

High speed rail and air transport

Mark Lijesen

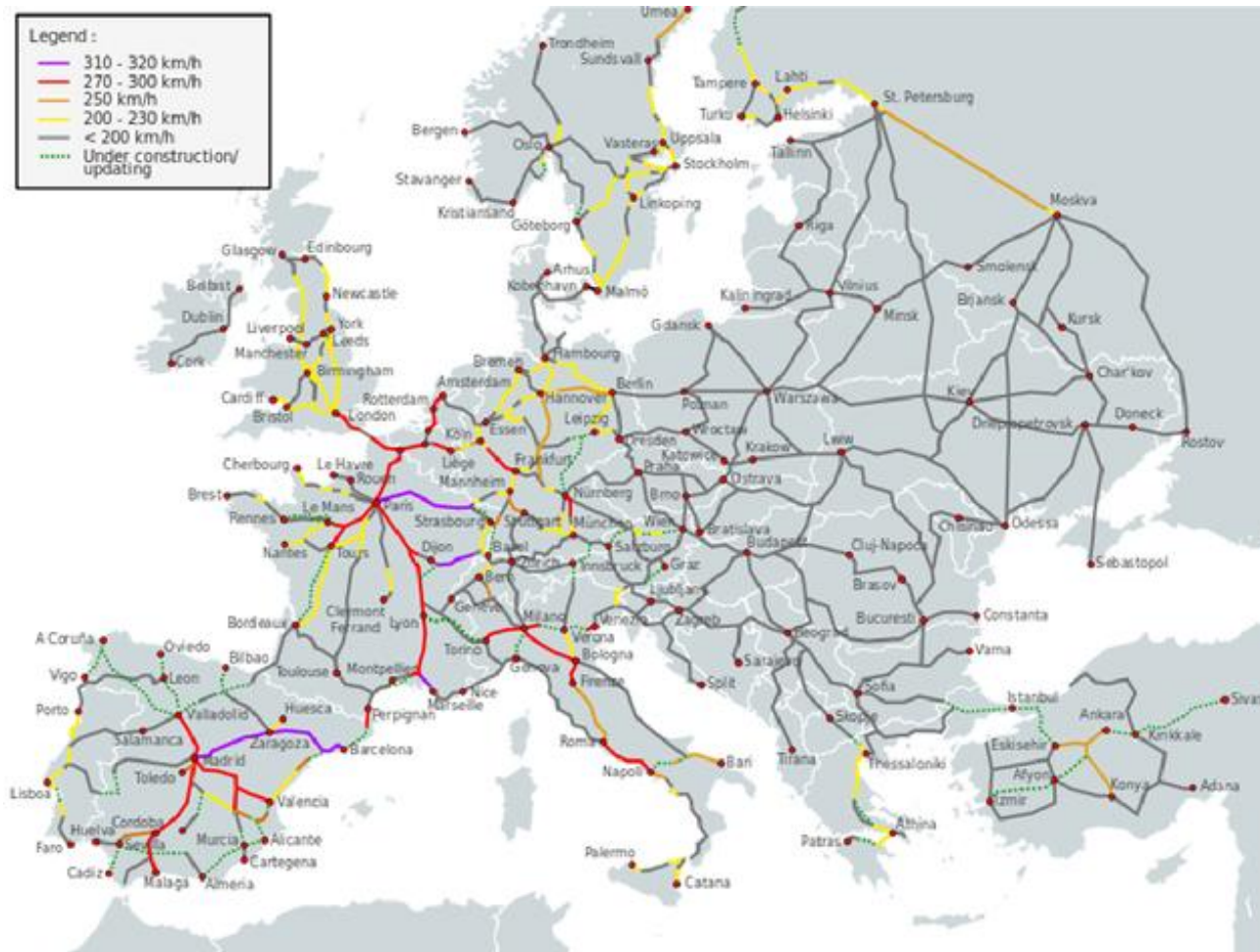
Airneth, 8 April 2013



VRIJE
UNIVERSITEIT
AMSTERDAM

Faculteit der
Economische
Wetenschappen
en Bedrijfskunde

The HSR network in Europe

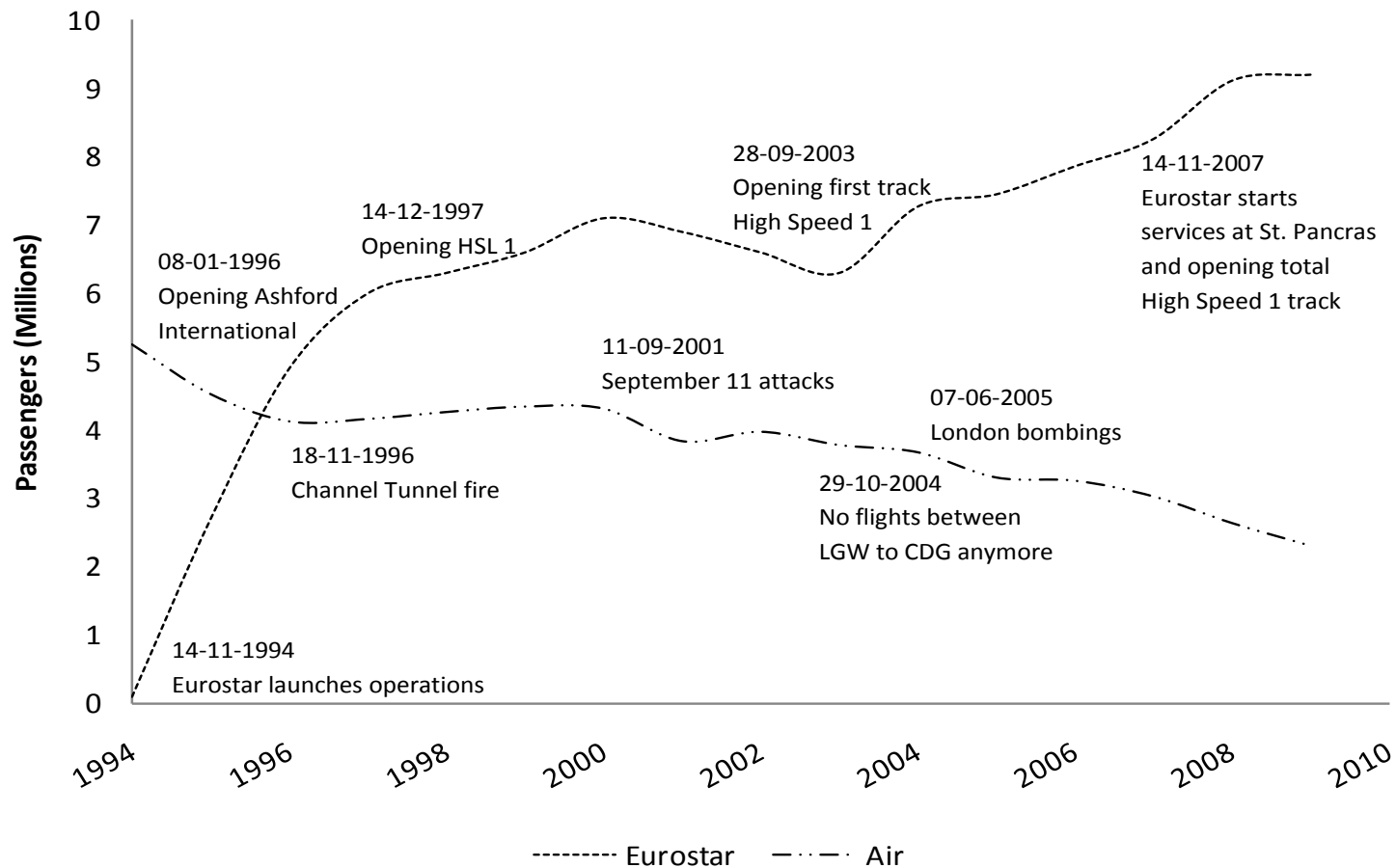


Airneth, 8 April 2013

Competing nodal networks

- Flights leave from airports, trains from stations
- Where do people come from /go to?
- Stations vs airports:
 - Closer to (in) city centres
 - Access times to stations relatively short
 - Process times at stations relatively short
- Planes vs trains
 - Planes are faster than trains

London to Brussels & Paris



Source: Behrens and Pels, 2012

Airneth, 8 April 2013

HSR pushes out air

- HSR superior in all aspects
 - Easyjet has lower fares for some years
- Air operations considerably scaled down, despite overall growth (2003-2009)
 - BA ceased operations LGW - CDG
 - BD ceased operations LHR – CDG
 - BA; LHR-CDG: -20% freq
 - AF; LHR-CDG: -40% freq
 - U2; LTN-CDG: -17% freq

Crowding out?

- For short haul route:
 - HSR has lower costs than air
 - HSR has shorter travel time than air
 - HSR drives out airlines (maybe more than 1)
 - Beneficial, because:
 - Lower costs (more so because of EoD)
 - Lower time costs of travel
 - But:
 - Competition decreases
- Net effect?
Current research

HS carriers need feeders

- AF and BA keep operating LHR-CDG
- Probably loss-making if analyzed separately
- Profitable as feeders for intercontinental routes
- Depends on
 - Density of all corresponding international city pairs
 - Frequency of all corresponding international city pairs
- While these flights are offered, rational to offer tickets as well
 - To help cover fixed costs

Notice anything peculiar?

○ 491 €	AF7184	10:21	Brussels	11:36	Paris (CDG)	11h29	Air France	Voyageur	☰
	AF006	13:35	Paris (CDG)	15:50	New York (JFK)		Air France	Voyageur	
AF7184	10:21 Brussels, Brussels South Railway Station - 11:36 Paris, Charles de Gaulle				Non-stop flight	Aircraft : Train			
Transfer time : 01h59									
AF006	13:35 Paris, Charles de Gaulle - 15:50 New York, John F Kennedy				Non-stop flight	Aircraft : Airbus A380-800			

Source: AF website

If you can't beat 'em, join 'em

- We've seen for short (and medium) haul:
 - HSR has lower costs
 - HSR is more attractive to travelers
- Moreover:
 - Airport capacity is scarce
- Airlines start using feeder trains
- Drawback: airport access time
- Unless the HSR-station is *at* the airport
 - AMS; CDG; FRA; planned in others

The future (?)

- HSR will beat air on short haul OD traffic
- Airlines integrate HSR into their networks
 - Favorable for airports with HSR station, more so for centrally located airports (FRA, CDG)
 - Capacity pressure on airports lifted
- Net effect of HSR on air transport ambiguous
- Reduced competition is likely
 - HSR monopolized
 - Access to feeder function limited