An institutional perspective on cost recovery in the water supply and sanitation sector.

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Aim

- the polluter pays principle in water management: focus on efficiency

- “It makes little sense for economists to discuss the process of exchange without specifying the institutional setting within which this trading takes place, since this affects the incentives to produce and the costs of transacting” (Coase, 2005)

- research objective: evaluate the role of the polluter pays principle for the recovery of costs of water supply and sanitation services from an institutional perspective
The polluter pays principle
Article 9 of the Water Framework Directive
Institutional economics at a glance
Williamson’s four level scheme: an application to cost recovery in the water sector
Conclusion
Polluter pays principle

The **Polluter Pays Principle** was adopted by the OECD in 1972 as the principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and avoid distortions in international trade and investment.

**External costs** evolution from partial internalisation ⇒ full internalisation

- pollution prevention and control costs
- costs of administrative measures taken by the authorities as a result of pollutant emissions
- cost of damage caused by pollution (OECD, 1992)
Water Framework Directive

- objective: to achieve good surface water status and good groundwater status
- puts forward a system of water management based on coordination of administrative arrangements within river basin districts instead of according to administrative or political boundaries; requires
Article 9
Recovery of costs for water services

'Member States shall take account of the principle of recovery of the costs of water services, including environmental and resource costs ... in accordance in particular with the polluter pays principle’

- by 2010, water-pricing policies have to provide adequate incentives for users to use water resources efficiently
- the cost recovery should be disaggregated at least to the levels of industry, households and agriculture
Cost categories

- financial costs
  operation and maintenance, capital costs

- environmental costs
  damage costs imposed by water uses on the environment and ecosystems and on the users of the environment

- resource costs
  costs of foregone opportunities, which other uses suffer when the resource is depleted beyond its natural rate of recharge or recovery

(Commission of the European Communities, 2000)
The water value chain
The name of the game: Polluter pays, cost recovery?

- development of the sanitation sector closely linked to existence of environmental norms (Command and Control)
- environmental costs $\Rightarrow$ financial costs
Four levels of social analysis (Williamson, 1998)

- **Social theory**
- **Economics of property rights**
- **Transaction cost economics**
- **Neo-classical Economics**

Diagram:

1. Embeddedness
2. Institutional Environment
3. Governance
4. Resource allocation
Layer 4: allocation

- Embeddedness
  - Institutional Environment
    - Governance
      - Resource allocation

responsiveness to price changes
- low elasticities
- link with price structure
Layer 3: institutional arrangements

- Embeddedness
- Institutional Environment
- Governance
- Resource allocation

the firms as a governance structure (role of integrated water resources management) public/private provision of water services
Layer 2: institutional environment

- Embeddedness
- Institutional Environment
- Governance
- Resource allocation

- public service obligations / competition and state aid rules
- stringency of environmental norms

- environmental costs
- financial costs
Layer 1: informal institutions

- the valuation process: preferences as given?
- “licences to pollute”? (Kelman, 1981)
- price structure - elasticity
Central and de-central provision

Figure 9.1: The urban water system
De-central provision...

<table>
<thead>
<tr>
<th>Support by Authorities</th>
<th>Presence of central provision of water and sanitation</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Planned and coordinated solutions for the improvement of services and their environmental and economic characteristics through conventional and inverse infrastructures</td>
<td>Planned and coordinated solutions for the provision of basic services through inverse infrastructures</td>
</tr>
<tr>
<td>Spontaneous individual solutions to improve on central services and their environmental and economic characteristics through conventional and inverse infrastructures</td>
<td>Spontaneous individual solutions for the provision of basic services through inverse infrastructures</td>
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</tbody>
</table>
Unbundled services and externalities in the system

- In the water cycle…?
- In the central value chain…?
- The decentral value chain…?
- What values are internalized?
- Cost recovery?
- Polluter pays?
Conclusion

- The introduction of market based instruments to meet environmental policy objectives in the water sector adds another requirement to pricing systems that are already subject to many conflicting pressures.
- Cost efficiency might not be the main argument to promote the use of the polluter pays principle for water supply and sanitation services (earmarking of revenues, transparency,…)
- Physical and financial coordination among segments of the value chain is a main issue: How and where to internalize?
- Whose values count and should be internalized…..
Thank you for your attention!

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