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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on the implementation of Regulation (EU) 2018/643 on rail transport statistics

1. INTRODUCTION

1.1 AIM OF THE REPORT

Article 9 of Regulation (EU) 2018/643 of the European Parliament and of the Council of 18 April 2018 on rail transport statistics[1] stipulates that, after consulting the European Statistical System Committee, the Commission must submit a report to the European Parliament and to the Council on the implementation of that Regulation and on future developments by 31 December 2020 and then every 4 years. This is the second report that meets that requirement[2].

The first section of this report explains the background, policy context, data usage and coverage of the Regulation. The second section describes its implementation by the Member States and the Commission (Eurostat), the burden and costs for Member States in terms of data collection, methodological and data quality issues, and the various means for publishing rail transport statistics. The last two sections refer to possible future developments in rail transport statistics and set out the report's main conclusions.

1.2 BACKGROUND TO THE LEGAL FRAMEWORK

Regulation (EC) No 91/2003 was designed to provide the Commission, other EU institutions, national governments and the general public with comparable, reliable, harmonised, regular and comprehensive statistical data on the rail transport of freight and passengers.

The amendments introduced in 2016 by Regulation (EU) 2016/2032 sought to update and simplify the original act (and therefore reduce the burden for Member States). They also aimed to optimise the existing legal framework for European statistics on rail transport and to bring it into line with the Lisbon Treaty.

1.3 POLICY CONTEXT AND DATA USAGE

Developing a common transport policy in the EU requires in-depth knowledge of the extent of rail transport and how it has evolved.

The European Green Deal[3] is a growth strategy that aims to make the EU's economy sustainable by converting climate and environmental challenges into opportunities across all policy areas and by making the transition just and inclusive for all. In 2022, the transport sector (including international bunkers) accounted for around 28.9% of the EU's greenhouse gas emissions. To achieve climate neutrality, a 90% reduction in transport emissions is needed by 2050. Rail freight transport is the sustainable logistical backbone of the economy and rail transport significantly contributes towards achieving the climate targets in line with economic growth and the growth of the transport sector.

[1] OJ L 112, 2.5.2018, p. 1. ELI: http://data.europa.eu/eli/reg/2018/643/oj
[2] The first report was adopted on 18 December 2020 (COM(2020) 838 final).
[3] COM(2019) 640 final.

In December 2020, the Commission also presented the 'Sustainable and smart mobility strategy – putting European transport on track for the future'[4], which outlines the intended steps towards transforming the EU transport system in line with the European Green Deal's ambitions. The mobility strategy pursues the vision of sustainable, affordable, inclusive, smart, resilient and competitive mobility, and requires a fundamental transformation of the transport sector. One of the approaches of the mobility strategy is to increase the use of less-polluting modes and to shift a substantial proportion of the inland freight currently carried by road (75%) onto rail and inland waterways. One of the Commission's 2024-2029 priorities in the area of transport is to put forward a plan for an ambitious European high-speed rail network to help connect EU capitals, including through night trains, and to accelerate rail freight transport.

Over the last 25 years, the Commission has actively been proposing that the European rail transport sector be restructured in order to strengthen rail's position in relation to other modes of transport. The Commission's efforts have focused on three major objectives, all of which are key to the development of a strong and competitive rail transport industry:

- to open up the rail transport market to competition;
- to increase the interoperability and safety of national networks;
- to develop rail transport infrastructure.

The data collected under Regulation (EU) 2018/643 play an important role in the EU's decision-making and in the design and monitoring of EU policies. The results of the data collection are crucial when it comes to monitoring the EU's rail market and are regularly used as a reference in Commission communications, staff working documents and impact assessments. In-depth knowledge of the market helps to increase the competitiveness of the sector's companies. The Regulation produces statistics that can also be used in assessing the potential for shifting freight transport from road to rail.

Furthermore, the Member States have noted that the data collected under the Regulation are needed at national level in order to:

- observe the evolution of rail transport activity through short-term monitoring (using quarterly data) and through long-term monitoring (using yearly data);
- conduct national trend analyses and run benchmarks with other countries;
- monitor how railways' share of overall European transport is evolving compared to other modes (modal split).

In this context, the Member States have indicated that the data are used by:

- national authorities;
- universities, research institutions and modellers;
- economic institutions;
- the railway industry for analysis and planning;

[4] COM(2020) 789 final.

- international organisations such as the International Transport Forum and the United Nations Economic Commission for Europe;
- policymakers at national level for planning, target monitoring and decision-making.

1.4 COVERAGE OF MEMBER STATES AND OTHER COUNTRIES

Regulation (EU) 2018/643 applies directly and fully to all Member States, which are required to provide the data it stipulates. Only Malta and Cyprus, which do not have rail infrastructure and therefore no rail transport activity, are not required to implement the Regulation.

Data on rail transport are also provided by three European Free Trade Area (EFTA) countries - Norway, Switzerland and Liechtenstein. Five candidate countries (Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia and Türkiye) provide data on a voluntary basis. In June 2024, for the first time, Ukraine sent one dataset on total rail freight and total rail passenger transport for reference year 2021. Albania, Georgia, Kosovo* and Moldova are currently assessing the availability of data and how they will best meet the requirements of Regulation (EU) 2018/643.

In line with Article 6 of Regulation (EU) 2018/643, countries send Eurostat:

(i) detailed annual statistics on freight and passenger transport;

(ii) quarterly statistics on freight and passenger transport;

(iii) regional statistics on freight and passenger transport at NUTS[5] level 2 (every 5 years, for a reference period of 1 year);

(iv) statistics on traffic flows on the rail network (every 5 years for a reference period of 1 year);

(v) less-detailed annual statistics on the freight and passenger transport activity of rail undertakings with a total freight transport volume of less than 200 million tonne-kilometres and less than 500 000 tonnes, and undertakings with a total passenger transport volume of less than 100 million passenger-kilometres.

2. FOLLOW-UP OF THE IMPLEMENTATION OF THE REGULATION

2.1 COMPLIANCE WITH LEGAL OBLIGATIONS

There is a high degree of compliance with the obligations laid down in Regulation (EU) 2018/643 on the provision of data, with all Member States regularly delivering the requested datasets within the deadlines set. Short delays may sometimes occur due to changes at national level (e.g. IT changes or changes in the rail market). However, these delays have never had an impact on the production of rail transport statistics. Countries follow the agreed methodology, ensuring that high-quality and reliable statistics on rail freight and passenger transport in Europe are produced.

To prevent the direct or indirect disclosure of information concerning individual rail undertakings, several Member States mark the rail data they send as confidential. In the latest

* This designation does not affect positions on status, and is in line with UNSCR 1244(1999) and the ICJ Opinion on the Kosovo declaration of independence.

[5] Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS): http://data.europa.eu/eli/reg/2003/1059/oj

data collections, the annual detailed rail passenger data transmitted by Belgium, France, Hungary, Poland and Netherlands were treated as confidential or partially confidential, while for Belgium, Poland and Sweden, the annual detailed rail freight data were reported entirely or partially as confidential. A higher confidentiality rate is observed in the five-yearly regional (NUTS level 2) data collection. In cases of confidential data, Eurostat applies rules and measures to prevent its disclosure.

2.2 DATA COLLECTION METHODS USED IN MEMBER STATES

Rail undertakings collect data according to the methods adopted by each country and send them to the national authorities, which are responsible for processing the data. Eurostat's *Reference Manual on Rail transport statistics*[6] includes a chapter dedicated to national methodologies with a subchapter on data compilation and quality management.

A 2021 Eurostat study on foreign undertakings operating on domestic rail networks found that some countries encounter difficulties in obtaining data from those undertakings, as a reporting obligation cannot be imposed on them. The study recommended certain measures to overcome these obstacles.

2.3 ADMINISTRATIVE BURDEN AND COSTS FOR MEMBER STATES

Regulation (EU) 2018/643 is designed to keep the burden on Member States to a minimum. Most Member States do not have to take extra measures because their existing processes are suitably developed to meet the Regulation's data collection requirements.

According to the information in the national metadata complementing the rail transport data, most reporting countries consider the workload involved in data provision to be acceptable. In most of the reporting countries the response burden is mainly borne by railway undertakings or operators and is kept to a minimum. Respondents are able to transmit the required data via a data interface or by email. Respondents are only contacted if plausibility errors cannot be resolved by national statistical authorities. Countries that are able to quantify the cost and burden of their rail data collection report significant disparities. These cost and burden differences depend on the number of undertakings and the volume of data collected, which varies from country to country, as well as national data compilation systems. In some cases, the number of rail undertakings responding has increased since the Regulation came into force, with a corresponding impact on the associated costs and burden. However, the Regulation has established thresholds on the magnitude of transport activity to limit the reporting burden while maintaining the quality of statistics. Nevertheless, countries consider the rail transport data to be of significant value and the benefit of the resulting statistics to outweigh the burden and cost for respondents and statistical offices.

Reducing administrative burden and simplification

[6] https://ec.europa.eu/eurostat/documents/29567/3217334/Rail_Reference_Manual_Ver+11.pdf/bd5bf79a-b6d3-be9e-ceb5-779a36cc0a7c?t=1698140752878 (Available only in English).

Reducing administrative burden is one of the Commission's ongoing objectives. In cooperation with national statistical authorities, Eurostat has been implementing specific actions to reduce the national burden of data collection and reporting. These actions include:

1. The development of tools, such as the Eurostat geo-viewer, to facilitate the reporting of regional data at NUTS level 2. The Eurostat geo-viewer has a search function that facilitates the search for NUTS codes. Reporting countries can enter the name of a railway station, or of a departure/arrival point, and the geo-viewer provides the appropriate NUTS code. Eurostat can also produce a list of all railway stations with the corresponding NUTS codes.

2. Newly developed validation tools, which allow reporting countries to validate their data before they officially transmit them to Eurostat (pre-validation) and to receive feedback on errors for each specific dataset.

3. Regular meetings of experts from Member States, EFTA countries, candidate countries and potential candidates in the Commission's Expert group on rail transport statistics to exchange good practices in the collection and processing of rail transport data.

A consultation of the Member States in June 2024 indicated that the framework defined by Regulation (EU) 2018/643 is sufficient to accommodate user needs without imposing an excessive burden on respondents.

2.4 VALIDATION AND QUALITY CHECKS OF DATA RECEIVED

Data collection and transmission is the responsibility of the Member States, but Eurostat takes all necessary measures to ensure high-quality statistics and detect any errors or implausibilities in the data received. Since 2023, Eurostat has implemented a sophisticated IT system for data management with two improved components: new data validation tools; and powerful software (Statistical Analysis Systems - SAS) for the processing, quality check and publication of rail transport data.

Reporting countries transmit datasets to Eurostat via the EDAMIS portal using a structure that is compatible with the SDMX (Statistical Data and Metadata eXchange) standard. A robust two-step validation process is then applied to the datasets received:

- Firstly, the STRUVAL (STRUctural VALidation) tool validates each dataset in terms of format, completeness of mandatory fields and correctness of structure and codes used.
- Secondly, the CONVAL (CONtent VALidation) tool validates the content of each dataset on the basis of predefined rules and thresholds. Reporting countries receive a detailed validation report for each dataset transmitted which make it easy to correct any errors. Eurostat is constantly updating the validation rules applied in order to meet evolving needs and ensure that high-quality statistics are produced.

Overall, the quality of the data transmitted is very good. However, all reporting countries revise their data if errors are detected by the STRUVAL and CONVAL validation tools.

As a next step, Eurostat checks the time-series consistency and inter-dataset consistency of quarterly and annual rail transport data. If none of those data checks detect any problems, or

once countries have revised their datasets or explained any inconsistencies, the data are stored for further processing and publication in Eurostat's online database.

2.5 METHODOLOGICAL SUPPORT FOR MEMBER STATES

Eurostat provides reporting countries with constant support on implementing Regulation (EU) 2018/643, the rail transport data requested and the appropriate methodology for compiling it.

Meetings of the Expert group on rail transport statistics provide Member States, EFTA countries, candidate countries and potential candidates with an opportunity to discuss data quality, methodological issues and new projects. Implementation of the Regulation is also a regular agenda item at the annual meetings of the coordinating group for statistics on transport.

The *Reference manual on rail transport statistics* provides reporting countries with detailed guidance on the implementation of the Regulation. The reference manual is regularly updated (usually on an annual basis) to include the most recent information, documentation and guidelines relevant to the collection of rail transport statistics.

In 2019, in close cooperation with the United Nations Economic Commission for Europe and the International Transport Forum, Eurostat co-published the fifth edition of the *Glossary for transport statistics*[7], which includes an updated and improved section on rail transport. The glossary aims to standardise definitions of transport statistics at European and international level. The three organisations plan a major update of the glossary. A new version is scheduled to be published in 2025.

2.6 DATA DISSEMINATION

Eurostat's online database

Eurostat releases the data collected under Regulation (EU) 2018/643 through its online database, which is freely accessible via the Eurostat website. There are 26 tables on rail transport, which are updated regularly and complemented by detailed European and national metadata files.

Every 5 years, Eurostat updates two datasets with regional statistics (NUTS level 2) on freight and passenger transport (Annex IV to the Regulation); and creates around 28 datasets (one per reporting country) on traffic flows on the rail network (Annex V to the Regulation). The latest reference year available for these statistics is 2020.

Dissemination products

Eurostat produces two *Statistics Explained* articles on rail transport that provide the media and public with an overview of the most important developments and an analysis of the data collected under Regulation (EU) 2018/643:

- *Railway freight transport statistics*[8]

[7] https://www.doi.org/10.2785/675927 (Available in English, French and German).
[8] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Railway_freight_transport_statistics (Available only in English).

- *Railway passenger transport statistics - quarterly and annual data*[9].

These articles are updated annually as soon as the data collection for a given reference year is finalised.

Other means of dissemination

Data on rail transport are also disseminated via tailor-made data extractions for users in Eurostat's news articles (e.g. *Rail freight transport slightly down in 2022*[10]) and other Eurostat publications, such as *Key figures on European transport*[11], *Key figures on Europe*[12], and the *Eurostat regional yearbook*[13]. The data are also disseminated in the publications of other Commission directorates-general, in particular those of the Directorate-General for Mobility and Transport (e.g. in their *Statistical pocketbook*[14]), and in the publications of the European Union Agency for Railways (ERA). All data included in tailor-made extractions and publications are also published in Eurostat's online database.

Rail transport data are also included in the *Sustainable Development Monitoring Report*[15] that monitors progress in the EU policy objective of shifting freight from road to rail and inland waterways. That report analyses the share of rail and inland waterways as a proportion of inland freight transport in tonne-kilometres in terms of short-term development and long-term development. Another main indicator in this publication is the short-term and long-term development of the share of buses and trains as a proportion of inland passenger transport.

3. FURTHER DEVELOPMENT OF RAIL TRANSPORT STATISTICS

The European Green Deal has presented a set of transformative policies across economic sectors, including transport. Rail freight and passenger transport statistics can help in the setting and monitoring of policy targets by providing data on volumes of freight transported, numbers of passengers, kilometres travelled, and equipment and infrastructure. That information is mainly gathered under Regulation (EU) 2018/643 and partly via voluntary data collection – the *Eurostat/ITF/UNECE Common Questionnaire on inland transport statistics*.

In some countries, data confidentiality limits the potential for publishing all data collected under Regulation (EU) 2018/643 and some EU aggregates. Eurostat and the Member States constantly discuss how the constraints imposed by data confidentiality can be alleviated.

To achieve wider coverage of rail transport statistics, Eurostat has signed an administrative agreement with ERA to receive and publish data on:

- the length of lines and tracks equipped with the European railway traffic management system (ERTMS);

[9] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Railway_passenger_transport_statistics_-_quarterly_and_annual_data (Available only in English).
[10] https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20231115-2
[11] https://doi.org/10.2785/4866 (Available only in English).
[12] https://doi.org/10.2785/494153 (Available in English, French and German).
[13] https://doi.org/10.2785/606702 (Available in English, French and German).
[14] https://doi.org/10.2832/319371 (Available only in English).
[15] https://doi.org/10.2785/98370 (Available only in English).

- the number of railway stations equipped with facilities for people with reduced mobility.

Data on lines equipped with the ERTMS have been published annually since the third quarter of 2020. The rest of the aforementioned data will be published when it is available from ERA.

Since 2022, ERA and Eurostat have also coordinated their efforts to obtain more harmonised and consistent data on rail infrastructure and transport equipment. A major task was to compare the georeferenced data on railway line sections provided by ERA's register of infrastructure (RINF) with the data on network segments sent under Annex V of Regulation (EU) 2018/643. This enabled differences in scope between the two sets of statistics to be identified and justified and made it possible to publish the first maps of traffic flows by rail network segment in 2023 for reference year 2020. Further to the established collaboration with ERA, the data collection under Annex V for reference year 2025 will be facilitated by the use of information from RINF (e.g. names of railway stations and lines and characteristics of network segments that are recorded in RINF by line section).

Eurostat has developed a rail distance matrix to help calculate modal split indicators by distance class without imposing an additional burden on reporting countries. The distance matrix for rail is based on the classification of regions according to NUTS level 2 so that it matches the collection of regional rail transport data under Annex IV of Regulation (EU) 2018/643. Further development of the distance matrix itself depends on the improvement of geographical networks. However, its application will mainly depend on the availability and quality of rail data reported at regional level (e.g. reduced reporting of unknown regions by countries).

The geographical coverage of rail transport statistics could be extended as a result of future EU enlargements. Eurostat supports the efforts of candidate countries and potential candidates to comply with Regulation (EU) 2018/643 by discussing methodological issues, data quality and future progress.

According to a questionnaire sent to the members of the Expert group on rail transport statistics in June 2024, Member States do not currently see a need for changes or improvements to Regulation (EU) 2018/643. This will maintain the burden for respondents at the current level. However, new national, European and international policy initiatives on sustainability and transformation of transport systems may create new data needs. Once those needs are identified, they will be evaluated and discussed in a timely manner within the Expert group on rail transport statistics.

4. CONCLUSIONS

The experience gained and results obtained from the implementation of Regulation (EU) 2018/643 on statistics for rail transport remain positive. The Member States comply with the data provision obligations, and the resources allocated at both national and Commission level enable high-quality results to be achieved. The Commission supports the Member States in their implementation of the Regulation and encourages candidate countries and potential candidates to obtain and compile rail transport data from national infrastructure managers, railway undertakings or their national transport ministries. The Commission has modernised its IT system for validating and processing rail transport data, facilitating the work

of the national statistical authorities. The Commission's Expert group on rail transport statistics remains the body in which the Regulation's implementation and potential improvements to it are actively discussed.

Regulation (EU) 2018/643 is still an efficient and effective tool for producing reliable and comparable rail transport statistics at both EU and national levels. The statistics produced are disseminated via Eurostat's online database, statistical articles, news articles and in tailor-made data extractions. Rail transport statistics are valuable for policymakers, the rail industry and national organisations, and for designing and assessing EU policies aimed at fostering sustainable, clean and safe transport.