Round-Table on Vertical Relations between Transport and Logistics Businesses
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Railroad Industry Structure and Competition

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RAILROAD CORNERTSTONES

Two technological constraints

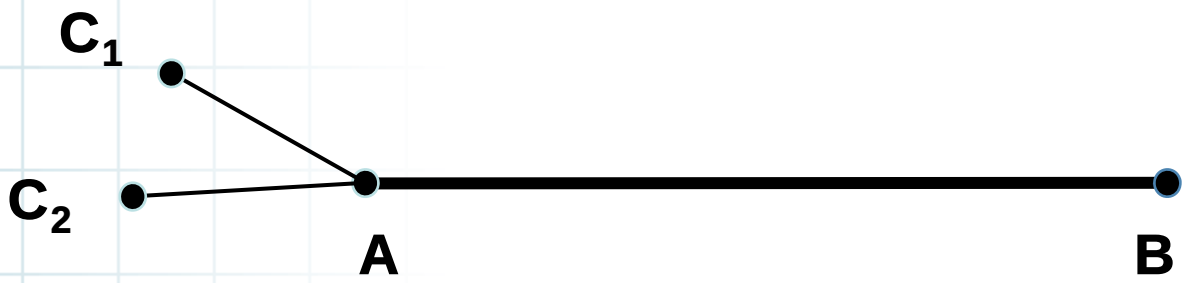
- Wheels must be round
- Trains are made of single wagons

Wheels must be round

- Two rules
  - The longer a wagon is operating, the more irregular the shape of wheels becomes
  - Irregular wheels It increases the wear-and-tear on tracks, and hence the risk of accidents
- Solution
  - Use of novel technologies (sensors, transponders),
- Requirement
  - Investment below and above the wheel
  - Standardized data

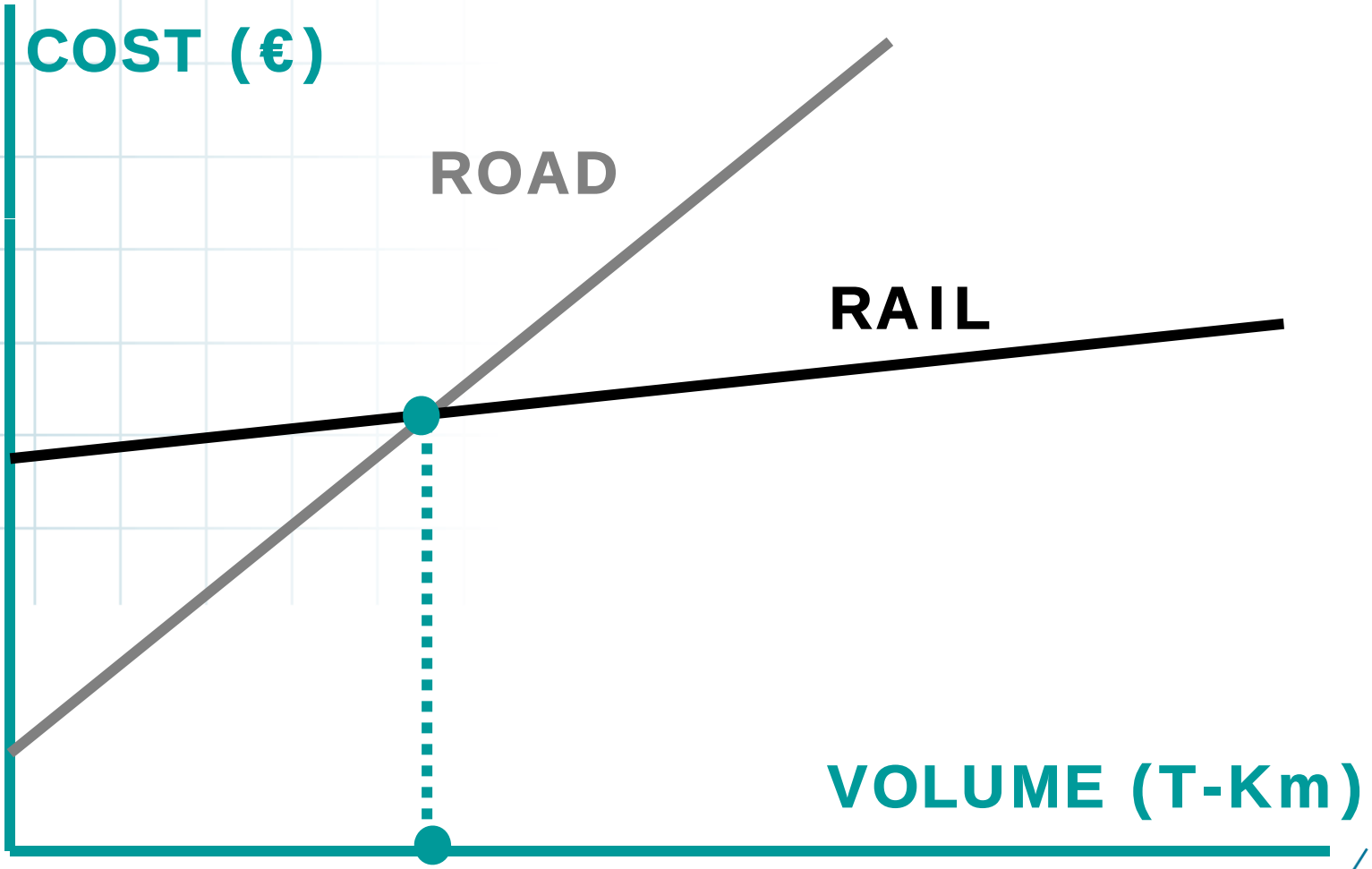
The single wagon problem

- Network
  - A – B market: long haulage
  - C_1, C_2, … C_n – A markets: short haulage



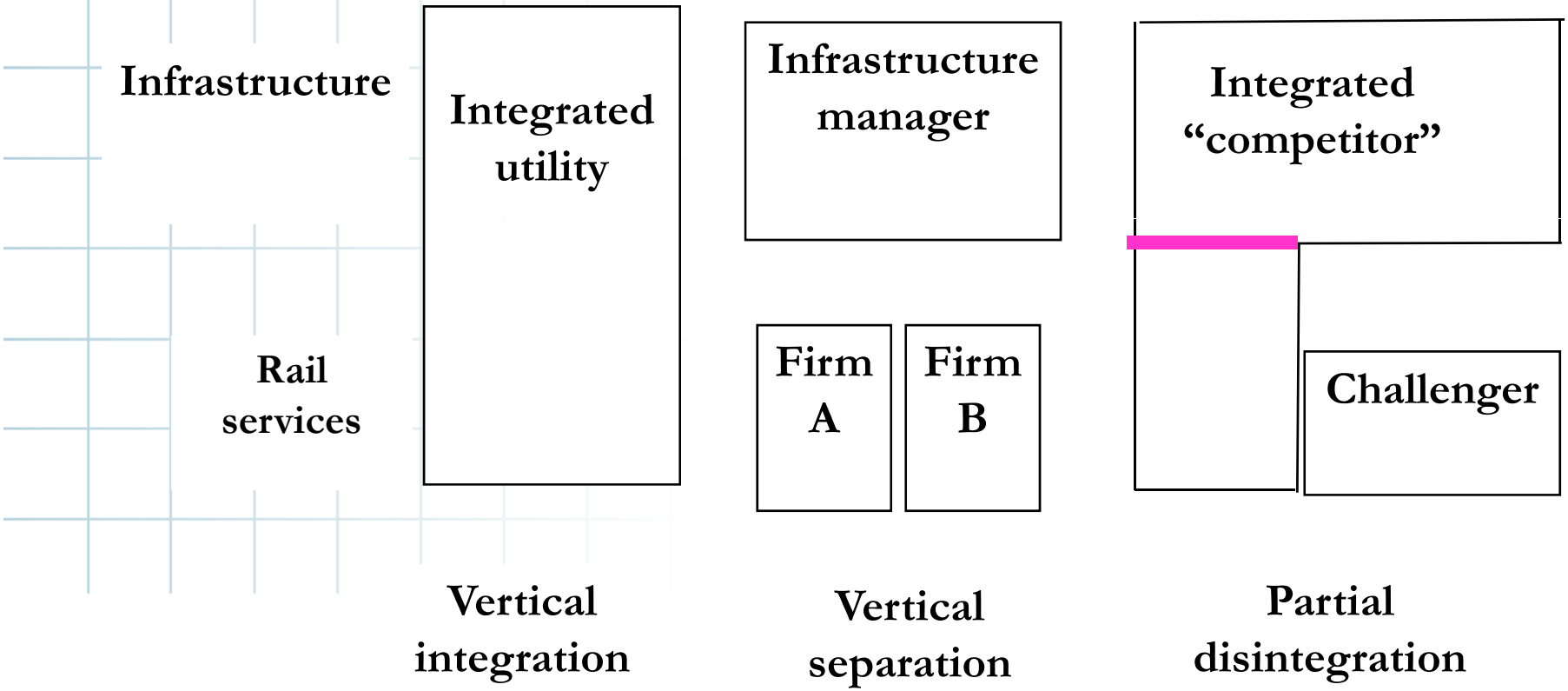
- Market
  - N containers or N trucks or N single wagons

Different cost structures: Which scope for intermodal competition?



THE POLICY DEBATE

Which industry structure?



Separation versus integration

- Contra integration
  - Infrastructure under the control of the incumbent
    - Depress competition (problem of discrimination to entry)
    - Costly for the consumers
- Pro integration
  - Reinforce the efficiency of the incumbent
  - Increase the competitiveness of rail vis-à-vis other transportation modes

EMPIRICAL EVIDENCES

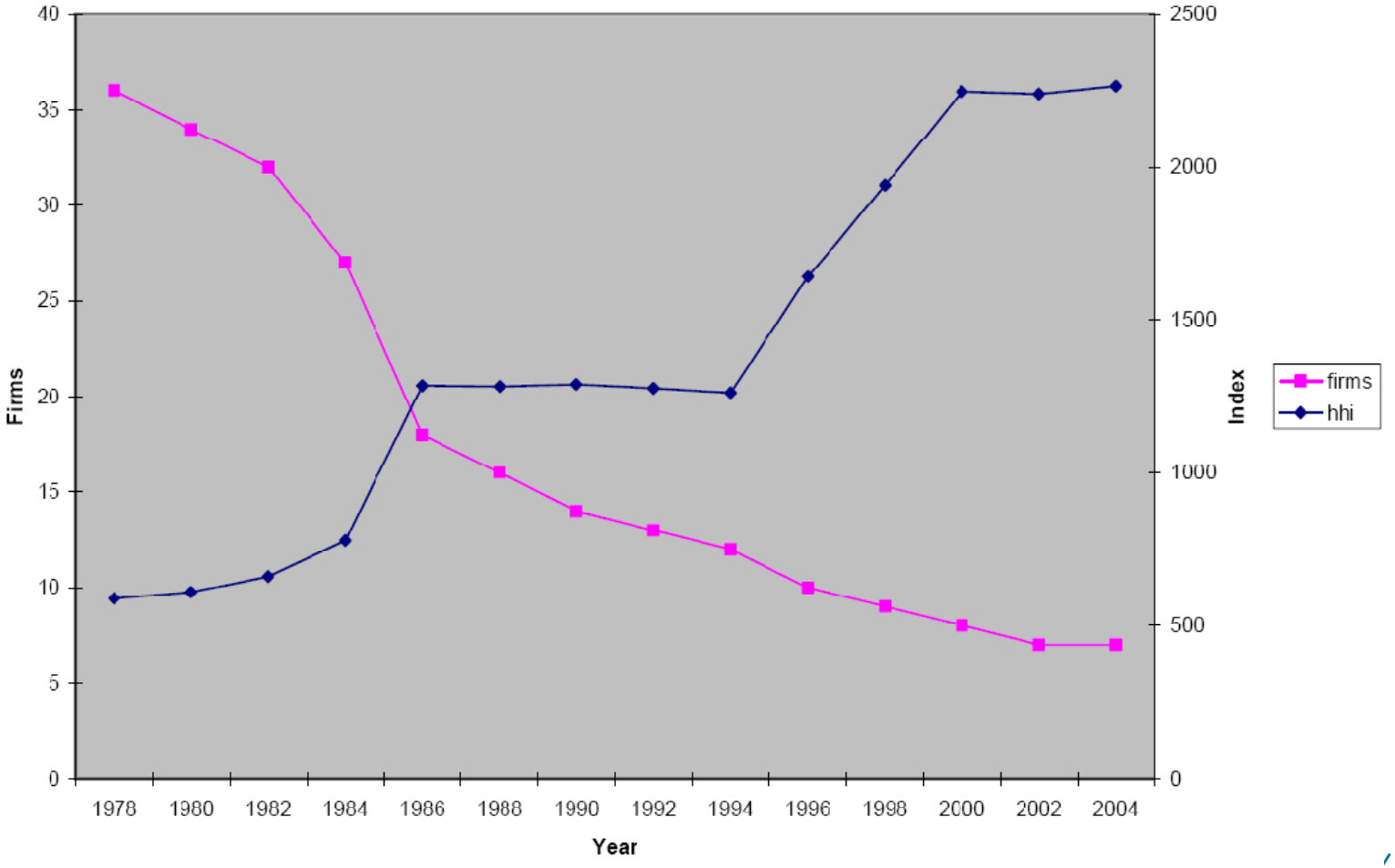
Experiences

- In most countries, integration
- Separation
  - UK
  - Japan
  - The Netherlands
  - France?

Separation of the US railroad industry
Simulation exercise based on a McFadden cost model

Projected Costs	Integrated Firm	Separated Firms		Diversified Firms	
Fixed Cost		169,067	338,134	169,067	338,134
Infrastructure		217,410		217,410	
Operations					
Bulk				823,799	
General Freight				984,802	
Subtotal		1,065,292		1,808,601	
Total	1,150,860	1,451,769	1,620,836	2,195,080	2,364,147

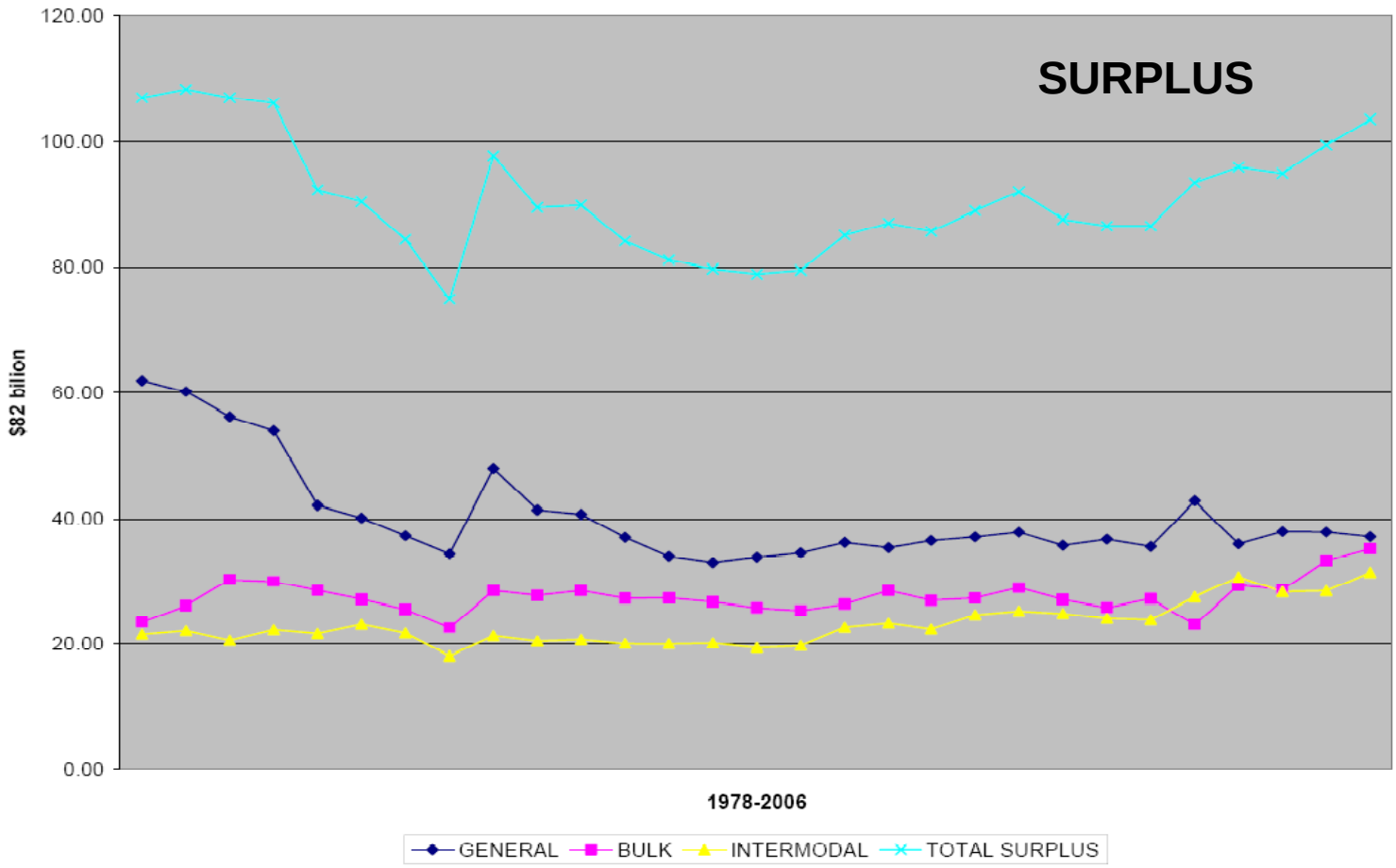
The US freight railroad industry
HHI versus number of firms



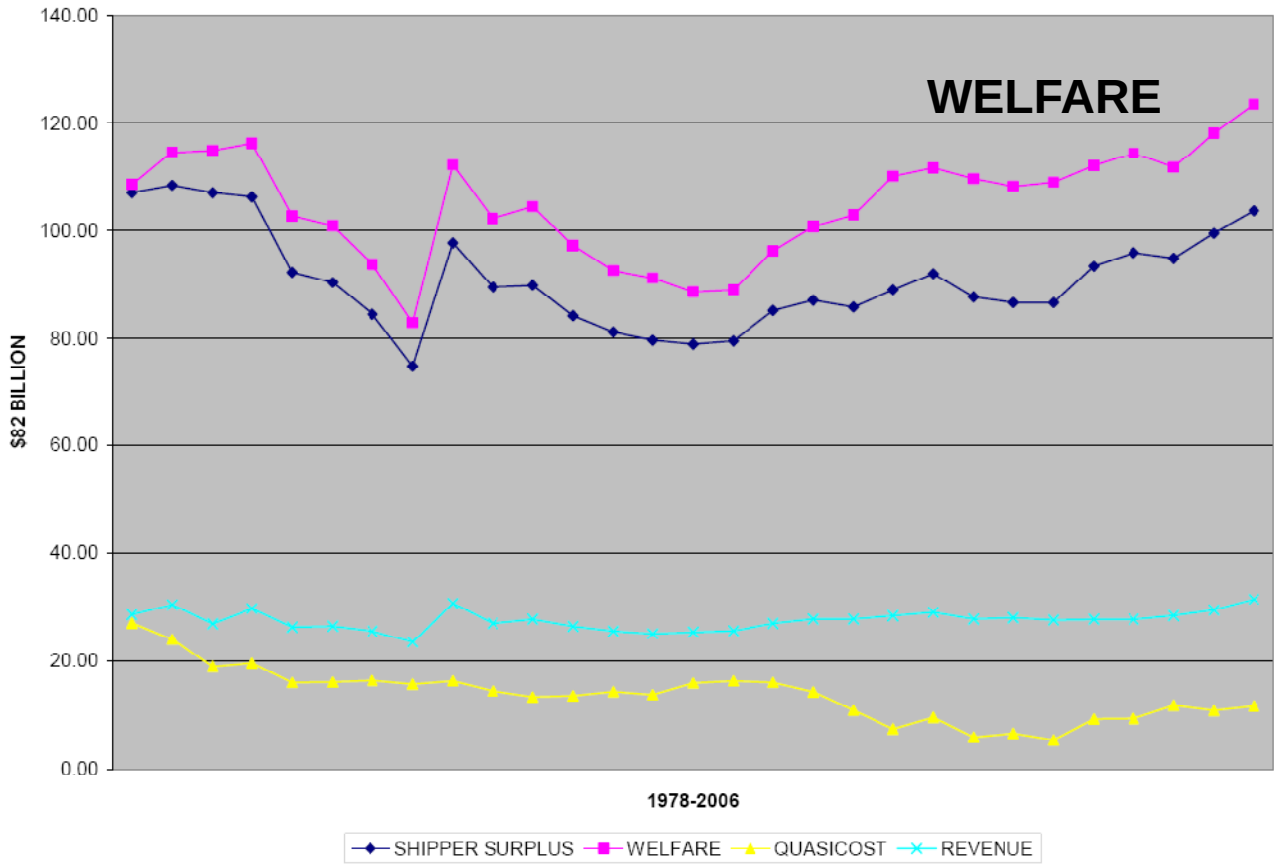
The US freight railroad industry
High price cost margins!!!

Railroad Market	BNSF	UPSP	CSX	NSC
Bulk	59%	89%	90%	70%
General freight	74%	83%	73%	71%
Intermodal freight	84%	87%	55%	41%

The US freight railroad industry
Consumer surplus basically stable, increasing lately



The US freight railroad industry
Increase in welfare



Why does the US structure work?
How should we organize the EU rail industry ?

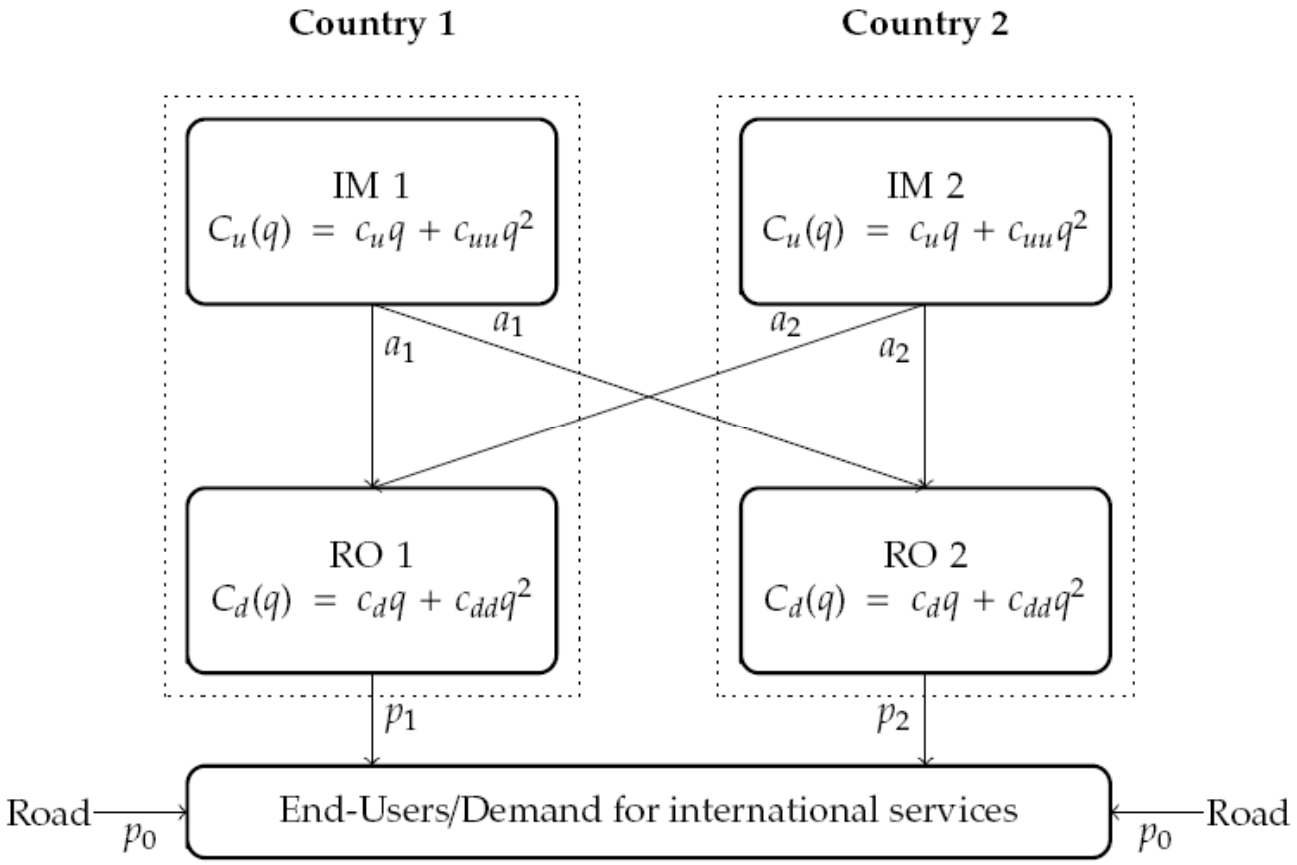


Figure: Structure of the model.

Main results

- Integration can be optimal if Downstream returns to scale
  - Key factors: Double-double marginalisation

Concluding remarks

- The burden of proof should be now on the side on the pros of separation??
  - The research agenda must go on
- Policy recommandations
  - A size does not fit all