Infrastructure regulatory systems in Europe

The main features of the recent European policy discussion

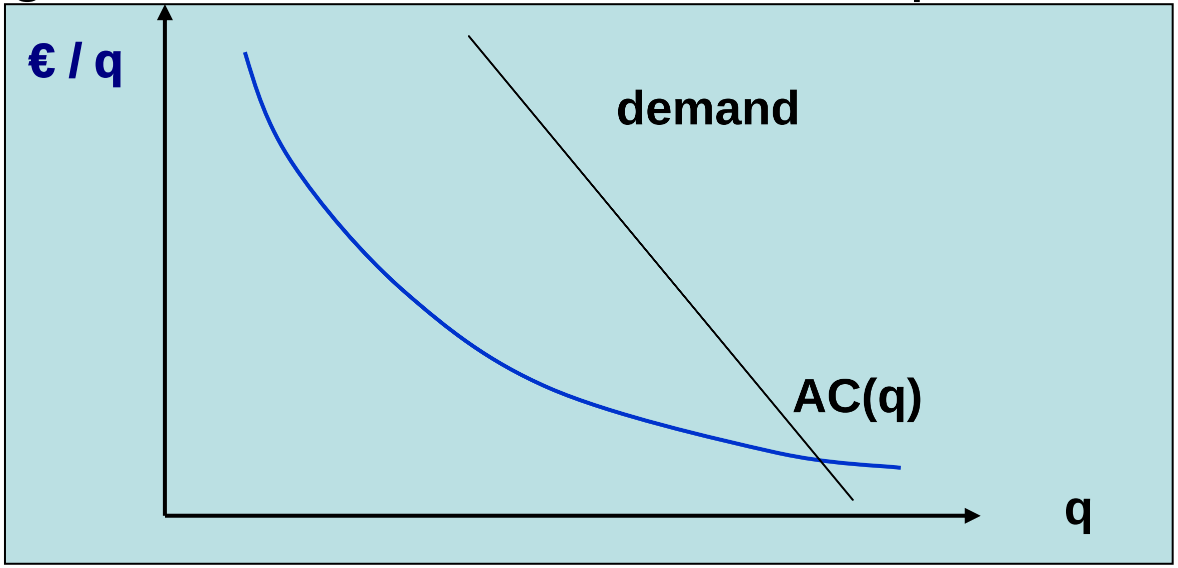
Georg Meran

- The nature of infrastructure sectors
- Utopia I: self-regulation by pure markets
- Utopia II: self-regulation by democratic control
- Privatization vs public ownership
- Regulatory systems
  - Traditional (cost based pricing)
  - French style (procurement)
  - English style (yardstick competition, price caps)
  - Political compromise: benchmarking
- Summary and more problems......

The nature of infrastructure sectors

Sectors: traffic and transportation (railways, highways, air), energy (electricity, gas, (water)), telecommunication, water, waste and recycling

Nature: natural monopoly, i.e. the monopolistic provision is cost minimizing. But : abuse of the bottleneck position

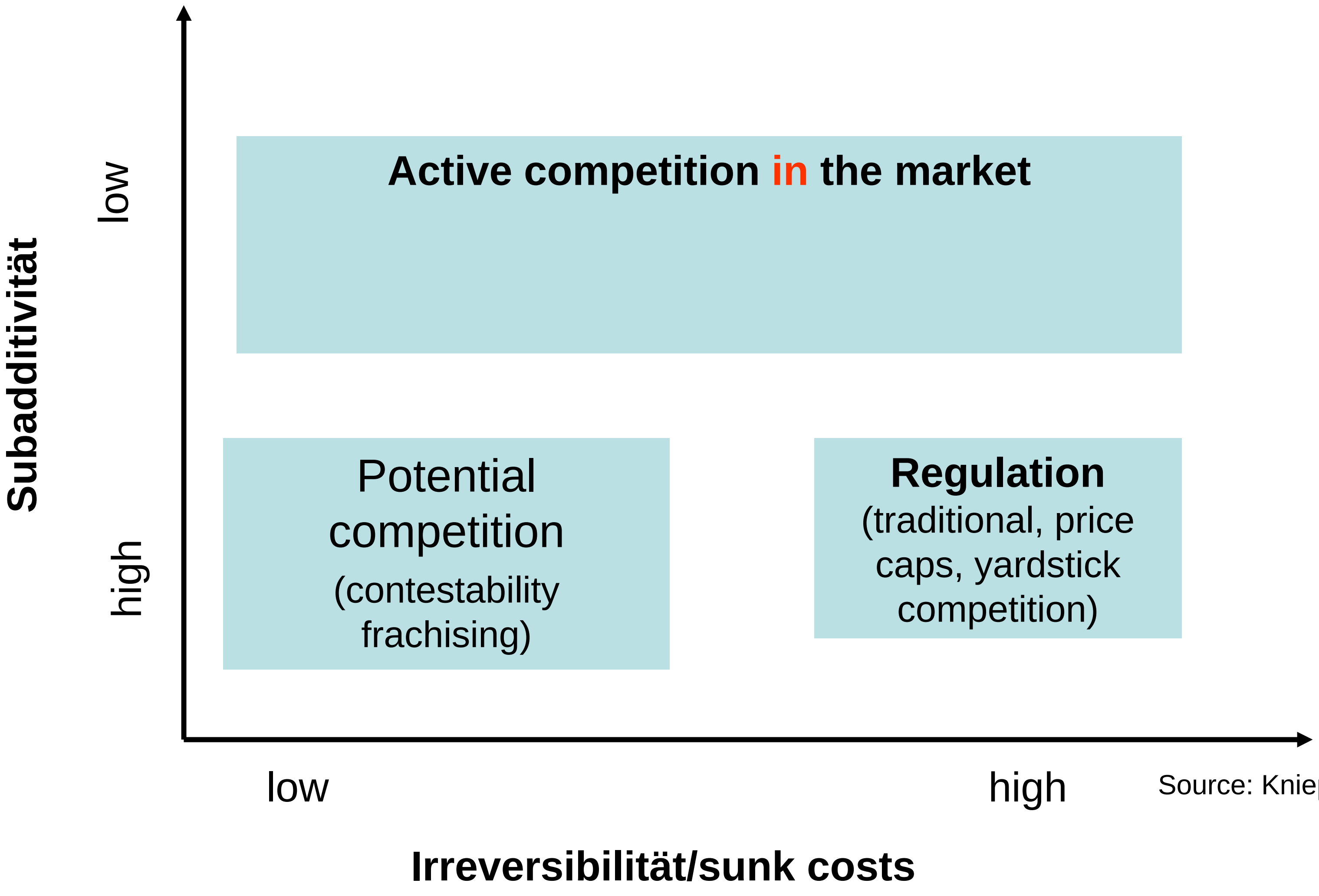


Utopia I: self-regulation by pure markets

« Contestability of markets » ?

		Incumbent	
		competetive pricing	**monopolistic pricing**
Entrant	entry	**0** / **-10 (0)**	**-10** / **2**
	no entry	**0** / **0**	**100** / **0**

Utopia I: ....competition versus regulation



Source: Knieps

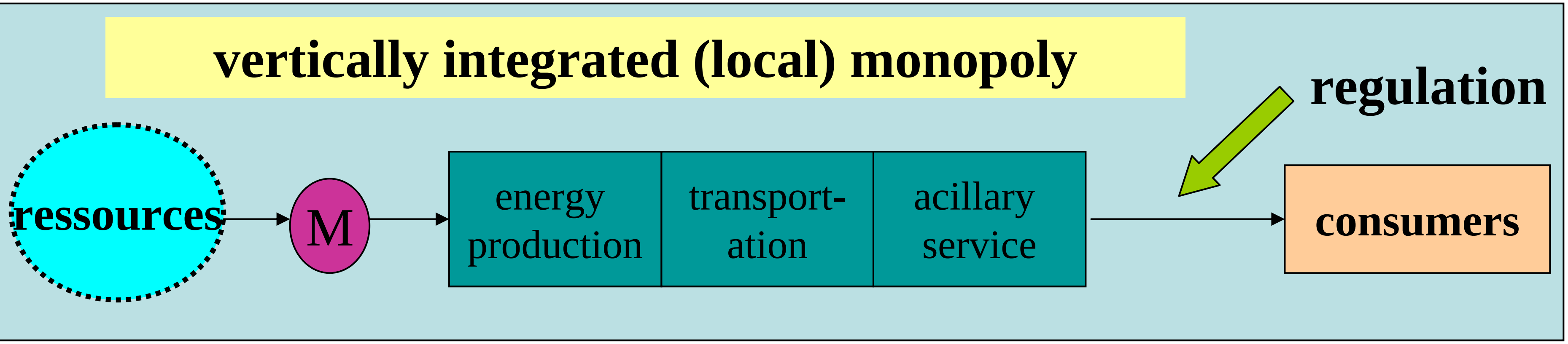
Utopia II: self-regulation by democratic control

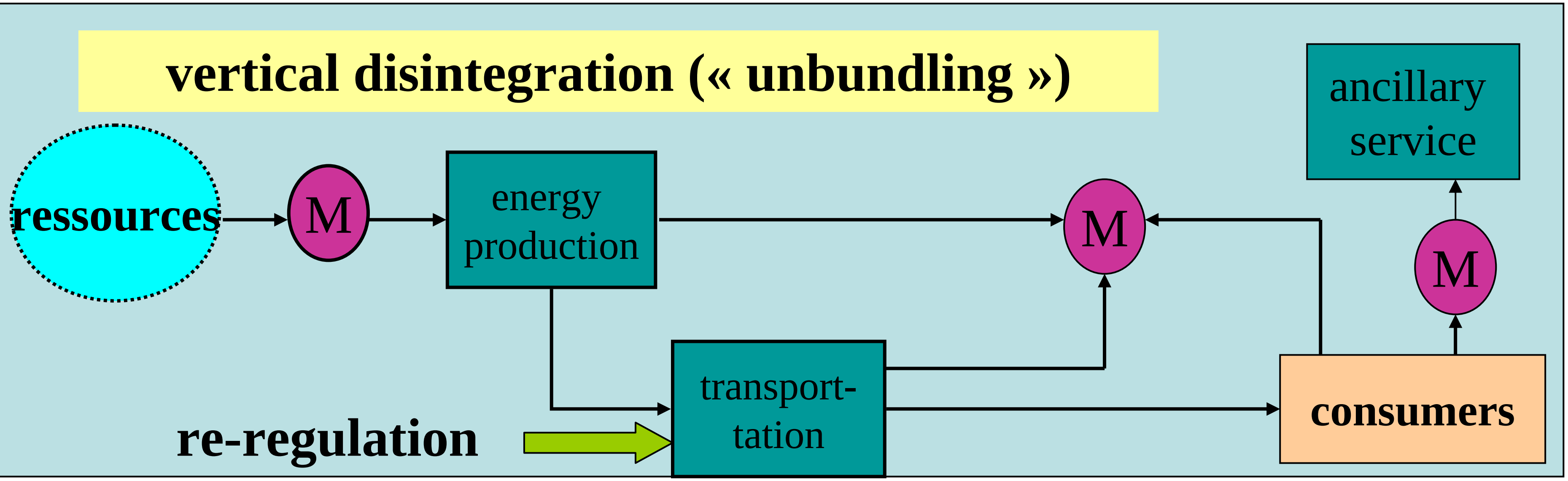
« Democratic control »

Privatization vs. public ownership

- privatization vs public ownership is not the main focus of public debate in Europe
- instead: What institutional environment is most effective to control monopolies?
  - vertical desintegration of state owned enterprises (corporatisation)
  - vertical desintegration of private enterprises (topical!)
  - Independence of regulatory authorities
  - Power endowment
  - Transparency of the regulatory process (see UK)

Vertical disintegration





Regulatory systems

- **Criteria**
  - efficiency (scale efficiency, technical efficiency)
  - efficacy (strategic abuse)
  - transparency
  - dynamic efficiency (innovation, investments)
  - robustness
  - social acceptance (affordability, universal coverage)

Going traditional

- **Cost related price regulation**

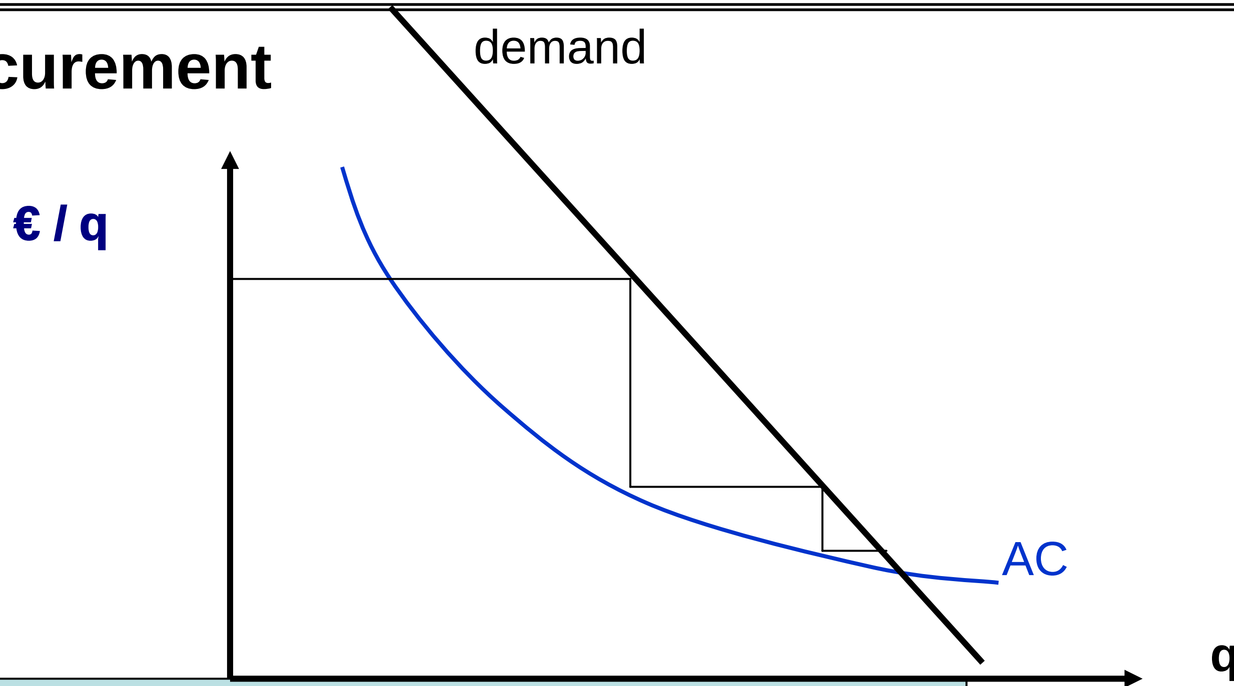
- **Cost-plus**: $p = AC\ (1+ b)$**,** b = augmentation factor,
  Leads to waste, and over-capitalisation, “gold plating”

- **Rate of return regulation**: $p = AVC + (1+ b)$ (capital costs/q)
  over-investments

Criteria:
- **efficiency** **(no, no)**
- **efficacy (avoiding strategic abuse)** **(no, no)**
- **transparency** **(no, no)**
- **dynamic efficiency (innovation, investments)** **(no, no)**
- **robustness** **(yes,yes)**
- **social acceptance (affordability, universal coverage)** **(yes, yes)**

French style

- **Tender procurement**



Criteria:

- **efficiency** **(yes)**
- **efficacy (avoiding strategic abuse)** **(no)**
- **transparency** **(no)**
- **dynamic efficiency (innovation, investments)** **(yes)**
- **robustness** **(yes)**
- **Social acceptance (affordability, universal coverage)** **(yes)**

English style: yardstick competition

Two ideas:

1. introduce exogenous price caps to avoid strategic abuse (“incentive regulation”)
   Δ **p = ΔRPI – X, ...** But how to fix the baseline?
2. yardstick competition

..........................next slide.............

Yardstick cost game:
price of firm 1 = [AC of firm 2](1+b)
(and vice versa)

(r = AC-ac)

		Firm 2	
Firm 1	costs	**Low (ac)**	**High (AC)**
	Low (ac)	**b ac** / **b ac**	**b ac – r** / **bAC+ r**
	High (AC)	**bAC+ r** / **b ac – r**	**b AC** / **b AC**

English style: yardstick competition

Criteria:

- **efficiency** **(yes)**
- **efficacy (avoiding strategic abuse)** **(no)**
- **transparency** **(yes)**
- **dynamic efficiency (innovation, investments)** **(yes)**
- **robustness** **(no)**
- **social acceptance (affordability, universal coverage)** **(yes)**

Summary and more problems.........

Summary

- **European policy debate is about**
  - **vertical disintegration**
  - **the proper regulation of "bottlenecks"**
  - **the ideal regulation is a hybrid of the pure systems**
  - **safegarding competition in deregulated parts (antitrust policy, etc.)**

more problems…….

- **More need for regulation: e. g. health, environment**
- **Common agency problem (integrated or separated regulation)**
- **more recently: vulnerability of infrastructure**