

The regulation of local public services

Carlo Scarpa

Università di Brescia

carlo.scarpa@unibs.it

and

Brescia Mobilità

Regulation and local services

- Regulation
 - Industry structure and regulation
 - The structure of regulated prices – principles and practice
 - The investment regime
 - Price v. revenues regulation
 - The issue of transfers/subsidies
- Local public services

Structure: an example (energy)

Upstream

Natural gas extraction & regassification
Electricity generation

Potentially competitive

Storage

Only in gas

**Natural monopoly
(not necessarily national)**

Transmission

High pressure – High voltage

**Regulated business
(who decides?)**

Distribution

Local networks connecting final customers

Supply

Relationship with final customers, billing,
customer service

Potentially competitive

Policy objectives

- Long term
 - Security and quality of supply
 - Investment in infrastructures
- Short term
 - Efficient prices
 - Reasonable prices (affordability)
- Others
 - Inflation
 - Employment/salaries
 - Local development ...

Key national (?) decisions (structure)

- Do we want to preserve large “national champions” upstream?
 - If so, competition is very limited
 - In gas: how effective can it be anyway if you import gas?
- Do we want transmission and production to be integrated?
 - If so, the monopolist will be very protected, but rivals will hardly develop
- How large do we want the downstream market to be?
 - How easy to leave your historical seller? (switching)?

Key decisions (regulation)

- What should we regulate – prices, quality, investment...?
 - The more we regulate, the less it makes sense to have a company running the service
- Do we want to preserve the right of the political system to directly regulate firms?
 - Regulators should be independent at least of the firms
 - What about firms in public hands?
- What role should the consultation with the stakeholders have?
 - Even with an independent regulator, consultation should remain relevant

The price regime

- Efficiency orientation
 - Cost reflective
 - Concern for investments
 - Remuneration and incentives
- Transparency in price determination
 - Pre-determined criteria
 - Equal for all players
 - In practice...

Methods of price regulation

A jump in the theory...

- *Cost-plus*
- *Rate of return regulation*
- *Fixed price – RPI-x*
- *Profit sharing*

Cost plus: only madness?

- Non avoidable costs
- The alternative is a public subsidy, at the expense of tax payers
- Incentive to efficiency?
- In practice...

Profit regulation (ROR)

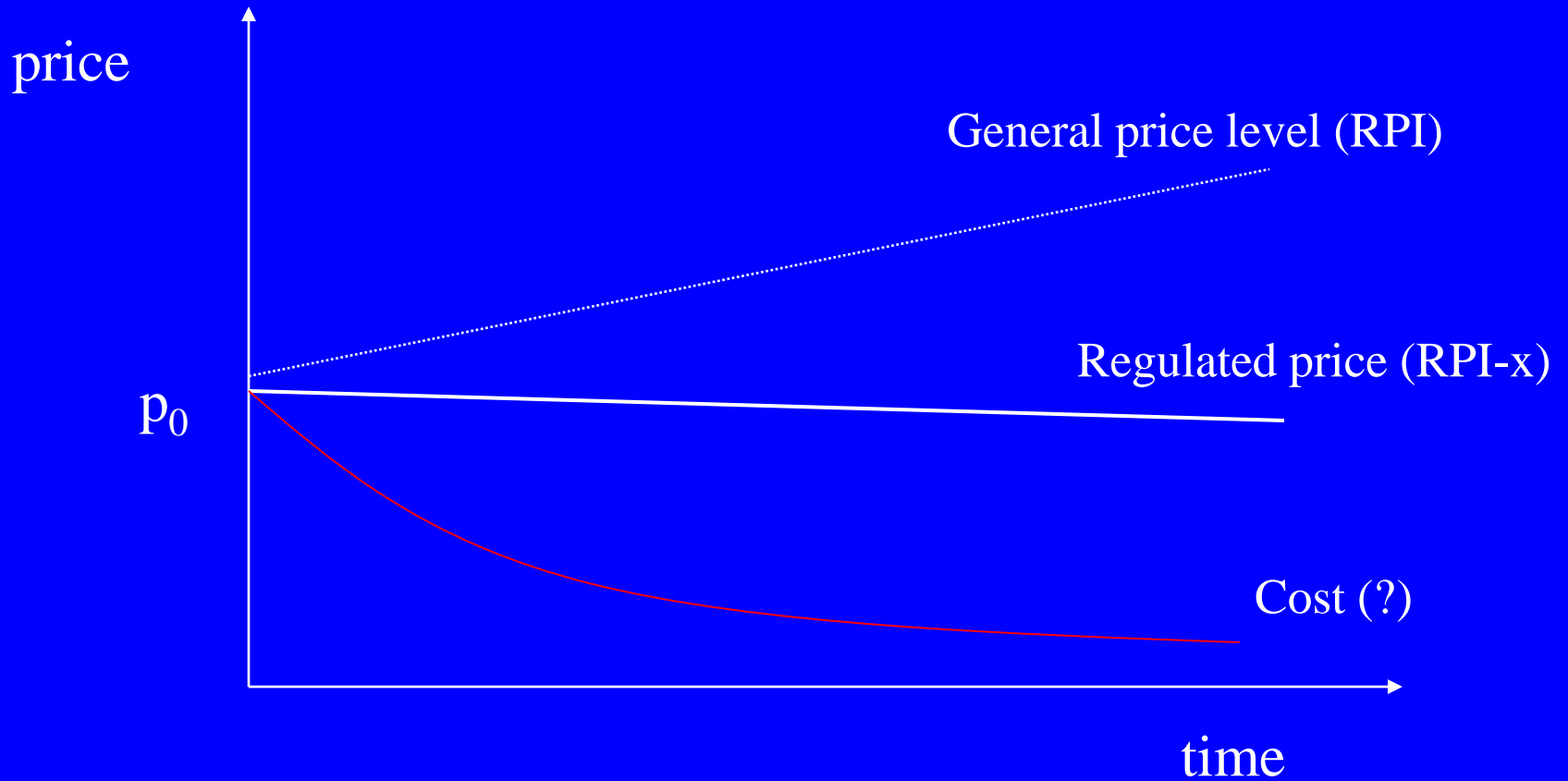
$$\pi / K \leq \rho$$

- Limitations:
 - Over-investment (Averch Johnson)
 - Administrative difficulties
 - Inefficient prices

Looking for perfection: the *price cap*

- In a static sense: price = C'
- In a dynamic sense: fix price, or at least a pre-determined dynamics, which the firm cannot affect (RPI-x)
- Incentive to investments

RPI – x and costs



Problems?

- Is it true that the incentive to invest is not distorted?
- Who bears the risk if input prices increase?
- Price review: how are prices reviewed?
- Credibility

Profit sharing: just demagoguery?

- In period t , x increases to x' if profit in $t-1$ goes beyond a threshold
- Lesser pressures from the public opinion
⇒ lesser regulatory risk
- Greater efficiency in the distribution of surplus
- Incentive to invest? Profit sharing intervenes only if things go well ...

Price regulation from theory to practice

- (Italy) price cap system (law 481/95)
 - Initial price (p_0)
 - Dynamic adjustment (x etc.)
- How is the initial price determined ?
- What happens within the regulatory period?

The price at the beginning of the regulatory period

$$\text{Total allowed costs} / \text{Output} = \text{price}$$



Operational costs

**RAB
x
WACC***

The price contains a pre-determined remuneration of capital

Element of *rate of return regulation*

* Regulatory asset base (RAB), remunerated through WACC

Within a regulatory period

- Price cap is sometimes applied only to “avoidable” costs (personnel)
- Price increases if input prices increase

– *cost plus*

- The new price shares efficiency gains 50-50 between firms and consumers

– *profit sharing*

Theory and practice

- Called *price cap*
- In practice it combines elements of
 - *Price cap* (possibly limited to avoidable costs)
 - ROR in the cost of capital
 - *Cost plus* for input (especially wholesale prices)
 - *Profit sharing* at the end of the regulatory period

More precisely...

- Price regulation v. revenue regulation
- Regulating through total costs or item by item
- How are investments considered?
- Should subsidies (“transfers”) be allowed?
- Should the public administration simply set rules and stick to them?

Price regulation v. revenue regulation

- Revenue is $p \times q$
 - Regulating revenues (revenue caps) is equivalent to regulating prices if q is perfectly predictable
- When q is risky, with price regulation the firm bears output risk
 - May be good or bad depending on demand dynamics
 - Water: falling demand
 - Others: sensitive to business cycles

New fashion: Totex

- Regulation of total costs, not item by item
- In principle, better – leaves the firm the possibility to decide where to increase or decrease costs
- In practice, fear that firms will misuse this tool
 - Regulate Total cost but requiring a year by year industrial plan (to be approved), checking that cost changes are in line with the plan

The investment regime

- In theory: left to the firms
 - Direct incentives (ROR + extra)
 - Indirect incentives (privileged access to newly build infrastructures)
- In practice, even more intervention:
 - For activities given in concession, minimum obligations are defined
 - Guidance by the Ministry or local authority (service contract)

Optimal contracts entail a transfer

- With asymmetric information (from Baron-Myerson 1982 onwards)
- In practice, the prices of many services do not cover their cost
 - Political decision
 - Good excuse to hide inefficiencies
- Need to subsidize the service
 - Municipal firm: possible game (delay the payment to hide the loss out of the public budget)

Net cost and gross cost transfer

- Definitions:
 - T = total subsidy
 - R = revenue (= $p \times q$)
 - C = total cost
 - Π = profit
 - M = subsidy cap
 - The apex ^e indicates expectations

Net cost contracts

$$T = C^e + \Pi^e - R^e$$

The transfer T is given ex ante, only based on expectations

The firm

- bears the whole risk (industrial and commercial)
- keeps the extra-profits
- bears the losses

Gross cost contracts

$$T = M - R$$

So that

$$R > M \Rightarrow T = 0$$

- The municipality guarantees a minimum revenue M (set ex ante), and thus bears the commercial risk
 - The actual transfer T is known ex post
 - Advance payment + ex-post adjustments
- The firm bears the «industrial» risk (cost)
 - Profits and losses remain with the firm

Comparison gross cost - net cost

- Service quality/revenues
 - NC is a high powered incentive scheme on service quality;
 - GC provides almost no incentive to increase revenues;
- Manageability
 - GC is easier to manage if different operators share neighbouring services
 - Integrated transport systems
- GC is compatible with a fully free service;
- GC may fall into a sheer *cost plus* contract

Is it better to have set rules or administrative discretion?

- In practice, regulation is not fully transparent
- Discretionary intervention takes place
 - On price
 - How to translate costs into prices
 - Price reviews
 - On investments (guidance by the public authority)
 - Through a heavy public presence in firms
- (Within the EU) Directives and general competition principles should be respected

Regulation and local services

- Regulation
- Local public services

“Local” public services: a meaningful concept?

- Public services
 - The most complicated to provide through a market, not the most important ones
 - Political definition (unavoidable)
- National or local?
 - Who decides?
 - Why?

Factors favouring local responsibility

- Some services are appendices of a larger system, others exhaust their relevance locally
 - Water
 - Local transport
 - Waste (to some extent)
- Costs: Economies of scale
 - Institutional scale economies?
 - A national common framework may favour competition
- Demand: When do local preferences really make a difference?

Local economic policy

- Local authorities have an increasing relevance in economic policy
 - Institutional reforms
 - Withdrawal of the State
 - Industrial districts
 - Competition among areas to attract investments
 - Regional marketing

Independent authority?

- Local regulation
 - At local level, particularly strong and direct link between the administration which sets the rules and a possible local public firm
- Are there experiences of independent local authorities?
- Effectiveness of local competition for the market

Local public services in practice (Italy)

- Energy distribution: supplied locally, with national rules
- Water services and local transport: national principles, significant freedom locally
- Waste: total freedom (about to be reduced)
- A category or a set of different problems?

Competition and public services

- In monopoly segments, only competition for the market
 - Effective?
 - Who manages the selection?
- The definition of the size of the market affects competition
 - Unduly small market definitions: inefficient where there are economies of scale
 - Unduly large market definitions: possible ways to limit participation & competition
 - Unduly large market definitions: possible ways to deny competition among sub-markets

Competition for the market and local choices

- (Italy) Great institutional confusion
- EU principles apply, many possibilities are open
 - direct management (unusual)
 - “in house” providing
 - outsourcing to private or public firms (tender)
 - non-competitive outsourcing to mixed firms if the private partner is chosen on the basis of an open procedure (quasi-tender)

Local authorities have contractual freedom

- Once the provider is selected, the contract is largely a local choice as for
 - Price/cost reimbursement rules
 - Structure
 - Review
 - Investment requirements
 - Enforcement mechanisms
 - Control bodies
 - ...

Local public firms

- From national champions to local champions
 - Local firms expand their operations
 - Local protection helps, to some extent
 - Engage in huge projects
 - Nuclear plants
 - Profit seeking local authorities?
 - Looking for private capital
 - Listing in stock markets

Development of local firms

- From multi-utilities to sectoral champions?
 - Maybe...
 - France, Germany...
- Profit oriented or empire builders ?
 - In any case, what is the role of municipal ownership?
 - And its future? ...

Public and private

- Mixed firms
 - Reluctant privatization?
 - Way to get entrepreneurial know-how
 - Way to raise finance (short in the public sector)
 - Genuine partnership from the beginning

The role of private shareholders

- No guarantee that firms behave like private ones
 - No guarantee that political interference will not take place
- Significant constraint that managers can use to counter political pressures
 - Could financial markets play a similar role even if private capital provides debt and not equity?
- Significant constraint that politicians can use to counter their voters' requests (including employees)
 - Public shareholders may be as greedy as private ones...

How do local public firms perform?

- Does a correct indicator of performance exist?
 - Depends on the objective function
 - On sector...
 - Large amount of (unavailable) information
- However, two models emerge
 - Service providers
 - Entrepreneurs (firms as ways of raising money)

Do competition and ownership matter?

- Claim/hope that competition help select the best provider
 - If so, firms selected through a competitive procedure should be more efficient than those directly appointed
- Fear that public ownership is associated to greater managerial slack (see above)
 - If so, private firms should be more efficient
 - Mixed firms? Maybe...

Different models

- In some areas, local governments use public firms to provide services, create employment
- In other regions, they use public firms to raise money (while providing services and creating employment)
- This goes through the management of firms
- ...and through the choice of the sector of activity
 - Take account of the “composition effect”

Summing-up: are “local” public services and firms really different ?

1. Limited resources
2. Size of jurisdiction
3. Access to capital markets
4. Proximity to citizens

1. Limited resources

- For some services, national funding (health, some local transports)
- For others (waste,...) there may be local taxes
- For others local supply within a national framework
 - Energy, in detail
 - Water, in principles

Limited funding autonomy?

- Limited possibility to run services at a loss
 - The freedom to set local taxes is crucial
 - Use of firms to bypass constraints and postpone funding
- “Need” to use some services to fund others
 - “Improper” taxation (cross subsidies)

2. Size of jurisdiction

- The control activity is a fixed cost: economies of scale
- Local Authorities ? (independent ones?)
 - Necessary a separation between management and control
 - Width of competence of the authority?
 - Efficiency of the municipal dimension?

3. Access to capital markets

- How large is the national stock market?
 - In Italy, a stock market only for large firms
- Several LPF are listed, but the transparency requires an elimination of cross subsidies
 - The governance of LPF is now even less transparent than the one of large national firms
- Should one favour/incentivate/force greater access to the stock market?

4. Proximity to citizens

- Advantage in terms of capacity to interpret preferences
- Disadvantage in terms of exposure to even small local pressure groups
 - Transportation infrastructures
- Local concentration of potential costs and benefits to the workforce
 - Protection of workers

Conclusions

- Local public services are not very different from national ones
- Local governments are no better or worse than other levels of public administration
 - But they are closer to citizens – clearer responsibility
 - Possibly more vulnerable to local interest groups