"Air cargo traffic on the Spanish airport network grows 20.3% year-on-year in August"[1]

In August 2024, air cargo traffic in the Spanish airport network grew by 20.3% compared to the same month of the previous year. This increase is mainly attributed to the recovery of international trade and the expansion of logistics operations.

The airports with the highest growth in cargo were Madrid-Barajas, Barcelona-El Prat and Zaragoza. The positive trend is also due to increased demand for electronics and pharmaceuticals. Despite the growth, there are still challenges such as congestion at some facilities and the need to improve cargo infrastructure. Overall, the evolution is favorable for the air logistics sector in Spain.

Analysis of the Fundación Valenciaport

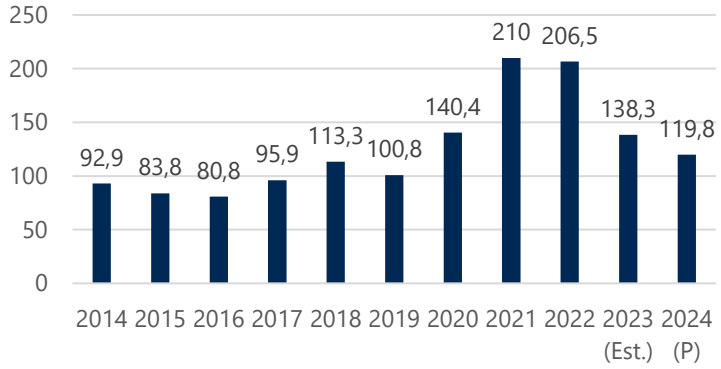
The **air cargo** sector is an essential component of global trade, playing a crucial role in the fast and efficient movement of goods internationally. Its relevance is manifested in its ability to ensure **urgent** and **high-value deliveries**.

Despite this relevance, in 2023, air cargo accounted for approximately 1% of the total global volume of goods transported, compared to other modes of transport such as maritime, which captured more than 80% of global goods, according to data from the International Air Transport Association (IATA) and the United Nations Conference on Trade and Development (UNCTAD). However, air cargo remains critical for urgent and high-value deliveries, such as technology products and pharmaceuticals. As such, its impact on the supply chain and the global economy emphasizes its importance as an **engine** of **growth** and a **pillar** of modern **logistics**.

Currently, the air transport **market size** is estimated at 151.22 billion USD in 2024 and is expected to reach 201.57 billion USD in 2029, according to market reports from consulting firms specializing in industry analysis. This growth is driven in part by the upturn in e-commerce and growing global demand, although it faces significant challenges in terms of supply and demand.

[1] Original news published by "Cadena de Suministro" and available at: *https://www.cadenadesuministro.es/logistica/traficos-carga-aerea-red-espanola-aeropuertos-crecen-203-anual-en-agosto_1504354_102.html*

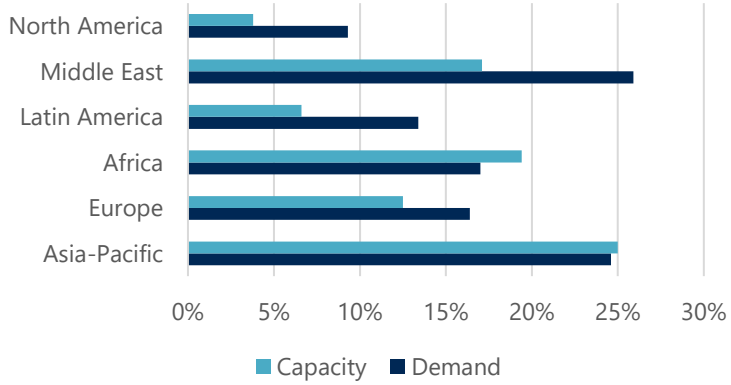
Graph 1. Evolution of global air cargo revenues between 2014 and 2024, in billions of dollars



**(P) Provisional, (Est.) Estimate*
Source: Own elaboration based on data from Statista

In terms of **cargo**, international cargo tonne kilometers (CTK)[2] reached 50.2 billion in the last quarter of 2023, growing 7.8% year-on-year. There has been a **continued upsurge** in air cargo **demand**, recording double-digit growth for eight months in a row, and reaching levels not seen since the highs of 2021. Airlines in the Asia-Pacific, Middle East and Europe regions recorded the highest growth rates, with increases of 17.7%, 14.7% and 13.9%, respectively.

Graph 2. Variation (%) in air cargo demand and capacity by region, comparison between January 2023 and January 2024



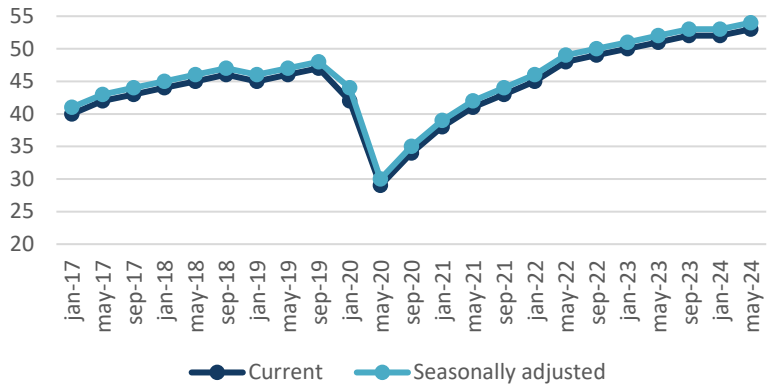
Source: Own elaboration based on IATA data

Growth was not uniform across all regions, with North America and Latin America growing at a more moderate pace of 10.4% and 9.2%, respectively. These results were

[2] It should be noted that, in the air cargo sector, cargo tonne kilometers (CTK) are the main indicator of demand, measuring the volume of cargo transported multiplied by the distance traveled. On the other hand, available cargo tonne kilometers (ACTK) reflect supply, that is, the total capacity available to transport cargo as a function of distance.

affected by flight cancellations and airport closures due to natural phenomena, such as hurricane Beryl in the U.S. and the Caribbean.

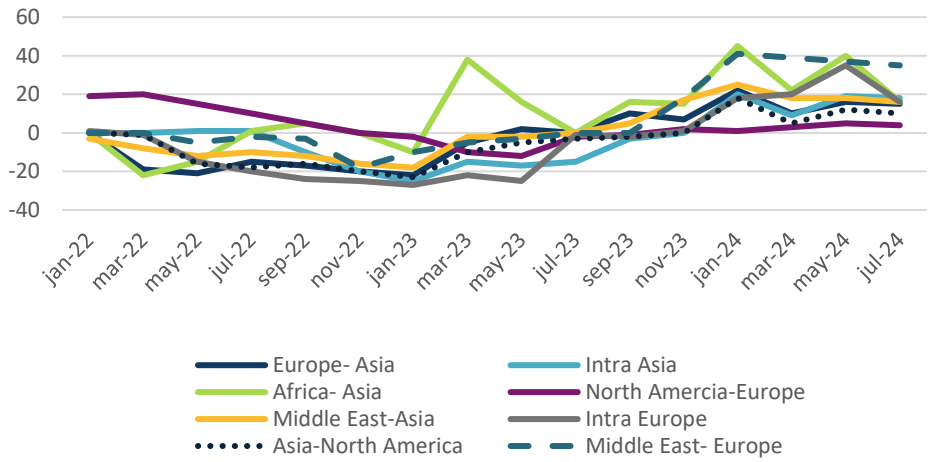
Graph 3. Evolution of world air cargo capacity, in billions ACTK



Source: Own elaboration based on data from IATA Sustainability and Economics, IATA Monthly Statistics

For its part, **global** air cargo **capacity** reached 146.4 billion available cargo tonne kilometers (ACTK) in the last quarter of 2023, representing annual growth of 8.3%, consolidating an **expansion trend**. Likewise, the annual ACTK growth of 9.2%, even more pronounced so far this year, confirms that capacity expansion has been a phenomenon since the turn of the year, despite the slow but steady decline in the monthly growth rate. This is because, since the onset of the pandemic, airlines have strengthened their fleets, and the return of commercial flights has added significant cargo capacity. This has led to oversupply in some key markets.

Graph 4. Year-on-year variation (%) of international air cargo in CTK by route area



Source: Own elaboration based on data from the Air Cargo Market Analysis Report July 2024 (IATA)

Going into the detail of the analysis by **routes**, there was significant growth in the main commercial areas. **Middle East-Europe** routes led growth in July 2024, with a 32.2% increase in CTK, followed by **Asia-Europe** and **Europe-Asia** routes with increases of

19.8% and 17.9%, respectively. Domestic routes in Asia, the Middle East and Africa also showed considerable upturns, consolidating the importance of these regions in global trade. Additional routes such as Middle East-Asia, Inland Europe and Africa-Asia also reported solid growth of more than 15% year-on-year, underscoring the importance of these trade corridors.

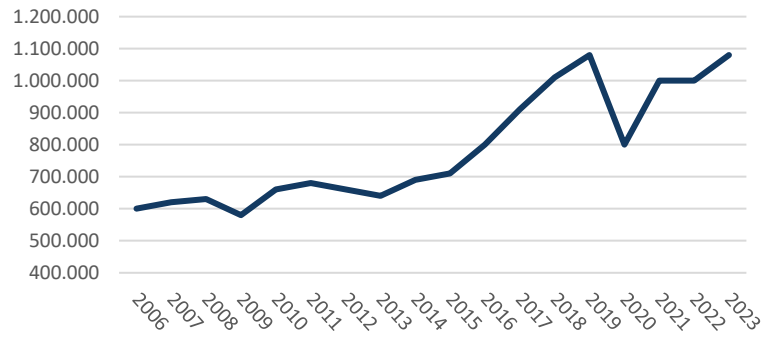
As for global **air cargo rates**, they continue to be approximately **40% higher** than **pre-pandemic** 2019 **levels**, despite a significant drop from the peaks observed during 2022. Volatility in the markets, oil price increases and geopolitical conflicts have influenced this trend.

Global rates are expected to remain stable in 2024, although any changes in geopolitical factors, such as further escalation in the Middle East or adjustments in OPEC production, could alter this forecast.

Despite these factors, e-commerce has driven air cargo demand in recent months, although the industrial sector, traditionally the engine of growth, remains depressed.

Focusing on the national level, the **airfreight sector** in **Spain** continues to consolidate its position as a key complement to cargo traffic. At the national level, **Spanish airports** have positioned themselves as **strategic points** in **global trade networks**, facilitating both imports and exports of high-demand goods.

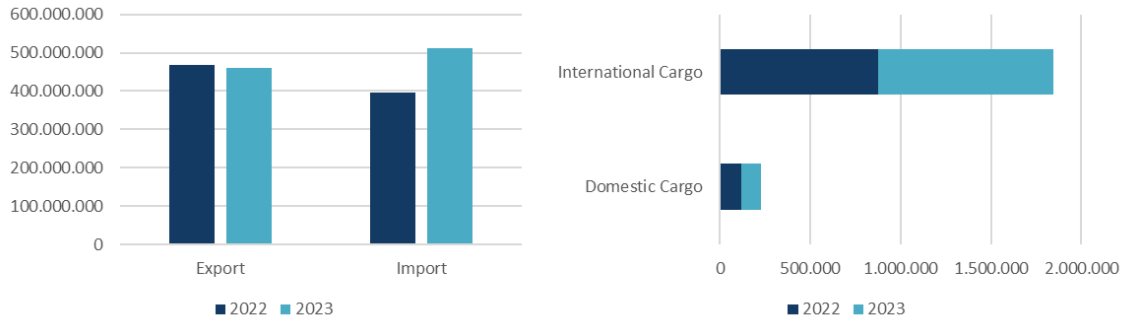
Graph 5. Evolution of air cargo traffic in Spain, in tons



Source: Own elaboration based on Aena data

However, the sector faces **challenges** in terms of **market share**, as, in 2023, air cargo accounted for **1.65% of total goods** transported, compared to **65.62%** for the **maritime sector** and **30.46%** for **road**. Despite its lower relative volume, air freight remains essential for high value-added and time-critical products, such as in the pharmaceutical and technology sectors and in certain supply chains, where speed is crucial.

Graph 6. Levels of air cargo Import and Export in Spain in the year 2022 and 2023, and Origin and Destination of domestic and international air cargo in the year 2022 and 2023 (tons)



Source: Own elaboration based on Aena data

As can be seen in the graph, there has been a significant **increase** in **international shipments**, which in both years exceeded domestic cargo, maintaining a relatively modest but rising share. This growth is evidence of the **strong demand** in **foreign trade**, aligned with the **recovery** of **global trade** and the **post-pandemic logistic dynamism**.

On the other hand, analyzing the **trade balance**, as reflected in the graph, there has been considerable growth in air cargo import and export operations between 2022 and 2023. Exports show a slight improvement in 2023 compared to the previous year, indicating stability in foreign trade.

However, the most noteworthy fact is the **strong increase** in **imports**, which grew more than that observed in exports, suggesting a greater demand for products in the domestic market. This performance reinforces the dynamism of the sector, driven by the global economic recovery.

Table 1. Ranking of Spanish airports according to air cargo (kilos)

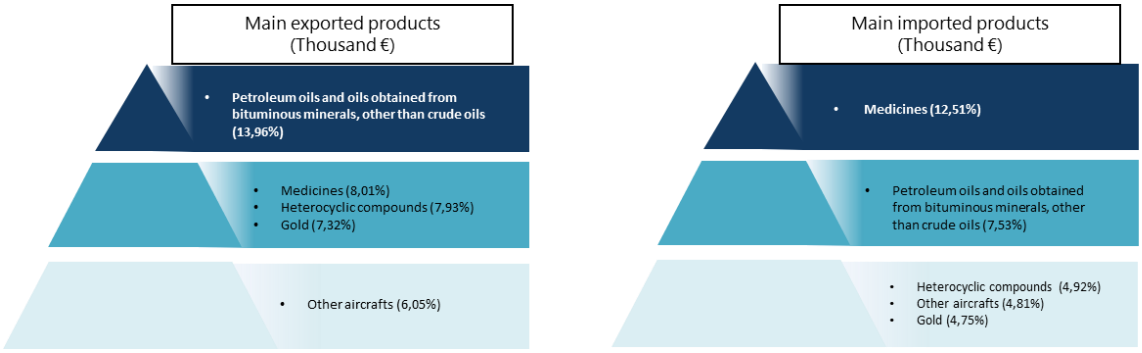
Airpot	2019	2022	2023	% 22-23	% 19-23
Adolfo Suárez Madrid-Barajas	560.039.136	566.395.050	643.534.817	13,62%	14,91%
Barcelona-El Prat J.T.	176.797.909	155.599.900	156.485.423	0,57%	-11,49%
Zaragoza	182.619.068	126.967.965	129.753.429	2,19%	-28,95%
Vitoria	64.470.673	73.632.775	71.689.094	-2,64%	11,20%
Gran Canaria	19.727.786	15.869.057	17.117.093	7,86%	-13,23%
Valencia	14.515.842	13.788.813	13.665.158	-0,90%	-5,86%
Tenerife Norte-C. La Laguna	12.596.348	13.165.640	11.561.686	-12,18%	-8,21%
Sevilla	9.891.790	9.966.098	10.913.974	9,51%	10,33%
Palma de Mallorca	9.021.606	7.592.108	7.184.352	-5,37%	-20,37%
Santiago-Rosalía de Castro	3.201.215	4.853.317	4.818.283	-0,72%	50,51%

Source: Own elaboration based on Aena data

In 2023, **air cargo volumes** at **Spanish airports** show contrasting dynamics. **Madrid-Barajas** remains **in the lead** with an increase of 13.62% compared to 2022, consolidating its position with a cumulative growth of 14.91% compared to 2019. **Barcelona-El Prat**, although almost stable with a slight growth of 0.57%, continues to fall behind, 11.49% below pre-pandemic levels. **Zaragoza**, in third place, shows a slight year-on-year

recovery of 2.19%, although it accumulates a significant drop of 28.95% compared to 2019. This evolution reflects the **uneven recovery** among the main logistics hubs.

Table 2. Main export and import goods traded by air in 2023, in thousands of euros



Source: Own elaboration based on Datacomex data

According to data observed, import and export flows are mainly concentrated in **strategic sectors** such as the **energy**, **pharmaceutical** and **chemical** industries. Petroleum and bituminous mineral oils lead exports, which are mainly destined for supplies. Medicines and heterocyclic compounds also stand out. Likewise, goods such as aircraft and gold also play an important role. As for imports, they are centered on medicines, being the main imported product, followed by petroleum oils and heterocyclic compounds. Aircraft and gold complete the group of the main imported goods, whose imports, although less voluminous, indicate the continuous demand in the technology and luxury goods industry at the international level.

Air cargo stands out, among other things, for its **speed** and **efficiency**, making it the preferred choice for high-value, time-sensitive or small-sized goods. Although the cost of air freight is higher than that of sea or land, its ability to deliver goods quickly and safely makes it indispensable for time-sensitive industries such as fashion and technology. In addition, air operations benefit from more **agile customs processes**, with the integration of advanced IT systems and the implementation of electronic data interchange (EDI), which speeds up management and reduces administrative errors. It also **offers** a **global reach**, enabling an efficient response to the growing demands of supply chains. Likewise, the **flexibility** it provides makes it a preferred option for high-value or time-sensitive products.

At the same time, the air cargo sector is facing a dynamic scenario characterized by several **challenges** that shape its evolution and competitiveness, among which the following stand out:

- **E-commerce**, continues to be a **major driver** of **growth** in the **sector**. The pandemic accelerated the adoption of digital transactions, and this trend remains strong. Forecasts indicate that global e-commerce sales will reach $4.4 trillion by

2026, with air freight playing a crucial role. This growth raises the **need** for **adaptation** by air carriers, which are already entering into strategic agreements with logistics providers and adapting their operations to support e-commerce. Examples include partnerships between China Southern and Pinduoduo, as well as Amazon Air with Atlas Air.

- **Sustainability**, has become a **growing priority** in **air cargo**, driven by environmental regulations and the demand for a lower carbon footprint. On this basis, several institutions, both national and supranational, have implemented policies to reduce emissions. Of special note are the policies implemented by the International Civil Aviation Organization (ICAO) and the European Commission with this mission, such as *Zero Net Emissions Target* or *ReFuelEU Aviation*. On the other hand, there is the European Emissions Trading System (EU-ETS), which controls greenhouse gas emissions in aviation. It is currently in its Phase III and will be updated from 2024 with the "Target 55" package. In addition, the Alliance for the Use of Green Hydrogen in Aviation, which includes Aena and the Ministerio de Transportes y Movilidad Sostenible (MITMA), seeks to drive the decarbonization of the sector through the development and integration of green hydrogen in aviation, a crucial step towards achieving sustainability goals.

- **Digitalization** is transforming air cargo, replacing manual processes with digital solutions that **improve efficiency**. The ONE Record standard facilitates data exchange throughout the supply chain, with airlines such as Cathay Cargo and Lufthansa Cargo leading adoption. In addition, projects such as Digital Dock are using artificial intelligence to optimize cargo handling at airports, improving competitiveness and reducing transit times.

- **Regulations** are an ongoing challenge in air cargo. Regulations related to hazardous materials and dangerous goods, as well as customs requirements, are **frequently updated** and **strictly enforced**. It is undeniable that air transport is subject to numerous regulations, such as those set by IATA, which establishes standards for the transport of dangerous goods and documentation, or those dictated by the International ICAO, which defines safety and operational standards. Each country has its own customs laws and procedures for import and export, and there are additional regulations in the areas of safety, sanitary and phytosanitary.

- **Cybersecurity** also represents a significant challenge. Civil aviation is increasingly reliant on information and communications technology systems, which are **exposed** to constant **threats** from **cyber-attacks**. Between 2019 and 2020, a 530% increase in aviation-related cyber-attacks on Eurocontrol was reported.

These attacks can disrupt operations and steal information, which is why ICAO has a vision for the aviation sector to be resilient to cyber-attacks, maintaining security and reliability worldwide. In this line, the State Aviation Safety Agency (AESA) in Spain plays a crucial role in the management of cybersecurity in aviation, with regulations found in the *Implementing Regulation (EU) 2015/1998* and its update through the *Implementing Regulation (EU) 2019/1583*.

Finally, it is worth mentioning the potential for **intermodality** between **maritime** and **air transport**, which allows logistics companies to **optimize** their **operations** by offering combined solutions that leverage the **strengths** of **both modes**. The ability to combine these two modes of transportation potentially helps mitigate risks and improve efficiency in the delivery of products globally. This cross-industry collaboration not only expands opportunities for airfreight, but also strengthens supply chain resilience in an increasingly interconnected global environment. This is why leading shipping companies such as CMA CGM, Maersk and MSC have expanded their operations to incorporate airfreight divisions, with the aim of offering comprehensive solutions and adapting to market fluctuations. Some of their initiatives include:

- **Maersk:** Has been expanding its airfreight network, combining owned and leased aircraft to carry a significant portion of its annual air tonnage. It plans to expand its capacity by purchasing new B777Fs and leasing three B767-300 freighters, which will be managed through Star Air, the subsidiary established in 1987 that manages Maersk's airfreight operations. In addition, Maersk reached an agreement to acquire the German airfreight platform Senator International, which operates in Europe, Asia, South Africa and the Americas, to expand its global air network.

- **CMA CGM:** In March 2021, CMA CGM Group created a new division dedicated to air cargo CMA CGM AIR CARGO, from the initial four Airbus A330-200F freighters, the Group has been increasing its fleet with new Boing 777, Airbus A350F and Airbus 330-200F. The Group has decided to convert CMA CGM AIR CARGO into a French cargo airline. In this respect, CMA CGM AIR CARGO has filed an application for an Air Operator Certificate (AOC) with the French Civil Aviation Authority (DGAC).

- **MSC:** MSC launched its air cargo division in 2022 to strengthen its position in the global logistics market. Mediterranean Shipping Company (MSC) has completed the acquisition of 100% of AlisCargo Airlines. This transaction, which follows the acquisition of a majority stake in the Italian airline last year. With the addition of a fifth Boeing 777-200 to its fleet and the launch of a new route between Milan and Hong Kong, MSC Air Cargo strengthens the company's global network. In

addition to the expansion of its route network, MSC Air Cargo is working on obtaining CEIV (Certified IATA Express Industry) certification for its pharmaceutical airfreight service.

As a conclusion, it is worth noting that **airfreight** continues to consolidate its position as a **key element** in **global freight transportation**, with steady growth driven by the demand for speed and efficiency. This mode of transport offers **significant advantages** in terms of speed, security and connectivity, aspects that are increasingly valued by industries that depend on agile and reliable supply chains. In addition, its complementarity with other modes of transportation, such as maritime, allows for greater flexibility and responsiveness to fluctuations in global demand.

In this context, sectors such as fuel and fashion stand out in both exports and imports, evidencing the relevance of air cargo for the international trade of strategic products. However, the industry faces the **challenge** of remaining competitive in an increasingly **demanding environment**, where digitalization, sustainability and regulations pose continuous challenges.

Undoubtedly, the industry's **ability to adapt** to these changes, together with the support and collaboration between airlines, logistics operators and authorities, will be critical to its long-term success. Moreover, the interrelationship between air and sea transport is crucial to the overall efficiency of freight transport, highlighting the importance of intermodality in the supply chain.