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Article

# Understanding Subjectivities in the Regulation of Local Water Services: A Q-Methodology Study of Elected Public Officers in Italy

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**Abstract:** In sub-national governments, elected public officers can exercise considerable influence on the regulation of local water services, in such ways as, for example, contributing to the design of local regulatory institutions, to the formulation of tariff rules, and to the supervision of water firms. Relatively little we know, however, about how elected public officers think about the regulation of local water services. This Q methodology study provides some evidence of the variety of opinions held on how local water services are delivered, how well they perform, and how they should be regulated among elected public officers in local governments in Italy. The study shows that the policy discourse on water regulation in Italy is highly fragmented into alternative and partially conflicting views. These findings bear some relevance for better understanding sources of stability and change of water regulatory regimes at the local level.

**Keywords:** water regulation; elected public officers; operant subjectivity; Q methodology

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## 1. Introduction

The regulation of local water services typically leaves considerable room for agency by elected public officers, who are able to shape, and sometimes to determine, the institutional design for the provision of local water services. For instance, elected public officers contribute to deliberations

concerning whether local water services should be delivered by local government owned firms or tendered out to business firms that are subjected to the terms and conditions stipulated in concession or franchise contracts. More generally, elected public officers exercise political discretion over aspects of the design of the regulatory system for local water services that have important consequences for the performance of water firms, the quality of water services, and the regime of transparency and accountability of water service providers. However, what understanding of the regulation of local water services do elected public officers have, and how can we access and analyse such understandings?

Within the area of study of regulation, the issue of how elected public officers understand the regulation of public services in general has been relatively little researched so far. In part, the lack of interest towards individuals' understanding of the regulation of public services can be explained by the secondary role that individual beliefs and opinions have within economic theories of regulation. In the "public interest" theories of regulation, individuals who hold public authority positions are typically assumed to supply regulation taking into account the interest of the society [1–3]. In the "private interest" or "capture" theories of regulation, individuals are assumed to rationally pursue their own interest, especially in the form of transfer of wealth or attainment of rent positions through the formulation of fitting regulations [4–6]. In both these streams of theoretical work, individuals' understandings of regulation and of the regulatory scenario are not problematic. Rather, attention is primarily placed on how individuals' objectives are achieved and what are the performance effects of the regulatory choices made.

The role of individuals' understanding of the regulation of public services is also relatively silent in the emerging theory of mechanism design of regulatory policy. Recent works highlighted that the principles of mechanism design [7–10] can inform the solution of social problems such as the regulation of infrastructure [11,12]. Building on this approach, Araral [13] argued that a "second-generation" research agenda on policy design should focus on the role of incentive compatible (self-enforcing) mechanisms, especially in the context of developing countries where regulatory capacity is weak, unaccountable, corrupted, or not credible. While greater attention towards the role of mechanisms in minimising transaction costs is welcome, also this approach papers over the possibility that individuals may hold different understandings of regulation and the regulatory scenario and that they may react differently to the incentive structures on the basis of such different belief or opinion premises.

Differently from the theoretical approaches briefly reviewed thus far, other streams of research highlight the role of individuals' ideas in the political economy of regulation. For example, Lodge and Wegrich [14] argued that individuals are inclined to favour alternative principles of regulatory design depending on their cultural orientation [15]. Individuals who lean towards "individualistic" values tend to advocate market-based mechanisms of regulation, those who hold "egalitarian" values grant primacy to transparency and accountability, those who embrace "hierarchical" values prefer centralised command-and-control styles of guidance, and those who cling to "fatalistic" values grant some merits to randomised checks and other accidental forms of regulation. According to this view, individuals' beliefs and opinions towards the regulation of public services are shaped by cultural factors no less than the canons of instrumental rationality in the pursue of individual objectives.

How do elected public officers think that the regulation of local water services should be designed? How do they take the interests of different stakeholders into account in their understanding of the

“public interest” associated with the provision of water services? How do cultural factors influence—if they do—their understanding of the ‘public interest’ in this particular policy domain? These issues are important because elected public officers hold relevant positions within the political arenas where deliberations over the regulation of local water services delivery systems are made. In addition, they call for the investigation of the kind of beliefs and opinions held by elected public officers. Elected public officers may be reasonably expected to declare to care about pursuing the public interest in the open political discourse. However, they also hold a particular understanding of what constitutes the public interest that is reflected in the kind of regulatory design principles and choices that they advocate. The aims of the paper, accordingly, is to contribute to research on the regulation of local water services by investigating the subjectivities of elected public officers, *i.e.*, the ideas that they hold about how local water services are delivered, how well they perform, and how they should be regulated.

The paper provides, first, a review of the literature on the design of local water regulatory systems, with focused attention placed on alternative regulatory design principles (*i.e.*, regulation through private contracts, regulation through concession contracts, discretionary regulation, and regulation through public enterprises) and regulatory design choices. Section 3 will outline the research design and illustrate how Q methodology provides a helpful tool for investigating the subjectivities of elected public officers. The approach is consistent with the one followed in other scholarly works that aimed to identify typologies of roles of individuals (e.g., policy analyst and public managers) through the empirical identification of their subjective viewpoints. Section 4 will illustrate the results from the analysis. Section 5 will discuss the results of the analysis and provide some tentative identification of subjectivities of elected public officers towards the regulation of local water services. Finally, the conclusions will discuss the contribution of the study to the research on the regulation of local water services.

## 2. Ideas about the Regulation of Local Water Services

Regulation of water services is a relatively large area of scholarly inquiry. Several works have been done on the design of water regulatory systems [16–23], on the assessment of water regulatory institutions [24–28] and on the making and implementation of regulatory reforms in the water sector [29–32]. The present study is especially concerned with ideas about the regulation of water services at the local level.

The role of ideas in the policy process, as a general kind of phenomenon, has been widely researched but it remains somehow controversial. Some scholars argue that ideas (in the forms of cognitive paradigms, world views, norms, beliefs, opinions, frames, and policy programmes), rather than self-interest, exert a significant influence on policy-making outcomes [33,34]. Others, instead, hold that ideas play a minor role in the policy process with respect to institutions and structures that orient the conduct of individuals [35]. If ideas matter in the policy process, a great deal of theoretical and empirical work is needed in order to clarify how exactly they come into play in shaping the issues at stake, the policy agenda, the policy alternatives and the selection of policy options within historically specific political discourses and institutional venues for political deliberation.

One way for ideas to play a role in the regulation of local water services is through the agency of elected public officers of local governments. Local governments typically enjoy some discretion in the

design of regulatory institutions and in the arrangement of regulatory systems for the delivery of local water supply and sanitation services. In France, for example, municipalities can decide whether to contract out the provision of water services to business firms selected through tender offer competitions or to retain the management of water services within municipal departments. Ideas, especially in the form of beliefs and opinions about how local water services are delivered, how well they perform, and how they should be regulated, can play an important role in determining the inclination of elected public officers who sit in municipal councils towards the desired configuration of the system of water service provision within the municipality. Anecdotal evidence from the cases of “remunicipalisation” of water service provision (e.g., in Grenoble in 2001 and in Paris in 2010) suggests that, indeed, ideas may contribute determining policy reversals under conditions of seemingly stable institutional arrangements.

Ideas about the regulation of local water services typically include the belief that water service provision should be subjected to economic regulation, especially because of the natural monopoly features of water infrastructure. These features include, in particular, the role of economies of scale that produce advantages for larger operators, of network economies that benefit operators of larger infrastructure networks, and of the presence of durable and immobile assets that discourage entry from potential competitors [36]. Relatively less consensus exists, however, on how precisely water services should be regulated. Generic policy options typically include regulating the water services provided by business companies through independent regulatory authorities (such as OFWAT in England and Wales), or through franchise contracts (as it is often done in France), or through the retention of water services under full public ownership and control (as it is often the case in Germany and Italy) or under semi-privatised water utilities (*i.e.*, mixed public-private ownership firms). More specifically, policy options include various ways for regulating tariffs (e.g., through price-cap mechanism, or rate-of-return, or other formulas), financing investments (e.g., through water charges or public funds), stimulating investments and service improvements (e.g., through contractual standards or benchmarking practices), and so on.

Issues related to the regulation of water services are especially sensitive at the local level. Actors of local water industries are typically embedded within dense networks of social relationships, which entail potential conflicts of interests between duties and responsibilities attached to organisational roles on the one hand, and partisan views and inclinations related to personal ties on the other one [37]. Mechanisms of “revolving doors” [38–40], for example, may blur the boundaries between the roles attached to positions within local authorities, regulators, and water utilities. Elected public officers may possess a complex understanding of the issues related to the regulation of water services that includes careful consideration for the diverse interests and expectations held by various stakeholders of the local water industries. Access to the understanding of elected public officers, therefore, may shed some light onto the repertoire of ideas that populate the policy discourse on the regulation of local water services.

Ideas on the regulation of local water services may be articulated along several dimensions. A tentative, *a priori*, classification includes ideas about (a) the normative stance towards values that should be protected, including a position about the allocation of costs and benefits between users and taxpayers and between generations; (b) the general regulatory design principles that should be followed; (c) initial conditions that characterise the present state of affairs in the local water industry;

(d) process conditions that relate to features of the conduct of the regulatory process; and (e) context conditions that relate to features of environmental circumstances. These dimensions provide a frame of reference for classifying and analysing the subjectivities of elected public officers with respect to the topic of local water services regulation. In other words, ideas held along these dimensions form “policy views” that elected public officers hold on the topic under consideration. The analysis of these policy views can reveal whether elected public officers share a mutual understanding of the regulation of local water services or whether they hold different positions on how local water services are delivered, how well they perform, and how they should be regulated.

Of course, ideas on the regulation of local water services should be understood as participating in contextually located political discourses. In principle, it is not possible to assert whether ideas tend to align with any dominant, or even hegemonic, policy programme or whether they tend to reflect diverse positions within a fragmented and discordant policy arena. It is plausible to argue, however, that ideas on the regulation of local water services are strategically formulated and expressed on the basis of actors’ understanding of the political economy of the regulation of local water services. For example, some beliefs and opinions may relate to policy views that tend to protect the interests of present water users, while others may be associated with the interests of taxpayers at large or next generations of water users. Evidence provided by the analysis of the subjectivities of elected public officers, therefore, should be carefully interpreted on the basis of information about the historical context and structural features of the water policy domain that actors participate to.

Understanding the subjectivities towards water regulation is relevant for arguing about the inclinations that individuals have towards water regulatory institutions and policies. For example, individuals who hold beliefs and opinions that are congruent with the design principles of existing regulatory institutions may be predisposed to preserve the present institutional arrangements, while those whose beliefs and opinions contrast with the performance or distributional effects of the existing regulatory regime may be oriented towards advocating and effecting change of the present regulatory institutions. Individuals’ beliefs and opinions, therefore, may play the role of a component factor of explanatory arguments for stability and change of regulatory institutions and service delivery systems.

### 3. Research Design

This study broadly follows an “interpretive” approach to the study of social phenomena, *i.e.*, one that grants primacy to detecting and understanding individuals’ beliefs, preferences, meanings and reasons for acting rather than to focusing on the institutional and organisational aspects of the social domain under consideration. Research on the regulation of local water services calls for such kind of approach. Elected public officers play an important role in the making of local regulatory policies that includes, for example, the selection of the regulatory design principles, the formulation of tariff rules, and the supervision of water firms. An inquiry into their subjectivities seems important, therefore, to better understand how they frame water regulation problems, how they search and assess alternative regulatory tools, and how they make decisions about the design of local water regulatory systems.

Investigating individuals’ beliefs and opinions towards the regulation of local water services poses a significant methodological challenge. How can we access such subjectivities? Standard methodologies such as semi-structured interviews and surveys do not really retrieve the inner worlds of individuals,

especially because they may not adequately capture the nuances of alternative regulatory design principles and choices or the relative importance that individuals grant to alternative normative views. Individuals' beliefs and opinions, however, can be investigated by using the so-called Q methodology, a technique that helps identifying the patterns of subjective perspectives held by a group of interviewees [41,42]. The technique has been applied in various fields, including the governance of public networks [43] and public service co-production [44]. In this study, the methodology is applied to answer the question of what are the beliefs and opinions of elected public officers towards the regulation of local water services.

Q methodology is often regarded as a way to access and measure human subjectivity [41,42]. Unlike other forms of quantitative analysis, the technique is not intended to test hypothesised causal relationships and the results of the analysis are subjected to the interpretive skills of the researcher. Dissimilarly from other forms of qualitative research, moreover, Q methodology provides the researcher a statistical basis for inferring associations between claims and therefore supporting the interpretation of alternative viewpoints on the issue under consideration. This research methodology, then, is consistent with the interpretive approach that is followed here and with the scholarly aspiration of making the analysis of empirical data transparent and systematic [45]. In broad terms, the methodology is applied by making each participant of a population sample (called P sample) sort a series of statements (called Q sample) that is representative of the variety of claims around an issue (the so-called *concourse*) into a distribution of preferences (called Q sort). Statistical analysis, then, allows to derive significant factors that are subjected to interpretation of the researcher.

Q methodology is generally implemented through five different stages. First, the technique provides the construction of the so-called "*concourse*", *i.e.*, the breadth of the debate around a particular topic. This task can be accomplished in various means, such as interviews with highly informed participants [46], focus groups [47], analysis of textual and other media resources [48], or a combination of these. Second, the researchers survey the *concourse* in search for as many sentences that are believed to adequately convey the variety of beliefs and opinions about the topic under consideration. The statements (which may number into the hundreds) should make use of the same lexicon as the one of the empirical field under consideration (*i.e.*, the "*emic*" knowledge of the individuals; [49]). Third, these statements are reduced to a manageable size (between about 30 and 60) to form the Q sample. The reason for the reduction from the sentences of the *concourse* to those of the Q sample primarily is a practical one, provided that interviewees may not possess the time or will to sort too many sentences. The construction of the Q sample is generally driven by a theoretical or an argumentative framework, which provides the criteria for arranging the sentences into a limited number of categories. Various techniques may help in this task, especially including the use of matrix tables to distinguish types of statements and discard duplicates. Fourth, a sample of individuals is purposively selected (in the number of between about 25 and 75) among the population of participants to the discourse about the topic under consideration. The P sample is not intended to be representative of the population, in the sense that the results from the analysis conducted on the basis of the evidence collected from the sample should be generalizable to the population. Rather, the P sample is constructed with the aim of gathering as much variety as possible of views about the topic under consideration on the basis of *a priori* knowledge and assumptions about the population and its relationship with the *concourse*. Fifth, the participants sort the statements of the Q sample into three

piles (depending on whether they agree, disagree, or are neutral with the claims) and then they refine the sort by placing the statements into a forced half-normal distribution, that typically is represented as an inverted pyramid made of “slots” arranged along a scale (*i.e.*, from  $-4$  to  $+4$  or from  $-5$  to  $+5$ ). The grid forces the participants to make hard choices to rank the order of statements relative to each other, rather than purely expressing the extent to which they agree or not (*i.e.*, as it would be normally done in a questionnaire survey). Finally, the responses (Q sorts) are analysed through a by-person factor analysis [41] to reveal correlated groups of statement preferences. The researcher, eventually, interprets the meaning of the synthesised factors on the basis of the correlated statements. Factors, in this sense, identify groups of claims that can be related to particular “worldviews” held by respondents.

The present study builds on the analysis of empirical evidence collected among elected public officers of local governments in Italy. The selection of the country case deserves some remarks. Water service provision in Italy was largely conducted by full public ownership firms in the past, until a reform of the water sector in 1994 [50] mandated the reorganisation of the water governance system, introduced novel regulatory institutions and tools, and paved the way for the partial privatisation of the water industry. A stream of reforms of local public services between 2001 and 2008 [51–54], moreover, entailed the gradual opening of the water sector to private operators and investors, which was eventually halted by a referendum in 2011 that resulted in the abrogation of legislative provisions about the tender out of water concessions and the inclusion of a return to investment in water charges. At the time of this study, these reforms resulted in heterogeneous forms of water service regulation across the country. Most water utilities were retained under public sector ownership, while others were partially privatised or floated in the Milan stock exchange. More importantly, for the sake of this study, the making and implementation of these reforms were accompanied by the emergence of contrasting arguments within the domestic policy discourse, which included both support towards the re-regulation and privatisation of the water sector (especially from the side of the financial sector and municipal government coalitions that embraced privatisation) and acrimony against the “marketisation” (as it was occasionally put) of water services.

The present regulatory regime for water services in Italy is heterogeneous across the country. About two-thirds of the water industry still consists of utilities owned and controlled by local governments, albeit they have been typically re-incorporated under company laws rather than left operating as municipal agencies or departments [32]. In the rest of the water industry, utilities are owned by both local governments and private operators and investors, that include, for instance, French water multinational firms, local banks, and financial investors. The provision of water services is typically regulated through concession contracts that stipulate infrastructure development, quality standards, and tariff. Whatever the particular configuration of the local water industry, local governments play a pivotal role. Where water utilities are owned by local governments, elected public officers may have diverse views as to whether the present arrangement is advantageous with respect to any form of involvement of private actors or whether full public ownership entails that the water utilities have limited capacity to cope with growing pressures to infrastructure development and increase of efficiency and service quality. Where water utilities are jointly owned by local governments and private operators and investors, elected public officers may be variously inclined towards the extent to which the water utilities should pursue of the interests of the private partners with respect to those of the local communities. Features of the particular water governance and regulatory regime, therefore,

seem important to account for the possibility that elected public officers hold the variety views towards the regulation of water services that this study is set to investigate.

The presumed variety of views about how local water services are delivered, how well they perform, and how they should be regulated may be related to several kinds of conditions. Members of coalition governments that decided to re-regulate and privatise water service provision within their municipality, for example, may be favourably inclined towards these policies. Members of minority parties or members of coalition governments that resisted privatisation, instead, may lean towards alternative or opposite policy positions. Apart from party affiliation, moreover, individuals' beliefs and opinions may relate to their value systems, their ties with local communities, and their understanding of issues related to the development and management of the water technical system. In addition, individuals may hold partially conflicting or contradicting views about component parts of the whole regulatory system, such as, for instance, beliefs and opinions about the desirability of alternative regulatory tools and of alternative forms of privatisation. The question as to what elected public officers of local governments in Italy think about the regulation of local water services, therefore, is open to empirical investigation.

This study began with the development of a concourse of about 150 statements about the regulation of local water services that had emerged from documentary sources and from about 20 interviews with elected public officers of both the national and local government level, water regulators, water utility managers, and mayors that were collected in previous research on water regulation and regulatory reform in Italy [30–32] (*i.e.*, the concourse was formed by identifying claims about how local water services are delivered, how well they perform, and how they should be regulated as expressed by interviewees in the course of previous fieldworks). Then, the number of statements of the concourse was reduced to a Q sample made of 30 claims that related to five convenient *a priori* categories of features about the regulation of water services. The five categories originated from the distinction, drawn from argumentation theory, between descriptive, normative, advocative claims, where the descriptive claims are further detailed into claims about initial conditions, context conditions, and process conditions about the working of the present regulatory system. The reduction of the number of statements into the five categories was primarily conducted by discarding statements whose meanings were understood as broadly corresponding to those of other statements that were preserved in the Q sample. Admittedly, this process entailed that some statements were discarded although they contained some nuances that were not completely incorporated in the remaining statements of the Q sample. The simplification of the set of statements that were considered adequate to represent the variety of beliefs and opinions about the regulation of local water services was justified, however, on the basis of the practical concern with constructing a Q sample of manageable size for the sorting exercise. The resulting Q sample is shown in Table 1. As statements were originally formulated in Italian, the reader should be warned that the English translation that is presented here may not completely convey the meaning that the elected public officers could have attributed to the original sentences. As a way to partially address this issue, Table 1 also contains (in brackets) the original formulation of the sentences in Italian. In addition, the discussion of the results of the analysis will pay attention to how the original formulation of the sentences in Italian could have been understood by elected public officers rather than the English corresponding translation.



Table 1. The Q sample.

Normative stance	Design principles	Initial conditions	Process conditions	Context conditions
Water services should be managed according to managerial principles akin to those of for-profit firms. <i>(I servizi idrici dovrebbero essere gestiti secondo principi manageriali simili a quelli delle imprese che operano per il profitto.)</i>	Local water services should be provided by business firms subjected to the pressure of market competition only. <i>(I servizi idrici dovrebbero essere erogati da imprese private soggette alle sole pressioni della concorrenza.)</i>	Local public authorities do not possess adequate knowledge, competences, and capabilities to regulate the conduct of water firms. <i>(Le autorità pubbliche locali non hanno adeguate conoscenze, competenze e capacità per regolare la condotta delle aziende idriche.)</i>	Local public authorities care more about protecting the interests of water firms than of the users. <i>(Le autorità pubbliche locali tutelano più gli interessi delle aziende idriche che degli utenti.)</i>	Local public authorities tend to interfere in the management of water firms rather than supervising and regulating their conduct. <i>(Le autorità pubbliche locali tendono a interferire nella gestione delle aziende idriche piuttosto che supervisionare e regolare la loro condotta.)</i>
Water services should be managed according to principles of solidarity and of protection of the most vulnerable users. <i>(I servizi idrici dovrebbero essere gestiti secondo principi di solidarietà e di tutela delle fasce più deboli dell'utenza.)</i>	Local water services should be provided by business firms subjected to the discretion of a regulatory agency. <i>(I servizi idrici dovrebbero essere erogati da imprese private soggette al controllo discrezionale dell'autorità di regolazione.)</i>	The water sector contains too few firms to stimulate any form of competition. <i>(Il settore idrico contiene troppe poche aziende per stimolare alcuna forma di concorrenza.)</i>	In the tender offer of franchise contracts, water firms tend to collude rather than compete. <i>(Nelle gare per l'assegnazione delle concessioni per la gestione del servizio, le aziende idriche tendono a colludere tra di loro invece di farsi concorrenza.)</i>	Water firms are not exposed to any serious threat of new entrants into the industry. <i>(Le aziende idriche non sono esposte ad alcuna seria minaccia di nuovi entranti nel settore.)</i>
Water tariffs should cover full cost, including a fair return to capital invested. <i>(Le tariffe dei servizi idrici dovrebbero coprire il costo pieno, comprendendo un'equa remunerazione del capitale investito.)</i>	Local water services should be provided by business firms subjected to terms and conditions of franchise contracts. <i>(I servizi idrici dovrebbero essere erogati da imprese private soggette ai termini e alle condizioni del contratto di concessione.)</i>	The attainment of profit bears negative effects on the quality of water services. <i>(Il perseguimento del profitto condiziona negativamente la qualità dei servizi idrici.)</i>	If water services are provided by franchisees, water firms tend not to completely comply with contractual obligations. <i>(Se il servizio idrico è gestito da aziende concessionarie, queste tendono a non rispettare completamente gli obblighi contrattuali di servizio.)</i>	Water services provide an attractive opportunity for private investors. <i>(I servizi idrici costituiscono un'attraente opportunità per gli investitori privati.)</i>

Table 1. Cont.

Normative stance	Design principles	Initial conditions	Process conditions	Context conditions
Water tariffs should be kept under the control of public authorities to ensure affordability. <i>(Le tariffe dei servizi idrici dovrebbero essere tenute sotto il controllo delle autorità pubbliche per garantirne l'accessibilità.)</i>	Local water services should be provided by mixed public-private ownership firms. <i>(I servizi idrici dovrebbero essere erogati da aziende a proprietà mista pubblica e privata.)</i>	In the water sector we lack reliable and comparable measures to assess the quality of services. <i>(Nel settore idrico non si dispone di misurazioni affidabili e confrontabili che servano per valutare la qualità dei servizi.)</i>	Local public authorities do not adequately monitor service quality. <i>(Le autorità pubbliche locali non tengono sotto osservazione la qualità dei servizi in modo adeguato.)</i>	Users of water services are not able to compare the quality of the services with those provided by other water firms. <i>(Gli utenti dei servizi idrici non sono in grado di paragonare la qualità dei servizi che ricevono con quella provveduta da altre aziende.)</i>
Water infrastructure development should be primarily financed by users charges. <i>(Lo sviluppo dell'infrastruttura idrica dovrebbe essere principalmente finanziato con le tariffe pagate dagli utenti.)</i>	Local water services should be provided by cooperative firms. <i>(I servizi idrici dovrebbero essere erogati da aziende cooperative.)</i>	In the tender offer of franchise contracts, it is difficult to detail and enforce contractual terms and conditions. <i>(Nelle gare per l'assegnazione delle concessioni per la gestione del servizio, è molto difficile precisare termini e condizioni contrattuali e farli rispettare.)</i>	Renegotiation of water franchise contracts is highly demanding in terms of time and resources. <i>(La rinegoziazione delle concessioni di gestione dei servizi idrici è molto dispendiosa in termini di tempo e risorse.)</i>	The administrative judicial system plays an important role in the regulation of water firms. <i>(Il sistema giudiziario amministrativo svolge un ruolo importante nel regolare la condotta delle aziende idriche.)</i>
Water infrastructure development should be primarily financed by public funds. <i>(Lo sviluppo dell'infrastruttura idrica dovrebbe essere principalmente finanziato da fondi pubblici.)</i>	Local water services should be provided by full public ownership firms. <i>(I servizi idrici dovrebbero essere erogati da aziende a totale proprietà pubblica.)</i>	Water firms are inherently inefficient because they are monopolists. <i>(Le aziende idriche sono intrinsecamente inefficienti in quanto monopolisti.)</i>	Water firms tend not to innovate and improve the quality of services over time. <i>(Le aziende idriche tendono a non innovare e non migliorare la qualità dei loro servizi nel tempo.)</i>	Water firms are provided incentives to operate efficiently. <i>(Le aziende idriche sono incentivate a operare con efficienza.)</i>

The P sample was composed of elected public officers in local governments in Italy. An invitation to participate to the Q methodology survey was sent to a total number of 481 elected public officers of 19 municipalities of the country, selected among 135 “middle-range” cities by population, *i.e.*, with between 50,000 and 500,000 inhabitants. The 19 municipalities were purposively chosen in order to provide variety in terms of both geographical location and mode of water service delivery. The list of the municipalities is shown in Table 2. The number of respondents was 24 (5%). By itself, however, the relatively small number of respondents does not compromise Q methodology, provided that the P sample is usually smaller than the Q sample [55,56].

**Table 2.** List of municipalities whose elected public officers were invited to the Q methodology survey [57].

Title	Municipality	Region	Inhabitants
Northern Italy	Bologna	Emilia-Romagna	383,577
	Verona	Veneto	258,553
	Modena	Emilia-Romagna	179,180
	Parma	Emilia-Romagna	178,723
	Reggio Emilia	Emilia-Romagna	165,001
	Novara	Piemonte	102,012
	Cuneo	Piemonte	55,613
	Pordenone	Friuli Venezia Giulia	51,512
Central Italy	Prato	Tuscany	187,530
	Terni	Umbria	111,792
	Arezzo	Tuscany	98,562
	Pisa	Tuscany	86,492
	Fano	Marche	63,009
	Chieti	Abruzzo	51,226
Southern Italy	Salerno	Campania	131,637
	Marsala	Sicily	80,564
	Caltanissetta	Sicily	75,662
	Caserta	Campania	74,838
	Scafati	Campania	50,227

The Q sort was performed through a web application, named FlashQ software [58]. The software enabled respondents to sort the statements online by dragging virtual “cards” onto the inverse pyramid grid with values ranging from  $-5$  to  $+5$ . Respondents were primarily of male gender (21), with average age 50.4 years (median 50.5, maximum 67, minimum 30), and with average seven years experience in the regulation of local water services (median 5, maximum 20, minimum 1). Respondents declared themselves as politically oriented to “right” (RT) parties (2), “centre-right” (CR) (3), “centre” (C) (3), “centre-left” (CL) (6), “left” (LF) (6), and “other/independent” (OT) (4) (because of the many and diverse parties in local government councils, respondents were requested to state their political inclinations rather than the party affiliation).

#### 4. Results from the Analysis

The analysis of the data was conducted with a centroid factor analysis and a varimax rotation using PQ method [59]. Various rotations were performed, checking for explained variance and eigenvalue, the number of significant persons confounded across more than one factor, and the correlation between factors. At the end, five factors were identified. Table 3 shows the factor matrix with defining sorts (in bold). Table 4 exhibits the factor Q sort values for each statement. Table 5 provides the correlations between factor scores.

**Table 3.** Factor matrix with defining sorts (in bold).

Respondent No.	Respondent ID	Factors				
		1	2	3	4	5
1	CR1	0.3066	−0.0665	0.5351	0.1606	−0.1501
2	CL1	0.3117	0.3461	0.4480	0.1291	−0.5067
3	CL2	0.0652	0.1304	<b>0.6083</b>	0.2813	0.1059
4	C1	0.2396	−0.1540	<b>0.6836</b>	0.2407	−0.1217
5	LF1	0.3565	<b>0.6346</b>	0.3367	0.2255	0.0480
6	CL3	−0.0560	0.0601	0.1556	0.0163	0.1611
7	RT1	0.3671	<b>0.7639</b>	0.0070	0.0214	0.0446
8	LF2	<b>0.6273</b>	0.1554	0.3089	−0.0863	−0.0713
9	C2	0.0481	0.2961	−0.0507	0.0444	<b>0.9027</b>
10	OT1	0.2153	0.0798	0.1132	<b>0.6495</b>	0.1094
11	LF3	<b>0.7898</b>	0.1444	0.1440	−0.0324	−0.1707
12	OT2	<b>0.7237</b>	0.1412	0.0435	0.0708	−0.2788
13	CR1	−0.2277	0.0515	0.0391	0.0688	<b>0.4265</b>
14	OT3	<b>0.8053</b>	0.3106	0.1547	0.1055	0.0945
15	LF4	−0.4282	−0.0336	0.1534	0.3831	0.2295
16	OT4	<b>0.8039</b>	0.1200	0.1104	0.1356	0.0284
17	CL4	−0.1263	−0.3549	0.2376	0.0078	−0.3511
18	RT2	0.0516	0.4528	−0.2500	0.1721	0.0091
19	CR2	0.2216	<b>0.5558</b>	0.1123	0.0046	0.2062
20	LF5	<b>0.8065</b>	0.0361	0.2702	0.1859	−0.0893
21	C3	0.1647	0.1793	<b>0.4189</b>	−0.1098	0.0299
22	CR3	0.2585	−0.1208	−0.0058	0.3498	−0.1032
23	CL5	<b>0.7229</b>	−0.1483	−0.1830	0.2606	−0.0427
24	CL6	0.1023	0.1816	0.2093	<b>0.4434</b>	−0.0443
% explained variance		21	9	9	5	7

Some of the factors are relatively correlated with each other (e.g., factors 1 and 2, whose correlation is 0.4999). The correlation does not negatively affect the results of the analysis, provided that—differently from linear regression studies—Q methodology is intended to single out factors that are sufficiently distinctive to call for an interpretative effort. The discussion below seeks to construct meaningful interpretations of the factors that have been identified in the analysis, also with the support of additional evidence provided by qualitative data in the form of comments included by the respondents about the statements they agreed and disagreed most with.

**Table 4.** Factor Q sort values for each statement.

	Statements	Factors				
		1	2	3	4	5
1	Water services should be managed according to business principles akin to those of for-profit firms.	-3	-3	2	-5	-2
2	Water services should be managed according to principles of solidarity and of protection of the most vulnerable users.	4	1	5	5	-1
3	Water tariffs should cover full cost, including a fair return to capital invested.	-4	1	4	-2	0
4	Water tariffs should be kept under the control of public authorities to ensure affordability.	4	1	4	4	1
5	Water infrastructure development should be primarily financed by users charges.	-1	-4	3	3	-1
6	Water infrastructure development should be primarily financed by public funds.	2	0	-1	3	-1
7	Local public authorities care more about protecting the interests of water firms than of the users.	0	2	-4	-2	3
8	In the tender offer of franchise contracts, water firms tend to collude rather than compete.	1	0	-3	1	1
9	If water services are provided by franchisees, water firms tend not to completely comply with contractual obligations.	3	2	0	-3	1
10	Local public authorities do not adequately monitor service quality.	2	3	1	4	0
11	Renegotiation of water franchise contracts is highly demanding in terms of time and resources.	-3	1	-1	0	-4
12	Water firms tend not to innovate and improve the quality of services over time.	1	2	3	-1	-2
13	Local public authorities do not possess adequate knowledge, competences, and capabilities to regulate the conduct of water firms.	-1	3	1	0	3
14	The water sector contains too few firms to stimulate any form of competition.	-2	-2	0	1	1
15	The attainment of profit bears negative effects on the quality of water services.	3	5	-2	2	-2
16	In the water sector we lack reliable and comparable measures to assess the quality of services.	-1	-1	1	3	2
17	In the tender offer of franchise contracts, it is difficult to detail and enforce contractual terms and conditions.	0	-1	-3	-3	0
18	Water firms are inherently inefficient because they are monopolists.	1	-1	-1	-4	0
19	Local public authorities tend to interfere in the management of water firms rather than supervising and regulating their conduct.	0	4	0	-1	2
20	Water firms are not exposed to any serious threat of new entrants into the industry.	0	-2	0	1	3
21	Water services provide an attractive opportunity for private investors.	3	3	1	0	4
22	Users of water services are not able to compare the quality of the services with those provided by other water firms.	2	0	3	1	2
23	The administrative judicial system plays an important role in the regulation of water firms.	-1	-3	2	-1	-5
24	Water firms are provided incentives to operate efficiently.	-2	-4	-2	-2	-3
25	Local water services should be provided by business firms subjected to the pressure of market competition only.	-5	-3	-5	-1	-3
26	Local water services should be provided by business firms subjected to the discretion of a regulatory agency.	-3	-2	-1	-3	4
27	Local water services should be provided by business firms subjected to terms and conditions of franchise contracts.	-4	0	-4	2	-1
28	Local water services should be provided by mixed public-private ownership firms.	-2	-1	-2	1	5
29	Local water services should be provided by cooperative firms.	1	-5	-3	-4	-4
30	Local water services should be provided by full public ownership firms.	5	4	2	0	-3

**Table 5.** Correlations between factor scores.

	1	2	3	4	5
1	1	0.4999	0.3761	0.3301	−0.0263
2	0.4999	1	0.2324	0.2891	0.2852
3	0.3761	0.2324	1	0.3693	0.0118
4	0.3301	0.2891	0.3693	1	0.1430
5	−0.0263	0.2852	0.0118	0.1430	1

As a way to make the results of the analysis more accessible, Table 6 exhibits the defining statements for each factor, *i.e.*, those statements individuals tend to agree and disagree most. On the basis of these defining statements, we can draw tentative interpretations of subjective views about the regulation of local water services and attribute speculative “labels” to characterise the kind of worldview held by elected public officers. In addition, the analysis reveals that some statements (so-called “consensus statements”) do not distinguish between any pair of factors in a statistically significant way. The two statements are that “In the tender offer of franchise contracts, it is difficult to detail and enforce contractual terms and conditions” (statement 17) and “Users of water services are not able to compare the quality of the services with those provided by other water firms” (statement 22). Both statements can be understood as factual beliefs or opinions that relate to issues that are generally uncontested within the water services domain.

**Table 6.** Defining statements for each factor (Z-scores greater than 1 or lower than −1).

Factor No. 1		Rank	Z-score
Agrees especially with the following statements			
s30	Local water services should be provided by full public ownership firms.	5	2.249
s2	Water services should be managed according to principles of solidarity and of protection of the most vulnerable users.	4	1.578
s4	Water tariffs should be kept under the control of public authorities to ensure affordability.	4	1.499
s15	The attainment of profit bears negative effects on the quality of water services.	3	1.235
s21	Water services provide an attractive opportunity for private investors.	3	1.026
Disagrees especially with the following statements			
s26	Local water services should be provided by business firms subjected to the discretion of a regulatory agency.	−3	−1.341
s27	Local water services should be provided by business firms subjected to terms and conditions of franchise contracts.	−4	−1.435
s3	Water tariffs should cover full cost, including a fair return to capital invested.	−4	−1.686
s25	Local water services should be provided by business firms subjected to the pressure of market competition only.	−5	−1.894
<b>Factor No. 2</b>			
Agrees especially with the following statements			
s15	The attainment of profit bears negative effects on the quality of water services.	5	1.592
s19	Local public authorities tend to interfere in the management of water firms rather than supervising and regulating their conduct.	4	1.546
s30	Local water services should be provided by full public ownership firms.	4	1.446
s10	Local public authorities do not adequately monitor service quality.	3	1.199
s21	Water services provide an attractive opportunity for private investors.	3	1.152
s13	Local public authorities do not possess adequate knowledge, competences, and capabilities to regulate the conduct of water firms.	3	1.052

Table 6. Cont.

<b>Factor No. 2</b>		<b>Rank</b>	<b>Z-score</b>
Disagrees especially with the following statements			
s25	Local water services should be provided by business firms subjected to the pressure of market competition only.	-3	-1.538
s5	Water infrastructure development should be primarily financed by users charges.	-4	-1.592
s24	Water firms are provided incentives to operate efficiently.	-4	-1.848
s29	Local water services should be provided by cooperative firms.	-5	-1.894
<b>Factor No. 3</b>			
Agrees especially with the following statements			
s2	Water services should be managed according to principles of solidarity and of protection of the most vulnerable users.	5	1.896
s4	Water tariffs should be kept under the control of public authorities to ensure affordability.	4	1.809
s3	Water tariffs should cover full cost, including a fair return to capital invested.	4	1.494
Disagrees especially with the following statements			
s27	Local water services should be provided by business firms subjected to terms and conditions of franchise contracts.	-4	-1.653
s7	Local public authorities care more about protecting the interests of water firms than of the users.	-4	-1.735
s25	Local water services should be provided by business firms subjected to the pressure of market competition only.	5	-2.367
<b>Factor No. 4</b>			
Agrees especially with the following statements			
s2	Water services should be managed according to principles of solidarity and of protection of the most vulnerable users.	5	2.287
s4	Water tariffs should be kept under the control of public authorities to ensure affordability.	4	1.679
s10	Local public authorities do not adequately monitor service quality.	4	1.378
s5	Water infrastructure development should be primarily financed by users charges.	3	1.071
s16	In the water sector we lack reliable and comparable measures to assess the quality of services.	3	1.071
Disagrees especially with the following statements			
s9	If water services are provided by franchisees, water firms tend not to completely comply with contractual obligations.	-3	-1.523
s29	Local water services should be provided by cooperative firms.	-4	-1.528
s18	Water firms are inherently inefficient because they are monopolists.	-4	-1.679
s1	Water services should be managed according to business principles akin to those of for-profit firms.	-5	-1.986
<b>Factor No. 5</b>			
Agrees especially with the following statements			
s28	Local water services should be provided by mixed public-private ownership firms.	5	1.923
s21	Water services provide an attractive opportunity for private investors.	4	1.406
s26	Local water services should be provided by business firms subjected to the discretion of a regulatory agency.	4	1.406
s20	Water firms are not exposed to any serious threat of new entrants into the industry.	3	1.162
s13	Local public authorities do not possess adequate knowledge, competences, and capabilities to regulate the conduct of water firms.	3	1.123
s7	Local public authorities care more about protecting the interests of water firms than of the users.	3	1.084
Disagrees especially with the following statements			
s24	Water firms are provided incentives to operate efficiently.	-3	-1.162
s25	Local water services should be provided by business firms subjected to the pressure of market competition only.	-3	-1.201
s30	Local water services should be provided by full public ownership firms.	-3	-1.201
s11	Renegotiation of water franchise contracts is highly demanding in terms of time and resources.	-4	-1.366
s29	Local water services should be provided by cooperative firms.	-4	-1.601
s23	The administrative judicial system plays an important role in the regulation of water firms.	-5	-1.923

## 5. Discussion

The results of the analysis can be interpreted by recollecting the distinctive sentences associated with each factor in meaningful wholes. The first factor can be called a “public sector interventionist” view of local water services regulation. Individuals who hold this view agree that water services should be provided by full public ownership firms (statement 30), that they should be managed according to principles of solidarity and of protection of the most vulnerable users (statement 2), and that they should be subjected to tariff controls by public authorities to ensure affordability (statement 4). In addition, proponents of this view agree that the water sector provides an attractive opportunity for private investors (statement 21), but also that the attainment of profit bears negative effects on the quality of water services (statement 15). Proponents of this view would also disagree with the ideas that water services should be provided by business firms subjected to the pressure of market competition only (statement 25), or subjected to the discretion of a regulatory agency (statement 26), or subjected to terms and conditions of franchise contracts (statement 27). Also, they challenge the idea that water tariff should cover full cost, including a fair return to capital invested (statement 3). An illustration of this view is provided by the following comment:

“Water is a natural public good. It is a good from which profit is unconceivable. Tariffs should exactly correspond to the operative costs and investments in new infrastructure. Private firms tend to make profits because of their very nature, and also public participation in business ventures would follow the same logic” (respondent No. 20).

The second factor can be called a “pessimistic” view of local water services regulation. Individuals who hold this view agree with statements that highlight unresolved issues with the present regulatory process. For example, they agree that the attainment of profit bears negative effects on the quality of water services (sentence 15), that local public authorities tend to interfere in the management of water firms rather than supervising and regulating their conduct (sentence 19), that local public authorities do not adequately monitor service quality (sentence 10), that local public authorities do not possess adequate knowledge, competences, and capabilities to regulate the conduct of water firms (statement 13). As a matter of policy inclination, individuals who hold this view acknowledge that water services provide an attractive opportunity for private investors (statement 21), but they hold that water services should be provided by full public ownership firms (statement 30).

The third factor can be called a ‘pragmatist’ view of local water services regulation. Individuals who hold this view acknowledge that the water services should be managed according to principles of solidarity and of protection of the most vulnerable users (statement 2) and agree with the policy that water tariffs should be kept under the control of public authorities to ensure affordability (statement 4). However, they also admit that water tariff should cover full cost, including a fair return to capital invested (statement 4). They are generally sceptical of the role of business firms in the provision of local water services irrespective to whether firms are subjected to terms and conditions of franchise contracts (statement 27) or to the pressure of market competition (statement 25) and of the possibility that local public authorities can be captured by water firms to serve their interests rather than those of the users (statement 7). The following comment provides an illustration of this view:



“Water is a common good, therefore the management of water services cannot contradict this absolute principle. The management of water services should be effective and efficient as in the best business companies, but with the constraint to protect weakest users” (respondent No. 4)

The fourth factor can be called a “cautious privatiser” view of local water services regulation. Individuals who hold this view agree that water infrastructure development should be primarily financed by user charges (statement 5), but, as water services should be managed according to principles of solidarity and of protection of the most vulnerable users (statement 2), water tariffs should be kept under the control of public authorities to ensure affordability (statement 4). Holders of this view, however, believe that local public authorities do not adequately monitor service quality (statement 10) and that in the water sector we lack reliable and comparable measures to assess the quality of services (statement 16). They also disagree that water services should be manager according to business principles akin to those of for-profit firms (statement 1) and that water firms are inherently inefficient because they are monopolists (statement 18). They also tend to disagree that water firms do not completely comply with contractual obligations of franchise contracts (statement 9).

Finally, the fifth factor can be called a “fatalist privatiser” view of local water services regulation. Individuals who hold this view agree that local water services should be provided by mixed public-private ownership firms (statement 28) or by business firms subjected to the discretion of a regulatory agency (statement 26). They see, in fact, that local water services provide an attractive opportunity for private investors (statement 21). With rather fatalistic tones, however, they also hold that water firms are not exposed to any serious threat of new entrants into the industry (statement 20), that local public authorities do not possess adequate knowledge, competences, and capabilities to regulate the conduct of water firms (statement 13), and that they rather care more about protecting the interests of water firms than of the users (statement 7). An illustration of this view is provided by the following comment:

“Water goods must be protected by public authorities but the contribution of private capital is needed for an effective management, development and distribution. Mixed ownership firms would enable to implement this model. It would be possible to attain the same results also with a full public ownership firm, but national politics have largely disappointed us, and therefore we need for a public-private partnership in order to provide incentives (to water firms), provided that there is no collusion between public and private actors” (respondent No. 9).

The five types of views about the regulation of local water services constitute tentative interpretations of sets of beliefs and opinions of the elected public officers in coherent wholes. The interpretations clearly require some amount of flexibility for accommodating apparently unrelated claims into meaningful arguments. The five types of view that resulted from the analysis, in fact, can not be easily mapped onto simplistic categories of “advocates” and “opponents” of re-regulation and privatisation of local water service provision. Rather than “advocates” of re-regulation and privatisation, the analysis led to the identification of “pragmatists” (who may embrace re-regulation and privatisation for practical benefits), “cautious privatisers” (who may half-heartedly accord privatisation while maintaining forms of public control on the provision of local water services), and “fatalist privatisers” (who may passively accept privatisation as inevitable). Rather than “opponents” of re-regulation and privatisation, the types of view identified from the analysis include a distinction between a “public sector interventionist” perspective (whose proponents believe of the merits of full

public ownership and control of water utilities) and a “pessimistic” perspective (whose holders rather criticise re-regulation and privatisation in place of advocating for any particular alternative). The five types of views, therefore, are not plainly correspondent to *a priori* categories as they rather relate to particular combinations of beliefs and opinions.

A first question arises, then, concerning what explains the apparent heterogeneity of views about the regulation of local water services among elected public officers in Italy. A tentative answer can be formulated by taking into consideration the historical context of the study. As briefly recalled above, the water sector of Italy was shaken by various reforms and legislative changes that took place over a period of almost two decades (1994–2011), with the resulting effect that differences emerged in the modes of governance, regulation, and service delivery across the country. The variety of individuals’ subjectivities identified in the present study may be related to the diversity of partisan views towards privatisation of local water services and towards the desirability of alternative regulatory systems and ownership structures, which may be related to the particular trajectories of re-regulation and privatisation experienced at the local level. Far from developing a “hegemonic” perspective, the discourse on the regulation and ownership structure of water utilities in Italy remained fragmented into diverse views held within political circles that either endorsed regulatory reform and privatisation or resisted them. Variety of initial conditions, political orientation, and occurrence of reform or legislative changes—among others—count as relevant factors for explaining the diversity of individuals’ subjectivities on the regulation of local water service provision.

Next question, then, is whether and how findings from this study—namely, the variety of views about regulation of local water services in Italy—matters, both within the context of the discussion about the regulation of the water sector in the country and of the design of water regulatory systems more generally. The presence of fragmented views about the regulation of water services in Italy poses some sources of potential instability within the present water regulatory regime. Within both the governance and regulatory regimes in place where water utilities are fully owned and controlled by local governments and where they are jointly owned by local governments and private operators and investors, some influential actors—elected public officers—hold beliefs and opinions that are dissonant, or even run against, the present mode of water service regulation and delivery. Implications of such diverse set of views about water regulation include the possibility that these actors can be especially sensitive to detect possible sources of discredit of the present regime (such as poor water service performance or dissatisfactory distributional effects of water service provision) and to frame the policy issue of how local water regulation should be reconfigured.

In a broader perspective, findings from this study also bear some relevance for the general discussion about the design of water regulatory systems. Evidence of the variety of ideas about the regulation of local water services suggests that individuals’ beliefs and opinions may be related to particular value premises, pragmatic concerns, and opportunistic considerations rather than to mere adherence to shared understanding of principles of economic regulation. If ideas matter in the policy process, then variety of beliefs and opinions held by elected public officers may help accounting for the features of the design of water regulatory systems. For instance, pragmatic concerns may induce individuals to welcome the opening of the water industry to private operators and investors as a way to stimulate efficiency and financial self-sufficiency of water utilities on the one hand, and to restrain the conduct of water utilities through stringent regulatory measures intended to protect weakest users on

the other one. The design of water regulatory systems, therefore, should be understood on the basis of the specific conditions that occur within given historical and political circumstances, including the variety of individual views about how water services should be regulated.

Finally, findings from this study may bear some relevance for other research works on the institutional features of water governance, especially in comparative perspective. Works done by Araral [16], and Araral and Yu [60], for example, argue that the design of appropriate governance systems for water service provision is important for improving service quality and that the quality of water governance seems related to the level of economic development. The present study suggests that paying attention to individual subjectivities may be relevant to account for similarities and differences of water governance systems across countries. Q methodology, as employed in this study, could help identifying the features of the discourse on water regulation and privatisation in different country case contexts. The characteristics of such discourse—in terms of both structure and variety of views held by individuals of the water policy domain—may be important to explain part of the observed variance of water governance systems across countries, especially developing ones with respect to industrialised ones.

## 6. Conclusions

This study provides an analysis of the subjectivities of elected public officers towards the regulation of local water services in Italy. By using Q methodology, the study showed that there are five different sets of beliefs and opinions held by elected public officers about how local water services are delivered, how well they perform, and how they should be regulated. One set of ideas, called “public sector interventionists”, are favourably inclined towards full public ownership of water firms and an influential role played by public authorities in the management of water services more generally. Another set of ideas, called a “pessimistic” view, primarily agrees on the presence of various problems in the regulation of local water services but is relatively uncommitted to any articulated policy approach. One more set of ideas, called a “pragmatic” view, aims at reconciling contrasting objectives, such as managing water firms in a business-like fashion while retaining concern with issues of water tariff affordability, within a common policy approach. Finally, two more sets of ideas tend to support some form of privatisation of water services. In the “cautious privatiser” variant, ideas include the need for public control of water charges and awareness of issues related to lack of attention of local public authorities towards monitoring service quality and of reliable and comparable measures to assess the quality of services. In the “fatalist privatiser” variant, ideas include awareness of various shortcomings of privatisation schemes, such as the lack of adequate knowledge, competences, and capabilities of local public authorities to regulate the conduct of water firms, the lack of threat of new entrants into the industry, and the somehow cynical view that local public authorities care more about protecting the interests of water firms than of the users.

This study contributes enriching our understanding of ideas about the regulation of local water services in ways that transcend more conventional categories of modes of regulation of infrastructure services. A result of the analysis that is relevant, in this respect, is that individuals hold idiosyncratic sets of ideas about how local water services are delivered, how well they perform, and how they should be regulated that contain particular “nuances”. For example, “pragmatists” strive to compromise between social concerns on the one hand, and the need to adequately finance the

management of water services and the development of water infrastructure on the other one. This finding is consistent with those of other works that highlighted that regulatory policies sometimes take the shape of “hybrids” by combining selected features of alternative regulatory models [31,61]. This study suggests that analysing the ideas on the regulation of local water services is important in order to contribute to the efforts to understand the origins of the design of regulatory systems.

If elected public officers play any role in the design of water regulatory systems at the local level, then this study shows that attention to the beliefs and opinions held by these individuals may be especially relevant. The interpretive approach to regulation can complement theoretical arguments put forward by the “public interest” and the “capture” theories in ways that highlight the importance of taking the variety of individuals’ views into account for explaining how regulations are made and implemented. With respect to the “public interest” theories of regulation, the inquiry into the subjectivities of elected public officers suggests that individuals may hold quite diverse understanding and attitudes towards ways to attain public objectives. With reference to the “capture” theories of regulation, this study suggests that elected public officers may hold reservations towards the privatisation of water service provision, which may entail the presence of an inclination to potentially reconsider—if not to revoke—the award of concession or franchise contracts under changed political circumstances. A similar argument could be made, moreover, about the role of individual subjectivities within mechanism design theories of infrastructure regulation [13]. Mechanism design theory holds that fitting incentive structures can minimise transaction costs in the provision of infrastructure services. The study of individuals’ subjectivities suggests, however, that we can not rule out the possibility that, while conforming their conduct to canons of instrumental rationality, individuals may nevertheless hold reservations about the institutional arrangement despite of any apparent net benefits, especially if the design principles or effects do not conform to individuals’ values. Additional issues arise, then, concerning whether designed mechanisms are exposed to the threat of being dismantled or whether any design effort should include ways to safeguard mechanisms from being taken apart.

Finally, this study enables us to reflect upon the possibilities offered by Q methodology as well as its limitations. On the one hand, Q methodology provides researchers with a rigorous and transparent way for collecting and analysing data on individuals’ subjectivities. On the other one, the methodological approach exhibits some weaknesses especially because the results are dependent on the selection of sentences of the Q sample, which may be affected by practical considerations for the limited amount of time and effort that respondents are willing to spend on the sorting task, and ultimately on the subjective interpretation of the researcher. In addition, the Q method is limited to providing the mapping of the beliefs and opinions held within the discourse on water regulation and privatisation. Questions about whether and how subjectivities matter for the formation of regulatory and privatisation policies or for the performance effects of water governance systems can not be addressed. Additional research is needed, therefore, to explore how findings from Q methodology may be fruitfully combined with other approaches in order to improve our understanding of the determinants of the design and performance effects of water governance systems.

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## Conflicts of Interest

The author declares no conflict of interest.

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