Improving data collection for domestic rail traffic of foreign companies

VIRGINIA BALEA, JOSEF DORNBUSCH, LINDA GAILÎTE, HIONIA VLACHOU

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Abstract

For the last 30 years, the European Union has been working on the development of a policy for rail liberalisation, with the first Directive regarding the European Community’s railways having been adopted in 1991. Rail liberalisation is currently fully in force in the area of freight transportation and to a large extent implemented in the area of passenger transport for the European Union, EFTA and some Candidate Countries. Thus, railway undertakings in these countries can currently freely circulate on the network of the European Union, EFTA and some Candidate Countries, after having obtained the necessary technical authorisations. The operations of these undertakings are harmonized at European level.

The legal basis for the collection of passenger and freight rail transport statistics is laid down in Regulation (EU) 2018/643 of the European Parliament and of the Council of 18 April 2018 on rail transport statistics. According to Article 2 of this Regulation, each Member State has to report data related to rail traffic within its territory. If a railway undertaking operates in more than one Member State, the various national authorities concerned must ensure that the railway undertakings provide data separately for each country in which they operate in order to compile detailed and reliable statistics to be transmitted to Eurostat. However, some countries expressed difficulties and limitations regarding the collection of statistical data from foreign rail undertakings operating on their national rail network. This is reportedly particularly problematic in the case of data from foreign railway undertakings which are operating on a rail network of a respective country and are neither registered nor have any representation in that country. Additionally, the national legislation of many countries does not provide for a mandatory reporting obligation for foreign companies in terms of their transport activities. It is therefore important to resolve these difficulties, especially also in light of the fact that the activity of foreign railway undertakings is expected to increase in the near future.

The main objective of this study was to investigate the aspects of data collection for domestic rail traffic of foreign railway undertakings. The study aimed to: (a) provide an overview of the challenges and limitations concerning the collection of data on the domestic rail traffic of foreign railway undertakings encountered by national authorities and (b) put together proposals and possible solutions for an improved and comparable data collection on domestic rail traffic of foreign undertakings.

This article summarises the findings of the study. Firstly, it describes the difficulties encountered by national authorities in terms of data collection. According to the information gathered, the reporting countries have developed different methods of data collection, depending on their national railway framework. The study provided an overview of existing methods but also outlined limitations by assessing the information provided in an online questionnaire. In addition, further detailed information was obtained by in-depth interviews with four selected countries.

Based on the information collected from the national authorities as well as experts’ assessment on the methods used for other modes of transport, possible solutions could be drawn with the aim to be reliable, realistic, and in line with the current EU legislation. Advantages, disadvantages and further requirements for the implementation of these solutions are also outlined, along with an analysis of the possible impact of each solution on the current practices.

Keywords: (railway statistics, foreign railway undertakings, transport)

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Rail transport is one of the most important, commonly used and cost effective modes of transport for both the commuting of passengers and the transportation of goods over long and/or short distances. Likewise, rail transport emerges as one of the safest modes of transport, and one of the least polluting ones, especially in comparison with road transport.

The common transport policy of the European Union has evolved, since 1986, in parallel with the creation of the single European railway market. In 1991(1), the European Commission noted that the share of the rail sector in total transport activities had fallen sharply compared to the 1970s. For example, the share of rail freight in the freight sector dropped from 20 % in 1970 to 10.8 % in 2008. A similar fall, although of a smaller scale, was observed in the field of passenger transport, dropping from 10.4 % in 1970 to 6.3% in 2001. This decline was assessed as problematic by the European Commission (EC) for two reasons: rail transport is the most ecological means of transport, and the sector can generate further economic growth and competitiveness.

Consequently, the European Union (EU) implemented a policy of establishing a single European railway area(4), a zone of free operation in the EU and associated countries. Previously to that, with a few exceptions, railway transport operations in each reporting country were performed exclusively by one national public state-owned railway company, and the railway company acted as both the national railway infrastructure manager and railway undertaking, with a monopoly position on rail transport and a complete ownership of the rail network. Prior to rail liberalization, rail transport was most often carried out by a domestic railway company, rarely by several. Rail transport activities by foreign railway undertakings were exceptional.

Following rail liberalization, the EU legislation in the domain has aimed to:

- eliminate the monopolistic position of the public railway company;
- separate the management of infrastructure and operation;
- establish common safety rules;
- allow a railway undertaking of one country to operate on the entire rail network of the EU.

The 2011 White Paper ‘Roadmap to a Single European Transport Area — Towards a competitive and resource efficient transport system’ the Commission(5) sets the goal for the majority of medium-haul passenger transport to be carried out by rail by 2050 and further actions towards the creation of a single European Railway Area.

In order to improve the interoperability and safety of the European rail network, the European Union Agency for Railways (ERA) was set up in 2004 by means of Regulation (EC) No 881/2004 of 29 April

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Introduction

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2004, repealed by Regulation (EU) 2016/796 towards further development and effective functioning of a Single European railway area. Since 2004, railway undertakings in the EU can circulate on the whole rail network under certain safety conditions. There are still some restrictions on the operation of foreign railway undertakings, particularly in terms of geography, railway gauge (spacing of the rails) and other technical specifications. In Europe, the majority of rail networks have the standard 1 435mm gauge, although there are some countries that have a different network gauge.

The access to rail infrastructure for railway undertakings was first enabled by Directive 95/18/EC of 19 June 1995 on the licensing of railway undertakings, whereas the amendment by Directive 2001/13/EC of 26 February 2001 laid down the rail sector operating conditions (safety, technical, economic and financial) and established a freight service authorisation procedure for the European cross-border network.


In April 2018, Regulation (EU) 2018/643(6) of the European Parliament and of the Council on rail transport statistics was adopted (hereafter: the Regulation (EU) 2018/643). According to the regulation, each Member State has an obligation to report statistics related to rail transport on its national territory. Furthermore, each country is responsible for the collection of data on the operation of all railway undertakings, foreign or domestic, on its territory/network. Article 2 of the Regulation (EU) 2018/643 stipulates that each EU Member State ‘shall report statistics related to its national territory’.

Member States may exclude the following entities from the scope of this regulation:

‘(a) railway undertakings which operate entirely or mainly within industrial and similar installations, including harbours;
(b) railway undertakings which mainly provide local tourist services, such as preserved historical steam railways.’

Consequently, Regulation (EU) 2018/643 covers all railway networks in the EU. Where a railway undertaking operates in more than one Member State, the national authorities concerned must request that the railway undertakings provide data separately for each country in which they operate in order to enable different national statistics to be compiled and sent to Eurostat.

The Reference manual for rail transport statistics, version 10.1, January 2019(7) provides detailed information related to the implementation of the Regulation (EU) 2018/643. In particular, this manual provides an overview, advice on methodology and further clarifications on definitions and classifications.

Part I of the Reference manual for rail transport statistics provides general guidelines on the implementation of Regulation (EU) 2018/643 and defines the structure of the tables of each annex to be provided to Eurostat. It provides useful assistance and helps to further harmonise the collection of statistical data on rail transport statistics. This part of the manual provides compilers of rail transport statistics guidance on the general concepts, definitions and nomenclatures. In addition, methodological questions raised by data providers are presented in this part of the manual.

Part II and III of the Reference manual focus more on practical modalities, such as the description of the data treatment process and the dissemination of data by Eurostat. Part IV is dedicated to national methodologies and provides information on how the methodology at national level complies with Regulation (EU) 2018/643. Terms and definitions are provided in the Glossary for transport statistics,

(7) Reference manual for rail transport statistics, version 10.1, January 2019
Despite the extensive legal framework and methodological guidance available, some national authorities in charge of data collection have recently pointed out that they have been facing difficulties in collecting data from foreign railway undertakings, generally defined as companies that operate on the territory of a country while not being registered in that country. Furthermore, those foreign companies often have no representation or offices in the given country. Additionally, there are some countries in which the respective national legislation only binds domestic companies to provide information on their transport activity, while foreign companies are not obliged to report.

The study summarised in this article had two phases. In its first phase, it tried to identify the difficulties encountered by the national authorities in the process of collecting data from foreign railway undertakings as well as the solutions implemented so far by some countries. For this to be achieved, a questionnaire was sent to the EU Member States, EFTA countries, Candidate Countries and Potential Candidates, whilst four countries were interviewed in more detail. These four countries either had particular problems in collecting data from foreign railway undertakings or had implemented some good practices. In its second phase, the study proposed ways to improve the current situation.

(*) Glossary for transport statistics in its fifth edition, 2019

(*) The term national authorities refers to National Statistical Authorities and other national authorities, such as the Ministry of Transport, which are responsible for the collection of data on railway statistics and for the transmission of the data to Eurostat. Therefore, the authors refrain from using the term National Statistical Authorities.
2 Methods

2.1 Questionnaire via EU-Survey

To obtain information on the data collection of foreign railway undertakings, the authors prepared a questionnaire to identify obstacles and problems faced by national authorities and their practices in the compilation of railway transport statistics.

Based on initial research and information available during a preparatory phase, the authors developed a questionnaire with different modules. The following topics regarding the operation of foreign railway undertakings were investigated: (i) legislation and legal framework; (ii) operation of foreign railway undertakings in the different countries; (iii) communication tools used; and (iv) data collection methods and procedures to overcome data gaps.

The first set of questions referred to administrative and legislative information, in particular the arrangements and responsibilities within the countries regarding data collection and transmission. It explored the legal arrangements of Regulation (EU) 2018/643. The second part of the questionnaire dealt with the number and operation of foreign railway undertakings, the means to obtain detailed information about them and their activity as well as the communication and contact. The third part of the questionnaire focused on the collection of data, issues encountered and ways to tackle those challenges. The last part of the questionnaire asked for additional input if considered as necessary. For a detailed overview of all questions, see here.

The questionnaire was disseminated to all national authorities via the EU-Survey tool. It contained an introductory part with definitions, a list of direct questions and some questions requiring further explanations. The online questionnaire was launched by Eurostat and remained opened for the period from 16 December 2020 to 8 January 2021. A subsequent analysis of the replies provided a synthesised overview of all the participating countries by a given question, as well as a summary of country-specific results.

The online questionnaire was sent to 33 countries in total (EU Member States, EFTA countries, Candidate Countries and Potential Candidates). Replies to the questionnaire were sent by 29 out of the 33 countries, whereas four countries did not send a reply.

2.2 Interviews with selected countries

National authorities in Belgium, Czechia, Germany and Norway were contacted for a more detailed interview on the topic of the study. Following an analysis of their replies to the EU Survey, more in-depth discussions were carried out with these four countries. Meetings with them were held remotely (as videoconferences) due to the COVID-19 travel restrictions and the various measures in place.

During the interviews, the involved parties discussed the issues linked with the collection of data on
the domestic rail traffic of foreign companies and proposals to overcome those problems.

A second questionnaire sent to the national authorities before the meetings. The interviews were held in January 2021, each with an approximate duration of 1 hour. During the interviews, the participants reviewed the questions of the EU-Survey and replied to the second questionnaire, with the possibility for the national authorities to add additional subjects, especially regarding the improvement of data collection of foreign railway undertakings. The discussions also provided an opportunity to clarify specific topics.

Following the meetings, a document was prepared summarising the most important points discussed.
Main outcomes of the project

The following sections provide the main findings of the study as these were extracted from the replies to the EU Survey and the specific interviews.

3.1 Modes of contacting and collecting data from foreign rail undertakings

The current situation in the Member States, EFTA, Candidate countries and Potential Candidates regarding the collection of data on the activity and performance of foreign railway undertakings is relatively diverse. Some countries face difficulties in collecting and compiling data, while others claim to have a good collaboration with foreign railway undertakings. The survey provided an inventory of national practices and challenges, with the main aspects reported being the legal framework implementation, the sources of information to identify the railway undertakings, the methodology of data collection, data quality and communication with the data providers. The main conclusions are presented below.

3.1.1 LEGAL FRAMEWORK IMPLEMENTATION

The EU legal framework for production and transmission of rail transport data is Regulation (EU) 2018/643 on rail transport statistics, which establishes common rules within the European Statistical System (ESS). According to this regulation’s requirements, Member States and EFTA –Countries must report statistics which relate to rail transport on its national territory. The regulation also states that: ‘where a railway undertaking operates in more than one Member State, the national authorities concerned shall require the undertaking to provide data separately for each country in which it operates so as to enable national statistics to be compiled’.

Based on the results of the survey carried out for the study, it can be concluded that the legal act provisions are directly applicable in most EU-Member States and EFTA countries. Nevertheless, there are also countries which have transposed the regulation by adopting national legal acts and by designating a responsible body within the scope of the rail transport statistics regulation, in order to ensure the direct applicability of Regulation (EU) 2018/643. There are other countries where it is the national legislation that sets down the rules for the development of questionnaires or forms, the frequency of reporting and other technical details of the rail data collection process.

Despite the fact that the requirements of Regulation (EU) 2018/643 are, in the majority of the cases, directly applied or transposed, there are Member States which have indicated that their scope of data collection is only limited to domestic railway undertakings and not applicable to foreign railway undertakings.
Directive 2012/34 of 21 November 2012 establishes a single European railway area with the aim of eliminating the monopolistic position of the public railway company. The Regulation further enhances separating the management of infrastructure and operation, as well as allowing railway undertakings from one Member State to operate over the entire network of the European Union. Common European requirements regarding certification and authorisation shall be issued accordingly by National Railway Safety Authorities. Although this legal framework ensures free operation of railway undertakings on all European Union rail networks, there are still some countries in which only domestic railway undertakings perform rail transport.

3.1.2. SOURCE OF INFORMATION TO IDENTIFY DOMESTIC AND FOREIGN RAILWAY UNDERTAKINGS

In order to draw a list of foreign railway undertakings operating on domestic networks, different national or European institutions were identified as potential sources of information:

- Ministry of Transport;
- National Railway Safety Authorities;
- Rail Regulatory Bodies;
- Railway infrastructure managers;
- European Railway Agency Database of Interoperability and Safety – ERADIS;
- National Statistical Business Registers - NSBR.

The National Railway Safety Authorities hold information about all railway undertakings that have obtained a safety certificate, which includes the area of operation of the railway undertaking. In each country, the National Railway Safety Authority can establish a complete list of all domestic or foreign railway undertakings that can circulate on the national network, after having obtained a safety certificate according to European requirements. The information is also available from the European Railway Agency Database of Interoperability and Safety (ERADIS). ERADIS publishes information about all issued safety certificates, the names of all railway undertakings, operation and validity of the safety certificates. ERADIS also publishes issued licences for railway undertakings.

The infrastructure manager keeps records of all railway undertakings operating on their railway network, as they manage and charge them, and have information regarding the number of train-kilometres operated by the railway undertakings, since charges are levied based on this data.

The Rail Regulatory Bodies monitor the fair competition amongst the railway undertakings, and thus they also have information on all railway undertakings. The Rail Regulatory Bodies are sometimes also responsible for issuing licences to railway undertakings. All railway undertakings have to apply for a licence in the Member State in which they are operating.

The National Statistical Business Register (hereafter: Business Register) is the basic infrastructure for the collection and compilation of data for European business statistics. The Business Register is the main source of information for the identification of the survey population as well for establishing the link with data sources. Thus, some countries use the Business Register to identify foreign railway undertakings, which under national law are obliged to register in the respective country.

Foreign railway undertakings operating in a country may or may not have a permanent address in that given country. In both cases, establishing a contact point with the undertaking in the country is a key success factor in the data collection process. In case the foreign railway undertakings are registered in the country, they must comply with the national legislation, in particular regarding the collection of statistical data.

The actual situation is however quite complex and varies from one country to another. In some

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countries, a good understanding between stakeholders exists and there is good cooperation and communication with foreign railway undertakings even without a local permanent address. In other countries, the situation is not so fortunate for a number of reasons, including language barriers, national requirements and huge efforts needed to establish cooperation.

In some EU Member States, the rail traffic information is obtained from railway undertakings that do not have a local address.

According to the survey results, there are foreign railway undertakings operating on the national rail networks in 76 % of 33 EU Member States, EFTA and Candidate Countries and Potential Candidates that replied to the EU Survey.

3.1.3. METHODOLOGY OF DATA COLLECTION FOR DOMESTIC RAIL TRAFFIC OF FOREIGN RAILWAY UNDERTAKINGS

Data are collected directly from foreign railway undertakings in most of the reporting countries. Only in a few instances, data are obtained from other national administrative sources or from the infrastructure manager.

In some of the countries, foreign undertakings are registered and reside in the country, while for others the foreign railway undertakings are contacted directly through the parent company. Quarterly and/or annual statistical surveys are conducted in order to collect transport indicators regarding foreign railway undertakings.

Where data can be collected directly from foreign railway undertakings, the tools used to are statistical surveys which are carried out via an online questionnaire or other electronic forms (for example Excel files).

In order to facilitate communication with foreign railway undertakings, national authorities send their messages in English and put a particular emphasis on the EU regulation obligation. In addition to the written request to report data, the undertakings receive documents explaining the methodology and technical transmission of the data. They also receive contact details of the national authorities’ personnel in charge, if further support is needed.

The key factors that lead to a successful collection of data on the activity of foreign railway undertakings are mostly the provisions in the statistical legal acts and good cooperation with the railway undertakings.

3.1.4. DATA QUALITY AND COMMUNICATION WITH THE DATA PROVIDERS

The assessment of data quality is a crucial step in providing the users with high value statistical data and is a precondition for informing the public about the possible uses of the data. Assessing data quality is therefore one of the core aspects of statistics. According to the responses to the survey, the statistical staff of the reporting countries regularly communicate with foreign undertakings on the content and the quality of data. A significant number of authorities appreciated the regular and good communication with foreign undertakings and the exchange information about the quality aspects of data provided.

In order to ensure consistency and coherence of data, foreign railway undertakings should be contacted by the same national authority for different requests. In general, the data provided by foreign undertakings is considered to be of good quality.

3.2. Difficulties in collecting statistical data from foreign rail undertakings

Although the majority of the reporting countries do their best to collect and transmit good quality data, some difficulties are encountered in the process of data compilation.
Main outcomes of the project

Firstly, different approaches on the interpretation of the term ‘foreign railway undertaking’ have been identified, although Regulation (EU) 2018/643 provides clear guidelines and requirements regarding these entities.

Problems were reported in particular with regard to the application of the national statistical legislation to foreign railway undertakings, as well as their registration procedures as business entities in the various countries. The national statistical legislation does not impose any reporting requirements on foreign railway undertakings and its scope is limited to domestic railway undertakings which are registered in the business register (or have a permanent office or a postal address in the country). Thus, foreign railway undertakings outside the scope of the business register are not subject to mandatory reporting requirements and, as such, also not subject to any legal enforcement procedures (fines and/or penalties) in the case of non-reporting.

However, during the in-depth interviews, specific countries indicated that the legal enforcement procedures, although theoretically applicable on domestic railway undertakings, are hardly utilized, since those measures would significantly decrease trust and the mutual understanding which results in good cooperation.

Furthermore, it is reportedly more difficult to establish good cooperation with foreign railway undertakings operating in a country in which they do not have a permanent address or registration. The national authority must rely on the goodwill of the railway undertaking since enforcement procedures are very unlikely. However, adapting the requirements for foreign railway operators regarding the registration with the business register would be beneficial for consistency checks with the information available elsewhere, e.g. annual financial reports or public information.

The situation is quite complex and varies from one country to another. Cultural and linguistic differences have been identified as challenging and result in a lack of cooperation due to anticipated time and resource restrictions in the respective countries. While some countries have solved their language issues by providing the information in English and also establishing direct support and assistance to foreign railway undertakings, in order to familiarize them with the reporting requirements, other countries still report negative outcomes due to unwillingness of the involved parties to cooperate on this issue.

Additionally, many of the reporting countries state that the search of an appropriate contact point with adequate knowledge of the issue is a challenge. Where the identification of a contact point is successful, this cooperation should be established over a longer period of time and then maintained to ensure regular reporting.

It should also be noted that some respondents to the questionnaire seem to lack knowledge regarding the legal impact of Regulation (EU) 2018/643 on rail transport statistics in their respective country, which might be explained by the fact that the roles and responsibilities within their National Statistical Systems (legal and technical) differ from the ones in the EU Regulation. Concerns might also be raised regarding the accurate application and interpretation of Regulation (EU) 2018/643 on rail transport statistics. It would be beneficial to improve the awareness and familiarity concerning the European legislation by organising working group meetings or by providing implementation guidance to those countries which might express interest.

Some countries reported that restrictions due to confidentiality constitute an obstacle to the exchange of information with foreign railway undertakings.

Moreover, some countries report that they do not have any information whether foreign railway undertakings operating on their territories are subsidiaries of other companies. This issue is also substantial because, as limited as they are currently, the activities of foreign undertakings are expected to increase in the future. On top of that, data reported by the parent railway undertakings and subsidiary simultaneously may lead to the ‘double-counting’ of some rail statistics data.

Regarding the lack of data, most of the countries mentioned in their response to the questionnaire that data are available and the statistical process is not affected by any missing data. However, in some countries, reminders and assistance concerning the data collection process is needed to obtain the necessary statistical data. In case of missing data at an aggregate level, data may also be
estimated on the basis of the information that is available from other sources, for example from the infrastructure manager.

The information gathered in the scope of the study indicates that by liberalising the railway market and operations within the EU, the regional distribution of railway infrastructure, as well as the particular geographical characteristics of the various regions, could make the collection of data on foreign railway undertakings even more difficult in the future.

Many foreign undertakings provide data on a voluntary basis. Good cooperation and communication with such undertakings, as well as a combination of assistance and repeated requests to provide data, can help to increase their willingness to deliver adequate data.

The key factors that lead to the successful collection of data on the activity of foreign railway undertakings are mostly the provisions in the statistical legal acts and good cooperation with the undertakings, established over a long period.
### Table 1: Overview of study results described in sections 3.1 and 3.2

<table>
<thead>
<tr>
<th>Topics and issues detected</th>
<th>Summary of replies</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Authority responsible for data collection</td>
<td>National Statistical Authority in 24 out of 29 countries</td>
<td>In some countries, the Ministry of Transport, the National Railway Safety Authority or a special government agency.</td>
</tr>
<tr>
<td>National Authority responsible for data transmission</td>
<td>National Statistical Authority in 26 out of 29 countries</td>
<td>In some countries, the Ministry of Transport/special government agency.</td>
</tr>
<tr>
<td>Transposition of Regulation (EU) 2018/643 on railway transport statistics into national legislation</td>
<td>Yes (6 out 29 countries) No (15 out 29 countries) Not clear (8 out 29 countries)</td>
<td>For most countries where Regulation (EU) 2018/643 on rail transport statistics has not been transposed, it is directly applicable. Problems with the application of the national statistical legislation to foreign railway undertakings are indicated.</td>
</tr>
<tr>
<td>Countries without foreign railway undertakings operating on their territories</td>
<td>10 countries</td>
<td></td>
</tr>
<tr>
<td>Source of information used to identify national and foreign railway undertakings operating on the national rail network</td>
<td>Ministry of Transport, National Railway Safety Authority, infrastructure manager, Rail Regulatory Body, mixed sources</td>
<td>Some countries use mixed sources to obtain full information on foreign railway undertakings.</td>
</tr>
<tr>
<td>Number of foreign railway undertakings (with a permanent address)</td>
<td>Countries provided the number of foreign railway undertakings for period 2015-2020</td>
<td>The registration of a business entity, branch, legal unit, etc. depends on the national legislation of a country.</td>
</tr>
<tr>
<td>Contact with foreign railway undertakings (without permanent address)</td>
<td>In some countries, there is no contact with foreign railway undertakings and it is very difficult to have any technical exchanges for different reasons.</td>
<td>Some countries have established a frequent, easy and constructive technical communication with foreign railway undertakings.</td>
</tr>
<tr>
<td>Foreign railway undertakings as subsidiaries of other companies</td>
<td>The majority of national authorities has no information if the foreign railway undertakings are subsidiaries of other companies, but some countries declared that identifying the parent company may help to collect better data.</td>
<td>In some cases, there is direct communication with foreign railway undertaking as a subsidiary without involvement of the parent company.</td>
</tr>
<tr>
<td>Methodology of data collection</td>
<td>Data are collected directly from foreign railway undertakings in almost all countries using different type of questionnaires (online, Excel).</td>
<td>Other sources are the infrastructure manager, national rail authorities, and annual financial reports of foreign railway undertakings.</td>
</tr>
<tr>
<td>Good practices and success factors of data collection from foreign undertakings</td>
<td>Good and constant cooperation, willingness of foreign railway undertakings, trust, motivated and competent contact points, no difficulties with language, legal aspects (possibility of sanctions).</td>
<td>Sometimes, the reasons for successful (or not) collection of data are unidentifiable; confidentiality of exchanges and of collected data is generally considered as an obstacle.</td>
</tr>
<tr>
<td>Lack of data: solutions and measures taken</td>
<td>Other available sources: annual company reports, information from the infrastructure managers for some complementary data; evaluation of missing data is done regularly to estimate the impact of the lack of data.</td>
<td>In some cases, it is impossible to obtain any data from foreign railway undertakings, and there is no possibility of sanctions; language barriers.</td>
</tr>
<tr>
<td>Data collection on the operation of national undertakings in foreign countries (including subsidiaries of national undertakings)</td>
<td>Seven countries collect such data, but those data are used internally and only rarely dispatched to the country of operation.</td>
<td>Some countries propose to improve global collection of data.</td>
</tr>
<tr>
<td>Exchange of information on data and data quality</td>
<td>About 50 % of countries exchange information on data quality with foreign railway undertakings directly</td>
<td>Some countries check data quality internally (comparisons, use of other sources, etc.)</td>
</tr>
</tbody>
</table>
3.3. Proposals for the improvement of the collection of data on foreign railway undertakings

Following an overview of the current situation and the difficulties and challenges reported by the participating countries, this section of the article puts forward potential solutions applicable at national and/or European level. To provide efficient and effective solutions, the authors have investigated other methodologies and/or practices applied in other modes of transport for collecting data from foreign companies. The potential solutions outlined below aim to:

a) have a realistic approach when addressing the difficulties identified in the concerned countries;

b) stay in line with the EU legislation;

c) outline the advantages and disadvantages of proposed solutions; and finally

d) take into consideration any risk of double counting of statistical data by a main company and its subsidiaries

The authors have put together a broad variety of possible solutions, such as cooperation and/or communication improvements as well as changes in the statistical data collection method, which could promote an improvement in the collection of rail transport data, in particular concerning the information received from foreign railway undertakings. The authors have analysed data collection methods of all transport modes and their potential application in rail statistics. The requirements for an adequate implementation and the impact on the current practices of collecting rail transport data from foreign railway undertakings are presented for each suggested solution.

The solutions are structured according to their potential implementation perspective and grouped into short-term and middle/long-term solutions. For each suggested solution, the authors added a brief description of the strategy and the actions necessary to implement it, an overview of advantages and disadvantages of the solution, as well as practical recommendations.

The first set of proposals aims to establish different communication channels in order to improve data quality and cooperation with foreign railway undertakings:

- Cooperation between countries: National Statistical Authorities could sign agreements or memoranda of understanding, which could enable and enhance the information exchange. Memoranda of understanding could be established between two or more countries regarding the identification of the railway undertakings operating in the partner country and thereby supporting ways of gathering statistical data. Data quality assessment and mirror-data exercises could be included in the scope and the purpose of these cooperation agreements.

- The establishment of informal networks to exchange best practices and experiences amongst national authorities could help in the sharing of approaches and methods of communication, data collection, etc., in order to improve the compilation of the statistical process. Informal meetings facilitate communication and provide a platform to discuss issues and problems encountered. Meetings allow the participants to develop new or enhanced tools for data quality, as well as to improve data collection methods and internal processes. The exchange of knowledge and experience on issues of common interest could facilitate discussions and provide insights on developments at European level.

- A close inter-institutional cooperation between the different authorities within the country, such as the National Statistical Authority, the National Railway Safety Authority or the Rail Regulatory Body, is highly recommended. The latter two authorities are very familiar with foreign railway undertakings and communicate with them regularly. They are also aware of whether any transport activity is provided or not. A close cooperation with the Infrastructure Manager is identified as best practice by several countries.

- Informal communication between the authorities within a country enhances the exchange of information and gives them an opportunity to solve any issues encountered and to obtain missing or incomplete information. By means of informal communication, the statistical authority is earlier
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aware of problems regarding erroneous reporting or data quality issues and, therefore, the statistical staff can take necessary actions timely and more effectively.

• The statistical authority might take the role of an initiator and ensure the management and organisation of regular meetings between different authorities. The regularity of meetings depends on the willingness of the parties involved; they might be held once or twice a year. Such meetings would aim to identify problems, possible solutions, process improvements and cooperation models with the purpose of improving the availability and/or quality of statistical data.

Another proposal is to add references of related EU rail legal acts in the Reference Manual on Rail Transport Statistics (e.g. legal acts on rail market monitoring, rail safety etc.) Supplementary information may lead to additional data sources and improved collection methods.

The authors also suggest introducing a definition of ‘foreign railway undertaking’ in any future amendment of Regulation (EU) 2018/643:

• ‘Foreign railway undertaking’ is any railway undertaking which provides services for the transport of goods and/or passengers outside of the country where it is registered. It is considered as a company whose head office or company registration is not registered in the country of operation but performs rail services (passenger/freight) and has obtained safety or single safety certificate to operate in the rail network of this country.

While analysing the replies to the EU-Survey and the results of the in-depth interviews, some countries expressed their preference for modifications in the approach of the data collection and methods used:

• A common data collection method for all reporting countries with clear criteria for data collection and submission: A possible way to harmonise the data collection as regards this aspect would be the possibility to obtain only information from the infrastructure manager. Article 5 (1) of Regulation (EU) 2018/643 on rail transport statistics stipulates that ‘Member States shall designate a public or private organisation to participate in collecting the data required in accordance with this Regulation’ and further on to ‘take measures for the coordination of the data sources used and to ensure the quality of the statistics transmitted to Eurostat’. In this aspect, national authorities may imply a ranking of different methods for appropriate data sources and methods and agree on this approach. Although country particularities do not allow the selection of one universal data source suitable for all countries, harmonisation could be partly reached by agreeing on the same statistical estimation procedures or alignment of the questionnaires to be sent to the foreign railway undertakings.

• The data collection should cover the domestic railway undertakings for their operations both on the domestic rail network and on the foreign rail networks, as applied for road transport. Thus, no additional data collection from foreign railway undertakings will be required. This is a different approach and it should be investigated further. This proposal is considered as a long-term solution since it may require an amendment of Regulation (EU) 2018/643 on rail transport statistics as well as a detailed analysis and impact assessment of additional time resources and costs to be deployed for its implementation.

• Some countries communicated the extension of the scope of Regulation (EU) 2018/643 on rail transport statistics and mentioned that, for national purposes, additional data are already collected. An amendment of the data requirements as specified by the regulation, however, would require lengthy discussions and consultations in different fora and can only be considered as a long-term solution.

• The establishment of a common European data platform: The Electronic Freight Transport Information system, which is established by Regulation (EU) 2020/1056(12) of the European Parliament and of the Council of 15 July 2020 on electronic freight transport information and will be applicable from 2024, deems to be an adequate solution to obtain further data on foreign

railway undertakings. It establishes a legal framework for road, rail, maritime and air transport operators to share information with relevant authorities in an electronic format. The one-stop shop for harmonised data exchange will allow transport operators to submit electronic information using a harmonised format in all Member States. Once the definition of the technical specifications is tailored to the operators’ need, the digital forms will reduce the administrative burden for enterprises, increase efficiency, simplify enforcement and remove language barriers. The competent authority will assess the information available and check data, as well as enhance, validate or monitor compliance on the territory of a Member State. It is necessary to clarify if the National Statistical Authority could be designated as a competent authority capable of accessing the information within the scope of Regulation (EU) 2020/1056 on electronic freight transport information. Ideally, one national authority with the relevant statistical knowledge should retain the information and transmit data to Eurostat.

- Another suggestion in order to improve the data collection of foreign railway undertakings is to introduce supplementary collection of data and consistency checks based on geographical considerations where the railway undertakings cross the border of another country. This approach would serve as a theoretical basis in situations where national authorities are unable to establish any contact with foreign railway undertakings. Strong cooperation with the Infrastructure Manager will be required since they provide capacity allocation schemes and manage running routes/train paths, including train schedules.

- It is also recommended that certain European Union legal acts should be amended in order to obtain satisfactory data collection results. There are certain conditions in legal acts for obtaining railway undertaking licences or safety certificates. A supplementary request for data reporting to the national authority responsible for railway transport data under Regulation (EU) 2018/643, by adding a reference in the legal acts, would promote data reporting obligations both for domestic and foreign railway undertakings.

3.4. Potential implementation for rail transport statistics of methodologies for other transport modes

Eurostat collects data for several modes of transport, by country. Each mode of transport - air, road, sea or inland waterways - operates according to a technical and economic framework. The methodology for collecting data for freight or passenger transport depends on the mode of transport. To improve the collection of rail transport data from foreign companies, the methodologies for other modes were analysed as part of this study and similar ways to collect data for rail transport were investigated.

3.4.1 ROAD FREIGHT TRANSPORT STATISTICS

Regulation (EU) No 70/2012(13) of European Parliament and of the Council of 18 January 2012 on statistical returns in respect of the carriage of goods by road lays down the methodology for data collection of road freight transport and the data requirements to be sent to Eurostat. For road transport, there is no data collection for foreign companies established. The data collection is based on a survey of a sample of all motorized heavy transport vehicles registered in the country, operating either on domestic or foreign territory. This statistical method results to the collection of microdata.

Developing a similar methodology for the collection of rail transport data would require a complete change of methodology for the collection of rail transport data. Data would have to be collected from railway undertakings that are registered in the country and operate both on national territory and in foreign countries. Such data would be collected by the country in which the undertaking is registered. Then, a mechanism would be required whereby countries would receive the data that correspond to rail transport on their territories.

For the national authorities that currently collect data directly from railway undertakings, the change

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in methodology could go quite smoothly during a three-year period. However, for national authorities that collect data from infrastructure managers, this procedure would require a complete change of methodology, since the infrastructure manager collects data only for the infrastructure they manage, i.e. on the national territory. The amendment of Regulation (EU) 2018/643 should be envisaged as well as an impact assessment carried out to assess additional costs of the foreseen changes.

3.4.2. MARITIME TRANSPORT STATISTICS

Directive 2009/42/EC of the European Parliament and of the Council of 6 May 2009 on statistical returns in respect of the carriage of goods and passengers by sea is the legal text that regulates, at European level, the methodology for data collection of maritime transport and the data that are to be sent to Eurostat.

Data collection is mandatory for all shipping undertakings (domestic and foreign), for all movements of vessels, without any difference in treatment according to their nationality. Shipping is a worldwide activity, thus the share of the activity between national and foreign vessels or national and foreign shipping companies would be inadequate.

The collection of data is based on the obligations of ports to provide data, and Directive 2009/42 /EC defines the minimum characteristics of these data. According to this directive, Eurostat draws up a list of ports that must send data, coded and classified according to countries and maritime coastal areas. Ports (port authorities) are the main data sources, but other complementary sources can be used for the collection as well as for quality checks.

The methodology used in maritime transport could be difficult to apply for the collection of rail traffic data because of the huge number of railway stations and loading/unloading operations.

3.4.3. INLAND WATERWAYS STATISTICS

Regulation (EU) 2018/974 of the European Parliament and of the Council of 4 July 2018 on statistics of goods transport by inland waterways is the legal text that regulates, at European level, the methodology for the collection of data on transport by inland waterways and the data that are to be sent to Eurostat. The process is generally based on the collection of shipping documents by ports. Data are transmitted to national inland waterway administrations by port authorities, and then to the institution responsible for the reporting to Eurostat. Other sources are used to check or complete the data, e.g. registers of national ship-owners and vessels. The collection of data on inland waterways encounters many specific issues and developing a similar methodology for railway statistics is not recommended, in particular because there are many diverse methodologies established in the different countries.

3.4.4. AIR TRANSPORT STATISTICS

Regulation (EC) No 437/2003 of the European Parliament and of the Council of 27 February 2003 on statistical returns in respect of the carriage of passengers, freight and mail by air is the legal text that regulates, at European level, the methodology for the collection of data on transport by air and for the transmission of the data to Eurostat.

Eurostat requests data for all flights, airline companies and aircraft type. The values to be provided concern passengers on board, freight and mail on board, commercial air flights as well as passenger seats available.

In some countries, national authorities are responsible for the data transmission to Eurostat, while in others it is the civil aviation authority that is in charge of the process. Airports usually collect a combination of data transmitted directly by the airline/handling agent and/or electronic messages transmitted between airports, sometimes with data from the air traffic control. Data are collected for all airplanes without any difference in treatment according to nationality. Air transport is a worldwide activity, thus the differentiation of the activity of data collection between national and foreign airplanes/companies is not adequate for rail statistics.
The requirements of Regulation (EU) 2018/643 on rail transport statistics are in principle met in all reporting countries. Data collection and transmission to Eurostat is ensured and authorities responsible for data collection and/or transmission have been identified.

Regulation (EU) 2018/643 on rail transport statistics is directly applicable in almost all countries. In some individual countries, it has to be transposed into national legislation. This may be achieved through the introduction of requirements in the national law or in the annual statistical programme of some Member States.

It should be noted that, in some countries, the national legislation including any enforcement procedures or reporting obligations only applies to domestic railway undertakings. This poses a problem regarding the collection of data from foreign railway undertakings that do not have a permanent office/postal address in the country of operation, as there are no legal means to impose reporting requirements on them. These undertakings usually report the data on a voluntary basis.

The study revealed some discrepancies in the interpretation of the definition of domestic and/or foreign railway undertakings. The interpretation depends usually on the respective national legislation and the registration practices in the business registers, etc.

The way of collecting data on rail transport statistics differs among countries. Reporting countries apply different data collection methods and cooperation models with stakeholders. Data can be received directly from the railway undertaking, obtained from the main infrastructure manager or from any other authority or source. Usually, there is direct communication with the foreign railway undertakings. It can be observed that data submitted by the main infrastructure manager, who has access to the information on the services performed on their railway network, tends to be more homogeneous and transparent.

However, the study revealed that some countries face problems obtaining data from foreign railway undertakings and actions towards an improvement of the data collection should be taken.

All the reporting countries agree that railway undertakings cannot officially operate as such if they have not obtained a railway licence and safety certificate to operate on the railway network. There are countries that do not have any foreign railway undertakings. However, more and more railway companies are aiming at expanding their area of operation and additional data on the volume of traffic will be needed.

According to the information gathered in the scope of the study, cooperation among all the parties involved, i.e. the National Railway Safety Authorities, infrastructure managers and the national authorities, is necessary in order to obtain good-quality information on the operation of foreign railway undertakings.

The ranking of proposed solutions in Table 2 suggests that the solutions with the highest added value would be the development of inter-institutional agreements on cooperation between authorities within a country and the establishment of cooperation with railway infrastructure managers. Possible reference to relevant EU Rail legal acts in the Reference Manual on Rail Transport Statistics and the integration of a definition for ‘foreign railway undertakings’ could facilitate the data collection process.
Conclusions and recommendations

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and offer additional guidance to countries in the compilation of rail statistics.

The suggested long-terms solutions require further considerations as they entail significant changes in the data collection process and require additional resources. Further investigation of the possibility to align the approach used for rail transport statistics with the one used for road freight transport statistics seems recommendable, since some countries expressed a preference for this direction.

It would also be a good idea to re-consider the possibilities established by the Electronic Freight Transport Information system and invest in a feasibility study to assess whether national authorities could be designated as competent authorities and get access to the system. This information system would only be applicable for freight transportation albeit for all modes of transport (road, railway, maritime, inland waterways and aviation).
### Conclusions and recommendations

Table 2: Suggested solutions by priority of implementation

<table>
<thead>
<tr>
<th>Rank</th>
<th>Solution</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Inter-institutional agreement on cooperation between authorities within country (formalised or informal), including coordinatig role of the National Statistical Authority</td>
<td>up-to-date and timely information, short term, improved volume and quality of data</td>
<td>principle of voluntariness, staff rotation.</td>
</tr>
<tr>
<td>(2)</td>
<td>Cooperation with railway infrastructure managers on data collection possibilities</td>
<td>one single source, short term, improved volume and quality of data</td>
<td>principle of voluntariness</td>
</tr>
<tr>
<td>(3)</td>
<td>Improving guidance by references to EU rail legal acts other than Regulation (EU) 2018/643 in the Reference Manual on Rail Transport Statistics</td>
<td>short term, help countries identify additional data sources and improve collection of data</td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td>Including a new definition on ‘foreign railway undertakings’ in the Reference Manual on Rail Transport Statistics</td>
<td>short term, additional clarification to compilers, improvement of data quality</td>
<td></td>
</tr>
<tr>
<td>(5)</td>
<td>Cooperation agreement or memorandum of understanding, setting up informal meetings between Member States’ National Statistical Authorities and other relevant bodies</td>
<td>up-to-date and timely information, share of best practice solution to communication problems</td>
<td>principle of voluntariness, not targeted meetings</td>
</tr>
<tr>
<td>(6)</td>
<td>Alignment to the methodology used for road transport</td>
<td>improved communication, improved data quality</td>
<td>long term, significant change in methodology and legislation, additional costs</td>
</tr>
<tr>
<td>(7)</td>
<td>Establishing a common European data platform (one stop shop platform)</td>
<td>reduction of administrative costs for companies, all data in one place</td>
<td>long term, not available for passenger services</td>
</tr>
<tr>
<td>(8)</td>
<td>Using a model for data adequacy for cross border movements of railway undertakings</td>
<td>solves communication problems</td>
<td>long term, significant change, additional costs</td>
</tr>
<tr>
<td>(9)</td>
<td>Linking the issuing of licence or of safety certificate to railway undertakings for operating in a foreign country to reporting obligations</td>
<td>all railway undertakings submit data</td>
<td>long term, change of EU/national legal acts, additional costs</td>
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</tbody>
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*Eurostat* Improving data collection for domestic rail traffic of foreign companies
### Conclusions and recommendations

Improving data collection for domestic rail traffic of foreign companies

<table>
<thead>
<tr>
<th>Rank</th>
<th>Solution</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
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<tbody>
<tr>
<td>(10)</td>
<td>Common data collection method (harmonised estimation techniques for missing data or identical questionnaires and instructions)</td>
<td>improved quality of the data</td>
<td>long term a common approach between countries on methods or data collection seems not possible additional costs</td>
</tr>
<tr>
<td>(11)</td>
<td>Extension of reporting at European level to cover also national needs in data</td>
<td>identification of additional data</td>
<td>long-term significant change additional costs</td>
</tr>
</tbody>
</table>


European Commission, ‘Roadmap to a Single European Transport Area — Towards a competitive and resource efficient transport system’ (COM(2011)0144),


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Improving data collection for domestic rail traffic of foreign companies

The scientific summary presents the findings of the study ‘Improving data collection for domestic rail traffic of foreign companies’ which was conducted from October 2020 to April 2021. The main objectives of the study were i) to provide an overview of the challenges and limitations that national authorities face while collecting data on the rail traffic of foreign railway undertakings on national territories; and ii) to put together proposals and possible solutions for improving the collection of data on domestic rail traffic of foreign undertakings.

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