

Benefits of the competition in the High speed rail and the limits to the competition

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Part 1: Benefits of the competition

The entry in the market of Italo on 28th of April of 2012 gave important benefits to the Italian travelers. Competition permits to improve the service, not just in terms of the quality, but also in terms of the reduction of ticket's prices.

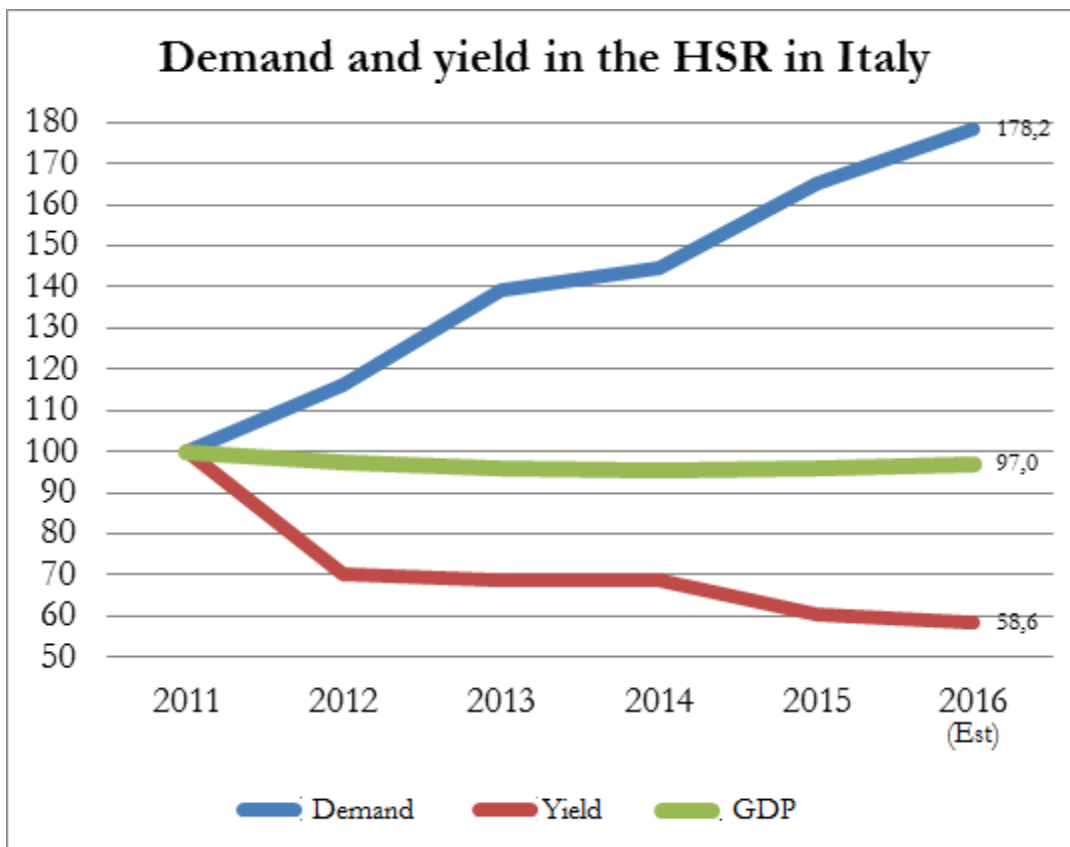
The analysis considers the high speed market where there is competition in Italy. It estimates the evolution of the market in 2016, thanks to the data of the railway undertakings and the offer in the second semester.

The average price of the ticket, considering the length of the trip, is decreased around 41 per cent between 2011, the year before the entry in the market of Italo and 2016.

It is clear that competition permitted a decrease of the price; it is possible to underline the same pattern also in other sectors, as aviation or telecommunication *in primis*.

The graph number one shows the decrease of the price and the evolution of the demand in the high speed market in competition and the Gross Domestic Product in Italy between 2011 and 2016.

Graph 1: Demand and price in the High Speed Market and GDP evolution



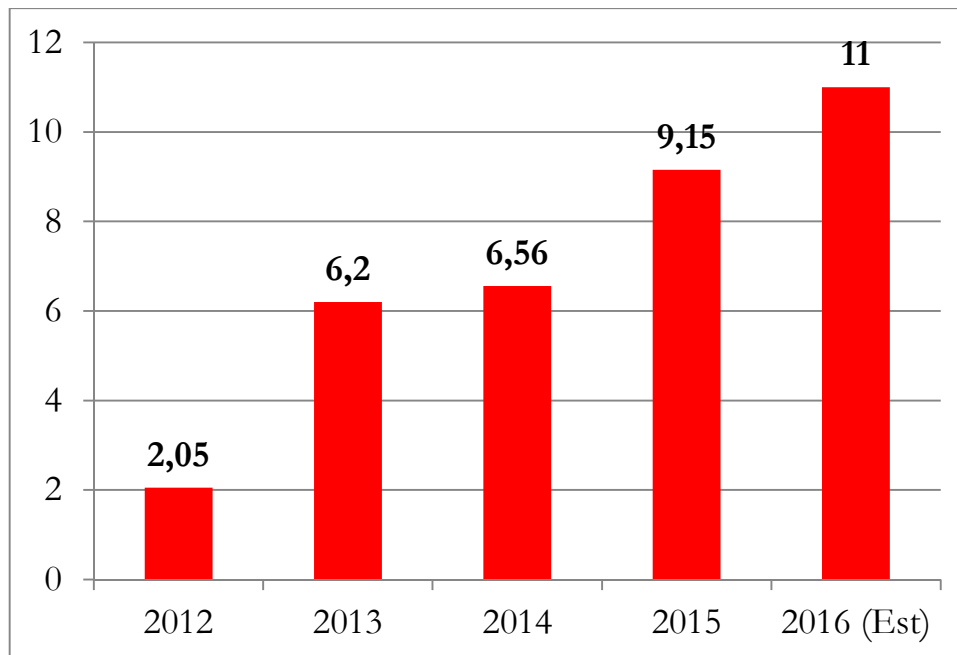
At the same time, it is possible to underline the strong increase of the demand. The estimation of the number of the passenger kilometers (it considers the length of the trip) between 2011 and 2016 shows an increase around 78 per cent of the demand.

It is important to underline that it is a very high increase of the demand, although a strong recession of the Italian economy in the same period. The gross domestic product decreases 3 per cent since 2011, even if in the last three years of the Renzi Government there was a growth of the economy.

The remarkable growth of the demand was not even registered in the aviation sector after the EU liberalization in the '90. This strong increase of the number of the passengers shows the potential of the high speed market liberalization.

Italo has increased every year the number of carried passengers and the last year it reached 11 million of passengers.

Graph 2: Number of passengers at Italo Treno (in mln)



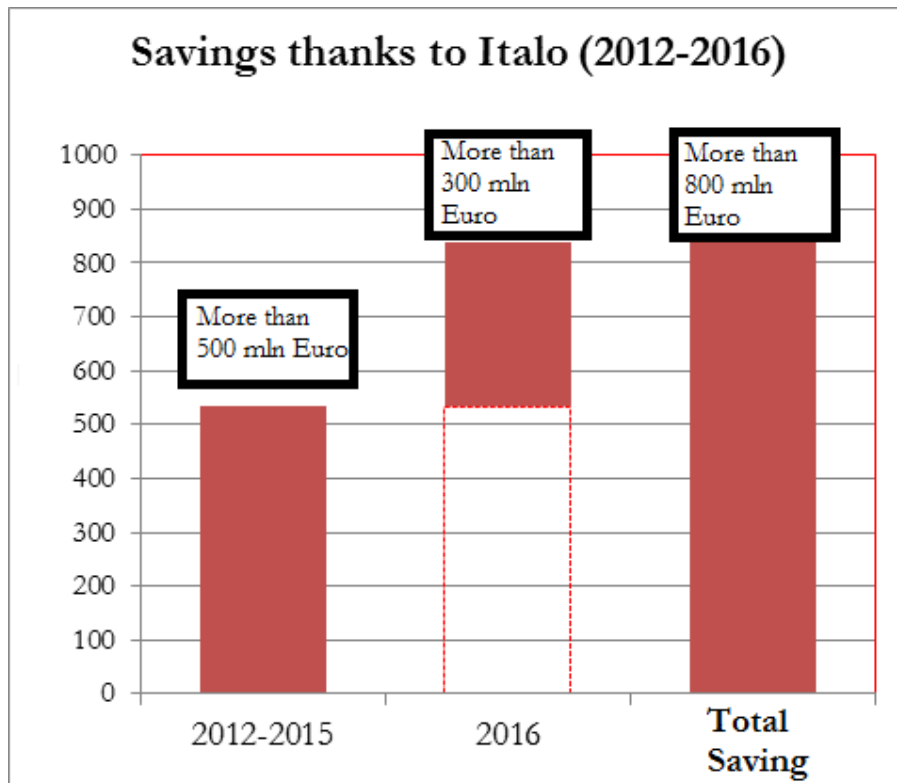
At the same time, Trenitalia not only has not decreased the number of passengers, but it continues to have a remarkable growth.

The decrease of the average price of the ticket permits to make some further analysis: it is possible to estimate the savings of the consumers thanks to the lower price of Italo.

In the third graph, it is possible to underline the savings due to the decrease of the average price of the tickets between 2012 and 2016, considering the Italo's average price

ticket and the yield in the high speed market before the arrival of the competitor (year 2011).

Graph 3: Savings for the Italo customers due to the reduction of the average price.



The graph shows a total saving for the Italo's customers around 800 million of euro between 2012 and 2016.

If we divide the analysis in two periods, it is possible to underline that the saving is more and more important: in fact, the saving for the customers was higher than 500 million of euro between 2012 and 2015, while in the last year it estimates a total saving around 300 million of euro.

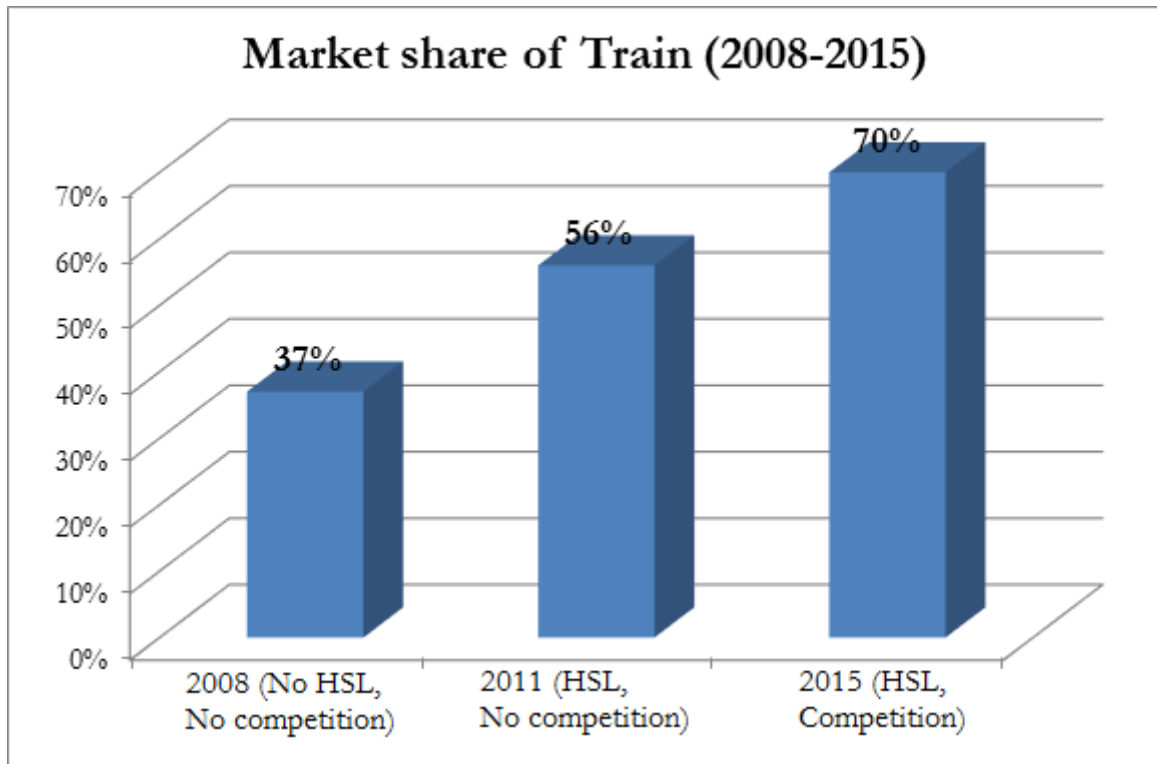
The saving is increasing in the last years because of two primary factors:

- The prices of tickets are decreasing more and more
- The number of the passengers continues to increase

The lower price of the ticket price in the high speed market and the increase of the quality of the service of the railway undertakings, permitted an increase of the modal share of the train, a mode of transport more ecologically friendly.

The analysis estimates the modal share of the high speed train between Rome and Milan. It considers three different years: the first one is 2008, when the high speed lines were not concluded, the second one is 2011 when the infrastructure was completed but there was not competition and the third one is 2015 when there was also the competition.

Graph 4: Market share of the train between Milan and Rome in 2008, 2011 and 2015.



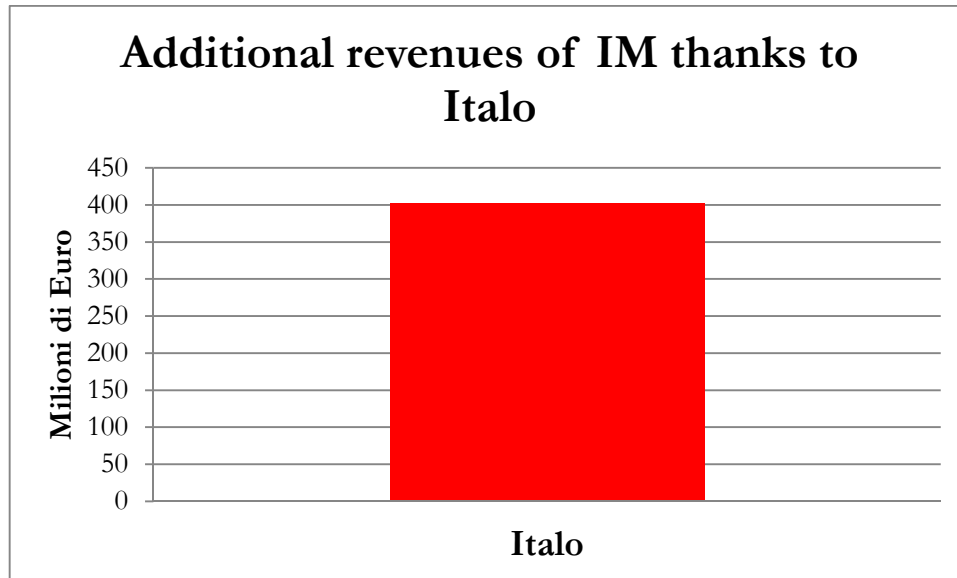
The market share of the train increases continuously, as it is possible to underline in the graph 3. In 2008, the train had 37 per cent of the market share, because the air transport mode was leader in the market. In 2011, thanks to the end of the infrastructure works of the high speed line, the market share of the train was 56 per cent.

In 2015, thanks to the competition and without an improvement of the speed of the network, the market share of the train between Milan and Rome reached 70 per cent.

This is a clear example how a private investment could lead to a better and higher utilization of the infrastructure network.

Italo has an access charge for the use of the infrastructure network. Nowadays it is fixed at 8.2 euro per train kilometer.

Graph 5: Revenues of the IM thanks to the entrance in the market of Italo



The entrance in the market of Italo permitted an increase of the revenues of the infrastructure manager of 400 million of euro, due to the fact that Italo has to pay the access charge.

This amount of the money is calculated by the independent Authority of Regulation of Transport (ART) with a marginal cost plus criteria. It means that the access charge covers not only the marginal cost of the high speed network, but also a part of the future investment of the network.

Part 2: Limits to the competition

The entrance in the market of Italo permitted to have a competition with very important benefits for the consumers as shown in the first part of the analysis. At the same time the infrastructure manager had an increase of the revenues due to the growth of the offer of Italo (*ceteris paribus*).

It is important to underline that there are several critical points to have a fair competition in the Italian high speed market.

Lack of vertical separation

In the aviation sector it is clear the vertical separation between the airport manager and the airlines. The success of the liberalization in this sector is also due to this driver that it permits to have a strong increase of the demand and a decrease of the average price of the tickets.

In the rail sector, the problem of lack of vertical separation is more complicated to solve. There are not important technical problems, but a strong pressure to have a vertical integration by the major operators.

The lack of vertical separation leads to a very complicate competition for the new entrants, not only for the operational management but also for the strategic decisions.

Box 1: Operative barriers

Italo had many problems in the positioning of the ticket vending machine. At the same time, it is not possible to regulate every single aspect of the competition.

NTV asked for many years the positioning of a TVM at the end of the escalator at the entrance at Tiburtina station. After some years, the station manager permitted to install the TVM as requested, but after few weeks the way of the escalator was changed, so the TVM was completely a waste of money for the private operator.

In fact, it is nonsense to have a TVM at the exit of the station, while the cost of every single point of sale is very expensive.

Another recurrent problem is the slot availability. Italo could use the main station is Milan and Rome after several years and nowadays it is not possible to find good slot in some city as Venice for example. The problem was also for the launch of new routes, where RFI gave slots at night hour.

The lack of the vertical separation is a critical point due to the fact that a good regulation is not enough in case of an incumbent owner both of infrastructure and railway undertaking.

Access facilities

In terms of strategical decision, the access facilities are a critical point for the new entrants.

The use of the depot, cleaning facilities and in general all the essential services for an efficient operational service of the railway undertaking are an important entry barrier that blocks the competition.

ROSCO

The highest entry barrier in the railway sector is the lack of ROSCO in the European market. The purchase of the rolling stock is the first of voice of CAPEX for a railway

undertaking. This problem is stronger in the regional rail market, where the Regions co-finance the purchase of train for the incumbent.

In the long distance railway market, the lack of a ROSCO at European level could introduce some difficulties to the new entrants. For example, NTV invested around 600 million of euro for the purchase of the train between 2008 and 2012. In the same period the total investment of the company was around 1 billion of euro.

NTV bought 12 more high speed trainset to develop the fleet and compete better with the incumbent.

The railway sector, as well as the aviation one, is capital intensive. The purchase of a single high speed train is around 30 million of euro and a settlement of a ROSCO could solve many problems.

Nowadays, the new entrant has to purchase a train with a lifecycle of 30 years minimum. This is the reason why the risk is very high. It doesn't exist a market for the "second hand" because it doesn't exist a real unique European market.

Non-transparent data of the incumbent

The problem of the non-transparent data of the incumbent is strictly connected to the lack of vertical separation. The annual account of the incumbent doesn't give the data about the high speed railway market and it is not clear the use of the subsidies received for the regional market by the Regions.

The annual account shows the total amount of the subsidies received, but the fact of direct award contract between the incumbent and the Regions, there is not a clear view about congruity of the resources received.

The lack of data had the consequence of informative asymmetry because the incumbent receives information by the infrastructure manager.

Lack of competition at regional level and the risk of cross-subsidies

Italy is the first country in liberalizing the high speed market, but it is one of the latest in opening the regional market. In Germany, where Trenitalia is an operator with the subsidiary Netinera, the subsidies decreased around 30 per cent when it was introduced a tender process.

The average revenue per train kilometer of Trenitalia in the regional market (considering the access charge) is around 50 per cent higher than in Germany. In the last ten years,

the subsidies that Trenitalia received by the Regions increased a lot and the price of ticket too.

There is another hidden subsidy in Italy in the regional market: the low level of the access charge.

At the same time, if a tender process for the regional rail market will show an excess of the subsidies, there will be clear the risk of cross subsidies.

Non-transparency of the investment strategy of the infrastructure manager

The access charge is the first voice of the operational cost for the new entrant. It is decided by the Authority of regulation for Transport but it depends by the investment decision of the infrastructure manager.

For example, if a station that it was planned to be built (Firenze Belfiore), it will be cancelled after spending hundreds of millions of euro, there is a critical point. The mistake of the infrastructure manager will be reflecting in the access charge (marginal cost plus criteria) of the railway undertaking.

Regulatory uncertainty

The stability of the regulation is one of the main element to develop a private business. If the regulation is not stable, there is the risk to block the investment.

The target of the regulation is a sort of stability not for the State Owned Enterprise but for the railway undertaking.

The access charge, as well the cost of the energy, have to be stable in the next years for the railway undertakings to have a development of the market and to give benefits to the customers.

When there is regulatory uncertainty, the higher risk could lead to higher cost for the companies. The higher cost could cause an increase of the price tickets and at the end of this process, a decrease of the demand.

NIV invested to increase the number of the trainsets, but the regulatory risk could lead to a higher financial cost and to block the development of the business.