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

Passenger cars accounted for 83.1% of inland passenger transport in the EU-28 in 2015, with motor coaches, buses and trolley buses (9.2%) 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) — see Figure 1.
The passenger car was by far the most important mode for passenger transport in all Member States. In Portugal and Lithuania passenger cars accounted for close to 90% of all passenger transport in 2015. The Czech Republic and Hungary were the only Member States where the shares of passenger cars were below three quarters. For Hungary, this was reflected in the highest share of motor coaches and buses among the Member States, as well as a high share also for passenger transport by train. The Member States with the highest share of passenger transport by train were Austria (12.0%) and the Netherlands (10.8%). However, this was well below the EFTA country Switzerland, where trains carried out 19.1% of all passenger transport in 2015.

Relative growth of passenger transport and the economy

Overall, between 2005 and 2015, inland passenger transport in the EU-28 grew 4.0% slower than the gross domestic product (GDP) in constant prices. It should be underlined that this indicator, showing the relation of inland passenger transport to constant price GDP, refers only to inland transport by car, by motor coach, bus and trolley bus, or by train. A significant proportion of international passenger travel is accounted for by maritime and air transport passenger services. In some countries national (domestic) maritime and air transport passenger services may also be noteworthy. However, maritime and air passenger transport is not taken into consideration in this indicator.
In a small majority of EU Member States, the change in GDP in constant price was higher than the change in inland passenger transport between 2005 and 2015. This resulted in a fall in the ratio between passenger transport and constant price GDP – see Figure 2. The biggest falls were in Lithuania (43.5 %) and Slovakia (31.5 %). By contrast, the opposite was observed in 13 Member States, most notably in Greece and Cyprus and to a lesser extent in Bulgaria and Croatia, reflecting a strong increase in passenger transport and/or a weak economic development. Among the non-member countries included in Figure 2, the index of inland passenger transport relative to GDP increased over the period in the former Yugoslav Republic of Macedonia, Norway and Iceland, while it fell in Switzerland.

**Road passengers**

Among the EU Member States, the relative importance of passenger cars was highest in Portugal in 2015, where cars accounted for 89.4 % of passenger transport, and in Lithuania (89.2 %). In most Member States, the share of passenger cars was between 80.0 % and 90.0 %, although there were seven Member States where the share was lower, most notably in Hungary (68.2 %); in Turkey, the share was even lower (67.6 %). — see Figure 1. The relative importance of motor coaches, buses and trolleybuses exceeded one fifth of inland passenger transport in Hungary (22.3 %), the highest share among the EU Member States in 2015, although an even higher share (30.7 %) was reported for Turkey. This share was between 10.0 % and 20.0 % in 18 other Member States. The lowest share for motor coaches, buses and trolleybuses was in the Netherlands (3.0 %). — see Figure 1.

**Rail passengers**

In 2015, trains accounted for more than one tenth of all inland passenger transport in Austria and the Netherlands, as well as in Switzerland. At the same time, their share fell below 2.0 % in Estonia, Greece and Lithuania, as well as in Turkey. In this context, it should be noted that there are no rail lines in Cyprus, Malta or Iceland — see Figure 1.

Based on the latest data available (generally for 2016), there were 401 billion passenger-kilometres travelled
on national railway networks in the EU (including 2015 data for Denmark and 2014 data for Hungary; excluding Belgium and the Netherlands). This figure was considerably higher than the 22 billion passenger-kilometres travelled on international journeys (based on the same data availability) — see Table 1.

Table 1: Rail passenger transport, 2014–2016

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>1 056</td>
<td>9 242</td>
<td>1 051</td>
<td>9 216</td>
<td>1 045</td>
<td>9 181</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1 538</td>
<td>12 047</td>
<td>1 524</td>
<td>11 992</td>
<td>1 510</td>
<td>11 938</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>8 355</td>
<td>67 904</td>
<td>8 334</td>
<td>67 866</td>
<td>8 313</td>
<td>67 825</td>
</tr>
<tr>
<td>Denmark</td>
<td>6 099</td>
<td>48 566</td>
<td>6 078</td>
<td>48 514</td>
<td>6 056</td>
<td>48 464</td>
</tr>
<tr>
<td>Germany</td>
<td>95 262</td>
<td>81 155</td>
<td>95 245</td>
<td>81 139</td>
<td>95 220</td>
<td>81 116</td>
</tr>
<tr>
<td>Estonia</td>
<td>2 673</td>
<td>21 207</td>
<td>2 663</td>
<td>21 181</td>
<td>2 653</td>
<td>21 156</td>
</tr>
<tr>
<td>Ireland</td>
<td>1 604</td>
<td>13 202</td>
<td>1 594</td>
<td>13 191</td>
<td>1 584</td>
<td>13 180</td>
</tr>
<tr>
<td>Greece</td>
<td>10 666</td>
<td>86 114</td>
<td>10 642</td>
<td>86 081</td>
<td>10 618</td>
<td>86 050</td>
</tr>
<tr>
<td>Spain</td>
<td>24 738</td>
<td>204 751</td>
<td>24 713</td>
<td>204 721</td>
<td>24 688</td>
<td>204 691</td>
</tr>
<tr>
<td>France</td>
<td>79 795</td>
<td>64 006</td>
<td>79 770</td>
<td>64 000</td>
<td>79 750</td>
<td>64 000</td>
</tr>
<tr>
<td>Italy</td>
<td>36 316</td>
<td>28 001</td>
<td>36 298</td>
<td>27 991</td>
<td>36 280</td>
<td>27 981</td>
</tr>
<tr>
<td>Switzerland</td>
<td>17 955</td>
<td>109 995</td>
<td>17 952</td>
<td>110 977</td>
<td>17 949</td>
<td>110 962</td>
</tr>
</tbody>
</table>

Table 1: Rail passenger transport, 2014–2016

Source: Eurostat (rail_pa_typepkm) and (demo_gind)

Close to three quarters (72 %) of all rail travel (national and international combined) in the EU (excluding Belgium and the Netherlands) took place within one of the four largest EU Member States; Germany, France, the United Kingdom and Italy. France and Germany together accounted for 43 % of national rail travel within the EU and 71 % of international rail travel. The number of international passenger-kilometres travelled by passengers in France in 2016 was more than double the number for Germany. However, Germany in turn recorded a figure that was more than twice as high as that for the United Kingdom.

In order to compare the relative importance of rail transport between countries, the data can be normalised by expressing passenger traffic in relation to population (as shown in the right-hand side of Table 1 and in Figure 3). Travel on the national rail network in Austria, Sweden, France, Germany, Denmark (2015 data) and the United Kingdom averaged more than 1 000 passenger-kilometres per inhabitant in 2016; this was well below the level recorded in Switzerland (2 231 pkm/inhabitant). By contrast, among the EU Member States the lowest average distances travelled on national railway networks in 2016 were recorded in Greece (110 pkm/inhabitant) and Lithuania (93 pkm/inhabitant), while the levels in Turkey (54 pkm/inhabitant) and in the former Yugoslav Republic of Macedonia (40 pkm/inhabitant) were even lower.
In terms of international rail travel, the only EU Member States to report levels of more than 100 passenger-kilometres per inhabitant in 2016 were Luxembourg (215 pkm/inhabitant), France (162 pkm/inhabitant) and the Czech Republic (116 pkm/inhabitant); this level was also surpassed in Switzerland (110 pkm/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

London Heathrow was the busiest airport in the EU-28 in terms of passenger numbers in 2016, with 76 million passengers arriving or departing. 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 (66 million), Amsterdam’s Schiphol airport (64 million) and Frankfurt airport (61 million) — see Figure 4. 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 (88.6 % international), rising to 100.0 % for Amsterdam Schiphol. In contrast, national (domestic) flights accounted for 28.7 % of the 49 million passengers carried through the EU’s fifth busiest passenger airport in 2016, Adolfo Suárez Madrid-Barajas. There were also relatively high proportions of passengers on national flights to and from Paris Orly (45.3 % domestic), Roma Fiumicino (30.0 %) and Barcelona airport (26.9 %).
For the EU-28 as a whole, there were 1.9 air passengers carried per inhabitant in 2016. The United Kingdom, the Member State with the highest number of air passengers, reported 3.8 air passengers per inhabitant. Relative to population size, the importance of air travel was particularly high for the holiday islands of Malta and Cyprus (11.2 and 10.5 air passengers carried per inhabitant in 2016), as well as for Iceland (20.3 passengers/inhabitant) and Norway (7.2 passengers/inhabitant). The lowest ratios were recorded for ten of the eastern and Baltic Member States, each reporting averages of less than 2.0 air passengers carried per inhabitant in 2016.
Maritime passengers

Measured per inhabitant, the number of sea passengers travelling through EU-28 ports was roughly unchanged in 2016 compared to 2006. In 2016, 0.8 sea passengers per inhabitant were recorded for the EU-28 as a whole, while in 2006 the corresponding ratio was 0.9 passengers per inhabitant.
Relative to national population, in 2016 the importance of maritime passenger transport was particularly high in Malta (23.5 maritime passengers per inhabitant), followed with considerable distance by Estonia (10.9 passengers/inhabitant), Denmark (7.3 passengers/inhabitant), Croatia (7.1 passengers/inhabitant) and Greece (6.1 passengers/inhabitant); with the exceptions of Finland, Sweden and Italy, the number of maritime passengers per inhabitant in 2016 averaged less than 0.6 in each of the remaining EU Member States. In this context, it should be noted that the Czech Republic, Luxembourg, Hungary, Austria and Slovakia are landlocked countries and thus by definition have no maritime transport at all.

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 Czech Republic, 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](https://ec.europa.eu) 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.

Other articles

- Air transport statistics
- Freight transport statistics
- Freight transport statistics - modal split

Publications

- Energy, transport and environment indicators — 2017 edition

Main tables

- Transport, see:

  Transport, volume and modal split (t_tran_hv)
   - Volume of passenger transport relative to GDP (tsdtr240)
   - Modal split of passenger transport (tsdtr210)

  Railway transport (t_rail)
   - Rail transport of passengers (ttr00015)

  Air transport (t_avia)
   - Air transport of passengers (ttr00012)

Database

- Transport, see:

  Multimodal data (tran)
   - Transport, volume and modal split (tran_lv)
     - Volume of passenger transport relative to GDP (tran_lv_pstra)
     - Modal split of passenger transport (tran_lv_psmad)
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 — November 2017
- 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;
- 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'.
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

View this article online at http://ec.europa.eu/eurostat/statistics-explained/index.php/Passenger_transport_statistics