

High speed rail vs. low-cost air: competing or complementary modes?

How much did the subsidies (to both rail and air sector) influence the current market structure and the competition between the two modes?

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The Single Market in the Transport sector



- ❑ In 2013 we celebrated 20 years of single market achievements in the transport sector
- ❑ However, the regulatory framework is still non uniform with regard to:
 - ✓ Market access
 - ✓ Subsidies policy
 - ✓ Passenger Rights

A European **Transport** Single Market?



Air Single Market

- ❑ 3 Packages and 1 Recast **achieved** a Single Market for the Air Transport:
 - ✓ Full UE and domestic opening
 - ✓ EU single technical certification body (EASA)
 - ✓ EU/ECAA co-ordinated air space design, management and regulation (Single European Sky)



Rail Single (?) Market

- ❑ 3 Packages and 1 Recast **do not achieved** a Single Market for the Rail Transport
 - ✓ Limited intra-UE competition
 - ✓ Domestic passenger opening still under discussion (4RP?)
 - ✓ Single technical certification still under discussion (4RP?)
 - ✓ Single European Regulator supported by CER, FSI and others but not proposed by the Commission



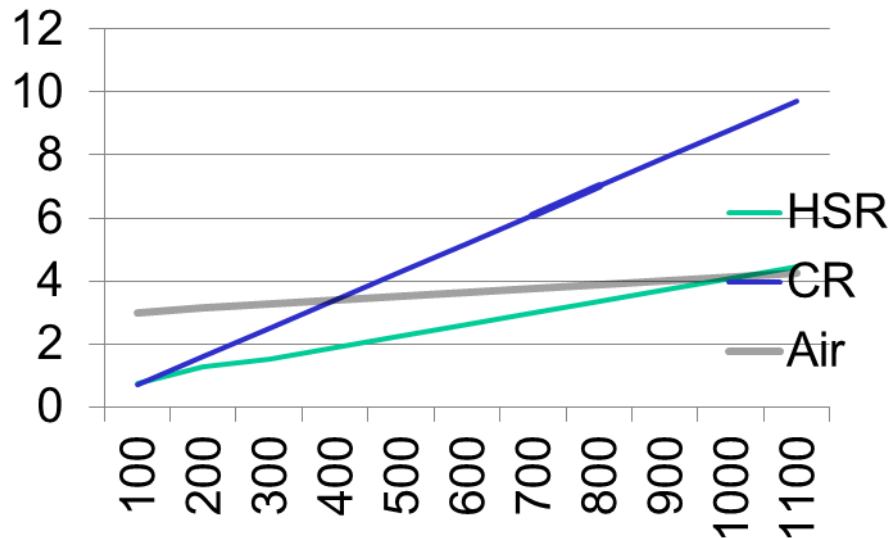
The EU Rail single market

Still to be achieved

		Freight	International Passenger	Domestic Passenger	Open Access on High Speed	Regional/PSO Passenger
	Legislative Framework	Open	Open	Closed 4RP?	Closed 4RP?	No compulsory tendering 4RP?
	Effective Competition	Yes	Limited (operation mainly under agreement or cooperation)	Few Countries: UK, SE, DE, IT, AT, CZ	IT	Both tenders and direct award
	Legislative Framework	Open Since 2000	Open Since 2000	Open Since 2000	Open Since 2000	Both tenders and direct award
	Effective Competition	Yes Since 2001	Yes Since 2009: DB/OeBB and SNCF	Yes Limited to HS and premium markets	Yes Since 2012: NTV (SNCF 20% industrial partner)	Limited Low PSO compensations and low regulated fares

- ✓ Lack of uniform regulation (interoperability, access to infrastructure)
- ✓ Domestic passenger an PSO to be liberalized

Competitiveness Rail vs Air



Modal share

- Travel Time and Price Elasticity VS Demand
- Up to 150 km Conventional Rail is fast enough
 - From 350 km High Speed Rail is needed for rail to be faster
 - Up to 800 km High Speed Rail is faster (but ETR1000)

Full System Benefits/ Costs : Main Levers

- Market Size in and along the Corridor (scale and frequency)
- Demand vs Travel Time Elasticity
- Effective Speed Yield
- Infrastructure Costs (topography)
- Situation specific Costs to upgrade Conventional Infrastructure

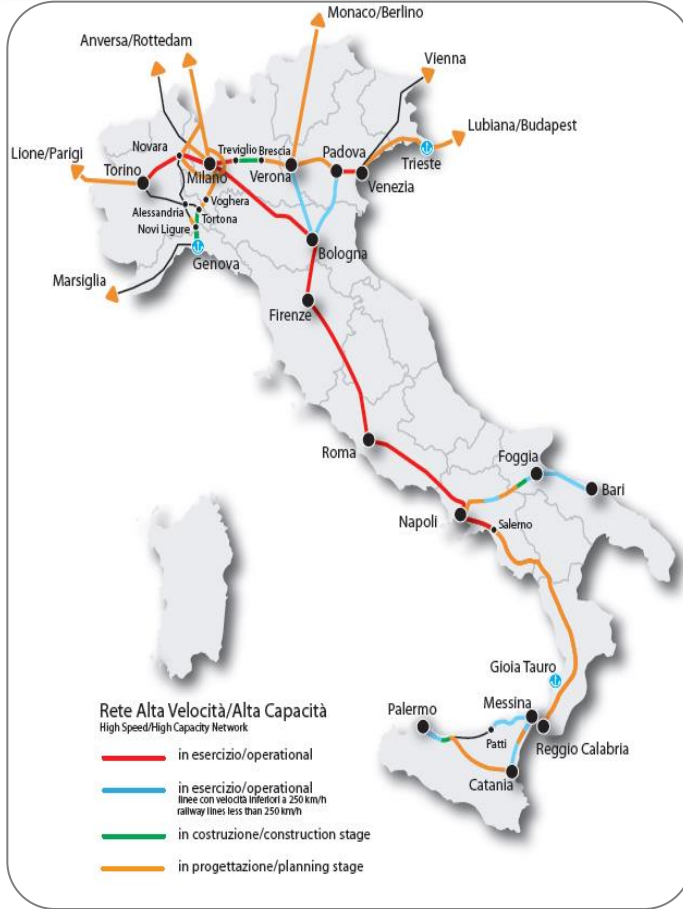
The High Speed / High Capacity system



TORINO PORTA SUSA



FIRENZE BELFIORE



REGGIO EMILIA



ROMA TIBURTINA

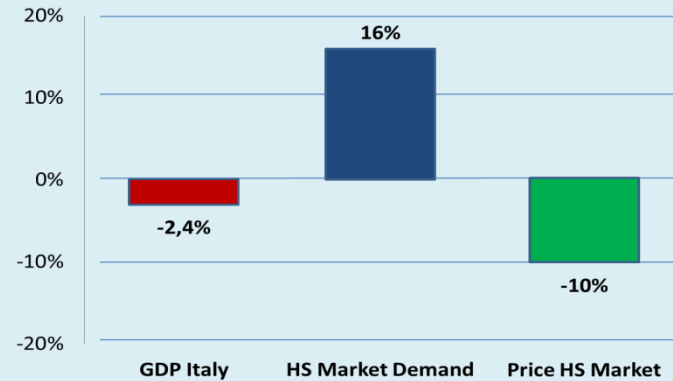


When a Country goes beyond the UE legislation: The effects of rail passenger liberalisation in Italy

FS «LE FRECCIE» services



Competitor services



- ✓ More transport offer and demand (despite the economic crisis)
- ✓ Lower prices

- ✓ Technological innovation
- ✓ New services



The new Frecciarossa 1000



- 50 trains completely interoperable in 8 European Countries**
- commercial speed: 360 km/h and maximum speed: 400 km/h**
- acceleration at start $\geq 0,7 \text{ m/s}^2$**
- Low energy consumption and low environment impact**
- Rome-Milan journey time from 2h55 to 2h20**

Wide inter-modal and intra-modal competition



VADO DA LEI
O LE MANDO
DEI FIORI?
BASTA RINUNCE

Con Le Freccie di Trenitalia
soggette a tanto città al miglior prezzo.
Chi è più di più?

Roma Termini - Milano Centrale da 29€

Offerta a posti limitati e soggetta a restrizioni.

RYANAIR Info, sui voli | Contatti | Tariffe e supplementi | Con

VOLI | HERTZ | HOTEL | ASSICURAZIONE | OSTELLI E B&BS | CARTA PREPAGATA | TRANSFER AEROPORTO | ORGANIZZATORE DI VIAGGI

5 €

Voli | **Hotel**

Ritorno Solo andata

Milano Bergamo

Roma Ciampino

Ho letto e accetto le condizioni di utilizzo

Adulti: 1 | Bambini <16: 0 | Neonati <2: 0

PRENOTA ENTRO LA MEZZANOTTE DI LUNEDÌ. VIAGGIA AD APRILE E MAGGIO. TARIFFA DI SOLO ANDATA A PARTIRE DA. SOGGETTO A TERMINI E CONDIZIONI. SPESE OPZIONALI ESCLUSE. [CLICCA QUI](#)



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solo andata a persona tutto incluso

5 voli al giorno | andata e ritorno | primo volo il 25 marzo

PRENOTA SUBITO



Roma - Bari

Solo andata

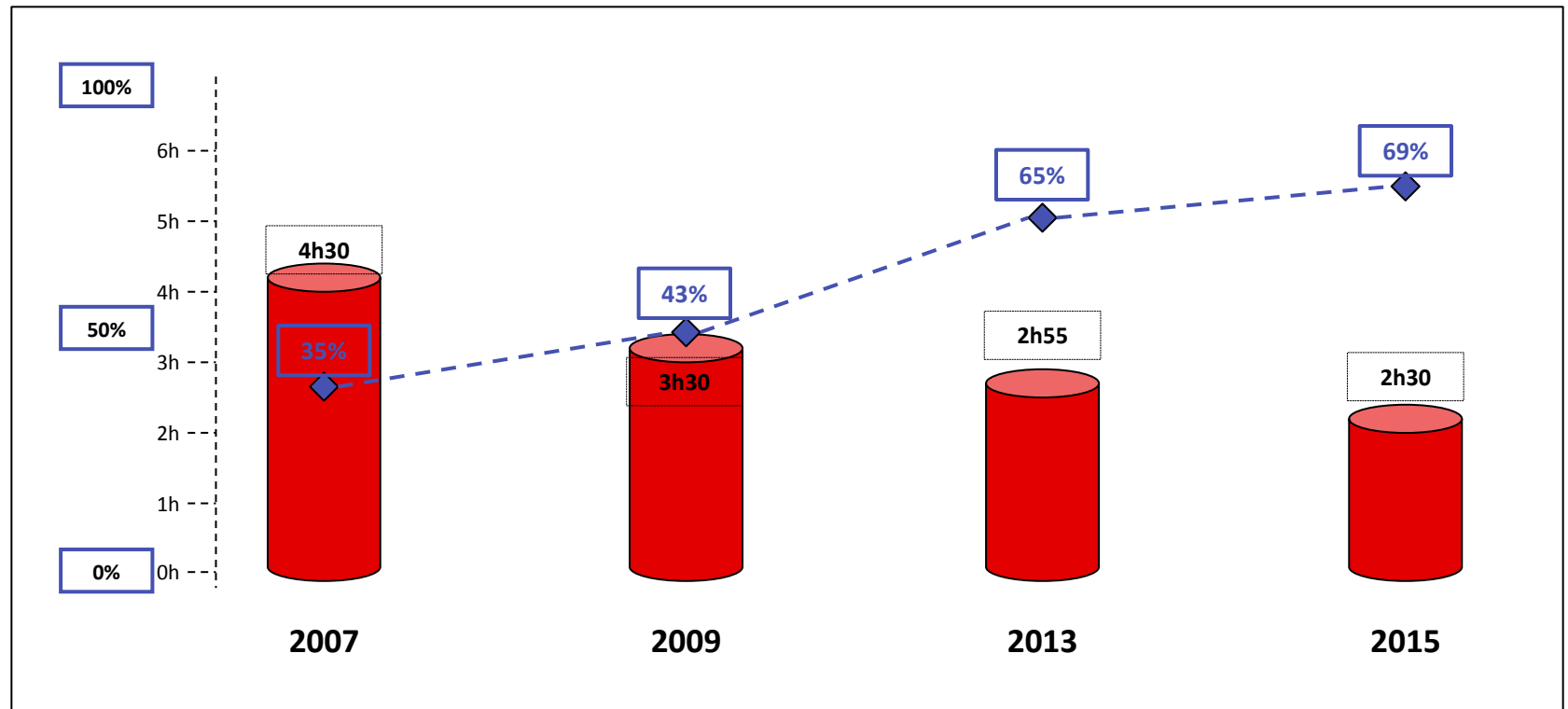
da 44€



High Speed Modal Share expansion

Rome-Milan route

Rome-Milan Train journey time and Rail Market share

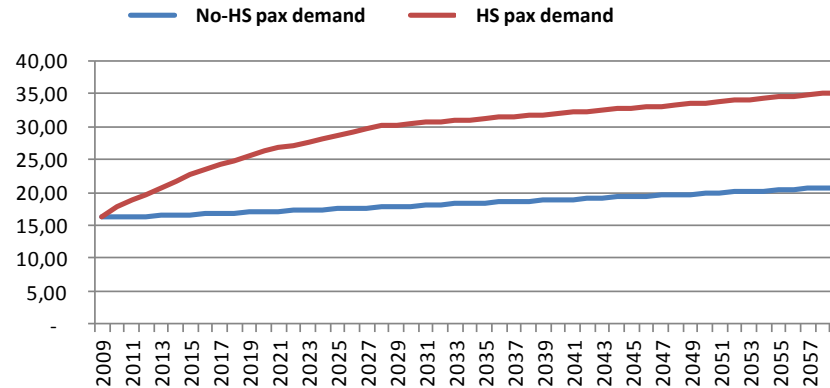


Source: FS internal elaboration

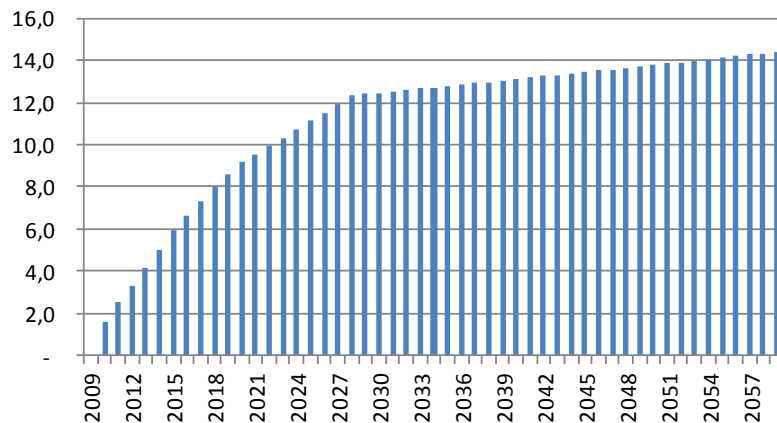
The effects of HS on transport demand

Rome-Milan route

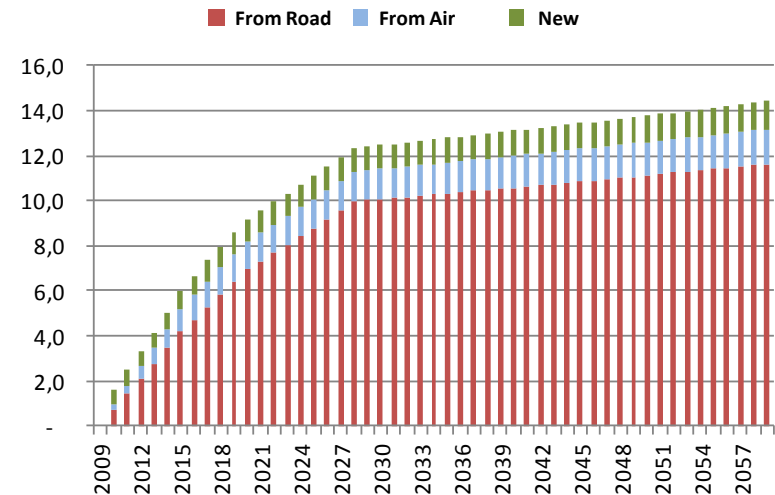
Rome-Milan HS scenario



Rail passenger increase



Split



Rome-Milan Journey Cost before HS completion

	Journey Cost (€/passenger) – 2011 prices				
	Rail*			Car	Air
	AV	ES	IC		
Torino-Milano	38,5	26	-	42,3	-
Milano-Bologna	51	36	26,5	63	-
Bologna-Firenze	30,5	29,5	16,5	32,5	-
Firenze-Roma	54	51,5	35	78	-
Milano-Roma (no stop)	103	83	58,5	163	147**
Roma-Napoli	51,5	42,5	25,5	60	-
Napoli-Salerno	19	16	-	15	-

* 2011 brands

** Average cost including airport/city transfer

The Subsidies in the Transport sector

High-Speed Rail vs. Low-cost Air

	HS Rail	Low-cost Air
Access to infrastructure	To be charged at direct cost (minimum package) or marginal cost + reasonable profit (additional service)	To be charged at market cost (agreement to be assessed under MEOP from an ex ante perspective, new 20.02 .2014 aviation guidelines)
Compensations for public transport obligation	X	Rules defined in SGEI Framework
Other public support to transport operations (compatible with article 107.3)	X	Start-up aid to airlines (confirmed in new 20.02.2014 aviation guidelines)
Fiscal rules	VAT rebates for international transport in many MS	VAT exemptions on international flights granted by international and UE rules International ban on taxing aviation fuel

Externalities to be considered as Indirect subsidies to transport sector

- ❑ Different Passenger Right protection (PRM, refunds, compensations for delay, etc.)
- ❑ Lack of external costs internationalization (indirect subsidy in favor of air transport)

	CO2 emissions (Kg)		
	Rail	Car	Air
Torino-Milano	4,4	15,6	
Milano-Bologna	6,9	23,8	
Bologna-Firenze	2,8	11,3	
Firenze-Roma	8,9	31,4	
Milano-Roma	17,8	64	89,2
Roma-Napoli	6,8	25,2	
Napoli-Salerno	2,8	8,2	