

Connectivity and network evolution

An analysis of market dynamics in Europe and the Middle East

Introduction

Air transport is often a literal lifeline for communities across the world, and an important contributor to GDP growth. It fosters regional integration, economic resilience, geopolitical cooperation, and spawns economic activities that are less viable without access to air transport. Airline networks continue to evolve in a dynamic manner, driven by changes in passenger demand patterns, shifting trade flows, industry and economic activity, and the overarching regulatory frameworks.

In the context of a shifting policy landscape, including ongoing discussions about aviation sustainability and the taxation of aviation, it is important to understand the current situation. How are the various markets evolving? Which markets are leading and lagging in their relative performance? What are the main drivers, and where might additional – or less – policy intervention be needed?

In this paper, we focus on Europe and the Middle East – two mature aviation markets – and compare and contrast, across selected countries, a range of key industry metrics: passenger levels, route churn characteristics, and overall connectivity performance. This provides a foundation for deeper conversations related to competitiveness and policy interventions, with insights that are relevant to all air transport markets and their existing and future policies.

The countries included in the analysis are the larger ones in terms of market size, airline activity, and hub airport existence in the respective region (Table 1). They accounted for 54% of all passengers departing on a flight from Europe and 76% from the Middle East.

Table 1: Countries included in the analysis

Europe	Middle East
France	Qatar
Germany	Saudi Arabia
Poland	United Arab Emirates (UAE)
Spain	
Sweden	
Türkiye	
United Kingdom	

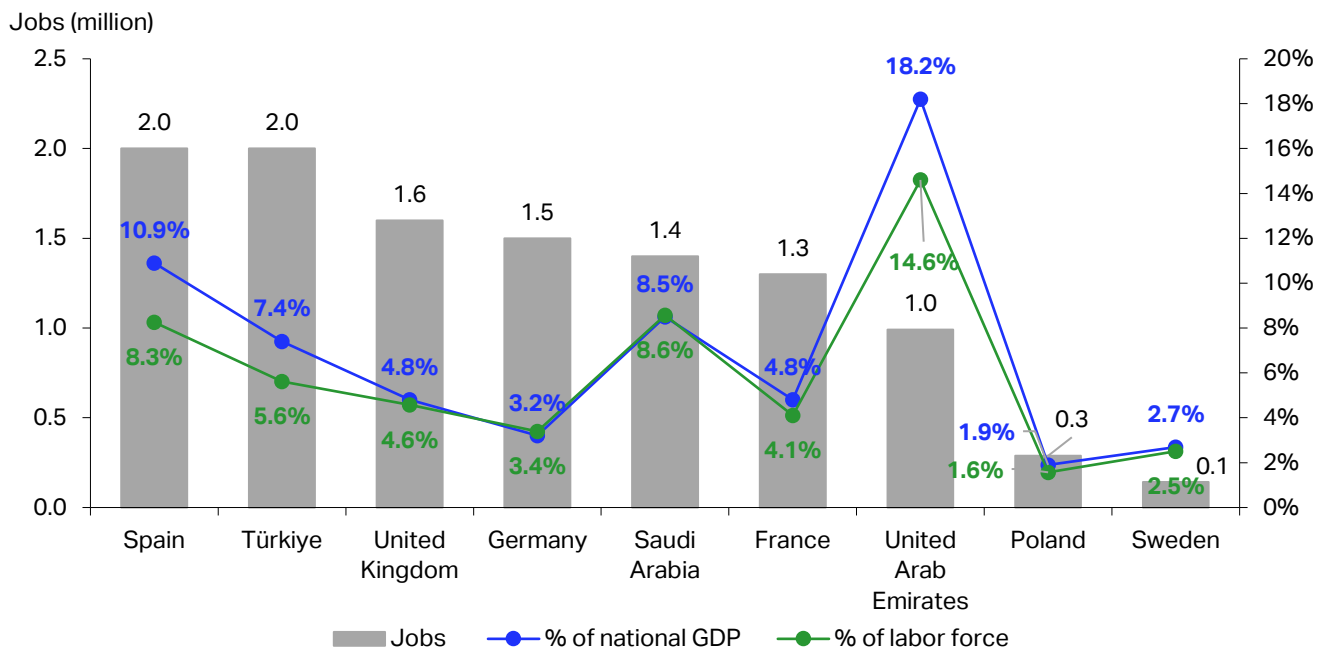
Market size and importance

Across the countries analyzed, the aviation industry contributed between USD 15.3 million (Poland) and USD 172.9 million (Spain)¹ to the country's economic output in 2023, measured in terms of the industry's contribution to gross domestic product, GDP. That direct and indirect contribution to GDP does not capture the dynamic impact of air transport, which increases the productivity of every industry that has access to its services.

In proportion to the size of the national economy, aviation is most important in the UAE, where it supported almost one-fifth (18.2%) of the country's GDP, while providing employment for a total of one million people (14.6% of the labor force). In Spain, the industry accounts for 10.9% of annual GDP output, and in Saudi Arabia 8.5%. Spain and Türkiye rank highest in terms of the number of jobs supported by aviation, at 2 million in both; 8.3% and 5.6% of the total labor force of each country, respectively. At the other end of the spectrum lies Poland, with a more modest contribution of 1.9% of annual GDP and 1.6% of the labor force. The mid-field includes Germany, the UK, and France, where aviation's contribution to overall economic output ranges between 3.2% and 4.8% (Chart 1). This is in line with the global average of 3.9% of GDP being directly and indirectly supported by the aviation sector.

The share of air transport in GDP, of course, also depends upon the characteristics of the local economy, including demographics, income levels, size of the economy, composition of economic activity (the size of other industries), geographic drivers, and the relative pace of expansion or contraction in other sectors.

Chart 1: Value of Aviation, jobs (no. and % of labor force) and % share of GDP, 2023



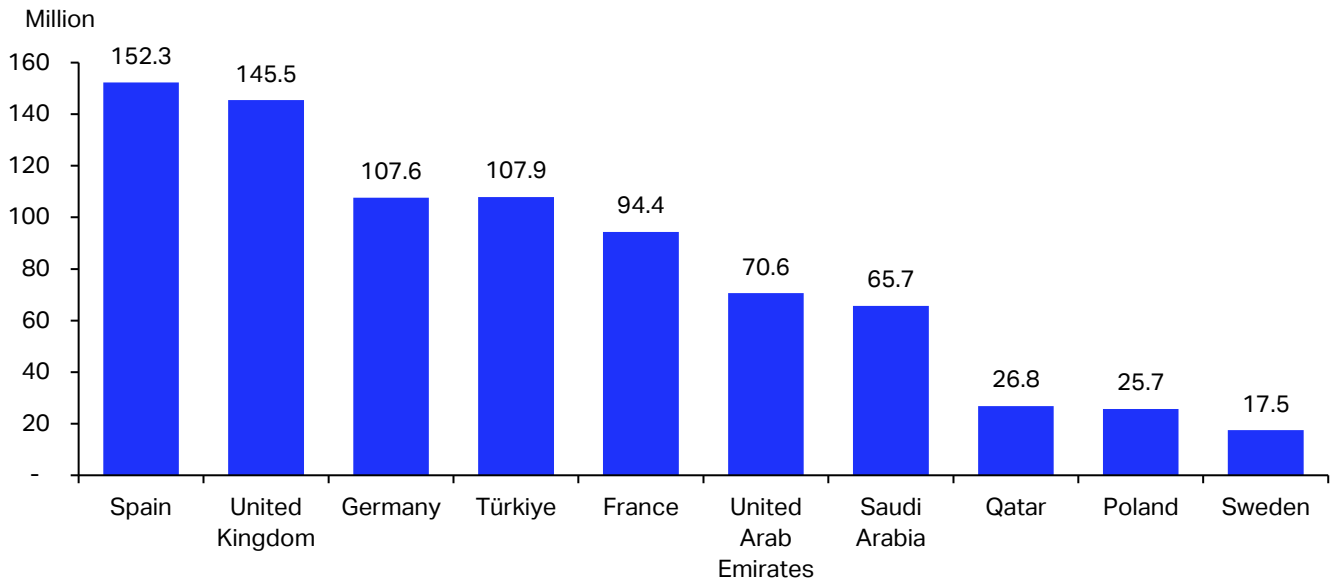
Source: IATA. The Value of Air Transport studies provide a detailed analysis of aviation's direct and indirect contributions to national economies, measured in terms of GDP contribution and the number of jobs. This includes the impact of airlines, airports, air navigation service providers, but also the benefits linked to the spending undertaken by the aviation value chain. Note that a Value of Aviation assessment is not available for Qatar.

Both the absolute and the relative market size – in terms of passenger numbers – can be important when considering network dynamics. Spain is the largest market in this assessment, with 152.3 million passengers boarding a flight in the country in 2024 (Chart 2). The UK followed closely, at 145.5 million passengers.

¹ Data for 2023. See <https://www.iata.org/en/publications/economics/reports/value-of-air-transport-country-reports/> for more.

Of the Middle Eastern countries, the UAE had the highest number of departing passengers, a total of 70.6 million in 2024. Importantly, these figures include both passengers who started their journey in the country and connecting passengers. Connecting traffic is particularly significant in the Middle Eastern markets.

Chart 2: Number of departing passengers, 2024



Source: IATA Sustainability and Economics based on data from DDS, measured on a flight segment basis

Market growth

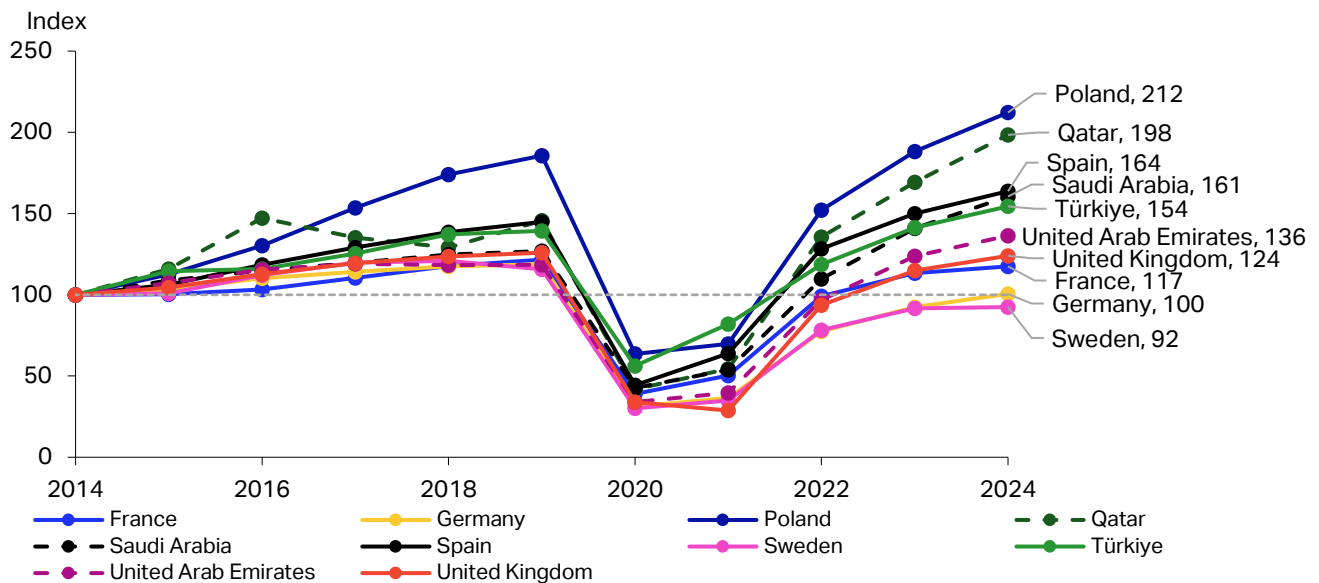
The evolution of passenger numbers over the past decade is a primary indicator of market dynamics. Poland leads the way in our sample in terms of growth in departing passenger numbers, as its market more than doubled between 2014 and 2024 (Chart 3). In large part, this reflects the considerable improvement in the affordability of air travel in the country; the average number of days of work required to pay for an average airfare almost halved from 3.8 days in 2014 to around 2.0 in 2024.

Countries in the Middle East also rank high on this metric, with Qatar's departing passenger numbers increasing by 98.4% over the 2014-2024 period. Saudi Arabia followed with growth of 60.5%, and the UAE with 36.3%. These outcomes were driven by the expansion of the Middle Eastern hubs, which in turn was enabled by national policies supporting aviation growth and investment. For example, since 2014, Qatar opened Hamad International Airport, two large concourses were opened at Dubai International Airport, and multiple new terminals were constructed at airports in Saudi Arabia.

The "core" European markets have seen a mixed performance. No cumulative growth was observed in Germany, while the UK and France saw only modest growth over the past decade, of 24.0% and 17.5% – equivalent to a compound annual growth rate of 2.2% and 1.6% – respectively. This is below the global average growth rate of 46.2% across the 10-year period, and the associated compound annual growth rate of 3.9%

In contrast, in Spain, the market grew by a brisk 63.8% over the past ten years, at a compound average growth of 5.1% per year. Similarly, Türkiye realized an overall growth of 54.4%, and an annual compound growth of 4.4%. Sweden is the only market in this analysis that contracted over the past decade, with passenger numbers in 2024 standing at 92.4% of their 2014 level. The different growth dynamics are related to a range of factors such as willingness to travel, general economic conditions, market maturity, costs (e.g., taxes and charges), and infrastructure capacity.

Chart 3: Number of departing passengers, segment level, index, 2014 = 100



Source: IATA Sustainability and Economics based on data from DDS

Box 1. Ticket tax levied on passengers travelling from an airport in Sweden.

In 2018, the Swedish government introduced a new tax levied on each air ticket for travel from a Swedish airport. The tax applied to both domestic and international travel but connecting traffic and small aircraft (<10 passengers) were excluded. Depending on the destination of travel, the tax varied between SEK 60 to SEK 400 (approximately USD 7 to USD 49 at the time). In 2024, the price of an average international air ticket from Sweden was increased by an average of 10% due to this tax.

At a time when global air transport was growing dynamically, the industry in Sweden began to contract. Numerous regional airports such as Halmstad, Kramfors/Solleftea, Lycksele, or Vilhelmina saw a year-on-year decline of more than 60% in the number of passengers in 2018, compared to 2017.

This reduction in traffic had an impact on the value that aviation brought to Sweden: in 2016 it was estimated that aviation supported 191 thousand jobs in the country, falling to 169 thousand in 2018, a drop of 11.5%. The number of jobs directly created by aviation entities (such as airlines, airports, ANSPs etc.) contracted from 48.6 thousand to 45.6 thousand across these two years (-6.2%). Consequently, the contribution of aviation to the GDP of the country shrank in this period from USD 19.2 billion to USD 17.7 billion (-7.8%).

The overall Swedish air transport market contracted by 23.1% between 2017 and 2024, with regional airports seeing an outsized decline of 29.4% in the number of passengers. Furthermore, the post-covid recovery in Sweden clearly lagged the dynamics seen across Europe more broadly. By 2024, Sweden's traffic was at 79.7% compared to 2019, versus 101% seen across the continent.

Recognizing the importance of aviation and noticing the stagnation of the market, the government abolished this tax as of 1 July 2025. The news of this policy reversal brought a near-immediate positive reaction. For example, in September 2024, Ryanair announced that two additional aircraft would be based in Sweden, offering 10 new routes for summer 2025 onwards.² Jonas Abrahamsson, president and CEO of Swedavia, which runs 10 of the country's busiest airports, noted that "the aviation tax has hampered Swedish flight accessibility, competitiveness and growth," and welcomed the cancellation of the levy.³ It is now expected that activity in this market can be reinvigorated, thanks to the reduced financial burden on the travelling public.

² Source: <https://corporate.ryanair.com/news/ryanair-responds-to-govts-decision-to-abolish-aviation-tax/>

³ Source: <https://onemileatatime.com/news/sweden-ends-flight-shaming-tax-aviation>

Route network evolution

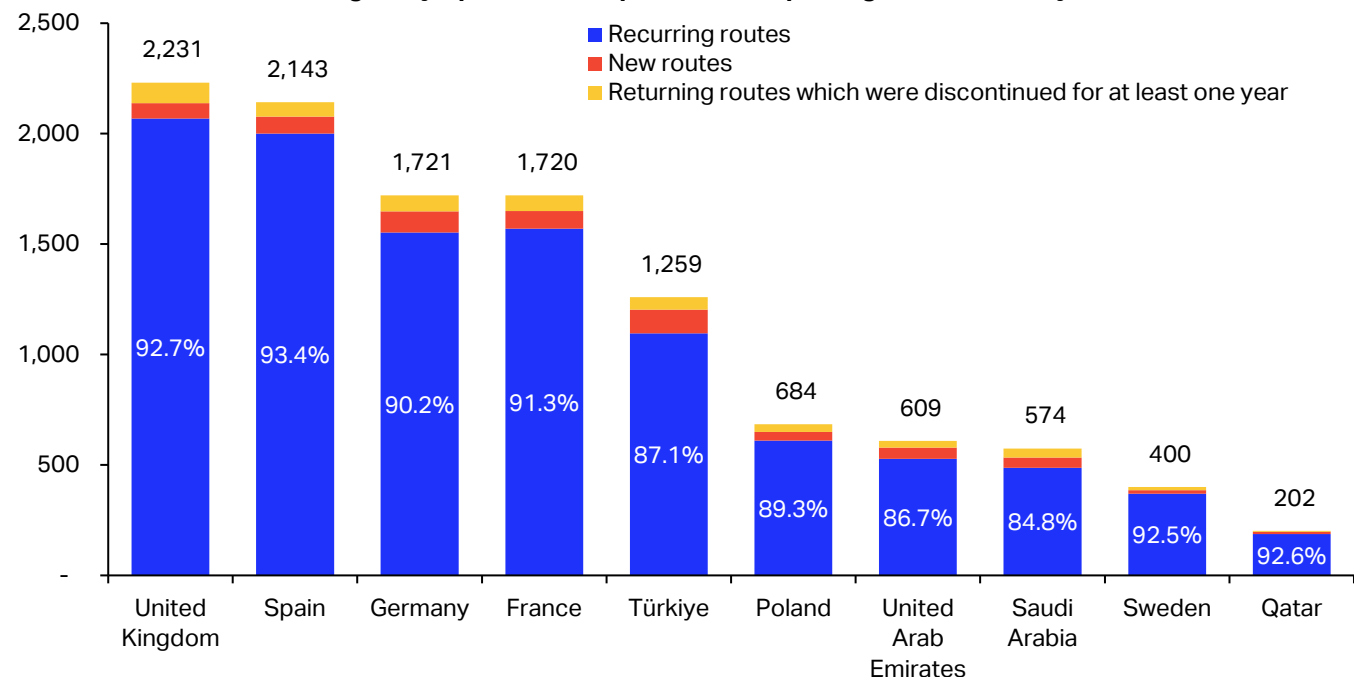
The evolution of the route network offered to passengers is another key indicator of market dynamics, in addition to the overall volume of air traffic. How many unique city-pair routes were there? How have they evolved over time?

In terms of the total number of regularly operated, unique routes flown from a country in the sample, the UK led the ranking in 2024, offering passengers a total of 2,231 unique city pair connections.⁴ Of these, 92.7% were recurring, meaning that they were also available to passengers in 2023. Spain followed closely, with 2,143 routes and a 93.4% rate of recurrence.

The most significant network evolution in 2024 took place in Saudi Arabia, where 15.2% of routes offered that year were not available to passengers in 2023 (Chart 4). In Europe, the largest percentage change in the composition of the route network occurred in Poland, with a 10.7% change year-on-year (YoY).

The highest number of new routes was added to the network operated from Türkiye, with 107 new connections being offered in 2024 when compared to 2023. This growth was enabled through the continued investment in airport infrastructure in the country, including the opening of the new Istanbul Airport. Significant investment was also seen across regional airports in the country. For example, in the spring of 2025, phase 1 of the Antalya airport expansion project was completed, with an additional 160,000m² of terminal space now being available to passengers.⁵

Chart 4: Total number of regularly operated, unique routes departing from a country, 2024



Source: IATA Sustainability and Economics based on data from OAG

While a level of route churn⁶ inevitably occurs, it is often the case that new routes replace existing routes as airlines adapt and respond to shifts in market conditions. In other words, the addition of new routes offered is not necessarily a reflection of a growing route network. The largest route growth – measured by the total number of unique routes available to passengers since 2014 – occurred in Poland, at 60.6% (Chart 5). This

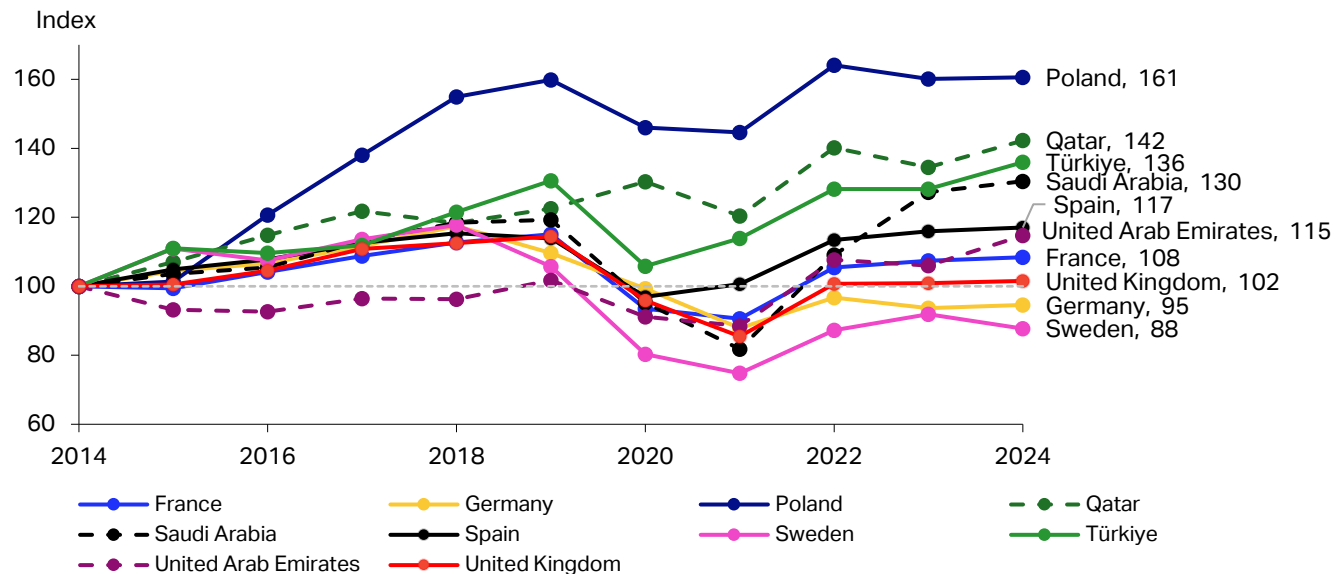
⁴ Inclusive of both international and domestic traffic, analyzed on a directional basis, and classified by point of departure.

⁵ Source: <https://www.passengerterminaltoday.com/news/construction-architecture/antalya-airport-completes-first-phase-of-airport-expansion.html>

⁶ Route churn relates to the extent to which airlines adapt their network, including both adding new routes and dropping previously operated routes.

represents a compound annual growth rate of 4.8% and is unsurprising given the strong growth in passenger numbers and the gains in terms of affordability noted previously.

Chart 5: Number of unique routes departing from a country. Index, 2014 = 100



Source: IATA Sustainability and Economics based on data from OAG

In contrast, Germany and Sweden saw a decrease in the total number of unique routes offered over the past decade, with contractions of 5.4% and 12.3%, respectively. The UK and France recorded slight increases in the number of routes, at 1.6% and 8.4%, respectively. While these markets are mature and already had a well-developed network in 2014, a stagnating number of routes offered, combined with slow growth in overall passenger traffic, suggests that these countries might not be deriving the full benefits of air transport, and a form of competitive disadvantage could be at play.

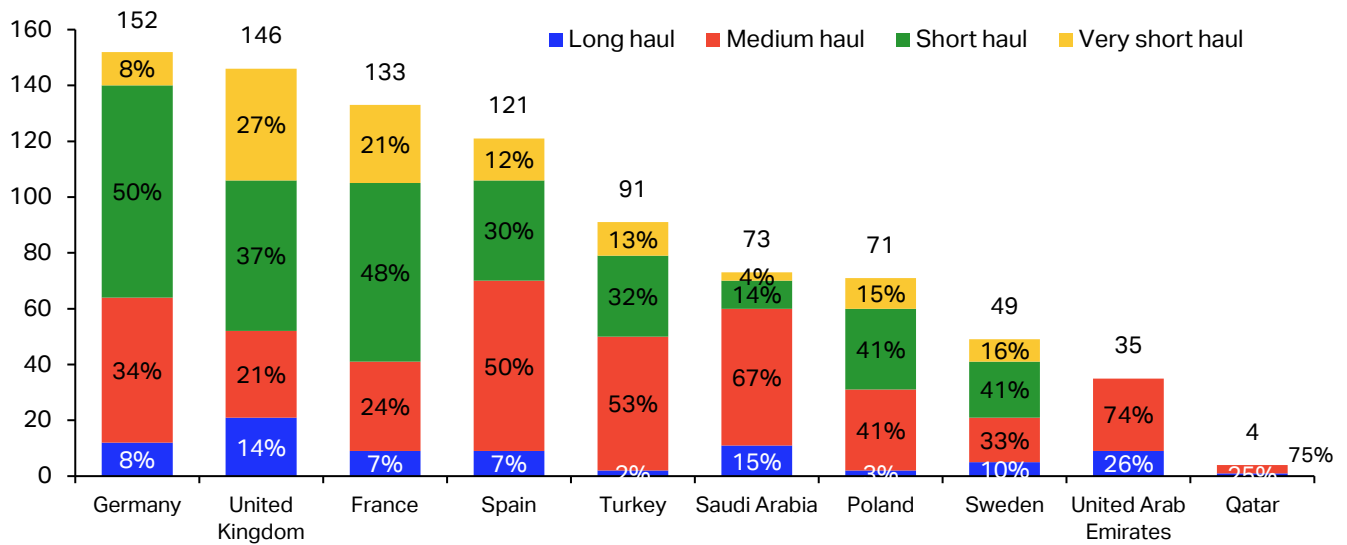
Route cancellations

Airlines continuously assess passenger demand across both existing and potential new routes. Where a route does not meaningfully contribute to the airline's profitability, various actions will be considered, including reducing the volume of available seats (via switching to smaller aircraft or reducing frequency), or redeploying aircraft to a different connection or hub. In addition to passenger demand, factors such as policy decisions, taxes, infrastructure charges and more can be important considerations in network development and optimization.

Germany had the largest number of discontinued routes in 2024, at 152. The UK followed, with 146 which were operated in 2023 but not in 2024 (Chart 6). In both cases, the total number of routes offered in 2024 grew by 16, compared to 2023 (see Annex for additional information). In the UK, 27.4% of the dropped connection options were domestic, and 56.8% international with a destination elsewhere in Europe. France and Spain also discontinued more than 100 routes in 2024. The least number of discontinued routes, only four, were removed from the network from Qatar, with 35 from the UAE and 49 in Sweden.

Routes longer than 500 km accounted for between 63% and 96% of these cancellations across the sample countries. For the affected passengers, such air travel typically cannot readily be substituted by other modes of transport, meaning that they will most likely have to travel via a hub or to/from an alternative airport.

Chart 6: Number of routes discontinued in 2024, by distance

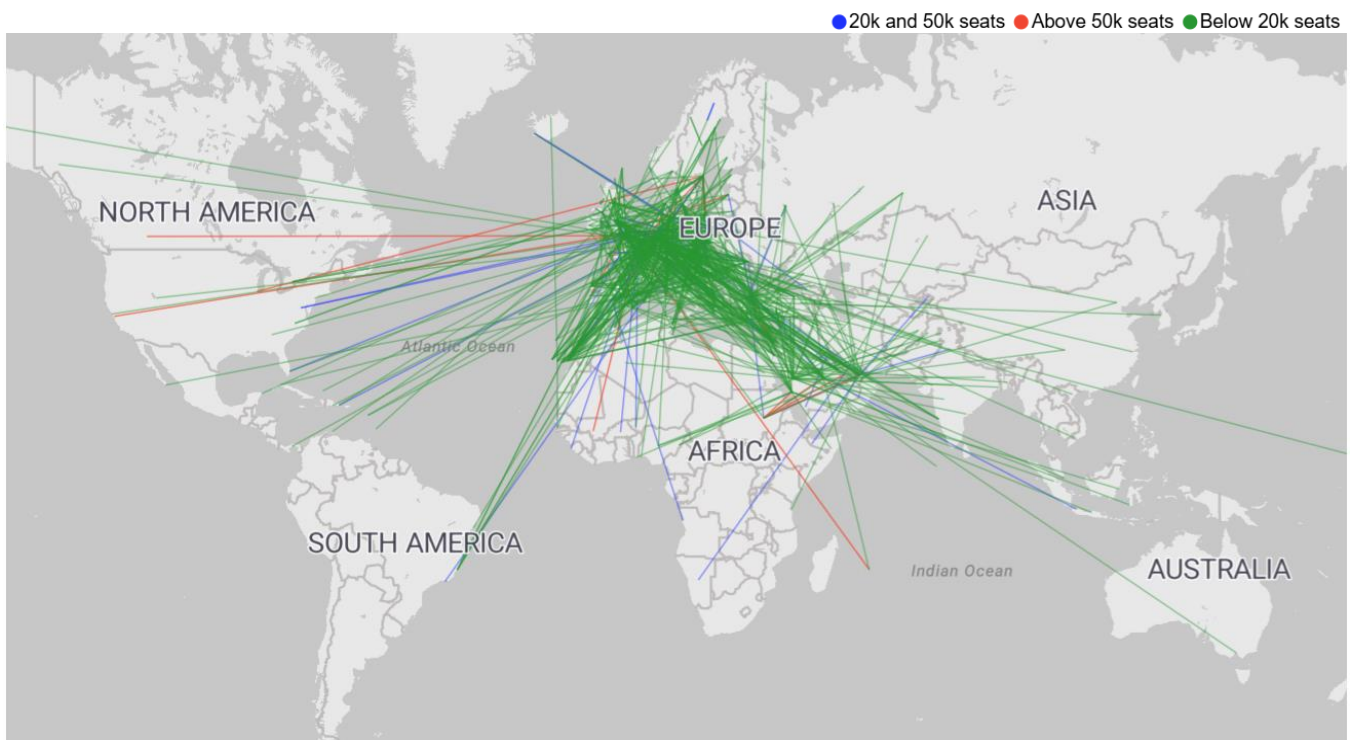


Source: IATA Sustainability and Economics based on data from OAG.

Classification applied: very short haul <500km, short haul 500-1,500km, medium haul 1,500km – 4,000km and long haul >4,000km

As much as 90% of the analyzed cancelled routes in 2024 had an annual capacity of 20 thousand seats or less, hence considered to be “thin” routes, with a usual flight frequency of two or three flights a week (depending on aircraft size). These routes are typically the most vulnerable to shifts in route economics, including costs and demand. The closure of such routes can have a significant detrimental impact on regional connectivity, and the ability to provide essential services to remote regions. The routes cancelled (Chart 7) not only affect the local population, but can also impact the wider network given their role in providing feeder traffic for larger, inter-hub routes. Worldwide services can therefore be reconfigured in response to what might initially appear to be purely local decisions.

Chart 7: Routes discontinued in 2024, by annual seat volume, sample countries only



Source: IATA Sustainability and Economics based on data from OAG

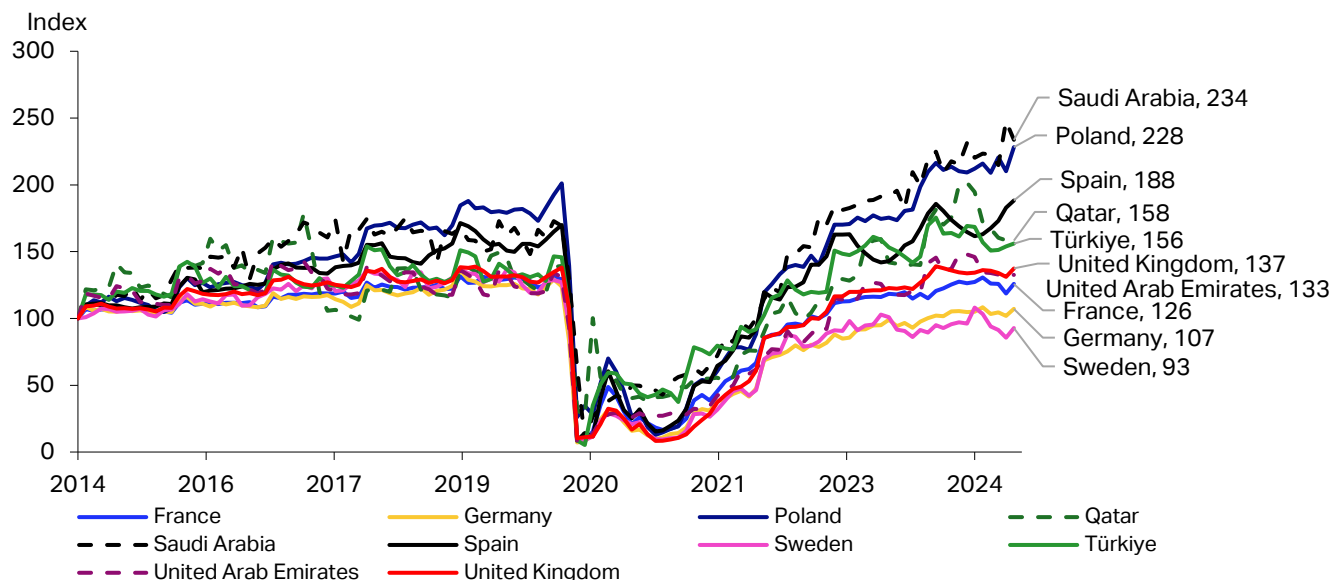
Connectivity

The IATA air connectivity index provides insight into how well-connected countries are to other key global markets. This index combines the number of routes with information on seat availability and is weighted by total traffic at the destination airport, thus capturing the relative importance of global destinations.⁷

In terms of connectivity, Saudi Arabia has outperformed Poland over the past decade (Chart 8), despite the latter having led the group of sample countries regarding growth in both the number of passengers and routes over the same period. This suggests that a large proportion of the connectivity increase in Poland relates to travel to destinations that are less well connected to the wider aviation network compared with Saudi Arabia. Indeed, for Poland, a large proportion of the travel growth is leisure-based, often to regional airports in Greece, Spain, and Italy. Saudi Arabia has increased the availability of seats to the UAE significantly, which is a key gateway to global destinations.

Sweden was the only market that experienced a decline in the air connectivity measure between 2014 and 2024, by 7.2%; unsurprising given the country's decline in the number of passengers and routes.

Chart 8: Air connectivity index, 2014-2024, 2014 = 100



Source: IATA Sustainability and Economics based on data from OAG

Conclusion

This brief analysis of network dynamics across a selection of air transport markets in Europe and the Middle East shows positive market dynamics notably in the latter (Table 2). The story is less clear in Europe where performance is mixed. The leading countries in our European sample in terms of growth in both passengers and routes are Spain, Türkiye, and Poland. In contrast, several of the large and mature European markets – France, Germany, and the UK – have stagnated across all metrics. Sweden not only stagnated but actually saw a shrinking market over the 2014 to 2024 period.

⁷ The IATA Connectivity index is designed in a way that applies a higher weighting to the key global destinations which give travelers more connectivity options. It does not try to measure the social or economic benefits of connecting remote communities into the air transport network. The creation of such connections might be a vital lifeline for those communities, despite having a relatively smaller, perhaps marginal, impact on the country's overall air connectivity score.

Table 2: Heatmap, key comparative results

	Value of Aviation relative to GDP (2023)	Total growth in the no. of passengers (2014 to 2024)	Total growth in the no. of unique routes (2014 to 2024)	Total growth in air connectivity (2014 to 2024)
France	4.8%	17.5%	8.4%	25.8%
Germany	3.2%	0.5%	-5.4%	7.1%
Poland	1.9%	112.2%	60.6%	128.2%
Qatar	Not available	98.4%	42.3%	58.3%
Saudi Arabia	8.5%	60.5%	30.5%	133.6%
Spain	10.9%	63.8%	17.0%	88.3%
Sweden	2.7%	-7.6%	-12.3%	-7.2%
Türkiye	7.4%	54.4%	36.0%	56.0%
United Arab Emirates	18.2%	36.3%	14.7%	32.6%
United Kingdom	4.8%	24.0%	1.6%	37.5%

Source: IATA Sustainability and Economics based on data from DDS and OAG.

Note: For each category, green indicates the highest growth or performance across the sample, while red represents the lowest. Shades of orange reflect intermediate levels of performance relative to the top result.

Various factors help to explain these evolutions and differences, many of which are country-specific. They can relate to socio-economic considerations, the business cycle, particular characteristics of the individual market, as well as the policy or regulatory backdrop. While beyond the scope of this paper, a deeper analysis of the specifics of the individual markets and how they differ across countries would provide greater clarity and understanding to inform strategic decision-making and policy action moving forward.

That being said, some high-level observations are possible. The potential air traffic growth rate tends to decelerate as market size and maturity increases; ensuring that markets can grow in line with underlying demand drivers requires cost-effective, forward-looking and timely infrastructure investment. Governments that see air transport as a strategic lever for economic development, such as in the Middle East, tend to be more proactive in alleviating potential capacity constraints. Tax policies are not only a way of raising government revenue, but are also a directional policy tool directly impacting activities subject to the tax. Countries that view air transport as an activity to be curtailed will cap and forego some of the economic benefits that the industry delivers, resulting in economic and social costs that could exceed the tax revenue collected.

Long-term market stagnation can be the result of various other policy and regulatory aspects in addition to taxes. This can include monopolistic pricing power of other sectors of the aviation value chain, over-burdensome policy and regulation, additional excessive cost or administrative items, and limited scope for airport and broader investment and development. Such factors can not only potentially limit air traffic directly, but also create competitive disadvantages compared to other markets. Wherever possible, the importance of harmonized pricing, rules, and regulations across global civil aviation cannot be overstated, as any local deviations will ripple across the global network of air traffic services.

Annex: Route churn overview

Country-level evolution of the regularly scheduled route network, 2023 to 2024.

Source: IATA Sustainability and Economics based on data from OAG.

