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COMPETITION IN THE RAILWAY PASSENGER MARKET

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Florence School of Regulation
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Research Project Report

COMPETITION IN THE RAILWAY PASSENGER MARKET

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COMPETITION IN THE RAILWAY PASSENGER MARKET

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Abstract

In recent years new developments in the railway market have brought about several new insights about the effects of competition in the sector. In the context of a workshop in Madrid organised by the UNED University in the realm of the research project REGUTRAIN, some practical cases in Europe were discussed. New entrants that offer competitive passenger rail services have brought down prices and increased frequencies significantly in several instances. Yet, the debate showed that whether these developments are beneficial for the system on the whole remains an open question.

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Introduction

A Workshop on the European experience of competition in the railway passenger market was held on 16th September 2016 in the Fundación de los Ferrocarriles Españoles in Madrid. The workshop was organised by the UNED University in the realm of the research project REGUTRAIN, funded by the Spanish Ministry of Science and Technology.

Experts from Austria, Italy, the Czech Republic, United Kingdom and Sweden participated in the Workshop. They presented the national experiences of competition “in the market” or so called “open access”, that is, competition of more than one undertaking in the provision of passenger transport services along the same route, as opposed to competition “for the market”¹. Table 1 illustrates the state of play of open access competition in the railway sector.

Table 1 Open Access Operators (OAO) and market share in Europe.

Country	Main OAOs	Service	Entry date	Market share (%)	
				OAO in relevant segments/routes	Incumbent country overall
Austria	Westbahn	LD	2011	[20–25]*	88
Czech Republic	RegioJet Leo Express	LD	2011	[35–40]†	95
		LD	2012	[25–30]†	
Germany	HKX	LD	2012	[5–10]‡	88
Great Britain	Grand Central First Hull Trains	LD	2007	[0–5]§	-
		LD	2002	[0–5]§	
Italy	NTV	HS	2012	[20–25]#	83
Sweden	Veolia/SkandJern/TAG MTR	LD	2011	N/A	68
		LD	2015	[25–30]~	

Source: Based on 2013 data (passenger miles) available in the Staff Working Document accompanying the European Commission’s Fourth report on monitoring development of the rail market (SWD (2014) 186 final) and from interviews conducted with national authorities and OAOs in Austria, the Czech Republic, Germany, Italy and Sweden.

* Market share estimate relating to the Vienna–Salzburg route.
† Market share estimate relating to the Prague–Ostrava route.
‡ Market share estimate relating to the Hamburg–Cologne route.
§ Market share estimate relating to long-distance services on the East Coast main line.
Market share estimate on the overall national high-speed services market.
~ Market share estimate relating to the Stockholm–Gothenburg route.

Source: Competition and Market Authority (CMA) (2016), p.86

Some lessons can be learnt from the experience of those countries where competition in the market was introduced. We would identify three lessons: Firstly competition is limited to a few

¹ The introduction of competition in the railway sector raised a number of questions, and many categories and definitions have been used. For an overview, refer to Finger, M., Rosa, A. (2012)

lines and a few competitors. Secondly competition has a positive impact for the passengers and thirdly competition can have a negative impact on the system as a whole.

Competition is limited to a few lines and a few competitors

The first conclusion is that competition tends to be limited to a few key routes and among a very small number of competitors.

In each country, new competitors tend to focus on the busiest routes, which are usually the lines with the best infrastructure and achieving the highest speeds. In fact, in Austria and the Czech Republic new comers operate only a single route, which is always the busiest in the country. In the Italian case, presented by Andrea Giuricin, the new entrant also began operations exclusively on the Rome-Milan line in 2011. Since then, it has begun operations on other lines, but always with high passenger volume (such as Milan-Venice).

The number of new entrants is also very limited. In Austria and Italy, only a single newcomer competes with the traditional public railway undertaking. In the Czech Republic, as explained by Zdeněk Tomeš, three undertakings now compete on the busiest line in the country.

A positive impact for the passengers

A second conclusion is that the introduction of competition has led to a drastic reduction in prices, increased frequency of services and, therefore, a significant increase in passenger volume.

The impact on prices has been very marked. Average prices have dropped sharply in all countries: -42% in the Czech Republic and -40% in Italy, and, furthermore, quite suddenly after the introduction of competition, in the case of Sweden, as explained by Bertil Hylén. In addition, there have been very dramatic discounts resulting from innovative pricing policies.

The frequency of service has also improved, although the new frequencies tend to concentrate at peak times and not nearly so much in non-peak hours, especially in services late in the day, when there is a tendency to advance the last departure to an earlier time.

The volume of travellers has increased dramatically in most countries, with the most notable being in the Czech Republic (+ 91%) and Italy (+ 65%). However, part of the increase should be attributed to other factors, as noted by Dietmar Pfeiler explaining the Austrian case, namely improvement in infrastructure, limitations in the air or road alternatives offered, etc.

Negative impacts on the system

Competition also seems to have caused some negative effects on the railway system, which must be considered for the correct and proper regulation of the activity.

Price reductions can be larger than the efficiency gains resulting from competition. Even more, in some cases unit costs per passenger may increase, resulting from the tendency to offer greater frequency with smaller trains and, perhaps, with lower occupancy rates. Increased frequency with lower capacity also involves congestion problems in infrastructure.

As a result, liberalisation has meant a greater financial pressure on the system, causing a chain of consequences, all of which were largely predictable.

To begin with, the financial pressure on railway undertakings has led to the deterioration of services on other routes. The customary cross-subsidisation within a public undertaking between the most and least profitable routes has been reduced significantly. This effect has been clearly observed in the Czech Republic and in particular in Italy, where the public railway undertaking suspended long distance services in deficit (as they did not benefit from any compensation

resulting from public service obligations) just before the entry of a new competitor into the market.

In the same vein, the financial pressure on railway undertakings has also been tempered by the reduction of fees for the use of the railway infrastructure. This is the case in Italy where the infrastructure management was forced to assume a greater share of the cost of the system.

Finally, despite the measures indicated above, it should be noted that competition has caused public undertakings to assume losses on lines that were previously highly profitable, and new comers also face a high risk of incurring losses over a prolonged period, although the more mature competitors in Italy and the Czech Republic appear to be stabilising their financial situation.

Conclusion

In most of the countries analysed, liberalisation was not the result of a policy designed to achieve specific objectives. Indeed, in the case of Sweden liberalisation was considered to have occurred *by accident*. As a result, liberalisation was not accompanied by regulatory measures to ensure specific objectives. This was not so in the British case, which, as Phillip Wheat explained, originally was clearly aimed at reducing the system's operating costs. It should be noted that over time, the costs have increased and the franchise model has failed to control the evolution of costs.

Unregulated competition has generated obvious benefits in the form of price reductions for travellers on competitive routes. However, these reductions have not necessarily been accompanied by a parallel reduction in the economic cost of the system. In fact, it has become evident that the introduction of competition usually presents a parallel trend to shift costs to the infrastructure manager and to the users of other routes that cannot benefit anymore of internal cross-subsidies. Yet further competition causes financial stresses to both the public railway undertakings and the new participants in the market.

It may be of interest to have a greater regulatory intervention to combine the benefits of competition with a reduced negative impact on the system, at least for a transitory period.

Case Study 1 - Passenger Railway Competition in Austria

This text is based on the presentation of Dietmar Pfeiler, ÖBB, at the workshop “Competition in the Railway Passenger Market”, Madrid, 16.09.2016 and the other sources referenced in the text.

Open access competition in Austria took off in December 2011 on the Vienna-Salzburg route, the country's busiest connection that, so far, remains the only case of open access competition in the country. The private operator Westbahn was founded already in 2008 but faced several difficulties in the beginning filing complaints among other about allegedly discriminatory access to essential facilities by the infrastructure manager ÖBB Infrastruktur AG, which is part of the integrated ÖBB Holding. In spite of having access to Vienna's main station Westbahn is operating uniquely from Vienna's Westbahnhof. The train cars Westbahn uses were requested from and provided by the manufacturer Stadler Rail (CH).

Open access competition in Austria is legally possible for every path upon the request of a licensed Railway Undertaking. The priority rules of the path allocation process can be an obstacle as Austria has a mix-use network with long-distance, local and freight trains using the same tracks.

Open access competition seems to have had several effects on the passenger railway market in Austria:

- Increase in demand: the overall passenger rail transport demand has risen by 25% over the last three years on the Vienna-Salzburg-route. The overall market volume of the incumbent ÖBB, however, has remained stable since 2011. In 2013 the market share of Westbahn on the Salzburg Vienna route was between 20-25% which is equal to a national share of about 3% (Casullo, 2016).
- Quality of Service: in terms of extra services, from the beginning Westbahn offered free Wifi on their trains, it allowed on board ticket sales and special discounts. Today the incumbent is also offering Wifi on their high speed trains. However, as the competition is mainly focussed on price competition an overall reduction of service quality is a possible trend.
- Capacity and travel time: Westbahn offers 15 train pairs per day, with standard travel-time of 2h28min (7 intermediate stops) and 2h16min/2h19min for early-morning-services with two intermediate stops. ÖBB offers two hourly lines to Salzburg, both with 16 pairs of trains each. The fast railjet line with a travel time of 2h15min (two intermediate stops) and the other line with 2h46min (with 8 intermediate stops). ÖBB has invested in quality (new railjet-trainsets). These improvements in travel-time and number of connections were made possible because of new investments to upgrade the infrastructure. The number of trains operating on the route was overall increased as a result of competition. Westbahn has announced it will offer more once more rolling stock becomes available.
- Prices: Westbahn offered very low fares and permanent special offers, most of them uncontrolled. Their standard fare was at 50% of the regular full-flex ÖBB fare and equalled the ÖBB fare for holders of ÖBB-*Vorteilscard*. Also ÖBB offers a special offer with the restriction of having a limited promo-capacity per train. Westbahn has also entered several partnerships with regional tickets but later abandoned some of them.

In spite of the overall positive impact for travellers there are problems with regard to the legal framework. Rules for the integration of timetable information and for a possible integration in sales platforms are missing. The rules for track access may need to be revised as well as the current system has a clear system of prioritization (for instance giving long distance priority over

short, international over national), which may not be compatible with fostering open access competition.

Case Study 2 - Passenger Railway Competition in the Czech Republic

This text is based on the presentation of Dr Zdeněk Tomeš, Masaryk University, at the workshop "Competition in the Railway Passenger Market", Madrid, 16.09.2016.

The Czech railways had been liberalized with the unbundling of infrastructure and services in 2003. The process was structurally completed with the creation of a fully independent infrastructure manager in 2011. Competition in passenger rail (unlike rail freight) had developed very slowly at first².

One of the peculiarities of the Czech railway market is the fact that almost all railway connections are subsidised (operated under public service obligation) on the regional as well as on the intercity level.

Table 2 Revenues and Profit in the Czech Republic.

	2012		2013		2014		2015	
	Rev	Profit	Rev	Profit	Rev	Profit	Rev	Profit
Regio	246	-76	318	-93	523	-42	718	+41
Leo	11	-78	193	-159	178	-137	258	-84
ČD	19 500	-517	19 900	-1 795	20 723	-865	21 075	-1 395

- mil. CZK
- RegioJet and LeoExpress - data for Prague-Ostrava;
- ČD – data for all Czech passenger rail network

Copyright: Zdeněk Tomeš

While in theory open access competition is allowed on all routes, a new entrant on any connection would have to compete with the incumbent operator (České Dráhy, ČD) that receives public funding. The Ministry of Transport is, however, entitled to withdraw public funding and open connections to on track competition. This has happened once so far on the case of the Prague-Ostrava route, where currently several operators compete.

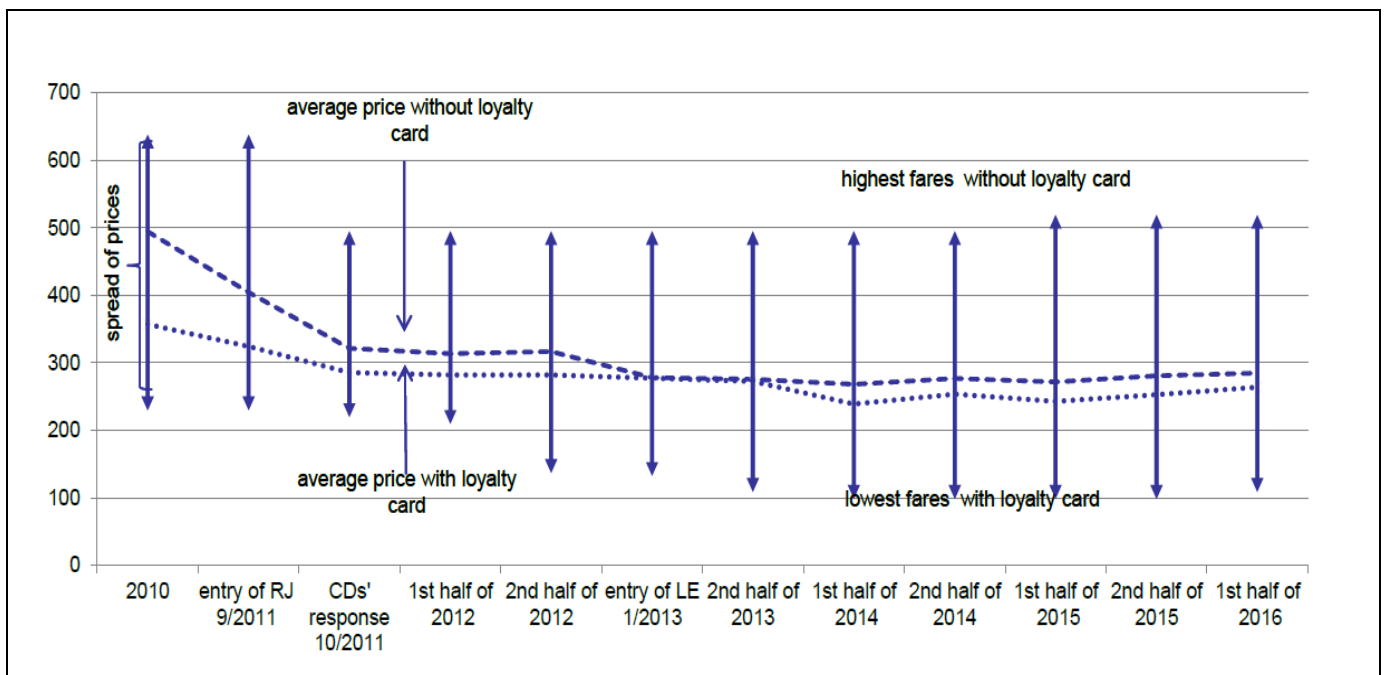
² Non-incumbent operators had a market share of 1.4% in 2011, see *Tomeš, 2014*

The Prague-Ostrava route is one of the main routes in the small country and it has ideal conditions for new entrants: high traffic volumes and little intermodal competition because of a lack of a direct highway connection. At the same time, the incumbent operator used to charge high prices and offered low quality of service, for instance due to using outdated rolling stock. Several new entrants with diverse business models entered the market from 2011 on the two most important ones being Regio Jet and LeoExpress. The greatest positive outcome (from a passenger's perspective) has been the reduction in fares (see Figure 1) with a simultaneous increase in travel volume and service quality. While the incumbent operator has been accused of predatory pricing there is no official verdict yet. However, estimates suggest that all the operators are currently operating at a loss.

The problem of predatory pricing is exacerbated by some intrinsic factors. Operators engage in such fierce competition partly because they face high sunk costs; some of their rolling stock used cannot be used in other countries and would be hard or impossible to sell after a possible exit from the market. The second problem that arose in the Czech Republic is capacity constraints due to increased congestion: competition has led to a much higher train frequency on the Prague-Ostrava track because all operators moved to shorter trains with shorter time intervals. This has negative impacts for freight operations as passenger trains always have priority in the track allocation in the Czech system.

The Czech Republic is a case of relatively unregulated competition. Clear rules, for instance on pricing and fare integration, are not in place. The Competition Authority of the Czech Republic lacked staff and experience in the railway sector when it had to deal with claims about anti-competitive behaviour of the incumbent operator. This experience may well give raise the idea of establishing a truly independent railway regulator. Currently the railway regulator is part of the Ministry of Transport and has no authority over competition issues.

Figure 1 Average fare prices for rail services in the Czech Republic.



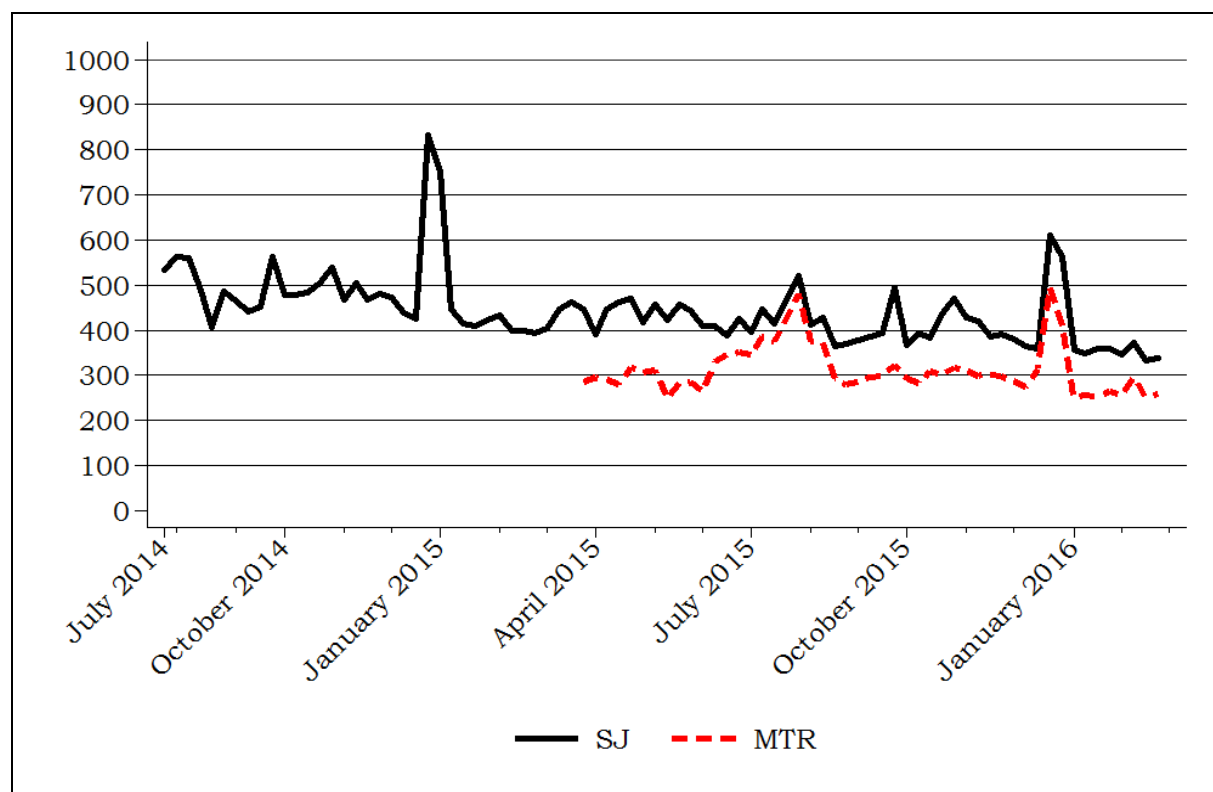
Copyright: Zdeněk Tomeš

Case Study 3 - Passenger Rail Competition in Sweden

This text is based on the presentation of Bertil Hylén, at the workshop “Competition in the Railway Passenger Market”, Madrid, 16.09.2016 and the other sources referenced in the text.

Sweden has opened the entire passenger railway market to competition in 2010. Nevertheless the incumbent state owned operator SJ has remained in a strong position in spite of some minor entries to the market. Recently competitors had operated on a small scale and in niche segments that did not challenge SJ. This changed when MTR entered the market on the Stockholm-Gothenburg line, the country’s busiest route, in March 2015 (see Figure 2).

Figure 2 Weekly average prices of Swedish incumbent operator SJ and new entrant MTR.



Source: Vigen, 2016, p. 11

The Hong Kong based corporation MTR had already entered the Swedish market in 2009 for the operation of Stockholm’s metro network.³

Conflict arose upon MTR’s market entry with regard to access to the incumbent’s sales platform. When its request to be included in SJ’s online ticket platform was rejected, MTR complained to the Swedish Competition Authority. The complaint was dismissed with the authority ruling that

³ Competitive tendering is common practice in Sweden: 95% of public transport operations is tendered out under the authority of the Passenger Transport Authorities.

access to SJ's sales platforms is not indispensable for market entry. MTR now uses the neutral resrobot.se platform.

Capacity shortages are a serious challenge for railway competition in Sweden. The infrastructure manager has to bring together conflicting demands between fast and slow passenger trains and freight transport, while priority rules are not well defined in Sweden. Capacity is in principle allocated on an annual basis. New entrants, however, need to plan several years ahead.

It seems that after a relatively short time on the market MTR has affected ticket prices. MTR's cheapest ticket is 10 SEK cheaper than the corresponding ticket of SJ. The incumbent's ticket prices have decreased by 12.8% between March 2015 and June 2016 (Vigren, 2016: p.18). Both the incumbent and the competitor have introduced a more dynamic yield management system to optimize load factors. This of course means more special offers on the one hand and higher prices during peak times such as holiday periods on the other.

MTR always stresses to seek competition not only with the other rail operators but with the other transport modes. They focus on increasing the share of online ticket sales through mobile applications and travel platforms and on attracting more business travellers (Barrow, 2015). SJ states that competition is generally good as it creates more attention in to the rail sector.

Case Study 4 - Passenger Railway Competition in Italy

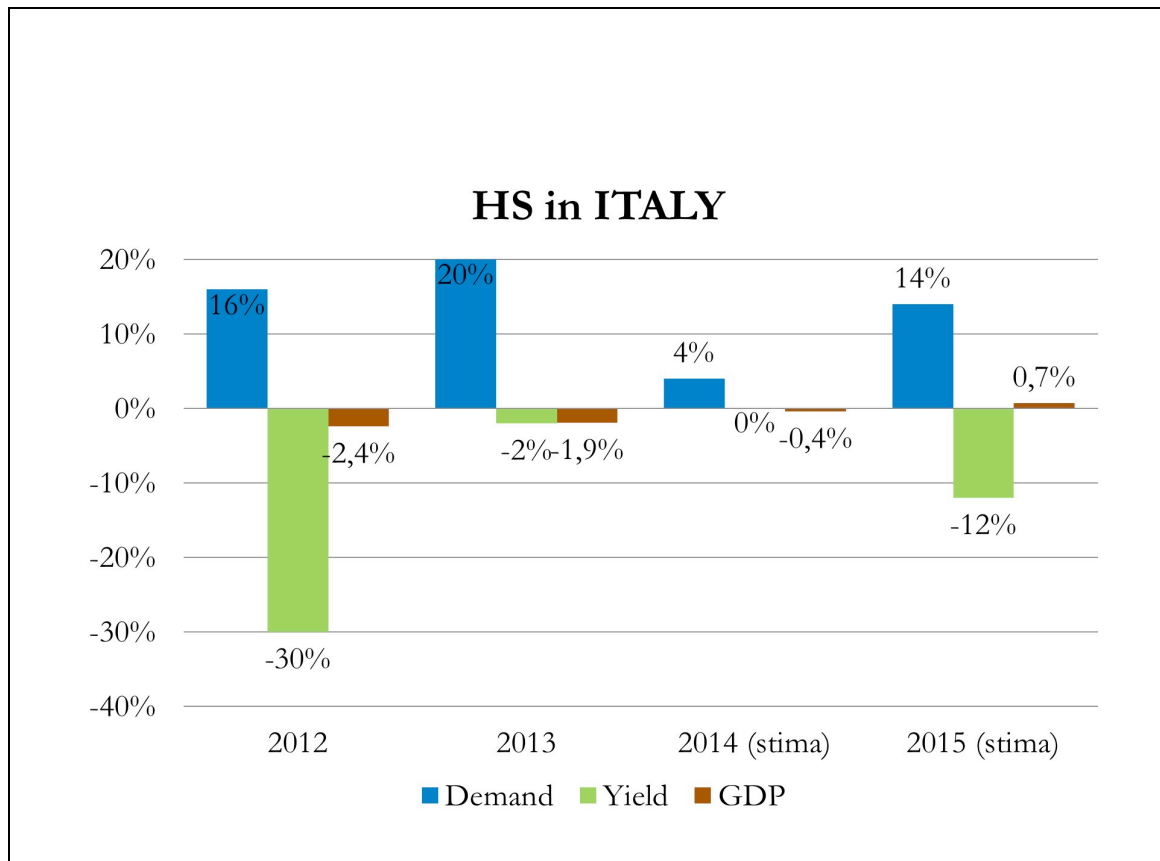
This text is based on the presentation of Dr Andrea Giuricin, University of Milan Bicocca, at the workshop "Competition in the Railway Passenger Market", Madrid, 16.09.2016 and the other sources referenced in the text.

The case of open access competition in Italy has received a lot of attention as it has developed quite significantly over the past years. In 2012 competitor NTV entered the high speed rail market challenging the incumbent Trenitalia. NTV was founded in 2006 but it took until March 2012 to get the final authorization to operate.

A decree allowing open access competition in Italy is in place since 2001. In the beginning NTV filed numerous complaints about the FS Holding (which comprises infrastructure manager and the incumbent operator). These complaints mainly regarded access to essential facilities, delays in the path application process and predatory pricing by the incumbent. In 2013 Italy's new transport regulator and competition authority (ART) started their operations and supported the development of competition with several interventions in the market aimed at ensuring non-discriminatory conditions. Among other things a significant reduction of track access charges in 2014 brought down costs for all operators.

The effects of open access competition in Italy have been quite significant: the overall demand for long distance rail transport rose by 65% (in PKM) while the ticket price yield fell by 40% (Figure 3).

Figure 3 Demand, GDP and reduction in ticket prices for high speed rail in Italy.



Copyright: Andrea Giuricin

Continuously adding new connections on profitable connections the national market share of competitor NTV had arrived at 26% in 2016. In spite of having to bare high investment cost in the starting phase, NTV is operating at a profit and is currently making investments in new trains. Italo is currently operating with 25 high speed trains, but at the end of 2017, 12 more will be added.

Part of this development was also an increase of the overall market share of rail vis-à-vis (low-cost) air because the cost for available seat kilometres of NTV is now lower than the majority of low cost airlines. In fact some routes in Italy have been abandoned by Ryanair as a consequence of the competition with high speed rail (Florence School of Regulation, 2014).

Case Study 5 - Passenger Railway Competition in the UK

This text is based on the presentation of Dr Phill Wheat, ITS Leeds, at the workshop "Competition in the Railway Passenger Market", Madrid, 16.09.2016.

The UK was one of the first countries with a liberalized rail system. Yet open access competition (competition in the market) exists only to a very limited extent and the number of cases is actually decreasing. The vast majority of train services are operated by government awarded franchises for a period of 7 to 15 years preceded by a competitive bidding process (Competition and Market Authority (CMA) (2016)).

Operators need to seek permission from the Office of Rail and Road (ORR) to operate an additional train on an existing connection (overlapping franchise) or to offer an alternative route to an existing city connection (parallel franchise). In its assessment on whether to allow an open access operation the ORR considers among other things the risk that new operations could defer revenues from the existing franchises making it likely that they will submit lower bids in future tenders (and thus jeopardize funding needed for infrastructure). In addition, the ORR's has role to arbitrate if the infrastructure manager doubts that there is path capacity for such operations.

The overall evaluation is that the liberalization has boosted passenger numbers and to some extent customer satisfaction. At the same time, the operational costs of the railway system are still considered too high. Hence the policy context today is mainly concerned with increasing efficiency and bringing down cost, whilst maintaining the quality and reliability of the service.

The ORR is the independent body in charge of overlooking the efficiency of the infrastructure manager Network Rail, to guarantee fair access to the infrastructure and to promote competition and safety regulation. ORR needs to balance several, sometimes conflicting duties: it has the duty to promote competition in the railways and at the same time favour sufficient revenues for the infrastructure manager.

To date there are about 20 franchises in operation. While at the beginning of the liberalization process there were financial problems with some of the franchises, their financial situation has stabilized by now. Yet the overall cost of providing train services has not fallen as expected and thus a priority for the industry is to improve this situation.

The Competition and Markets Authority (CMA) has recently completed a policy project which concluded that one strategy to address this issue and generally increase innovation in the industry is to increase the so far limited number of open access competition. There is some evidence that, where it is allowed, service levels and customer satisfaction improves. Potential efficiency gains were found for instance by an ORR study showing that costs of open access operations are on average 30 % lower than the cost of a franchised operation working at the same density of operation (Rasmussen et al, 2015)). A second benefit that is observed is the potential of open access operators to pressure the network manager to become more efficient. More open access competition means overcoming barriers to entry. Legally access to the infrastructure is not an obstacle as ORR may not discriminate against an operator applying for access rights. However, capacity constraints on many tracks and the often difficult access to rolling stock limit the chances of new entrants entering the market.

It would be important to further investigate financial and other implications of a move towards more open access competition on certain routes. If such a path is chosen policy action would need to continue to remove such barriers. One such issue relates to access charges and the extent to which a greater open access would prevent recovery of fixed costs for the infrastructure manager.

Considering charges based on both marginal cost and avoidable cost offer some potential to recover such costs (Office of Rail Regulation, 2016, p23-24).

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