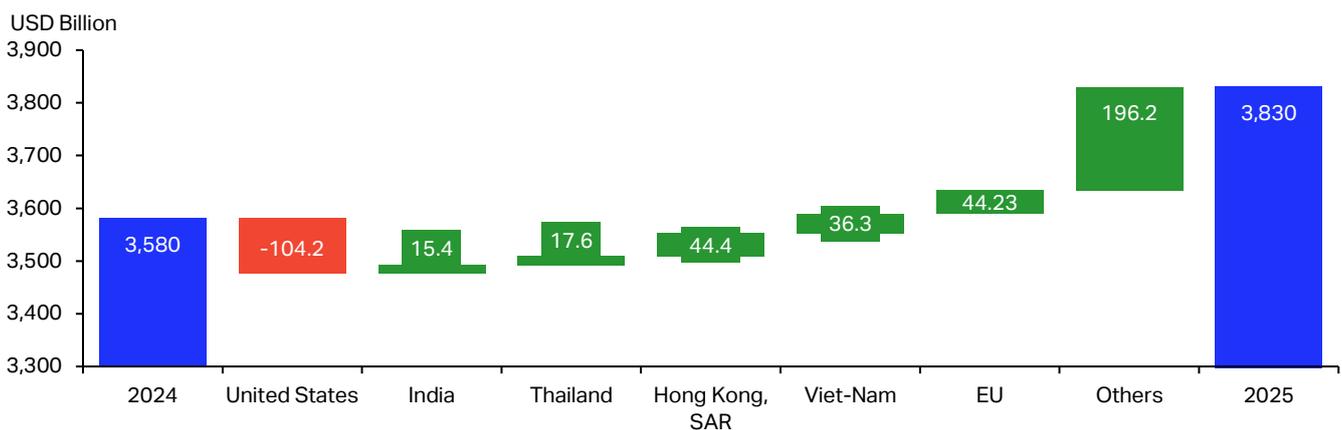
Source: IATA Sustainability and Economics, World Uncertainty Index

This environment prompted businesses worldwide to adapt rapidly, relying primarily on two strategies: frontloading trade flows to pre-empt tariff increases and restructuring trade relationships to reduce exposure to trade barriers.

Foreign exporters and US importers alike accelerated shipments to the United States to secure market access before any new tariffs took effect. As a result, US imports in the first quarter of 2025 exceeded their 2024 levels by USD 193 billion, equivalent to a year-on-year increase of 21%.

At the same time, firms began to reassess suppliers and destination markets. US businesses sought alternatives to tariff-exposed suppliers, particularly in China, increasingly turning to other Asian economies. Exporters facing reduced access to the US market redirected shipments elsewhere. China’s experience illustrates this adjustment: while exports to the United States declined, those to the European Union and other Asian markets expanded sufficiently to more than offset these losses (Chart 2).

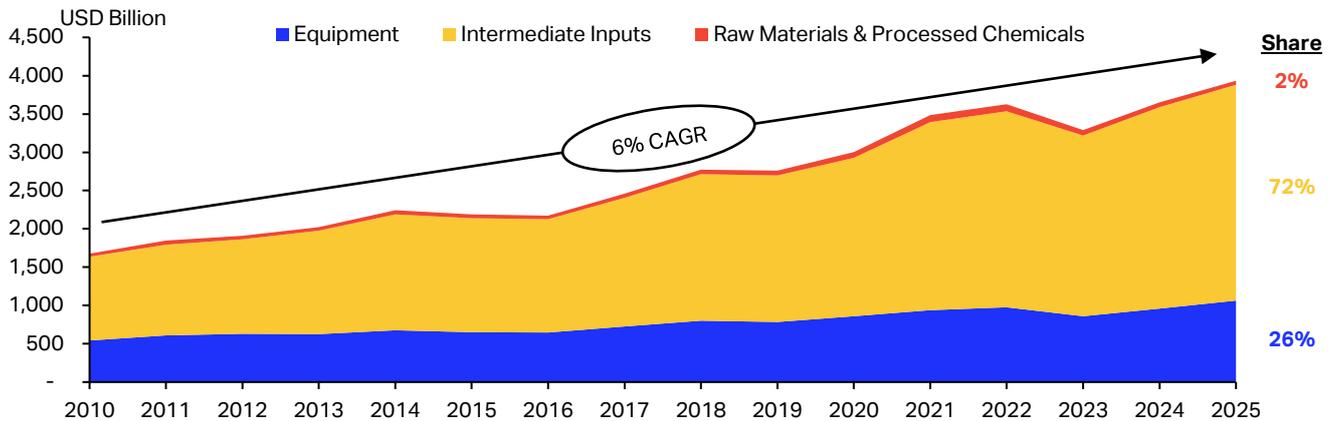
**Chart 2: Nominal YoY change of Chinese exports by country, USD billion, 2024–2025**



Source: IATA Sustainability and Economics, Global Trade Tracker

Beyond trade policy, another defining feature of the global economy in 2025 was the AI boom. Investment in AI-related technologies surged, AI-focused firms recorded strong stock market performance, and the sector became a key contributor to overall economic growth. Trade in AI-related goods continued its long-term expansion, reaching almost USD 4 trillion - exceeding the GDP of countries such as France and Italy. Intermediate inputs accounted for around 72% of this trade and final equipment for 26%, while raw materials and processed chemicals played a comparatively minor role (Chart 3).

**Chart 3: Trade in AI-related goods, USD billion, 2015–2025**



Source: IATA Sustainability and Economics, Global Trade Tracker

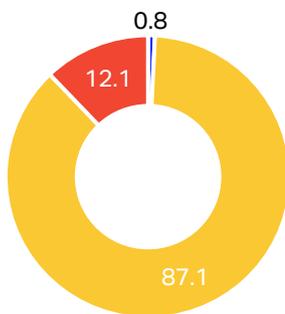
## The distinctive role of air cargo in the global economy

Air cargo plays a distinctive and critical role in international trade. While it accounts for less than 1% of global trade by weight (Chart 4, panel A), it represents close to one-third of global trade by value (Chart 4, panel B).<sup>2</sup> This reflects air cargo’s unique ability to provide speed, reliability, security, and specialized handling for high-value and time-sensitive goods.

**Chart 4: Trade by mode of transport, %, 2025**

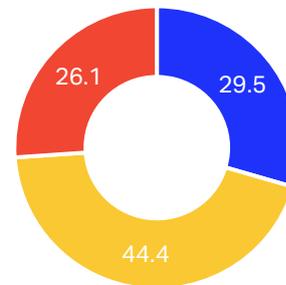
**Panel A: % of total sample weight in kg**

■ Air ■ Sea ■ Other modes (including unknown)



**Panel B: % of total sample value in USD**

■ Air ■ Sea ■ Other modes (including unknown)



Source: IATA Sustainability and Economics, Global Trade Tracker

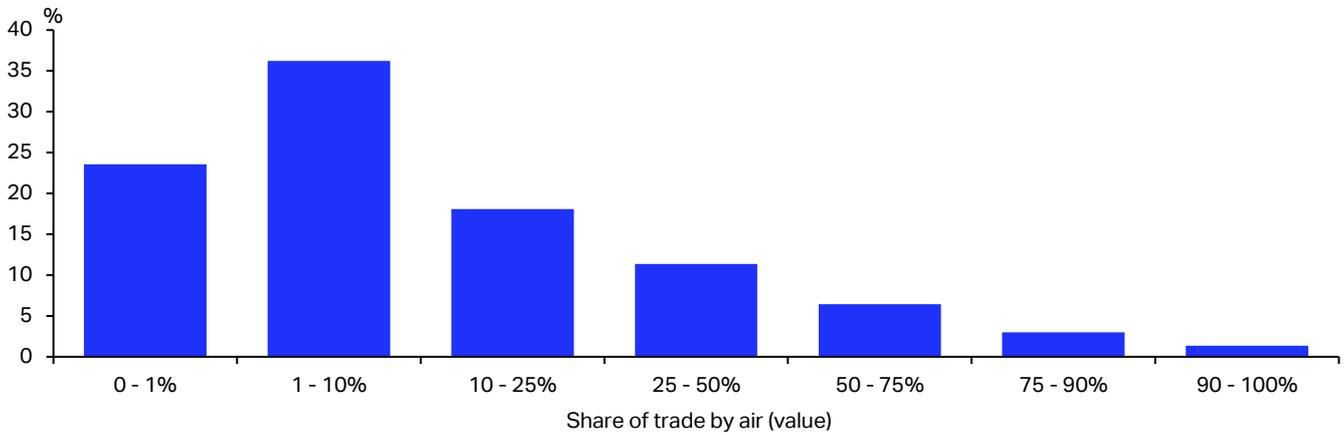
Note: Sample of 42 countries that consistently reported trade by air since 2015 and represent 37% of 2025 global trade.

Key commodities transported by air include high-value goods, pharmaceuticals, live animals, perishable goods, and dangerous goods. Only a minority of products rely heavily on air transport, but for those that do, air cargo is indispensable. Around 60% of traded products are never or only rarely transported by air, typically because they have a low value-to-weight ratio, are not time-critical, or cannot be transported safely by air (Chart 5). Almost 30% of products are occasionally transported by air, often reflecting segmentation within product categories. The remaining 11% of products rely heavily on air cargo, with more than half of their trade value transported by air. This group includes electronics (around 60% for laptops and 77% for smartphones),

<sup>2</sup> This estimate is based on customs trade data for a specific country sample and may differ from other estimates due to country coverage, data source and characteristics, and year.

pharmaceuticals (for example, 72% for vaccines), and high-value or highly time-sensitive perishables such as fresh-cut roses and truffles (both around 82%). Some products depend almost entirely on air transport: more than 99% of global trade in memory chips and gold is carried by air.

**Chart 5: Distribution of share of trade value by air by product (HS6 level), %, 2024**

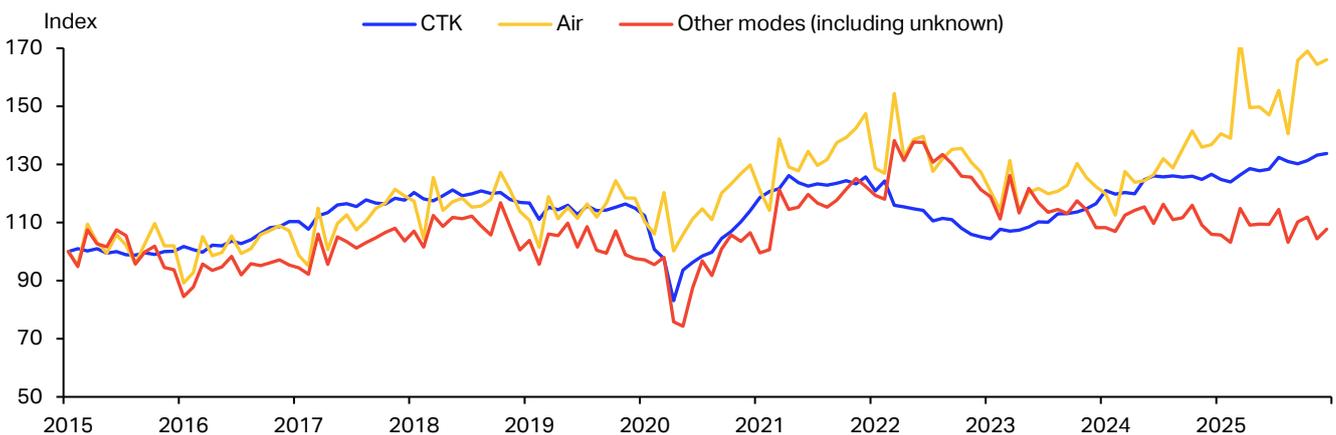


Source: IATA Sustainability and Economics, Global Trade Tracker

Note: sample of 50 countries reporting trade by air for 2024 and representing 59% of world trade, covering 5,611 products at the Harmonized System 6-digit level.

Because air cargo serves fundamentally different economic needs from other transport modes, its evolution can diverge significantly from that of maritime or land transport. While trade by air and by other modes tended to move broadly in tandem in the late 2010s, air cargo outperformed other modes between 2020 and 2022 before converging again in 2022–23. Trade by air expanded sharply between 2023 and 2025, increasing by 35% over that period during which trade by other modes of transport remained broadly flat. Measured in volume (cargo tonne kilometres, CTK), air cargo rose by 17% between 2023 and 2025, reflecting both higher demand and changes in the composition and value of goods transported (Chart 6).

**Chart 6: Trade by mode of transport (constant prices) and CTK, January 2015=100, January 2015 prices, January 2015–December 2025**

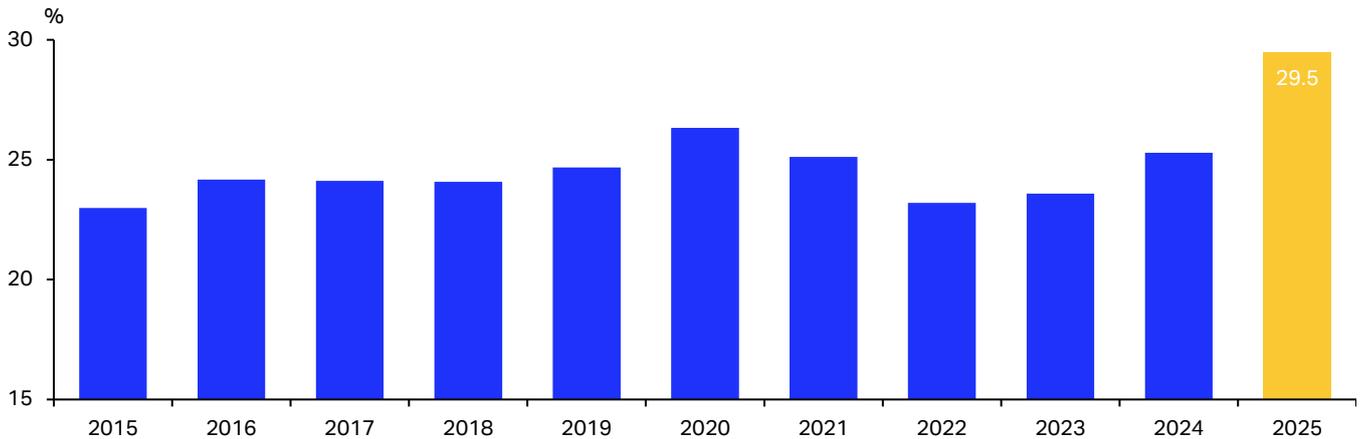


Source: IATA Sustainability and Economics, Global Trade Tracker

Note: Sample of 42 countries that consistently reported trade by air since 2015 and represent 37% of 2025 global trade. Trade values are deflated using the US core CPI.

As a result, the share of trade transported by air reached an exceptionally high level in 2025. For a sample of 42 countries that consistently reported trade by air since 2015, air cargo accounted for 29.5% of total trade value, surpassing the previous peak observed during the pandemic in 2020 (Chart 7). Frontloading, trade restructuring, and the expansion of trade in AI-related goods all contributed to this outcome.

**Chart 7: Share of trade value by air, % of total sample, 2015-2025**



Source: IATA Sustainability and Economics, Global Trade Tracker

Note: Sample of 42 countries that consistently reported trade by air since 2015 and represent 37% of 2025 global trade.

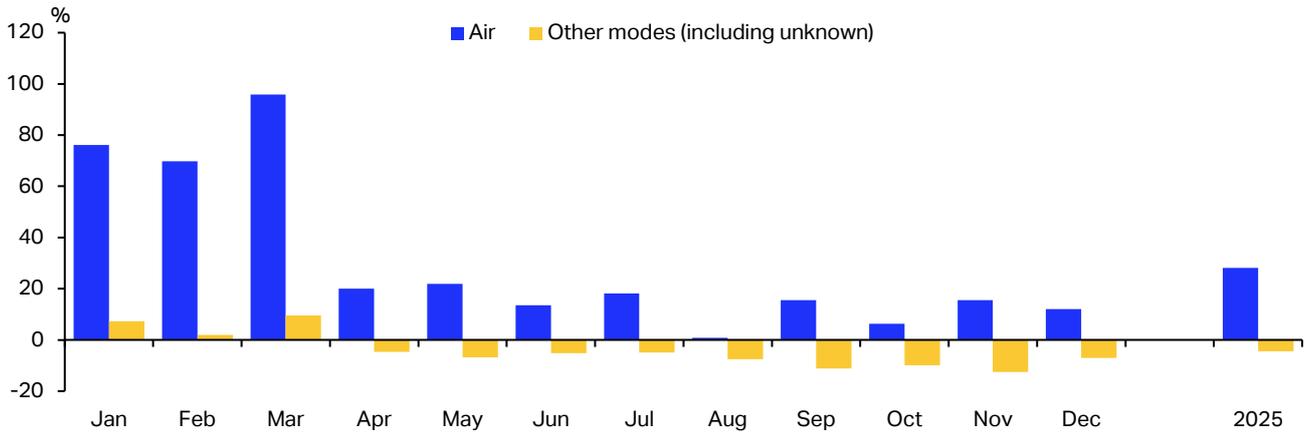
## How air cargo supported trade and growth in 2025

Air cargo played a particularly important role in the global economy in 2025 by supporting both short term adjustment and longer term adaptation. First, it enabled large scale frontloading of trade flows to the United States, allowing firms to avoid or postpone the impact of new tariffs. Second, it facilitated the restructuring of global trade relationships, helping firms diversify suppliers and markets in response to restricted market access and heightened policy uncertainty. Together, these effects helped prevent a slowdown in global trade, which instead expanded by 2.4%, exceeding expectations held by major international institutions in spring 2025. Third, air cargo played a critical role in supporting the AI investment boom by transporting a large share of AI related goods, thereby sustaining a key driver of global economic growth.

### Air cargo enabled frontloading

In the months preceding the introduction of major US tariff increases for a broad range of countries in April 2025, firms sought to accelerate deliveries to secure market access. The result was an exceptional surge in US imports during the first quarter of the year, with import values rising by USD 193 billion, or 26%, compared with the same period in 2024. This surge differed markedly by mode of transport. Trade by air increased by 81% year on year (YoY), underscoring the speed and flexibility of air cargo, while trade by other modes grew by just 6%. In value terms, air cargo enabled USD 157 billion of additional imports, accounting for 82% of the total YoY increase in US imports during this period (Chart 8). Without air cargo, frontloading at this scale and pace would clearly not have been feasible.

**Chart 8: US value of imports from all partners by mode of transport, YoY, 2025**



Source: IATA Sustainability and Economics, Global Trade Tracker

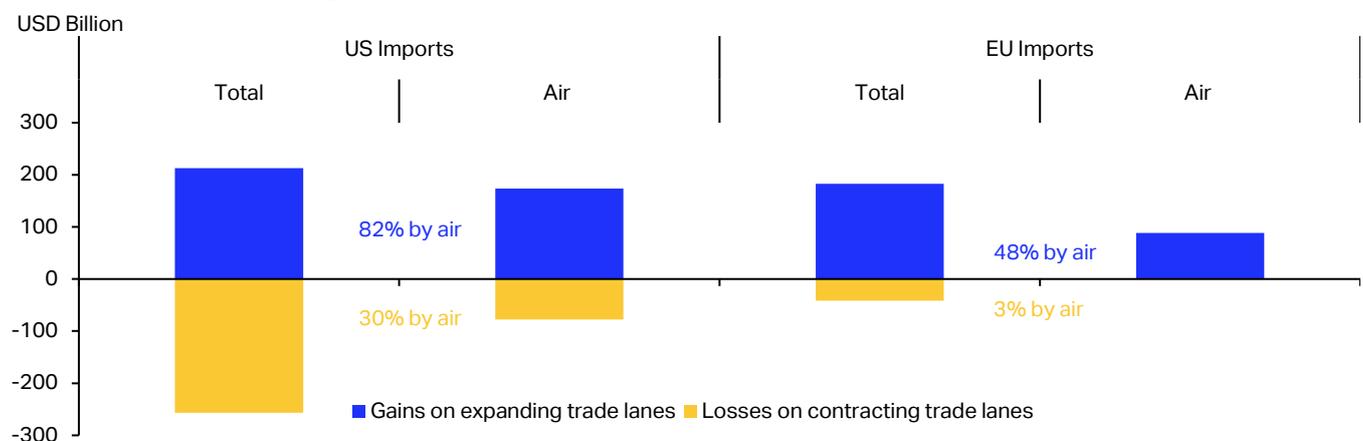
## Air cargo enabled the restructuring of global trade

Beyond the short-term effects of frontloading, firms also undertook more structural adjustments to reduce exposure to trade policy risk. US importers shifted sourcing away from heavily tariff exposed partners, while global exporters increasingly redirected shipments away from the US market towards alternative destinations, particularly the European Union. Data on US and EU imports by mode of transport provide insight into the role of air cargo during this restructuring phase.

Focusing on the second to fourth quarters of 2025 to exclude peak frontloading effects, US imports expanded by USD 213 billion on growing trade lanes and contracted by USD 257 billion on shrinking ones. Air cargo accounted for USD 174 billion, or 82%, of gains on expanding lanes, while representing only USD 77 billion, or 30%, of losses on contracting lanes. A similar pattern emerged in Europe: air cargo supported 48% of gains on expanding lanes but only 3% of losses on contracting ones (Chart 9).

These patterns highlight air cargo’s contribution to the rapid geographical reallocation of trade. While part of this reflects shifts in product composition and price effects—such as the expansion of AI related trade and higher gold prices—it underscores air cargo’s function as a facilitator of trade resilience in the face of policy shocks and its enabling role for trade in high value and time critical goods.

**Chart 9: Import restructuring across partners by mode of transport, Q2-Q4 2025**



Source: IATA Sustainability and Economics, Global Trade Tracker

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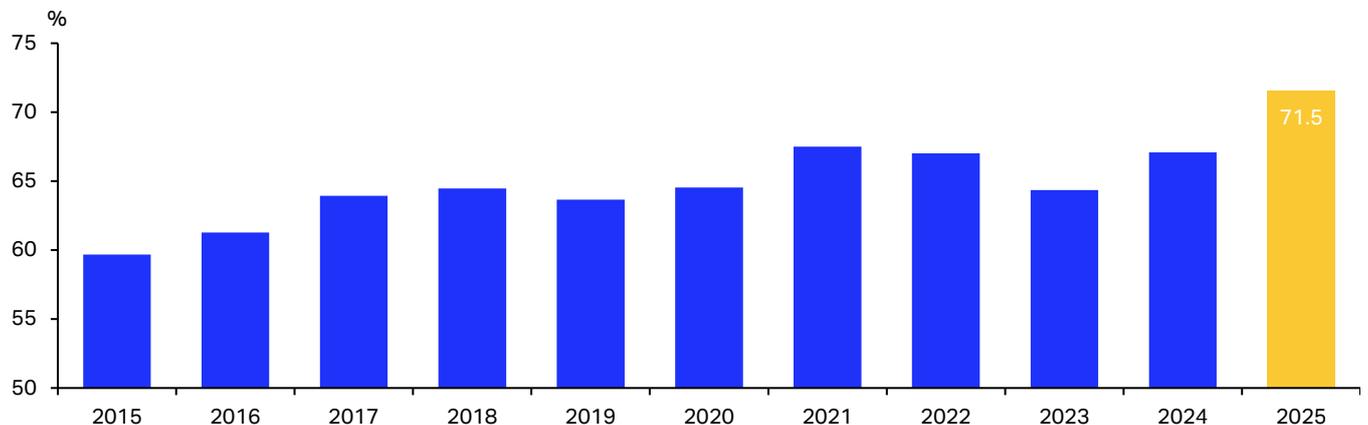
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## Air cargo supported the AI boom

Investment in AI reached elevated levels in 2025. Global venture capital investment is estimated around USD 110 billion, private sector investment at USD 200–400 billion, and total global spending on AI approached USD 1 trillion. While the impact of AI on global productivity remains uncertain and is the subject of ongoing debate, these investments nonetheless made a significant contribution to economic growth. In the United States, investment in AI related hardware, software, research and development, and new data centers contributed an estimated 0.97 percentage points to real GDP growth in the first three quarters of the year, accounting for 39% of total GDP growth over that period.<sup>3</sup>

Trade in AI-related goods expanded from USD 2.1 trillion in 2015 to USD 3.9 trillion in 2025. Many of these goods rely heavily on air transport. Equipment, which accounts for 31% of AI related trade, is transported by air at rates of 66%, including key products such as data storage units and servers, which rely on air cargo for 68% and 56% of their trade, respectively. Intermediate inputs, representing 68% of AI related trade, are transported by air at rates of 74%, and include critical components such as memory chips, which are almost exclusively shipped by air. Although comprehensive global data by mode of transport are not available, data from a sample of countries consistently reporting trade by air suggests that around three quarters of trade in AI related goods was carried by air in 2025 (Chart 10).

**Chart 10: Share of AI-related trade value by air, % of total sample, 2015-2025**



Source: IATA Sustainability and Economics, Global Trade Tracker

Note: Sample of 42 countries that consistently reported trade by air since 2015 and represent 37% of 2025 global trade.

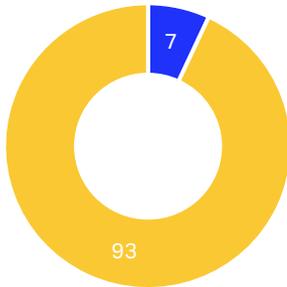
Moreover, the value of air cargo trade in AI related goods grew by 20% compared with 2024, underscoring air cargo’s central role in sustaining the AI boom. Conversely, AI related goods have become increasingly important for air cargo itself. In 2025, they accounted for 53.5% of the value of air transported trade, while representing only 7% of its volume (Chart 11). The close interdependence between air cargo and AI driven economic activity is therefore likely to persist.

<sup>3</sup> Hannah Rubinton and Bontu Ankit Patro, "Tracking AI's Contribution to GDP Growth," St. Louis Fed On the Economy, Jan. 12, 2026.

**Chart 11: Share of AI-related goods in trade by air, 2025**

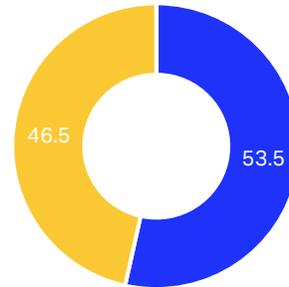
**Panel A: Share of weight in kg, % of total sample**

■ AI-related goods ■ Others



**Panel B: Share of value in USD, % of total sample**

■ AI-related goods ■ Others



Source: IATA Sustainability and Economics, Global Trade Tracker

Note: Sample of 42 countries that consistently reported trade by air since 2015 and represent 37% of 2025 global trade.

## Conclusion

The experience of 2025 illustrates the critical role of air cargo in sustaining global trade and economic growth during periods of heightened uncertainty. Faced with volatile and restrictive trade policies, businesses relied on air cargo to frontload shipments, reconfigure trade relationships, and avoid severe disruptions to supply chains. These mechanisms helped reduce the risk of supply shortages and mitigated upward pressure on prices, contributing to stronger than expected trade and economic outcomes.

Beyond its role in responding to trade policy shocks, air cargo also proved essential in supporting the AI boom by enabling the rapid and reliable transport of high value, time sensitive inputs and equipment. As AI emerged as a key driver of global growth in 2025, air cargo helped ensure that investment translated into economic activity rather than being constrained by logistical bottlenecks.

Absent air cargo, frontloading would have been far more limited, trade restructuring slower and more costly, and AI related investment more vulnerable to supply constraints. The likely outcome would have been weaker trade growth, higher inflationary pressures, and lower GDP growth.

Overall, air cargo once again demonstrated its role as part of the global economy’s resilience architecture. It absorbs short term shocks—whether stemming from trade policy changes, health emergencies, or geopolitical disruptions—while simultaneously enabling longer term structural adaptation through supplier diversification, the development of new trade lanes, and the support of emerging growth drivers such as AI.