



20 years of experience with rail liberalisation: a balance sheet

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Key measures from 1991 on

- Organisational separation of infrastructure from operations
- Legal rights of access to railway infrastructure in EC countries for freight
- Non-discriminatory rules for the allocation of paths and for access charges
- Opening up of international passenger services in 2010; domestic passenger services to follow
 - Competitive tendering for subsidised services
 - On track competition for commercial

Alternative Models of Rail Restructuring



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Complete Separation(13)	Separation of key powers (6)	Holding Company (6)
(the Swedish model)	(the French model)	(the German model)
Great Britain Finland, Denmark Netherlands Spain, Portugal, Slovakia Lithuania Romania Czech Republic Greece, Bulgaria	Estonia Hungary Slovenia Luxembourg Latvia	Austria Belgium Italy Poland

(Ireland and Northern Ireland remain vertically integrated)





Vertical separation and costs

Vertical separation may raise costs by:

- Increasing transactions costs (track access contacts, performance regimes, etc)
- Reducing pressure on infrastructure manager (publicly owned monopoly at one remove from the ultimate customer)
- Leading to poorer decisions, for instance on investment, on timetabling and on real time operations, due to asymmetry of information and misalignment of incentives



Vertical separation and costs

But these effects may be minimised by:

- Differentiated track access charges
- Performance regimes
- Government role in investment planning

Whilst vertical separation may reduce costs and improve services by encouraging more competition



Evidence on costs

- US studies based on vertically integrated companies and of doubtful relevance
- Specific study of transaction costs (Merkert et al, forthcoming) shows them to be higher with vertical separation but not a big share of total cost
- Many aggregate studies of European countries problematic (problems with data, inadequate consideration of external factors influencing costs)
- Recent studies (Cantos et al, 2010) finds that railways which combine vertical separation and competition are the most efficient, whilst Mizutani and Uranishi (2011) find vertical separation reduces costs at low densities but raises them at high

Extent of competition in the rail freight market



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Structure/ region	Average no of freight licenses/ country	Market share non incumbent freight operators (%)	Rail market opening score (HHI)
VS	12	15	0.72
VI	43	12	0.80
VI ex DB	15	11	0.82
EU15 VS	10	14	0.77
EU15 VI	85	8	0.87
EU15 VI ex DB	5	5	0.92
EU12 VS	16	16	0.55
EU12 V1	22	16	0.74

Yellow indicates most competition.

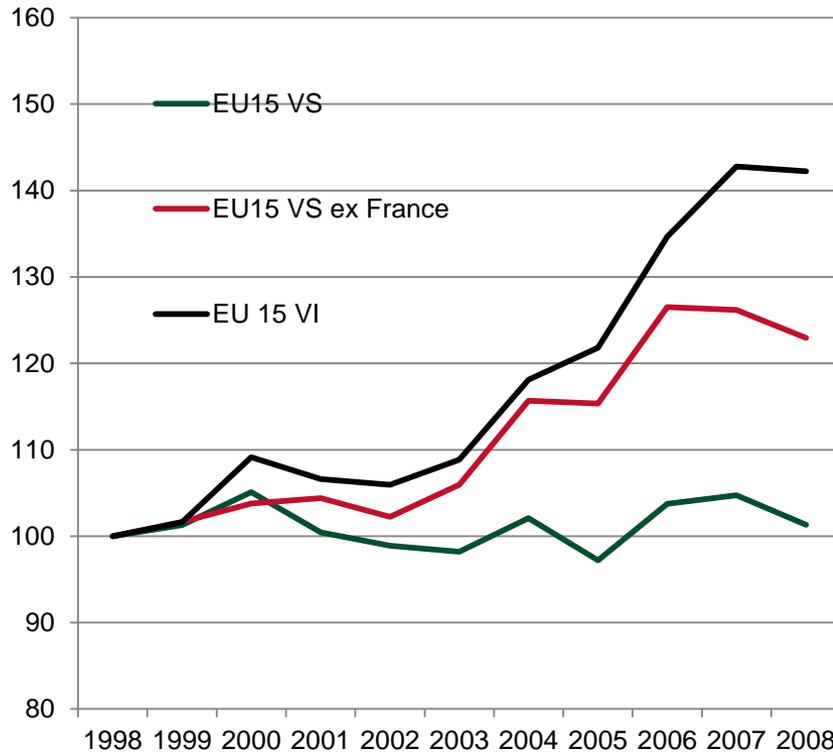
Herfindahl-Hirschman Index is defined as the sum of squares of the market shares of each individual firm.

For both EU15 and EU 12, rail freight growth has been faster for vertically integrated railways than for vertically separated ones.

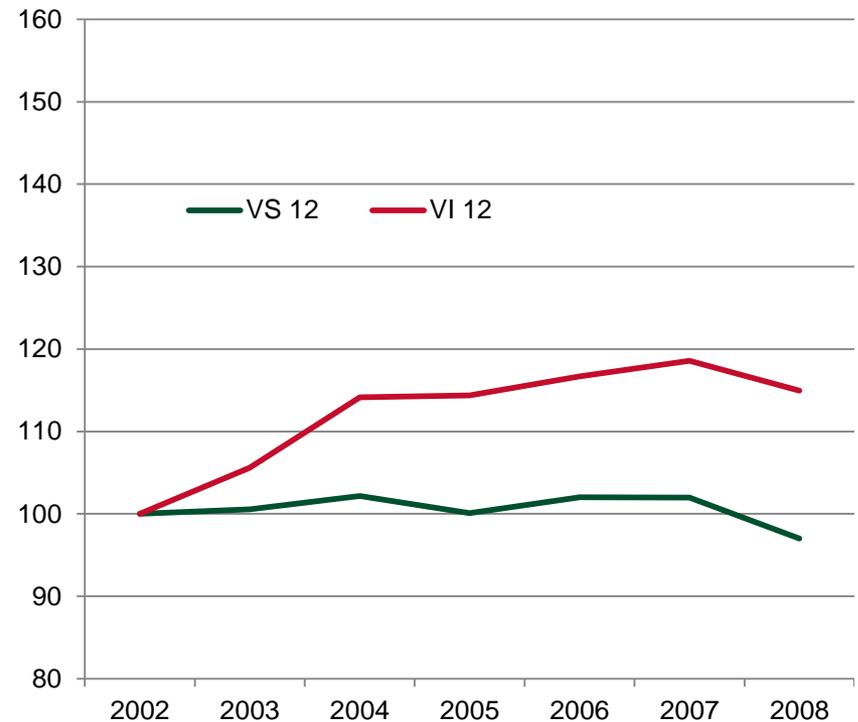


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Indices of tonne km: EU15 (1998=100)



Indices of tonne km: EU 12 (2002=100)

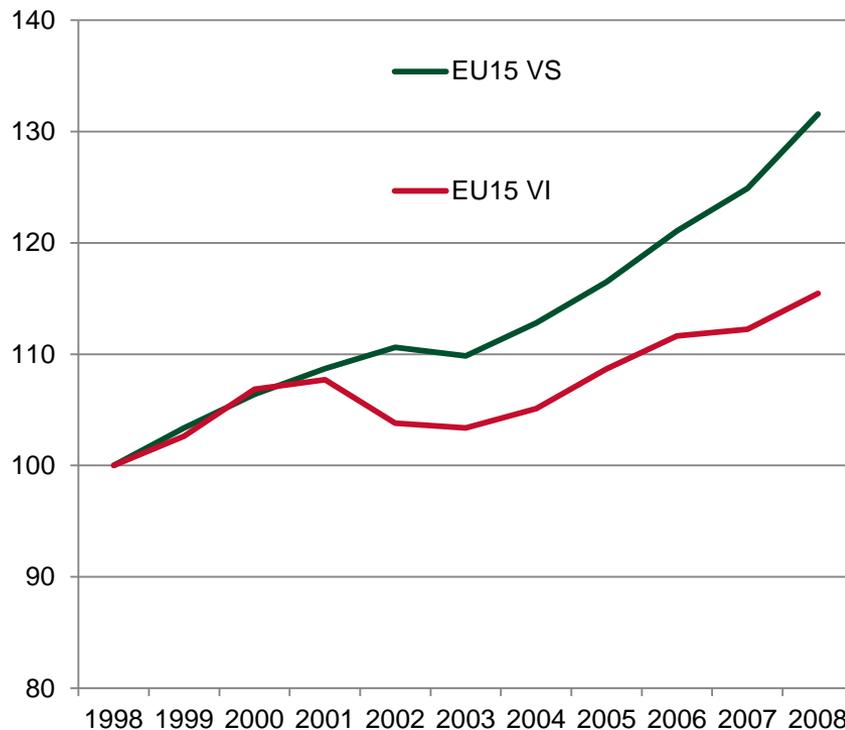


In contrast, for passengers in EU15, vertically separated railways have grown faster than integrated ones – for EU12, both groups have declined.

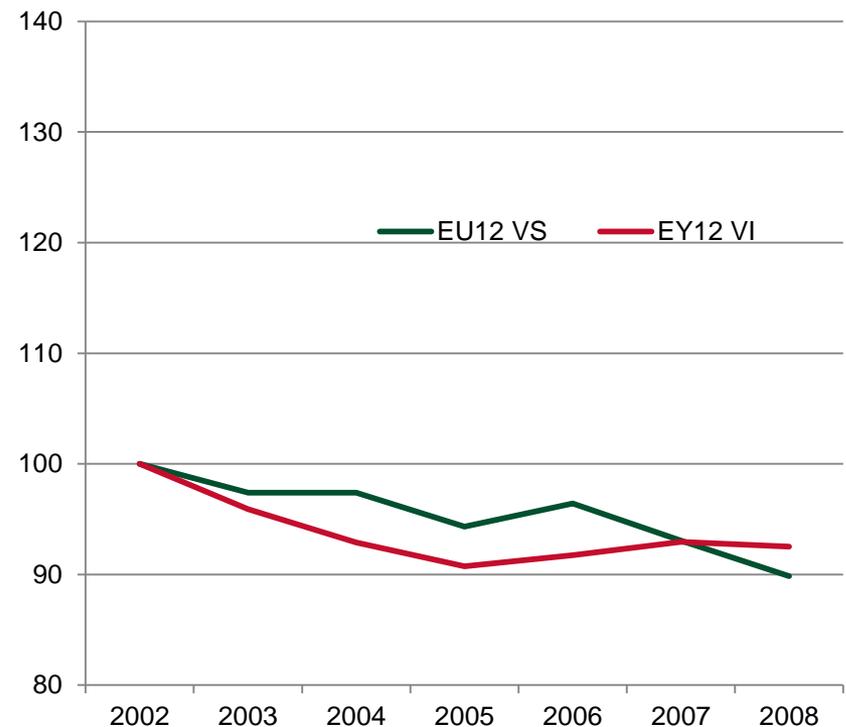


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Indices of passenger km: EU15
(1998=100)



Indices of passenger km: EU 12
(2002=100)





Causes of passenger growth

- The rapid growth of passenger traffic in France and Spain cannot however be attributed to competition as there has been none.
- Investment in high speed rail has clearly been the major cause of growth in these countries
- In the UK, there is little open access operation - nearly all traffic is carried by franchise operators which rarely compete with each other on the tracks.
- Vertical separation is not essential for franchising (the McNulty report has recently advocated a degree of vertical integration for British franchises)

Role of open access passenger competition



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- So far, mainly niche market entry
 - Britain,
 - Germany
 - Sweden
 - Italy

- Head on competition
 - Italy (NTV starting in 2012)
 - Austria (Westbahn started Dec 2011)



Effects of Open Access Competition

- **Lower fares**
- **Additional services**
- **Use of spare capacity**
- **Pressure on costs**

BUT ALSO

- **Reduced profitability**
- **Loss of economies of density**
- **Poorer use of scarce capacity**
- **Loss of integration and of services elsewhere**



Britain

All services, including inter city

Sweden

All subsidised services, including long distance

Germany, Denmark, Netherlands

Some regional services only (but also Dutch high speed line)



Results of Competitive Tendering

- **Increased traffic in all countries**
- **20-30% reduction in subsidies in Sweden and Germany**
- **But costs increased in Britain**
- **Competitive tendering**
 - preserves economies of density**
 - permits a degree of vertical integration**
 - enables the maximum contribution to be made to infrastructure costs, through the premium paid for the franchise**

Conclusions on the impact of European rail reform



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- There has been some competition in the freight market; but although barriers to entry remain a problem it is not clear that complete vertical separation is the best solution
- The net effect of liberalisation and restructuring appears to have reduced costs and increased traffic
- So far on track competition in the passenger market has been very limited even where permitted; it has benefits but also costs
- Passenger franchising has generally been successful, despite the problems in Britain
- So there is potential benefit from further market opening in both freight and passenger traffic but uncertainty as to how best to do it