

5th European Rail Transport Regulation Forum

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Economic effects of Vertical Separation in the railway sector “EVES-Rail” study

Preliminary findings

Study carried out by:

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Starting point

- Context
 - European Commission preparing 4th Railway Package
 - Existing studies show inconsistent findings on impact of unbundling
 - Good performances observed in each category of institutional organisation (vertical integration VI, holding companies HC, vertical separation VS)
- Main research question
 - *“What is the potential impact of various forms of unbundling in the rail sector?”*

Objectives of the study

- Improve knowledge on
 - Impact of institutional organisation on
 - Total costs of the railway sector
 - Modal share of rail
 - Factors influencing the effects in each institutional organisation
 - Focus on mis-alignment of incentives between actors (in particular infrastructure manager IM and railway undertaking RU)
 - Circumstances in which some organisational options might be more/less suitable

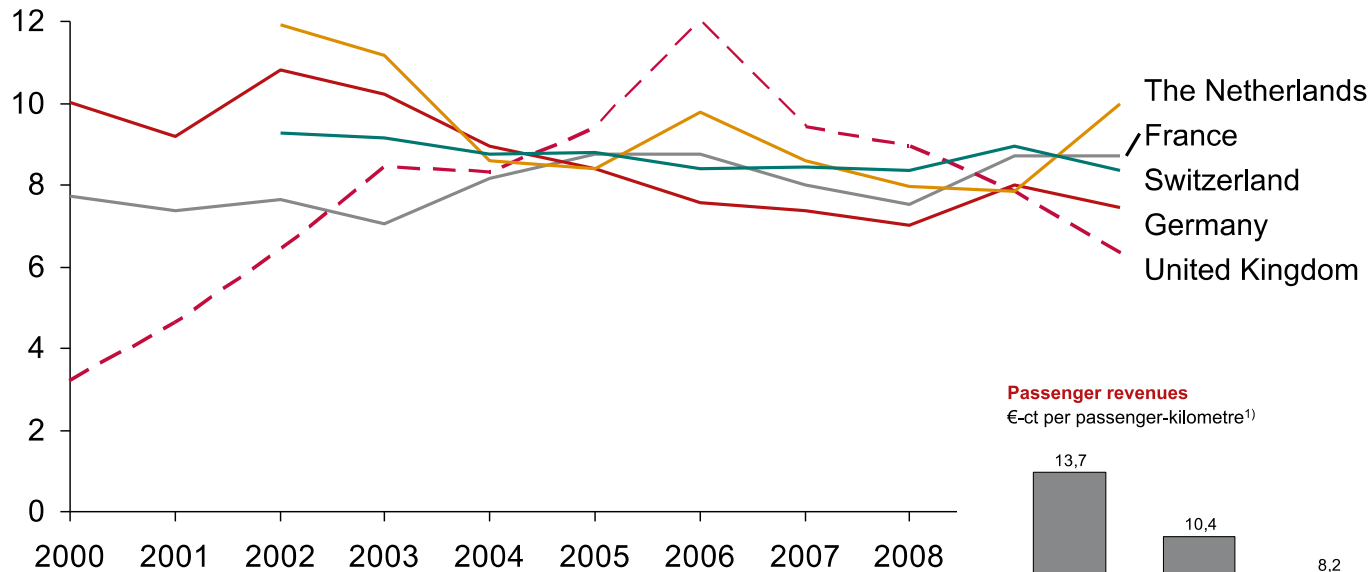
Study design

- Review of academic and consulting literature
- Econometric analysis (on an improved data set) of
 - Total rail costs
 - Modal share of rail
- Analysis of the rail value chain
 - Potential misalignment issues
 - Interfaces and coordination mechanisms
- Review of options for non-discrimination besides unbundling
- Estimates of costs and/or benefits for society of switching institutional setup
- Institutional options
 - Vertical separation (VS)
 - Re-aligned separation
 - Separation of essential functions (EF)
 - Holding company/hybrid regimes (HC)
 - Enhanced compliance mechanisms
 - Vertical integration (VI)

State funding

State funding

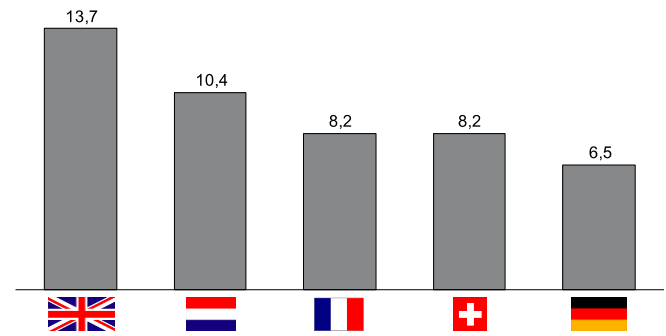
€-ct per transport unit¹⁾



1) Price level 2011, normalised by purchasing power parities

Passenger revenues

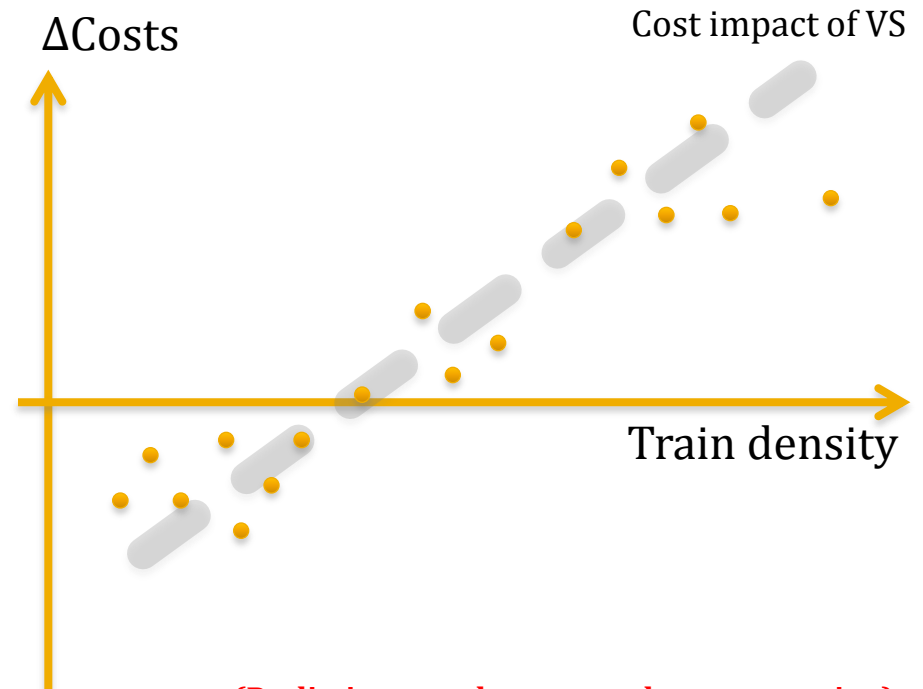
€-ct per passenger-kilometre¹⁾



1) Data of 2010, normalised by purchasing power parities

Cost effects of vertical separation (VS)

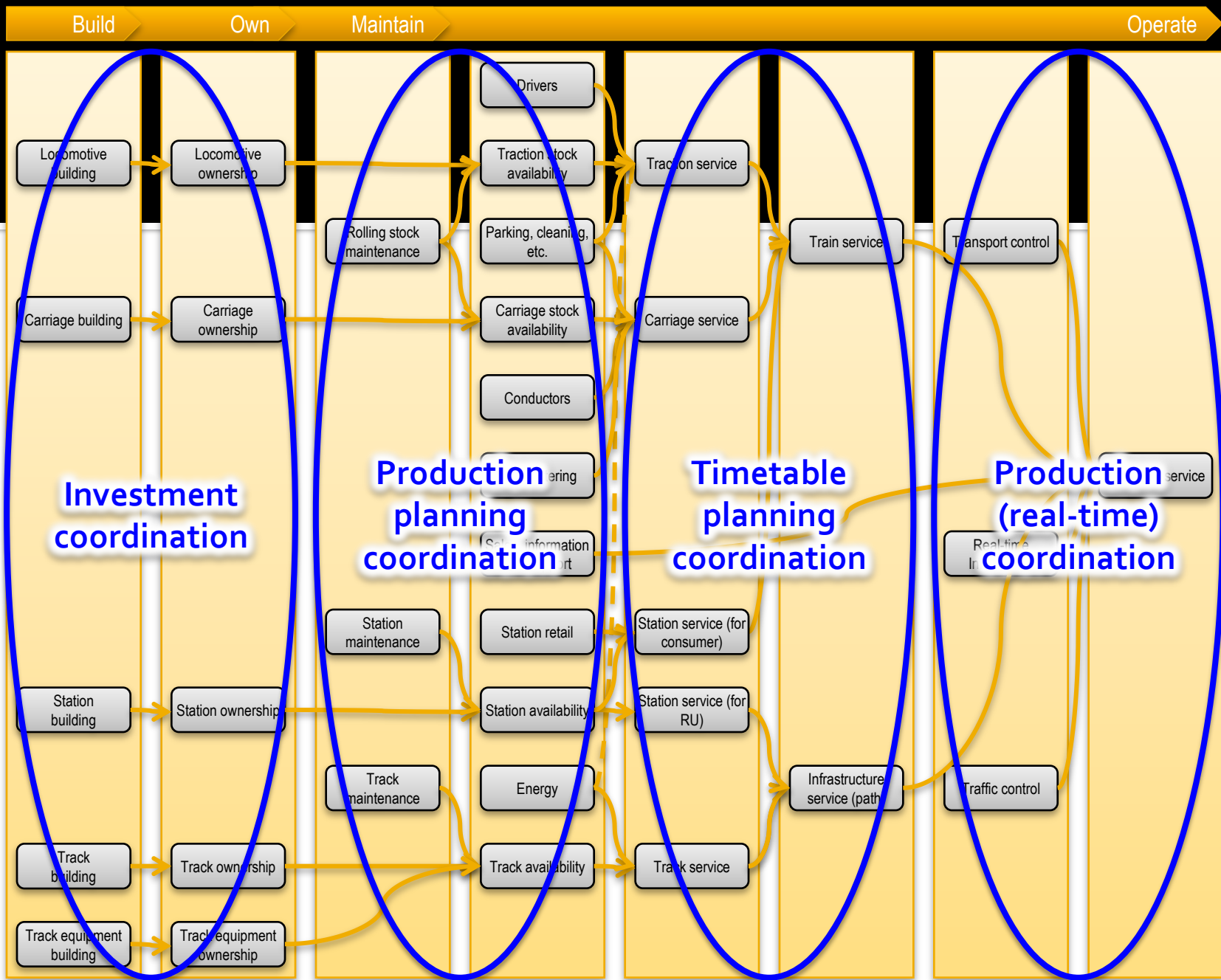
- Imposing VS
 - Cost reductions for some
 - Cost increases for others
- Overall: cost increase
 - Effect increases with higher train densities
 - (Higher densities is a policy goal)
 - VS seems less favourable for railways with high proportion of freight



(Preliminary and conceptual representation)

Modal shares and competition

- No evidence that one model leads to significantly higher rail modal shares than the other
 - Both for freight and passenger traffic
- No evidence in practice that vertical separation leads to more competition than other regimes



Misalignment

- Literature:
 - VS leads to limited additional transaction costs (+1%)
 - Induced costs from misalignment likely to be higher (up to 20%)
- Misalignment issues increase in importance
 - In non steady-state railways (demand increase, investments, reconfigurations)
 - In systems with higher train densities
- How to solve misalignment issues?
 - Track access charges and performance regimes cannot solve all misalignment issues
 - Neither can regulators (compared to vertical integration/holding)
 - Recent development of various hybrid arrangements
 - Joint ventures, cooperations, etc.
 - Easier to reach where a single operator carries a large part of the traffic

Preliminary policy implications

- Imposing vertical separation to all of EU would increase total costs
 - Even more if traffic densities increase in line with EU policy aims (Transport White Paper)
 - No clear correlation between structure (VI, HC, VS,...) and entry
 - Essential functions: facts show various arrangements can work
 - Where VS is adopted, measures are needed to ensure re-alignment of incentives between IM and RU
 - Track access charges and performance regimes (bonuses and penalties) are not sufficient
- Different structures work best in different circumstances**