



Use of benchmarking by British regulators

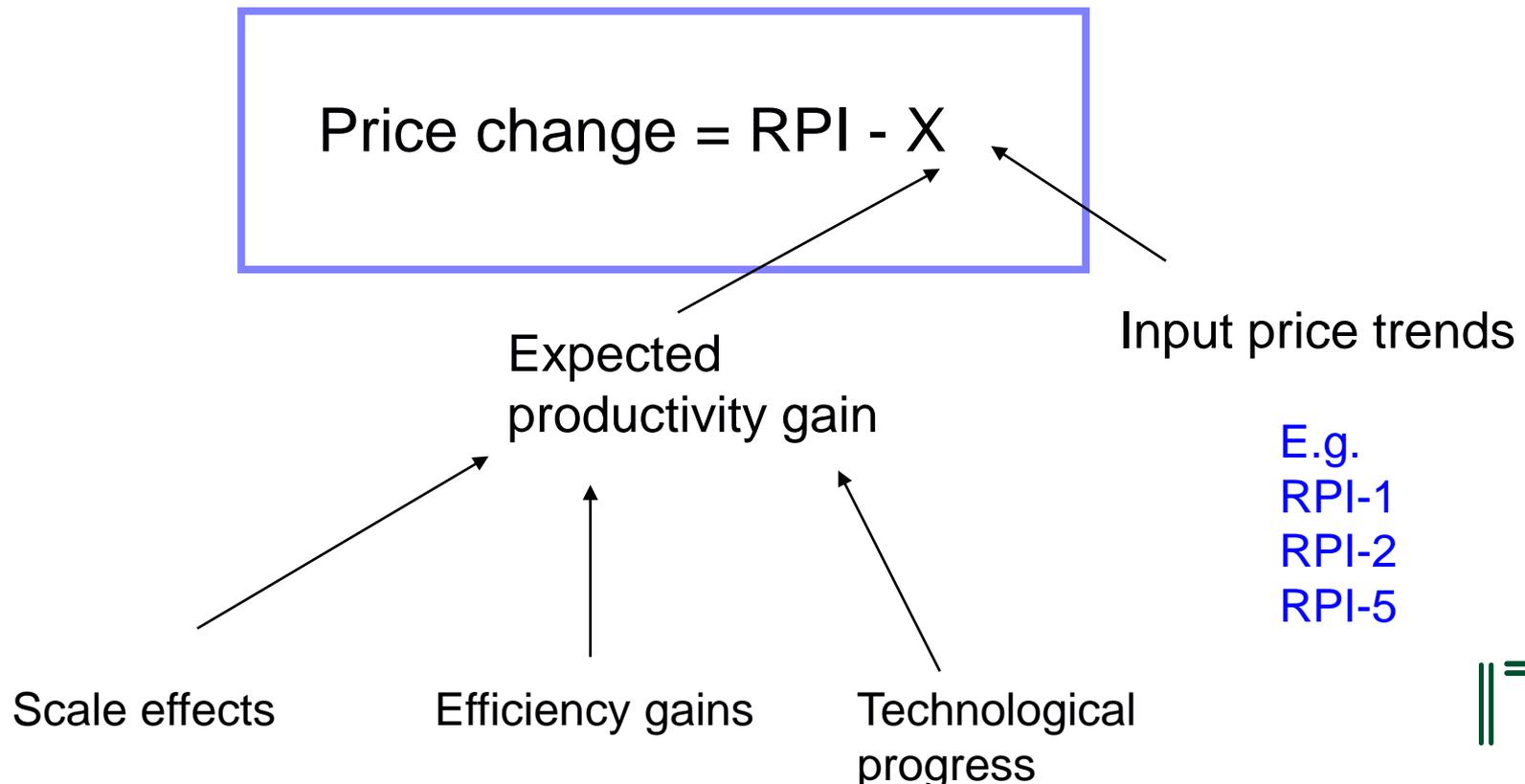
Seminar on Yardstick Competition in Transport, Turin

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RPI-X regulation has been credited with achieving very significant unit cost reductions in the UK

Efficiency benchmarking – or yardstick competition - is a key input into setting the X factor

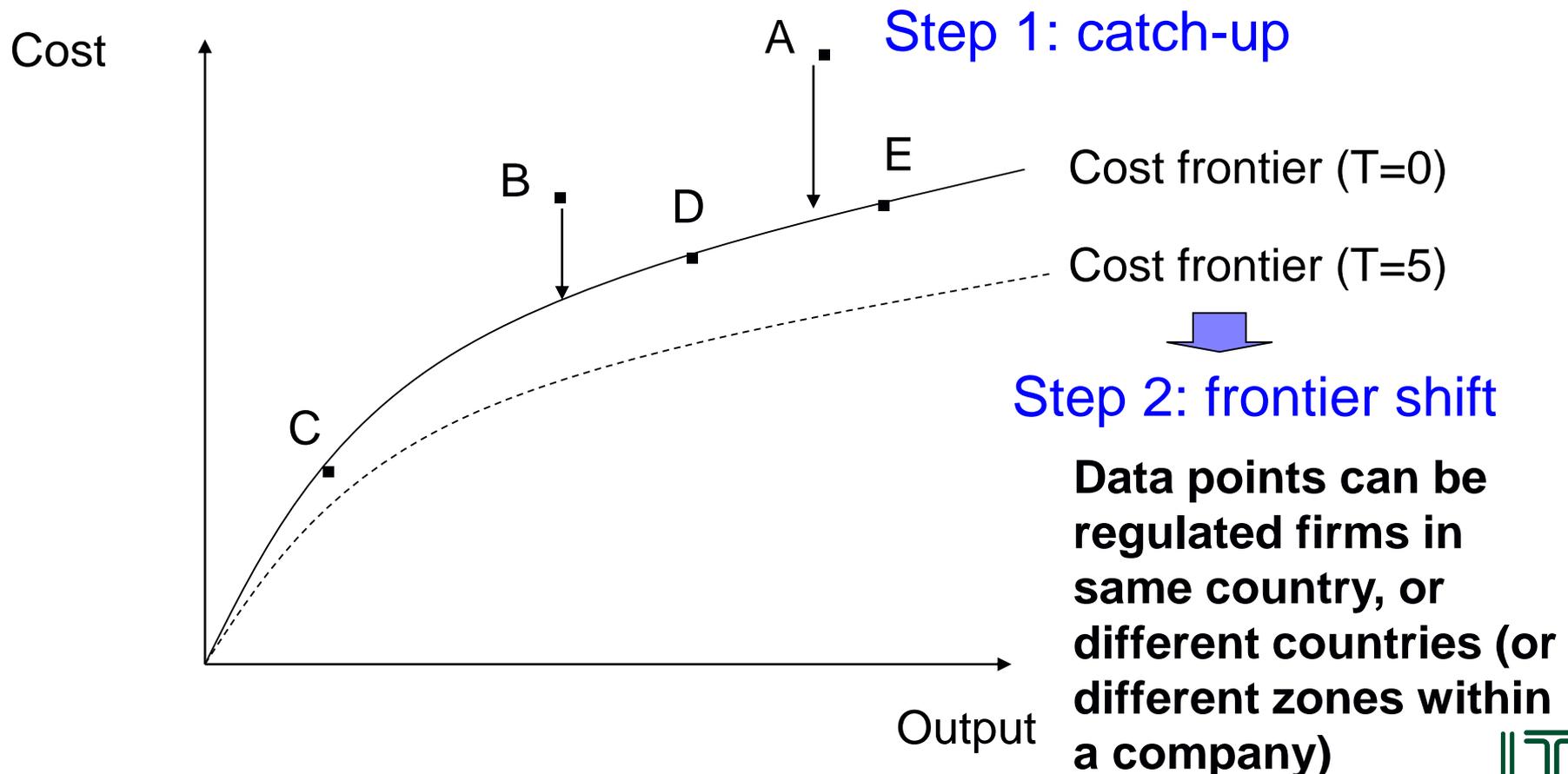


Yardstick Competition Conceptual Approach



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- Regulator eliminates inter-company efficiency differences



Example: Rail

International benchmarking study



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- Panel data: 13 European countries over 11 years
- Used by International Union of Railways (UIC) in its benchmarking
- Standard definitions – to an extent

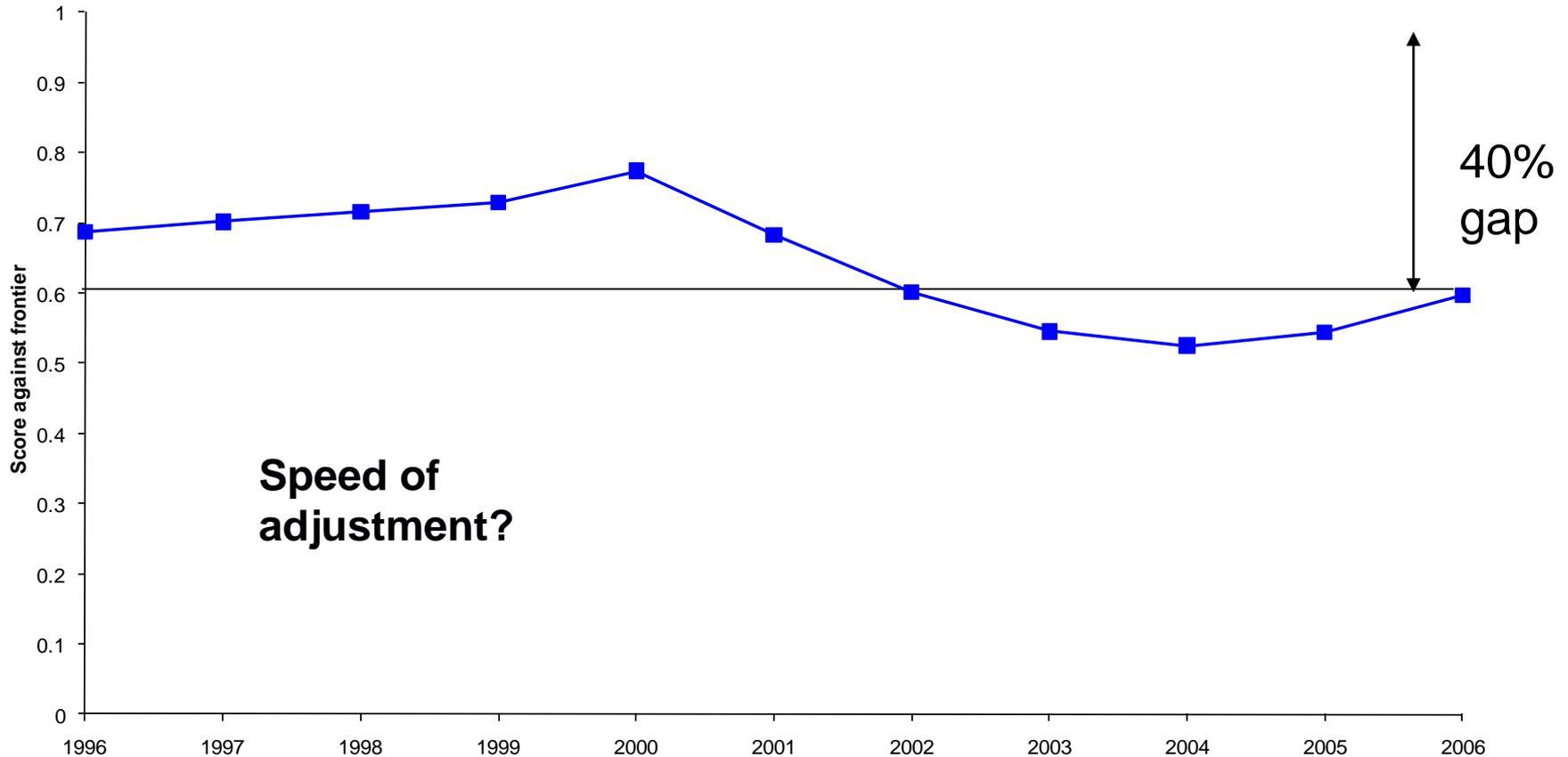
Cost Data	Network Size	Final Outputs	Network Characteristics
Maintenance costs	Track kilometres Route kilometres	Passenger train kilometres	Ratio of single track to route kilometres (as a measure of the extent of single / multiple track)
Total costs (Maintenance + renewals)	Single track kilometres	Passenger tonne kilometres	
	Electrified track kilometres	Total tonne kilometres	Proportion of track electrified
		Freight train kilometres	Number of stations per route km
		Freight tonne kilometres	Number of switches per track km
		Total train kilometres	

Efficiency estimates for Network Rail



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Profile of Network Rail Efficiency Scores: Flexible Cuesta00 Model



Implies a gap against the frontier of 40% in 2006



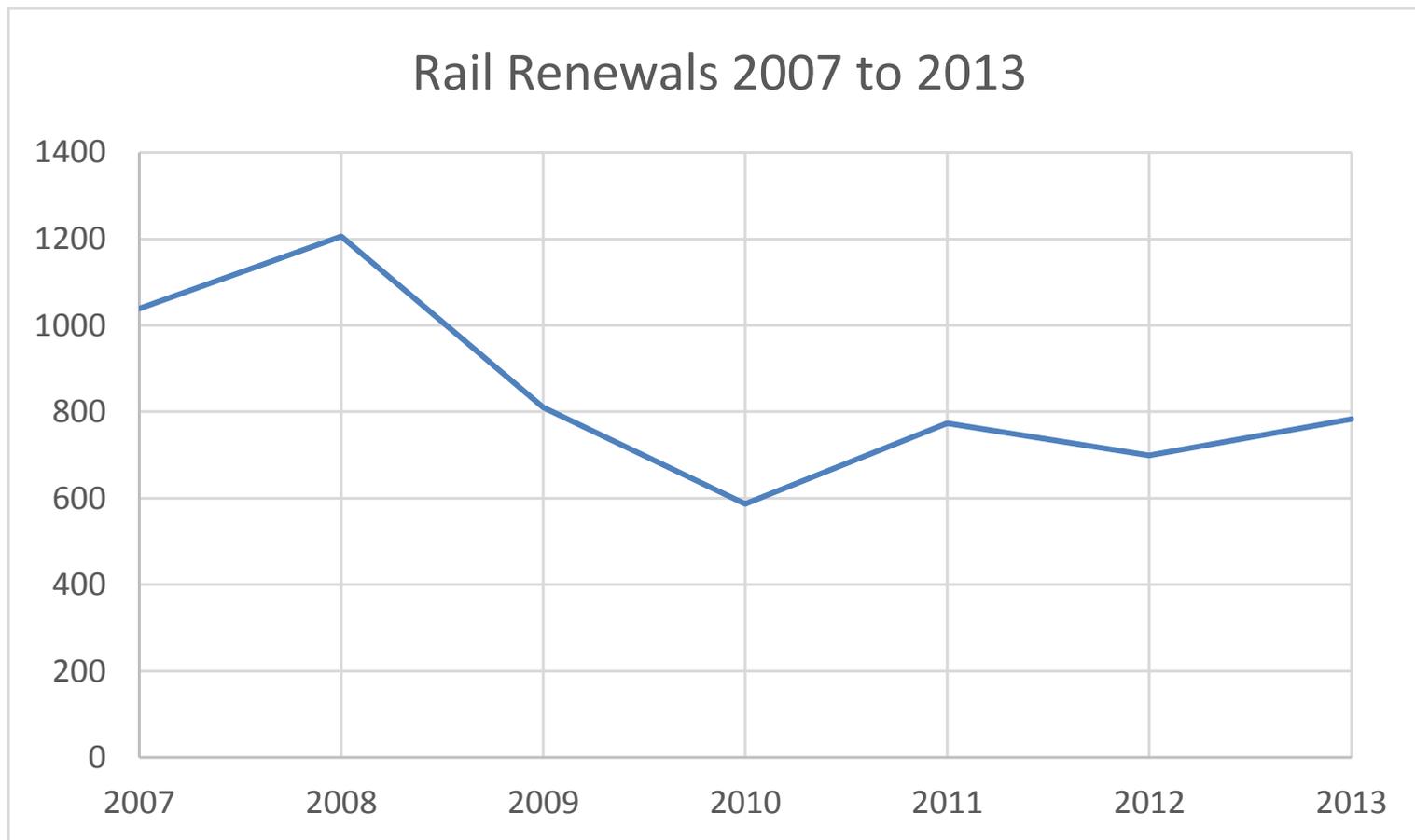
Regulatory challenges

- Do we believe the model? Will the companies accept it?
 - ❑ Eg. CMA enquiry in 2015; 17 of 18 water companies accepted; 1 appeal
 - ❑ Engineering / management evidence?
 - ❑ Do different methods and specifications produce similar results?
- Time consuming to collect data set – long-term commitment
- Modelling fundamental differences in characteristics and quality of railways
- Understanding uncertainty in efficiency modelling
- How to deal with lumpy / cyclical capital costs?

Lumpy capex renewals – rail (whole network)



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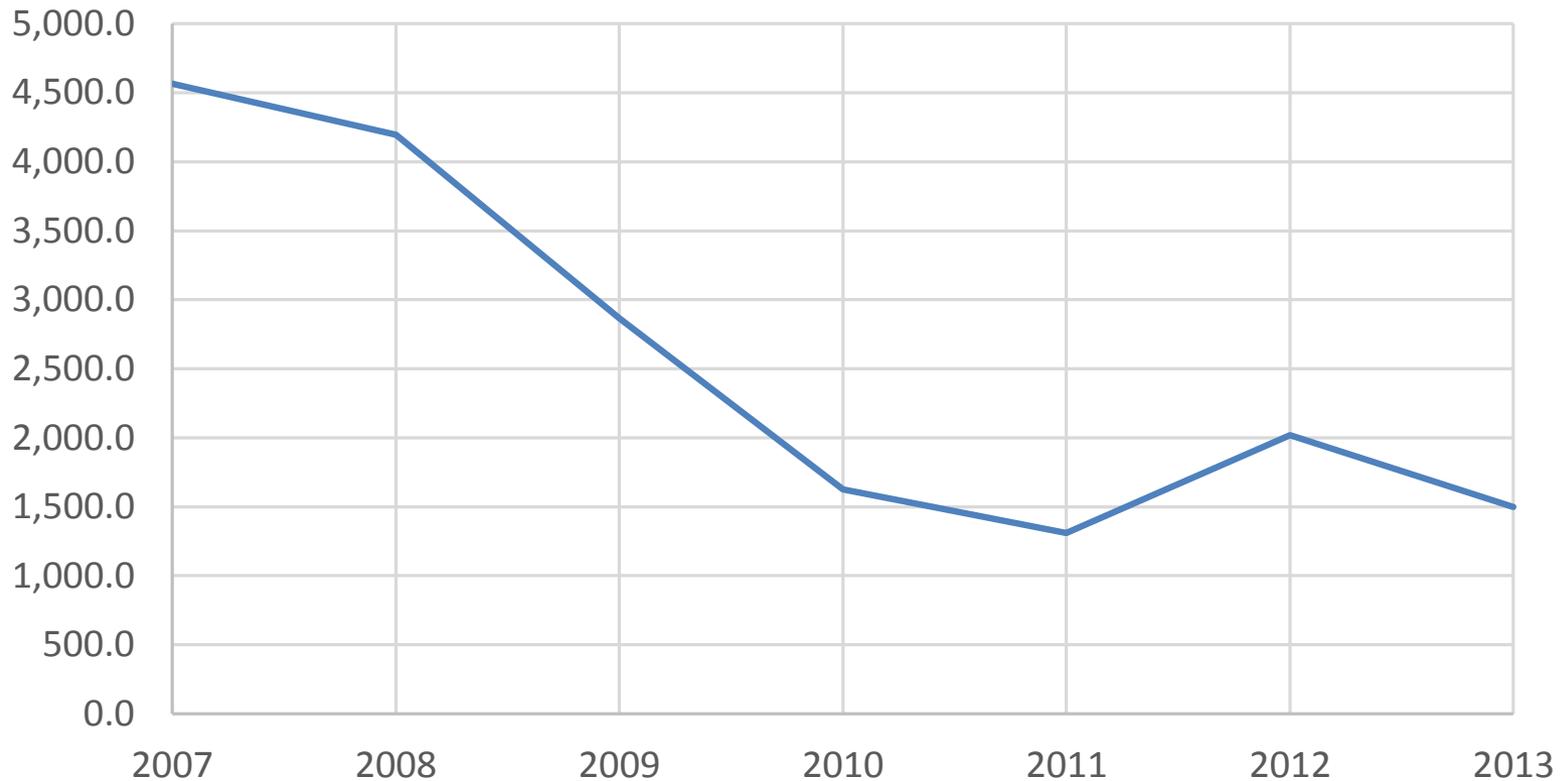


Lumpy capex renewals – water (industry)



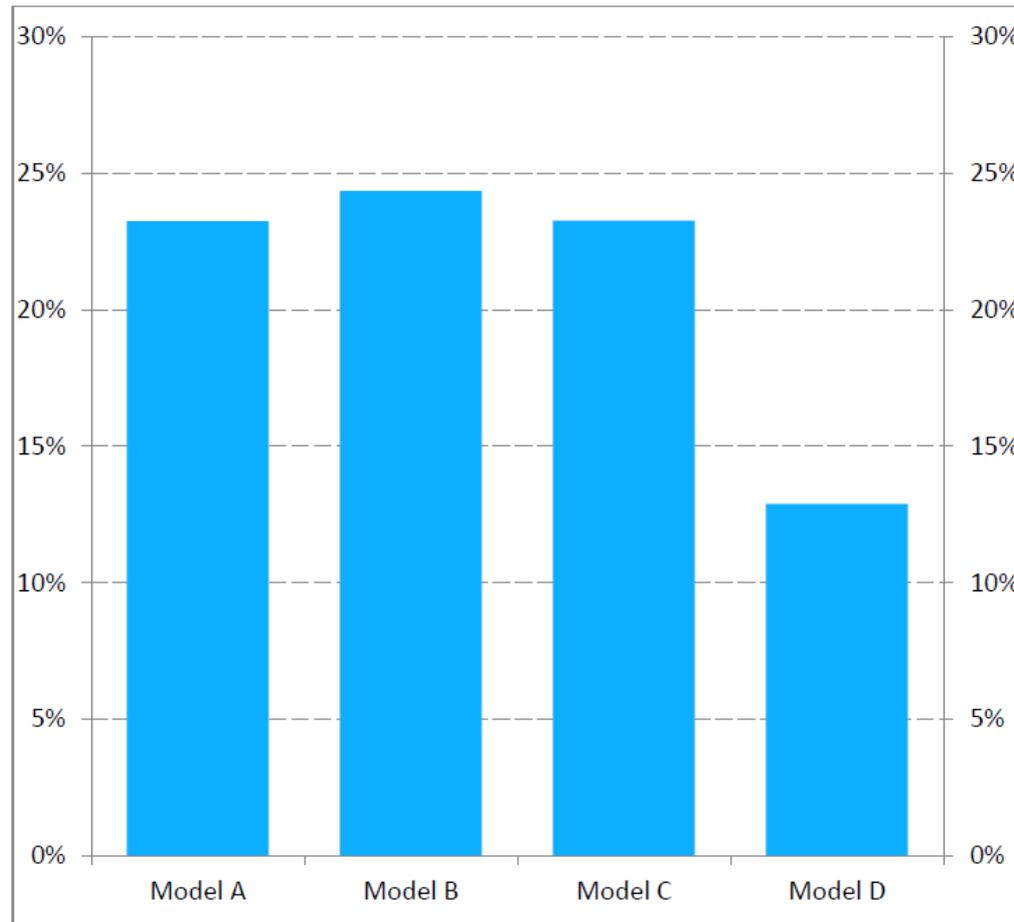
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Water sector renewals 2007 to 2013



- **There are solutions to this problem though they are not perfect...**

Figure 8.17: Estimates of Network Rail's efficiency gap with preferred models



- Range 13-24%
- Ignoring the extremes would suggest a gap of 23% (ORR)
- **Bottom-up engineering methods now starting to dominate though in rail regulation in Britain**
- 16% for maintenance; 20% for renewals

• Source: Office of Rail Regulation (2013)



Concluding remarks

- Britain: multiple decades of experience of economic regulation of privatised (and non-profit / state-owned) firms
- Cost benchmarking, combined with high powered incentives, credited with achieving substantial productivity gains
- Critical success factors?
- Good quality data; common definitions between firms; over time
- Appropriate cost efficiency model / use of multiple models
- Supporting evidence from business plans and bottom-up studies
- Use of regulatory judgement e.g. on speed of adjustment and special factors
- Transparency and communication – esp. in GB system