

What motivates organizational changes?

An empirical analysis of the French water industry

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Context

- Policy trend towards more private sector participation in (local) public services
 - EU Green Papers (03,04), EU Communication (09), PFI in the UK, Contrat de Partenariat in France ...
- Yet, the economic literature is more nuanced
 - Hart, Shleifer and Vishny (1997), Bennett and Iossa (2006), Guasch, Laffont and Straub (2006,2008), Levin and Tadelis (2010) etc.
- And several questions remain from an empirical standpoint
 - Few empirical studies with performance measures to evaluate alternative organizational choices (direct public management vs. PPPs) (Chong et al. 2006, Yvrande-Billon et Roy 2007, Klien 2011...)
 - Some empirical studies suggesting strong inertia in organizational choices (Zupan 1989, Lopez de Silanes et al. 1997, Canneva et Garcia 2010...)
 - Some studies pointing out the importance of political dimensions in organizational choices (Boycko et al. 1996, Lopez de Silanes et al. 1997)

Motivation

- Do local public authorities care about efficiency?
 - Does private sector involvement enhance efficiency?
 - Do potential efficiency improvements motivate public authorities to change organizational forms?
 - More specifically, what do they take into account when they decide to switch from one organizational choices to another?
- Contribution of our study
 - A performance indicator to study the impact of organizational choice
 - Panel data allowing to account for unobservable heterogeneity
 - Changes from one organizational form to another

The case of water in France

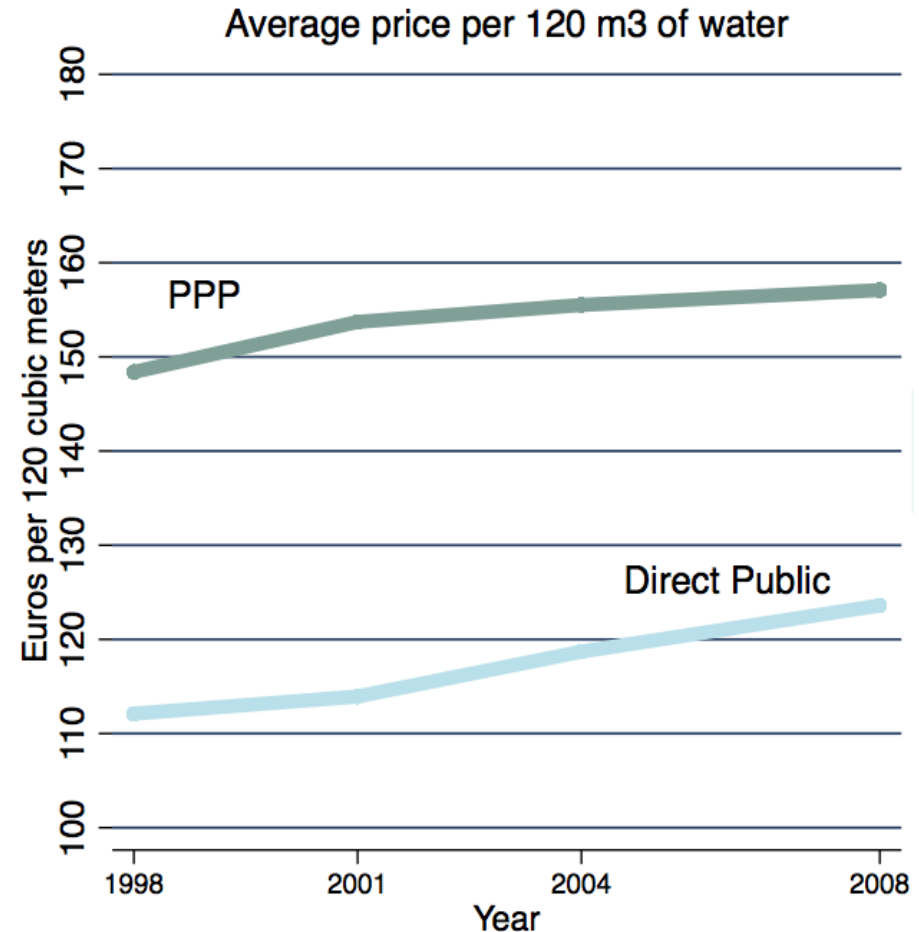
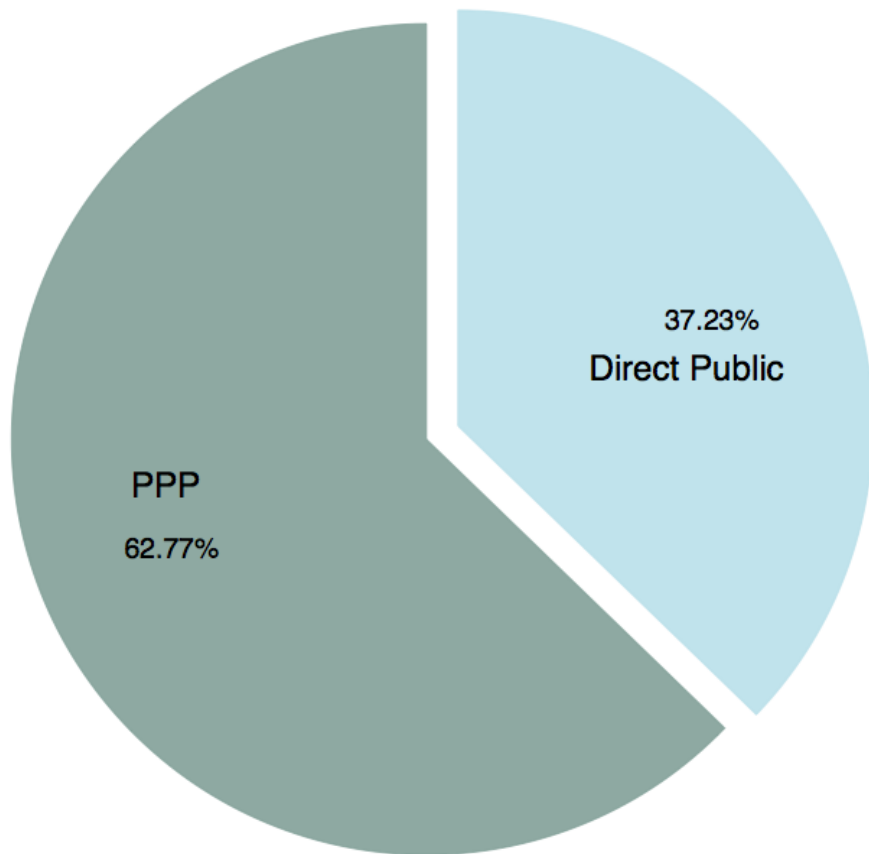
- Why?
 - Local authorities decide on how to organize water services
 - 19 000 water services
 - Access to data concerning 5 000 local authorities representing more than 75% of French consumers
 - France has a long experience of PPP
 - Access to data concerning 1998, 2001, 2004, 2008
 - Water is a hot topic in France
 - Several studies on water prices and organizational choice
 - Paris remunicipalization
 - Trend? Many switches?
 - ... and more broadly,
 - Atlanta (2001), Hamilton (2004), ...
 - A website dedicated to this “trend”: <http://www.remunicipalisation.org/>

Institutional context

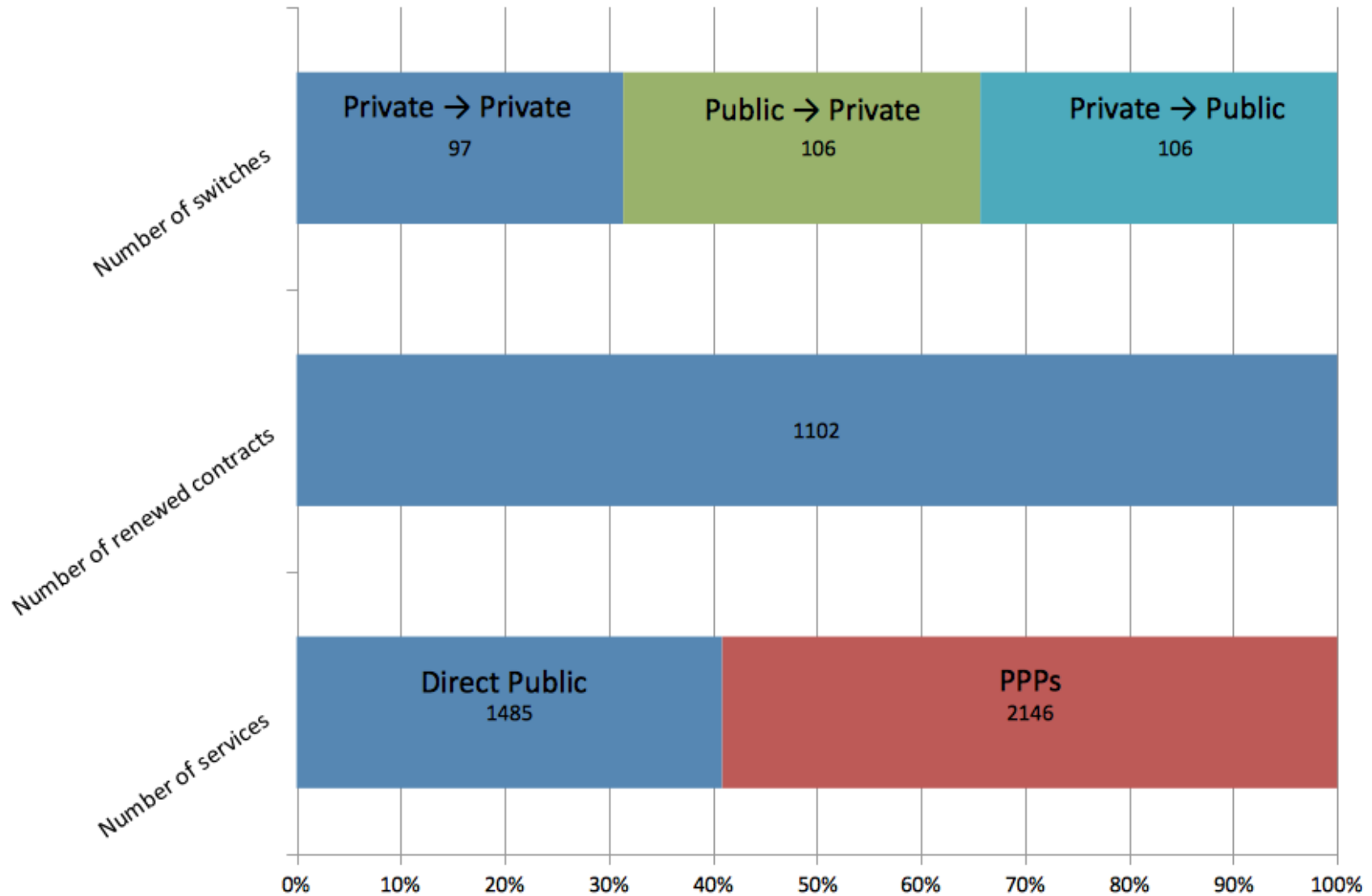
- Local public authorities can freely decide on how to provide water services in France
 - Direct public management
 - PPP
 - Call for tender and long term contracts
- Organization changes are possible
 - Anytime for services managed under direct public management
 - At the end of a contract under PPPs

Organization of water services in France: A snapshot

Organization choices for water supply 1998-2008



Organization of water services in France: A snapshot



Empirical strategy

- Our questions:
 - Does private involvement increase efficiency, *all things being equal*?
 - Do switches reflect the willingness of local authorities to improve efficiency?
- Assumption: Deflated price per 120 m³ paid by consumers as performance measure
- A first step analysis on the impact of organizational choice on water price
 - Issue of endogenous organizational choice
 - Panel regressions (fixed effects)
 - Switching regressions

How can we explain switches?

- Switches should occur when performances can be improved
 - Economic incentives to change as measured by the distance between observed price and potential expected price



How can we explain switches?

- Switches may be driven by political reasons
 - For the moment, share of left wing votes in the 1995 and 2002 Presidential elections
- Switches might be limited because of switching costs
 - Distinction between large ($>10,000$) and small ($<10,000$) municipalities
 - Some switches may be less costly than others
- Simple Probit analysis
 - Direct Public Management \rightarrow PPP
 - PPP \rightarrow Direct Public Management
 - One operator to another

Results and discussion

Performance

- Main results on the relative efficiency of PPPs
 - On the overall, water prices are 10€ higher under PPPs (simple mean = 139€)
 - This effect is only present in small municipalities (<10,000 habitants), about 11€
 - No significant impact for large municipalities
- Based on these estimations, we compute measures for potential improvements
 - For municipalities whose observed water price is **higher** than the expected price if they change organizational form
 - Direct Public Management → PPP: Average gain $\approx 13\text{€}$ per 120m^3
 - PPP → Direct Public Management: Average gain $\approx 22\text{€}$ per 120m^3

Results and discussion

Organizational changes

- Main results concerning switches (very preliminary)
 - Our efficiency measures explain some form of switches more than others
 - Potential improvements in efficiencies trigger large municipalities to change from direct public management to PPPs, and to change operators 😊
 - Potential improvements in efficiencies do not guide municipalities' decision to remunicipalization 😞
 - Small municipalities' decision to switch is not driven by the “right” kind of potential improvements 😞
 - Lock in effects
 - ... or irrational behavior?

To do list

- Data collection for municipal elections
- Quality-adjusted price as a measure for economic efficiency (leakages, quality of distributed water)

Thank you
for your attention!

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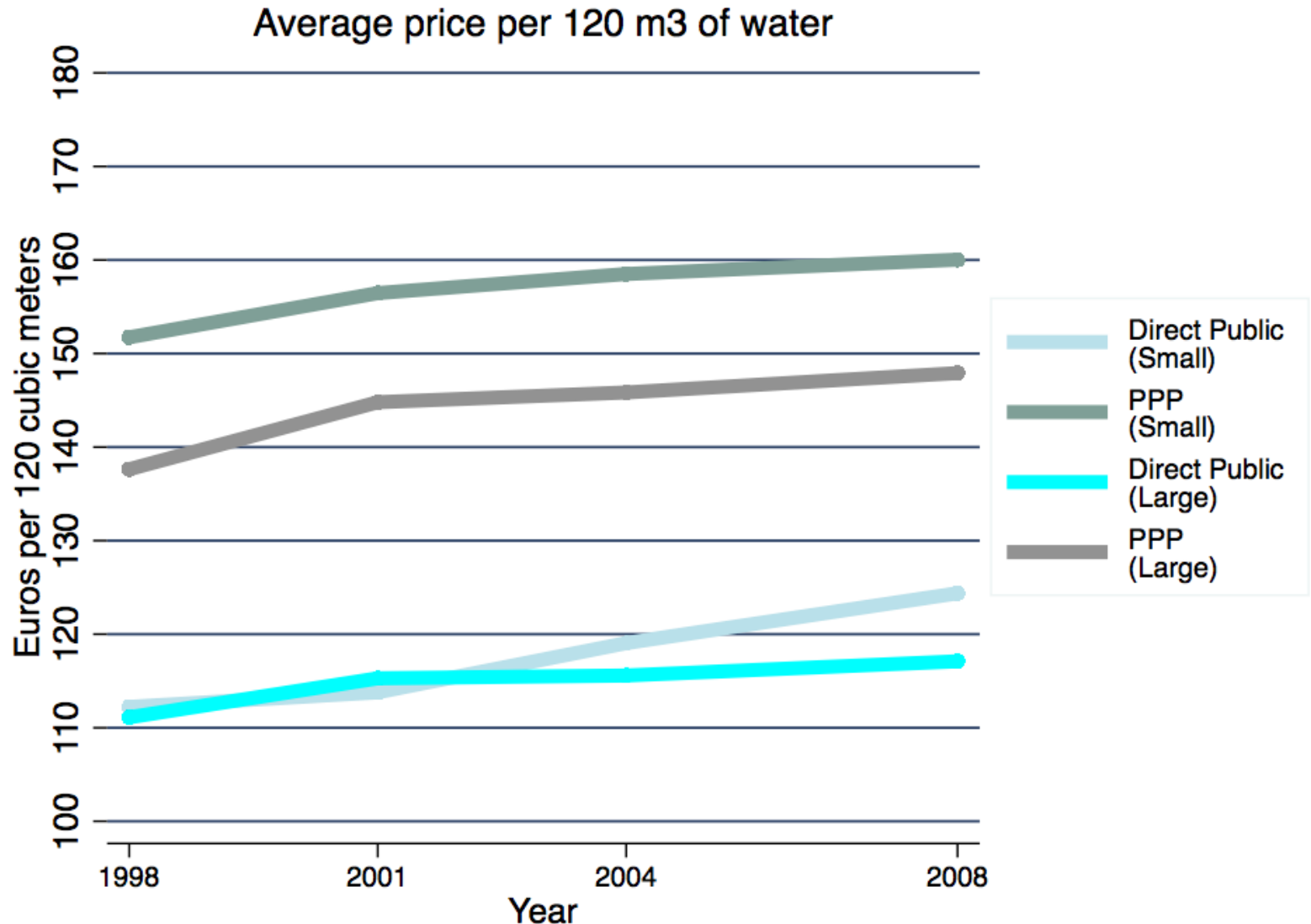
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Results and discussion

Organizational change

	Direct Public → PPP		PPP → Direct Public		Change in operator	
	Small Muni.	Large Muni.	Small Muni.	Large Muni.	Small Muni.	Large Muni.
Improvement (Change)	-0.342+	1.237***	0.947	0.138	5.807***	-1.571
	(0.202)	(0.297)	(1.697)	(0.572)	(1.703)	(1.576)
Improvement (Same)	1.462*	-0.744	-1.489	1.623	-4.293**	5.024+
	(0.650)	(0.899)	(1.542)	(1.326)	(1.573)	(2.691)
LeftWing	0.735	-0.734	-1.415+	-3.948+	0.521	2.586
	(0.594)	(1.719)	(0.834)	(2.390)	(0.794)	(2.038)
Constant	-2.368***	-1.183+	-0.964*	0.106	-2.374***	-2.371**
	(0.264)	(0.692)	(0.380)	(0.845)	(0.387)	(0.792)
Pseudo R2	0.014	0.049	0.011	0.058	0.028	0.098
N	2798	372	1106	173	1001	151

Organization of water services in France: A snapshot



Changes in organizational forms

	Contracts that expire	New contract with same PPP operator	New contract with different PPP operator	Brought in-house as public operation
1998-2001	391	326	16	34
<i>small towns</i>	<i>340</i>	<i>289</i>	<i>13</i>	<i>26</i>
<i>large towns</i>	<i>51</i>	<i>37</i>	<i>3</i>	<i>8</i>
2001-2004	332	301	20	10
<i>small towns</i>	<i>289</i>	<i>261</i>	<i>17</i>	<i>10</i>
<i>large towns</i>	<i>43</i>	<i>40</i>	<i>3</i>	<i>0</i>
2004-2008	671	543	42	70
<i>small towns</i>	<i>571</i>	<i>464</i>	<i>34</i>	<i>60</i>
<i>large towns</i>	<i>100</i>	<i>79</i>	<i>8</i>	<i>10</i>

Changes in organizational choices

