# Implementing Infrastructure Regulatory Reforms in Multi-level Governance Systems

# Dr Alberto Asquer

**Faculty of Economics, University of Cagliari, Italy**

**SOAS, University of London, UK**

# 0. Overview

**Aims** of this lecture:

1) To present and discuss issues related to regulatory reform in local public services;

2) To present and discuss a method for analysing institutional change based on modelling social interactions within events (*analytic narrative*);

3) To present and discuss the case of the implementation of the water sector reform in Italy in the period 1994-2009 as a way to illustrate points 1 & 2.

# 1. Regulatory reform in local public services

**Regulatory reforms** typically aim to radically reconfigure the way public services are provided, e.g., by liberalizing access to infrastructure and price setting.

Regulatory reforms, for example, consist of "transformative shifts" from one of these **regimes** to another (Gómez Ibáňez, 2003):

- Public ownership and provision of public services;

- Allocation of franchises for delivering public services;

- Discretionary powers granted to regulatory authorities;

- Liberalization, provided some regulation of access, price, and quality.

# 1. Regulatory reform in local public services

Regulatory reforms typically entail a considerable amount of **political confrontation** in both the making and the implementation "stages" of regulatory reform policy cycles.

Here, we are especially focused on the implementation "stage", where apparently "technical" and "administrative" activities really consist of the "continuation of politics by other means" (Wildavsky and Majone, 1979).

The **multi-layered government context** provides a special source of continuous political confrontation – one that calls for mutual adjustment (Lindblom, 1959) between public authorities situated at different tiers of the governmental systems.

# 1. Regulatory reform in local public services

Patashnik (2003, 2008) addressed the issue of what makes policy reforms "**politically sustainable**" in the post-enactment stage.

He aimed to identify "systematic patterns of reform trajectories" (e.g., sustained success, reversal, mixed results).

"Factors" that induce a sustainable reform implementation pattern especially include:

a) **shift of institutional configurations** that "disable" policy-makers from taking new actions contrary to the reform "spirit" and objectives;

b) **policy feedback effects** that affect identities, political resources, and strategic behaviour of relevant actors.

# 1. Regulatory reform in local public services

Adding reservations to Patashnik's (2003, 2008) works:

a) **Under which conditions** do shifts of institutional configurations and policy feedback effects take place?

Initial conditions and changing context features may play an important role in triggering these favourable "factors" (or "mechanisms").

b) **Can we really identify** "systematic patterns of reform trajectory"?

Mutual adjustment between public authorities may result in "erratic" trajectories that are no easily susceptible to taxonomy.

# 2. Overview of the research

**Question:** How does the process of implementing regulatory reforms unfold, especially within a MLG context?

**Case:** Implementation stage of the policy cycle to liberalize and re-regulate Italy's (drinking and waste) water sector (1994-2009)
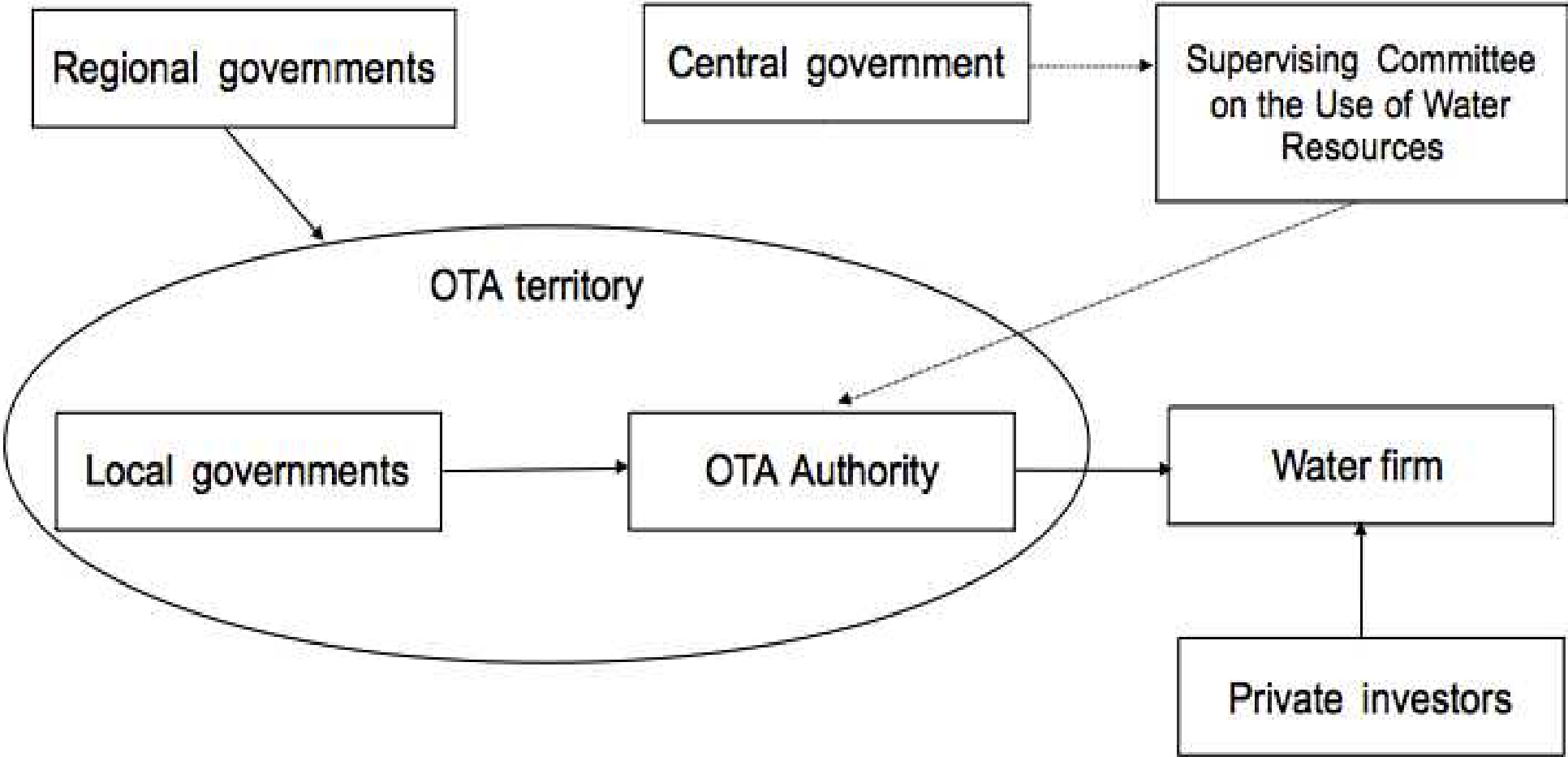
**Case path and outcome**: The episode presents these features:
a) a period of slow implementation was followed by one of rapid implementation;
b) some part of Italy (Tuscany) proceeded in the implementation of the reform faster than others;
c) the outcome includes widespread implementation of the new water regulatory system in the country.

**Method**: analytic narrative (Bates et al., 2000; Levi, 2002)

# 3. The reform of the water sector in Italy (1994-2009)

The **institutional design** of the 1994 water reform.

# 3. The reform of the water sector in Italy (1994-2009)

1994 water reform

1997 legislation on funding for wastewater infrastructure

Generally, inertia to establish the new regulatory system

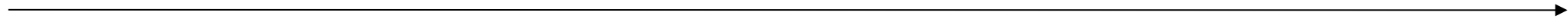Defining the boundaries of new water district jurisdictions (*Ambiti Territoriali Ottimali*)

Establishing the new water regulatory authorities (*Autorità d'Ambito*) at the local level

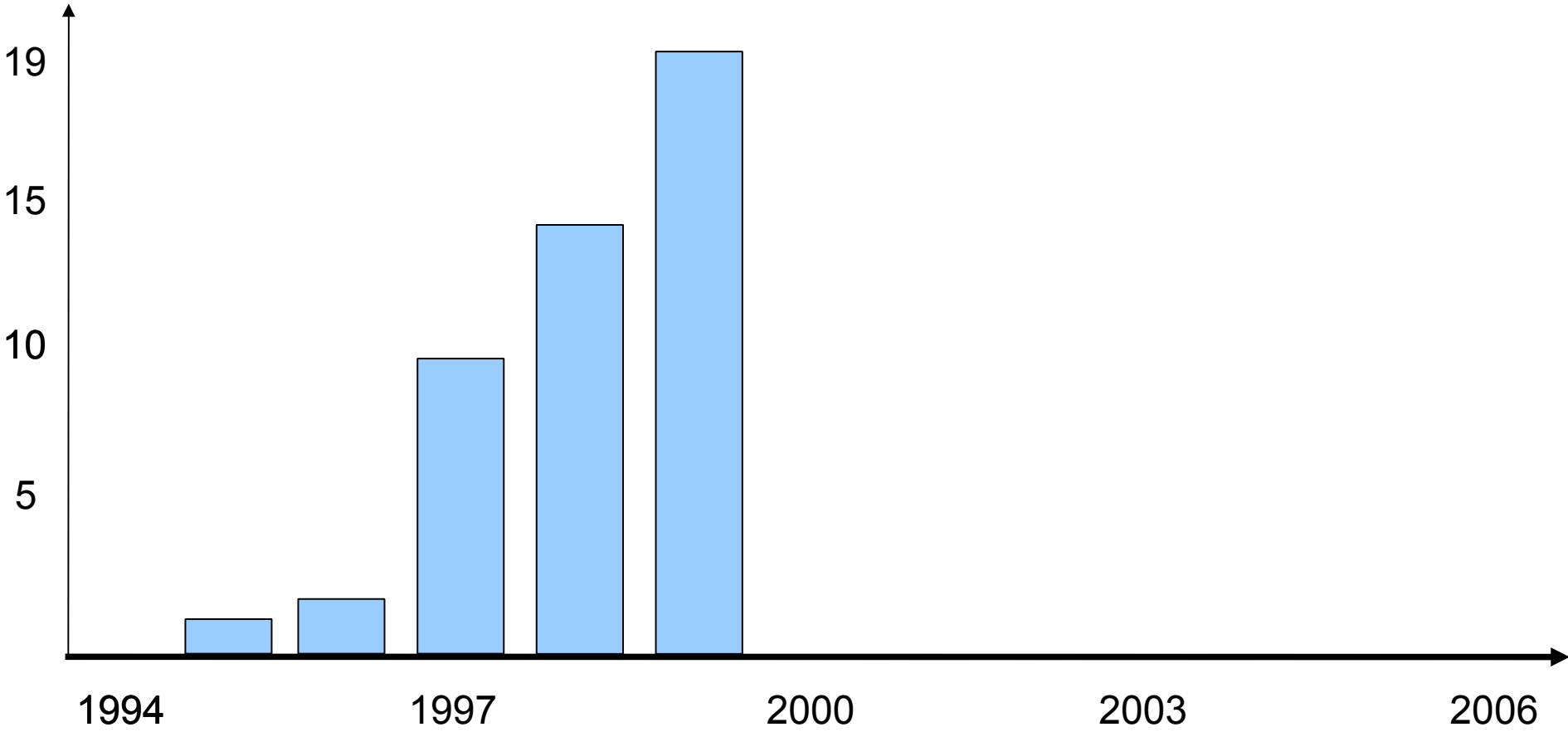Establishment of new regulatory system and award of water franchise in Alto Valdarno, Tuscany

1994

1997

2009
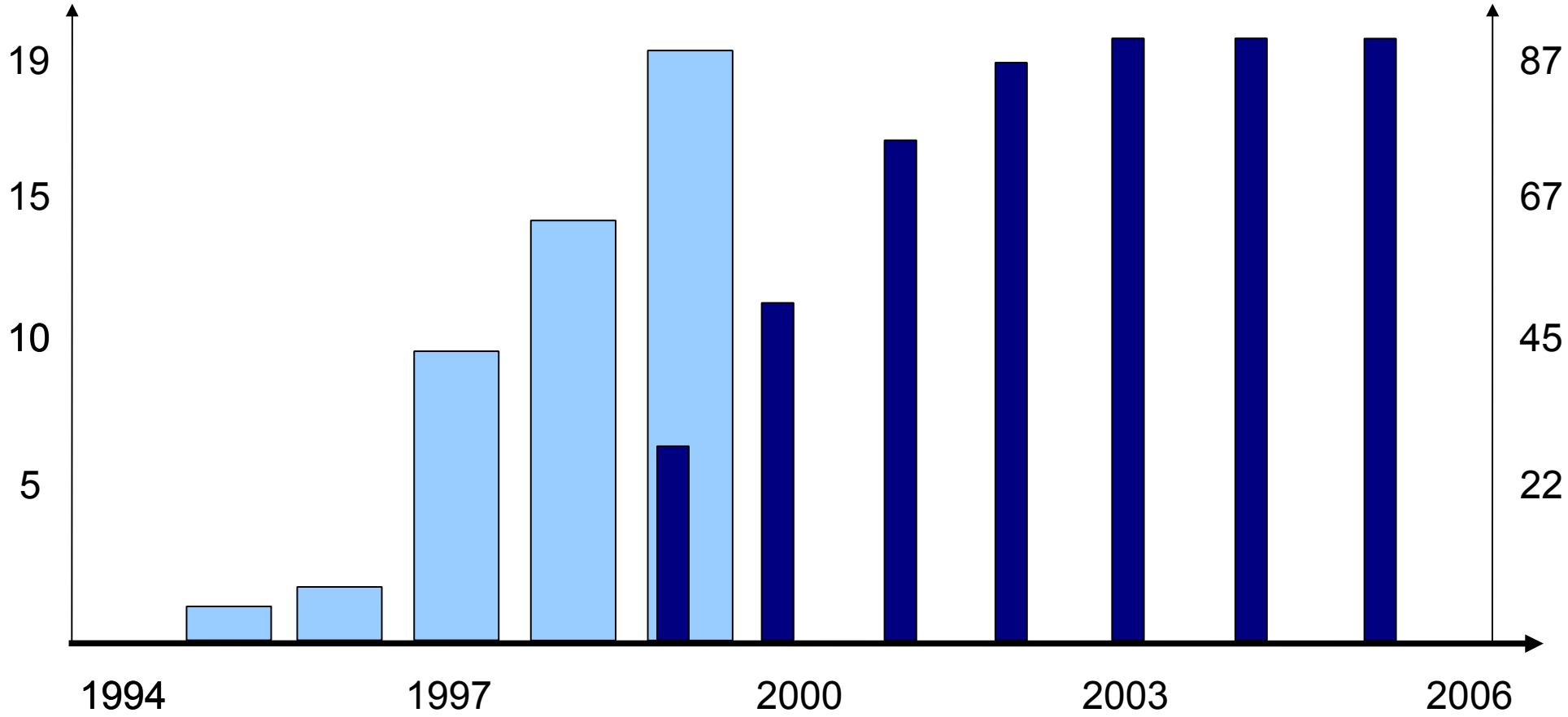
# 3. The reform of the water sector in Italy (1994-2009)



Legend: ☐ Number of regions having transposed the 1994 water reform

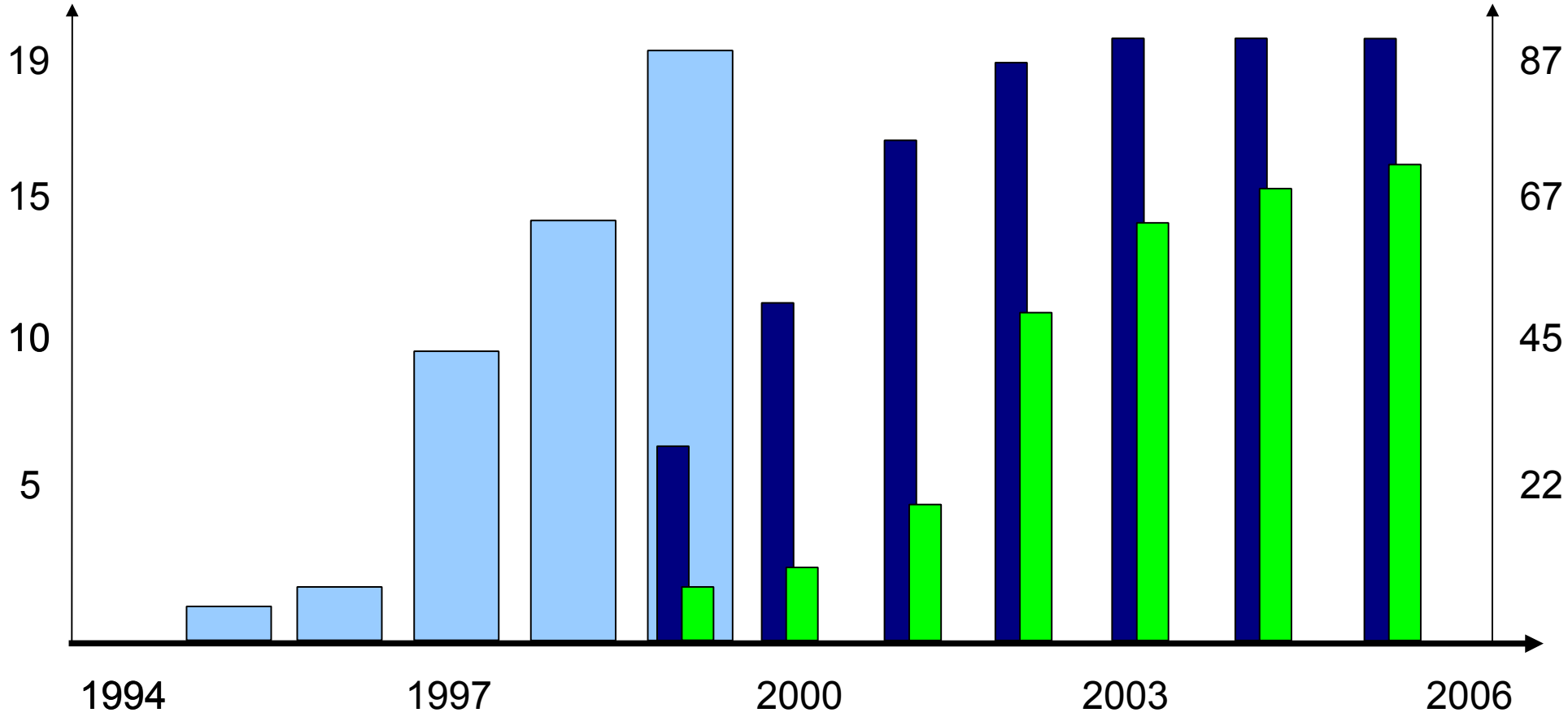# 3. The reform of the water sector in Italy (1994-2009)

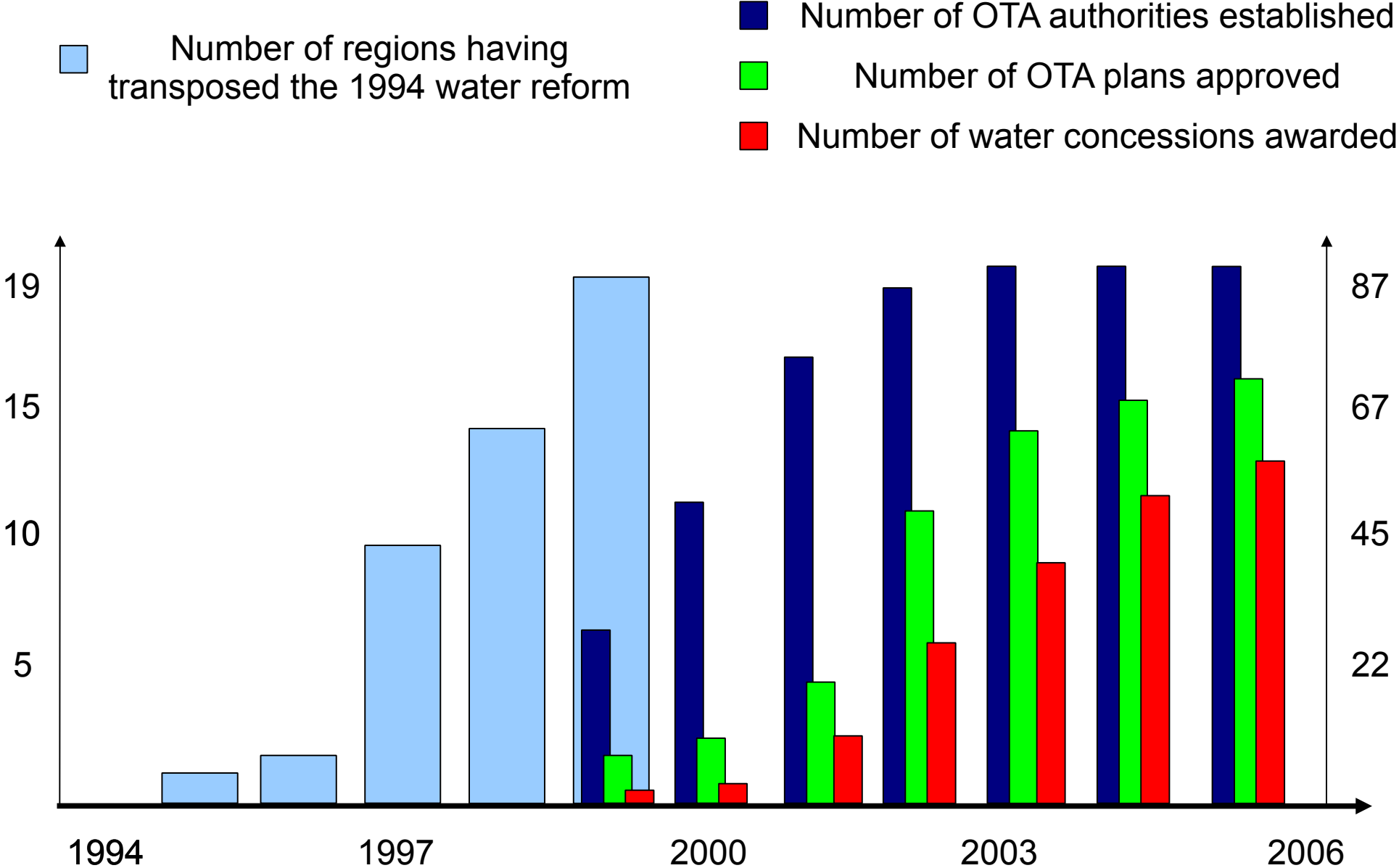# 3. The reform of the water sector in Italy (1994-2009)



- Number of regions having transposed the 1994 water reform
- Number of OTA authorities established
- Number of OTA plans approved

# 3. The reform of the water sector in Italy (1994-2009)



(source: Supervising Committee on Use of Water Resources annual reports, 1996-2008)

# 3. The reform of the water sector in Italy (1994-2009)

## 3 analytic questions

1994 water reform

1997 legislation on funding for wastewater infrastructure

Generally, inertia to establish the new regulatory system

Defining the boundaries of new water district jurisdictions (*Ambiti Territoriali Ottimali*)

**Why no implementation?**

**Why this acceleration?**

the new water regulatory authorities (*Autorità d'Ambito*) at the local level
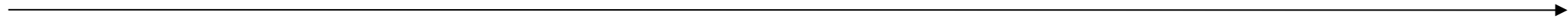
Establishment of new regulatory system and award of water franchise in Alto Valdarno, Tuscany

**Why there?**

1994            1997            2009

# 4. Explaining the implementation of the water sector in Italy

**Q 1** – Explaining the "no implementation" part (1994-1997)

Factors to take into account:

Reform design features required cooperation between local governments to define water districts before regions established them through legislation.

Initial conditions of the sector included high fragmentation of water service providers, dominant local government ownership, and stakes of local government politicians in the water business.

Multi-level government context features included constitutional autonomy of local government as to how to regulate local water service provision.

# 4. Explaining the implementation of the water sector in Italy

**Q 1** – Explaining the "no implementation" part (1994-1997)
<u>Modelling the interaction between local governments:</u>

|  | LG₁ | |
|---|---|---|
|  | To define the OTA boundaries (D) | Not to define the OTA boundaries (ND) |
| LG₂ — To define the OTA boundaries (D) | $p_{lg}$ , $p_{lg}$ | 0, 0 |
| LG₂ — Not to define the OTA (ND) | 0, 0 | 0, 0 |

Provided for local governments:

$$p_{lg} = \frac{-C_{lg1}}{(1+\delta)^{t_1}} + \frac{-C_{lg2}}{(1+\delta)^{t_2}} + \frac{B_{lg1}}{(1+\delta)^{t_3}}$$

expected costs of losing control of regulatory and management functions and benefits of jointly owning a larger water firm

# 4. Explaining the implementation of the water sector in Italy

**Q 1** – Explaining the "no implementation" part (1994-1997)
Modelling the interaction between local governments:

1 Nash equilibrium if p is negative

|  | | $LG_1$ | |
| --- | --- | --- | --- |
|  | | To define the OTA boundaries (D) | Not to define the OTA boundaries (ND) |
| $LG_2$ | To define the OTA boundaries (D) | $p_{lg}$ , $p_{lg}$ | 0, 0 |
|  | Not to define the OTA (ND) | 0, 0 | 0, 0 |

2 Nash equilibria if p is positive or nil

|  | | $LG_1$ | |
| --- | --- | --- | --- |
|  | | To define the OTA boundaries (D) | Not to define the OTA boundaries (ND) |
| $LG_2$ | To define the OTA boundaries (D) | $p_{lg}$ , $p_{lg}$ | 0, 0 |
|  | Not to define the OTA (ND) | 0, 0 | 0, 0 |

# 4. Explaining the implementation of the water sector in Italy

**Q 1** – Explaining the "no implementation" part (1994-1997)
<u>Modelling the interaction between local governments:</u>

**1 Nash equilibrium if p is negative**

|  |  | $LG_1$ | |
|---|---|---|---|
|  |  | To define the OTA boundaries (D) | Not to define the OTA boundaries (ND) |
| $LG_2$ | To define the OTA boundaries (D) | $p_{lg}$ , $p_{lg}$ | 0, 0 |
|  | Not to define the OTA (ND) | 0, 0 | 0, 0 |

**2 Nash equilibria if p is positive or nil**

Expected positive payoff was necessary but not sufficient condition for cooperation

|  |  | To define the OTA boundaries (D) | Not to define the OTA boundaries (ND) |
|---|---|---|---|
| $LG_2$ | To define the OTA boundaries (D) | $p_{lg}$ , $p_{lg}$ | 0, 0 |
|  | Not to define the OTA (ND) | 0, 0 | 0, 0 |

# 4. Explaining the implementation of the water sector in Italy

**Q 1** – Explaining the "no implementation" part (1994-1997)
Modelling the interaction between regional and local government

$LG_{ij}$

|  | | To Contribute defining the OTA boundaries (D) | Not to contribute defining the OTA boundaries (ND) |
|---|---|---|---|
| $R_i$ | To pass regional legislation (P) | $0, p_{lg}$ | $- C_{r1}, p_{lg}$ |
| | Not to pass regional legislation (NP) | $- C_{r2}, 0$ | $0, 0$ |

Provided for the region: costs of political conflict with local government for acting contrary to local government's strategy

# 4. Explaining the implementation of the water sector in Italy

**Q 1** – Explaining the "no implementation" part (1994-1997)
Modelling the interaction between regional and local government

2 Nash equilibria

$LG_{ij}$

|  | To Contribute defining the OTA boundaries (D) | Not to contribute defining the OTA boundaries (ND) |
|---|---|---|
| **$R_i$** To pass regional legislation (P) | 0, $p_{lg}$ | - $C_{r1}$, $p_{lg}$ |
| Not to pass regional legislation (NP) | - $C_{r2}$, 0 | 0, 0 |

No cooperation between the region and local governments was a stable (intermediate) outcome

**Q 1** – Explaining the "no implementation" part (1994-1997)
Modelling the interaction between central, regional and local gov.



Provided for the central government: benefits for implementing the reform and costs of political conflict with region; for the region: cost of being spoiled of competences.

# 4. Explaining the implementation of the water sector in Italy

**Q 1** – Explaining the "no implementation" part (1994-1997)
Modelling the interaction between central, regional and local gov.

The "threat" to commission the regions was not necessarily effective and therefore credible

$0, - C_{ng2}$

$- C_{r1} - C_{r2}, - C_{ng1}$

NE

ND

CG    E

LG

D

$- C_{r2}, B_{ng1} - C_{ng1}$

NP

$R_i$

P

$- C_{r1}, B_{ng1}$

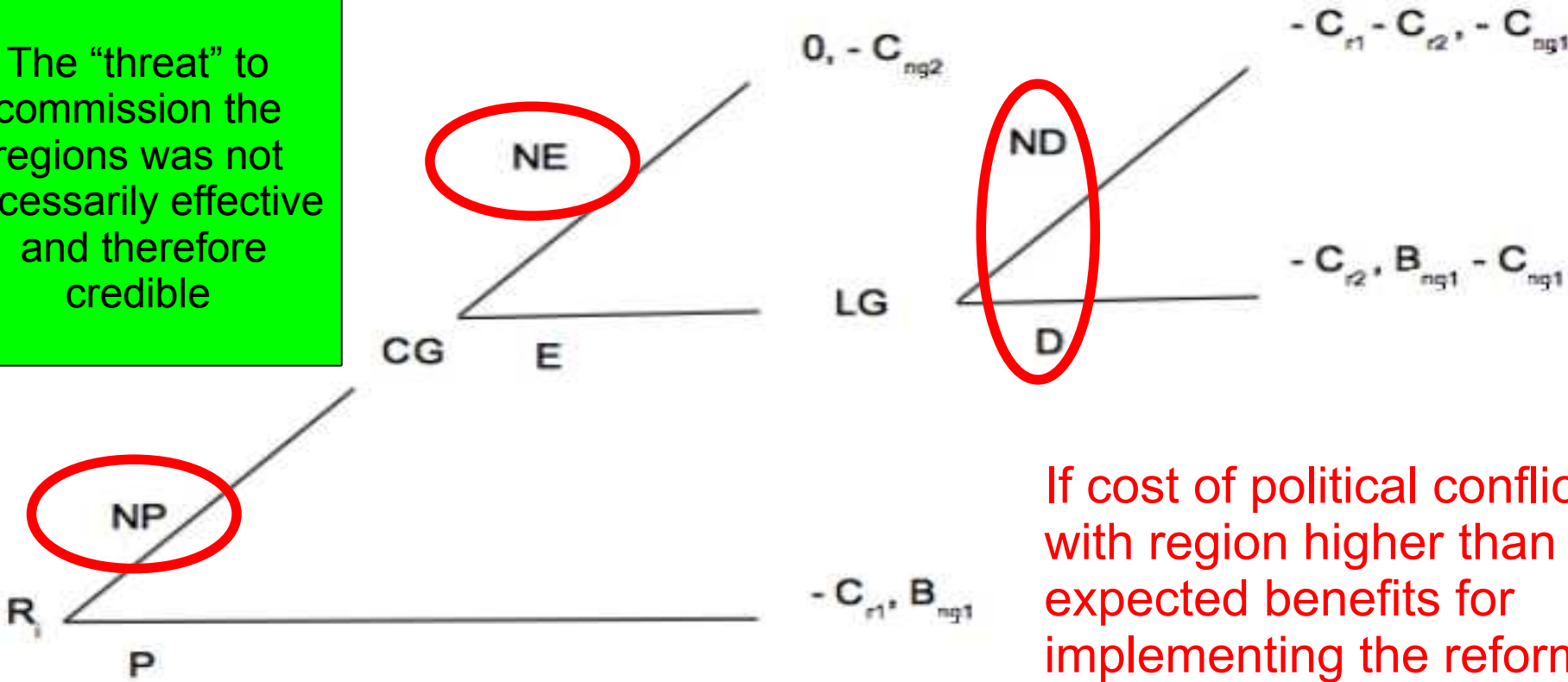If cost of political conflict with region higher than expected benefits for implementing the reform

Provided for the central government: benefits for implementing the reform and costs of political conflict with region; for the region: cost of being spoiled of competences.

# 4. Explaining the implementation of the water sector in Italy

**Q 2** – Explaining the "local deviation" part (1992-1998)
Modelling the interaction in "Alto Valdarno" (Tuscany)

Most likely nash equilibrium

|  | | $LG_1$ | |
|---|---|---|---|
| | | To define the OTA boundaries (D) | Not to define the OTA boundaries (ND) |
| $LG_2$ | To define the OTA boundaries (D) | $p_{lg}$ , $p_{lg}$ | 0, 0 |
| | Not to define the OTA (ND) | 0, 0 | 0, 0 |

Local conditions were conducive to the emergence of cooperation between local governments

Special local conditions:
Past experience of negotiation
Shared beliefs of mutual agreement
Political support for re-regulation and privatisation
"Sunk cost" of political capital spent in previous plans to reorganise local water service provision
Public commitment

# 4. Explaining the implementation of the water sector in Italy

**Q 3** – Explaining the "acceleration" part (1997-onwards)
Modelling the interaction between regional and local government

| | | $LG_1$ | |
|---|---|---|---|
| | | To contribute defining the OTA boundaries (D) | Not to contribute defining the OTA boundaries (ND) |
| $R_i$ | To pass the regional legislation (P) | $0, p_{lg}$ | $-C_{r1}, p_{lg} - C_{lg3}$ |
| | Not to pass the regional legislation (NP) | $-C_{r2}, 0$ | $0, -C_{lg3}$ |

Provided for the local government: cost of being overridden in the definition of the water district

# 4. Explaining the implementation of the water sector in Italy

**Q 3** – Explaining the "acceleration" part (1997-onwards)
Modelling the interaction between regional and local government

1 Nash equilibrium

|  | | $LG_1$ | |
|---|---|---|---|
|  | | To contribute defining the OTA boundaries (D) | Not to contribute defining the OTA boundaries (ND) |
| $R_i$ | To pass the regional legislation (P) | 0, $p_{lg}$ | - $C_{r1}$, $p_{lg}$ - $C_{lg3}$ |
| | Not to pass the regional legislation (NP) | - $C_{r2}$, 0 | 0, - $C_{lg3}$ |

Cooperation to define the water districts was the selected strategy, taking into account that 1997 legislation imposed a "default" design in case of no agreement (i.e., the provincial territory)

**Q 3** – Explaining the "acceleration" part (1997-onwards)
Modelling the interaction between local governments:

$LG_1$

|  | To establish the OTA authority (E) | Not to establish the OTA authority (NE) |
|---|---|---|
| **To establish the OTA authority (E)** | $q_{lg}$ , $q_{lg}$ | 0, - $C_{lg4}$ |
| **Not to establish the OTA authority (NE)** | - $C_{lg4}$, 0 | - $C_{lg4}$, - $C_{lg4}$ |

$LG_2$

Provided for local governments:

$$q_{lg} = -C_{lg1} + \frac{-C_{lg2}}{(1+\delta)^{t_1}} + \frac{B_{lg1}}{(1+\delta)^{t_2}}$$

and the cost of political blame for not establishing the regulatory authority once the institutional system was in place

**Q 3** – Explaining the "acceleration" part (1997-onwards)
Modelling the interaction between local governments:

1 Nash equilibrium if $q_{lg} > -C_{lg4}$

| | | $LG_1$ | |
| --- | --- | --- | --- |
| | | To establish the OTA authority (E) | Not to establish the OTA authority (NE) |
| $LG_2$ | To establish the OTA authority (E) | $q_{lg}$ , $q_{lg}$ | $0, - C_{lg4}$ |
| | Not to establish the OTA authority (NE) | $C$ , $0$ | $- C_{lg4}, - C_{lg4}$ |

Formation of belief that implementing the reform resulted in advantageous payoff was pivotal to turn local governments to cooperation

An important role was played by diffusion of ideas concerning the merit of the "Alto Valdarno" design

2 Nash equilibria if $q_{lg} <= -C_{lg4}$

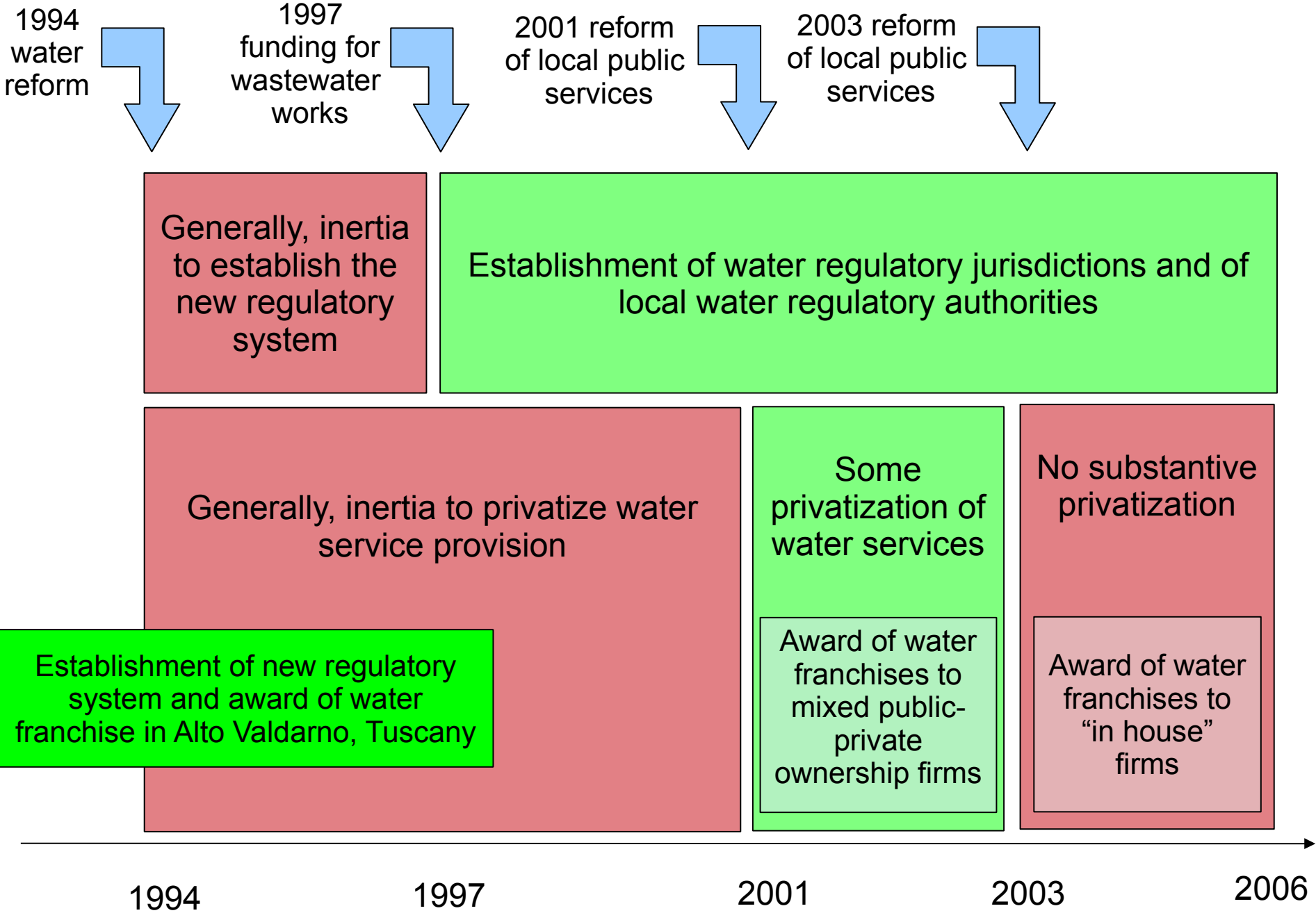| | | $LG_1$ | |
| --- | --- | --- | --- |
| | | To establish the OTA authority (E) | Not to establish the OTA authority (NE) |
| $LG_2$ | To establish the OTA authority (E) | $q_{lg}$ , $q_{lg}$ | $0, - C_{lg4}$ |
| | Not to establish the OTA authority (NE) | $- C_{lg4}, 0$ | $- C_{lg4}, - C_{lg4}$ |

# 5. Conclusions

What seems important to explain how reform was implemented:

a) **Initial conditions** of public ownership, decision makers' stakes, and fragmentation of the reformed industry;

b) **Past events** that already formed negotiated agreements about privatizing public services;

c) **New events** that change features of the reform statute;

d) An active **policy network of public service professionals** that help diffusing ideas about the viability and beneficial effects of the reform;

e) **Multi-level government** features that shape the interaction between public authorities and attribute strategic options.
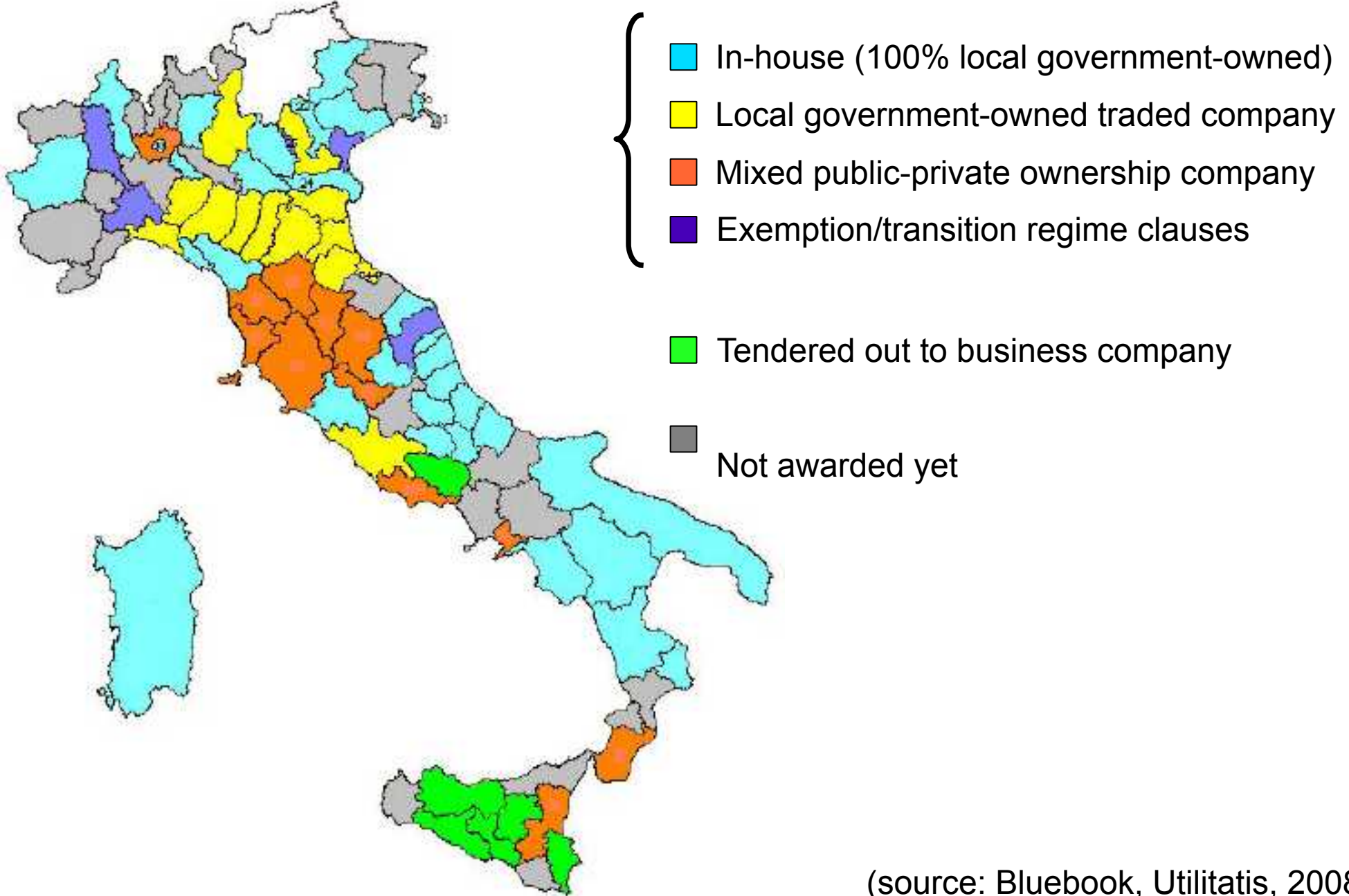
# 5. Conclusions

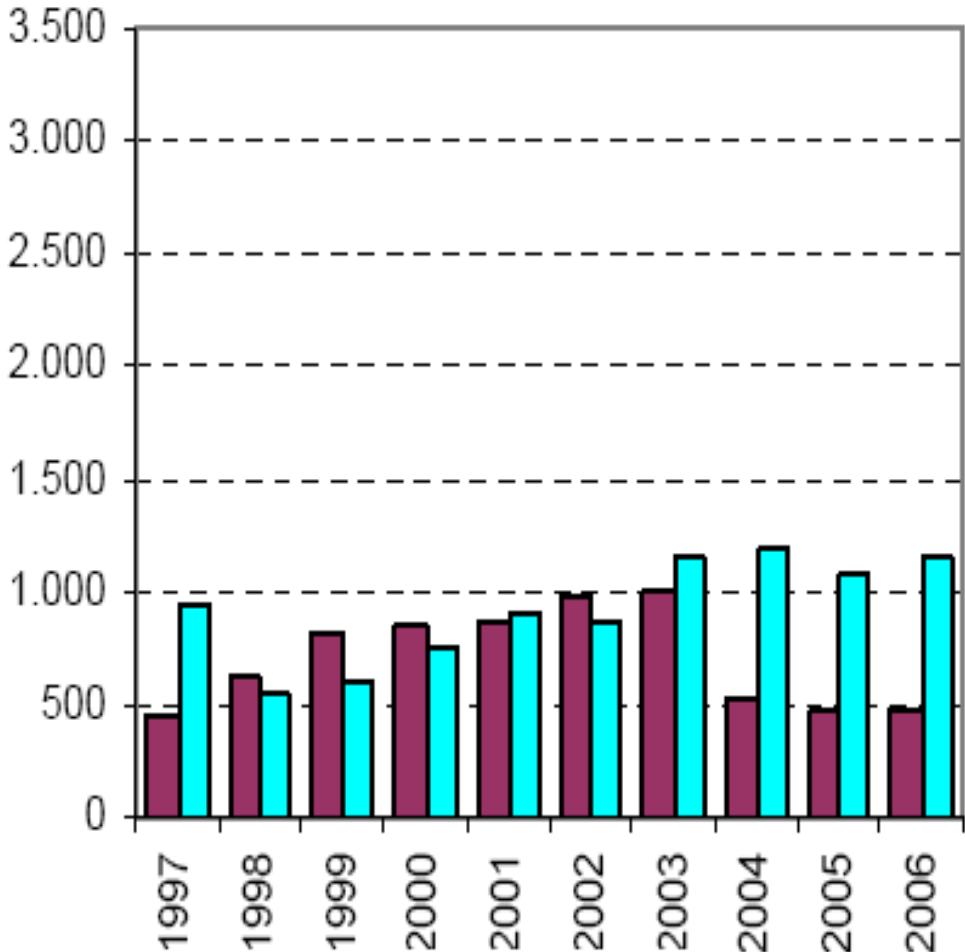Another part of the story: the quasi-privatization of water services:

# 5. Conclusions

Another part of the story: the quasi-privatization of water services:



- ■ (light blue) In-house (100% local government-owned)
- ■ (yellow) Local government-owned traded company
- ■ (orange) Mixed public-private ownership company
- ■ (purple) Exemption/transition regime clauses

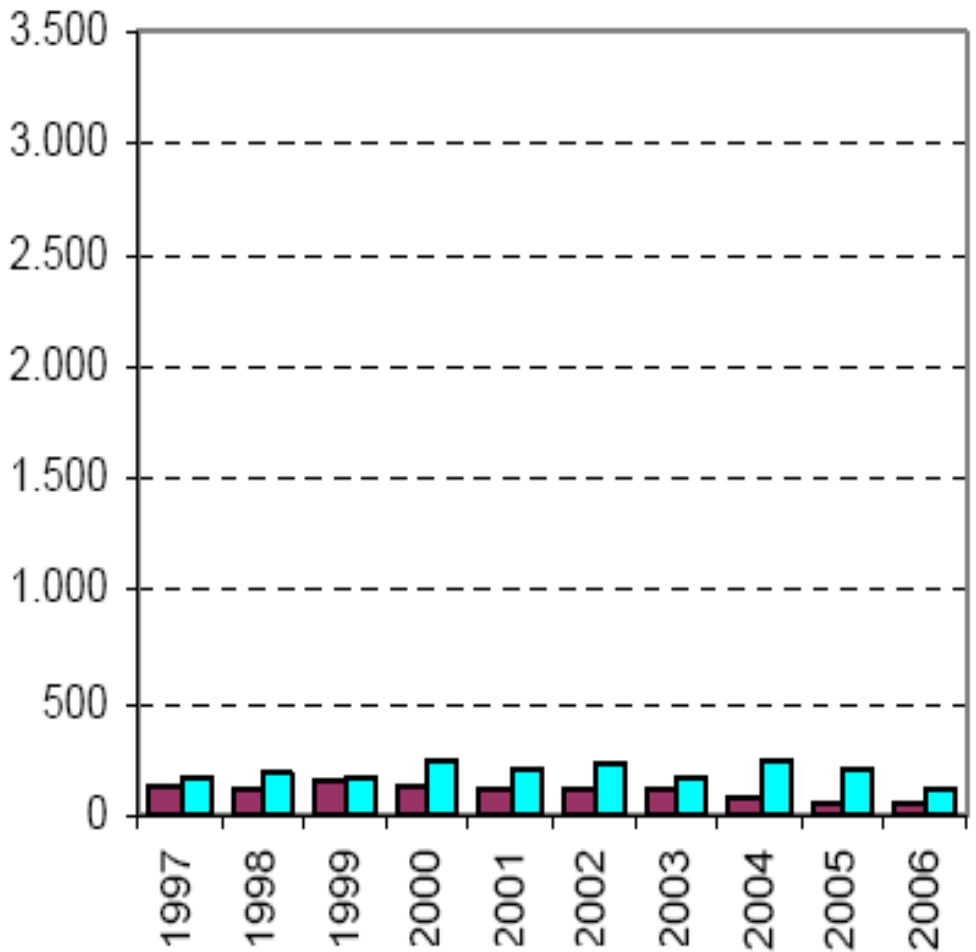- ■ (green) Tendered out to business company

- ■ (grey) Not awarded yet

(source: Bluebook, Utilitatis, 2008)

# 5. Conclusions

Investments in water collection and distribution infrastructure (€ m)

Investments in sewage infrastructure (€ m)



■ Public sector & non-profit entities

■ Business companies (including those local government-owned)

(source: ISTAT, 2008)

# 5. Conclusions

**Some issues for discussion!**

Is there really anything like "systematic patterns" of regulatory reform implementation?

What are the merits and limitations of the analytic narrative method?

What kind of challenges are posed by regulatory change provided by the central government but implemented at the sub-national level?

# Thank you!

And feel free to contact me if you like:


aasquer@unica.it