Institute for Transport Studies
FACULTY OF ENVIRONMENT

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Feedback regarding the opening up of passengers railways services: The case of Great Britain

Symposium, Competition and Regulation: Perspectives for the Rail Transport Market

June 29th, 2017

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(with acknowledgement to the contributions of Professor Chris Nash and Dr Phill Wheat to some of the slides included)

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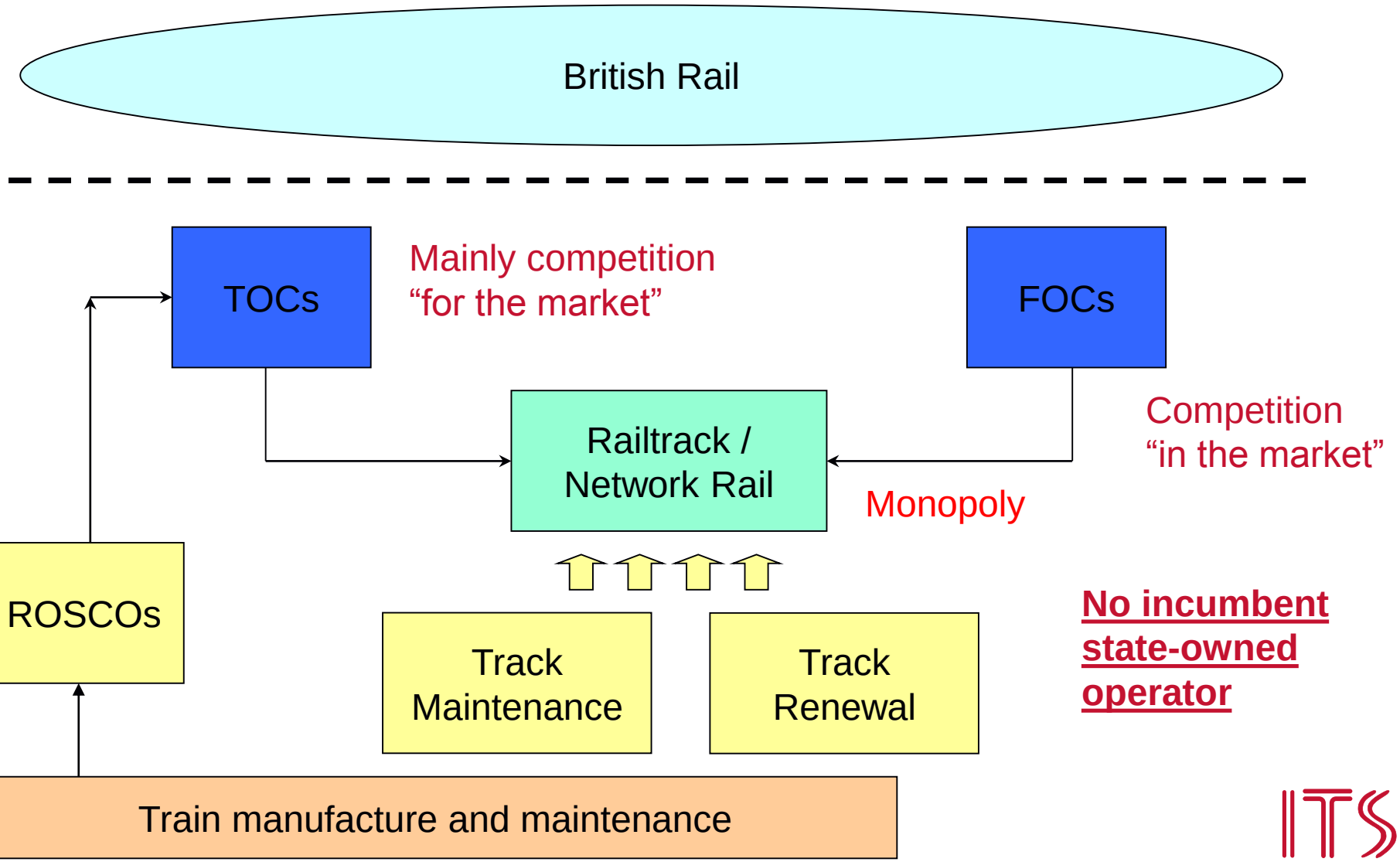
Agenda and objectives

- Brief reminder of the reforms and industry structure
- Overview of the impact of GB Rail Reforms
- Outline some possible solutions to current challenges
- Have a discussion

Context: Rail industry structure



Organisation and governance (with some re-organisation…)

- **Office of Rail and Road (ORR)** – independent of government and operators; efficiency of Network Rail; fair access to the infrastructure; promote competition; safety regulation
- **OPRAF / SRA / Department for Transport** – responsible for letting and managing the franchises; determining level of subsidy and high level output specification; and strategy
- **Regional bodies**: Devolution of powers for Scotland, Wales, London and Merseyside – emergence of other regional bodies (e.g. Rail North, representing 29 local bodies in the region)
- **Other bodies**: Transport Focus (“independent transport user watchdog”); Rail Accident Investigation Branch (independent investigation of accidents); Rail Safety and Standards Board (support industry on safety, efficiency, business performance)

Approach to competition - a very quick overview

- On-rail competition ("in the market") rejected on practical grounds
- So **competition for the market** chosen (plus marginal open access – this may get an increased role in future)
- Infrastructure separated from operations – initially 25 operating franchises
- Bidding based on lowest subsidy (**net cost contracts**) – most franchises **7 years** initially
- Plus pre-qualification; franchise contract specifies service levels and quality; performance regime; c. 40% of fares regulated

Impact: long term demand series

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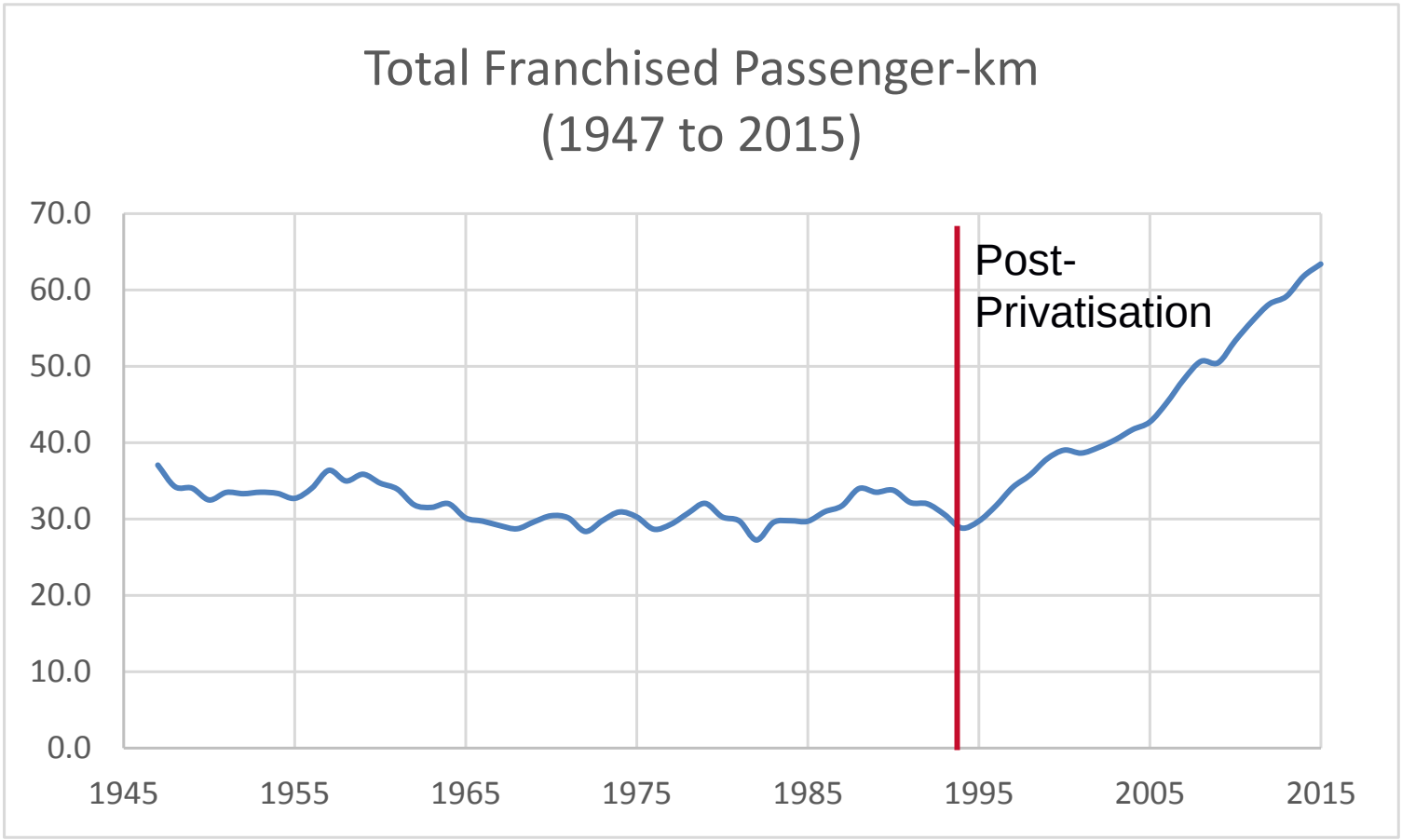
Figure 1: Total Franchised Passenger-km (1947-2015)



Source: Office of Rail and Road (ORR) National Rail Trends Data Portal

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Impact: Countries with fastest growth in passenger km (%)

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	2000-2012
Great Britain	59
Switzerland	53
Sweden	43
Belgium	34
Netherlands	16
France	27
Germany	17
Spain	12

Source: EC (2014) EU transport in figures

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Impact: Explaining demand growth (Britain)

Table 10: Impact of External Variables on 1990 -1998 Rail Demand Growth

	London	Non London	South East
GDP	1.301 (1)	1.196 (1)	1.149 (1)
Car Time	1.043 (4)	1.031 (4)	1.067 (3)
Fuel Cost	1.045 (3)	1.056 (2)	1.049 (5)
Population	1.038 (5)	1.022 (6)	1.055 (4)
Car Ownership	0.975 (6)	0.951 (3)	0.972 (6)
Post 1995 Trend	**1.119 (2)**	**1.033 (5)**	**1.092 (2)**
Total	1.606	1.307	1.440

Note: Figures denote the proportionate change in demand in the period attributable to this variable. The overall growth is what it is estimated would have happened for the group of services concerned in the absence of specific rail management decisions, in terms of changes in services and fares. Rankings of the magnitudes of each effect are given in parentheses.
Source: Wardman (2006)

- So is franchising really the driver of demand growth? What about other countries - transfer of responsibility for regional services to regional transport authorities?

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Impact: Changes in British TOC own costs,1998–2015 (%)

Table 2: Train Operating Company Real Unit Cost Changes 1998-2015)

	Per train-km	Per vehicle-km*
Staff	+44%	+34%
Rolling stock lease payments	-20%	-26%
Other	+46%	+35%
Total	+25%	+16%

(excluding payments to Network Rail)

- See Smith (2016). Very high costs is one of the key problems facing Britain's railways
- Unit costs per passenger-km have fallen marginally over the period – but the efficiency of the industry in delivering the timetable more reflective of performance

Competition with privatisation usually results in cost (or subsidy) reductions

- Germany and Sweden rail tendering: **20-30%** savings; Alexanderson (2009) and Alexandersson and Hulten (2007)
- Netherlands rail tendering: **20-50%** savings; van Dijk (2007)
- Competitive tendering in other industries: savings of **20-30%**; e.g. Domberger et. al. (1987)
- **45%** savings in bus de-regulation 1985-1997 (Britain); Nash (2008). **4-6% p.a**. savings in utility privatisations (Britain); see e.g. Oxera (2008)
- Caveat: net versus gross cost contracts

Why have costs not come down?

- Franchisees take over an existing franchise (as franchises very large) so take the existing staff and rolling stock:
  - Combined with short franchises and net cost contracts - loss of revenue from industrial disputes weakens incentives for cost reductions
- Franchise size, structure, length, contract type?
- Misalignment of incentives due to fragmentation? Case for closer integration?
- Franchising not working? Role for open-access?

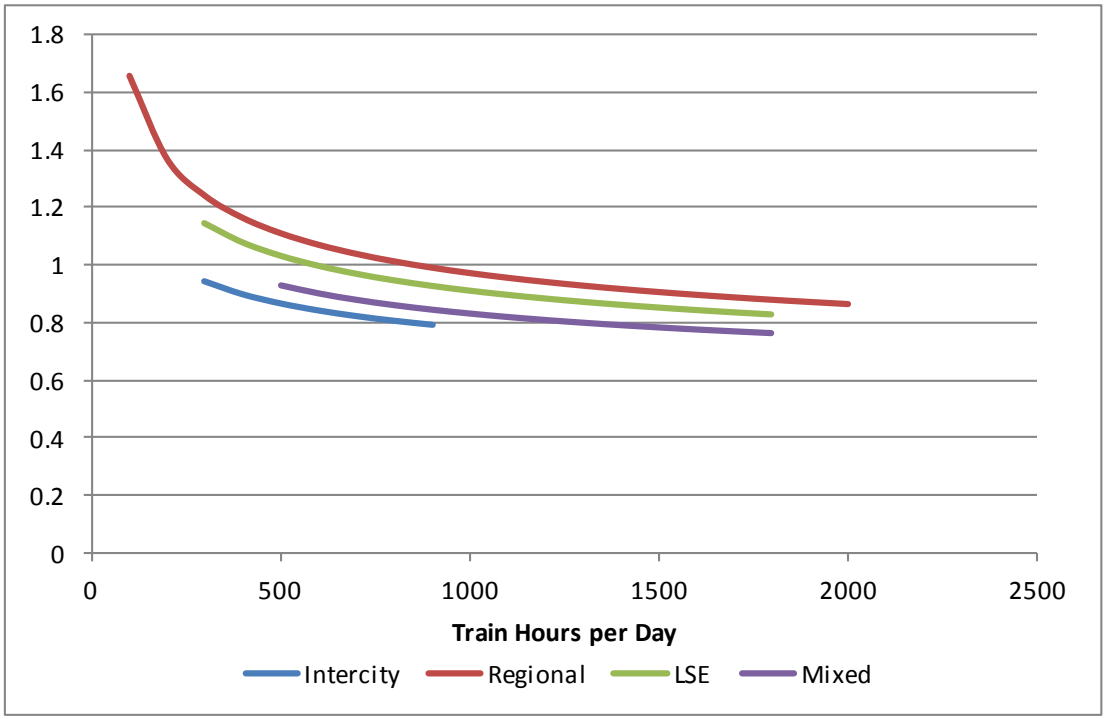
Franchise size by country (train-km)

	Mean
Britain	26.5
Germany	3.3m
Sweden	2.6m

Source: Nash et. al., 2013 p. 199

Returns to scale

Figure 3 Returns to scale for different TOC types holding other variables constant



Source: Reproduced from Wheat and Smith (2015)

- Optimal size and structure of franchises depends on factors other than economies of scale

- Also German evidence of decreasing returns for largest franchises

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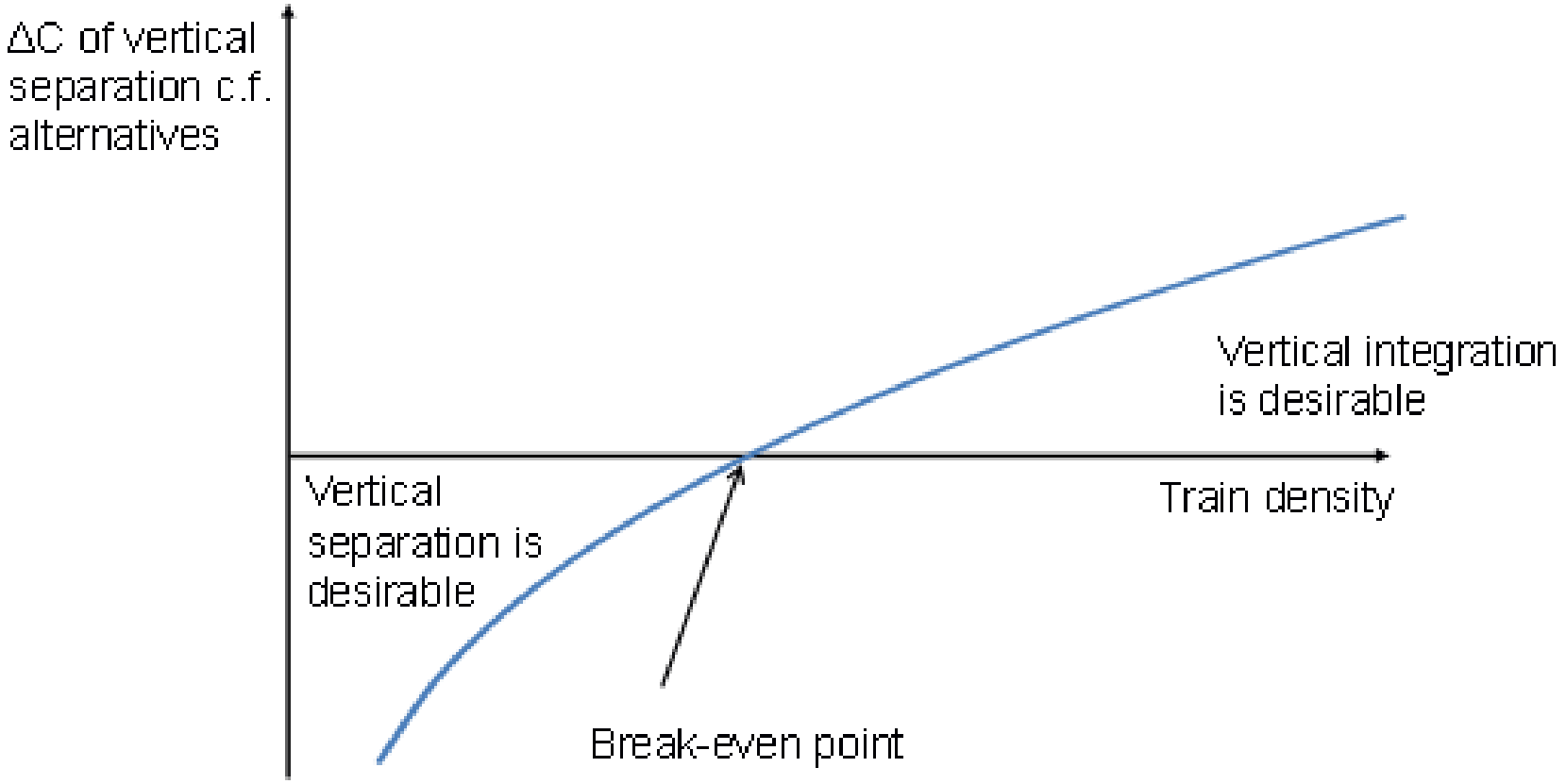
Franchise length and structure

- Little clear impact on the evidence on franchise length in GB
- Short contracts post-2000 raised costs - Smith and Wheat (2012) – main issue was the structure of the contracts
- New study underway for GB – but separating direct award effect from length?
- Evidence that longer franchises in Germany reduce costs (better rolling stock lease deals)
- Gross cost contracts seem to have been successful (demand and cost side in Sweden for example)

Impact of vertical separation on costs



- But how to achieve closer integration: use of alliances, efficiency benefit sharing mechanisms? See Mizutani et. al. 2015 and van de Velde et. al. 2012

Possible solutions

- Judicious use of **gross cost contracts** for a time to bring focus onto costs
- Clearly make sense more where regional authority is planning and marketing services - as in Sweden and Germany
- Arguably – and controversially – gross cost contract may have benefits w.r.t. industrial disputes
- **Longer franchises in some cases** – incentives for cost reduction – though how long given rolling stock life?
- **Smaller franchises** – given DRS and risk /capital arguments; plus may support greater competition

Other possibilities

- Increased open access – an extension of previous arguments to an extent
- Research shows OA are surprisingly similar in terms of unit costs despite being very small – **appear to have a business model advantage** Rasmussen, Wheat and Smith (2015)
- But would they keep these advantages as they became larger?
- Do we understand where their cost advantage comes from?
- Challenges of reforms of access charges and PSO levy

Concluding remarks

- Argument for **smaller franchises** (decreasing returns; risk; entry; competition on route through franchise overlaps)
- Some use of **gross-cost contracts** may force focus on cost – and again reduce risk
- In some cases, **longer franchises** could be advantageous in terms of cost reduction – though limited evidence
- Evidence that **VI could reduce costs on busier railways** – but what form should it take? Can Alliances work? Full VI?
- **Open-access** could play a useful role for long distance

Concluding remarks…..

- How to **combine the different reforms** – avoid big bang?

Thank you for your attention

Andrew Smith

- See also report on ‘Liberalisation of passenger rail services’, published by the Centre on Regulation in Europe (CERRE).
- http://www.cerre.eu/publications/liberalisation-passenger-rail-services

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