



# **FIELD: a methodology for the analysis of local actors, incentives and information endowment in regulation of local public services**

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**Competition and Regulation of Network Industries, 6<sup>th</sup> Annual CRNI Conference**

***Daniele Russolillo, Turin School of Local Regulation***



*An open window on local services,  
infrastructures, investments and  
welfare policies*

*services policies*

/The **Turin School of Local Regulation (TSLR)** offers an international high-level research, education and capacity-building experience. The School adopts a policy-oriented approach, with the aim of spreading the culture and instruments of regulation and regulatory reform at local level, connecting academic research with local policy-makers, public officials, professionals, local regulatory agencies, NGOs, consumers' associations, chambers of commerce /

## ACTIVITIES

*/ International Summer School on regulation of local public services  
([turinschool.eu/iss](http://turinschool.eu/iss))*

*/ Executive Education Programme ([turinschool.eu/eep](http://turinschool.eu/eep))*

*/ On-demand training and capacity building*

*/ Local Regulation Network of Experts ([turinschool.eu/lorenet](http://turinschool.eu/lorenet))*

*/ International seminars and round tables*

*/ Policy-oriented research*

*papers and policy briefs*

*/ Prizes and awards for researchers and practitioners*

*/ Web-platform for surveys, data collection, blogging*



## TABLE OF CONTENTS → some power questions...

### □ Turin School of Local Regulation?

→ what is the focus on the «local» level for?

### □ FIELD: framework of incentives to empower local decisions makers

→ From a survey tool to a methodology analysis to build either better policies (through effective institutional mechs and individual incentives scheme) or to layout the playing field to take the best decisions on investments for infrastructure and local general interest services provision

### □ FIELD: preliminary results (3 cities, 2 sectors: WWS and MSW) and closing remarks

→ What comes out? What's the catch?

# THE CONTEXT OF THE RESEARCH AND TWO SHORTCOMINGS IDENTIFIED

**Focus on the institutional and market peculiarities at local level**

The roots of municipal regulation

Institutions & Organizations

Market dimensions

Clientelism, politicians and public goods

Specific weakness of local regulation

Legal empowerment and contract enforcement

Role of Institutions

Formal and informal rules

Trust

Accountability

Redistribution

**Attention to specific features of service regulation in developing economies**



## 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 takes place.*

# THE MATRIX - FIELDS

## Categories of players

- Politicians
- Public officials
- Market actors (non-financial)
- Market actors (financial – local or national/international)
- Lobbies
- Consumer organizations
- Administrative tribunals (administrative, procedural, budget conflicts)
- Consumers / final users

## Players' information endowment

Information on:

- Industrial costs of the service
- Investment costs
- Physical assets

## Players' incentives

- Efficiency in provision of the service (I)
- Profit (I)
- Market share (I)
- Efficacy and quality (I)
- Equity / redistribution / accessibility (I)
- Electoral consensus (S)
- Consensus (S)
- Political control (S)
- Religious control (S)
- Ethnic control (S)
- Bureaucracy / maintaining own budget (S)
- Financial public budget constraints (S)

## Types of relations amongst players

- Appointment
- Election
- Lobby pressure
- Strong political influence
- Corruption
- Command & Control
- Regulation: price, quantity, quality, accessibility, distributional
- Sentences / rule of law / judicial enforcement
- Data transfer
- Assignment
- Market power

# THE MATRIX – THE FORM USED IN THE SURVEY

C11

FIELD

UNIVERSITY SCHOOL OF LOCAL REGULATION

Description of the state of the art of the main players involved in the local regulatory agenda, their relationship, the information flows, the incentive system that drives their choices

**STEP 2**

**PLAYER:** (note 1)  
 Player name:  add a description:

**CATEGORY OF PLAYER:** (note 2)  
 select from the menu:  Player's nature (note 3):  Player's attitude (note 4):

**PLAYER'S INCENTIVES:** (note 5)  
 select from the menu:   
 Note for each:   
 scale them according to their relevance:  add a description (please try to specify duties, measure the achievement):

**STEP 3**

**INFORMATION FLOWS** (note 6)  
 In case of indirect ownership, what are the costs to obtain information?  
 Operational costs:  Yes/No:  Ownership:   
 Investment costs:   (free text):   
 Physical assets:   (free text):   
 Revenues:   (free text):   
 Demand side:   (free text):

**RELATIONS WITH THE OTHER PLAYERS:** (note 7)  
 (this column is automatically filled-in)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
P1 0															
P2 0															
P3 0															
P4 0															
P5 0															
P6 0															
P7 0															
P8 0															
P9 0															
P10 0															
P11 0															
P12 0															
P13 0															
P14 0															
P15 0															

**Types of relations**

- 1 Appointment
- 2 Election
- 3 Lobby pressure
- 4 Strong political influence
- 5 Corruption
- 6 Regulation of price
- 7 Regulation of quality
- 8 Regulation of quantity
- 9 Regulation of accessibility
- 10 Regulation of distributional aspects
- 11 Rule of law / judicial enforcement
- 12 Assignment
- 13 Market power
- 14 Command
- 15 Control

**INFORMATION TRANSFER:** (note 8)  
 (this column is automatically filled-in)

	Operational costs	Investment costs	Assets	Revenues	Demand	Autore	Truth-revealing incentive compatibility?	Any multi-regulation mechanisms in place?	If yes, please specify:
P1 0									(free text): <input type="text"/>
P2 0									(free text): <input type="text"/>
P3 0									(free text): <input type="text"/>
P4 0									(free text): <input type="text"/>
P5 0									(free text): <input type="text"/>
P6 0									(free text): <input type="text"/>
P7 0									(free text): <input type="text"/>
P8 0									(free text): <input type="text"/>
P9 0									(free text): <input type="text"/>
P10 0									(free text): <input type="text"/>
P11 0									(free text): <input type="text"/>
P12 0									(free text): <input type="text"/>
P13 0									(free text): <input type="text"/>
P14 0									(free text): <input type="text"/>
P15 0									(free text): <input type="text"/>

**STEP 5**

FRONT P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15

One sheet for each Player (P1, P2, P3 ...)

# THE OPEN QUESTIONS – THE FORM USED IN THE SURVEY

## OPEN QUESTIONS FOLLOWING THE FILLING-IN OF THE PLAYERS' SHEETS

### 1. Is the *status quo* described in the Excel matrix a sustainable equilibrium?

Please answer Yes or No. Optional: please provide a short explanation

### 2. What forces are at work to change it and in which direction?

### 3. Who is in charge for possible policy design and implementation?

## MAIN OBSTACLES TO IMPLEMENTATION

This section is intended to describe the obstacles that the system of relationships described in the Excel matrix poses to the implementation of the regulatory agenda / the project / the initiative / the policy in the context analyzed.

Please select three of the obstacles listed below, rank them according to their relevance and provide a few lines where you identify / suggest mechanisms that could be activated in order to remove the obstacle for the implementation of the regulatory agenda.

List of obstacles:

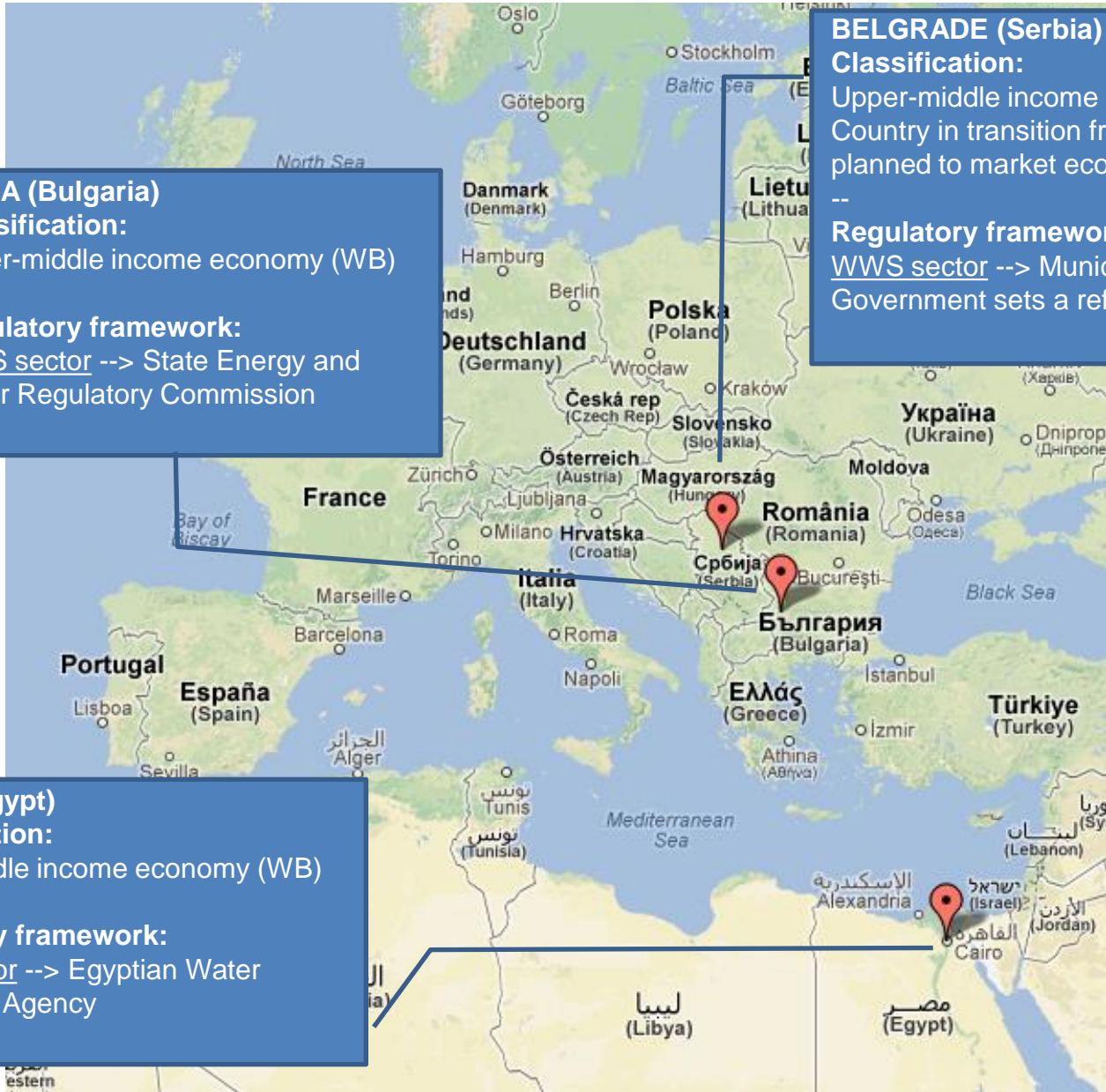
- challenges related to the rule of law
- corruption
- conflict of interests
- degree of regulatory independence
- lack of human capital and expertise
- political conflict
- ethnic conflict
- lack of political freedom
- poor quality and low accessibility of accountancy and statistical data
- other (to be specified)




**SOFIA (Bulgaria)**  
**Classification:**  
Upper-middle income economy (WB)  
--  
**Regulatory framework:**  
WWS sector --> State Energy and Water Regulatory Commission

**BELGRADE (Serbia)**  
**Classification:**  
Upper-middle income economy (WB)  
Country in transition from centrally planned to market economy (UN)  
--  
**Regulatory framework:**  
WWS sector --> Municipalities (the Government sets a reference price)

**CAIRO (Egypt)**  
**Classification:**  
Lower-middle income economy (WB)  
--  
**Regulatory framework:**  
WWS sector --> Egyptian Water Regulatory Agency





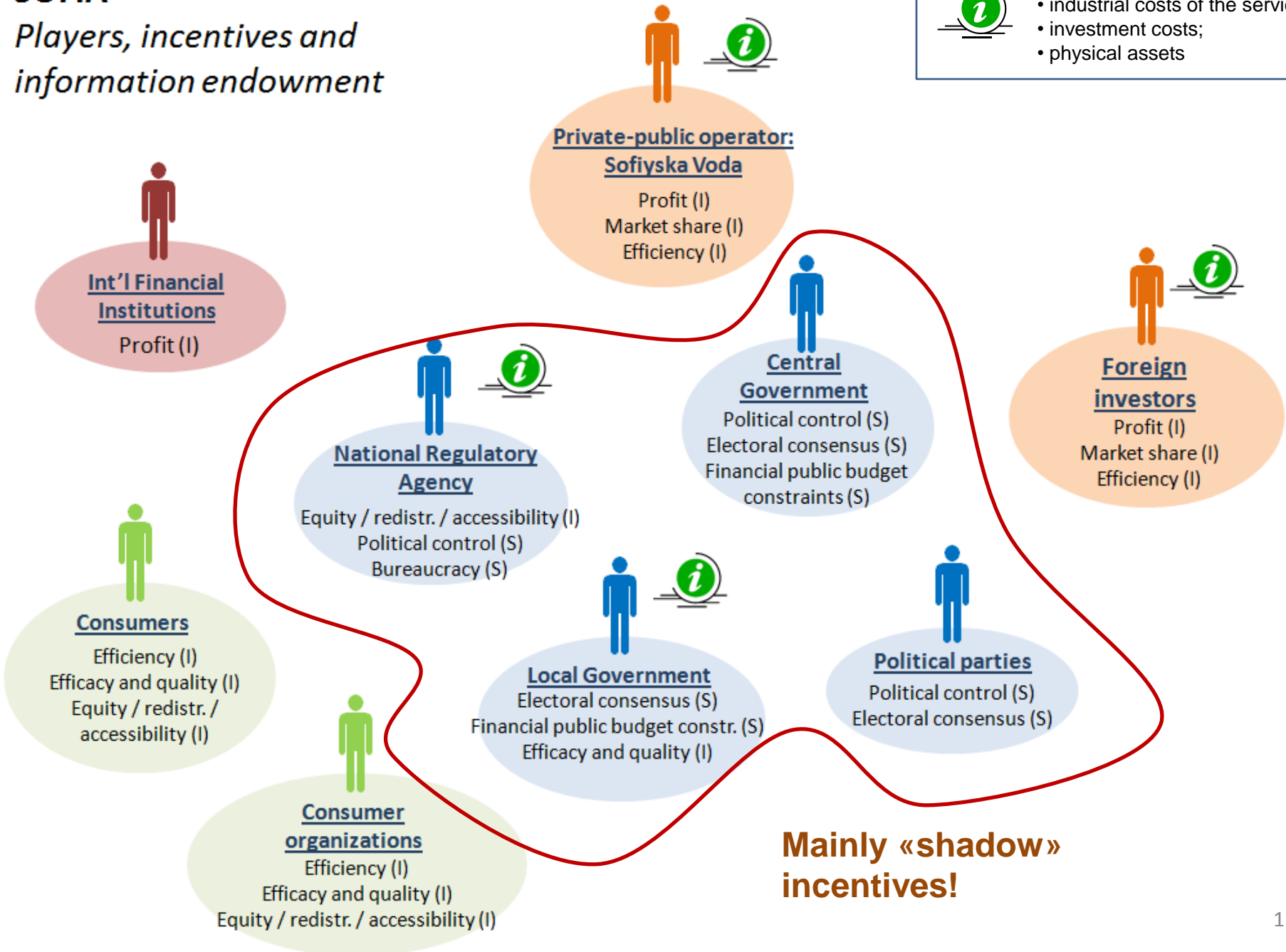
**SOME PRELIMINARY RESULTS  
IN THE WATER AND SANITATION  
SECTOR**

# SOFIA

## Players, incentives and information endowment



- = information endowment on:
- industrial costs of the service;
  - investment costs;
  - physical assets



# CAIRO

Players, incentives and information endowment

**2010: Egypt 7<sup>th</sup> recipient in aid to water & sanitation with 228.84 mil. USD.**

**Publicly owned operator: Holding Company for WWS**

- Bureaucracy (S)
- Efficiency (I)
- Political control (S)

**Int'l Financial Institutions**

- Efficacy and quality (I)
- Equity / redistrib. / accessibility (I)
- Efficiency (I)

**Central Government**

- Political control (S)
- Electoral consensus (S)
- Financial public budget constraints (S)

**Private operators**

- Profit (I)
- Market share (I)

**National Regulatory Agency**

- Efficacy and quality (I)
- Equity / redistrib. / accessibility (I)
- Financial public budget constraints (S)

**Consumers**

- Efficacy and quality (I)
- Equity / redistrib. / accessibility (I)

**Local Government**

- Efficiency (I)
- Equity / redistrib. / accessibility (I)
- Financial public budget constr. (S)

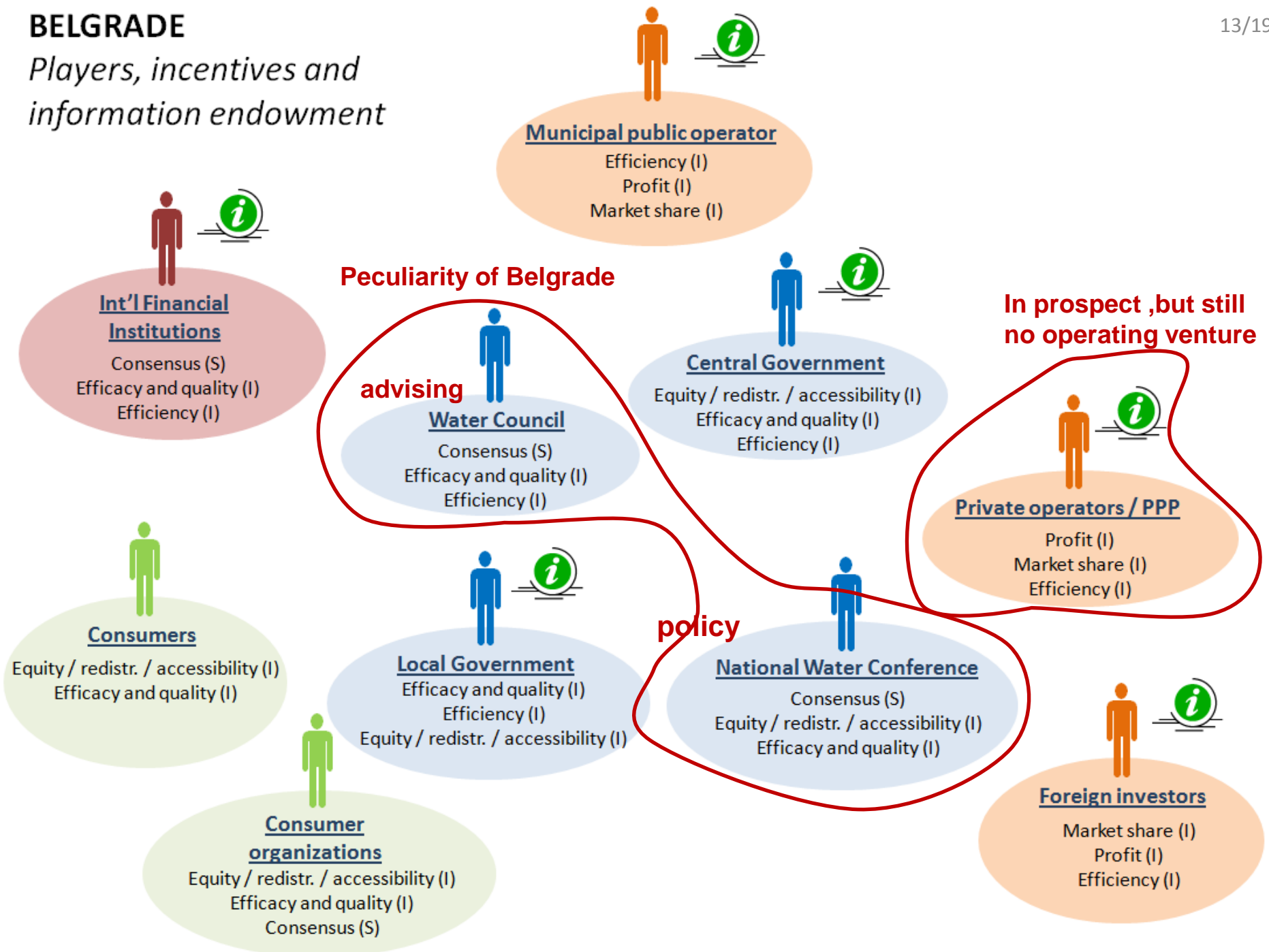
**NGOs**

- Efficacy and quality (I)
- Efficiency (I)
- Electoral consensus (S)

**Peculiarity of Cairo**

# BELGRADE









































## Players, incentives and information endowment



PUBLIC AUTHORITIES

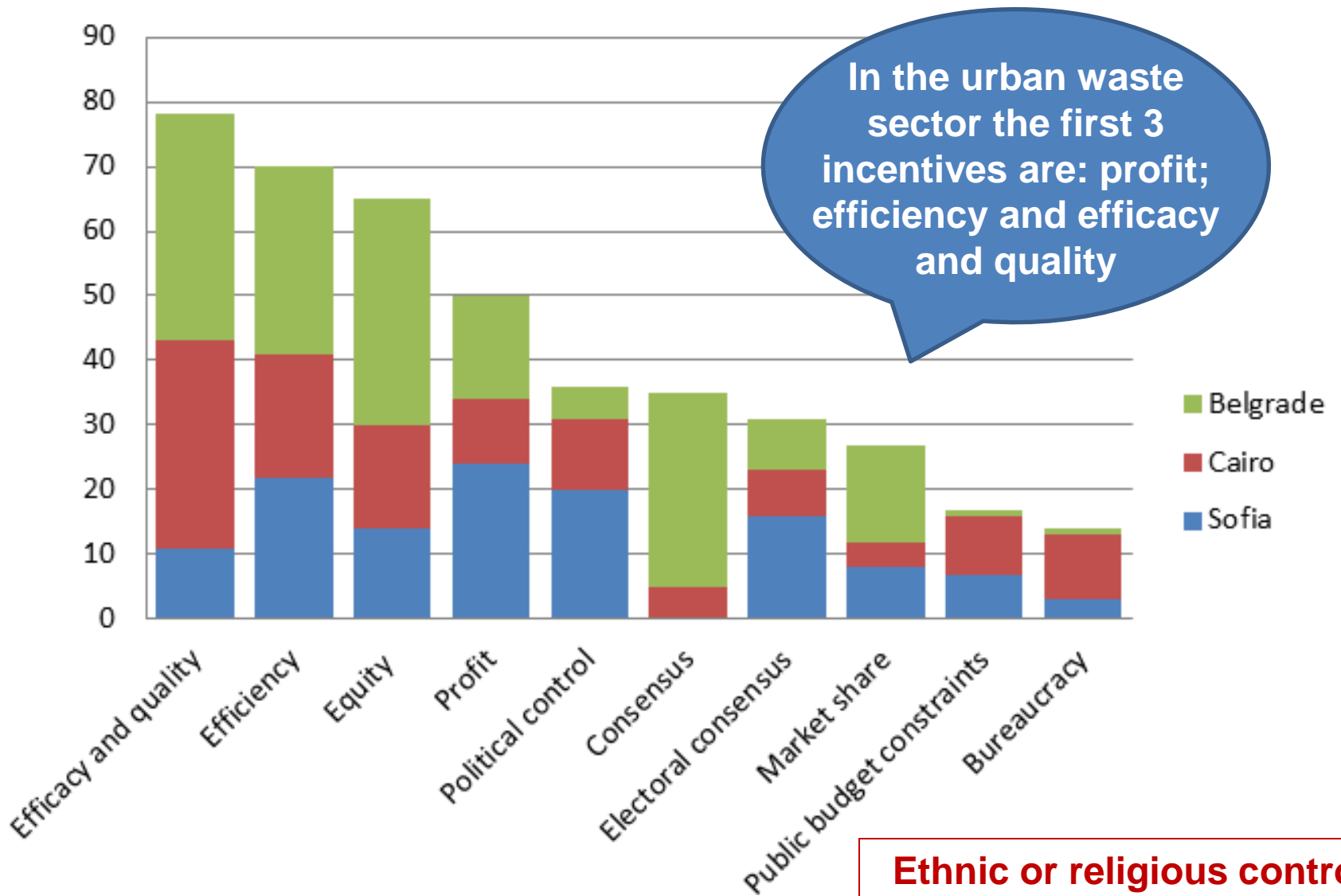
MARKET ACTORS

CONSUM IFIs

Players	Sofia	Cairo	Belgrade
Central government 	<ul style="list-style-type: none"> <li>Political control</li> <li>Electoral consensus</li> <li>Public budget constraints</li> </ul>	<ul style="list-style-type: none"> <li>Political control </li> <li>Electoral consensus</li> <li>Public budget constraints</li> </ul>	<ul style="list-style-type: none"> <li>Equity / redistr./ access. </li> <li>Efficacy and quality</li> <li>Efficiency</li> </ul>
Water Council (consultative body established by the Ministry)			<ul style="list-style-type: none"> <li>Consensus</li> <li>Efficacy and quality</li> <li>Efficiency</li> </ul>
National Conference on Water			<ul style="list-style-type: none"> <li>Consensus</li> <li>Equity / redistr./ access.</li> <li>Efficacy and quality</li> </ul>
National Regulatory Authority	<ul style="list-style-type: none"> <li>Equity / redistr./ access. </li> <li>Political control</li> <li>Bureaucracy</li> </ul>	<ul style="list-style-type: none"> <li>Efficacy and quality </li> <li>Equity / redistr./ access. </li> <li>Public budget constraints</li> </ul>	
Local government / municipality 	<ul style="list-style-type: none"> <li>Electoral consensus</li> <li>Public budget constraints </li> <li>Efficacy and quality </li> </ul>	<ul style="list-style-type: none"> <li>Efficiency</li> <li>Equity / redistr./ access. </li> <li>Public budget constraints </li> </ul>	<ul style="list-style-type: none"> <li>Efficacy and quality </li> <li>Efficiency</li> <li>Equity / redistr./ access. </li> </ul>
Political Parties	<ul style="list-style-type: none"> <li>Political control</li> <li>Electoral consensus</li> </ul>		
Publicly-owned operators		<ul style="list-style-type: none"> <li>Bureaucracy</li> <li>Efficiency </li> <li>Political control </li> </ul>	<ul style="list-style-type: none"> <li>Efficiency </li> <li>Profit </li> <li>Market share </li> </ul>
Private operators		<ul style="list-style-type: none"> <li>Profit </li> <li>Market share </li> </ul>	<ul style="list-style-type: none"> <li>Profit </li> <li>Market share </li> <li>Efficiency </li> </ul>
Mixed publicly-privately owned operators	<ul style="list-style-type: none"> <li>Profit </li> <li>Market share </li> <li>Efficiency </li> </ul>		
International / foreign operators	<ul style="list-style-type: none"> <li>Profit </li> <li>Market share </li> <li>Efficiency </li> </ul>		<ul style="list-style-type: none"> <li>Market share </li> <li>Profit </li> <li>Efficiency </li> </ul>
NGOs providing technical and financial support		<ul style="list-style-type: none"> <li>Efficacy and quality</li> <li>Efficiency</li> <li>Electoral consensus</li> </ul>	
International financial institutions and international donors 	<ul style="list-style-type: none"> <li>Profit</li> </ul>	<ul style="list-style-type: none"> <li>Efficacy and quality </li> <li>Equity / redistr./ access. </li> <li>Efficiency </li> </ul>	<ul style="list-style-type: none"> <li>Consensus </li> <li>Efficacy and quality </li> <li>Efficiency </li> </ul>
Consumer Organizations	<ul style="list-style-type: none"> <li>Efficiency</li> <li>Efficacy and quality</li> <li>Equity / redistr./ access.</li> </ul>		<ul style="list-style-type: none"> <li>Equity / redistr./ access.</li> <li>Efficacy and quality</li> <li>Consensus</li> </ul>
Consumers 	<ul style="list-style-type: none"> <li>Efficiency</li> <li>Efficacy and quality</li> <li>Equity / redistr./ access.</li> </ul>	<ul style="list-style-type: none"> <li>Efficacy and quality</li> <li>Equity / redistr./ access.</li> </ul>	<ul style="list-style-type: none"> <li>Equity / redistr./ access.</li> <li>Efficacy and quality</li> </ul>

### WWS Sector - Players' Incentives

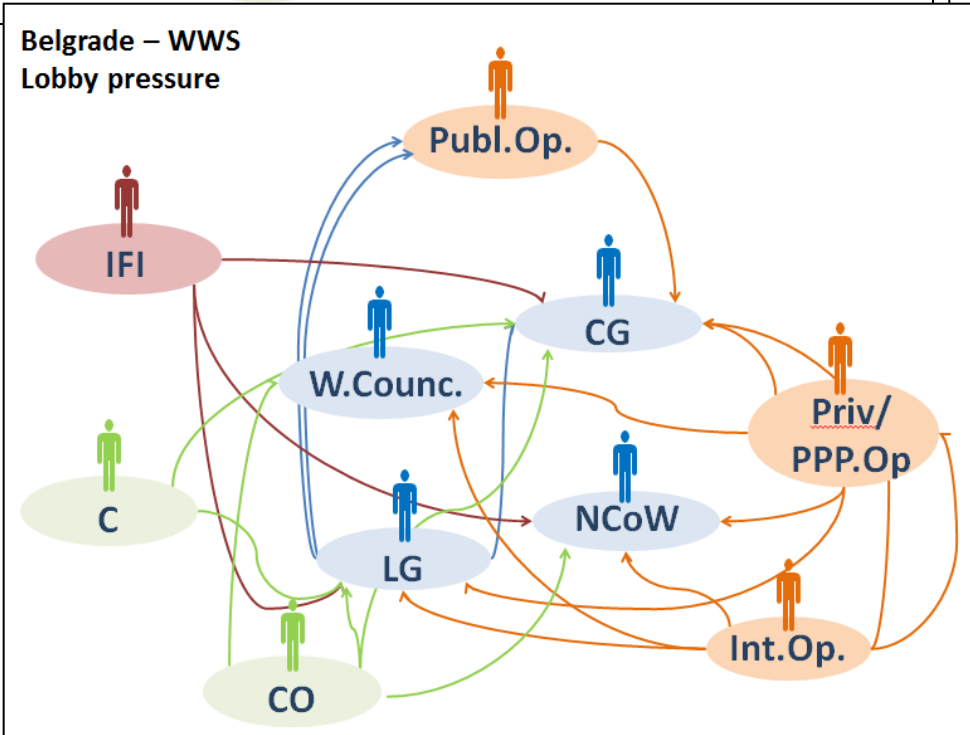
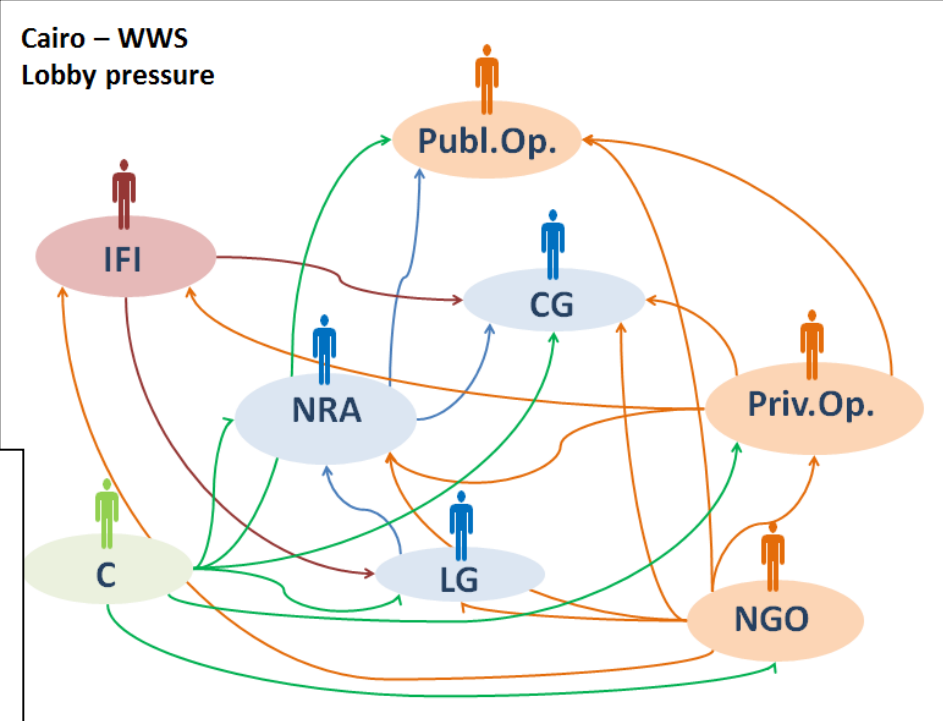
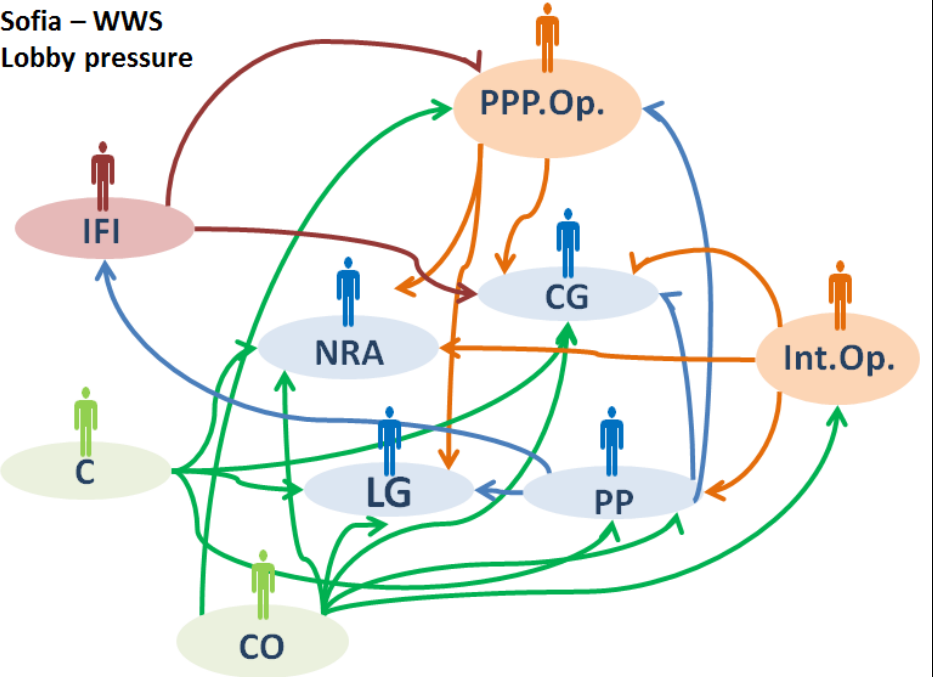
Weighted Total summing the results in the 3 Cities analyzed



**Ethnic or religious control?**

1<sup>st</sup> position: 8 | 2<sup>nd</sup> position: 4 | 3<sup>rd</sup> position: 3 | 4<sup>th</sup> position: 2 | 5<sup>th</sup> position: 1

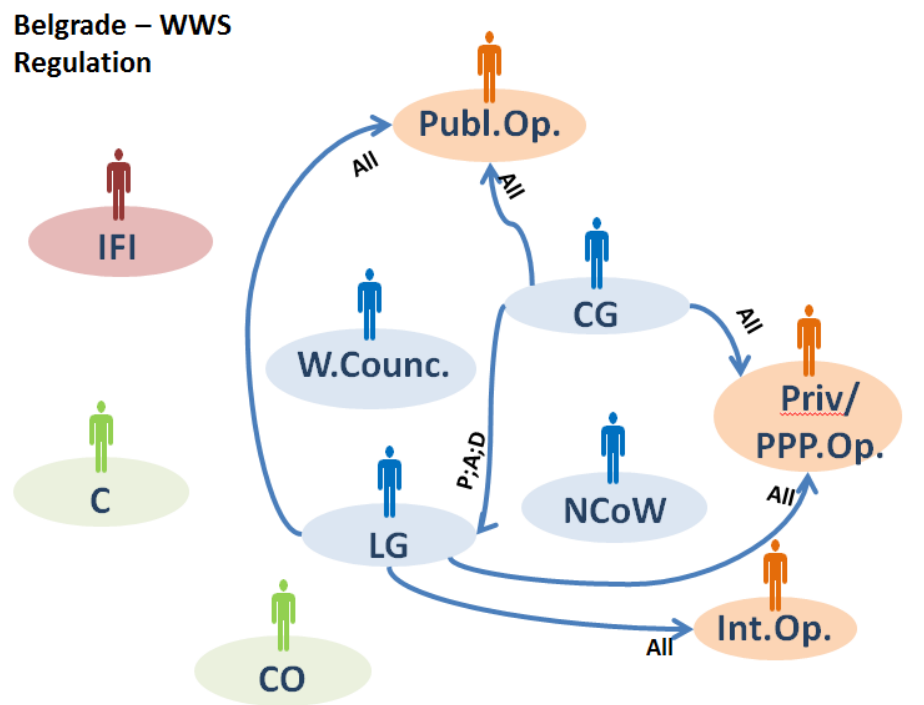
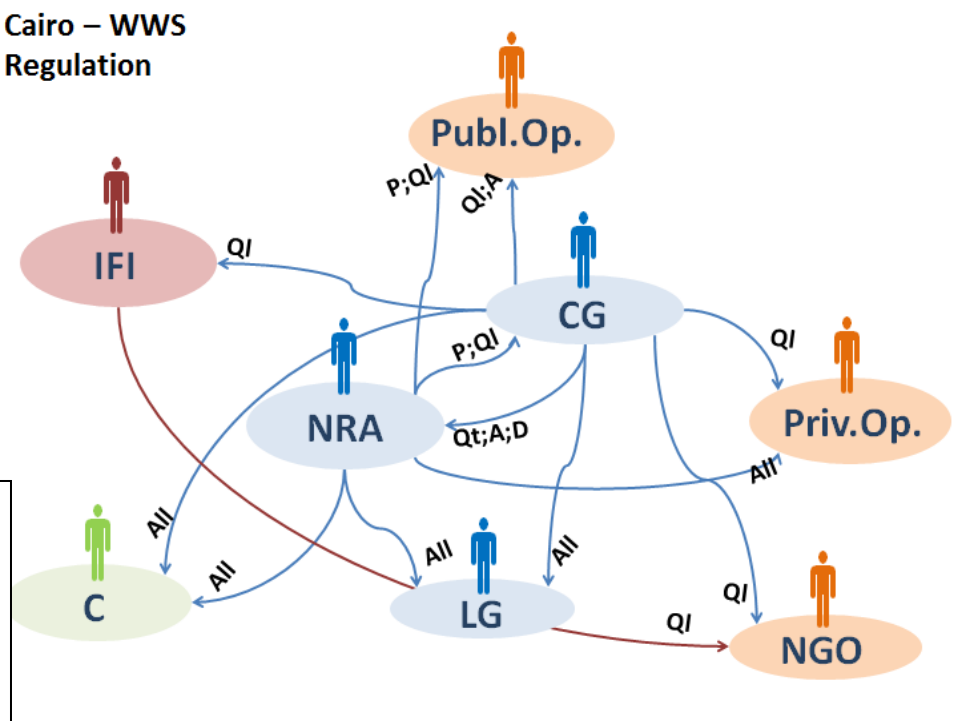
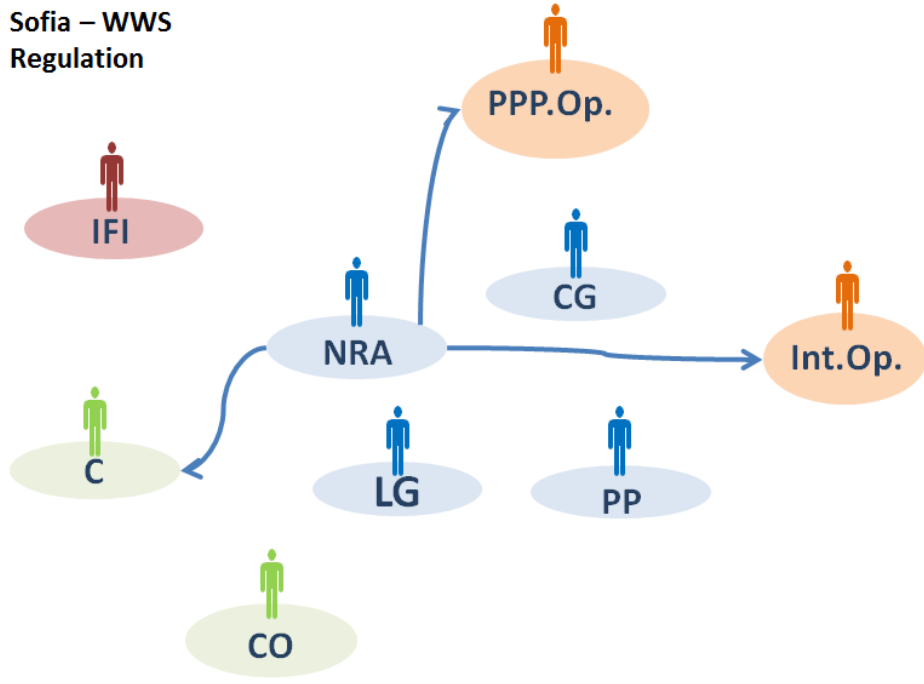
# Graphic representation of some relationships amongst players: Lobby pressure



- Public bodies: Central Government (CG), Local Government (LG), National Regulatory Agency (NRA), Water Council (W.Counc.), National Conference on Water (NCoW) and Political Parties (PP)
- Market operators: Public (Publ.Op.), Private (Priv.Op.), Public-private (PPP.Op.), International / Foreign (Int.Op.)
- International financial institutions and donors (IFI)
- Consumers (C) and their organizations (CO)



# Graphic representation of some relationships amongst players: Regulation

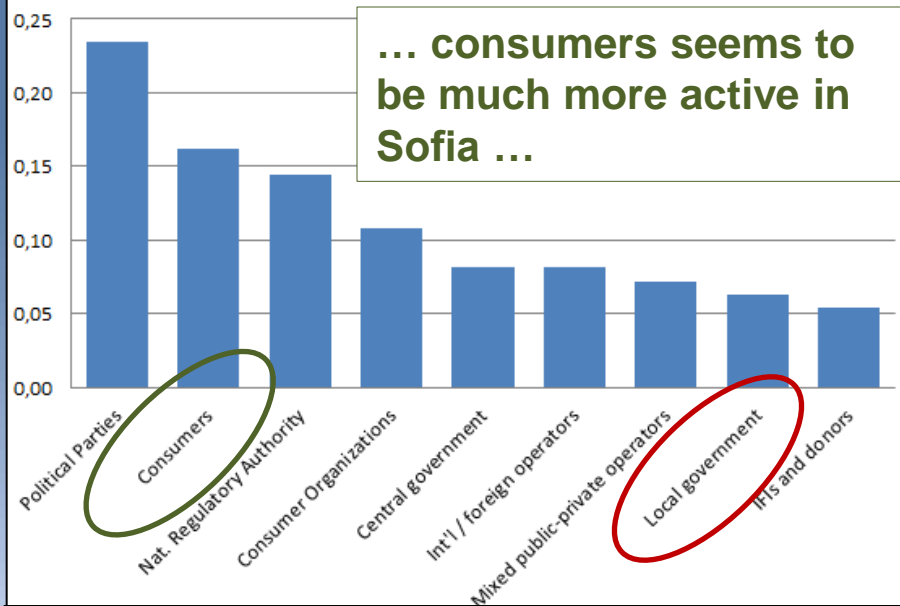


## Regulation categories:

- P = price
- QI = quality
- A = accessibility
- D = distributional aspects
- All = all types

### WWS sector - Sofia

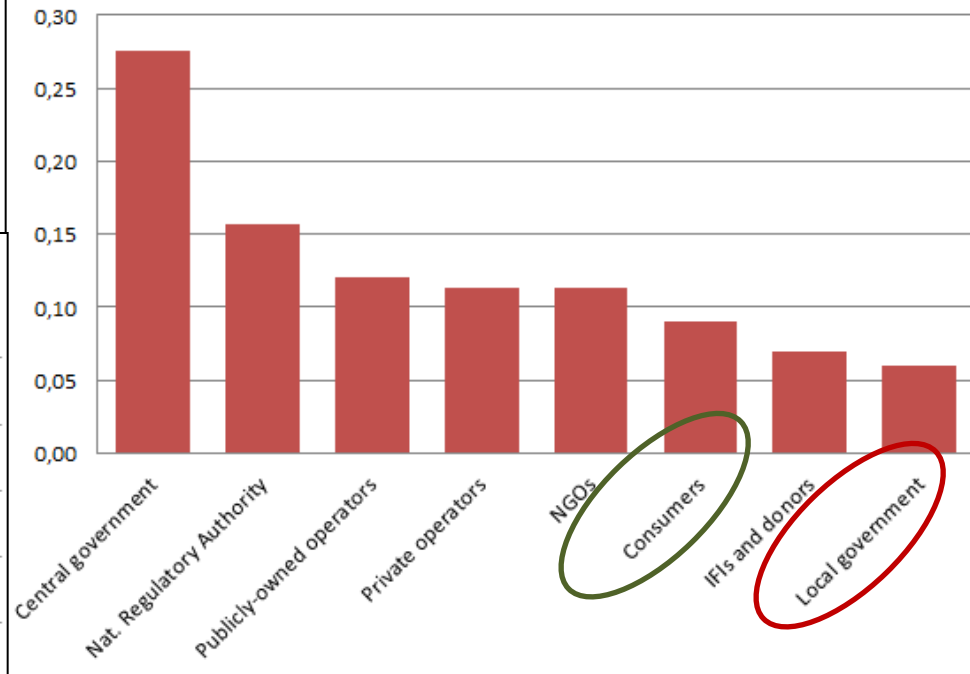
Outbound relations registered for each Player



## Outbound relations registered for each player in Sofia (Outbound Relations Ratio Index)

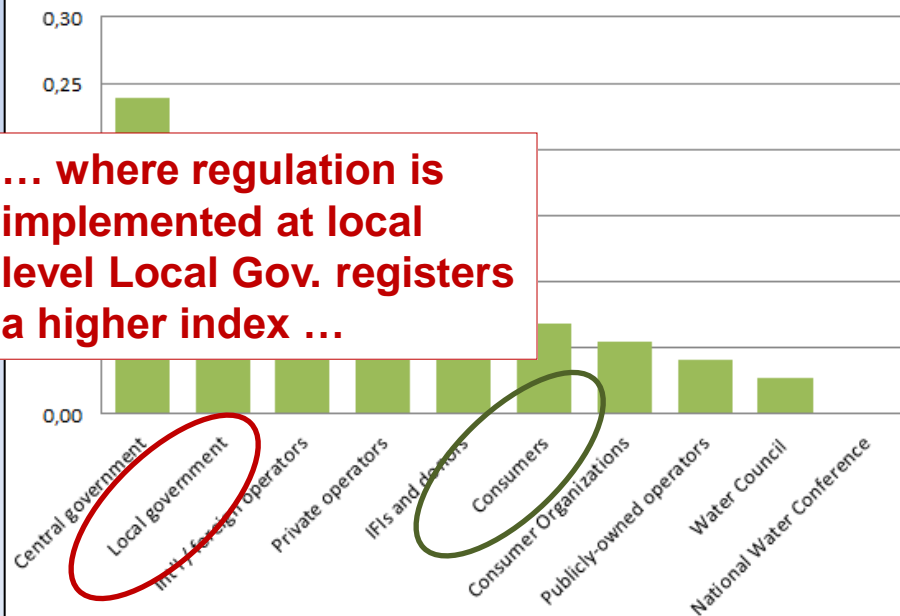
### WWS sector - Cairo

Outbound relations registered for each Player



### WWS sector - Belgrade

Outbound relations registered for each Player

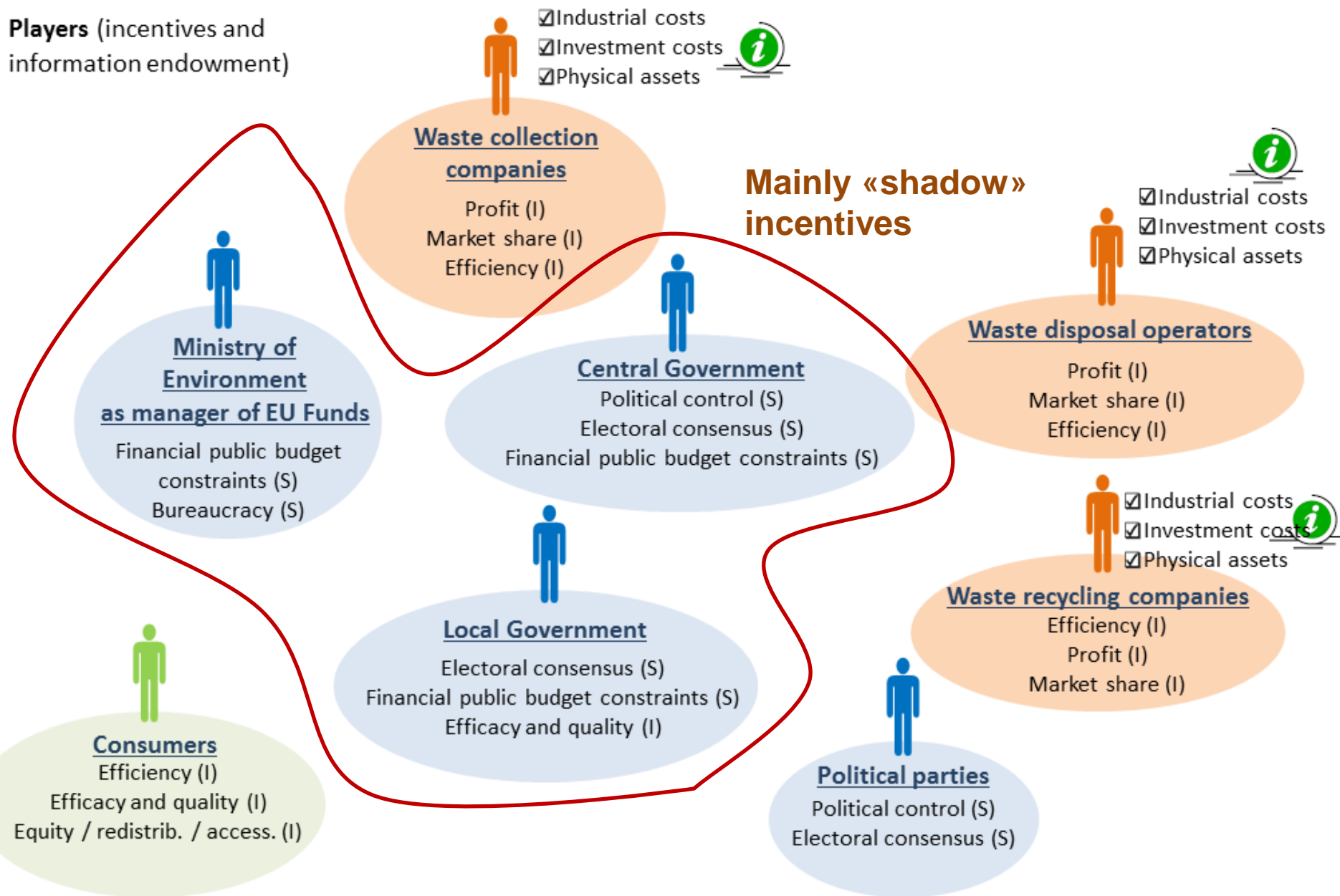




**SOME PRELIMINARY RESULTS  
IN THE HOUSEHOLD URBAN  
WASTE SECTOR**

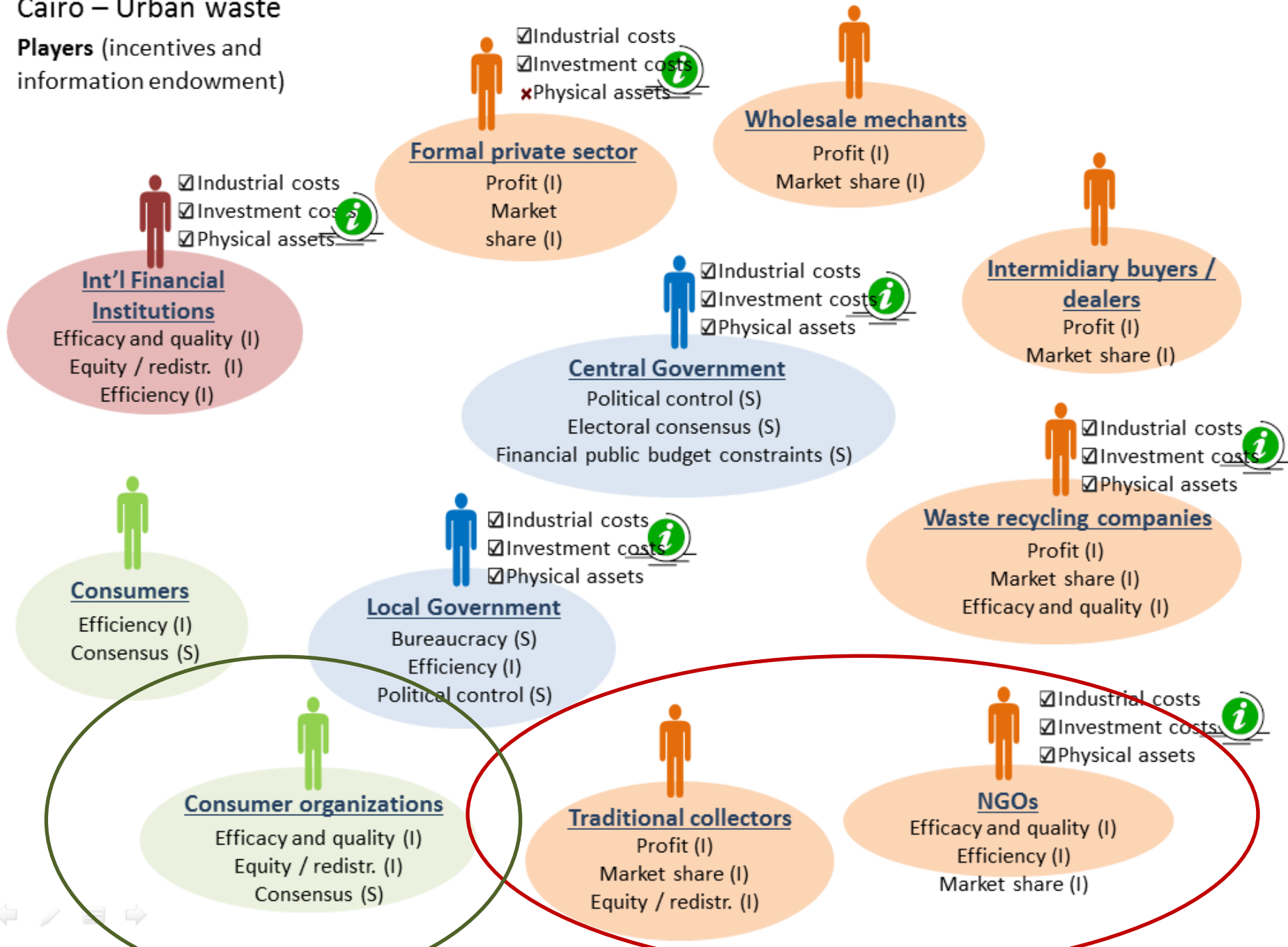
# Sofia – Urban waste

**Players** (incentives and information endowment)



# Cairo – Urban waste

**Players** (incentives and information endowment)



# Belgrade – Urban waste

**Players** (incentives and information endowment)



- ☑ Industrial costs
- ☑ Investment costs
- ☑ Physical assets



## Private waste collection companies

### companies

- Efficiency (I)
- Efficacy and quality (I)
- Profit (I)



- ☑ Industrial costs
- ☑ Investment costs
- ☑ Physical assets



## Financial Institutions (domestic or foreign)

- Profit (I)
- Efficiency (I)



## Consumers

- Efficiency and quality (I)
- Equity / redistrib. (I)
- Consensus (S)



- ☑ Industrial costs
- ☑ Investment costs
- ☑ Physical assets



## Local Government

- Efficiency and quality (I)
- Efficiency (I)
- Equity / redistrib. (I)



- ☑ Industrial costs
- ☑ Investment costs
- ☑ Physical assets



## Autonomous Province Vojvodina

- Efficiency (I)
- Efficiency and quality (I)
- Political control (S)

- ☑ Industrial costs
- ☑ Investment costs
- ☑ Physical assets



## Public waste operators

- Profit (I)
- Market share (I)
- Efficiency (I)






















































The only City where publicly-owned companies operate in the waste sector

**PUBLIC AUTHORITIES**

**MARKET ACTORS**

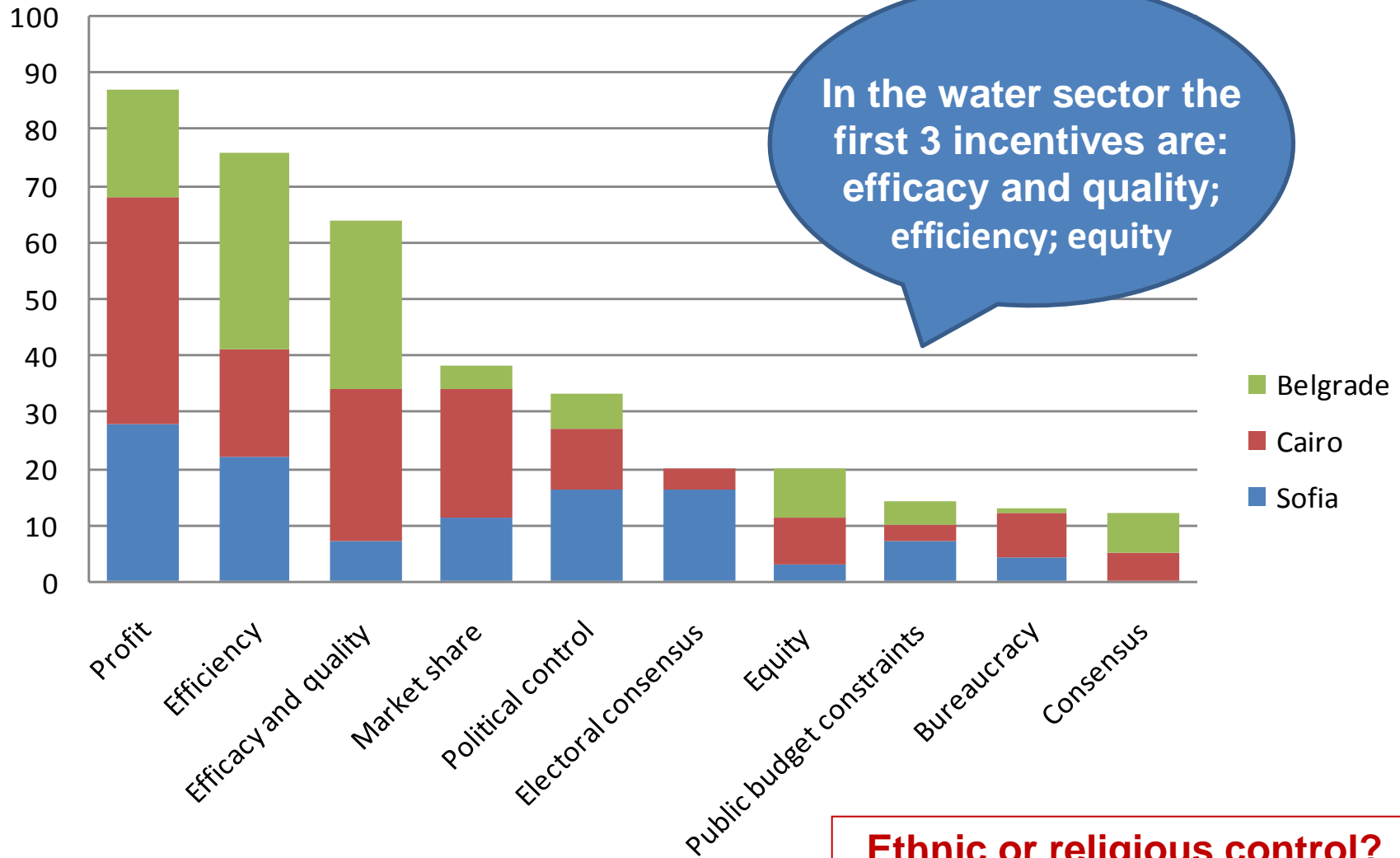
**IFIS**

**CONSUM**

	Players	Sofia	Cairo	Belgrade	
PUBLIC AUTHORITIES	Central government 	<ul style="list-style-type: none"> <li>Political control</li> <li>Electoral consensus</li> <li>Public budget constraints</li> </ul>	<ul style="list-style-type: none"> <li>Political control   </li> <li>Electoral consensus</li> <li>Public budget constraints</li> </ul>	<ul style="list-style-type: none"> <li>Efficiency</li> <li>Efficacy and quality   </li> <li>Political control</li> </ul>	
	Autonomous province			<ul style="list-style-type: none"> <li>Efficiency</li> <li>Efficacy and quality   </li> <li>Political control</li> </ul>	
	Local government/ municipality 	<ul style="list-style-type: none"> <li>Electoral consensus</li> <li>Public budget constraints</li> <li>Efficacy and quality</li> </ul>	<ul style="list-style-type: none"> <li>Bureaucracy</li> <li>Efficiency.   </li> <li>Political control</li> </ul>	<ul style="list-style-type: none"> <li>Efficacy and quality</li> <li>Efficiency   </li> <li>Equity/redistr./access.</li> </ul>	
	Political Parties	<ul style="list-style-type: none"> <li>Political control</li> <li>Electoral consensus</li> </ul>			
	Ministry of Environment as manager of EU Funds	<ul style="list-style-type: none"> <li>Profit</li> <li>Bureaucracy</li> </ul>			
MARKET ACTORS	Private waste collection companies (formal sector) 	<ul style="list-style-type: none"> <li>Profit</li> <li>Market share   </li> <li>Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Profit</li> <li>Market share  </li> </ul>	<ul style="list-style-type: none"> <li>Efficiency</li> <li>Efficacy and quality   </li> <li>Profit</li> </ul>	
	Publicly-owned waste operators			<ul style="list-style-type: none"> <li>Profit</li> <li>Market share   </li> <li>Efficiency</li> </ul>	
	Waste disposal operators	<ul style="list-style-type: none"> <li>Profit</li> <li>Market share   </li> <li>Efficiency</li> </ul>			
	Waste recycling companies	<ul style="list-style-type: none"> <li>Efficiency</li> <li>Profit   </li> <li>Market share   </li> </ul>	<ul style="list-style-type: none"> <li>Profit</li> <li>Market share   </li> <li>Efficacy and quality</li> </ul>		
	NGOs that support the SWM system		<ul style="list-style-type: none"> <li>Efficacy and quality</li> <li>Efficiency   </li> <li>Market share</li> </ul>		
	Traditional collectors		<ul style="list-style-type: none"> <li>Profit</li> <li>Market share</li> </ul>		
	Intermediary buyers/dealers		<ul style="list-style-type: none"> <li>Profit</li> <li>Market share</li> </ul>		
	Wholesale merchants		<ul style="list-style-type: none"> <li>Profit</li> <li>Market share</li> </ul>		
	CONSUM	International financial institutions and donors (in Belgrade they refer to domestic or foreign financial institutions)		<ul style="list-style-type: none"> <li>Efficacy and quality</li> <li>Equity / redistr./ access.   </li> <li>Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Profit</li> <li>Efficiency   </li> </ul>
		Consumer Organizations		<ul style="list-style-type: none"> <li>Efficacy and quality</li> <li>Equity / redistr./ access.</li> <li>Consensus</li> </ul>	
		Commercial waste generators and residents 	<ul style="list-style-type: none"> <li>Efficiency</li> <li>Efficacy and quality</li> <li>Equity / redistr./ access.</li> </ul>	<ul style="list-style-type: none"> <li>Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Efficacy and quality</li> <li>Equity / redistr./ access.</li> <li>Consensus</li> </ul>

# Urban waste - Players' Incentives

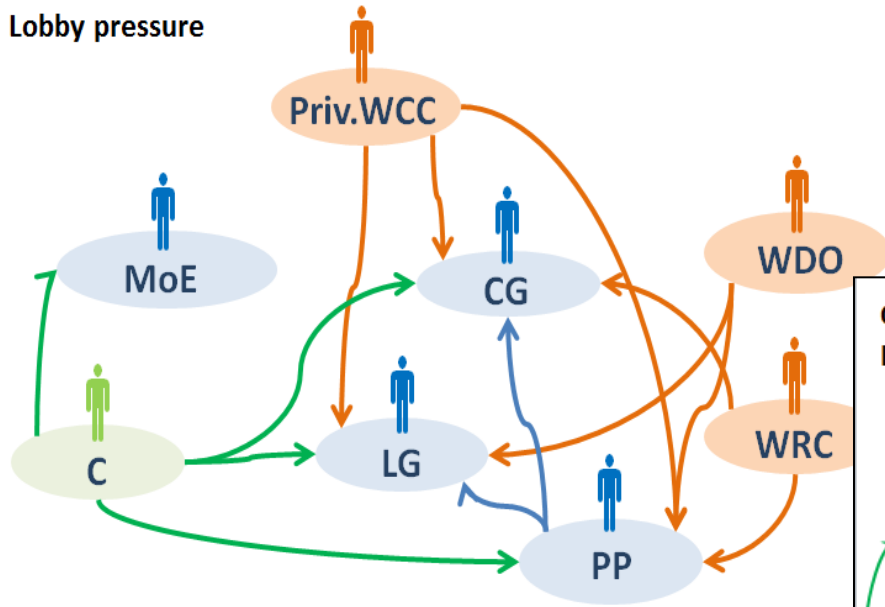
Weighted Total summing the results in the 3 Countries analyzed



1<sup>st</sup> position: 8 | 2<sup>nd</sup> position: 4 | 3<sup>rd</sup> position: 3 | 4<sup>th</sup> position: 2 | 5<sup>th</sup> position: 1



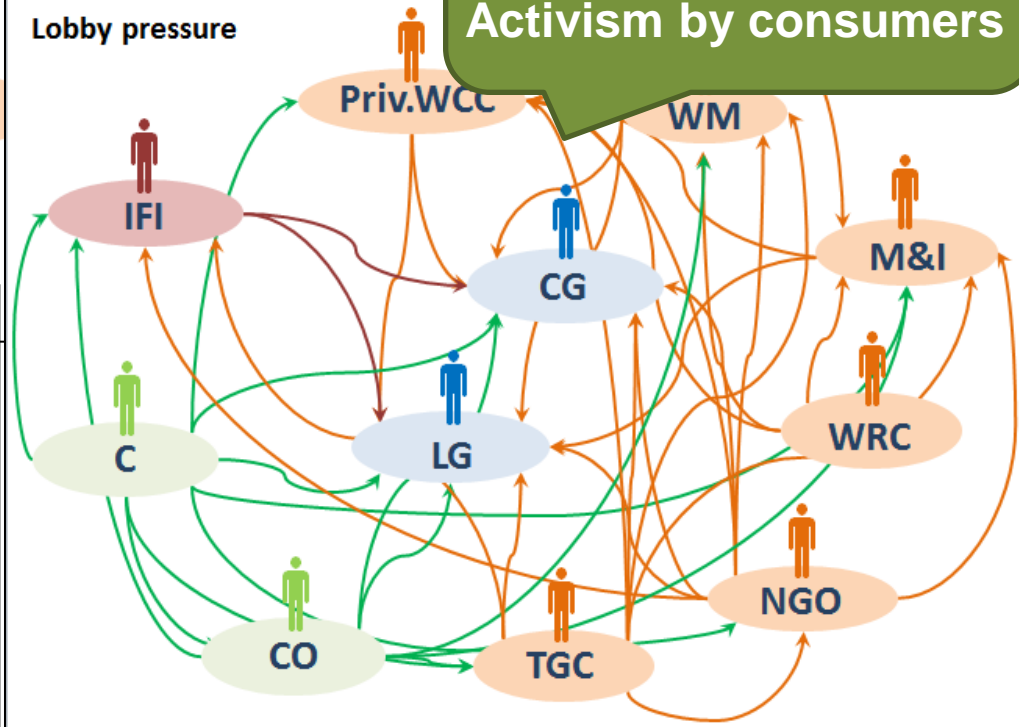
Sofia – Urban waste  
Lobby pressure



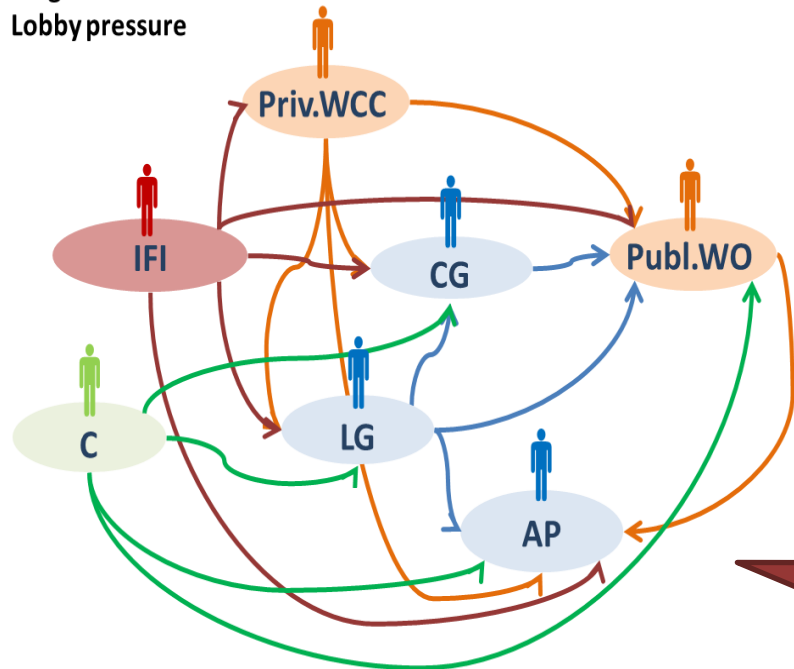
## Graphic representation of some relationships amongst players: Lobby pressure

More complexity  
More players  
Activism by consumers

Cairo – Urban waste  
Lobby pressure



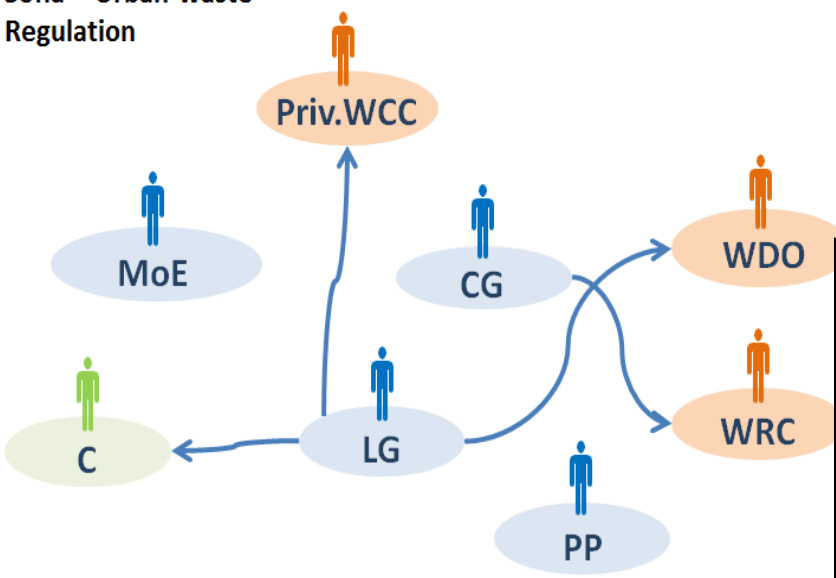
Belgrade – Urban waste  
Lobby pressure



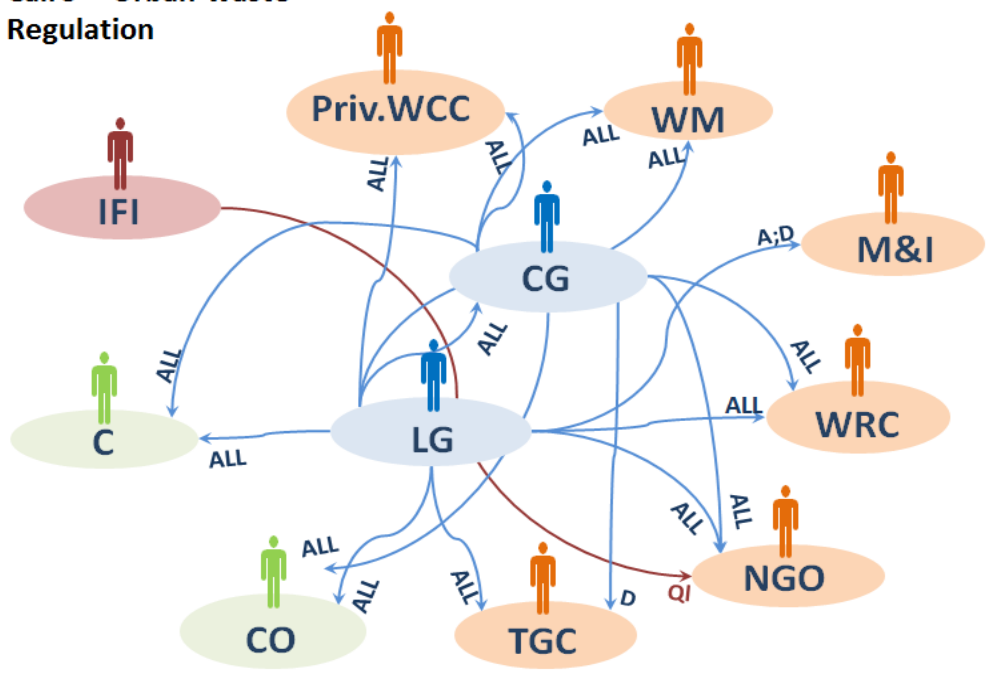
Financial institutions  
more active both  
toward PA and market  
operators

# Graphic representation of some relationships amongst players: Regulation

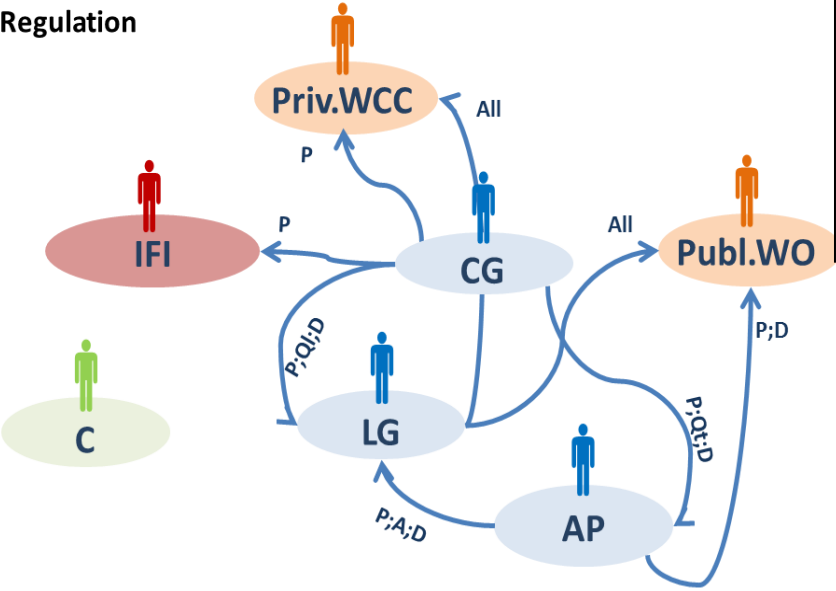
Sofia – Urban waste Regulation



Cairo – Urban waste Regulation

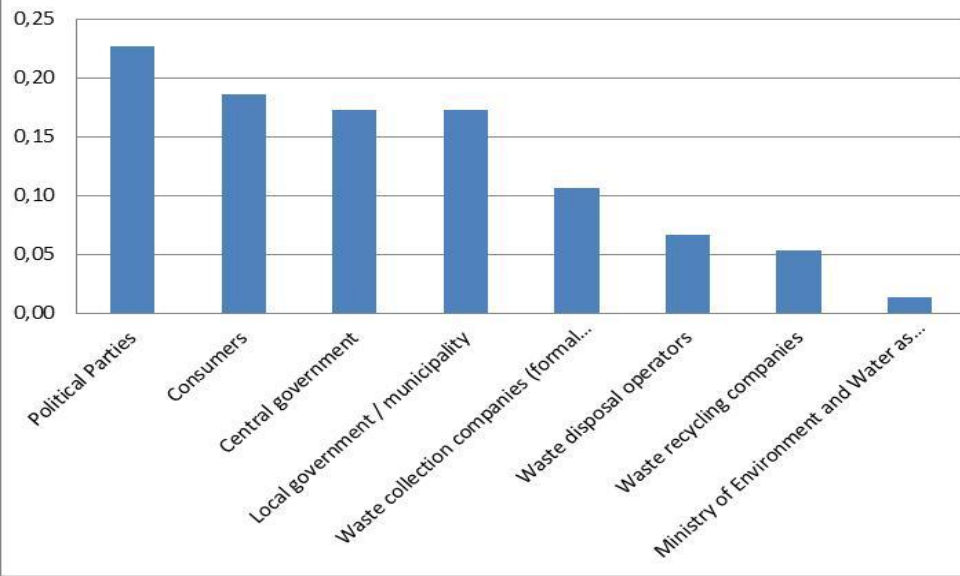


Belgrade – Urban waste Regulation



### Waste sector - Sofia

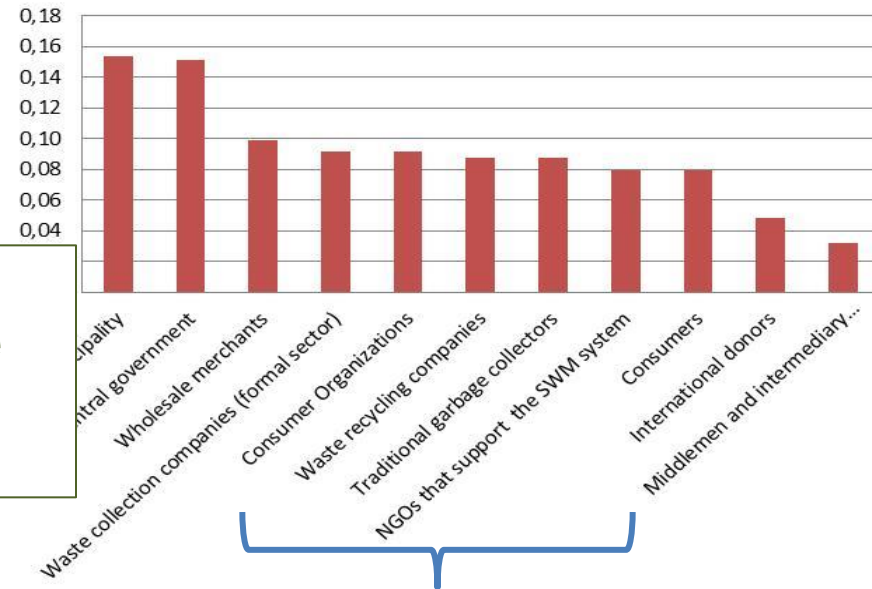
Outbound relations registered for each Player



## Outbound relations registered for each player in Sofia (Outbound Relations Ratio Index)

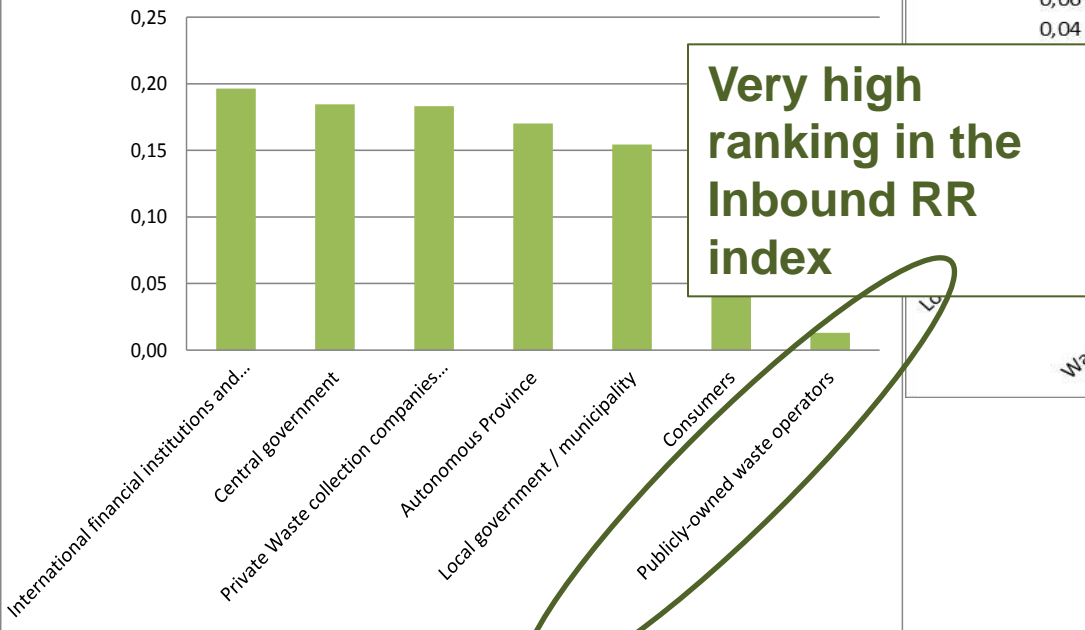
### Waste sector - Cairo

Outbound relations registered for each Player



### Waste sector - Belgrade

Outbound relations registered for each Player



All market operators have a similar index, including the informal sector

# MAIN OBSTACLES TO THE IMPLEMENTATION OF THE REGULATORY AGENDA: WWS AND URBAN WASTE SECTORS

Country	Sector	Obstacle 1	Obstacle 2	Obstacle 3
Bulgaria	Water	Degree of regulatory independence	Lack of human capital and expertise	Poor quality and low accessibility of accountancy and statistical data
	Waste	Degree of regulatory independence	Poor quality and low accessibility of accountancy and statistical data	Corruption
Egypt	Water	Degree of regulatory independence	Lack of human capital and expertise	Poor quality and low accessibility of accountancy and statistical data
	Waste	Scattered or uncertain legislative framework	Degree of regulatory independence	Lack of human capital and expertise
Serbia	Water	Scattered or uncertain legislative framework	Degree of regulatory independence	Corruption
	Waste	Scattered or uncertain legislative framework	Conflicts of interest	Corruption

e.g. In Bulgaria the economic competence of the State Energy and Water Regulatory Commission is considered to be lower than needed, as the Commission is mainly formed by technical experts

- 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?
- How to reduce subjectivity? → pools of referees?
- Is it possible to transform the Outbound/Inbound Relations Ratio Index into something more than a purely descriptive tool?

## ...to be done ASAP:

- Improving and fine-tuning the matrix → it needs «simplicity» (and some addition, i.e. a «commercial» relation between players)
- Enlarging geographical coverage and the scope, including osmosis among professional roles at local level
- build a large portfolio of case studies to further test it → do you want to help ?



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### Credits:

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