International Journal of Water Governance 1 (2013) 109–132
DOI: 10.7564/12-IJWG3

Remediable institutional alignment and water service reform: Beyond rational choice

Emanuele Lobina

Public Services International Research Unit, Business School, University of Greenwich
E-mail: e.lobina@gre.ac.uk

A growing body of empirical evidence fails to support rational choice expectations of superior private sector efficiency in the urban water sector. Drawing on Oliver Williamson's work on comparative institutional analysis, I suggest that institutional adaptability explains the efficiency and effectiveness of the public sector relative to the private sector. Under private sector participation, lowly remediable institutional adaptability favours the deployment of asymmetric power and the production of outcomes unaligned to reform objectives. Conversely, institutions supporting public operations are designed to facilitate the achievement of collective goals. This makes the alignment of individual attitudes, resources and institutions under in-house service provision less resilient to sustainability-oriented change. Remediable institutional alignment undergirds the comparative advantage of public water operations, as more ample opportunities are provided for compliance, allocative efficiency and adaptive performance. I thus call for a critical realist account of the outcomes of water service reform, free of rational choice dogma.

Keywords: Rational choice, institutional alignment, institutional adaptability, remediableness, comparative institutional analysis, water service reform, private sector, public sector, public enterprise performance, policy networks, transaction cost economics, agency, sustainable development, critical realism.

1. Introduction

Urban water supply and sanitation are as essential a service as they are controversial to organise and manage. These public services satisfy basic human needs and prevent public health hazards (Heller, 2009), are central to fostering economic development and social cohesion (UNESCO-WWAP, 2006; Gandy, 2004), and produce cross-cultural meanings associated with life and death, and with social and spiritual identity (Strang, 2005). Their economics, organisation and governance are determined by their typical natural monopoly market structure resulting from the dominant technological paradigm (Lobina & Hall, 2010). Rational choice theories such as public choice, property rights, and transaction cost economics, have dominated scholarly discourse and informed policy in the last few decades (Peters, 2005; Self, 1993). These strands of thought agree that the ownership of service providers matters (Dietrich, 1994) and have inspired the Washington and Post-Washington Consensus insistence on private sector participation

(PSP) – a set of reforms ranging from outright divestiture to the transfer of management rights to the private sector via concessions, operating contracts and other forms of delegation – and marketisation as the preferred approach to water service reform (Bayliss, 2006, 2001). This insistence is predicated upon theoretical expectations of superior private sector efficiency in the provision of water supply and sanitation. As a result, since the 1980s there has been a significant increase in PSP through developed, transition and developing countries (Hall & Lobina, 2009). While the results of a growing body of literature question claims of superior private sector efficiency (Lobina & Hall, 2009), the intellectual hegemony of rational choice remains unchallenged (Crouch, 2007; Fine, 2009).

The purpose of this article is to contribute to the theoretical debate on water service reform. It does so by evaluating the cogency of rational choice theories and identifying the theoretical gaps these have left in the explanation of the behaviour of public and private water operators. A microanalytic approach (Williamson, 1999) is adopted to explicate the merits of alternative organisational forms for the provision of water supply and sanitation services. More precisely, I compare public and private operations at the lowest operational level, and consider the alignment of the respective organisational goals and structural attributes to achieve the objectives of service delivery. This article is not concerned with a macroanalytic approach to the emergence of public and private organisational forms for the operation of water services and the path dependency of alternative institutional trajectories (Granovetter, 1985). This complementary perspective is addressed, among others, by Castro (2009) who looks at the systemic conditions of water service reform in developing countries, and by Swyngedouw's (2009) analysis of the retooled Washington Consensus as the institutional landscape of water service reform.

The next section introduces the notion of water service governance – of which water service reform is part and parcel – and develops an analytical framework based on the policy networks metaphor. I use this framework to illustrate the limitations of rational choice theories in investigating the duality of agency and institutions in the water sector. The same framework is also functional to trace a research agenda for water service reform. The third section reviews the positive and normative dimensions of rational choice theories, in view of the influence these perspectives exerted on the policy of international development agencies and governments in the last thirty years. Section four draws on empirical evidence questioning the validity of rational choice theories. An increasingly extensive body of quantitative evidence refutes theoretical expectations of greater private sector efficiency and effectiveness. Qualitative data is then used to explain why such expectations fail to materialise and why public water operations offer greater potential to enhance sustainability. In section five, I reflect on the significance of findings by focusing on the alignment of agency, power and institutions with sustainability objectives, respectively under private and public water operations. The final section calls for a theory of water service reform free of rational choice dogmas, and outlines a research agenda towards that aim.

2. Analytical framework: Water service governance and policy networks

Green (2007) identifies three dimensions of water governance: a) the process and outcome of institutional reform; b) the role played in this process by public, private and social actors; and, c) the economic, but also political, social and environmental implications of the first two dimensions. Green's (2007) definition treats water governance as a process of multi-actor, networked interaction in the pursuit of a collective goal and is thus consistent with Swyngedouw's (2005) notion of networked governance as government-beyond-the-state. Klijn and Koppenjan (2006: 144) define networks as "patterns of social relationships between mutually dependent actors". These relationships are formed around policy problems or policy programmes (Klijn, 1997). Policy networks are used heuristically to investigate political phenomena (Christopoulos, 2008) and water reform. More precisely, Lobina & Hall (2007a) use policy networks as an analytical framework to shed light on the dynamic interest-seeking of private water operators and test the cogency of public choice and property rights theory. A similar approach is adopted by Lobina (2005a) and for the purposes of this article.

Building on Lobina & Hall (2007a), I offer the following description of the policy networks metaphor. Actors in a policy network strategically interact in response to their attitudes, and such interaction is informed by the respective power and the institutional context shaping their relationships. Attitudes guide agency and derive from the actors' own beliefs, interests and calculation – what actors believe is right, what objectives they want to achieve, and what costs and benefits they estimate are implied with the pursuit and achievement of their objectives (Axelrod & Lehman, 1993). External incentive structures consisting of expected positive and negative sanctions are thus one of the determinants of attitude formation and intensity. Power can be defined as the ability to induce and resist change and does not necessarily coincide with authority. The availability of tangible and intangible resources – including status, legitimacy, knowledge and money – is central to power. Power produces resource-based dependence between actors (Giddens, 1979; Green & Anton, 2010). Therefore, power cannot be confined to the outcome of mere resource allocation (Dietrich, 1994) and can be rather seen as the result of resource mobilisation in a relational context. For example, one actor's power can be given by the perception other actors have of his or her power (Klijn, Koppenjan, & Termeer, 1995). Relations are characterised by the principles of mutuality, conflict and order. When mutuality prevails, actors exchange resources for the achievement of their goals. If these are communal objectives, transactional relationships are also cooperative. In case of conflict, resources are deployed for the attainment of opposite goals. In principal-agent relationships within organisations or social systems, hierarchy presupposes the exercise of authority over subordinates (Williamson, 1999).

Institutions constitute the structure which supports agency and are "implicated in the reproduction of social systems" (Giddens, 1979: 64, 81–82). It is possible to distinguish between different conceptions of the relation between organisations and institu-

tions. Williamson (1975, 1985) views organisations as institutions whose governance is aimed at minimising the transaction costs associated with economic activity. According to this conception, organisational modes for the delivery of water services are institutions. Sociologists tend to emphasise instead the connectedness between organisational structure and operation on one hand, and between organisations and societal processes on the other. Institutions can be seen as composed of three separate but interconnected elements. The regulative pillar consists of the formal and informal rules constraining and regularising behaviour that are governed by the logic of instrumentality, as agents adapt their actions to maximise their utility in consideration of expected positive or negative sanctions. The normative pillar consists of the values that encapsulate shared conceptions of the desirable, and of the norms that prescribe societal goals and define the legitimate means to achieve them. In this case, the logic underlying agency is that of appropriateness: actors' adherence to the normative aspect of institutions reflects their acceptation that the prescribed behaviour is correct. The cognitive-cultural pillar includes the communal understanding of reality and views of the world. Compliance with the cognitive-cultural component of institutions occurs as other courses of action are inconceivable and existing routines are taken for granted. The dominant logic here is that of orthodoxy. The three illustrated pillars of institutions are mutually reinforcing, which explains why institutions are relatively resistant to change, tend to be maintained and reproduced through generations, and are a stable feature of social life (Scott, 2005).

In summary, I assume that different actors carry different combinations of interests and attitudes, which define the intensity of incentives to accomplish their objectives. Agency is also determined by actors' ability to use resources and respond to institutional demands. Interaction between actors or coalitions of actors within a policy network is thus the result of interaction between different sets of incentives, resources and abilities to use underlying institutions to realise aims. This interaction represents a mechanism through which the distribution of power within a network is reproduced and altered. Finally, sustainability is a normative objective of water governance. The governance and operation of water services should be directed towards sustainability if "good governance" is to be achieved (Rogers & Hall, 2003). Water service sustainability is seen as the sustained reproduction of political, economic, social, technical and environmental (PESTE) regimes and their interdependent cycles (ERL-UCM and PSIRU, 2003). The application of normative coherence in the operationalisation of water service sustainability demands that efficiency be instrumental to the achievement of effectiveness (Idelovitch & Ringskog, 1995). In fact, the ultimate objective of water service provision is the satisfaction of the developmental needs of the beneficiary communities, not the needs of the operational process.

3. A review of rational choice theories of the firm

Rational choice consists in the common assumptions informing a variety of theories of the firm. These assumptions are that individuals are rational, are intrinsically self-interested, and take actions aimed at maximising their own utility (Peters, 2005; Self, 1993; Dietrich, 1994). Although these theories share assumptions, methods and explanations, I distinguish between public choice and property rights theory on one hand, and Williamson's approach to transaction cost economics on the other. The former theoretical perspectives predict government failure in the provision of water services and recommend the introduction of PSP. The latter has a less pronounced normative character in relation to the ownership of service providers.

3.1. Public choice and property rights theory

Public choice theory contends that public service provision is intrinsically inefficient due to the self-interested behaviour of public managers who prioritise budget maximisation over the public interest (Renzetti & Dupont, 2003). This negative view of the public sector stems from four premises derived from principal-agent analysis. First, individual voters cannot control the political process, nor keep politicians accountable once they are elected. Second, interest groups manipulate the political process to their advantage. Third, elected politicians cannot effectively control bureaucracies. Finally, interest groups, politicians and bureaucrats mutually exchange favours to the detriment of voters and consumers (Self, 1993). Conversely, public choice theory predicts that competition enhances efficiency by reducing the excessive public supply of public services (Bel, Fageda, & Warner, 2010; Bel & Warner, 2008). Contracting out water supply is expected to improve performance as a result of competitive pressures (Boyne, 1998). It is also argued that insulation from self-serving political interference results in the superior efficiency of regulated private enterprises over public undertakings. This insulation arises from the fact that the institutional framework supporting privatisation guarantees profitability in order to attract private investment (Willig, 1994).

Property rights theory expects the specification of property rights to induce efficient resource allocation by influencing incentives and individual behaviour (Furubotn & Pejovich, 1972; Dietrich, 1994). It posits that "private-sector owners, as residual claimants, have more clearly defined incentives to push for efficient decision-making by managers", than elected officials, senior bureaucrats and taxpayers (Renzetti & Dupont, 2003: 10–11). More precisely, the case for the superiority of private ownership rests on the "weak incentives of government employees with respect to both cost reduction and quality innovation" (Shleifer, 1998: 138). The plurality of objectives pursued by public authorities and public operators, which include social justice, also goes to the detriment of productive efficiency (Lorrain, 1997a). Premised on property rights, Demsetz (1968) argues in favour of competition for the market to select public utility operators when competition in the market is unfeasible. Competition for the market takes the form of competitive

bidding for the long term right to serve a specified area. Regulation and contractual renegotiation might be necessary to avoid excessive windfalls in cases whereby the durability of investments requires entering long term contracts (Demsetz, 1968), as is typically the case of urban water services. The so-called Demsetz competition is expected to promote the efficiency of monopolists by sanctioning poor performance through the threat of franchise termination, suspension, or non-renewal, and to mitigate the risk of regulatory capture by minimising agency discretion (Baldwin & Cave, 1999).

World Bank literature stresses the role of property rights-induced incentives in fostering the efficiency of Public-Private Partnerships (PPPs). Whether contractual options ranging from management contracts to full concessions "perform better than full provision by state-owned enterprises depends in particular on whether performance risk is effectively shifted from taxpayers to the private shareholders of the company that enters into a concession-type arrangement" (World Bank, 2002b: 23–24; Brook Cowen, 1997). Proponents of PSP also argue that due to the presence of natural monopoly, regulation in the water sector should be accompanied by competition. Regulation and competition would be mutually reinforcing as regulation is supposed to compensate for the limited possibility to introduce competition, while competitive pressures would reduce the required regulatory burden (Rees, 1998; Franceys, 2000; Lorrain, 1997b).

3.2. Transaction cost economics

The Williamsonian tradition of transaction cost economics propounds that economic activity should be organised so as to minimise individual's bounded rationality and to safeguard transactions from the threat of opportunism. The occurrence of opportunistic behaviour is less likely within a firm than under trading between two autonomous parties, due to the propensity of hierarchy to impose its objectives over those of individual agents. This tradition emphasises the importance of process on determining outcome. This implies a preoccupation not only with the ex ante conditions preceding a given transaction but also with how these conditions affect the ex post phase, for example the execution of a contract. High asset specificity can cause a transaction to move from a large-numbers exchange relation in the ex ante phase to a small-number transaction during contract execution. This situation is typical of the water sector and means that both buyer and seller are locked into a bilateral monopoly (Williamson, 1988, 1981; Dietrich, 1994).

Williamson (1999, 1997, 1988, 1981) argues that comparative institutional analysis is required to recognise the economic institutions conducive to economising on transaction costs. According to the remediableness criterion, all feasible organisational modes – market, hybrid, private bureau, public bureau – are flawed. Therefore, the transaction costs associated with the attributes of different modes during both the ex ante and ex post phases have to be comparatively assessed in light of the nature of the transaction to be performed. Among such attributes is the intensity of incentives to appropriate

net gains, distinguished between high- and low-powered incentives (Williamson, 1999, 1988, 1981).

Demsetz' (1968) assumption of efficiency being achieved through "unassisted" competition for the market can be upset by incomplete information and uncertainty, incomplete contracts, high asset specificity and opportunism (Williamson, 1976, 1981, 1988). Williamson (1976) identifies the following problems with Demsetz competition: a) unclear award criteria; b) difficulties with auditing in case of divergence on price-cost relations; c) defective incentives; d) weak credibility of contract termination as the sanction for poor performance; e) operators' ability to renegotiate contractual terms to their advantage; f) biased relationship between franchisor and franchisee, as political considerations override economic considerations; g) lack of a level playing field during contract renewal as the incumbent is favoured over other bidders. Furthermore, the possibility of corruption and of price transfer through the vertically integrated units of the operators' mother company is acknowledged.

The proponents of PSP in the water sector have left Williamson's warnings unheeded. Drawing on Coase (1937), Lorrain (1997b, 1991) maintains that multinational corporations enjoy a comparative advantage over municipal water operators as a result of vertical and horizontal integration. Economies of scope mean that operating subsidiaries would benefit from access to the group's know-how on how to economise on the conduction of operations. Vertical integration across the production chain would allow private groups to bypass the market for the purchase of ancillary goods and services and avoid the associated transaction costs.

4. Empirical evidence on public and private operational performance

Studies that comparatively assess the operational performance of public and private water operators fail to find evidence of superior private sector efficiency (Bel, Fageda, & Warner, 2010; Bel & Warner, 2008; Hall & Lobina, 2009; Massarutto, 2007; Estache, Perelman, & Trujillo, 2005). The reviewed quantitative evidence refers to: Argentinean, Bolivian and Brazilian cities (Clarke, Kosec, & Wallsten, 2004); Brazil (Seroa da Motta & Moreira, 2004; da Silva e Souza, Coelho de Faria, & Moreira, 2007); 76 African enterprises (Kirkpatrick, Parker, & Zhang, 2006); Uganda (Mbuvi & Tarsim, 2011); 50 public and private operators in 29 Asian and Pacific countries (Estache & Rossi, 2002); England and Wales (Saal & Parker, 2001; Saal, 2003; Saal, Parker, & Weyman-Jones, 2007; Florio, 2004); 5,000 French water operators (Chong et al., 2006); and 53 Spanish cities (Martínez-Espiñeira, García-Valiñas, & González-Gómez, 2009).

Explanations provided in the quantitative literature for the absence of superior private sector efficiency include: the limited competitiveness of the water sector (Bel, Fageda, & Warner, 2010; Bel & Warner, 2008); the presence of substantial transaction costs (Chong et al., 2006; Bel, Fageda, & Warner, 2010; Bel & Warner, 2008); and improved public performance due to public sector innovation (Estache & Rossi, 2002; Bel,

Fageda, & Warner, 2010; Bel & Warner, 2008). Even an extensive World Bank study comparing the performance of more than 1,200 water and energy utilities in 71 developing and transition economies does not find conclusive evidence of superior private sector efficiency. The observed operational efficiency gains under private operations are not accompanied by reduced prices and increased investments, suggesting that "the private operator reaps all the gains through profits" (Gassner, Popov, & Pushak, 2009: 5).

In order to integrate such explanations, I look at empirical evidence derived from qualitative studies on the behaviour of public and private actors in developed, transition and developing countries, under different institutional and regulatory frameworks. The "extensive observation" of more case studies and different organisational modes allows for addressing issues of governance and power at microanalytic level (Williamson, 1976, 1999).

4.1. Problems with private water operations

The limited competitiveness of the water sector is not only explained in terms of market structure. Private operators may use corruption to influence public decision makers, circumvent competition and gain long term access to a captive market, obtain favourable contractual terms or have their contracts extended at expiry. Evidence of corruption is found in developed and developing countries, and in relation to contracts that are either competitively tendered or awarded after direct negotiation (Lobina & Hall, 2007a; Lobina & Paccagnan, 2005; Lobina, 2005a; Lobina & Hall, 2003; Hall & Lobina, 2004; Hall, 1999). Private operators might also engage in collusion to rig competition in developed as well as developing countries (Lobina & Paccagnan, 2005; Hall, 1999; Davis, 2004).

Private operators' strategies and tactics determine relationships with public authorities during contract execution. Ranging from conflictive to collaborative, the nature of these relationships depends on the stance adopted by contracting and regulatory authorities, and how this stance is compatible with the achievement of commercial objectives. Private water operators rely on favourable resource allocation, asymmetric information and expertise between regulated and regulator, to pursue profit maximisation (Lobina & Hall, 2008a). Corresponding tactics include the manipulation of tariff formulas and bills, overestimation of projected investments and demand forecasts, and price transfer through integrated activities (Lobina, 2005a; Lobina & Hall, 2007a). Less than transparent accounts in Bandol-Savary, Nice and Avignon, France meant that private operators charged consumers for investments that had not been realised (Cour des Comptes, 1997; Global Water Report, 2002a,b).

Superior expertise in drafting and negotiating contracts may lead to private operators averting performance risk (Lobina, 2005a). Superior expertise in renegotiating contracts induces private operators to proactively exert pressure on contracting authorities. This aims at revising contractual terms in favour of the operator and relies on the fact that contract law safeguards contractually agreed profit levels against change

in circumstances. For private operators, this mechanism has the potential to turn an adventurous bid into an economically advantageous deal. Renegotiation is thus systematic and sought shortly after the award (Lobina, 2005a, 2006). Horizontally and vertically integrated water multinationals may tactically use subcontracting to their own operating subsidiaries to renegotiate operating contracts. Subcontracted activities may include technical assistance and managerial duties, infrastructure maintenance and construction. Overpriced internal contracts result in losses for the operating subsidiary purchasing the goods and services. As these losses are compensated for by adjusting prices upwards, the final outcome is the appropriation of net gains by the mother company at the expense of consumers (Lobina & Hall, 2007a, 2000; Lobina, 2005b,a).

Private operators entertain amicable relationships with complacent contracting authorities and are ready to challenge regulatory acts undermining expected levels of profitability. This pattern is replicated across developed, transition and developing countries. Examples include the lack of conflict with the "sleeping" public partner in Cartagena de las Indias, Colombia, and the conduction of contractual renegotiations between private operator and central government, bypassing local regulators in Buenos Aires and Santa Fe, Argentina (Lobina, 2005a). In England and Wales, the 1989 outright privatisation of water and sewerage services was accompanied by the introduction of price-cap regulation enforced by the independent agency Ofwat. Despite its considerable resources, Ofwat has been unable to deal with the companies' opportunistic behaviour. From 1995 to 2006, so called "gaming" has resulted in over GBP 4.3 billion of extra dividends paid to shareholders across the industry, equal to 9.6% of the total value of projected investments. The deliberate misrepresentation of data has also been the object of investigations and charges brought by the Serious Fraud Office. The scandal emerged as a result of whistle-blowing and not thanks to Ofwat's regulatory scrutiny (Hall & Lobina, 2008; Lobina & Hall, 2008b). Factors explaining contracting and regulatory authorities' lack of resolve to sanction poor performance include inability to access commercially confidential data and poor regulatory capacity (Lobina, 2005a). Furthermore, contracting authorities may justify the selected operator's conduct to avoid admitting their error. "Only in the event of egregious and persistent malperformance would an effort be made to replace the winning franchisee" (Williamson, 1976: 81).

The tactics adopted by private operators in response to regulatory activities affecting commercial returns range from litigation to the use of extra-legal pressure. The case of Arezzo, Italy, is symptomatic. As the local regulatory agency questioned the efficiency of the private operator, the latter responded by threatening multi-million compensation claims and withholding payment of the concession fees due to municipalities. Local authorities hence abandoned attempts to sanction the operator and agreed to renegotiate the contract by increasing charges and postponing projected investments, to the concessionaire's advantage (Lobina, 2005b). Similarly, see Lobina (2005a) on the suspended payment of concession fees in Manila, Philippines. Decision making on the termination of controversial contracts has also been influenced by the menace of costly litigation

in La Paz, Bolivia; Grenoble, France; and Szeged, Hungary (Lobina & Hall, 2007b,a; Lobina, 2005a). In the course of a dispute with local authorities, the concessionaire suspended operations of a wastewater treatment plant in Brussels, Belgium, causing significant environmental damage (Lamquin, 2010; Petrella et al., 2009; EPSU, 2010).

4.2. Reform of public water operations

Public water operators are wholly publicly owned and managed undertakings. They can assume different organisational modes depending on their legal status, the degree of managerial and financial autonomy, and the nature of governance and accountability mechanisms. Public organisational modes vary from administrative departments to publicly-owned PLCs (Public Limited Companies), with a number of hybrid forms in between. Administrative departments are subject to public law and have no distinct legal personality, and no managerial and financial autonomy. Publicly-owned PLCs are governed by commercial law and enjoy a distinct legal status and full managerial and financial autonomy from their public shareholders. Governance and accountability mechanisms range from bureaucratic to corporate models. In addition, public participation can be introduced to integrate representative democracy and strengthen strategic decision making and regulation. In-house restructuring consists in the changes leading to the passage of a public operator from one institutional and organisational mode to another, while retaining full public ownership and control.

Public water operators in developed, transition and developing countries are capable of efficiency and effectiveness (Lobina & Hall, 2000, 2008a; da Costa et al., 2006). Contrary to received wisdom (Baietti, Kingdom, & van Ginneken, 2006), non-corporatised public operators can perform well. Evidence in this sense refers to administrative departments in France as implied in the findings of Chong et al. (2006). Moving from a transaction cost economics perspective, they look at the decision of French local authorities to opt for PSP or public water operations as a make-or-buy decision. Chong et al. (2006) find in favour of the efficiency of public over private operators, pointing to the efficiency of administrative departments as these constitute a large share of French public water operators. A similar point can be made in relation to the literature assessing the comparative efficiency and efficacy of public and private operators in developing countries. Furthermore, in-house restructuring may result in improved operational performance, as reform brings new rules, norms, values, cultural frames and incentives. Several factors can induce the reform of public operations, only one of which is the threat of privatisation to the existence of public operations (Estache & Rossi, 2002). Other determinants of reform are: the willingness of decision makers to avoid the costs – political, social, economic, environmental and technical – associated with PSP and privatisation; decision makers' views of the world; the content of applicable law; and, pressure exerted by external actors.

The motivation of key actors in the reform of public water operations lies on varying combinations of self-interest, sense of appropriateness, and coercion. In Debrecen,

Hungary; Łodz, Poland; and Tegucigalpa, Honduras, public managers and trade unions successfully collaborated to strengthen the public operator's performance and reject the proposed adoption of PSP (Lobina & Hall, 2000). In Grenoble, France and Milan, Italy local authorities opted for in-house provision in response to problems experienced with PSP. Also, in both cases national legislation influenced the adoption of the organisational mode. In Grenoble, remunicipalisation followed a failed and corrupt lease contract. In Milan, the mayor decided to avoid holding a competitive bidding procedure to select a private operator. The decision matured after the two major water multinationals came to dominate the local wastewater market amid controversy (Lobina & Hall, 2007a; Lobina & Paccagnan, 2005). The beliefs of the political leadership determined the introduction of participatory practices in Cordoba, Spain and Porto Alegre, Brazil (ERL, UCM, 2005; Viero & Cordeiro, 2003). The conditionality attached to international and bilateral development agencies' loans and grants have induced in-house restructuring in: Porto Alegre, Brazil; Kaunas, Lithuania; Riga, Latvia; and, Alexandria, Egypt (Lobina & Hall, 2008a, 2006; ARD, 2005).

In-house restructuring entails different aspects of institutional change. Change in rules affects incentives by sanctioning different types of behaviour. In turn, rules impact on the norms, values and cultural frames which influence agency. The introduction of an arms-length relationship between municipal owners and public managers is intended to insulate day-to-day management from political interference (Lobina & Hall, 2006, 2007a; Lobina & Paccagnan, 2005). Public participation in decision making and regulation aims at strengthening the operator's accountability and enhancing the responsiveness of operations to their intended objectives (Lobina & Hall, 2007a, 2008a; ERL, UCM, 2005). The reorganisation of corporate structure and reallocation of resources and tasks can promote operational efficiency and effectiveness (Lobina & Hall, 2006; Mugisha, 2007). In Tegucigalpa, Honduras, in-house restructuring was based on a two-pronged strategy. While core managerial responsibilities were decentralised, staff motivation was improved by refocusing organisational values and culture and by involving workers in designing the reform (Lobina & Hall, 2000). Other cases confirm not only that the effects of regulative change are reinforced by normative and cultural-cognitive transformation. Such transformation also depends on the bonding outcome of social networks internal to the operator, as well as on the networks bridging the operator and its social milieu. In Ahmedabad, India and Azad and Jammu, Pakistan, served communities praised workers' commitment and the strengthening of this relationship led to service improvement (Davis, 2004). In Phnom Penh, Cambodia, managerial and financial autonomy, the redistribution of managerial responsibilities and introduction of performance-related pay and penalties successfully changed organisational culture. In addition, bill collection and revenues increased following a campaign to "educate the public, especially high-ranking families, other government agencies, and even (the operator's) top management, of the importance of paying their water bills" (Bryant, 2004; Warwick & Cann, 2007).

The effects of in-house restructuring are significant. In Tegucigalpa, Honduras, leakage was reduced and the capacity to supply water increased fivefold in three years. The continuity and reliability of supply also improved allowing the majority of the population to receive piped water 24 hours a day. In the course of 1995 alone, the population supplied with treated water by the then wholly São Paulo state-owned operator SABESP increased from 84% to 91%. Sewerage coverage increased from 64% to 73%. In Grenoble, France, the remunicipalised operator tripled investment in infrastructure renewal despite charging lower tariffs than the preceding private operator. Business plans developed by public management in Debrecen, Hungary and Łodz, Poland successfully compared against proposals put forward by water multinationals (Lobina & Hall, 2000, 2007a). Under full public ownership and management, Burkina Faso's utility ONEA increased service coverage by an annual average of 1.64% from 1990 to 2001. This compares to 0.83% under a private service contract from 2001 to 2007 (Lobina & Hall, 2009; Fall, 2009) in a context of declining urban growth rates (World Bank, 2002a). In Phnom Penh, Cambodia, water coverage increased from 20% in 1993 to 70% by 2004 and 90% by 2007 (Bryant, 2004; Warwick & Cann, 2007).

5. Discussion of findings

Rational choice expectations of superior private sector efficiency in water supply and sanitation are not supported by empirical evidence. These theoretical perspectives should thus be revised to correct their positive and normative limitations. Rational choice theories have been criticised for: a) basing their predictions on ex ante incentive alignment and ignoring the impact of power on process (Dietrich, 1994; Williamson, 1976); b) providing an undersocialised account of economic action which neglects the role of social relations in conditioning behaviour (Granovetter, 1985). Looking at institutional adaptability from a policy networks perspective, my critique of rational choice theories aims at integrating these analyses. I thus point to the need for alternative theoretical accounts of water service reform and put forward a research agenda towards that aim. In fact, public choice and property rights theories do not allow for the efficiency and effectiveness of public operations. Also, Williamson (1999) confines his analysis of public economic organisations to the public bureau and does not contemplate the possibility of in-house restructuring.

5.1. Discussion of findings: Problems with PSP in the water sector

Like all private firms, private water operators pursue profit maximisation as their raison d'être. Private managers tend to internalise shareholders' interests, as the latter have the means to remove the former. Therefore, the behaviour of private managers is informed by high-powered incentives to achieve profit maximisation. This objective determines managerial strategies in relation to accessing markets, contract execution,

and defence of the incumbent's monopolistic position at contract expiry. Factors taken into account in the design, implementation and adaptation of interest-seeking strategies include other actors' interests, their attitude and ability to take action, and the rules of the game in a natural monopoly.

Public choice emphasises the self-interestedness of politicians, public managers and public sector workers, and expects competition to contain the self-interestedness of private operators. Comparative institutional analysis requires, however, an assessment of the relative merits of public and private operations. It is difficult to see how the same corrupt politicians' conduct would be dishonest when services are publicly managed and virtuous when PSP is introduced. Indeed, privatisation offers further opportunities for corruption (Bayliss, 2001; Hellman, Jones, & Kaufmann, 2000). Evidence reviewed for this article shows that corruption occurs in connection to competitive bidding procedures and points to the variety of observed private malpractice, extending to collusion and fraud. Such evidence rebuts expectations that competition in the water sector prevents corruption, and that the private sector should be expected to behave more honestly than the public sector.

Rational choice theories expect private sector efficiency to derive from competition for the market and regulation, greater incentives to obtain profitability and lower agency costs – the costs for principals to control agents. I find that these expectations do not hold. The limited competitiveness of the water sector is due to market structure and private operators' interest seeking behaviour. Opportunism also allows private operators to appropriate net gains when interacting with contract awarding and regulatory authorities under different institutional frameworks. While private shareholders enjoy relatively low agency costs in controlling managers, asymmetric power means that public principal-private agent relationships imply high agency costs. If private operators obtain productive efficiency, power differentials allow them to retain it as rent rather than passing that on to consumers.

As an economic institution, PSP in the water sector affords flexibility to private operators' interest seeking strategies in different institutional contexts. This flexibility is due to the alignment of private operators' high-powered incentives with their reliance on advantageous resource allocation and favourable institutions. To illustrate the flexibility of private operators' interest seeking strategies under PSP, I identify two scenarios in light of the incentives informing the behaviour of different actors. In both scenarios, private operators act under high-powered incentives to appropriate net gains and to take advantage of resource allocation and institutions. In fact, the decision to introduce PSP implies the adoption of rules attracting the interest of the private sector by guaranteeing profitability. In scenarios A and B, contract awarding and regulatory authorities have respectively low-powered and high-powered incentives to ensure that consumers and taxpayers benefit from private service provision. In scenario A, private operators and public authorities entertain collaborative relationships, as public actors are not opposed to the realisation of private objectives. This can be due to a number of factors – public author-

ities might be corrupt, they might lack the political resolve to tackle poor performance, they might lack access to information, or have inferior technical and bargaining skills. In scenario B, private operators and public authorities engage in conflicting relationships as private operators react to public authorities' determination to sanction poor performance. If private operators' superior skills are not sufficient to solve the dispute to their advantage, they can opt for exerting legal or extra-legal pressure on public authorities.

Institutions constraining and regularising agency under PSP are biased in favour of private operators, which explains the resilience of private sector interests under adverse circumstances. Even in cases where contracts have been demonstrably found to be vitiated by corruption, private operators' strategic flexibility has been rewarded through payment of compensation settlements (Lobina & Hall, 2007a) or with the award of additional contracts (Lobina & Paccagnan, 2005). Institutions favourable to private operators primarily include regulative institutions – contractual arrangements and the applicable national and international law, such as provisions on dispute settlement via international arbitration. Regulative institutions' disposition to safeguard private interests might be supported by normative and cultural-cognitive institutions such as collective norms, values and attitudes. Generalised favourable attitudes towards the private sector have accompanied the diffusion of public choice and New Public Management tenets beyond Anglo-Saxon countries (Self, 1993; Hood, 1995). Furthermore, private operators have demonstrated their ability to obtain the advantageous amendment of rules under either collaborative or conflicting scenarios. Privatised companies in England and Wales obtained the extension of the termination notice from a complacent regulator (Hall & Lobina, 2008). In Arezzo, Italy, the private concessionaire won the standoff against regulatory authorities by exerting extra-legal pressure and obtained a favourable renegotiation of the contract (Lobina, 2005b). Under PSP, the strategic flexibility enjoyed by private operators is both a determinant of asymmetric power and determined by it. The favourable alignment of incentives, resources and institutions encourages private water operators to test the limits of Williamson's (1976) prediction that only in extreme circumstances will private operations be terminated. Even when this eventuality occurs, compensation claims for damages and lost profits represent a last resort for seeking corporate interests.

PSP is thus prone to what Williamson (1999) defines as maladaptation hazards. These hazards result from the fact that institutional adaptability facilitates the attainment of private agents' objectives in conflict with the intended objectives of public principals. Under PSP, institutional adaptability provides the conditions for the deployment of asymmetric power to achieve outcomes unaligned to reform objectives. The maladaptation hazards of PSP are epitomised by the fact that priority accorded to private operators' commercial considerations hinders the integrated and sustainable reproduction of interdependent PESTE cycles. In turn, the institutional adaptability of PSP is not only adverse to sustainability but also lowly remediable. Due to the combination of asymmetric power and institutions favouring private interests, public principals face high costs to

steer private agents away from an undesired course of action. Under PSP, institutional alignment causes what I define as "Willig's paradox": it is the institutional framework expected to promote efficiency by shielding private operators from non-commercial demands (Willig, 1994) that allows private operators to abuse of their monopoly power.

5.2. Discussion of findings: In-house restructuring in the water sector

The reviewed evidence shows that public efficiency and efficacy is possible, as is successful in-house restructuring. Furthermore, it illustrates how the public sector encompasses a variety of organisational forms having in common full public ownership and control. The public sector cannot thus be construed as representing an organisational monolith (Hall, 2007). It also points to the diversity of in-house restructuring strategies successfully adopted in different social and economic contexts. What emerges is the ability of restructured public operators to pursue a variety of PESTE sustainability objectives, for example both sound financial management and the extension of service coverage, without privileging one at the expense of the other.

In the absence of conclusive evidence on the relative efficiency of administrative departments compared to reformed public operators, I conjecture that efficiency can be obtained under administrative departments and not only as a result of in-house restructuring. As no organisational mode is plausible of perfection (Williamson, 1999), I admit the possibility of both efficiency and inefficiency of public operations, whether managed by administrative departments or reformed public enterprises. Starting my analysis with administrative departments, I assume that there are no external impediments to efficiency and ask whether public bureaus have the resources and incentives to run efficient and effective operations. These two questions permit the identification of four possible cases: a) the public bureau has both adequate resources and adequate incentives; b) the public bureau lacks adequate resources but has adequate incentives; c) the public bureau has adequate resources but lacks adequate incentives; and, d) the public bureau lacks both adequate resources and adequate incentives. Unlike the other three, scenario a) is likely to lead to efficiency without the need of external intervention. The occurrence of this scenario requires an explanation.

Public choice adopts a simplistic assumption by expecting the self-interestedness and corruption of public managers and employees to prevail over behavioural alternatives. A more realistic hypothesis is that whether individual conduct is informed by self-interestedness, honesty, or morality, depends on the concrete personal relations and networks of relations in which public managers and employees participate. These relations and networks thereof can in fact generate trust and discourage malfeasance (Granovetter, 1985). Probity in the public bureau is the result of the low-powered incentives of civil servants to appropriate net gains, the administrative control to which bureaucratic routines are subject and the contract law regime which provides for flat remuneration and security of employment (Williamson, 1999). In addition to the effect of regulative

institutions such as administrative rules and contracts, individual behaviour is shaped by the obligations inherent in the networks of personal relations (Granovetter, 1985), or derived from normative and cognitive institutions. The adequacy of resources can be explained in light of the administrative department's reliance on central or local taxation, the sufficient scale of the administration to attract financial and human resources through charging, and the accumulation of organisational memory throughout time. Scenario a) approximates the Weberian ideal type of bureaucracy structured around clear hierarchical authority, administrative due process, deep professional knowledge of the process, and public sector ethos (Williamson, 1999). This scenario implies the benevolence of government, as owner, regulator and financier of the administrative department.

Scenario b) differs from scenario a) in terms of the availability of resources, which can be scarce in a weak macroeconomic and institutional context. Nonetheless, the limitation of resources can be remedied thanks to collaboration with external public agencies. Capacity building can thus be achieved by public operators entering into Public-Public Partnerships (PUPs), defined as peer relationships between public entities, forged around common values and operational objectives, and which exclude profit-seeking (Lobina & Hall, 2006). Alternatively, financial and human resources for supporting viable public service provision can be obtained through intergovernmental cooperation, including the sharing of services among more municipalities (Warner, 2006; Warner & Hefetz, 2003; Hukka & Vinnari, 2007).

Scenarios c) and d) are characterised by the lack of adequate incentives to operate efficiently and effectively, which requires a distinction between the incentives affecting the behaviour of public owners and that of public managers and workers. Individual politicians may lack the incentive to diligently direct and control a public undertaking due to corruption, patronage or the political costs associated with institutional change. The professionalism of public managers and workers might suffer in the absence of authoritative guidance and effective regulative and normative sanctions oriented towards virtuous conduct. However, wrongdoing in the public sector is not inevitable and institutional change can align the incentives of politicians, public managers and workers with public service objectives. Public participation and greater transparency can strengthen the incentives of politicians and management by making them more accountable to, respectively, voters and politicians. In-house restructuring can introduce clear responsibilities by providing for politicians to define strategic policy and public managers to take charge of day-to-day operations. Workforce discipline and morale can be reinforced with decent pay, training and involvement in the workplace. Greater efficiency can be stimulated by rewarding success. In addition, social dialogue can persuade politicians of the political advantages of developing water services; reconfiguring social networks of interaction between workers and the served communities can build trust and instigate morality (Davis, 2004).

Under public operations, the prevalence of high- over low-powered incentives is due to a pathological state in which individual agents are disenfranchised from their po-

litical and organisational principals. Far from being inevitable, this condition can be reversed by institutional change as a result of pressures external and internal to the polity. This can lead to the reestablishment of hierarchy in principal-agent relationships both within the operator and between the operator and its principals. Success in modifying the attitude of self-interested individuals and redirecting resource mobilisation, relies on the fact that institutions supporting public operations are designed to facilitate the achievement of collective goals. This makes the alignment of individual attitudes, resources and institutions less resilient to sustainability-oriented change under in-house service provision than PSP – whose ultimate goal, appropriation, is divergent from the intended reform objectives. Remediable institutional alignment undergirds the comparative advantage of public water operations, as more ample opportunities are provided for compliance, efficiency and adaptive performance through the alternative organisational modes offered under public ownership. Remediable institutional alignment does not only explain scrupulous task execution, but also how cost savings are passed on to the served communities. In the absence of commercial imperatives, the hierarchy of public enterprise supersedes high-powered incentives and directs individual efforts towards the transfer of added value. This value is not exclusively of economic nature as it extends through the multiplicity of PESTE sustainability dimensions. Public operators' emphasis on different aspects of sustainability is a function of local decision making, susceptible of changes as the local context evolves. Multiple agency and low-powered incentives are not the cause of public inefficiency, as claimed by rational choice theorists, but the determinants of public superiority in promoting sustainable water service development. I call this Lorrain's (1997a) paradox.

6. Concluding remarks: A research agenda for public water service reform

Public choice and property rights theory are inadequate to guide scholarly inquiry and inform the action of policy participants in the water sector. These rational choice theories adopt narrow behavioural assumptions limited to individual self-interestedness. Their decontextualised understanding of the interrelationship between agency and institutions ignores the impact of power and process on outcome. In contrast, a combined policy networks and transaction cost economics approach offers the basis for a comprehensive analysis of the dynamics of water service reform. This approach allows for investigating a broader range of behavioural assumptions beyond bounded rationality, the role of power beyond static resource allocation, the role of institutions beyond rules, and the mutual dependence of individual and organisational incentives, resources and institutions.

In the past 30 years, conventional wisdom has led the academic and mainstream international water community to extol the virtues of the private sector and denigrate public water service provision. This has resulted in scant empirical attention to the merits of public enterprise, and insufficient theorisation of public ownership and operating

performance in the water sector. This article finds that public operations are a more versatile vehicle to enhance water service sustainability than PSP. However, we need a better understanding of the merits of different organisational forms admissible under outright public ownership and management. I have compiled a list of related research questions in Lobina (2012), which could be part of a research agenda for public enterprise performance in the urban water sector. In light of the limitations of public choice and property rights theory, this agenda should aim at the formulation of a critical realist account (Lee, 2011) of reform outcome, free from rational choice dogma. I suggest that the following are the main themes of this agenda.

The first theme concerns an analysis of sustainable water development as a social welfare function, intended to reflect the complexity of the objectives of urban water services and to inform their governance. This analysis will address normative coherence as a causal mechanism of sustainable development and governance. The second theme is the formulation of a behavioural assumption that transcends individual self-interestedness and articulates hierarchy with the autonomy of agents. The third theme consists in the identification of the attributes of public organisational modes enabling sustainable water operations. These attributes will be assessed in view of their propensity to induce remediable institutional alignment, output maximisation and social responsiveness. The fourth theme is an explanation of the interdependencies between the institutional attributes of organisational modes and the institutional matrix of the relevant governance subsystem. The development of these themes promises to result in an account concerned with social and environmental justice, contingency, and non-linear causality, while avoiding the undersocialised narrative of rational choice. The sketched research agenda is a critical realist project open to contributions from academicians and policy participants in the water sector - policy and decision makers, operators, workers, civil society, voters and practitioners. Beyond the lexical divide separating communities of practice, practical knowledge has as much to contribute to advancing our understanding of the reality we live in as it has social scientific knowledge (Sayer, 1992).

Acknowledgements

An earlier version of this paper was published as Lobina (2012) under the editorial guidance of Léo Heller and with the financial support of the Pan-American Health Organization, for which I am grateful. I also wish to thank Kate Bayliss, Lesley Catchpowle, Colin Green, David Hall, Tapio Katko, Alessandro Marra, Erik Swyngedouw, Paola Tubaro, Mehmet Ugur, Eija Vinnari, and Mildred Warner for helpful comments. All remaining errors are mine.

References

ARD (2005). *Case Studies of Bankable Water and Sewerage Utilities – Volume II: Compendium of Case Studies*. Washington, DC: USAID.

Axelrod, L. J., & Lehman, D. R. (1993). Responding to environmental concerns: What factors guide individual action? *Journal of Environmental Psychology*, *13*, 149–159. doi: 10.1016/S0272-4944(05)80147-1.

Baietti, A., Kingdom, W., & van Ginneken, M. (2006). Characteristics of well performing public water utilities. In *Water Supply & Sanitation Working Notes*, Note No. 9, May 2006, Washington, DC: The World Bank Group.

Baldwin, R., & Cave, M. (1999). *Understanding Regulation: Theory, Strategy, and Practice*. Oxford: Oxford University Press.

Bayliss, K. (2001). Economic growth and development – the World Bank and privatization: A flawed development tool. *Global Focus – An International Journal of Business Economics and Social Policy*, *13*(2), 95–104.

Bayliss, K. (2006). Privatization theory and practice – a critical analysis of policy evolution in the development context. In K. S. Jomo, & B. Fine (Eds.), *The New Development Economics: After the Washington Consensus* (pp. 144–161). London and New York: Zed Books.

Bel, G., Fageda, X., & Warner, M. E. (2010). Is private production of public services cheaper than public production? A meta-regression analysis of solid waste and water services. *Journal of Policy Analysis and Management*, *29*(3), 553–577. doi: 10.1002/pam.20509.

Bel, G., & Warner, M. E. (2008). Does privatization of solid waste and water services reduce costs? A review of empirical studies. *Resources, Conservation and Recycling*, *52*(12), 1337–1348. doi: 10.1016/j.resconrec.2008.07.014.

Boyne, G. A. (1998). Bureaucratic theory meets reality: Public choice and service contracting in U.S. local government. *Public Administration Review*, *58*(6), 474–484. doi: 10.2307/977575.

Brook Cowen, P. J. (1997). Getting the private sector involved in water – what to do in the poorest of countries? In *Public Policy for the Private Sector*, Note No. 102, January 1997, Washington, DC: The World Bank Group.

Bryant, J. (2004). Thirst for change. *ADB Review*, *36*(3), May–June 2004. Accessed 15 December 2010. http://www.adb.org/Documents/Periodicals/ADB_Review/2004/vol36_3/thirst_for_change.asp.

Castro, J. E. (2009). Systemic conditions and public policy in the water and sanitation sector. In J. E. Castro, & L. Heller (Eds.), *Water and Sanitation Services – Public Policy and Management* (pp. 19–37). Earthscan: London and Sterling, VA.

Chong, E., Huet, F., Saussier, S., & Steiner, F. (2006). Public-private partnerships and prices: Evidence from water distribution in France. *Review of Industrial Organization*, *29*, 149–169. doi: 10.1007/s11151-006-9106-8.

Christopoulos, D. C. (2008). The governance of networks: Heuristic or formal analysis? A reply to Rachel Parker. *Political Studies*, *56*, 475–481. doi: 10.1111/j.1467-9248.2008.00733.x.

Clarke, G., Kosec, K., & Wallsten, S. (2004). *Has private participation in water and sewerage improved coverage? Empirical evidence from Latin America* (Working paper 04-02). AEI-Brookings Joint Centre for Regulatory Studies, January 2004.

Coase, R. H. (1937). The nature of the firm. *Economica*, *4*, 386–405. doi: 10.1111/j.1468-0335.1937.tb00002.x.

Cour des Comptes (1997). *La gestion des services publics locaux d'eau et d'assainissement*. Paris: Les éditions du Journal.

Crouch, C. (2007). Neoinstitutionalism: Still no intellectual hegemony? *Regulation & Governance*, *1*, 261–270. doi: 10.1111/j.1748-5991.2007.00015.x.

da Costa, S. S., Heller, L., Moraes, L. R. S., Borja, P. C., de Melo, C. H., & Sacco, D. (2006). *Experiências de Êxito em Serviços Públicos Municipais de Saneamento*. Brasilia: ASSEMAE (Associação Nacional dos Serviços Municipais de Saneamento).

da Silva e Souza, G., Coelho de Faria, R., & Moreira, T. (2007). Estimating the relative efficiency of Brazilian publicly and privately owned water utilities: A stochastic cost frontier approach. *Journal of the American Water Resources Association*, *43*(5), 1237–1244. doi: 10.1111/j.1752-1688.2007.00106.x.

Davis, J. (2004). Corruption in public service delivery: Experience from South Asia's water and sanitation sector. *World Development*, *32*(1), 53–71. doi: 10.1016/j.worlddev.2003.07.003.

Demsetz, H. (1968). Why regulate utilities? *Journal of Law and Economics*, *11*(1), 55–65. doi: 10.1086/466643.

Dietrich, M. (1994). *Transaction Cost Economics and Beyond – Towards a New Economics of the Firm*. London and New York: Routledge. doi: 10.4324/9780203312414.

EPSU (European Federation of Public Service Unions) (2010). Veolia Water company Aquiris pollutes Belgian river Zenne, *EPSU Press Release*, 7 January 2010. Accessed 15 December 2010. http://www.epsu.org/a/6071.

ERL, UCM (2005). WaterTime case study – Cordoba, Spain. *WaterTime Deliverable* D17, 20 January 2005. Accessed 4 December 2009. http://www.watertime.net/docs/WP2/D17_Cordoba.doc.

ERL-UCM, PSIRU (2003). Public Participation and Sustainability, Annex C to Analytical Framework. *WaterTime Deliverable* D4, December 2003. Accessed 4 December 2009. http://www.watertime.net/Docs/WP1/AFannexes.zip.

Estache, A., Perelman, S., & Trujillo, L. (2005). *Infrastructure performance and reform in developing and transition economies: Evidence from a survey of productivity measures* (World Bank Policy Research Working Paper 3514), February 2005.

Estache, A., & Rossi, M. A. (2002). How different is the efficiency of public and private water companies in Asia? *World Bank Economic Review*, *16*(1), 139–148. doi: 10.1093/wber/16.1.139.

Fall, M. (2009). *Improving Performance, the role of Governance – The Burkina Faso case*. Presentation at the World Bank Water Week 2009. Accessed 12 November 2012. http://siteresources.worldbank.org/EXTWAT/Resources/4602122-1213366294492/5106220-1234469721549/11.4_Burkina_Faso.pdf.

Fine, B. (2009). Development as zombieconomics in the age of neoliberalism. *Third World Quarterly*, *30*(5), 885–904. doi: 10.1080/01436590902959073.

Florio, M. (2004). *The Great Divestiture: Evaluating the Welfare Impact of the British Privatizations, 1979–1997*. Cambridge, MA and London: MIT Press.

Franceys, R. (2000). *Water and Public-Private Partnerships*. Keynote Speech, Special Subject on "Water and Public-Private Partnerships", 2nd World Water Forum (The Hague, The Netherlands, 17–22 March 2000).

Furubotn, E. G., & Pejovich, S. (1972). Property rights and economic theory: A survey of recent literature. *Journal of Economic Literature*, *10*(4), 1137–1162.

Gandy, M. (2004). Rethinking urban metabolism: Water, space and the modern city. *City, 8*(3), 363–379. doi: 10.1080/1360481042000313509.

Gassner, K., Popov, A., & Pushak, N. (2009). Does private sector participation improve performance in electricity and water distribution? *PPIAF Trends and policy options*, No. 6. Washington, DC: The World Bank. Accessed 25 February 2012. http://www.ppiaf.org/documents/trends_and_policy/PSP_water_electricity.pdf.

Giddens, A. (1979). *Central Problems in Social Theory – Action, Structure and Contradiction in Social Analysis*. Basingstoke, Hampshire and London: MacMillan Education.

Global Water Report (2002a). Nice work cuts costs. *Global Water Report*, N. 144, 19 April 2002, p. 3.

Global Water Report (2002b). Avignon beats down the price. *Global Water Report*, N. 142, 22 March 2002, p. 6.

Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, *91*(3), 481–510. doi: 10.1086/228311.

Green, C. (2007). Mapping the field: The landscapes of governance. *SWITCH report*, February 2007. Integrated Project "Sustainable Water Management in the City of the Future" (SWITCH), European Commission, 6th Framework Programme, 2006–2010, Contract No. 018530 (GOCE). Ac-

cessed 15 December 2010. http://www.switchurbanwater.eu/outputs/pdfs/W6-1_GEN_RPT_D6.1.1b_Mapping_Landscapes_of_Governance.pdf.

Green, C., & Anton, B. (2010). *Why is Germany thirty years ahead of England?* Unpublished SWITCH Project paper, April 2010. Integrated Project "Sustainable Water Management in the City of the Future" (SWITCH), European Commission, 6th Framework Programme, 2006–2010, Contract No. 018530 (GOCE).

Hall, D. (1999). Privatisation, multinationals and corruption. *Development in Practice*, *9*(5), 539–556. Accessed 4 December 2009. http://www.psiru.org/reports/9909-U-U-Corrup.doc. doi: 10.1080/09614529952657.

Hall, D. (2007). Decision-making on water services in European cities: Overview. *Utilities Policy*, *15*, 61–63. doi: 10.1016/j.jup.2007.02.002.

Hall, D., & Lobina, E. (2004). Private and public interests in water and energy. *Natural Resources Forum*, *28*, 268–277. doi: 10.1111/j.1477-8947.2004.00100.x.

Hall, D., & Lobina, E. (2008). From a private past to a public future? – the problems of water in England and Wales. *PSIRU Reports*, commissioned by the GMB union, November 2007. Accessed 15 December 2010. http://www.psiru.org/reports/2008-02-W-UK.doc.

Hall, D., & Lobina, E. (2009). Water privatization. In P. Arestis, & M. Sawyer (Eds.), *Critical Essays on the Privatization Experience, International Papers in Political Economy Series* (pp. 75–120). Basingstoke and New York: Palgrave Macmillan.

Heller, L. (2009). Interfaces and inter-sector approaches: Water, sanitation and public health. In J. E. Castro, & L. Heller (Eds.), *Water and Sanitation Services – Public Policy and Management* (pp. 122–138). Earthscan: London and Sterling, VA.

Hellman, J., Jones, G., & Kaufmann, D. (2000). Are foreign investors and multinationals engaging in corrupt practices in transition economies? In *Transition* (pp. 4–7), May–June–July 2000. Accessed 4 December 2009. http://www.worldbank.org/transitionnewsletter/May-Aug2000/pgs4-7.htm.

Hood, C. (1995). The "New Public Management" in the 1980s: Variations on a theme. *Accounting, Organizations and Society*, *20*(2/3), 93–109. doi: 10.1016/0361-3682(93)E0001-W.

Hukka, J. J., & Vinnari, E. M. (2007). Public-public partnerships in the Finnish water services sector. *Utilities Policy*, *15*, 86–92. doi: 10.1016/j.jup.2007.01.002.

Idelovitch, E., & Ringskog, K. (1995). *Private Sector Participation in Water Supply and Sanitation in Latin America*. Washington, DC: The World Bank. doi: 10.1596/0-8213-3219-8.

Kirkpatrick, C., Parker, D., & Zhang, Y-F. (2006). State versus private sector provision of water services in Africa. *World Bank Economic Review*, *20*(1), 143–163. doi: 10.1093/wber/lhj001.

Klijn, E. H. (1997). Policy networks: An overview. In: W. J. M. Kickert, E. H. Klijn, J. Koppenjan (Eds.), *Managing Complex Networks: Strategies for the Public Sector*. London: Sage Publications.

Klijn, E. H., & Koppenjan, J. (2006). Institutional design: Changing institutional features of networks. *Public Management Review*, 141–160.

Klijn, E. H., Koppenjan, J., & Termeer, K., (1995). Managing networks in the public sector: A theoretical study of management strategies in policy networks. *Public Administration*, 437–454.

Lamquin, V. (2010). Aquiris ne devait pas fermer la station d'épuration. *Le Soir*, 23 November 2010. Accessed 25 February 2012. http://www.lesoir.be/actualite/belgique/2010-11-23/aquiris-ne-devait-pas-fermer-la-station-d-epuration-804910.php.

Lee, F. S. (2011). The Making of heterodox microeconomics. Accessed 29 December 2011. http://mpra.ub.uni-muenchen.de/30907/1/CH1xx.pdf.

Lobina, E. (2005a). Problems with private water concessions: A review of experiences and analysis of dynamics. *International Journal of Water Resources Development*, *21*(1), 55–87. doi: 10.1080/0790062042000313304.

Lobina, E. (2005b). D11: WaterTime case study – Arezzo, Italy, *WaterTime Deliverable* D11, 4 March 2005. Accessed 4 December 2009. http://www.watertime.net/docs/WP2/D11_Arezzo.doc.

Lobina, E. (2006). D21: WaterTime case study – Grenoble, France, *WaterTime Deliverable* D21, 10 March 2006. Accessed 4 December 2009. http://www.watertime.net/docs/WP2/D21_Grenoble.doc.

Lobina, E. (2012). Hacia una teoría para la reforma del servicio de agua: Más allá de la elección racional. In PAHO (Pan-American Health Organization) (Ed.), *Agua y saneamiento: en la búsqueda de nuevos paradigmas para las Américas* (pp. 113–136). Washington, DC: Pan-American Health Organization, McGraw-Hill Interamericana.

Lobina, E., & Hall, D. (2000). Public sector alternatives to water supply and sewerage privatization: Case studies. *International Journal of Water Resources Development*, *16*(1), 35–55. doi: 10.1080/07900620048554.

Lobina, E., & Hall, D. (2003). Problems with private water concessions: A review of experience. *PSIRU Reports*, June 2003. Accessed 4 December 2009. http://www.psiru.org/reports/2003-06-W-over.doc.

Lobina, E., & Hall, D. (2006). Public-public partnerships as a catalyst for capacity building and institutional development: Lessons from Stockholm Vatten's experience in the Baltic region. *PSIRU Reports*, August 2006. Accessed 4 December 2009. http://www.psiru.org/sites/default/files/2006-09-W-PUPs.doc.

Lobina, E., & Hall, D. (2007a). Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations. *Utilities Policy*, *15*, 93–109. doi: 10.1016/j.jup.2007.01.004.

Lobina, E., & Hall, D. (2007b). Water privatisation and restructuring in Latin America, 2007. *PSIRU Reports*, September 2007. Accessed 4 December 2009. http://www.psiru.org/sites/default/files/2007-09-W-Latam.doc.

Lobina, E., & Hall, D. (2008a). The comparative advantage of the public sector in the development of urban water supply. *Progress in Development Studies*, *8*(1), 85–101. doi: 10.1177/146499340700800108.

Lobina, E., & Hall, D. (2008b). Water, in S. Thomas (Ed.), *Poor Choices: The Limits of Competitive Markets in the Provision of Essential Services to Low-Income Consumers* (pp. 93–122). London: energywatch.

Lobina, E., & Hall, D. (2009). Thinking inside the box: The World Bank position on the private and public sector, PSIRU Reports, March 2009. Accessed 4 December 2009. http://www.psiru.org/reports/2009-03-W-wbank.doc.

Lobina, E., & Hall, D. (2010). Public water supplies. In B. Warf (Ed.), *Encyclopedia of Geography*, *5* (pp. 2315–2319). Thousand Oaks: SAGE Publications.

Lobina, E., & Paccagnan, V. (2005). D33: WaterTime case study – Milan, Italy, *WaterTime Deliverable* D33, 4 March 2005. Accessed 4 December 2009. http://www.watertime.net/docs/WP2/D33_Milan.doc.

Lorrain, D. (1991). Public goods and private operators in France. In R. Batley, & G. Stoker (Eds.), *Local Government in Europe – Trends and Developments* (pp. 89–109). Basingstoke and London: Macmillan Education.

Lorrain, D. (1997a). Introduction: The expansion of the market. In: D. Lorrain, & G. Stoker (Eds.), *The Privatization of Urban Services in Europe* (pp. 1–26). London: Pinter.

Lorrain, D. (1997b). Introduction – the socio-economics of water services: The invisible factors. In D. Lorrain (Ed.), *Urban Water Management – French Experience around the World* (pp. 1–30). Levallois-Perret: Hydrocom.

Martínez-Espiñeira, R., García-Valiñas, M. A., & González-Gómez, F. (2009). Does private management of water supply services really increase prices? An empirical analysis in Spain. *Urban Studies*, *46*(4), 923–945. doi: 10.1177/0042098009102135.

Massarutto, A. (2007). *Liberalization and private sector involvement in the water industry: A review of the economic literature* (Working Paper N.6). IEFE, Università Commerciale Luigi Bocconi, September 2007. Accessed 15 December 2010. http://mpra.ub.uni-muenchen.de/5864/1/MPRA_paper_5864.pdf.

Mbuvi, D., & Tarsim, A. (2011). *Managerial ownership and urban water utilities efficiency in Uganda* (UNU-MERIT Working Papers). ISSN 1871-9872, Maastricht Economic and Social Research Institute on Innovation and Technology, July 2011. Accessed 25 February 2012. http://www.merit.unu.edu/publications/wppdf/2011/wp2011-036.pdf.

Mugisha, S. (2007). Effects of incentive applications on technical efficiencies: Empirical evidence from Ugandan water utilities. *Utilities Policy*, *15*, 225–233. doi: 10.1016/j.jup.2006.11.001.

Peters, B. G. (2005). *Institutional Theory in Political Science: The "New Institutionalism"*. London and New York: Continuum.

Petrella, R., Pigeon, M., Dewalque, F., Ben Amar, R., Lieben, G., Heine, S., Lê Quang, K., Mestrum, F., ACME-France, Verbeke, R., & Theisen, A. (2009). Aquiris ou la preuve par l'exemple des dangers de la délégation d'un service public essentiel. *Le Soir*, *28* December 2009, p. 10.

Rees, J. A. (1998). Regulation and private participation in the water and sanitation sector. *Natural Resources Forum*, May 1998, *22*(2), 95–105. doi: 10.1111/j.1477-8947.1998.tb00717.x (also published as TAC Background Papers No. 1, Stockholm, Global Water Partnership. Accessed 4 December 2009. http://www.gwpforum.org/gwp/library/Tac1.pdf.

Renzetti, S., & Dupont, D. (2003). Ownership and performance of water utilities. *Green Management International*, *42*, 9–20.

Rogers, P., & Hall, A. W., (2003). *Effective Water Governance* (TEC Background Papers No. 7). Stockholm: Global Water Partnership. Accessed 4 December 2009. http://www.gwpforum.org/gwp/library/TEC%207.pdf.

Sayer, A. (1992). *Method in Social Science – A realist approach* (2nd ed.). Routledge: London and New York.

Saal, D. (2003). *The impact of privatisation on the English and Welsh water and sewerage industry*. Paper presented at CESifo Conference on Privatisation Experiences in the EU, Munich, 10–11 January 2003.

Saal, D., & Parker, D. (2001). Productivity and price performance in the privatised water and sewage companies of England and Wales. *Journal of Regulatory Economics*, *20*(1), 61–90.

Saal, D., Parker, D., & Weyman-Jones, T. (2007). Determining the contribution of technical change, efficiency change and scale change to productivity growth in the privatized English and Welsh water and sewerage industry: 1985–2000. *Journal of Productivity Analysis*, *28*, 127–139. doi: 10.1007/s11123-007-0040-z.

Scott, W. R. (2005). *Institutions and Organizations: Ideas and Interests* (3rd ed.). Thousand Oaks, California: SAGE.

Self, P. (1993). *Government by the Market? The Politics of Public Choice*. Basingstoke, Hampshire and London: Palgrave MacMillan.

Seroa da Motta, R., & Moreira, A. R. (2004). *Efficiency and regulation in the sanitation sector in Brazil* (IPEA Discussion Paper No. 1059). Accessed 4 December 2009. http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID651884_code347008.pdf?abstractid=651884&mirid=3.

Shleifer, A. (1998). State versus Private Ownership. *Journal of Economic Perspectives*, *12*(4), 133–150. doi: 10.1257/jep.12.4.133.

Strang, V. (2005). Common senses: Water, sensory experience and the generation of meaning. *Journal of Material Culture*, *10*(1), 92–120. doi: 10.1177/1359183505050096.

Swyngedouw, E. (2005). Governance innovation and the citizen: The Janus face of governance-beyond-the-state. *Urban Studies*, *42*(11), 1991–2006. doi: 10.1080/00420980500279869.

Swyngedouw, E. (2009). Troubled waters: The political economy of essential public services. In J. E. Castro, & L. Heller (Eds.), *Water and Sanitation Services – Public Policy and Management* (pp. 38–55). London and Sterling, VA: Earthscan.

UNESCO-WWAP (United Nations Educational, Scientific and Cultural Organization – World Water Assessment Programme) (2006). *Water, a Shared Responsibility: The United Nations World Water Report 2*. Paris and New York: UNESCO and Berghahn Books.

Viero, O. M., & Cordeiro, A. P. (2003). *The Case for Public Provisioning in Porto Alegre*. London: WaterAid and Tearfund. Accessed 4 December 2009. http://www.wateraid.org/documents/plugin_documents/pspbrazilweb.pdf.

Warner, M. E. (2006). Inter-municipal cooperation in the U.S.: A regional governance solution? *Urban Public Economics Review*, (6), 221-239.

Warner, M. E., & Hefetz, A. (2003). Rural – urban differences in privatization: Limits to the competitive state. *Environment and Planning C: Government and Policy*, *21*, 703–718. doi: 10.1068/c008r.

Warwick, H., & Cann, V. (2007). *Going Public – Southern Solutions to the Global Water Crisis*. London: World Development Movement. Accessed 4 December 2009. http://www.wdm.org.uk/sites/default/files/goingpublic01032007.pdf.

Williamson, O. (1975). *Markets and Hierarchies: Analysis and Anti-Trust Implications: A Study in the Economics of Internal Organisation*. New York: Free Press.

Williamson, O. (1976). Franchise bidding for natural monopoly – in general and with respect to CATV. *Bell Journal of Economics*, *7*, 73–104. doi: 10.2307/3003191.

Williamson, O. (1981). The modern corporation, origins, evolution, attributes. *Journal of Economic Literature*, *19*(4), 1537–1568. doi: 10.2307/2724566.

Williamson, O. (1985). *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. London and New York: Collier Macmillan, Free Press.

Williamson, O. (1988). The logic of economic organization. *Journal of Law, Economics, and Organization*, *4*(1), 65–93.

Williamson, O. (1997). Hierarchies, markets and power in the economy: An economic perspective. In C. Menard (Ed.), *Transaction Cost Economics – Recent Developments*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar.

Williamson, O. (1999). Public and private bureaucracies: A transaction cost economics perspective. *Journal of Law, Economics, and Organization*, *15*(1), 306–342. doi: 10.1093/jleo/15.1.306.

Willig, R. D. (1994). Public versus regulated private enterprise. In *Proceedings of the World Bank Annual Conference on Development Economics 1993*. Accessed 15 December 2010. http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/1994/03/01/000009265_3970702134943/Rendered/PDF/multi0page.pdf.

World Bank (2002a). *Upgrading of Low Income Settlements Country Assessment Report: Burkina Faso*, January 2002. Washington, DC: The World Bank Group. Accessed 12 November 2012. http://web.mit.edu/urbanupgrading/upgrading/case-examples/overview-africa/country-assessments/reports/burkinafaso.html.

World Bank (2002b). *Private Sector Development Strategy – Directions for the World Bank Group*, 9th April 2002. Washington, DC: The World Bank Group. Accessed 4 December 2009. http://rru.worldbank.org/Documents/PapersLinks/699.pdf.