



Study on the prices and quality of rail passenger services

European Commission
Directorate General for Mobility and Transport

Final Report
April 2016

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Executive Summary

Introduction

The European Commission is interested in how the prices and quality of rail services have evolved and vary in different Member States. It is also concerned with the impact of market liberalisation and competition, and policy in relation to services operated as Public Service Obligations (PSO services) under contract between a transport authority and a railway undertaking.

Accordingly, the Commission asked Steer Davies Gleave to investigate rail fare levels and service quality offered to passengers across the European Union and to assess how this has been influenced by policy in different Member States. In delivering this study we used a combination of desk research, stakeholder questionnaires and interviews, an expert knowledge of the rail networks of the capital cities and the Member States.

A key objective for the study was to determine how far fare policy in each of these areas has influenced the attractiveness of suburban, regional and long-distance rail services operating on routes on the main European rail network. The findings are expected to inform the Commission's Fifth Report on Rail Market Monitoring, to be published during the first half of 2016.

The study covers all 26 members of the European Union which have operating railways (Cyprus and Malta have no operating railways), as well as Norway and Switzerland.

The passenger rail market in Europe

European rail travel demand

Over the ten years to 2013, passenger rail demand in the European Union (EU28) increased by 61.8 billion passenger-kilometres to 424 billion passenger-kilometres. Of this, two thirds (or 280 billion passenger-kilometres) were made on services contracted under PSO, with fares often, but not always, specified by a competent authority.

The evolution of rail fares

Each year millions of fares are calculated and marketed by a wide range of national, regional, local and urban authorities and operators. However, databases of historic fares may not be saved or made available to third-parties. In most Member States it was possible to obtain data on the evolution of average yields, but we note that average yield may not always provide a reliable proxy for changes in fares since passengers may change their travelling habits in response to fare changes. Only in three Member States (Finland, Sweden and the UK) was it possible to identify time-series fares data.

National institutional arrangements

To provide context for the fares analysis, we examined the extent to which Member States rely on PSO contracts for the provision of rail services, and on the different approaches to their procurement. We identified Member States making direct awards of contracts and others awarding them through competitive procurement procedures, as well as a number using both approaches. However, it was not possible to categorise either services or fares as "PSO" or "non-PSO" as:

- There is rarely any indication of whether a train is operated under a PSO, unless it is a suburban service specified by the local competent authority or there is a national PSO¹.
- PSO fares may be administered (as in many suburban areas), regulated (as in some Member States), or left to the market (as with many fares in Sweden and Great Britain).
- National operators may operate both “PSO” and “non-PSO” services but choose, or be required, to have a common fare structure.
- A competent authority or “PSO” operator may set or regulate fares that all operators must accept. This means that fares which operators are in principle free to set may be “quasi-regulated” by the regulated or administered fare which they must accept.
- An individual train service may include both “PSO” and “non-PSO” station calls.
- A station pair may be served by both “PSO” and “non-PSO” services.

Instead we identified whether fares appeared to be administered, regulated or constrained only by reference to the market.

Fares and tickets

Our analysis of fares focused on comparisons between Member States, disaggregated by market segment (suburban, regional, interurban, high speed and international) and how far in advance the fare was paid (the “booking horizon”). Member States do not publish fares databases, so we collected data on fares for a representative route in each Member State and market segment. While insufficient to draw general conclusions regarding the service offer across the European Union, this information base is sufficient to allow a number of insights regarding the characteristics of rail fares in each Member State.

Suburban fares and tickets

Suburban fares are almost invariably administered by the competent authority and may be common to rail and other modes. Few Member States set out a national fares “policy” aiming to increase train ridership, While other competent authorities may take into account cost-recovery targets when they set fares, no individual fare is set by calculating the “cost” of the service to which it applies.

In many capital cities a range of single fares are available, including some or all of:

- a full “cash” fare obtainable at a ticket office or ticket machine by cash or by card;
- a discount obtainable using a smart card;
- a further discount for off-peak travel, available in London on the Oyster smart card; and
- a distance-based or “kilometric” fare for the national railway and valid on local services.

In some cities multi-trip tickets or carnets are also available which offer discounts of up to approximately half the full “cash” fare.

Regular commuters in many cities will typically buy weekly, monthly or annual tickets, often valid on all modes, and typically offering increasing levels of discount relative to single, return or day tickets. In some cases, however, these tickets are more expensive than rail-only tickets bought on a daily basis. There can be a wide variation between the suburban fares applied in cities in the same Member State.

¹ National PSO arrangements only appear to be in place in Estonia, Ireland, Greece and Luxembourg, where all domestic passenger rail journeys are made on PSO services.

The predominance of zonal fares structures in suburban markets often reflects the authorities' objective to simplify ticketing arrangements for passengers and integrating the fares structure across modes. However, zonal fares systems are normally specific to the needs of the urban area they cover, and can be inconsistent with fares for regional and interurban travel.

Other fares and tickets

Regional and intercity fares may be set by national, regional or local competent authorities. In liberalised Member States, some fares may be regulated or left to the market

- Sweden has no regulated fares, but long-distance operators must accept local fares administered by County authorities.
- In the UK, a range of fares are regulated with a degree of flexibility varying by location, market segment and ticket type.

In addition, discounts may be available, whether specified by administered processes including national, regional and local legislation, regulated through specific agreements within the industry, or set only with respect to market conditions. The wide range of both restrictions and discounted and reduced fares contributes to the complexity of many fare structures.

Many railways offer tickets for travel in different quantities (single, return, season), at different times (peak, off-peak, weekend), with different booking conditions (advance), with different discounts for the young, the elderly and the disabled, or for different types and sizes of groups.

There is therefore a trade-off between allowing operators to offer a range of ticket types and discounts, on a commercial basis, to attract more passengers, and requiring them to keep fares simple and transparent.

Fares on regional, interurban and high-speed routes vary widely between Member States, ticket-types and booking horizons:

- On regional routes, in many Member States there is only one fare, and a return ticket costs the same as two single tickets. In around half the Member States we were unable to find season ticket fares, although these may be available on request at a ticket office.
- For interurban trips under 300 kilometres fares are often lower if booked in advance or restricted to off-peak trains. Where season tickets are available they are often significantly cheaper than buying daily tickets.
- For interurban trips over 300 kilometres, fares per kilometre tend to be lower than at shorter distances and may sometimes be constrained by competition from air services. Advance booking discounts are often available on more expensive Western European networks, with savings of up to 70% on full fares.
- For journeys on domestic high speed routes, fares varied widely. Advance booking discounts and yield management systems are common on domestic high-speed services.
- For international journeys, fares per kilometre are often higher than the domestic equivalent.

Intermodal competition

In addition to domestic and international rail travel we examined competition between rail and car, coach and air. Despite only examining a small sample of routes, with different market conditions and levels of intermodal competition, our findings are consistent with the twin hypotheses that:

- the operator with the best cost-quality mix is best able to set fares in marketplace (the "price setter"); and

- fares offered by other modes (“price takers”) are determined by the relative quality of their mode, subject to the constraint that they must either remain profitable or be supported through a PSO.

At very long distances, outside the scope of this study, airlines offers both the lowest costs and the fastest journey time, and are the dominant mode. For domestic or international journeys over 300 kilometres rail operators may have to charge less than airlines unless they can offer a faster city centre to city centre journey time. Coach operators can often compete with both air and rail because they can offset longer journey times with lower fares. Car is less attractive because of the cost and time penalties of entering and parking in large cities, and because it is not possible to work or rest while driving.

For domestic interurban journeys under 300 kilometres, air travel is not normally available, and coach and rail fares tend to depend on their relative speed and frequency, and hence their market power. Car remains relatively unattractive because of the cost and time penalties of entering and parking in large cities, and the journey time variability that arises from journeys into congested city centres.

On regional journeys, rail may face competition from coach but, without the cost and time penalties of entering and parking in large cities, car may set an effective ceiling on their fares. Both rail and coach operators may be constrained to set fares, in some cases through PSO contracts, at levels low enough either to attract passengers from car or to be affordable to those with no car.

In every case the actual choice of mode may depend on the characteristics of the travelling party. Airlines can offer extremely low fares up to one year ahead, whereas rail can rarely confirm timetables this far ahead due to its reliance on engineering timetables issued by the infrastructure manager. In many cases these are not required to be made available more than twelve weeks in advance. This constrains the scope for rail operators both to compete with airlines over longer booking horizons, or to provide complementary travel services and through-ticketing.

Intramodal competition

Liberalisation of access to rail networks also allows two distinct types of competition between operators:

- Competition for the market, where operators compete to win contracts (or franchises) that grant them the exclusive right to provide passenger services on a particular route or franchise area (“PSO” services).
- Competition in the market, where two or more operators directly compete for passengers in the same product market (e.g. on a particular route). In the rail sector, this is often referred to as ‘on-rail’ competition, as the operators directly compete for passengers on the same stretch of track.

Competition for the market can in practice take a number of forms, including management contracts, gross-cost or net-cost contracts, franchises or concessions. Each arrangement offers a different level of flexibility and risk exposure to the railway undertaking operating services.

Since two-thirds of all rail travel is made on services contracted under PSO, there are significant opportunities for competent authorities both:

- to specify the quality and fares of the services they procure; and

- to benefit from the innovation and efficiency offered by a competitive supply market, at least to the extent that the market is willing to bear cost and revenue risk.

Competition within the rail market can offer a wider range of services and price/quality options, but may also introduce disbenefits by placing additional strain upon limited network capacity and by complicating the timetabling process. New entrants typically offer many fewer services than incumbents, which means that to be attractive they must offer a combination of higher quality, better service timings, or lower fares, which may be as low as half of those of the incumbent.

The evidence of the effect of new entrants on incumbents' fares is varied:

- In the UK, researchers have found no clear evidence that the incumbent has reduced its fares.
- In Italy, we found no time series data, and note that the incumbent now offers different classes of travel, making comparison with its previous fares difficult.
- In the Czech Republic, there has been a price war, with the incumbent offering some of the lowest fares, but it may be loss-making and its prices are under investigation by the Anti-Monopoly Office.
- In Sweden, the introduction of competition on the Stockholm to Gothenburg market has forced the incumbent to lower its fares.

We also examined the emerging practice of within operator or group competition, which may be considered as a form of product or market differentiation. For example, even where there is a single operator on the railway, there may be effective competition between some of the products it offers. This competition can arise either naturally, as a result of the network, timetable and fares, or deliberately, through the design of products to offer choices to passengers, which typically involve trade-offs between price and some element of quality. While not a form of direct competition between different providers of rail services, such developments still have the potential to benefit the passenger by increasing the choices available, and in particular by allowing passengers to select from a range of combinations of quality, price and flexibility.

Quality and customer satisfaction

Journey speed

Average journey speeds on the routes we sampled varied from 22 km/h for a multi-stop regional journey to 200 km/h for some non-stop journeys on high speed lines. Average speed is determined by both the infrastructure provided and of the service pattern offered.

Punctuality and reliability

Punctuality tends to be better in smaller states and the punctuality of regional services tends to be better than the punctuality of long-distance services. Punctuality may be hardest to maintain on busy lines, particularly if they carry a mix of long-distance and regional passenger services and freight services.

Station quality

The majority of the websites we examined provide information on ticket facilities and on booking office opening times. Information is also available on services for persons of reduced mobility and the hours in which it is possible for assistance to be provided at each facility. However, few station facilities websites provide clear and easy accessible information on train times or departure platforms, which may be the responsibility of either the operator or infrastructure manager.

Customer satisfaction

The principal source of comparable pan-European data on customer satisfaction with rail services is the Eurobarometer survey of *Europeans' satisfaction with rail services*, which was last undertaken in 2012-2013. Overall, roughly half (51%) of respondents score their level of satisfaction with railway stations as “high” or “good”, with the remainder (49%) recording “medium” or “low” satisfaction levels. Positive satisfaction scores are typically more prevalent in Western European Member States. However, Germany and Denmark underperform compared to their Northern European peers, and Latvia outperforms other Baltic States by a considerable margin. A slightly larger proportion (55%) of respondents score their level of satisfaction with rail services as “high” or “good” compared to satisfaction with railway stations.

Conclusions

The demand for travel is influenced by a wide range of demographic, geographic and economic factors which make it complex to explain travel patterns and the demand for any particular mode of transport within a given area. As a consequence, Member States with broadly comparable fare and service quality levels can exhibit very different levels of rail demand.

Within the scope of this study it has not been possible to isolate the impact of fares and service quality measures from those other factors that influence rail demand. Fares and service quality are nevertheless important drivers of demand, and a substantial and growing body of empirical research quantifies these impacts.

The policy and regulatory framework governing national rail sectors has a significant influence on both fares and service quality, a reflection of the fact that the European rail industry continues to be heavily dependent on public subsidy. It follows that the fares and service quality observed across much of the European rail market will continue to be determined in large part by decisions taken within national, regional and local transport authorities, rather than by market conditions, although these authorities may be constrained by competition from other modes.

Where there is available capacity and levels of demand to support the introduction of new commercial services, on-rail competition can be expected to have an increasing influence on fares and quality. However, any growth in the extent of on-rail competition is likely to raise issues concerning the complexity of the fares structure, not least because of the challenges of encouraging operators to compete on fares while maintaining network benefits such as through ticketing and inter-available fares.

Given the considerable range of products on offer it is important that passengers from all Member States can access good quality information about their ticket options within and between all Member States so they can confidently select the best ticket for their journey, and understand its terms and conditions. This should not require the passenger to understand all of the layers of complexity set out above and the resultant fare structure, but should instead guide the passenger to timely and accurate information tailored to their travel requirements. Consequently, explicit consideration of the trade-off between passenger choice and ease of decision-making in the development of fare and service quality offers across Europe should be encouraged.

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