Railway passenger transport statistics - quarterly and annual data

Statistics Explained

Data extracted in September 2024.
Planned article update: October 2025.

Highlights

"In 2023, EU rail passenger transport hit its highest level in years, reaching 429 billion passenger-kilometres."

"In 2023, rail passenger transport performance in the EU increased by 11.2% compared with 2022 and almost doubled compared with 2020."

"8 billion passengers used railways for national journeys in 2023, an increase of 67.9% compared with 2020."

This article presents the main trends in rail passenger transport in the European Union (EU) , and the EFTA countries Norway and Switzerland as well as the candidate countries Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia and Türkiye. It covers quarterly and annual rail passenger transport data. This article, together with the article Railway freight transport statistics presents a complete overview of railway transport in Europe.

EU rail passenger transport performance peaked in 2023

Over the period of 2015 to 2019, there was a steady rise in demand for rail passenger transport, resulting in a 9.4% increase overall. In 2019, a peak of 411 billion passenger-kilometres (pkm) was reached (see Figure 1). This upward trend was swiftly reversed in 2020 with the spread of the COVID-19 pandemic. Due to strict precautions and reduced train services from March 2020 onwards, rail passenger transport significantly decreased across all EU countries. Compared with 2019, rail passenger transport performance almost halved in the EU (-46.2%) reaching 221 billion pkm.

In 2021, only a partial recovery was observed, with a 15.5% increase compared with 2020. In 2022, the recovery of rail passenger transport was more noticeable with a sharp increase of 51.0% in the EU compared with 2021. In 2023, rail passenger transport continued this positive trend, with a further growth of 11.2%, reaching a new peak of 429 billion pkm. This level exceeds the pre-pandemic performance of 2019 by 4.4%. All quarters of 2022 saw substantial increases in performance compared with the same quarters of the previous year. The growth in the first quarter of 2023 showed a similar trend with a 29.1% increase, compared with the same quarter of 2022. The last 3 quarters of 2023 also increased but more moderately (+9.1% in the second quarter, +6.6% in the third quarter and +6.8% in the fourth quarter, compared with the same quarters of 2022).

Rail passenger transport for main undertakings, EU, 2015-2023
(billion passenger-kilometres)
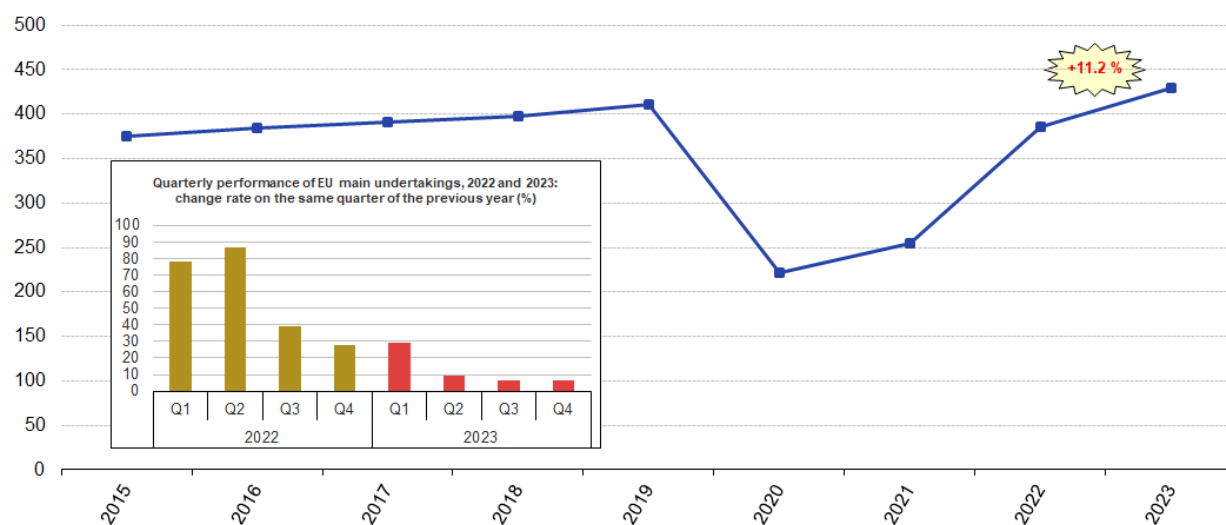
Figure 1: Rail passenger transport for main undertakings, EU, 2015-2023 (billion passenger-kilometres)
Source: Eurostat (rail_pa_typepas) and (rail_pa_quartal)

Germany and France were the largest contributors to EU rail passenger transport performance in 2023

In 2023, all EU countries recorded an increase in rail passenger transport performance compared with 2022, except Greece and Bulgaria (see Figure 2). The highest increase among the EU countries was recorded by Croatia (+40.6%), followed by Luxembourg (+29.9%), Ireland (+27.9%), Spain (+26.0%), Italy (+18.7%), Slovenia (+15.1%) Finland (+13.7%), Austria (+13.3%), Latvia (+13.2%) and Slovakia (+11.9%). The candidate countries Montenegro and Serbia also registered large increases, by 32.2% and 23.9%, respectively. Greece, by contrast, decreased by 39.7%, primarily due to the damage of its rail network caused by Storm Daniel in September, which halted train services to northern Greece. Passen-
ger transport in Bulgaria remained rather stable (-0.5%). North Macedonia also observed a declining trend of -29.7%.

Rail passenger transport for main undertakings, 2021, 2022 and 2023
(billion passenger-kilometres)

Note: countries are ranked based on 2023 data. Data for Belgium, Hungary and the Netherlands are confidential. Cyprus and Malta have no railways.
(¹) 2021 data are confidential.
(²) Based on quarterly data.
(³) 2023 data are based on quarterly data.
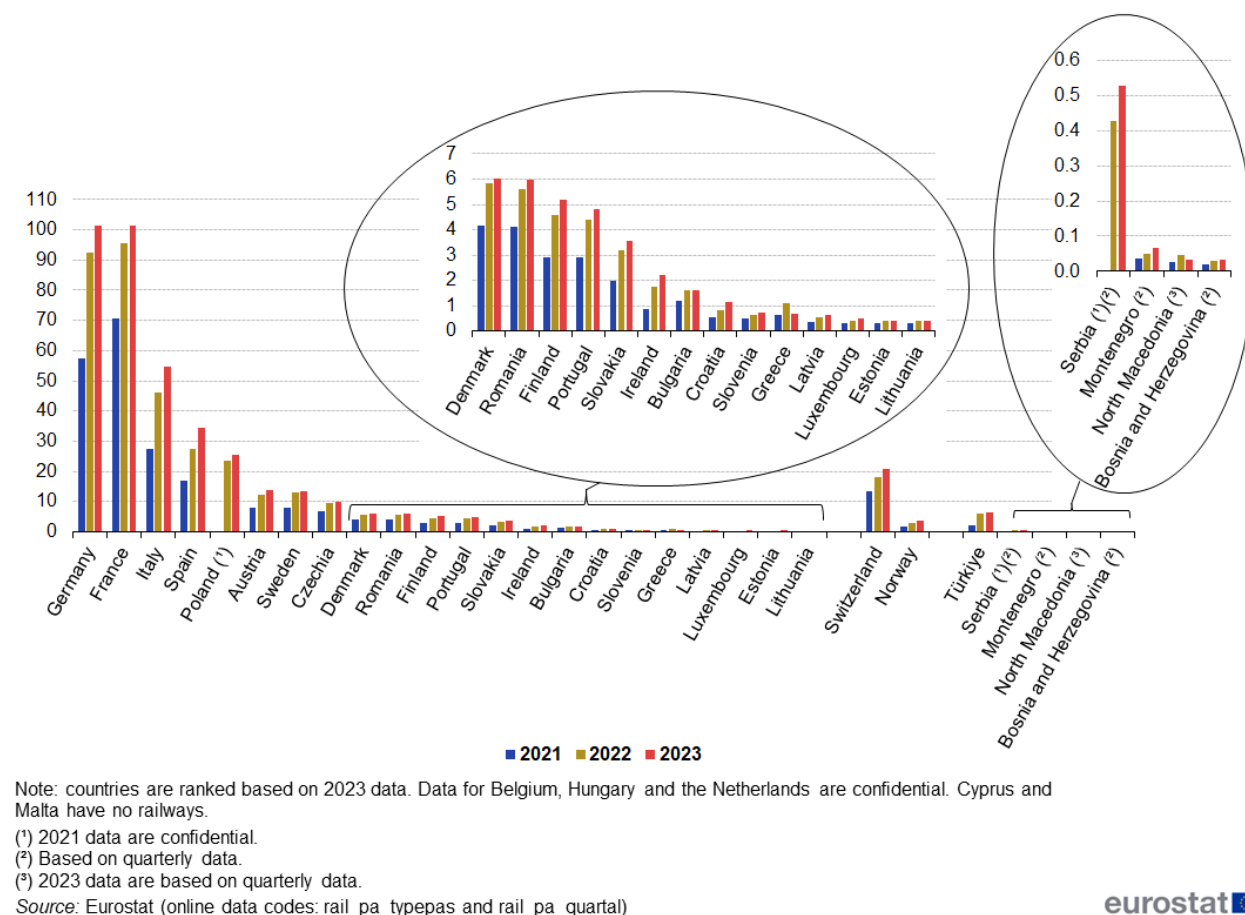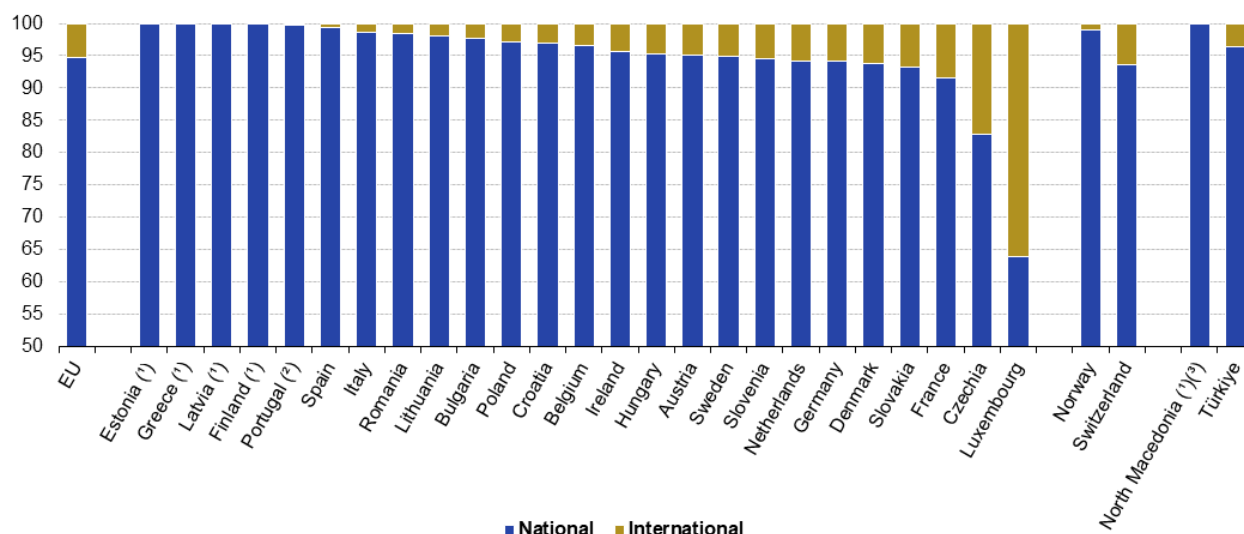*Source:* Eurostat (online data codes: rail_pa_typepas and rail_pa_quartal)

Figure 2: Rail passenger transport for main undertakings, 2021, 2022 and 2023 (billion passenger-kilometres) Source: Eurostat (rail_pa_typepas) and (rail_pa_quartal)

In 2023, Germany and France were the largest contributors to rail passenger transport performance in the EU, with 101.4 billion pkm and 101.3 billion pkm, respectively (each accounting for a 23.6% share of the EU's total rail passenger transport performance). At the other end of the scale, 6 EU countries recorded less than 1 billion pkm in 2023. The candidate countries Bosnia and Herzegovina, Montenegro and North Macedonia recorded less than 70 million pkm in 2023.

From the perspective of the share between national and international transport, national transport is predominant in all countries. It represented more than 90% of the total rail passenger transport performance for all countries in 2023, except for Luxembourg and Czechia, where national transport represented 63.9% and 82.8%, respectively (see Figure 3). Estonia, Greece, Latvia, and Finland only reported national passenger transport for 2023.

Rail passenger transport by type of transport for main undertakings, 2023
(%, based on passenger-kilometres)

Note: Cyprus and Malta have no railways. Data are not available for Bosnia and Herzegovina, Montenegro and Serbia.
(¹) No international tansport.
(²) International transport is less than 0.5 %.
(³) 2022 data instead of 2023.
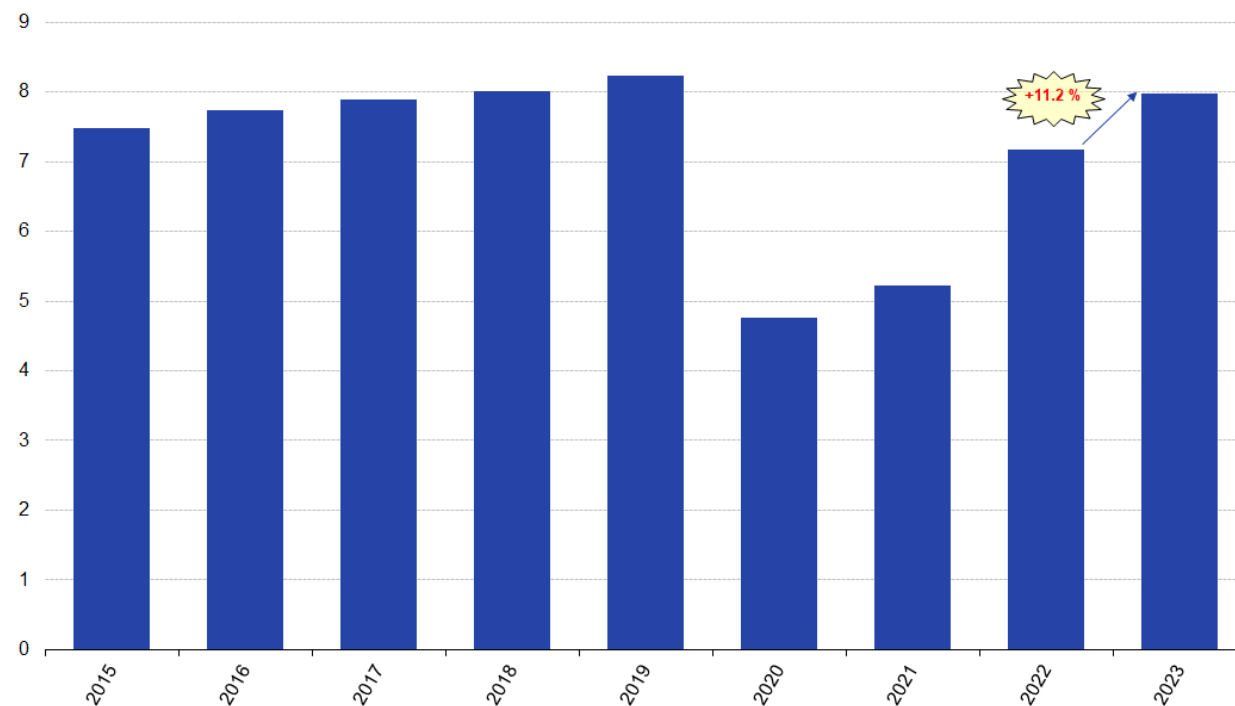Source: Eurostat (online data code: rail_pa_typepas)

Figure 3: Rail passenger transport by type of transport for main undertakings, 2023 (%, based on passenger-kilometres) Source: Eurostat (rail_pa_typepas)

In 2023, Germany and Austria had the highest rates per capita transported by rail

When looking at the number of passengers transported by rail at the national level, the situation was similar to the transport performance in passenger-kilometres. From 2015 to 2019, there was a consistent growth in the number of rail passengers being transported, resulting in a total increase of 9.9% during this period. The highest recorded number of passengers, reaching 8.2 billion, was in 2019 (see Figure 4). This upward trend was abruptly reversed in 2020 (-42.2% compared with 2019), reaching only a total of 4.8 billion passengers. The number of passengers gradually recovered over the period 2021-2023, reaching 8.0 billion in 2023. Despite an overall 67.9% increase from 2020 to 2023, this level represents still a 3.0% decrease compared with the pre-pandemic year 2019.

National rail passenger transport for main undertakings, EU, 2015-2023
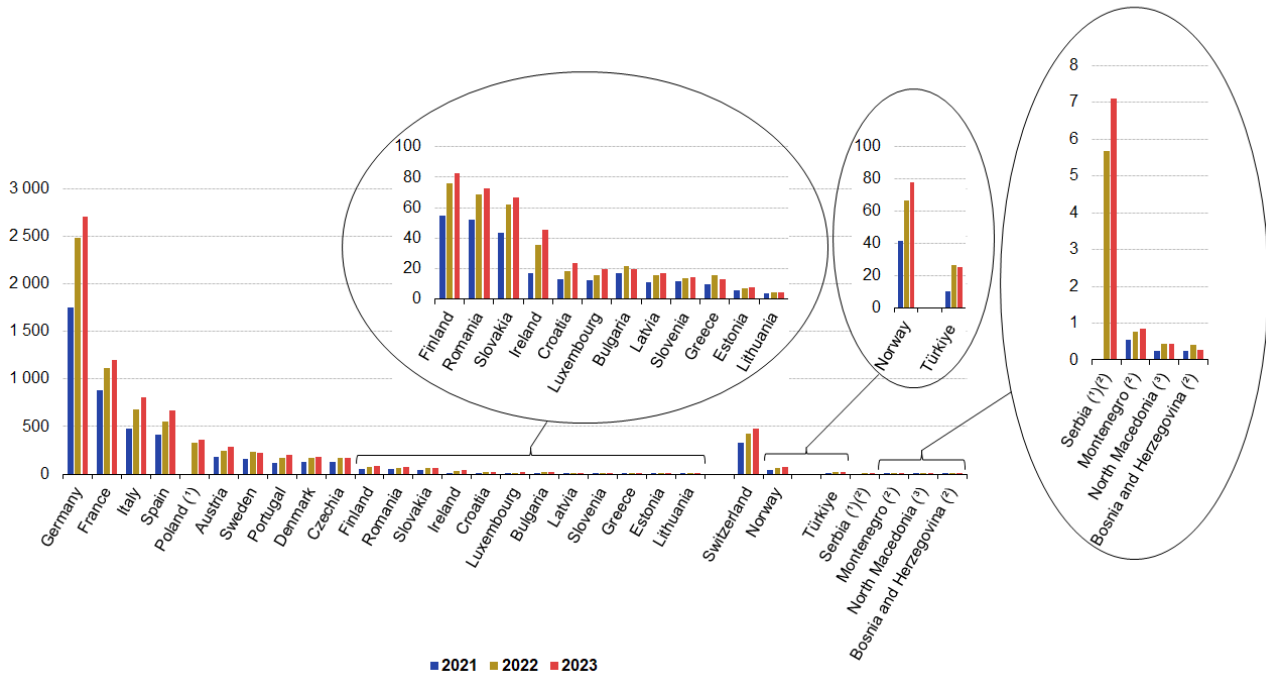(billion passengers)

Figure 4: National rail passenger transport for main undertakings, EU, 2015-2023 (billion passengers)
Source: Eurostat (rail_pa_typepas)

With the exception of 3 EU countries, all countries reported increases in the number of passengers transported by rail in 2023 (see Figure 5) compared with 2022. Croatia recorded the largest increase at 29.0%, followed by Ireland (28.7%), Luxembourg (25.1%), Spain (20.2%), Italy (19.6%), Austria (16.9%), and Portugal (16.8%). The EFTA countries, Norway and Switzerland, and the candidate countries, Bosnia and Herzegovina, and Serbia also reported substantial growth, by more than 10%. By contrast, 3 EU countries recorded falls in 2023 compared with 2022: Greece, by 17.0%, Bulgaria, by 7.8% and Sweden by 1.2%. The number of rail passengers in the candidate countries North Macedonia and Türkiye also decreased by 30.8% and 5.8%, respectively. It is worth noting that even though Sweden and North Macedonia recorded decreases in passenger numbers transported by rail in 2023 compared with 2022, nevertheless these countries recorded an increase in terms of passenger-kilometres.

Rail passenger transport for main undertakings, 2021, 2022 and 2023
(million passengers)

Note: countries are ranked based on 2023 data. Data for Belgium, Hungary and the Netherlands are confidential. Cyprus and Malta have no railways.
(¹) 2021 data are confidential.
(²) Based on quarterly data.
(³) 2023 data are based on quarterly data.
Source: Eurostat (online data codes: rail_pa_typepas and rail_pa_quartal)

Figure 5: Rail passenger transport for main undertakings, 2021, 2022 and 2023 (million passengers) Source: Eurostat (rail_pa_typepas) and (rail_pa_quartal)

Regarding the number of passengers transported by rail, Germany was by far the largest contributor in the EU, recording 2.7 billion passengers (or 33.9% of the EU total) in 2023. France, Italy and Spain followed with 1.2, 0.8 and 0.7 billion passengers, respectively. At the other end of the scale, Lithuania and Estonia registered less than 8 million passengers in 2023. Less than 1 million passengers were recorded in 2023 in the candidate countries Bosnia and Herzegovina, Montenegro, and North Macedonia.

Figure 6 presents the number of passengers transported in relation to the population of the reporting countries. At EU level, an average of 17.8 passengers per capita travelled by rail within their country in 2023, increasing to 6.1 passengers per capita compared with 2021, and by 1.7 passengers per capita compared with 2022. Germany and Austria had the highest rates in 2023, with 32.1 and 32.0 passengers per capita, respectively. These two countries were closely followed by Denmark (31.3 passengers per capita) and Luxembourg (30.1 passengers per capita). The EFTA country Switzerland registered the highest rate, with 54.8 rail passengers per capita in 2023. Sweden, Portugal, France and Czechia were the other EU countries with more than 15 passengers per capita (21.8, 19.1, 17.5 and 16.3, respectively). For 4 EU countries, the rate stood between 15 and 12 passengers per capita; for 6 others between 10 and 5 passengers per capita; and another 5 countries had a rate between 4 and 1 passengers per capita of which Greece registered the lowest rate with 1.2 rail passengers per capita in 2023. The candidate countries Türkiye, North Macedonia and Bosnia and Herzegovina recorded even less than 1 passenger per capita transported by rail in 2023.

When comparing the per capita rates of 2023 with 2021, increases are observable in all countries presented. Austria experienced the highest increase in passengers per capita among EU countries, with a significant growth of 11.3. Germany and Luxembourg also saw substantial increases of 11.0 and 10.6 passengers per capita respectively. The EFTA country Switzerland also registered a large increase by 16.6 passengers per capita.

Rail passenger transport for main undertakings, 2021, 2022 and 2023
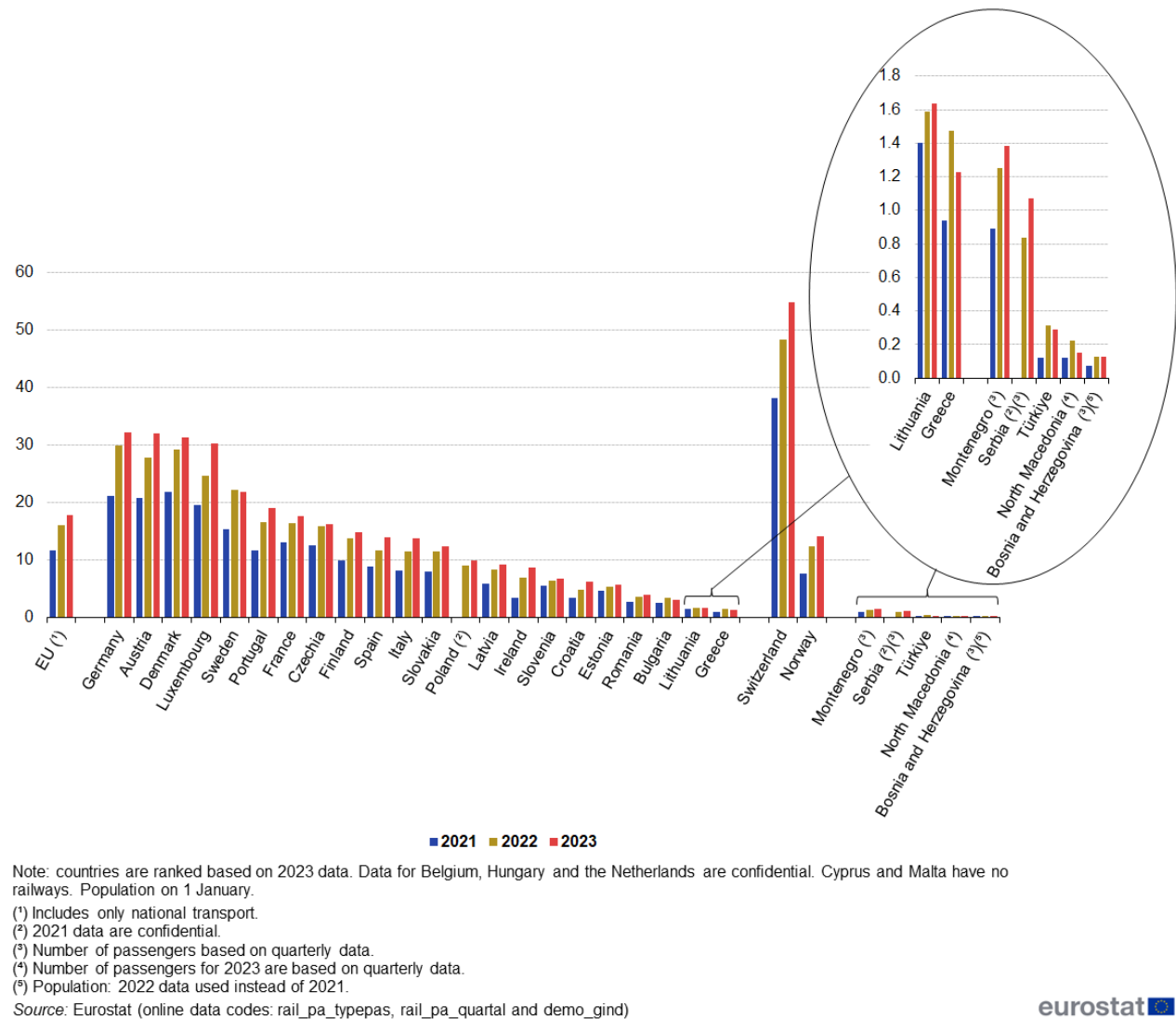(passengers per capita)

Figure 6: Rail passenger transport for main undertakings, 2021, 2022 and 2023 (passengers per capita) Source: Eurostat (rail_pa_typepas) and (rail_pa_quartal)

Source data for tables and graphs

* Rail passenger transport statistics: tables and figures

Data sources

The figures presented in this article have been extracted from the Eurostat rail transport database. They include data on national, international and transit transport of the Member States, EFTA, candidate countries and potential candidates, collected according to the Regulation (EU) No 2018/643 - recast of Regulation (EU) No 2016/2032 . The transport of passengers by metro, tram and/or light rail is excluded. The data presented are included in Eurostat's dissemination database (reference tables are provided under each table and graph). There are no railways in Cyprus, Malta and Iceland. The various elements present data collected under the detailed reporting system, meaning that data include only main undertakings which are defined as follows:

- Until 2015: undertakings with a total transport performance greater than 500 million tonne-km or 200 million passenger-km.

- From 2016: undertakings with a total volume of goods transport of at least 200 million tonne-km or at least 500 000 tonnes or total volume of passenger transport of at least 100 million passenger-km.

Railway undertakings which are below the thresholds may however be included for some countries. Basic results and derived indicators (such as growth rates and shares in percentage of total) in the tables are rounded. However, the figures are based on the non-rounded original data. As a result, the sum of shares in percentage of total, as shown in the tables, is not necessarily equal to 100%.

Due to confidentiality, the EU aggregate for passenger transport by rail cannot be disclosed for years before 2015. This is why the data series presented in this article start in 2015 and not in 2013 as in the article on Railway freight transport statistics .

Explanatory notes for countries are available in the metadata on the Eurostat website.

Context

The content of this statistical article is based on data collected within the framework of Regulation (EU) No 2018/643 recast of Regulation (EU) No 2016/2032 .

Explore further

Other articles

- Freight transport statistics - modal split

- Railway freight transport statistics

Database

- Transport , see detailed datasets:

 Railway transport (rail)

 Railway transport measurement - passengers (rail_pa)

Dedicated section

- Transport

Publications

- All transport publications online

- Key figures on European transport - 2023 edition

- Eurostat Regional Yearbook - 2024 edition

Main tables

- Transport , see selected datasets:

 Railway transport (t_rail)

 Rail transport of passengers (ttr00015)

Methodology

- Railway transport measurement (ESMS metadata file — rail_pa_esms)

- Glossary for transport statistics - 5th edition - 2019

- Reference manual on rail transport statistics (Version 11 – Edition 2023)

Legislation

- Regulation (EU) No 2018/643 - recast of Regulation (EU) No 2016/2032 .

- Summaries of EU legislation: EU rail transport statistics