This article provides details on the current situation and recent developments for passenger transport statistics within the European Union (EU), based on the most recent data available. It presents information on passenger transport by a range of transport modes, such as road, rail, air and maritime transport. Among these, the principal mode of passenger transport is the passenger car, fuelled by a desire for greater mobility and flexibility. However, the high reliance on the passenger car as a means of transport across the EU has contributed to increased congestion and pollution in many urban areas and on many major transport arteries.

**Modal split of inland passengers**

Figure 1 shows that passenger cars accounted for 82.9% of inland passenger transport in the EU in 2016, with motor coaches, buses and trolley buses (9.4%) and passenger trains (7.7%) both accounting for less than a tenth of all traffic (measured by the number of inland passenger-kilometres (pkm) travelled by each mode).
The passenger car was by far the most important mode for passenger transport in all EU Member States. In Lithuania and Portugal passenger cars accounted for close to 90% of all passenger transport in 2016. Slovakia, Czechia and Hungary were the only EU Member States were the shares of passenger cars were below three quarters. For Hungary, this was reflected in the highest share of motor coaches and buses (21.7%) among the EU Member States. An even higher share was reported for the candidate country Turkey (28.5%). The lowest share for motor coaches, buses and trolley buses was in the Netherlands (3.0%).

The EU Member States with the highest share of passenger transport by train were Austria (12.1%) and the Netherlands (11.0%). However, this was well below the EFTA country Switzerland, were trains carried out 19.8% of all passenger transport in 2016. At the same time, their share was 2.0% in Estonia and Slovenia and less in Greece and Lithuania, as well as in North Macedonia and Turkey.

**Rail passengers**

Concerning rail transport, more than 9.6 billion passengers travelled on national railway networks in the EU, in 2017 (Table 1). It has to be noted that international transport represented less than 8% of the total transport for all countries except Luxembourg where it represented 28%. All in all, sixteen of the EU Member states reported increases in the total number of passenger transported between 2016 and 2017. The largest increases were recorded in Romania (+14.4%), Slovakia (+8.3%) and Estonia (+7.3%). In contrast, the transport of passengers decreased by 4.7% in Slovenia. Outside the EU, Montenegro and North Macedonia registered a large drop in rail passenger transport (-27.9% and -24.5%).
When looking at the evolution of international transport between 2016 and 2017, the largest increases were reported by Bulgaria (+52.3 %), Poland (+35.5 %), Spain (+24.0 %) and Finland (+21.0 %). In contrast, the largest decreases were reported by Italy (-10.0 %) followed by Romania (-7.6 %). Finally, concerning the evolution of national transport, Romania registered the largest increase with +14.5 %, followed by Lithuania (+7.7 %) while Slovenia reported the largest decrease with -4.8 %.

In order to compare between countries the relative importance of rail transport, the data can be normalised by expressing passenger traffic in relation to population (Figure 2). Travel on the national rail network in Austria, France, Sweden, Germany, Denmark and the United Kingdom averaged more than 1,000 passenger-kilometres per inhabitant in 2017; this was well below the level recorded in Switzerland (2,211 passenger-kilometres per inhabitant). By contrast, among the EU Member States the lowest average distances travelled on national

Table 1: Rail passenger transport by type of transport, 2016-2017 (thousand passengers) Source: Eurostat (rail_pa_typepas)

When looking at the evolution of international transport between 2016 and 2017, the largest increases were reported by Bulgaria (+52.3 %), Poland (+35.5 %), Spain (+24.0 %) and Finland (+21.0 %). In contrast, the largest decreases were reported by Italy (-10.0 %) followed by Romania (-7.6 %). Finally, concerning the evolution of national transport, Romania registered the largest increase with +14.5 %, followed by Lithuania (+7.7 %) while Slovenia reported the largest decrease with -4.8 %.

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railway networks in 2017 were recorded in Greece (103 passenger-kilometres per inhabitant) and Lithuania (107 passenger-kilometres per inhabitant), while the levels in the candidate countries Turkey (56 passenger-kilometres per inhabitant) and in North Macedonia (28 passenger-kilometres per inhabitant) were even lower.

**Figure 2: Rail passenger transport by type of transport, 2017 (passenger-kilometres per inhabitant)**

In terms of international rail travel, the only EU Member States to report levels of more than 100 passenger-kilometres per inhabitant in 2017 were Luxembourg (219 passenger-kilometres per inhabitant), France (145 passenger-kilometres per inhabitant) and Czechia (136 passenger-kilometres per inhabitant); this level was also surpassed in the EFTA country Switzerland (110 passenger-kilometres per inhabitant). These figures may reflect, among others, the proximity of international borders, the importance of cross-border commuters within the workforce, access to high-speed rail links, and whether or not international transport corridors run through a particular country.

**Air passengers**

The total number of air passengers transported surpassed 1 billion for the first time in 2017, at EU level (Figure 3). The United Kingdom was the EU Member State carrying the highest number of passengers in 2017 (265 million passengers), followed by Germany (212 million passengers) and Spain (210 million passengers). The first five countries represented two thirds of the total EU air transport. On the other side, Slovenia recorded 1.7 million passengers.

Almost half of the air passenger transport concerned intra-EU flights (47 %) while national transport and extra-EU transport accounted for 17 % and 36 % of air passenger transport, respectively. For all countries intra-EU transport is dominant, with shares between 45 % for France and 92 % for Malta. When looking at extra-EU transport, the highest share was registered by Slovenia (40 %) while the lowest by Malta (8%). The
share of national transport was higher than the share of extra-EU transport only for Italy (22 %), Sweden (20 %) and Spain (17 %).

Figure 3: Air passenger transport by type of transport, 2017 (million passengers carried)

Source: Eurostat (avia_paoc)

London Heathrow was the busiest airport in the EU in terms of passenger carried in 2017, with 78 million passengers arriving or departing (Figure 4). Heathrow has constantly remained the busiest airport in the EU since the beginning of the time series in 1993. It was followed — at some distance — by Paris’ Charles de Gaulle airport (69 million), Amsterdam’s Schiphol airport (68 million) and Frankfurt airport (64 million). The same airports have been the largest four in the EU since 2011, when Amsterdam Schiphol moved from fifth into fourth place.

The overwhelming majority of passengers travelling through these four busiest airports were travelling on international flights; the lowest share among them was recorded for Frankfurt airport (88.7 %), rising to 100.0 % for Amsterdam Schiphol. In contrast, national flights accounted for 28.3 % of the 52 million passengers carried through the EU’s fifth busiest passenger airport in 2017, Adolfo Suárez Madrid-Barajas. There were also relatively high proportions of passengers on national flights to and from Paris Orly (44.3 %), Roma Fiumicino (28.1 %) and Barcelona airport (27.1 %).
Figure 4: Top 15 airports in the EU-28, 2017 (million passengers carried)

Map 1 presents some elements of the extra-EU air transport of passengers. With a 38 % increase between 2016 and 2017, ‘Asian Republics of the Ex-USSR’ is the partner world region with the highest increase for EU passenger transport. The highest and continued decrease of Australia – 4.1 % could be partially linked to the increase in Near and Middle East (+9.8 %) – more passengers taking indirect flight to Australia changing in Near and Middle East airports. North Africa also recorded an important increase after several years of decrease +19.5 %.
Maritime passengers

When it comes to maritime transport, the total number of passengers embarking and disembarking in EU ports is estimated at almost 415 million in 2017, a rise of 4.6 % from the previous year (Figure 5). Unlike goods movements, where broadly 60 % of goods are unloaded and 40 % loaded in the EU ports, the difference between the number of passengers disembarking ("inwards") and embarking ("outwards") in EU ports is generally small. This reflects the fact that seaborne passenger transport in Europe is mainly carried by national or intra-EU ferry services, with the same passengers being counted twice in the port throughput statistics (once when they embark the ferry in one EU port and once when they disembark the same ferry in another EU port).
At close to 74 million and 70 million seaborne passengers, respectively, Italian and Greek ports handled a combined share of 35% of the total number of passengers embarking and disembarking in EU ports in 2017. As a consequence, Italy and Greece remained the main countries in terms of EU seaborne passenger transport. Both countries recording substantial increases in passengers embarking and disembarking compared with 2016 (+9.8% and +7.3%, respectively). The two leading countries were followed by Denmark with close to 43 million passengers embarking and disembarking in 2017, an increase by 3.1% from 2016.

Compared with the previous year, the largest relative increases in seaborne passengers transport were recorded by Latvia (+37.5%), Slovenia (+33.0%), Romania (+25.0% from a low base), Cyprus (+22.8%) and Belgium (+13.7%) as well as Iceland (+68.4%), in 2017. In contrast, only five countries reported a fall in 2017 compared with the previous year. The largest relative decreases were recorded in Bulgaria (-28.0%, from a low base).
Table 2: Seaborne passengers embarked and disembarked in all ports, 2014-2017 (thousand passengers)

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<td>Total</td>
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(1) Data exclude cruise passengers.
(2) Data on international maritime passenger transport only.
Source: Eurostat (online data codes: mar_mp_aa and mar_mp_aa_cphd)

Although cruise passengers made up only 3.4% of the total number of passengers embarking and disembarking in EU ports in 2017, these passengers play an important role in the ports and countries where the cruise traffic is concentrated. Close to 80% of the total number of cruise passengers embarking and disembarking in European ports in 2017 did so in the ports of one of the four countries Italy, Spain, Germany and the United Kingdom. Cruise passengers on day excursions in EU ports are not included in these figures.
Source data for tables and graphs

- Passenger transport statistics: tables and figures

Data sources

The majority of inland passenger transport statistics are based on vehicle movements in each of the reporting countries, regardless of the nationality of the vehicle or vessel involved (the ‘territoriality principle’). For this reason, the measure of passenger-kilometres (pkm, which represents one passenger travelling a distance of one kilometre) is generally considered as a more reliable measure, as a count of passengers entails a higher risk of double-counting, particularly for international transport. The methodology used across the EU Member States is not harmonised for road passenger transport.

The modal split of inland passenger transport identifies transport by passenger car, by motor coach, bus and trolley bus, and by train; it generally concerns movements on the national territory, regardless of the nationality of the vehicle. The modal split of passenger transport is defined as the share of each mode (in percentage) and is based on data expressed in passenger-kilometres. For the purpose of this article, the aggregate for inland passenger transport excludes domestic air and water transport services (inland aviation and maritime transport).

The level of inland passenger transport (in passenger-kilometres) may also be expressed in relation to GDP; within this article, the indicator is presented based on GDP in constant prices for the reference year 2005. This indicator provides information on the relationship between passenger demand and the size of the economy and allows monitoring of the development of passenger transport demand relative to economic growth.

Rail passengers

A rail passenger is any person, excluding members of the train crew, who makes a journey by train. Rail passenger data are not relevant for Malta and Cyprus (or Iceland) as these countries have no railways. Annual passenger statistics for national and international rail transport generally cover only larger rail transport enterprises, although some countries use detailed reporting for all railway operators.

Air passengers

Air transport statistics concern national and international transport, as measured by the number of passengers carried; information is collected for arrivals and departures. Air passengers carried relate to all passengers on a particular flight, counted once only and not repeatedly on each individual stage of that flight. Air passengers include all revenue and non-revenue passengers whose journeys begin or terminate at the reporting airport, as well as transfer passengers joining or leaving a flight at the reporting airport; excluded are direct transit passengers. Air transport statistics are collected monthly, quarterly and annually, although only the latter are presented in this article. Air transport passenger statistics also include the number of commercial passenger flights, as well as information relating to individual routes and the number of seats available. Annual data are available for most of the EU Member States from 2003 onwards.

Maritime passengers

Maritime transport data are generally available from 2001 onwards, although some EU Member States have provided data since 1997. Maritime transport statistics are not transmitted by the Czechia, Luxembourg, Hungary, Austria or Slovakia, as these are landlocked countries with no maritime traffic; the same applies to Liechtenstein and Switzerland.

A sea passenger is defined as any person that makes a sea journey on a merchant ship; service staff are not regarded as passengers, neither are non-fare paying crew members travelling but not assigned. Infants in arms are also excluded. Double-counting may arise when both the embarking port and the disembarking port report data; this is quite common for maritime transport of passengers, which is generally a relatively short distance activity.

Context

EU transport policy seeks to ensure that passengers benefit from the same basic standards of treatment wherever they travel within the EU. Passengers already have a range of rights covering areas as diverse as: information
about their journey; reservations and ticket prices; damages to their baggage; delays and cancellations; or difficulties encountered with package holidays. With this in mind the EU legislates to protect passenger rights across the different modes of transport:

- **Regulation 261/2004** establishing 'common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delays of flights'; in March 2013 the **European Commission** proposed a revision of this Regulation (COM(2013) 130 final) aiming to clarify grey areas, introduce new rights (for example concerning rescheduling), strengthen oversight of air carriers, and balance financial burdens;
- **Regulation 1371/2007** on 'rail passengers' rights and obligations';
- **Regulation 181/2011** establishing 'the rights of passengers in bus and coach transport';
- **Regulation 1177/2010** establishing 'the rights of passengers when travelling by sea and inland waterway'.

Specific provisions have also been developed in order to ensure that passengers with reduced mobility are provided with necessary facilities and not refused carriage unfairly.

In December 2011, the European Commission adopted 'A European vision for passengers: communication on passenger rights in all transport modes' (COM(2011) 898 final). This acknowledged the work undertaken to introduce passenger protection measures to all modes of transport but notes that a full set of rights is not completely implemented. The Communication aims to consolidate the existing work, and move towards a more coherent, effective and harmonised application of rights alongside better understanding among passengers.

In March 2011, the European Commission adopted a White paper, the 'Roadmap to a single European transport area — towards a competitive and resource efficient transport system' (COM(2011) 144 final). This comprehensive strategy contains a roadmap of 40 specific initiatives to build a competitive transport system over a 10-year period that aims to increase mobility, remove major barriers in key areas and fuel growth and employment.

More details concerning the European Commission’s proposals for transport policy initiatives are provided in an introductory article on transport in the EU.
Air transport (t_avia)

Air transport of passengers (ttr00012)

Database

- Transport, see:

  Multimodal data (tran)
  - Transport, volume and modal split (tran_hv)
    - Volume of passenger transport relative to GDP (tran_hv_pstra)
    - Modal split of passenger transport (tran_hv_psmod)

  Railway transport (rail)
  - Railway transport measurement - passengers (rail_pa)

  Road transport (road)
  - Road transport measurement - passengers (road_pa)

  Maritime transport (mar)
  - Maritime transport - passengers - detailed annual and quarterly results (mar_pa)

  Air transport (avia)
  - Air transport measurement - passengers (avia_pa)

Dedicated section

- Transport

Methodology

Reference manuals

- Reference manual on rail transport statistics, version 10.1 — January 2019
- Reference manual on air transport statistics, version 14 — September 2017
- Reference manual on maritime transport statistics, version 4.0 — November 2017
- Illustrated glossary for transport statistics, 4th edition, 2010

Methodological notes

- Methodological notes on maritime transport statistics

ESMS metadata files

- Maritime transport (ESMS metadata file — mar_esms)
- Modal split of passenger transport (ESMS metadata file — tran_hv_psmod_esms)
- Passenger and freight transport by air/Traffic data/Air transport at regional level (ESMS metadata file — avia_pa_esms)
- Railway transport measurement (ESMS metadata file — rail_pa_esms)
- Regional transport statistics (ESMS metadata file — reg_tran_esms)
- Volume of passenger transport relative to GDP (ESMS metadata file — tran_hv_pstra_esms)
Legislation

- **Regulation 261/2004** establishing 'common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delays of flights'; in March 2013 the European Commission proposed a revision of this Regulation (COM(2013) 130 final) aiming to clarify grey areas, introduce new rights (for example concerning rescheduling), strengthen oversight of air carriers, and balance financial burdens;
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- **Regulation 1177/2010** establishing 'the rights of passengers when travelling by sea and inland waterway'.

External links

- Eurocontrol — The Single European Sky
- European Commission Directorate-General for Mobility and Transport (DG MOVE)
- International Transport Forum — ITF (formerly the European Conference of Ministers of Transport (ECMT))
- United Nations Economic Commission for Europe (UNECE) — Transport statistics