



Main findings

5th RMMS Report

PRIME KPI Subgroup
Rome, 15-16 March, 2017



Coverage


5th Report on monitoring development of the rail market

- Adopted 8 December 2016 and consists of:
 1. **Report from the Commission to the European Parliament and the Council** – a compact summary in the form of EC Communication to the EP and the Council, translated to all languages
 2. **Accompanying Staff Working Document** – develops each topic in more depth, only in English
 3. **Data and figures** – in an Excel format, accessible through EC website



http://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

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MOBILITY AND TRANSPORT

European Commission

European Commission > Transport > Transport modes > Rail > Market > Rail Market Monitoring (RMMS)

Home Transport Modes Transport Themes Media Corner Facts & Fundings About Us

Rail


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Rail Market Monitoring (RMMS)

On 8 December 2016, the European Commission adopted the fifth report on monitoring development of the rail market. While the Report gives only a high level overview of the main developments, the full analysis is presented in the accompanying Commission Staff Working Document. Data and figures are available also in an Excel format.

[Fifth report on monitoring development of the rail market \[COM\(2016\) 780\]](#)

[Accompanying Commission Staff Working Document \[SWD \(2016\) 427\]](#)

 [Data and figures](#)

- Rail
 - ▶ Accessibility
 - ▶ Studies
 - ▶ Useful links
 - ▶ Environment
 - ▼ Market
 - ▼ Rail Market Monitoring (RMMS)
 - ▶ Regulatory bodies



Coverage

Time coverage and sources

- Developments between 2009 and 2014
- All EU MS with railways and Norway; Switzerland to some extent.
- Sources:
 - RMMS (Rail Market Survey) responses
 - Pocket book "EU Transport in Figures"
 - Eurostat, ERA
 - statistics collected by sectoral organisations
 - *ad hoc* presentations and studies

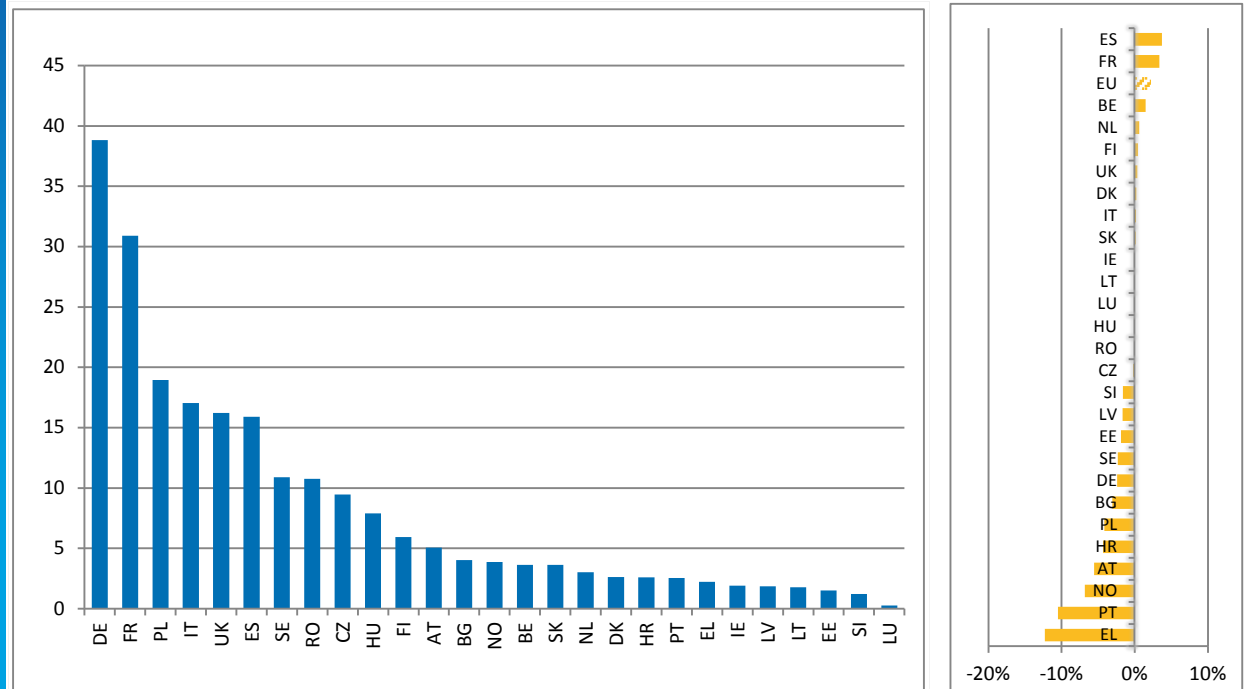


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Railway network

- Increase since 2009 about 2%
- 52% electrified (+1,6 pp since 2009)
- Large sections of the network have been upgraded to enhance travel speed, but there are still wide discrepancies
- 3,4% of the network is high speed (+1400 km added since 2009):
- Ongoing projects in DK, DE, ES, FR, IT, and UK (total 1200 km) and further plans in the UK and SE
- TEN-T/CEF to address missing cross border links and bottlenecks

Figure 1 – Length of national rail networks (2014) and relative change since 2009 (length of lines, thousand km)



Railway network- high speed lines

- Major differences between countries in terms of travel speeds
- Freight – average speeds from 18-60 km/h
- By 2030 high speed TEN-T network should extend over 30 000 km
- ES - 2 871 km of HSL in operation and 1 200 km under construction, new lines planned in UK and SE
- The utilisation of high speed networks in Spain is 5 times lower than in France

Figure 1 – Length of dedicated high speed lines (km, 2015)

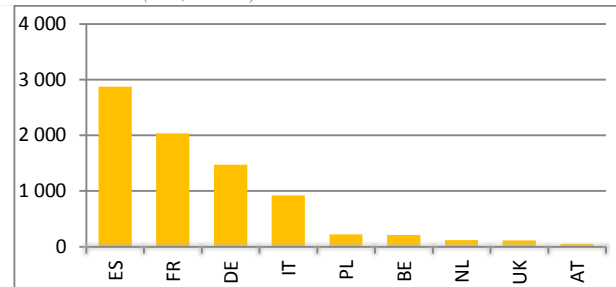


Figure 2 – Long term evolution of high speed lines in Europe (km)

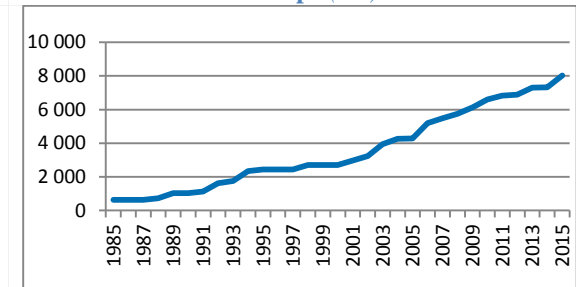


Table-1 – Utilisation high speed lines for high speed services (2014)

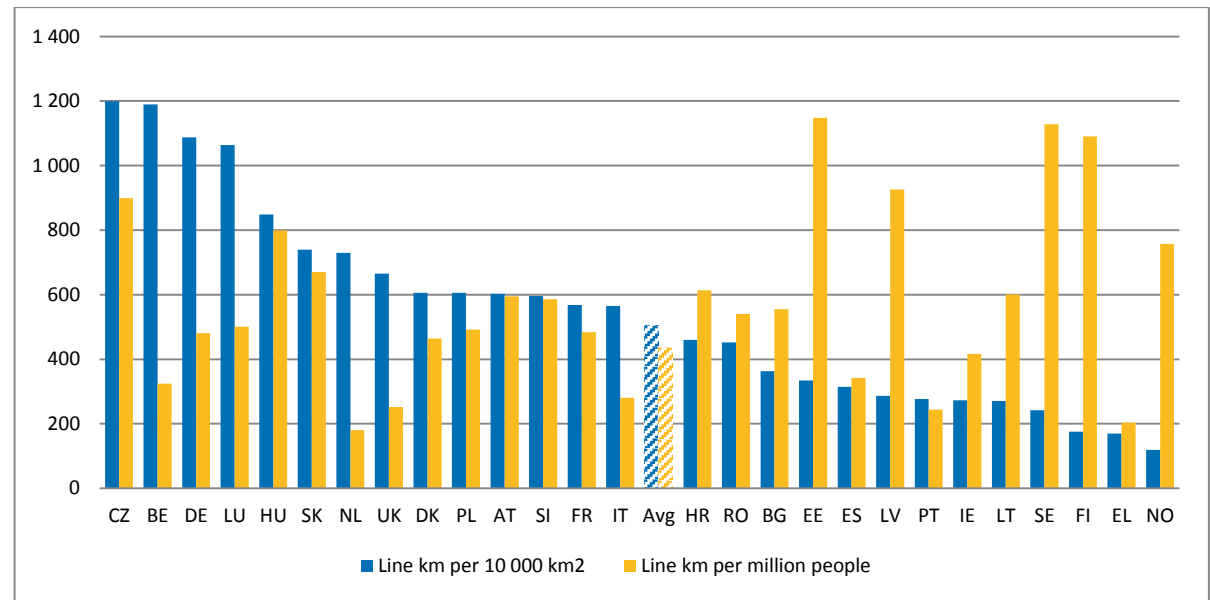
	BE	DE	ES	FR	IT	NL	UK
Traffic with high speed rolling stock (million p-km)	910	24 316	12 788	50 659	12 794	242	4 360
Length of high speed lines (km)	209	1 352	2 515	2 036	923	120	113
Proportion of high speed network compared to total network (line km)	6%	3%	16%	7%	5%	4%	1%
Utilisation rate (million high speed p-km per line km per year)	4.4	18.0	5.1	24.9	13.9	2.0	38.6

Source: Statistical pocketbook 2016, based on UIC data

Railway network - density

- CZ, BE and LU with high population densities, have the most dense rail networks in terms of territorial coverage
- Density of rail networks per inhabitant is the highest in sparsely populated Nordic countries
- CZ and HU score high and PT and EL low both in terms of lines per surface area as well as per inhabitant

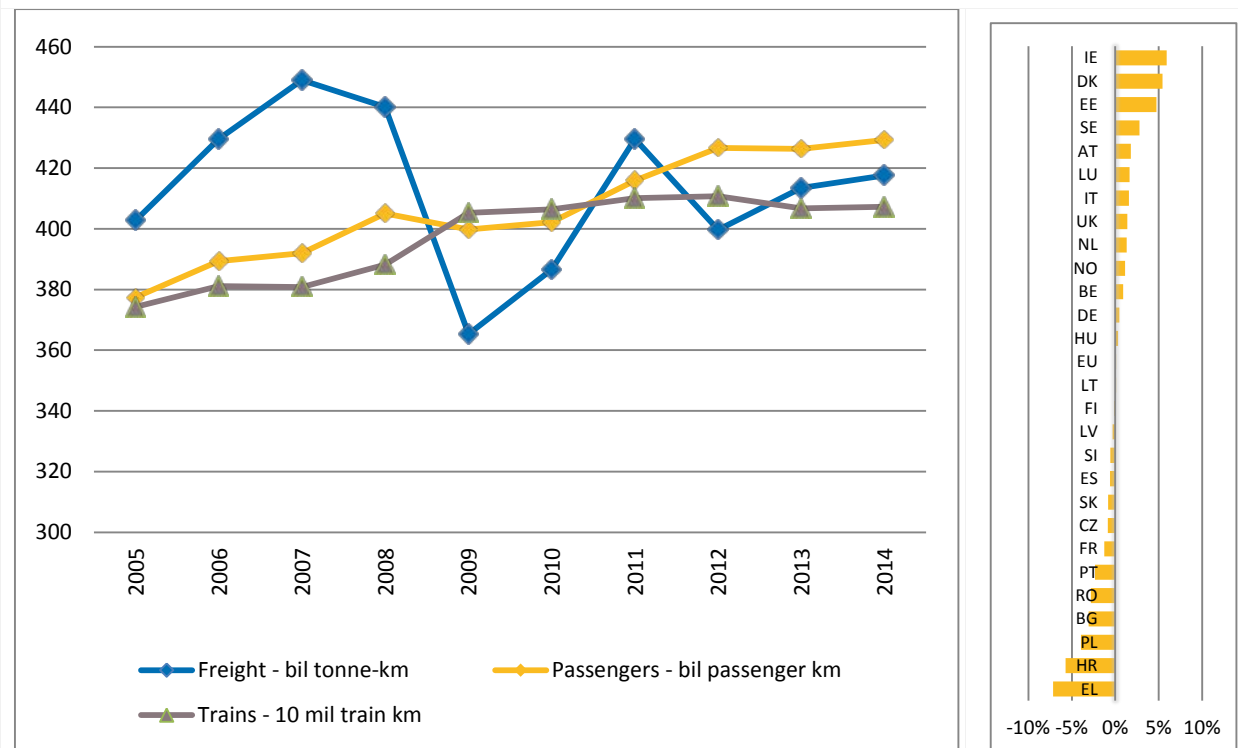
Figure 1 – Density of railway network in terms of surface area and population (2014)



Rail services

- Rail passenger outputs were almost not impacted by the 2009 crisis and have continued to grow on average 1% per year
- Rail freight outputs in t-km in contrast dropped heavily in 2009 and have not yet fully recovered.
- Total train-km (including both passenger and freight train movements) have effectively not increased indicating certain productivity gains.

Figure 1 – Evolution of traffic volumes since 2005 and average annual change of train-km since 2009 (%)



Rail services - passengers

- Slow but steady growth overall
- 6% passenger traffic international, traffic volumes however not growing
- The largest increases in the UK, the CZ and LU, while in HR passenger traffic halved.
- Rail's modal share 7,5%, increased since 2009 0,4 pp
- Strong improvement in the NL and the UK and decline in LV, SI, BG and HR

Figure 1 – Evolution of rail passenger traffic volumes

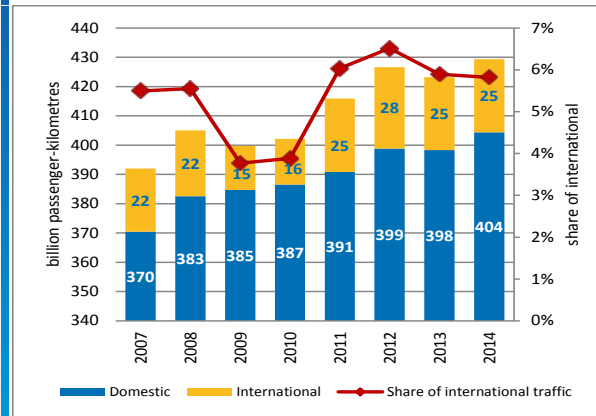


Figure 1 – Passenger land transport modal split (%)

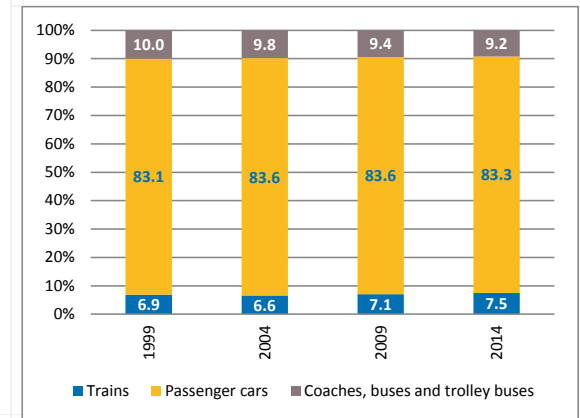
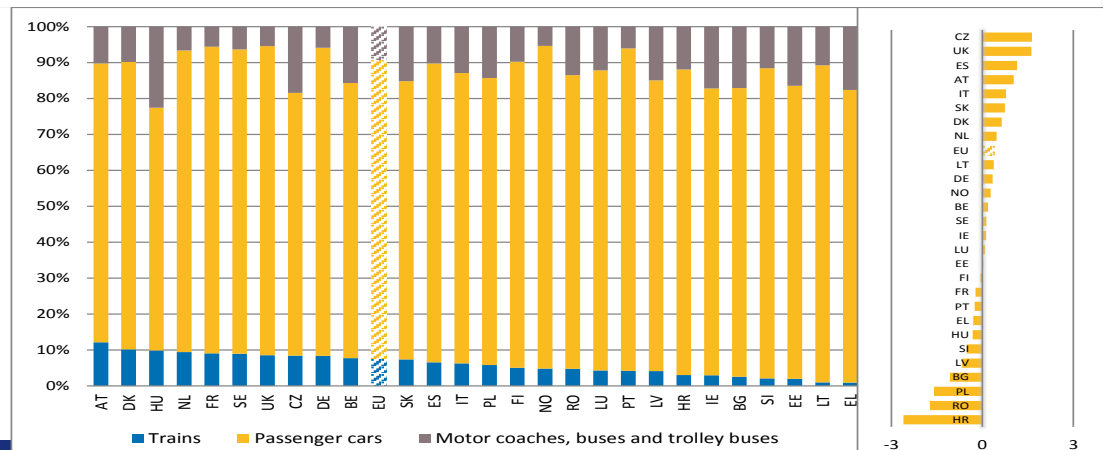


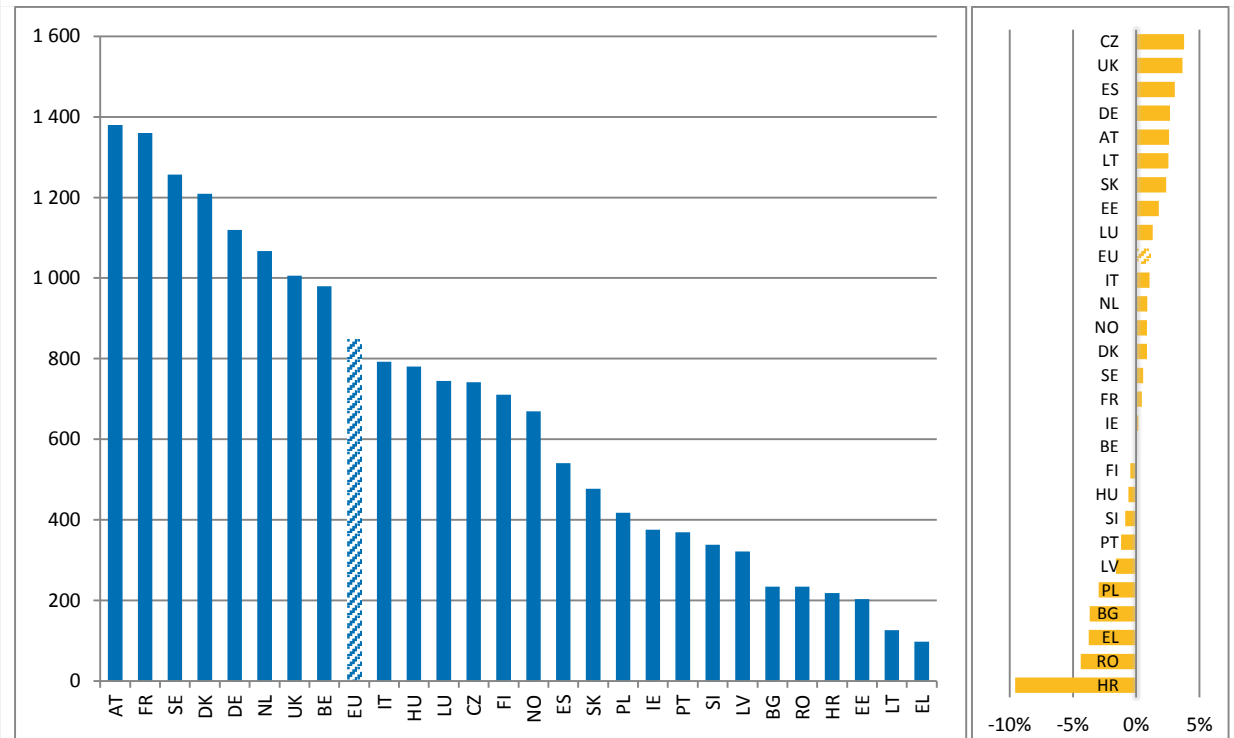
Figure 1 – Passenger land transport modal split by Member State (2014) and change since 2009 (in percentage points)



Rail services – propensity to travel

- **Rail travel per inhabitant** varies by a factor of ten.
- At the high end - 1 400 km per year in AT and FR, and more than 1000 in SE, DK, DE and the NL; it keeps growing in all these countries.
- At the low end - less than 100 km in LT and EL

Figure 1 – Propensity to travel by rail (2014) and its average annual change since 2009
(p-km per year per inhabitant)



Rail services - freight

- Freight volumes are still lower than in 2007, but annual growth is 3%
- More than 50% international
- Modal share 18%, the same as 10 years ago
- Strongest increase in SI, RO and HU.
- The total tonne-kilometres in comparison to 2009 have declined only in HR, SK, EL and EE.

Figure 1 – Evolution of rail freight traffic volumes

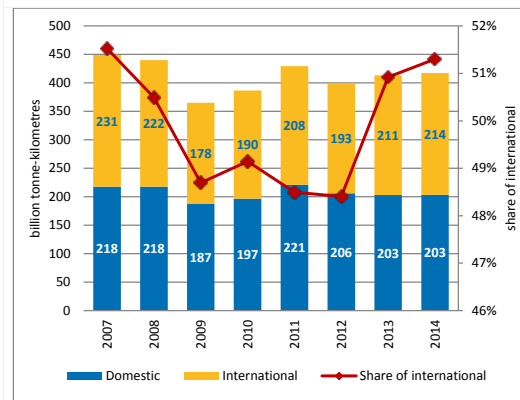


Figure 1 – Freight land transport modal split (%)

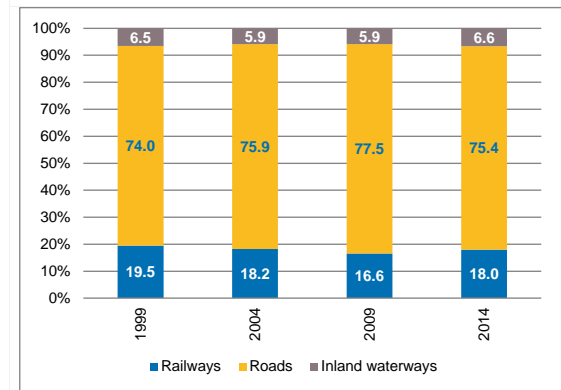
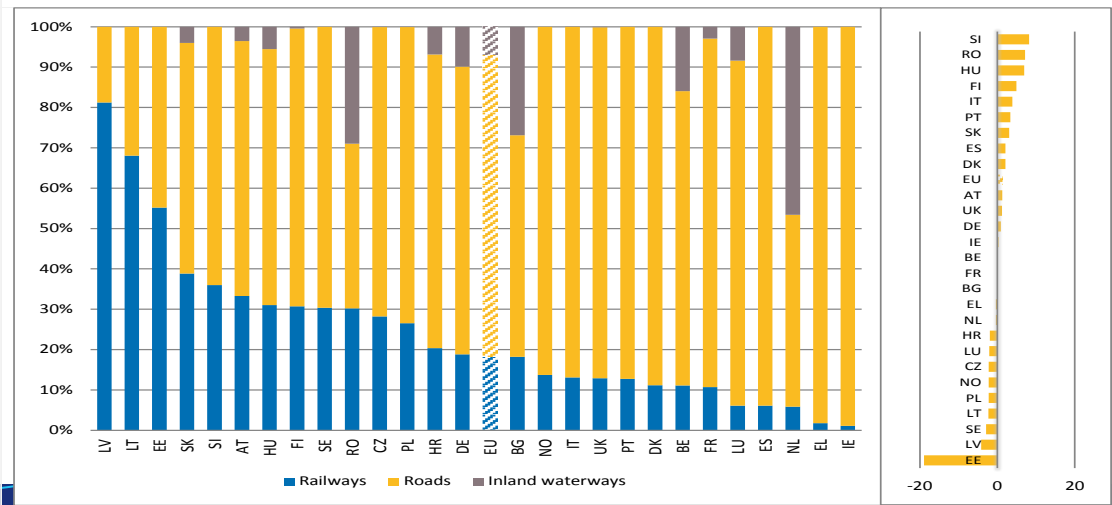


Figure 1 – Freight land transport modal split by Member State (2014) and change since 2009 (in percentage points)



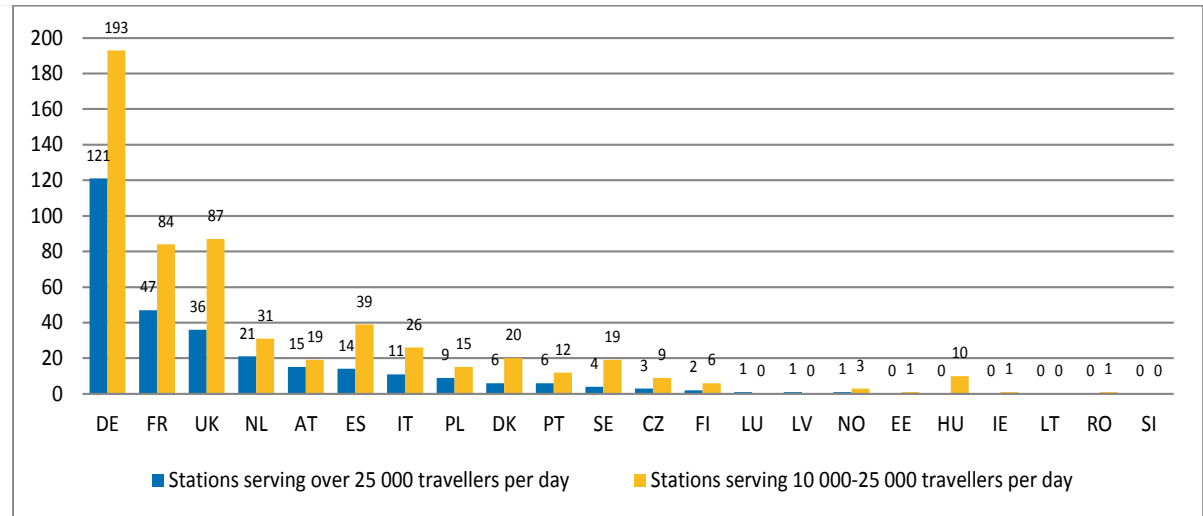
Service facilities

- The Recast Directive introduced rules for service facilities
- Apart from stations, data availability and consistency is rather poor
- Common definitions still to be developed.

According to available RMMS data, in 2014 there were about:

- 30 000 passenger stations;
- 3600 freight terminals;
- 1700 marshalling yards;
- 28 500 storage sidings;
- 1300 maintenance facilities;
- 650 maritime and port facilities; and
- 650 refuelling facilities.

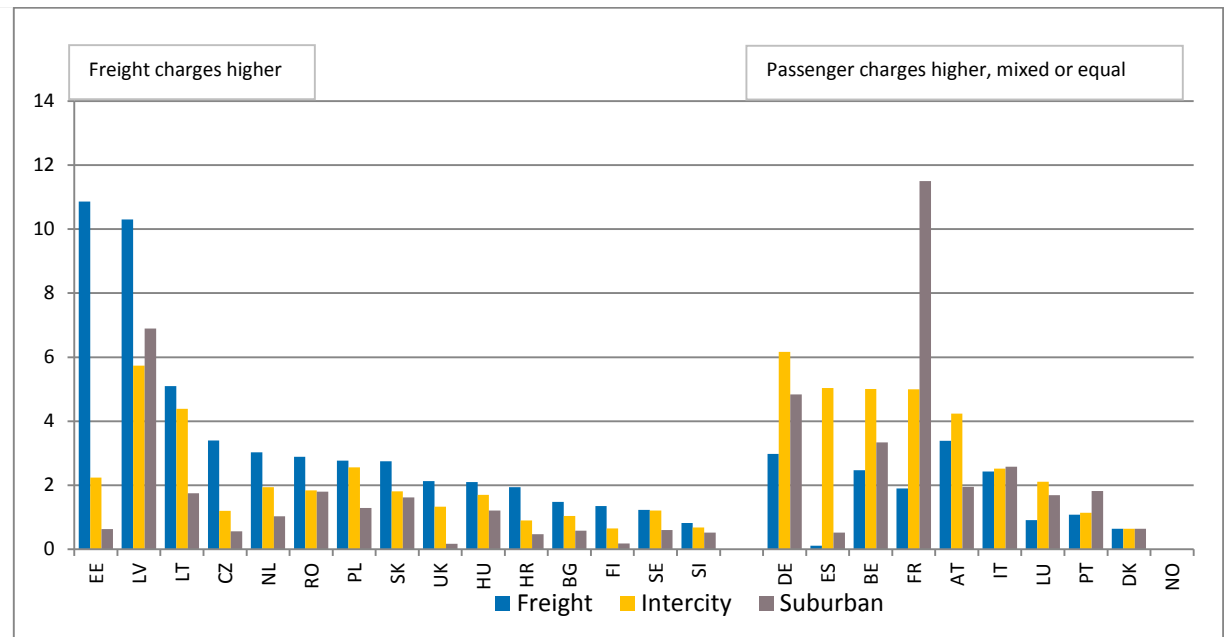
Figure 1 – Number of stations serving more than 10 000 travellers per day



Infrastructure charging

- Different charging approaches – comparison is not straightforward
- In most countries charges for freight trains are higher than for passenger trains
- Freight charges in the Baltics are particularly high
- The intercity charges in BE, DE, ES and FR are relatively higher because these include HSL charges.
- Suburban charges are most volatile (between EUR 0.17 in the UK and 11.50 in FR) - their levels depend on national approaches to PSO contracts and rail financing
- NO did not apply charges to the major part of its network.

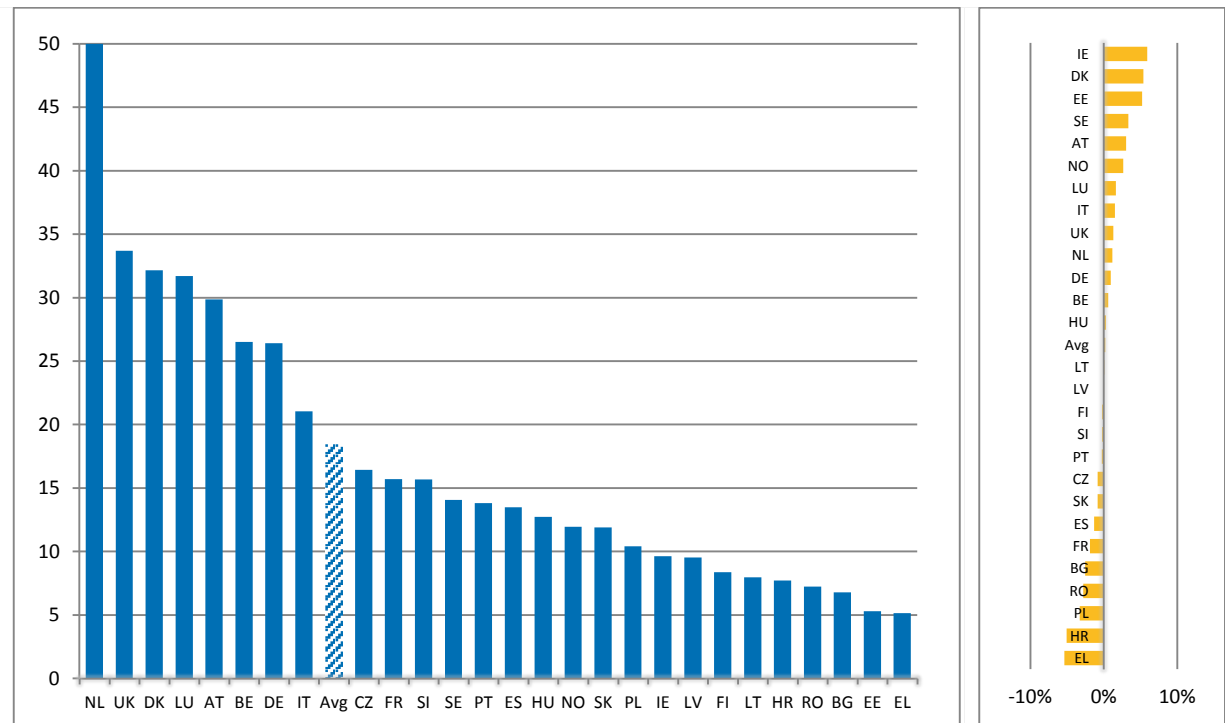
Figure 1 – Track access charges for different categories of trains (EUR per train-km, applicable 2016)



Capacity allocation and congestion

- **NB! Line km used instead of track km, because there is no good data on tracks**
- The NL has by far the most saturated network (70% of Dutch railway lines consist of multiple tracks).
- The next group is the UK, LU, DK, AT, BE and DE, being still much higher than the EU average.
- In all these Member States rail demand continues to increase
- Over the last five years, the utilisation rates have increased significantly also in IE, DK, EE, SE, and declining in EL, HR, PL, RO and BG.

Figure 1 – Network utilisation rates (thousand train-km per line-km, 2014) and relative change since 2009





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Congested Sections

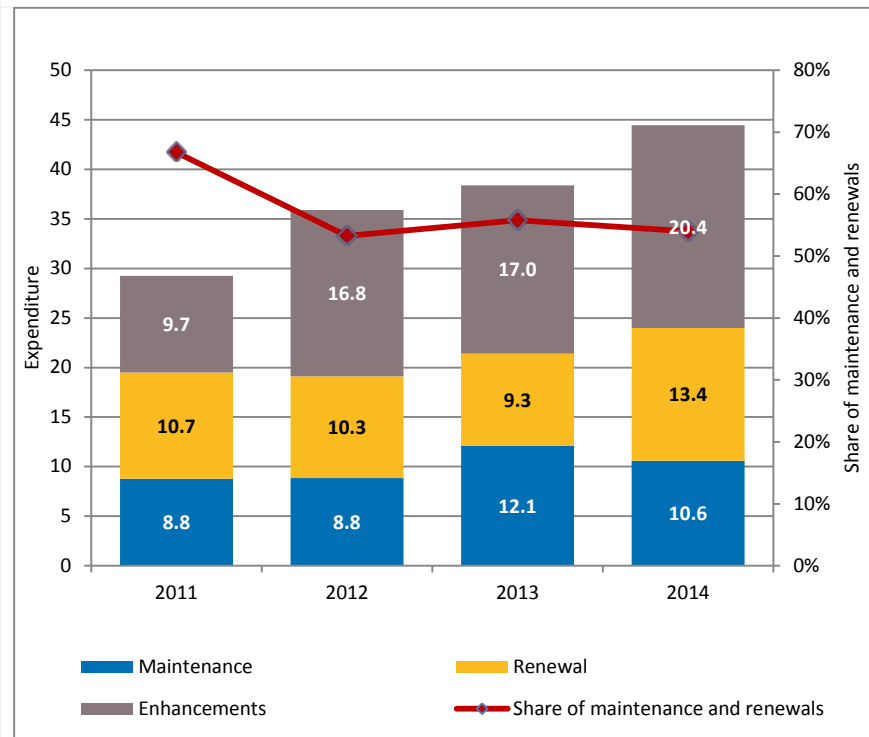
- In 2014 ten Member States had declared part of their network congested - more than 2000 km of tracks and 6 big passenger stations.
- In SE, the whole area of Stockholm has been declared congested.
- In addition to the sections which have been officially declared congested, there are many sections with highly saturated traffic levels

Member State	AT	CZ	DE	DK	HU	IT	NL	RO	SE	UK	NO
2014											
Tracks (km)	12	0	507	84	89	355	175	193	XXX*	652	71
thereof high-speed lines (km)											2
thereof lines for passenger transport (km)	12		507		89		175	193			71
Stations serving over 25 000 travellers per day (number)		1	2	1					XXX		2
Freight terminals (number)					1				XXX		
Marshalling yards and train formation facilities (number)				3	1				XXX		

Infrastructure expenditure

- Infrastructure expenditure has constantly increased over the last four years
- The maintenance expenditure has fluctuated, while investment into renewal and enhancements has continuously increased.
- In 2014 25% of infrastructure expenditure went on maintenance, 29% on renewals and 45% on enhancements

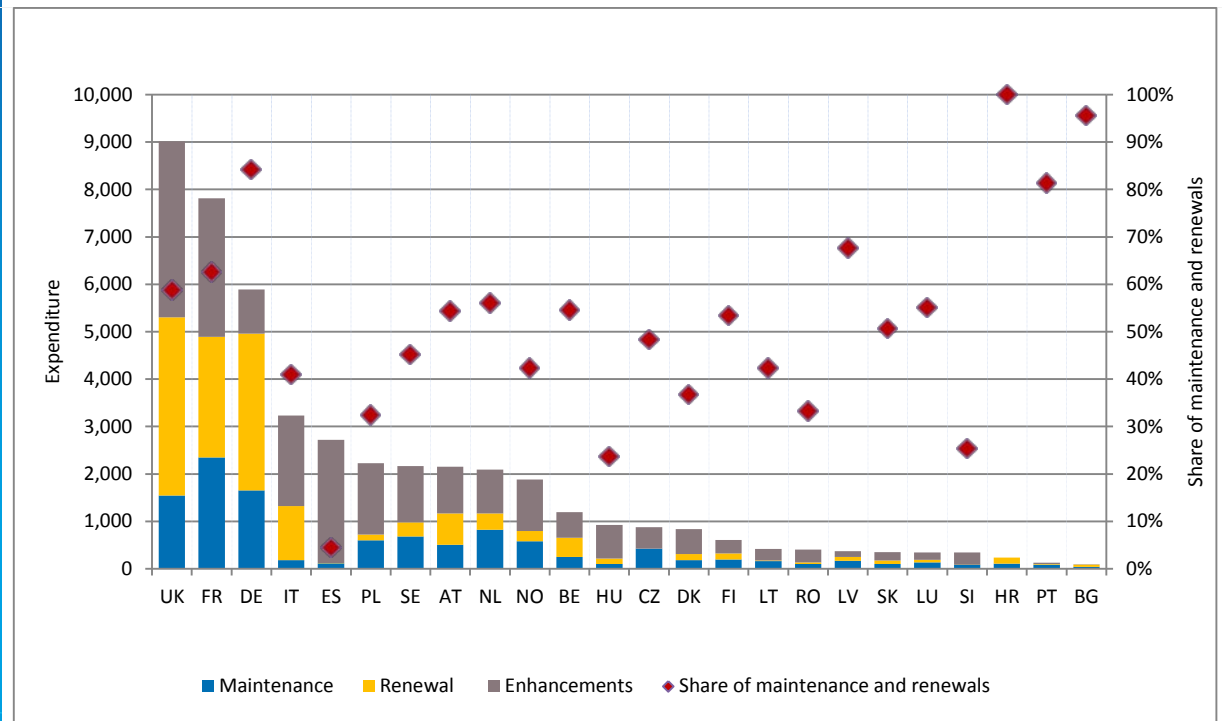
Figure 1 – Evolution of infrastructure expenditure (billion EUR) and proportion of maintenance and renewal expenditure



Infrastructure expenditure

- The total infrastructure expenditure was highest in the UK and in FR – much higher than in DE, even if the DE network is by far the largest in the EU.
- In DE the infrastructure expenditure in 2014 also increased rapidly (+57% compared to 2013)
- In 2014 EUR 24 billion was spent on maintenance and renewal of lines, a median proportion was 52%. The extremes varied between 4% in ES and 100% in HR

Figure 1 – Total infrastructure expenditure in Member States (million EUR) and proportion of maintenance and renewal expenditure

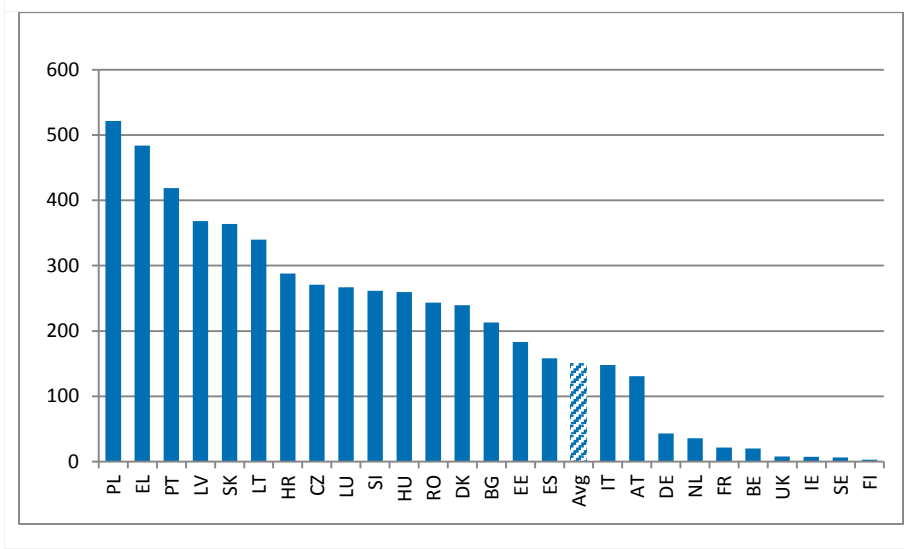




EU funding

- In total more than EUR 33 billion in grants under the current financial framework (2014-2020) has been allocated to rail investment.
- Almost three quarters of the CEF funding and 37% of total EU transport funding has been dedicated to rail.
- PL is the main beneficiary, both in absolute and relative terms

Figure 1 – Total allocated EU rail funding in Member States in relation to their network length (2014-2020, thousand EUR per line-km)



Quality and reliability

- **Note: definition of “on time” varies!**
- The best performing Member States have small passenger rail networks, ES is the only large network recording punctuality over 95%.
- The punctuality of long-distance services tends to be worse than regional and local services.
- DE and IT, two of the largest networks have some of the lowest long-distance punctuality scores.

Figure 1 – Punctuality of regional and local passenger services, percentage of services on time

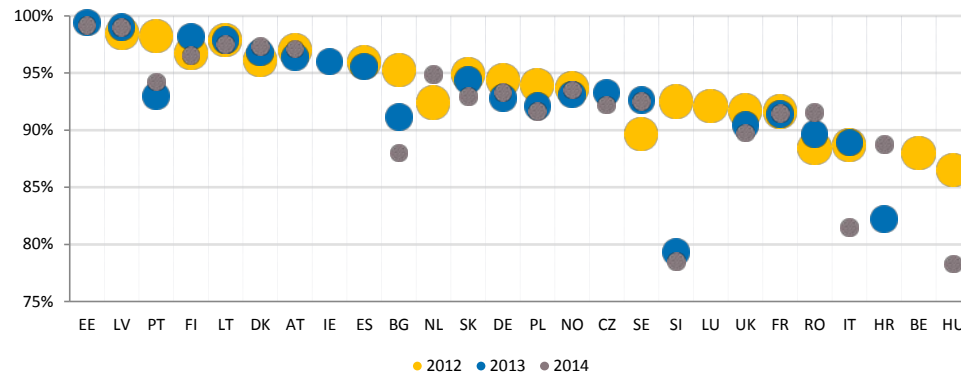
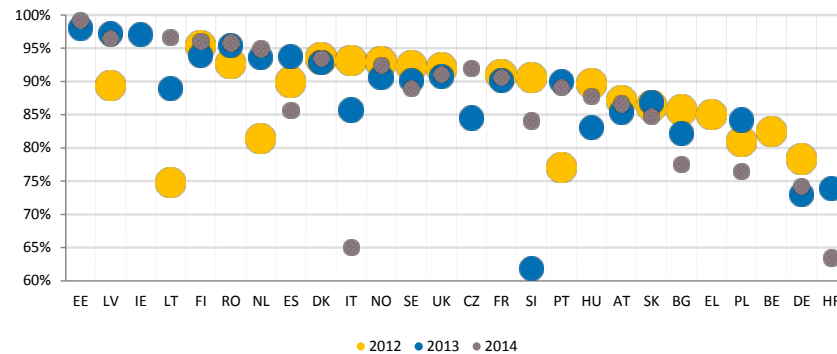


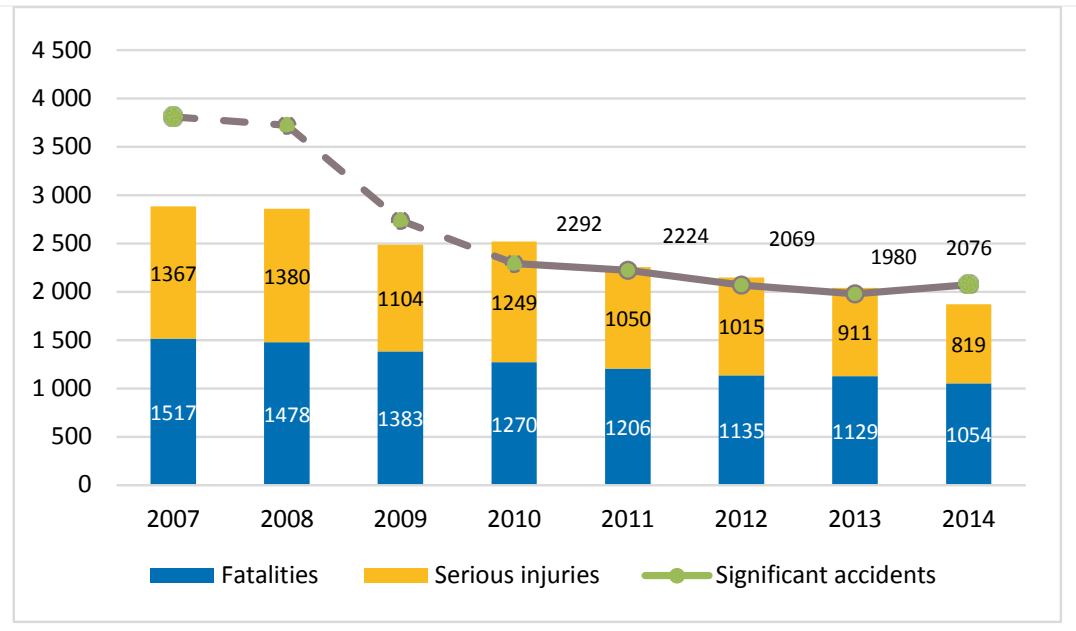
Figure 1 – Punctuality of long distance passenger services, percentage of services on time



Safety

- There were about 1 000 rail fatalities in 2014.
- Railway safety continued to improve between 2009 and 2014, with fatalities, serious injuries and significant accidents all decreasing.
- Excluding suicides, more than two thirds were accidents to persons caused by rolling stock in motion and level crossing accidents

Figure 1 – Significant accidents and resulting casualties



Services under Public Service Obligation

- 68% of the p-km in 2014 were PSO services, +4 pp compared to 2012
- In DK, IE, HR, EL and LU all passenger services are under PSO.
- In general, the larger Western-Europeans countries have relatively less PSO services.
- In most countries the PSO compensation per train-km is higher than EUR 5, the total support provided was around EUR 20 billion.

Figure 1 – PSO Services as % of total passenger services (2014)

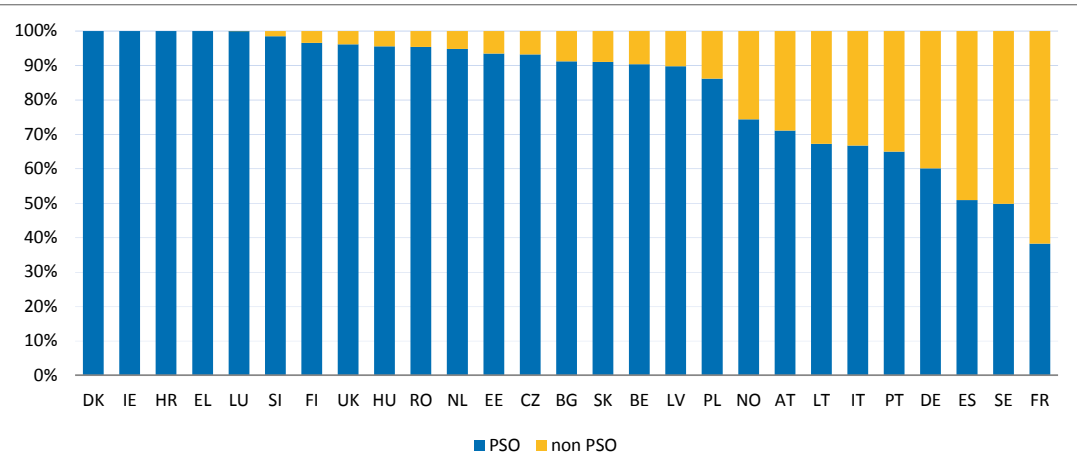
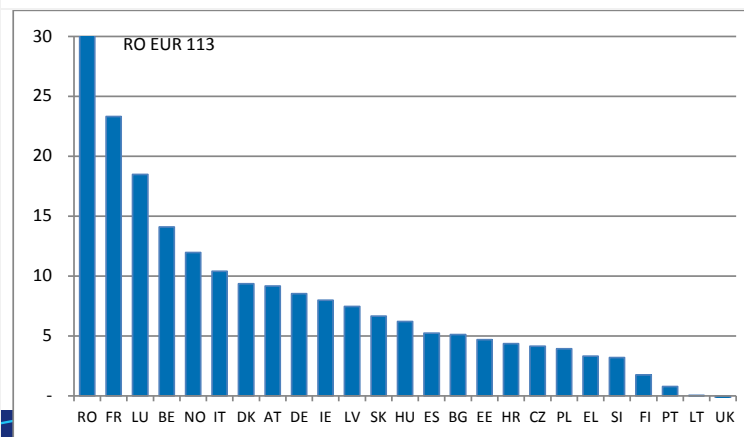


Figure 1 – PSO compensation per train-km (EUR/train-km, 2014)



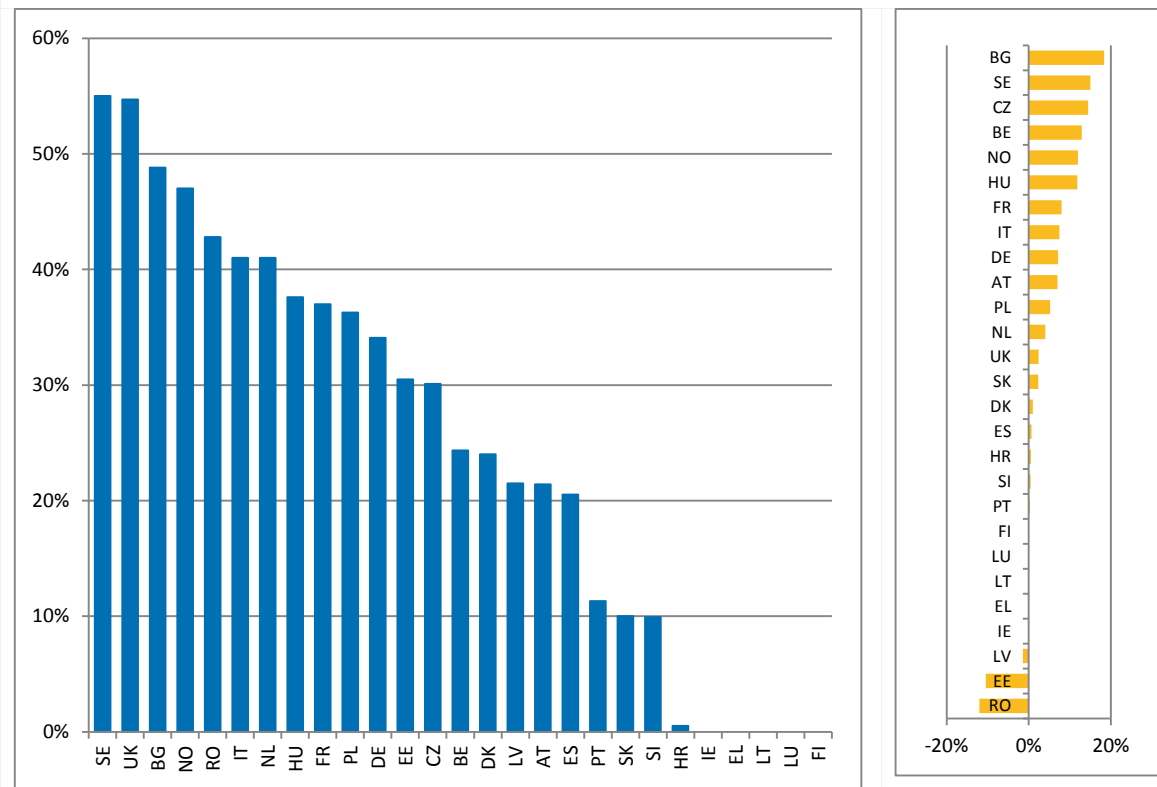


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Freight market opening

- In the majority of States the market share of competitors is higher than 20%
- In SE, the UK, BG, NO, RO, IT and the NL it is more than 40%.
- In 2014 rail freight transport was 100 % in the hands of national incumbent in FI, EL, IE, LT and LU

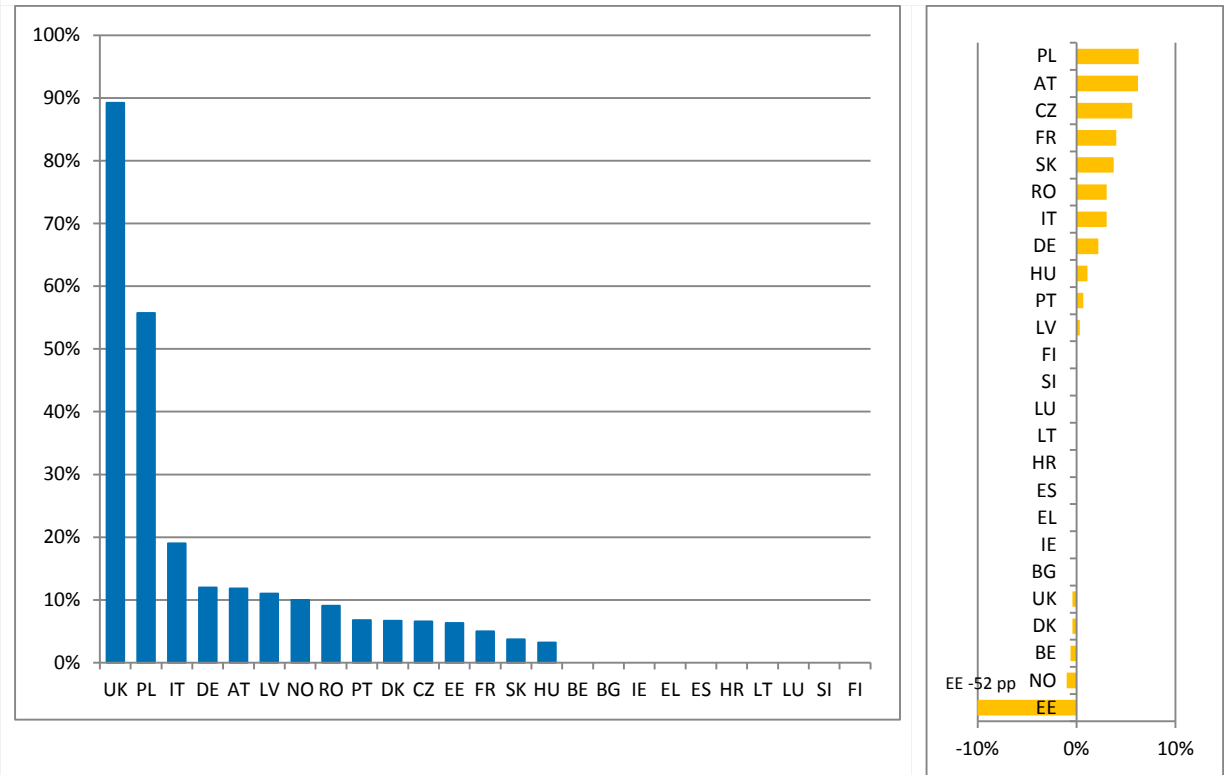
Figure 1 – Market share of competitors in the freight market (2014, % of t-km) and evolution 2011-2014 (in percentage points)



Passenger market opening

- Market shares of competitors in the rail passenger market are lower than in the freight market
- In most countries incumbents keep a market share over 80%, with exceptions of PL and the UK.
- At least in 15 countries competing operators have entered the rail passenger markets
- The number of active RUs (freight and passenger) was increasing in PL, FR, DE, and HU and decreasing in BU and NL (2013 to 2014)

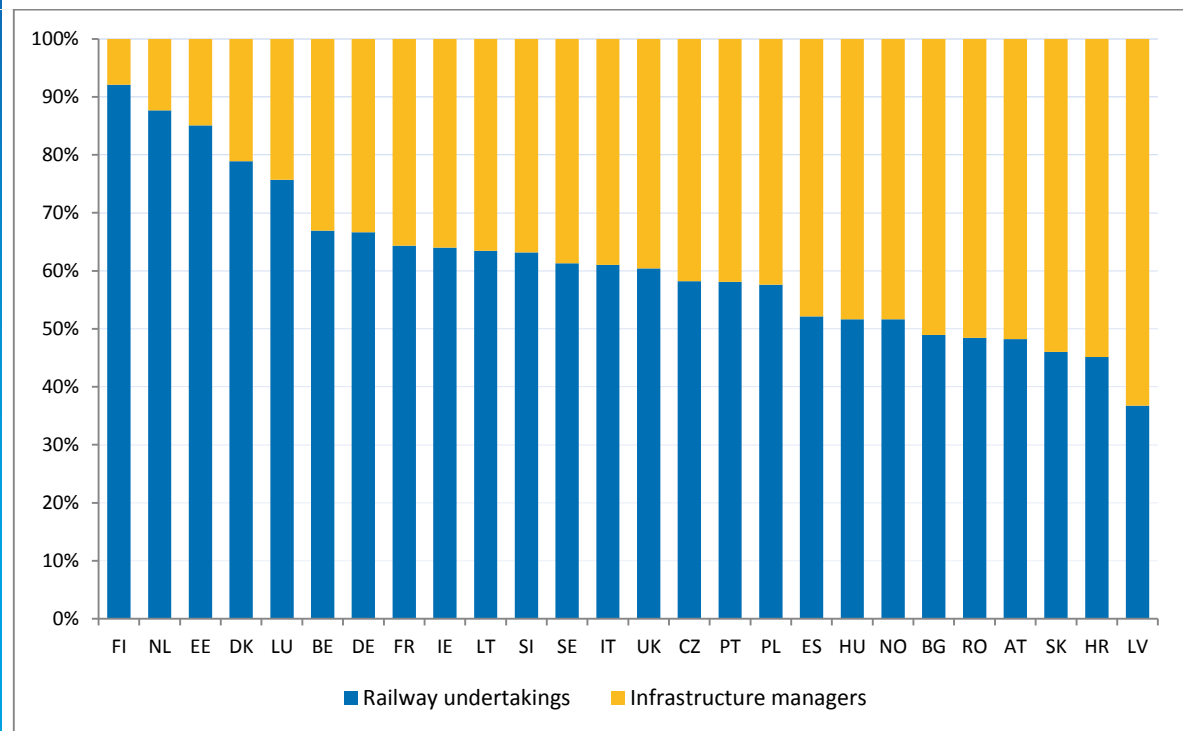
Figure 1 – Market share of competitors in the passenger market (2014, % of p-km) and evolution 2011-2014 (in percentage points)



Employment

- About 900 000 people were employed either by railway undertakings (549 000) or infrastructure managers (357 000) at the end of 2014.
- In many Member States railway undertakings are among the largest national employers
- Railway undertakings generally employ a higher proportion of labour force compared to infrastructure managers.
- The overall percentage of staff in infrastructure managers is higher in South and Eastern Europe and lower in Northern Europe

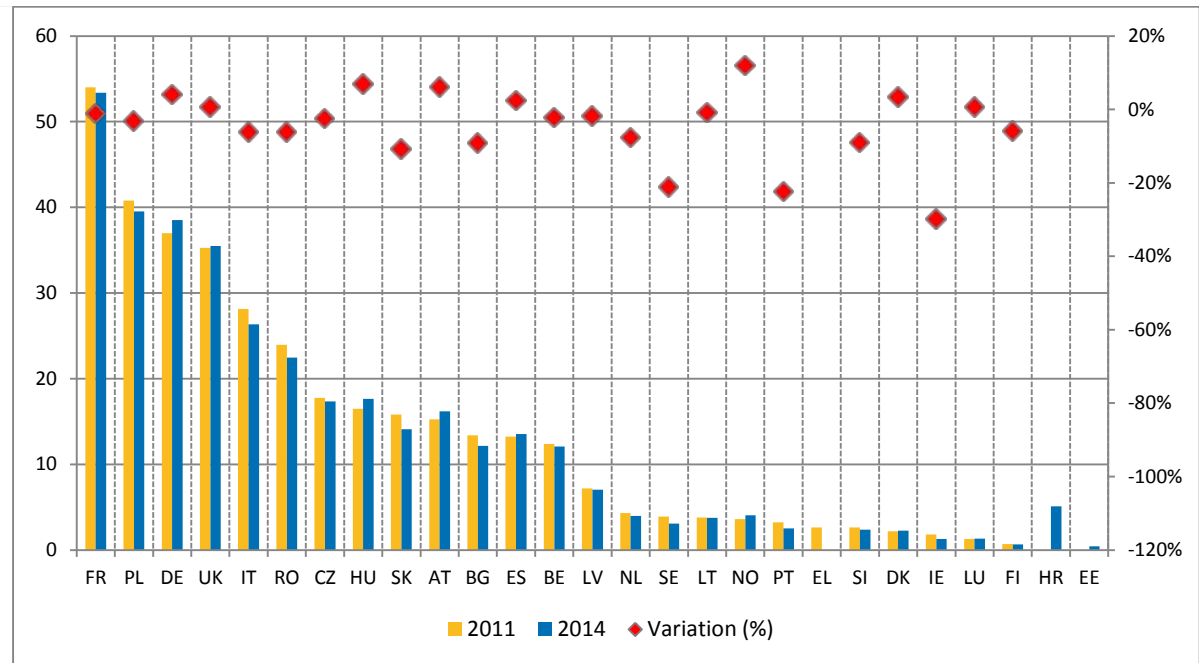
Figure 1 – Proportion of labour force between infrastructure managers and railway undertakings (2014)



Employment

- Total employment has decreased between 2014 and 2011 by 4% being relatively more significant among infrastructure managers
- There is a gradual move, especially by new entrants, towards multifunctional positions (except in the case of drivers) leading to new types of jobs, requiring relatively higher qualifications and continuous in-job training

Figure 1 – Staff employed in infrastructure managers (2014, thousand)



Employment – gender and age

- Women are underrepresented in the railway sector
- The proportion of women is higher (but still less than 50%) in SE, EE and AT
- Workforce is ageing, with proportion of workers older than 40 years typically higher than 50%.
- The proportion of workers older than 50 years was in 2012 particularly high in Spain, Greece, Finland and Italy

Figure 1 – Gender structure of railway staff (2012)

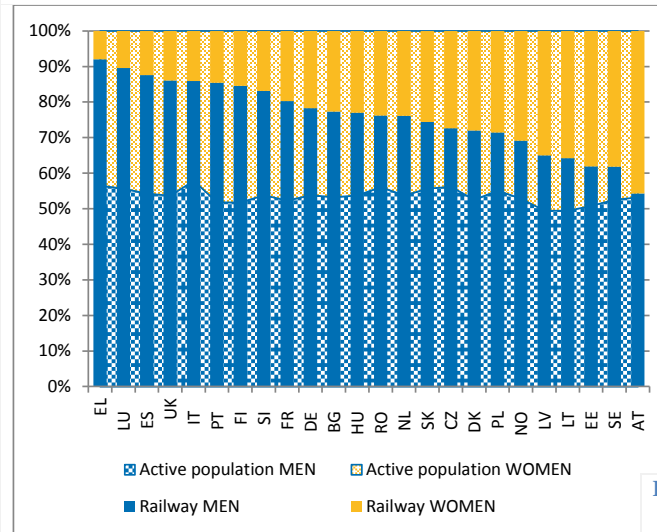
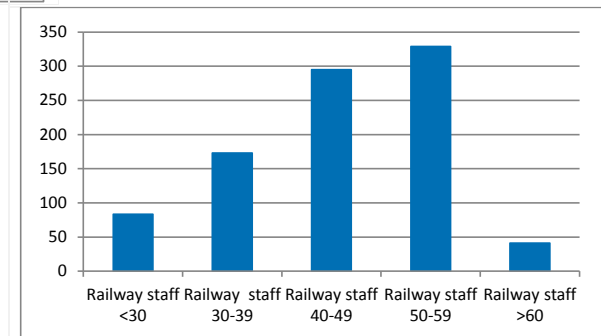


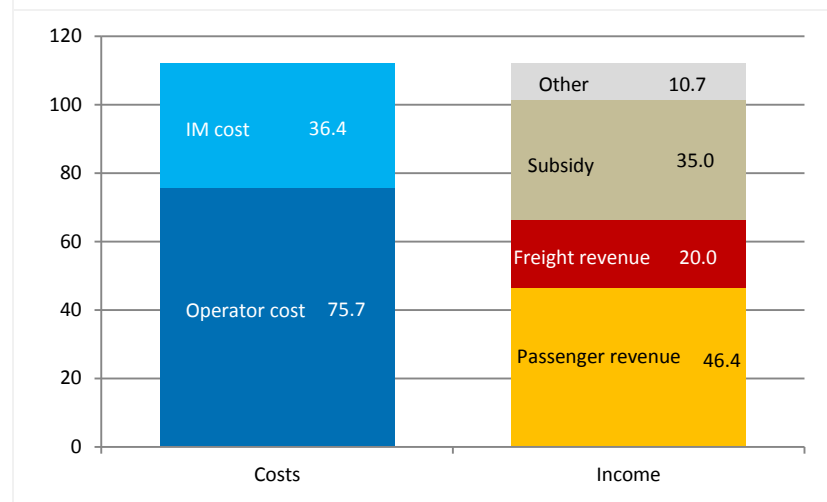
Figure 1 – Age pyramid of workers in rail (thousand employees, 2012)



Finances and performance

- The overall cost of rail system in 2012 was about EUR 110 billion
- The split between infrastructure and operator cost was 30%:70%
- 30% of this was covered by public subsidies, 60% by service fees and the remainder by other sources
- Passenger revenue has increased, while operating costs have remained broadly static

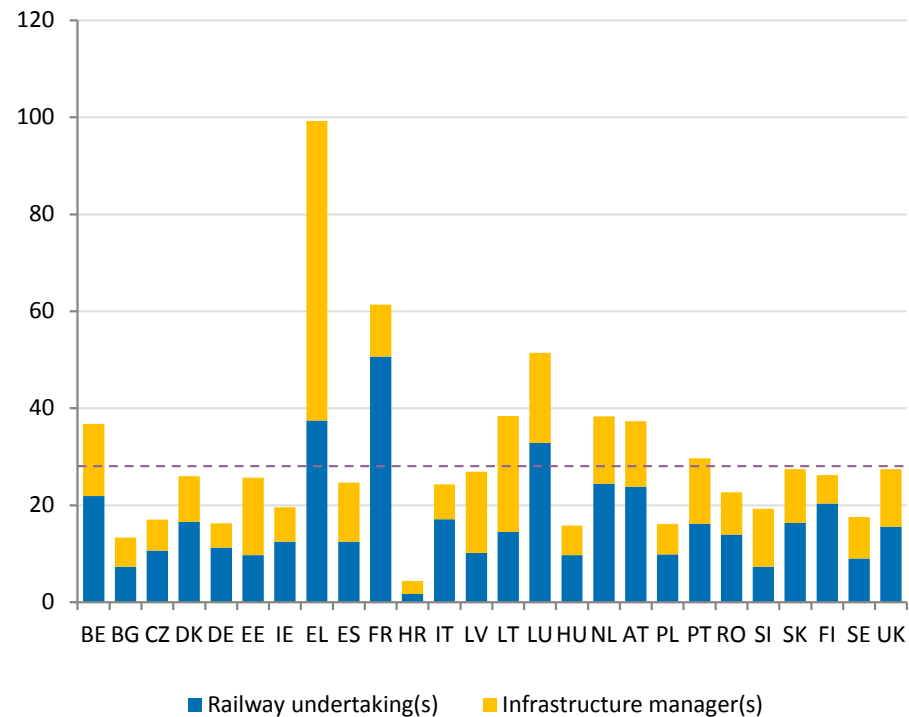
Figure 1 – Cost and contribution of rail sector (billion EUR, 2012 in 2010 prices)



Finances and performance

- The spread of operating costs lies broadly in the range of 20 – 40 EUR per train-km.
- Few notable outliers – EL and HR
- Towards the upper end of this range lie high-income Western European Member States including BE, the NL and AT with FR and LU even higher.
- A number of Central European Member States lie towards the lower end of the range including CZ, HU and PL.

Figure 1 – Operating costs per train-km by Member State (EUR per train-km, 2012)



Source: Study on the *Cost and Contribution of the Rail Sector*



Conclusions

Where we stand



Increasing passenger volumes

Increasing investment

Markets gradually opening...



... but unevenly

Rail freight recovery slow

Modal share stagnant

Efficiency gaps

The European railways have still issues with cost, quality of services and market share



Ongoing work:

The Recast Directive (2012/34/EU)

- Implementing act on access to service facilities
- Scheduling rules

Revisions

- Passenger rights Regulation
- Combined transport Directive

Evaluations

- Rail freight corridor Regulation
- Train Drivers Directive

Environment

- Revised TSI (Technical Specifications for Interoperability) Noise

Infrastructure

- TEN-T Guidelines, CEF, European Fund for Strategic Investments
- ERTMS deployment plan

4th Package

- Implementation of the Technical Pillar ongoing
- Implementation of the Market Pillar launched

Conclusions

Accommodating future challenges:

Innovation
Shift2Rail

Security

analysis ongoing

Financing

CEF blending call

**Level playing field
across modes**

analysis ongoing

Efficiency

*RFC,
PRIME, RU
dialogue*

Multimodality

2018 – year of Multimodality