Merchant transmission investment

Symposium in Honour of Jean Tirole

The Hague, 9 December

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seo economic research

The Nobel Prize for Jean Tirole…

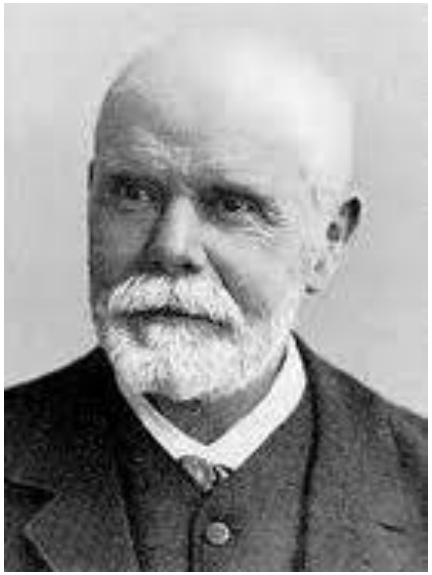


- **… is also a reward for the French educational system**
- **Tirole was trained as an engineer**
  - **Ecole Polytechnique**
  - **Ecole Nationale des Ponts et Chaussées**
    - *Essais sur le Calcul Economique Public et sur le Taux d'Actualisation (Essays on Cost Benefit Analysis and the Social Rate of Discount)*
  - **(…and went to MIT for his Ph.D)**

The French connection…



Jules Dupuit (1804-1866)



Leon Walras (1834-1910)



Maurice Allais (1911-2010)

The French divide…



J.B. Say (1767-1832)

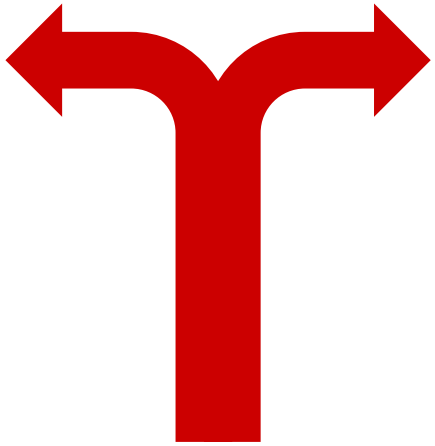
French liberalism

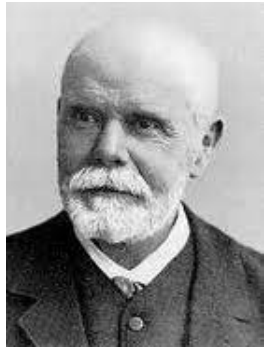
“Engineering” tradition





Frédéric Bastiat (1801-1850)





T(irole)-twist: a model-based approach

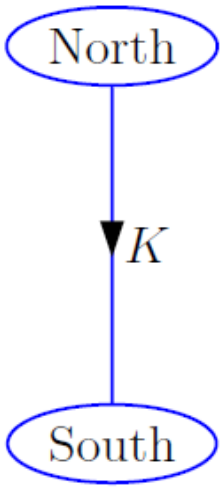
- **“deregulatory fervor is often guided more by a gut feeling that competition is efficient than by a clear conceptual framework embodying the specificities of these industries”**

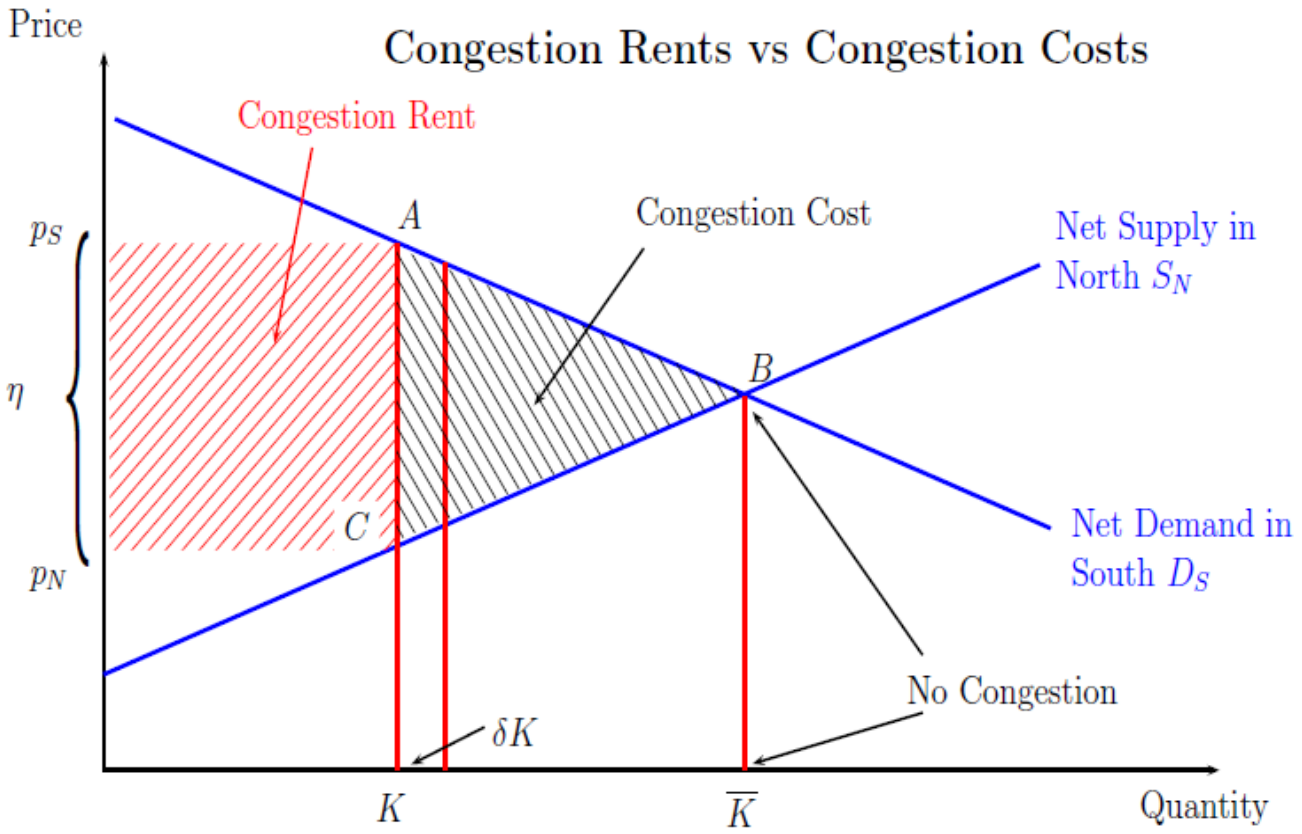
- **Laffont and Tirole (2000), *Competition in Telecommunications***

Merchant transmission investment

- ‘Market driven’ investment to increase network capacity
  - Point-to-point transmission capacity (interconnectors)
  - Separation between ownership (TO) and control (SO)
  - Transfer of property rights
  - Congestion revenues as funding
- Assuming competition, free entry and decentralized property rights, there is no need for regulation of transmission as a natural monopoly
- Stephen Littlechild: this model can work
- Joskow/Tirole: in theory superior, but in the real world no improvement over a regulated transmission operator
- “Merchant Transmission Investment”, *Journal of Industrial Economics*, vol 53 (2005), pp. 233-264

Interconnection in a two-node model





Imperfections

- Market power in generation
  - Over/under incentive to reinforce the link
- Lumpy investments
  - Underincentive to reinforce the link
- Locational bottlenecks
  - Pre-emption and monopoly
- Competing merchant lines
  - Wars of attrition
- Coase bargaining
  - Transaction costs
- Moral hazard
  - Incentive compatibility of SO and TO

Market failures and regulatory failures

- Littlechild (2012) replies that in practice these imperfections play a limited role
- Based on experience with two merchant and two regulated interconnectors in Australia
- Merchant interconnectors displayed none of the market failures discussed by Joskow and Tirole (except imperfect information)
- Regulated interconnectors suffered from regulatory failures: bureaucratic costs, cost inefficiency, interest group capture, political influence, inadequate regulatory resources
- Moreover other examples demonstrate that transaction costs can be overcome
- This is a choice between two imperfect solutions

Littlechild's gut feeling

- **"Markets are more efficient mechanisms for learning, discovery and incentives than are regulatory bodies" (Littlechild 2012, p. 332)**
- **Regulation can support market-based investment: facilitating agreement on size, timing, location et cetera**

Conclusion

- Tirole: models for an imperfect world
- Need more empirical research to choose between imperfect alternatives

- UK: competitive tender process for offshore transmission licences
- 3.9 GW in 9 tenders since 2009
- 30% cost reduction