Knowing the FIELD for infrastructure regulation at local level: actors, information, incentives

Florence | 13\textsuperscript{th} of June 2014
3\textsuperscript{rd} Florence Conference on the Regulation of Infrastructures

Franco Becchis, Turin School of Local Regulation
THE DESIGN

• Is the local dimension relevant for infrastructure regulation?
• Are there peculiar critical aspects in local regulation?
• How to prepare the field for better regulatory framework at local level?
• Tangle of relationships, actors/players, incentives, information endowment and exchange
• From information to knowledge to awareness
Framework of Incentives to Empower Local Decision-makers

A multidisciplinary methodology for the analysis of local actors, incentives and information endowment that surround and lie behind the success or the failure of local services, infrastructures and projects, defining the playing field where their implementation and regulation takes place.
Estimates indicate that at least 40 trillion USD will be needed **globally** in the next 20 years for **urban infrastructure investments alone**. Annual infrastructure investment needs are expected to increase by around 70% from 2.6 trillion USD in **2013** to 4.5 trillion USD in **2030**.

The OECD estimates that 1.3 trillion USD need to be invested annually to replace and maintain **water infrastructure in developed countries and emerging markets alone** (without considering support needed for new infrastructure).

**Planes, trains and sewers**

Global infrastructure investment required 2013-30, $trn, 2010 prices

- Roads: 16.6
- Ports: 0.7
- Airports: 2.0
- Rail: 4.5
- Power: 12.2
- Water: 11.7
- Telecoms*: 9.5

*Brazil, China, India and OECD countries only

Sources:
- The Economist (2014), Infrastructure financing: A long and winding road - The world needs more infrastructure. How will it pay for it?, Mar 22nd 2014
1. High degree of subjectivity
2. Difficulty to compare case studies that are economically and socially different

Policy-oriented tool
THE CASE STUDIES ANALYZED SO FAR

Cairo (Egypt)

Classification: Lower-middle income economy (WB)

Regulatory framework: WWS sector — Egyptian Water Regulatory Agency

THIS PAPER FOCUSES ON:

• Bangalore (Water)
• Belgrade (Water)
• Sofia (Water)
• Berlin (DH)
• Turin (DH)
<table>
<thead>
<tr>
<th>Source: LORENET</th>
<th>Water and sanitation</th>
<th>District heating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bulgaria</td>
<td>India</td>
</tr>
<tr>
<td>Who has the ownership of networks and plants?</td>
<td>State; Local governments</td>
<td>Local governments</td>
</tr>
<tr>
<td>How is the service assigned?</td>
<td>Public tender</td>
<td>In-house providing</td>
</tr>
<tr>
<td>If applicable, who is in charge of tendering the services?</td>
<td>Local governments State Government</td>
<td>Only the capital works are tendered. The utility tenders the work on behalf of the local governments</td>
</tr>
<tr>
<td>What is the average duration of concessions? Can they be re-negotiated?</td>
<td>On average: 25 years Renegotiation: possible</td>
<td>N/A</td>
</tr>
<tr>
<td>Who operates the services?</td>
<td>Generally public companies. 1 case of PPP</td>
<td>Local governments</td>
</tr>
<tr>
<td>Is PPP a common practice in the sector?</td>
<td>No. It exists, but this model is not common.</td>
<td>No</td>
</tr>
<tr>
<td>Who regulates tariffs, profits/revenues and so on?</td>
<td>The State Energy and Water Regulatory Commission</td>
<td>Local governments</td>
</tr>
<tr>
<td>Who plans investments?</td>
<td>Service operators with approval by the regulator</td>
<td>Local governments</td>
</tr>
<tr>
<td>What is the structure of revenues?</td>
<td>Customer bills (+) EU funds (-)</td>
<td>Customer bills</td>
</tr>
</tbody>
</table>

DE and IT Antitrust authorities’s sector inquiry
WWS Sector - Players' Incentives
Weighted Total summing the results in the 3 Cities analyzed

<table>
<thead>
<tr>
<th>City</th>
<th>Incentive</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sofia</td>
<td>Profit</td>
<td>1st</td>
</tr>
<tr>
<td>Belgrade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangalore</td>
<td>Political control (2nd) and Bureaucracy (4th)</td>
<td>3rd</td>
</tr>
</tbody>
</table>

DH Sector - Players' incentives
Weighted total summing the results in the 2 cities analyzed

<table>
<thead>
<tr>
<th>City</th>
<th>Incentive</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turin</td>
<td>Profit</td>
<td>1st</td>
</tr>
<tr>
<td>Berlin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bangalore: Political control (2nd) and Bureaucracy (4th) 
Sofia: Profit (1st)
RELATIONSHIPS IN THE WATER SECTOR: REGULATION

Public bodies: Central Government (CG), Local Government (LG), National Regulatory Agency (NRA), Water Council (W.Counc.), National Conference on Water (NCoW), Political Parties (PP), Members of Legislative Assembly (MLA), Local Development Agency (LDA)


International financial institutions and donors (IFI)

Consumers (C) and their organizations (CO)
RELATIONSHIPS IN THE DH SECTOR:
LOBBY PRESSURE

Very relevant role ≠ Turin

Lobby pressure: what for?

• FIs: good return on investment + they have been financing the w-to-e plant → lobby on waste regulator
• Neighbour municipalities: environmental compensations + future provision of heat at fair retail prices
• Installers: make CM opt for their systems instead of DH
FOREWORD: “outbound” and “inbound” relations registered for each player were calculated, according to who is the agent of the relation and who is the passive target. An index was created to assess the “influence” of each player in the context analyzed, based on the number of outbound relations that the player exerts. The index has been calculated dividing the sum of outbound relations registered for a single player by the total sum of outbound relations registered in that city (Outbound relations ratio). The same procedure has been adopted for inbound relations (Inbound relations ratio).

Outbound / Inbound Relation Ratio Index: a demonstration of the Outbound RRI in the DH sector

Outbound relations of Player X

\[
\text{Outbound relations ratio of Player X} = \frac{\text{Outbound relations of Player X}}{\text{Total outbound relations of the city players}}
\]

DH Berlin
Outbound relations registered for each player

DH Turin
Outbound relations registered for each player

Strong role of players representing and protecting consumer interests: Consumer associations, Courts, Consumers themselves

Much higher index compared to Berlin, and this can be due to the fact that it is also stakeholder in the service provider (IREN)
POWER QUESTIONS & NEXT STEPS

- Did we pose the right questions?
- Are there other institutions that are asking the same questions in other contexts? → enlarging literature survey?
- Are questions suitable for a quantitative representation? Are we really leaning towards this objective? Can econometrics give answer to complex socio-economic phenomena and relationships?
- How to reduce subjectivity? → pools of referees (see the case in Turin)?
- Is it possible to transform the Outbound/Inbound Relations Ratio Index into something more than a purely descriptive tool?

...to be done ASAP:

Build a large portfolio of case studies to further test it:
- Local welfare (Turin)
- Biogas plant (Piemonte)
- Local public transport (Istanbul)
- Others to be identified
Franco Becchis
Scientific Director
franco.becchis@turinschool.eu
www.turinschool.eu

Credits:
The co-authors: Elisa Vanin and Daniele Russolillo.
The Country experts who contributed to the survey: Atanas Georgiev (Bulgaria), Tatjana Jovanic (Serbia), Vincent Pál (Germany), Arvind Shrivastava (India).
The working group of the Turin School of Local Regulation, and in particular: Andrea Sbandati, Fulvia Nada, Alice Montalto.