

# Local public firms and local utilities: ownership, regulation and competition

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# Municipal socialism or capitalism?

- Since the 19<sup>th</sup> century, considerable direct presence in the ownership of firms
  - Special services (new demand from new population)
- Now, socialism or capitalism?
  - Strict constraints in public finance, national and local
- Does public ownership make a difference?
  - And should it make a difference?
  - If not, why remain among the shareholders?

# Good management is anyway reasonable

- The real issues are
  - Set the objectives
  - Find the optimal instrument
    - The “right” balance between market and direct public intervention
  - Verify compatibility with the budget constraint
- Objectives: a Political matter

# Regulation and local services

- The meaning of regulatory reforms
- What is an optimal price regime?
- Local (instead of national) public services

# A hierarchy of decisions

- Identify the services which we want citizens to have
  - Public services?
- Identify the maximum prices which we want customers to pay for these services
- If these prices are below cost, subsidized monopoly
  - How do we select the provider?
- If these prices are above costs, the market may work
  - Competition in the market

# Each sector may be very complex

- The final customer only sees one end
  - Monopoly segments
  - Segments where no economies of scale exist
- Vertical integration has its virtues
  - No double marginalization
- But it often preserves monopoly
  - High prices
  - Huge inefficiencies

# Monopoly and competition

- Unbundling creates several companies where there is one
  - Organizational costs
  - Double marginalization
- Unbundling serves the purpose of introducing competition whenever possible
  - But either competition is effective, or unbundling may worsen the situation

# 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**



# 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 the network and upstream (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

- Do we want to preserve the right of the political system to decide these prices?
  - The notion of “independent” authority
- “Political” regulation entails a trade off
  - Better control over the process
  - Lesser ability to attract the best firms
    - More so of a state owned company is present
- How do we organize regulation?
  - Objectives
  - Instruments

# 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 ...

# Regulation and local services

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# The price regime

- Efficiency orientation
  - Cost reflective
    - (Political decision not to spend public money)
    - Not essential (prices may in principle be below costs)
  - 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: just madness?*

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

# Profit regulation (ROR)

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

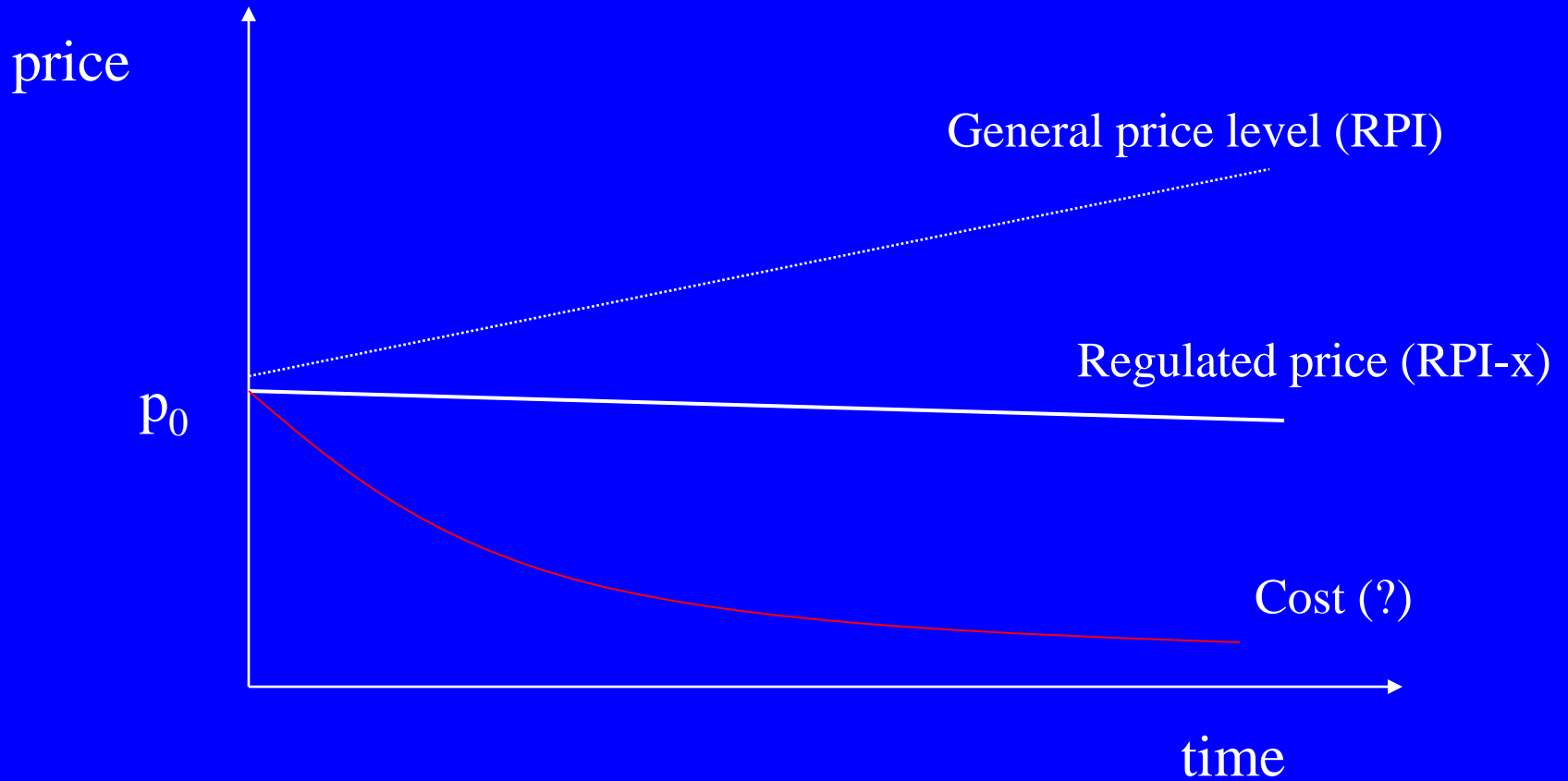
- Limitations:
  - Over-investment (Averch Johnson)
  - Administrative difficulties
  - Inefficient prices



# 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 some inputs (especially wholesale prices)
  - *Profit sharing* at the end of the regulatory period



# The investment regime

- In theory: left to the firms
  - Direct incentives (ROR)
  - 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

# Rules or 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 Ministry)
  - Through a heavy public presence in firms
- Within EU Directives and general competition principles

# 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

# Problem: prices may be below total average cost

- Some services may be subsidised if they produce positive externalities
  - Public transport (environment)
  - Social services?
- Even optimal contracts entail a transfer
  - With asymmetric information (from Baron-Myerson 1982 onwards)

# A dangerous game

- Good excuse to mix efficiency and equity
  - Why do welfare policy through prices?
- Good excuse to hide inefficiencies
  - When losses are expected, how do we measure success?
- Good excuse to hide deficits
  - Delay the payment to hide the loss out of the budget
- Not surprising that the EU requires prices which cover costs...

# Even subsidies can be designed well

- Subsidies such as “full cost reimbursement” give bad incentives
- Subsidies which do not bluntly follow costs may be smarter
  - Subsidy caps
  - Subsidies may be designed to induce the firm to cut costs or improve service quality...

# Net cost and gross cost transfer

- Definitions:
  - $T$  = total subsidy
  - $R$  = revenue (=  $p \times q$ )
  - $C$  = total cost
  - $\Pi$  = profit
  - $M$  = subsidy cap
  - The apex <sup>e</sup> 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

# Regulation and local services

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# Local public services: a meaningful concept?

- Public services
  - The most complicated ones 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 exhaust their relevance locally, others are appendices of a larger system
  - Water
  - Local transport
  - Gas distribution
- 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: national principles, significant freedom locally
- Local transport: greater local freedom
- Waste: total freedom
- 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 local champions to national ones
  - 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? ...

# Local public firms are not totally public...

- 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 public firms really different ?

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

# 1. Limited resources (a)

- 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

# 1. Limited resources (b)

- 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)

# Income from municipal firms for some Italian cities, (old example - in Euro)

	Net profits from firms	Total income	%
<b>Bologna</b>	20,020,714	640,031,748	3.13
<b>Brescia</b>	31,658,424	292,443,110	10.83
<b>Como</b>	1,069,079	111,983,429	0.95
<b>Genova</b>	2,903,664	1,292,210,599	0.22
<b>Milano</b>	60,220,375	9,291,479,888	0.65
<b>Modena</b>	5,669,758	310,698,345	1.82
<b>Padova</b>	5,671,165	303,966,266	1.87
<b>Ravenna</b>	2,500,601	181,328,372	1.38
<b>Rimini</b>	1,128,552	212,599,045	0.53
<b>Roma</b>	32,318,854	4,274,439,739	0.76
<b>Torino</b>	17,979,298	1,929,386,230	0.93
<b>Trieste</b>	7,956,025	704,467,352	1.13

Net of cross subsidies  
within multiutility firms

# Income from privatisations for some Italian cities (in Mil Euro)

	Total incomes of the local government	% sold	Value of the sale (revenue)	Year	Revenue as % of total income
ACEA Roma	5,725	49.0	787	1999	13.7
ACSM Como	129	25.0	18	1999	14.0
	144	24.0	43	2000	29.9
AEM Milano	6,378	49.0	689	1998	10.8
		8.8	268	2004	
AMGA Genova	1,150	49.0	102	1996	8.9
AEM Torino	2,073	26.0	279	2000	13.5
Hera (Bologna et al.)	640	38.7	368	2003*	57.5
Meta (Modena et al.)	311	24.0	57	2003*	18.3
Acegas -Aps (PD-TS)	1,008	41.9	154	2001	15.3

## 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
  - But control activities display economies of scale
  - Local public services may be a key reason for re-election
- Funding mechanisms are crucial
  - Financial constraints induce profit seeking
  - Access to funding may be limited
  - Dedicated (earmarked) funds are vulnerable to local interest groups