Introduction

KEY FIGURES

- 28 countries
- 5 years of data
- Main focus of this year: quality of rail passenger services

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REPORTS FOCUS

Service facilities Charges Trends analysis Degree of market opening Quality of rail passenger services

Participating countries

AT - Austria
BE - Belgium
BG - Bulgaria
HR - Croatia
DK - Denmark
EE - Estonia
FI - Finland
FR - France
DE - Germany
GR - Greece
HU - Hungary
IT - Italy
KS - Kosovo
LV - Latvia
LT - Lithuania
LU - Luxembourg
MK - FYR Macedonia
NL - Netherlands
NO - Norway
PL - Poland
PT - Portugal
RO - Romania
SK - Slovakia
SI - Slovenia
ES - Spain
SE - Sweden
CH - Switzerland
UK - United Kingdom
IRG-Rail – A network of cooperation

The Independent Regulators’ Group-Rail (IRG-Rail) is a network of cooperation between national independent rail regulatory bodies. The group was established in June 2011 by 15 European countries and has since expanded to 31 countries. IRG-Rail acts as a platform for cooperation, sharing of best practices on regulatory issues and promotion of a consistent application of the European regulatory framework. Its overall objective is to support a common, competitive and sustainable internal rail market in Europe. IRG-Rail members aim at dealing consistently with regulatory challenges across Europe.

WHAT WE DO

Monitoring of the railway markets is an essential task of national regulatory bodies. Pursuant to Article 56 (paragraph 2) of Directive 2012/34/EU, regulatory bodies have a formal duty to monitor the situation in the rail markets. Monitoring is also a vital instrument for enhancing market transparency, setting directions for the activities of regulatory bodies and encouraging market participants to improve their activities.

General aim of IRG-Rail Market Monitoring Working Group

The IRG-Rail Market Monitoring Working Group was set up as a platform for cooperation and sharing best practices in terms of collection and analysis of data. One of the main tasks of the group is the completion of an annual market monitoring report, based on data collected by national regulatory bodies according to an agreed set of guidelines. This report is the sixth market monitoring report of IRG-Rail and covers the calendar year 2016 unless stated otherwise.

Content of the reports

The monitoring reports provide annual overviews of the economic conditions and market developments in the railway sector. They also show the development of the European railway market and its competitiveness compared with previous years.

In addition to presenting the main findings of the annual data collection every year, each annual monitoring report focuses on a particular issue. In 2016, the report’s emphasis has been placed on the quality of rail passenger services. The 2016 annual market monitoring report is divided into two parts: the main report which presents overall results at the European level, and a working document in which country specific details are provided. Finally, data used to build graphics are, for the first time, directly available on the IRG-Rail website. This report covers 28 countries.

Methodology

The regulatory body for each country collects its data and submits a single data set to IRG-Rail using a template developed by the Market Monitoring Working Group. The data collected for this report comes from annual market surveys of the respective IRG-Rail members and other external sources, such as the state institutions for transport statistics. Several countries participating in the data collection were not able to provide a full set of data to IRG-Rail for 2016. In order to present reliable and consistent information, this report only uses those indicators for which sufficient and significant data is available. Consequently, some analyses are performed using data from a selection of the participating countries. In each section of the report, key figures and other analyses presented use a consistent sample of member states (and may not cover all the 28 countries due to lack of some data). However, additional information for 2016 is available in the working document.

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1 The Guidelines can be found here.
2 This IRG-Rail report is published on the responsibility of the IRG-Rail plenary.
3 The Working Document can be found here.
4 The data can be found here.
Network characteristics of the railway market

In 2016

Network length
- 220,623 km total route length
  - 4.74 km of lines per 100 km² country area
  - 4.32 km of lines per 10,000 inhabitants

Network usage intensity
- 53.5 trains per day per route km
  - 82% for passenger services
  - 18% for freight services

56% share of electrified route

The sample used to calculate these figures is specified in the following pages.
European rail network

Figure 1 – Route length (in km) in the participating countries in 2016

Due to the expanded number of participants in this year’s report, the total length of the rail network in the 28 countries monitored in 2016 is 220,623 kilometres. With 38,990 kilometres, Germany has the longest network in Europe, followed by France. These two countries cover approximately 30% of the total route length. The next two longest networks can be found in Italy and Poland. About 48% of the total network monitored is covered by these four countries. The shortest network can be found in Luxembourg with a length of 275 kilometres.

Figure 2 – Network density with regard to country area and population in 2016

The network density may reflect the degree of development of the rail network in each country. When considering the country size, Switzerland has the highest rail network density among the IRG-Rail members, followed by Belgium, Germany and Luxembourg. Norway has the sparsest network in Europe which is due to the difficult topography with high-mountain landscape and a long fjord-coast in many parts of the country. The network density with regard to the population of a country shows quite opposite results. Latvia, Estonia, Sweden and Finland have in this respect the highest network density. Notwithstanding this, it can be noted that these four countries have a relatively low population density.

6 The perimeter of each figure is specified in a footnote. Without specification, the full sample is considered.
6 Lithuania, FYR Macedonia, Portugal and Romania contributed for the first time to the IRG-Rail Market Monitoring Report.
7 The population density is calculated by the proportion of inhabitants to the country area.
The European railway network is mainly used by passenger trains. There are more than four times as many passenger trains on the European railway network as freight trains. The total usage intensity is slightly increasing (1%) thanks to passenger services, while freight traffic intensity remains stable. In many countries it can be observed that main lines are already highly used. The average usage intensity of passenger trains increases more than in the freight sector. One reason for this may be the use of modern rail technology that allows operating more passenger trains through a faster acceleration. Significant differences can be observed across countries, due to country-specific characteristics and developments.\(^\text{10}\)

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\(^\text{6}\) See part 2.1 of the Working Document.

\(^\text{9}\) 26 countries are included (Estonia and Luxembourg are missing).

\(^\text{10}\) See part 2.2 of the Working Document.
Track access charges (TAC) paid by railway undertakings for the minimum access package

IN 2016

€16.6 bn total TAC
€4.03 average TAC per train.km
87% share of TAC from passenger market

The sample used to calculate these figures is specified in the following pages.
Evolution of track access charges (TAC)

It is important to note that, for each country, charges for specific types of trains (such as heavy or light trains) and/or specific lines (high-speed versus conventional, main versus regional lines) could be very different from the average TAC. The trends mentioned above are only relevant to the total TAC paid by all railway undertakings in 24 EU countries. National trends in country show a very different dynamic.12

The total TAC increased by 1.3 billion euros between 2012 and 2016. The overall annual growth rate of total TAC is 1.6%. It corresponds to an annual increase of the average TAC per train.km of 0.25 euros.

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11 24 countries are included (Estonia, Kosovo, Luxembourg and Sweden are missing).
12 See part 3 of the Working Document.
13 24 countries are included (Estonia, Kosovo, Luxembourg and Sweden are missing).
Market players and global rail traffic

IN 2016

- 4.28 bn train.km
- Between 1 and 340 railway undertakings in each country
- Passenger services: 82% of total train.km

The sample used to calculate these figures is specified in the following pages.
Market players

According to the last available data, 535 railway undertakings operated in the European rail market in 2015. There are substantial differences concerning the number of railway undertakings in the monitored countries. In 2016, there is only one active railway undertaking in Lithuania and FYR Macedonia. In Finland, Greece and Kosovo, two undertakings operate. At the other end of the scale, 340 railway undertakings operate in Germany and 82 in Poland. The number of freight railway undertakings is, and has all through the reporting period been, higher than that of passenger railway undertakings. Note that since some companies are active in several countries, the total number of railway undertakings cannot be obtained by adding the values specified for all countries in 2016.

Total rail traffic

Train traffic, in train.km, has been growing over the last 5 years, but only marginally with an annual growth of 0.6% between 2012 and 2016. The total traffic in 2016 was 4.28 billion train.km. Despite the fact that there are more freight railway undertakings than passenger railway undertakings, passenger traffic widely exceeds that of freight traffic. Over 80% of the total traffic is made for passenger services. However, there are significant differences between countries. In Latvia, Lithuania and Slovenia, freight traffic represented a higher portion of the total than passenger traffic in 2016. Conversely, in Denmark, the United Kingdom, Luxembourg, the Netherlands and Greece, the share for passenger traffic exceeded 90%.

14 See the Fifth IRG-Rail Market Monitoring Report.
15 See part 4.1 of the Working Document.
16 26 countries are included (Estonia and Luxembourg are missing).
17 See parts 5 and 6 of the Working Document for countries’ details.
The rail freight market

**IN 2016**

- 790 m freight train.km
- 420 bn freight net tonne.km
- Freight load factor: 531 net tonne.km per freight train.km

- 40% total market share of new entrants in the freight market
- €21.1 operators’ revenue per freight train.km
- €cts 3.81 operators’ revenue per net tonne.km

The sample used to calculate these figures is specified in the following pages.
The rail freight market size

There is a stable offer of freight railway undertakings in terms of train.km. The demand side, in net tonne.km, has increased by 1% per year between 2012 and 2016. Note that, according to the latest available data from Eurostat, freight rail services represented 18.3% of the inland freight transport in 2015 (in tonnes.km). In 2016, railway undertakings performed 4% more net tonne.km than in 2012. This may reflect an improvement in efficiency by an increase in train load (Figure 9). The split between international and national freight traffic has remained unchanged since 2012 with approximately an equal share of the traffic.

The freight load factor is obtained by dividing net tonne.km by freight train.km. This factor has increased by 3% over the period 2012-2016 (with an annual average growth of 0.7%), and by 1.5% between 2015 and 2016. It reflects a growing demand for freight services, while the offer has remained stable. This might be explained by railway undertakings trying to meet additional demand by using rolling stock and/or train paths more efficiently, e.g. by operating heavier trains.

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Figure 8 – Total freight traffic (in billion train.km and net tonne.km) from 2012 to 2016

Figure 9 – Freight load factor (in net tonne.km per freight train.km) from 2012 to 2016

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18 See Eurostat data for passenger market and freight market.
19 See parts 5 and 6 for details of rail traffic in passenger.km and tonne.km.
20 See part 5.1 of the Working Document.
21 26 countries are included (Estonia and Luxembourg are missing).
22 26 countries are included (Estonia and Luxembourg are missing).
23 Load factor per country can be found in part 5.1 of the Working Document.
Market shares of freight railway undertakings

Figure 10 – Market shares of freight railway undertakings (based on net tonne.km) in 2015 and 2016²⁴

There has been a slight decrease in the market share of domestic incumbents between 2015 and 2016. The distribution of market shares of railway undertakings was broadly analysed in the Fifth IRG-Rail Market Monitoring Report, where a geographical expansion of incumbents and non-incumbents on foreign markets was shown. These results could mean that the decline in incumbents’ share in their domestic markets was in some cases compensated by developing services and gaining market share in foreign markets.

Economic performance indicator of freight railway undertakings

An economic performance indicator of freight railway undertakings is built by dividing total revenues by train.km or net tonne.km.²⁵ During the last five years, total revenues and unit revenues per freight train.km increased annually by respectively 0.3% and 0.4% on average. Meanwhile, unit revenues per net tonne.km decreased annually by 0.5% on average, while net tonne.km increased on the same period of time. This observation, together with the evolution of the freight load indicator, show that, on average, freight trains tend to be heavier but unit revenues per tonne.km for railway undertakings tend to decrease. This could be explained notably by the competition that exists between freight railway undertakings and between rail and other modes of transport, especially road.

24 20 countries are included (Denmark, Estonia, France, Italy, the Netherlands, Romania, Slovakia and Sweden are missing). Detailed information on market shares in each country in 2016 can be found in part 5.2 of the Working Document.

25 Unit revenues by countries can be found in part 5.3 of the Working Document.

26 17 countries are included (Belgium, Denmark, Estonia, France, Italy, Luxembourg, the Netherlands, Norway, Slovakia, Slovenia, Switzerland are missing).

27 05 // The rail freight market

Economic performance indicator of freight railway undertakings

Figure 11 – Freight operators’ revenues per train.km and tonne.km from 2012 and 2016²⁶

An economic performance indicator of freight railway undertakings is built by dividing total revenues by train.km or net tonne.km.²⁵ During the last five years, total revenues and unit revenues per freight train.km increased annually by respectively 0.3% and 0.4% on average. Meanwhile, unit revenues per net tonne.km decreased annually by 0.5% on average, while net tonne.km increased on the same period of time. This observation, together with the evolution of the freight load indicator, show that, on average, freight trains tend to be heavier but unit revenues per tonne.km for railway undertakings tend to decrease. This could be explained notably by the competition that exists between freight railway undertakings and between rail and other modes of transport, especially road.

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25 Unit revenues by countries can be found in part 5.3 of the Working Document.

26 17 countries are included (Belgium, Denmark, Estonia, France, Italy, Luxembourg, the Netherlands, Norway, Slovakia, Slovenia, Switzerland are missing).
The rail passenger market

**IN 2016**

- 3.4 bn passenger train.km
- 449 bn passenger.km
- 22% total market share of new entrants in the passenger market
- €16.7 operators’ revenue per passenger train.km
- €cts 14.1 operators’ revenue per passenger.km

The sample used to calculate these figures is specified in the following pages.
The rail passenger market size

A growing trend can be observed both on the supply and demand side of the market. From 2012 to 2016, the number of passenger.km increased annually by 1.4% on average (compound annual growth rate), whereas the offer increased annually on average by 0.8%. Note that, according to the latest available data from Eurostat, the modal share of rail passenger services in 2015 was 7.7% of the total passenger inland transport (in passenger.km). A slight increase has been observed since 2010, when the passenger rail modal share was of 7.2%.

Figure 12 – Total passenger traffic (in billion train.km and passenger.km) from 2012 to 2016

Figure 13 – Passenger load factor (in passenger.km per passenger train.km) from 2012 to 2016

The passenger load factor is obtained by dividing passenger.km by passenger train.km. This indicator was stable between 2012 and 2014, and increased slightly in 2015 and 2016, equating to an average annual increase of 0.7% between 2012 and 2016.

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27 See part 6 of the Working Document for further information on the national passenger markets.
28 See Eurostat data for passenger market and freight market.
29 25 countries are included (Belgium, Estonia, and Luxembourg are missing).
30 25 countries are included (Belgium, Estonia, and Luxembourg are missing).
Market shares of passenger railway undertakings

Figure 14 – Market shares of passenger railway undertakings (based on passenger.km) in 2015 and 2016

Approximately 78% of passenger.km were performed by domestic incumbents in both 2015 and 2016. Between 2015 and 2016, the market share of non-incumbents decreased by 0.7 percentage points, while foreign incumbents increased their share by 0.6 percentage points, meaning that incumbents are gaining market share abroad, to the detriment of non-incumbent companies.

Economic performance indicator of passenger railway undertakings

Revenues per train.km increased over the last 5 years at an average rate of 2.4% per year. However, there was a decrease of 3% between 2015 and 2016. A similar trend is observed for revenue per passenger.km, with an average annual increase of 1.2% over the last 5 years but a decrease by 4% between 2015 and 2016.

Figure 15 – Passenger operators’ revenue per train.km and per passenger.km from 2012 to 2016

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21 countries are included (Belgium, Estonia, Luxembourg, the Netherlands, Romania, Slovakia and Sweden are missing).
22 16 countries are included (Belgium, Denmark, Estonia, France, Italy, Luxembourg, the Netherlands, Norway, Romania, Slovakia, Slovenia and Switzerland are missing).
INTRODUCTION

In 2015, passenger cars accounted for 83.1% of inland passenger transport in the EU-28 while trains accounted for less than a tenth of all traffic (7.7%) in terms of inland passenger kilometres travelled.\textsuperscript{33} Between 2006 and 2015 the share of passenger cars in inland transport was stable, ranking between 83.2% and 83.1%. Over this period, the share of rail travel increased steadily from 7.1% to 7.7%.

The quality of service is increasingly at the heart of public policies, in order to improve the competitiveness of rail services relative to other modes of transport. The high reliance on the use of the car as a means of passenger transport across the EU has contributed to increased congestion and pollution in urban areas and on major transport arteries. The European Commission published in April 2016 a study on the prices and quality of rail passenger services\textsuperscript{34}, underlying that prices and quality of service are both key determinants of the competitiveness of rail services. In addition, the European Commission is updating the European rules on rail passenger rights to better protect train travellers notably in case of delays and cancellations. A high quality of rail services and the protection of users’ rights are essential, according to the European Commission, to fulfil the objective of increasing the share of rail transport in comparison to other modes of transport.

In that context, IRG-Rail proposes an overview of national practices in terms of regulation and monitoring of quality of rail passenger services in 27 countries.\textsuperscript{35} The aim is first to assess to what extent the quality of rail services is measured and used in each country and to what extent it is a key driver of public transport policies. Moreover, this overview enables assessment of the degree of homogeneity and comparability of indicators of the quality of rail services in the participating European countries.

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\textsuperscript{33} See Eurostat data for passenger market and freight market.

\textsuperscript{34} See the study on the prices and the quality of rail passenger services of the European Commission.

\textsuperscript{35} Kosovo is missing in this chapter.
National institutional organisations in the field of quality of rail services

12 regulatory bodies are also the national enforcement body in charge of consumer protection and passenger rights according to Regulation 1371/2007.36 In 17 countries, the Ministry or another government-related institution is the national enforcement body in charge of consumer protection and passenger.40 There are some exemptions to the enforcement of this Regulation in 13 countries.41

Type and use of indicators monitored

The diversity of national practices is evident when considering the way the quality of service is defined and used in the different countries. More harmonisation in the European level could strengthen the positive impact of such monitoring for passengers and contribute to the construction of a common market.

Details of other institutions38

12 regulatory bodies are involved in the monitoring of the quality of rail passenger services.36 When the regulatory body is not involved in such a monitoring, at least one other institution is in charge of it. In 10 countries, the quality of rail passenger services is monitored both by the regulatory body and at least another institution.37

Figure 16 – Institutions that monitor the quality of rail passenger services in 2016

Figure 17 – Main indicators monitored for the quality of rail passenger services in 2016

Delays and cancellations are the most commonly monitored indicators, followed by the level of satisfaction of passengers. Only 7 regulatory bodies monitor either delays and/or cancellations but other institutions deal with these indicators in 21 countries. According to the last Eurobarometer carried out in 201342, delays and cancellations are among the main drivers of satisfaction or dissatisfaction of passengers.43 Moreover, among countries where the regulatory body and other institutions monitor common indicators, the indicators are defined in different ways in 9 countries.44

24 Legal powers to monitor the rail sector have been conferred to regulatory bodies from 2003 in the United Kingdom to 2016 in Germany.
36 Bulgaria, Croatia, Denmark, France, Germany, Italy, Poland, Portugal, Sweden and the United Kingdom. See details in part 7.2 of the Working Document.
40 Bulgaria, Croatia, Finland, France, Germany, Greece, Hungary, Latvia, Luxembourg, Poland, Portugal, Slovakia and Spain.
41 Details of indicators monitored in each country are provided in part 7.3 of the Working Document.
42 See part 7.4 of the Working Document.
The level of quality of service has financial consequences for railway undertakings in 19 countries. Those financial incentives are mainly enforced by the Ministry (in 12 countries) and mainly through bonus/malus mechanisms (in 11 countries). In all countries, the infrastructure manager applies financial incentives to railway undertakings in the framework of performance regimes. In addition, some other institutions may also use financial incentives linked to the quality of service.\textsuperscript{45}

Figure 18 – Existence and enforcement of financial incentives linked to the quality of rail services in 2016

Indicators of the quality of rail services are published in 20 countries, either by the regulatory body only (2 countries), by other institutions only (13 countries) or both by the regulatory body and other institutions (5 countries).

In 10 countries, all types of services are included (PSO and non-PSO services) in publications. Conversely, only PSO services are taken into account in publications in 5 countries and indicators of quality of services are published only for non-PSO services in Bulgaria.\textsuperscript{47}

Figure 19 – Institutions that publish indicators of quality of rail services in 2016

\textsuperscript{45} Details about these financial incentives are provided in part 6.5 of the Working Document.

\textsuperscript{46} 16 countries involved.

\textsuperscript{47} Details are provided in part 7.6 of the Working Document.
Focus on delays and cancellations

Delays and cancellations are the two most commonly monitored indicators of quality of rail passenger services in Europe. They also represent main drivers of satisfaction and dissatisfaction of passengers. Therefore, they can be seen as crucial when considering a passenger-oriented regulation. At the European level, however, the diversity of definitions and scopes retained when monitoring these indicators make it difficult to provide relevant comparisons. It is therefore almost impossible to detect and share best practices when looking at national statistics.

Figure 20 – Calculation of delays

Delays are monitored in 24 countries and cancellations in 22 countries, either by the regulatory body and/or by other institutions. However, there are various national approaches to calculate these indicators.

In 12 countries, delays are calculated at the final station of a service, while in 2 countries, delays are calculated at departure. These methodologies do not always take into account potential delays at intermediate stations and therefore may not reflect what is actually experienced by passengers. 8 countries take into account delays between each station and, finally, other methods are also used in 2 countries.

Punctuality rates also differ according to the threshold used to start considering a train as being delayed. In most countries, this threshold differs according to regional and long-distance services. For both regional and long-distance services, trains are considered as being delayed from the first second of delay at the final destination in Hungary. At the other extreme, only trains delayed by at least 1 hour on arrival at final destination are taken into account in Italy. In most of countries, the threshold for delays for both types of services is between 2 minutes 30 seconds and 5 minutes 59 seconds.

Measurement point of delays

Threshold for classification of a service as delayed

Not specified in MK, DE, SK

France
There are different thresholds based on the duration of the journey, from 5min59 for trips less than 1h30 to 15min59 for trips longer than 3h00.

Italy
There are different thresholds depending on the type of service (non-PSO, PSO long-distance and PSO regional services). For PSO regional services, the threshold also depends on the regional authority.

Spain
Thresholds are different according to the type of service: from 3mn for non-PSO high-speed services and PSO regional/high-speed medium distance to 10mn for some other non-PSO long-distance services.

48 See part 7.9 of the Working Document for details about national practices in terms of calculation of delays.
49 24 countries involved.
There is also no common approach for assessing cancellations across the different countries. There is no threshold retained in 10 countries, meaning that any scheduled trains that have been cancelled before departure are taken into account in the cancellation rate. On the contrary, different thresholds are used in 8 countries as specified in Figure 21.\(^{50}\) Note that 3 regulatory bodies (in France, Portugal, the United Kingdom) expect changes in the way punctuality and/or cancellations of rail passenger services are calculated.\(^{51}\)

Assessing the number of passengers affected by service disruptions enables a better assessment of what is actually experienced by passengers. The assessment of the number of passengers affected by service disruptions is very limited in European countries. However, it requires sufficient data in terms of occupancy of trains suffering delays or cancellations. It is potentially at least partly the reason why this type of assessment is carried out only in 3 countries for delays and 4 countries for cancellations. In Denmark, Slovakia and Spain, the assessment is made by the railway undertakings. In the Netherlands, it is made by the Ministry, local public authorities and railway undertakings. However, it is worth noting that no regulatory body has experience with the methodology and data used to conduct such assessments.

Delays and cancellations are collected daily in 9 countries and 8 countries respectively. Publications are mainly annual and indicators are mainly aggregated at the national level.\(^{54}\) Delays and cancellations are collected daily through mechanisms often put in place by the infrastructure manager and/or railway undertakings.

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\(^{50}\) See part 7.9 of the Working Document.
\(^{51}\) See part 7.7 of the Working Document.
\(^{52}\) 19 countries involved.
\(^{53}\) Not specified for the Netherlands.
\(^{54}\) Part 7.8 of the Working Document details per country the regularity of collection and publication of delays and cancellations as well as the level of disaggregation of publications.
Statistics of delays and cancellations

Regarding the various definitions and scopes used in each country to calculate delays and cancellations, one can conclude that national statistics are very poorly comparable in European countries. In some countries, indicators are only available for the entire rail market whereas for other, only information by type of rail service (regional/long-distance services) is available. The lack of comparability of quality of service in Europe is illustrated in Figure 23, representing delays for regional rail services. The same comparison issues apply for all statistics of quality of service monitored.\(^{55}\)

![Figure 23 – Rates of delay from 2010 to 2016 (%) – Regional passenger services\(^{56}\)](image)

Even among countries where the thresholds are the same or similar, statistics are still not directly comparable. For instance, in Denmark and Finland, delays are calculated between each station whereas in Norway only delays at the final station are published. In all countries the cancellation rates remained stable between 2014 and 2016. The same observation can be made for the majority of countries for the rate of delays.\(^{57}\)

Expected role of regulatory bodies

12 regulatory bodies consider they need more powers in the field of the quality of rail services to improve this crucial aspect of rail transport demand and enforce a more passenger-oriented regulation.\(^{58}\)

11 regulatory bodies consider they need more powers to monitor the quality of passenger rail services. Among them, 5 regulatory bodies are not currently legally empowered to monitor this aspect of rail services and 6 regulatory bodies already have some powers in this field. For instance, the Portuguese regulatory body states that a stronger and unified focus among the industry on tackling overcrowding on trains is necessary and could help in keeping costs down. This would allow creating a powerful passenger-focused regulatory body capable of ensuring a more efficient rail sector.

Moreover, 5 regulatory bodies, which already have some powers to monitor the quality of rail services, consider they need more powers to implement financial incentives linked to the quality of service. For instance, in France, there is no national authority provided with such powers in the rail sector. Only public local authorities can enforce bonus/malus in the framework of regional PSO contracts, without any unified approach of this mechanism and without being able to compare the performance of the monopoly in the provision of regional rail services.

CONCLUDING REMARKS

In a context of a developing single market for passenger rail transport, the diversity of practices tends to limit the possibility for users to get clear information on their services, and make it difficult for railway undertakings to adapt their services to various definitions of best practices. The lack of comparability of indicators between countries may also limit the possibility for public decision makers, including regulatory bodies, to benefit from best practices at the European level.

In order to strengthen the impact of the monitoring of the quality of rail services on the functioning of the rail sector, a harmonisation of indicators at the European level would be necessary. The harmonisation should at least cover the following key elements concerning delays and cancellations of rail passenger services:
- The thresholds retained to calculate delays and cancellations;
- The calculation points of delays;
- The scope of services taken into account in statistics (all passenger services, not only PSO or non-PSO services).

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\(^{55}\) All available statistics of delays and cancellations by type of rail service and by country between 2010 and 2016 are provided in the Excel annex. Additional details are provided in part 7.10 of the Working Document.

\(^{56}\) Italy has several thresholds for regional services; however, only rates of delay for the 15min00 threshold has been provided for this report.

\(^{57}\) Details about evolution of rates between 2014 and 2016 are provided in part 7.10 of the Working Document.

\(^{58}\) Details are provided in part 7.11 of the Working Document.