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Abstract

This chapter finds that water and sewerage privatisation in England favoured the extraction of economic value to guarantee short-term financeability and shareholder remuneration, harming long-term financeability and economic, technical, social, environmental, and political sustainability. A strong lock-in of distributive inefficiency comes together with highly regressive outcomes and cost shifting to future generations. Other lessons include: 1) it is important to consider how the pursuit of productive and distributive efficiency affects sustainable water development under different forms of ownership and governance; 2) the assumption that the public sector is an intrinsically inferior organisational mode does not hold; 3) the problems with water privatisation in England cannot be attributed to the exceptionalism of its institutional design.

Bio

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Strong and weak lock-in of water governance outcomes in England

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1. Introduction

This chapter looks at the governance of privatised water supply and sewerage in England, with particular reference to the workings of economic institutions and their implications for sustainable water development. The chapter aims at taking stock of nearly 30 years of water and sewerage privatisation – an experiment that arguably remains unparalleled worldwide for its depth and breadth – in view of its relevance for theory and policy. This offers an opportunity to reflect on the validity of those perspectives of Austrian and neoclassical economics that have influenced the institutional design of privatisation in England and that favour private over public service provision (Littlechild, 1978; Sawyer, 2009). This stocktaking exercise is relevant for policy makers who are considering the lessons of the emerging remunicipalisation trend (Kishimoto et al., 2015) while pressures to adopt Public-Private Partnerships and other forms of privatisation remain unabated (Iossa and Saussier, 2018) – not least for British policy makers at a time when water privatisation in England is highly controversial.

Focussing on England rather than the whole United Kingdom warrants an explanation. On the one hand, neglecting the experience of water service reform in Wales, Scotland and Northern Ireland makes it impossible to fully capture the diversity of water governance in Great Britain – from a privatised utility turned into a not-for-profit company limited by guarantee in Wales, to a public utility responsible for managing operations and relying on the wholesale adoption of PPPs for delivering infrastructure investment in Scotland, and a public utility providing fully subsidised services to domestic users in Northern Ireland (Tinson and Kenway, 2013; Lobina and Terhorst, 2005; Northern Ireland Water, 2017). On the other hand, narrowing the attention to England enables an in-depth analysis of a textbook case of outright privatisation whose influence of national and international water policies is second only to the French model of privatisation by delegation. More precisely, the virtually perpetual transfer of managerial control and asset ownership to the private sector is not the most emulated aspect of the English model of water privatisation - even Chile's pervasive privatisation programme consists in the award of concessions to public-private joint ventures, in some cases for an unlimited duration and in others for a fixed-term duration (Lobina and Hall, 2007). Aspects of the English model that have resulted in more significant levels of policy diffusion include the establishment of vertically integrated monopolies providing water and sewerage services at river basin level (Lobina and Hall, 2008b) and, most notably, its economic regulatory institutions. For example, Italy as well as most Latin American countries have taken inspiration from England's Ofwat (Office of Water Services, currently known as the Water Services Regulation Authority) to embrace price-cap regulation (Lobina, 2005a; Foster, 2005). In this light, close consideration of the English experience appears legitimate.

The remainder of the chapter is structured as follows. Section 2 offers a brief historical overview of water governance in the two centuries preceding the 1989 privatisation. Section 3 illustrates the governance framework of privatised water and sewerage services, and its evolution from 1989 to present. Section 4 sketches a framework for the investigation of the duality of governance regimes and organisational efficiencyⁱ outcomes, and proceeds to look at the tensions between different dimensions of sustainability arising from the governance of privatised water and sewerage. Section 5 discusses the implications of findings for the public vs. private debate, inclusive of Williamsonian transaction cost economics and Willig's industrial economics. The chapter ends with concluding remarks in section 6.

2. A historical overview of water governance: 1789-1989

Before 1800 the majority of urban water services in England and Wales were provided by the private sector. The period from 1840 to 1900 saw a sustained process of municipalisation – that is, the expansion of municipal ownership whether by takeover of private companies or establishment of greenfield municipal utilities. This process was a response to the private sector’s reluctance to develop service provision, due to the lack of profitability in expanding access and supplying water of good quality, in view of the ability of municipal enterprises to tap cheap investment finance and prioritise service development over commercial considerations. The pace of municipalisation accelerated after the national cholera epidemics of 1832 and 1849 and became particularly intense between 1861 and 1881, when the share of towns served by municipally-owned undertakings went from 40.8% to 80.2% - a share that reached 90.1% in 1901. Most water services were municipalised by World War I; the exception was represented by 28 private companies (the so-called “statutory water companies”) that in 1974 supplied water to 25% of the population (Hassan, 1998; Juuti and Katko, 2005).

Virtual universal coverage in urban areas was achieved around the 1960s thanks to the overwhelming contribution of the public sector, operationally and financially. By the 1970s, only 3% of the rural population remained unserved by networked systems (Hassan, 1998; Hall and Lobina, 2009). For all its social and economic importance, universalisation of access to water is an unsung achievement of the public sector. The difficulties encountered by the municipal undertakings in tackling water pollution - due to a combination of planning difficulties and politicised management, a failure to recover costs through charges, and organisational fragmentation – appear to have received greater attention (Hassan, 1998). The achievements and difficulties of municipal providers characterise the so-called Keynesian period when public ownership and subsidised charges were part of a governmental policy pursuing security of supply and social equity objectives (e.g. in light of the ‘ability-to-pay’ principle), as a way of supporting both public health and economic growth (Bakker, 2001, 2003). Conversely, wastewater treatment was neglected as this was not the express responsibility of any local authority and the situation was compounded by years of underinvestment in sewerage infrastructure, which was not seen as strategically important as water supply, particularly during World War II and its economic aftermath. This led to growing levels of water pollution and public disquiet (Hassan, 1998; Jordan et al., 1977).

By the early 1970s, the British government was reconsidering its policy approach and this led to the restructuring of the water industry with the 1973 Water Act. The restructuring did not involve the 28 “statutory water companies” and saw the nationalisation (without payment of compensation to local authorities) and amalgamation of 157 water undertakings, 1393 Sanitary Authorities, and 29 River Authorities into 10 governmentally-owned and -financed Regional Water Authorities (nine of which in England and one in Wales) responsible for water supply, sewerage, wastewater treatment, and water resource management at river basin level. The RWAs were to apply full cost-recovery, with the introduction of direct billing and the removal of subsidies and cross-subsidies, and deliver a sustained investment programme to meet the quality requirements of EC directives – for higher standards for the quality of drinking water, cleanliness of beaches, and wastewater treatment - while facing severe fiscal constraints in accessing governmental funding. In fact, the RWAs were subject to strong pressures to cut their expenditure and contribute to reduce the Public Sector Borrowing Requirement at a time when the UK were under IMF conditionality (Hassan, 1998; Vickers and Yarrow, 1988; Hall and Lobina, 2008). The restructuring induced a gradual change in organisational culture with the introduction of managerialism and a move towards basing payment – according to the “benefit principle” - on the costs imposed by individual consumers (Bakker, 2001; Jordan et al., 1977). The RWAs became more driven by productive efficiency due to targets to reduce operating and capital expenditure, while industrial reorganisation on a regional basis was designed to achieve economies of scale and scope. However, regulatory constraints on price increases meant that productive efficiencies were achieved at the cost of service degradation and underinvestment. In turn, this led to customer

dissatisfaction (Hassan, 1998; Vickers and Yarrow, 1988). The new business culture, leaner organisational structure, and negative public opinion of the RWAs meant that the water industry was ready for privatisation.

In 1979, Margaret Thatcher became Prime Minister with an ideological agenda to promote popular capitalism. In addition to neoliberal ideology, what made water privatisation attractive to the British government was the prospect of financing the expenditure required to meet EU law requirements while reducing the fiscal pressure on public finances. Before the publication of governmental proposals to privatise the RWAs, the 1983 Water Act completed the nationalisation process by severing all remaining links between local authorities and RWAs, as all appointments were to be made by government. The general public lost the right to attend the meetings of the RWAs. Instead, consumer consultative committees were created in each region (Hassan, 1998; de la Motte, 2005). The Act also promoted the commercialisation of the RWAs - by enabling them to access private capital markets - thus paving the way for the privatisation of the water industry (Ofwat and Defra, 2006). In 1986, the government published a consultative White Paper on water privatisation, which emphasised that privatisation and regulation would result in greater efficiency, and that profit would represent an effective incentive for the private companies to achieve efficiency (Odgen, 1997). It also published a report by "Austrian" economist Stephen Littlechild, commissioned by the Department of the Environment. This was revised in 1988 and the two reports (Littlechild, 1986, 1988) came to inform the regulatory framework of privatisation. The 1989 Water Act provided for the privatisation of the RWAs – stripped of their water resource management and environmental regulatory duties that were transferred to a new National Rivers Authority, and thus retaining responsibility for providing water supply, sewerage and wastewater treatment services. The RWAs were privatised in November 1989 when their shares were floated on the stock exchange (Hassan, 1998; Vickers and Yarrow, 1988; Ofwat and Defra, 2006). To ensure the success of the flotation and make it an attractive investment proposition, the government wrote off all the debt of the RWAs and provided a cash injection (termed "green dowry") to the balance sheet of the privatised companies - public subsidies totalling £6.5 billion to which was added a further £7.7 billion in tax relief on the companies' profits (Hall and Lobina, 2008).

3. Governance framework: overview and evolution, 1989 to present

In November 1989, the privatised water and sewerage regional monopolies were renamed Water and Sewerage Companies (WaSCs) and began operating alongside the statutory private water-only companies (WOCs). The WaSCs were monopolies licensed by the government - licences were awarded initially for 25 years and could be terminated with a minimum notification period of 10 years. They were protected from takeover for the first 5 years by a governmental "golden share" after which takeovers – but not mergers – have been allowed. Three new regulators were created. Drinking water quality was monitored by the Drinking Water Inspectorate. The National Rivers Authority was responsible for monitoring river and environmental pollution until 1996 when this was succeeded by the Environment Agency. Economic regulation was carried out by Ofwat. Customer representation was the responsibility of 10 regional Customer Service Committees initially established as an integral part of Ofwat; since 2005 this responsibility sits with the independent Consumer Council for Water (de la Motte, 2005; Ofwat and Defra, 2006).

Ofwat is a non-ministerial government department – independent of government and accountable to Parliament - tasked with reviewing the private companies' investment plans and, on the basis of the plans deemed to be justifiable, setting price limits for the following five years. This regulatory mechanism, known as price-cap regulation, revolves around the formula $RPI + K$, which determines the extent to which prices can be adjusted on a yearly basis to inflation, financial requirements, and past performance against operational targets. The system is premised on the expectation that the regulated companies will have an incentive to be always more efficient as they are enabled to retain the additional profits thus generated. At the subsequent price review, Ofwat is then in a position to

incorporate productivity gains in setting new performance targets so that efficiency gains are passed on to consumers. Because these targets are comparatively assessed and the performance of the best companies is used as a yardstick in determining the K of the other companies, the system is said to contain an element of “yardstick competition”. Ofwat’s primary duties include the protection of consumers’ interests - for example through the promotion of competition - and ensuring the companies’ financeability. The latter implies securing a rate of return on capital that is sufficient to induce lenders and shareholders to, respectively, make loans to and hold shares in the companies (Ofwat and Defra, 2006; de la Motte, 2005; Ménard, 2017; Bayliss, 2017; Odgen, 1997).

Ofwat is a powerful and resourceful regulator that in the financial year 2016-17 had 174 permanent employees and a budget of over £25 million (Ofwat, 2017). In addition to running the five-yearly price reviews and having the power to issue fines for breach of customer service standards, Ofwat may amend the companies’ licences and initiate policy reviews. It thus wields significant influence on shaping the regulatory framework and, ultimately, its hard and soft power derives from the centrality of its role in ensuring the success of privatisation. There is a convergence of interests between the economic regulator and the regulated companies as their very existence depends on privatisation and this explains a symbiotic relationship that is strengthened by a “revolving door” process between the industry and Ofwat (Bayliss, 2017). Since 1989, British politics have been dominated by a “Westminster Consensus” on water privatisation. In fact, government has either been led by a Conservative Party that unquestionably embraced neoliberalism or, from 1997 to 2010, by a Labour Party that, having abandoned its commitment to the common ownership of the means of production, had come to accept water privatisation. The dominance and possible imminent demise of this “Westminster Consensus” are important factors to understand the evolution of water service governance to date. Few salient developments may serve as background to the next sections.

With the election of a new Labour government in 1997, the regulatory environment became more challenging for the private companies. First, the government imposed a windfall tax on utility company profits that recouped most of the £7.7 billion in tax relief from which the water companies’ shareholders had benefited at privatisation. Then, the government pressured Ofwat to impose a much more stringent price-cap in the 1999 review which required 12% cuts in prices. Finally, the 1999 Water Act banned disconnection of users for non-payment, as well as the use of pre-payment meters. The ban, which remains in force to date, was in response to the public health hazards associated with cut-offs. Following privatisation the number of households disconnected had in fact tripled in the first 5 years, with 18,636 households disconnected in 1994. The combined result of these regulatory measures was to squeeze the profitability of the water industry. The rate of return on capital was halved, from 12% to 6%. The response of many companies to this was to withdraw equity capital as far as possible, and instead use debt to finance the great majority of operations. In Wales, the regional utility was taken over by a consortium of USA energy companies, who transferred all the assets, liabilities and statutory functions to Welsh Water, a not-for-profit company limited by guarantee and financed entirely by debt (Lobina and Hall, 2001; Lobina and Hall, 2008a, 2001; Ofwat, 2016).

In 2002, Ofwat made the companies’ licences virtually perpetual, thus contradicting its mandate to promote competition. Prior to then, the 25-year licenses would be automatically extended unless the government gave companies at least 10 years’ notice before terminating the licenses. In 2002, Ofwat extended the minimum notice period of termination to 25 years to avoid that the approach of 2004, when a notice would have to be given to terminate any licence in 2014, could drive up the costs of raising finance. Ofwat did so by publishing a consultation document containing the proposal to amend the licences of all companies when Parliament was suspended for the summer holidays and could not discuss the proposal. By so doing, Ofwat served the companies’ short-term interest in reducing the costs of accessing finance while giving them a long-term guarantee against the threat of losing their monopoly rights (Lobina and Hall, 2008a). Conversely, in 2008, Ofwat acted to promote competition

in the market - that is, retail competition in ancillary services like billing and metering - by instigating a review alongside a separate review launched by the UK government. Retail competition is highly unusual in water supply and wastewater because in these highly capital-intensive services the majority of costs borne by consumers are derived from the cost of capital so that the greatest potential for savings lies with reducing the cost of capital rather than operating costs (Lobina and Hall, 2008b).

Governance has evolved not only in response to changes in the regulatory framework, but also in utility ownership. These changes have increasingly occurred since the expiry of the governmental golden share in WaSCs and, by 2001, saw the emergence of a mixed pattern of domestic and international ownership for both WaSCs and WOCs. If, for example, multinationals Suez, Enron and RWE owned one WaSC each, the then Vivendi (now Veolia) was the owner of six WOCs. Only occasionally did former foreign owners give way to domestic owners, as in the case of Welsh Water discussed above (Lobina and Hall, 2001). By 2012, the landscape had changed dramatically with the growing importance of private equity funds, financial groups and Asian multinationals. Only three of the 10 WaSCs remained listed on the stock exchange, other four including Thames Water were owned by private equity funds and financial groups, one was a not-for-profit company limited by guarantee, and the remaining two were owned by Asian multinationals. Private equity funds also owned the majority of WOCs after Suez and Veolia had sold their stakes in seven of these companies. The increasing prominence of financialisation in the sector creates a number of regulatory challenges partly due to the reduced transparency that comes with delisting companies from the stock exchange and partly to the practice, common among private equity funds, to buy up firms and turn them around to extract a quick profit (Hall and Lobina, 2012; Bayliss, 2017; Tinson and Kenway, 2013).

4. Privatisation and sustainability

In setting out its overall approach to sustainability, Ofwat (2011) identifies five principles: 1) A safe and reliable water and sewerage service for consumers that minimises the impacts on the environment now and in the future; 2) Consumers continue to get a fair deal and receive a level of service that consistently meets their needs; 3) Financially robust sectors that are able to meet consumers' needs at a fair cost, into the future; 4) Companies that remain accountable to their consumers; 5) Using the best available information to support decision making. Ofwat's contributions to the debate on the merits of water and sewerage privatisation in England have rarely been framed in terms of comparative advantage to enhance sustainability. Establishing whether this is due to the nature of the public vs. private debate or to other factors, is something that remains outside the scope of this chapter. Yet my contention is that discussing public and private sector performance relative to the advancement of sustainable water development – or other non-individualistic social welfare functionsⁱⁱ – allows for injecting a healthy dose of realism in the debate. For commentators who were to choose this approach would be compelled to interrogate the whys and hows of the complex interdependencies and tensions between the different dimensions of sustainability through space and time.

Ofwat and the companies have argued that two measures of the success of privatisation are the amount of investment delivered by the WaSCs and the efficiency increases since then. For example, in 2013 Ofwat claimed that £111 billion had been invested since privatisation, equivalent to roughly double pre-privatisation levels (Ofwat, 2013). In this respect, it should be noted that the biggest factor driving increases in capital expenditure was EU law on higher standards for the quality of drinking water, cleanliness of beaches and wastewater treatment, so that the required investment levels would have been delivered irrespective of privatisation.ⁱⁱⁱ Furthermore, maintaining the growth rates in capital expenditure achieved under public ownership between 1985 and 1989 – at an average annual growth rate of 8% - would have allowed for far greater investments than the £55 billion delivered by the privatised companies from 1990 to 2004 (Hall and Lobina, 2008).

As to the second argument, the industry association Water UK commissioned consultancy Frontier Economics to quantify the productivity gains achieved by the 9 English WaSCs since privatisation. The report, commissioned in response to the Labour Party's pledge to renationalise the water industry if returned to power (Roberts, 2017), finds that total factor productivity growth between 1992/93 and 2016/17 has increased by 64% on a quality adjusted basis, and 27% without quality adjustment (Wright and Huggins, 2017). First, it should be noted that the study by Frontier Economics is concerned with productivity growth under privatisation and does not assess the relative efficiency of public and private water operations. Second, Dieter Helm (2018) questions the relevance of comparing the efficiency of today's private companies with that of public enterprises in the pre-IT world of the 1970s and 1980s, when manual labour accounted for a much higher share of total costs. In that sense, interestingly, Saal and Parker (2000) find no evidence of increased efficiency under privatisation when comparing public sector performance between 1985 and 1989 with private sector performance between 1990 and 1995. Furthermore, Hall and Lobina's (2008) elaboration of Saal and Parker (2001) and Saal and Reid's (2004) data shows that there is no evidence of total factor productivity growth after privatisation when considering the 1985-1999 period. Finally, for the period 1985-2000, Saal et al. (2007) find that "while technical change improved after privatization, productivity growth did not improve."

In the absence of conclusive evidence on the relative efficiency of public and private ownership it has become fashionable to argue that what matters for sectoral performance is regulation, not ownership – as if it was possible, in real-world governance, to isolate ownership and property rights from regulation or other formal and informal institutions. One way of avoiding the fallacies associated with this form of blackboard economics is to treat the complexity of both governance and sustainable water development seriously, in recognition of the fact that the latter is the normative objective of the former. On the one hand, governance can be seen as the multi-actor interaction informing the process and outcome of institutional change – of which, water service reform and regulation are part and parcel – whereby interaction is dictated by combinations of actors' interests, beliefs, and power, and institutions comprise formal and informal rules, norms and customs (Lobina, 2013).

On the other hand, sustainable water development can be seen as the viable reproduction of a utility's operations and capital investment which supports the viable reproduction of a community – and the reproduction of interconnected financial, economic, technical, social, environmental, and political regimes - consistently with collective expectations (Lobina, 2013). Because the policy process and policy outcome of water service reform are intertwined and path-dependent, different governance systems may produce a variety of organisational efficiency outcomes subject to lock-in, understood as a temporary rather than permanent condition. In turn, the more or less temporary lock-in of organisational efficiency, categorised as strong and weak lock-in of public efficiency/inefficiency and private efficiency/inefficiency, will affect the reproduction of governance regimes (Lobina, 2017a, 2017c). Hence, a key criterion for comparative institutional analysis is the directionality of collective agency, resulting from the multi-actor interaction that informs the process and outcome of institutional change in the sector. This framework enables evaluating the sustainability implications of privatised water supply and sewerage in England.

4.1 Financial sustainability

Private ownership, full cost recovery, and price-cap regulation have resulted in the financeability, or financial viability of the sector. This reflects the fact that guaranteeing financeability is prominent among Ofwat's primary duties. A prima facie case for the claim that privatisation has guaranteed financial sustainability rests on the aggregate value of investments delivered since privatisation – estimated at £126 billion - that have largely been funded by debt (NAO, 2015). In this view, the 40% tariff increases above inflation that have occurred since 1989 (NAO, 2015) and the £18.1 billion in

profits paid to the shareholders of the 9 English WaSCs in the 10 years from 2007 to 2016 (Bayliss and Hall, 2017) constitute a fair price to pay for the industry's liquidity.

However, short-term liquidity does not necessarily correspond to long-term financial sustainability and concerns have been raised in regards to financial resilience, or the financial capacity to withstand internal and external financial shocks. For example, it has been noted that the £18.1 billion in dividends paid by the 9 English WaSCs between 2007 and 2016 represent over 96% of the £18.8 billion in post-tax profits recorded by the companies in the same period. Using almost all profits to finance dividend payment has contributed to an increasingly higher gearing, the ratio between debt and equity, and led in turn to the growing cost of servicing the debt. Aggregate net finance costs for the period 2007-2016 thus averaged £1.2 billion. These challenges to achieving financial sustainability are compounded by the practice of paying disproportionate amounts in dividends, with 3 WaSCs paying more in dividends than their total pre-tax profits over a period of 10 years. In 2016, the aggregate amount paid by all WaSCs for both net interest payment and dividends was in excess of £2.9 billion and corresponded to 28% of turnover (Bayliss and Hall, 2017).

The rent-seeking practices of private equity owners appear to represent more cause for concern. These practices – which are integral to financialisation - include raising debts to pay a “special dividend” to shareholders, especially in the course of acquisitions; adding acquisition debt to the regulated utility; and, issuing intergroup loans to the regulated utility. “Special dividends” – so-called because they come on top of the payment of ordinary dividends – can be as high as the £717 million paid by Yorkshire Water to the shareholders who bought the company for £3 billion in 2007. Much like the practice of financing the payment of ordinary dividends through loans, and that of adding acquisition debt to the regulated utility, the payment of “special dividends” produces an upward pressure on gearing. Similarly, the practice of contracting intergroup loans means that gearing increases while value is extracted from the regulated utility, specifically in the form of (tax-deductible) interest paid to the utility's own shareholders – for example, in 2013 Southern Water's accounts showed £67.9 million in interest on loans of £633.9 million contracted from its parent company (Bayliss, 2017, 2014). Similar practices of asset sweating are in shareholders' financial interest but risks saddling future generations of consumers with unsustainable mountains of debt.

4.2 Economic sustainability

The impact of privatisation on the reproduction and viability of the economic system depends on whether consumers receive good value for their money, whether whole asset value is maintained, and whether taxpayers benefit from adequate contributions to fiscal expenditure. As regards consumers, the House of Commons Public Accounts Committee stated in 2016 that: “Ofwat, like other economic regulators, has repeatedly overestimated the cost of finance in successive price reviews. ... As a result, water companies made windfall gains of at least £1.2 billion between 2010 and 2015 from bills being higher than necessary” (House of Commons Committee of Public Accounts, 2015). The practice condemned by the Public Accounts Committee - also known as “gaming” - consists in the companies' overestimating the investment required in the price review period, followed by Ofwat allowing the companies to charge higher prices as calculated on this basis. As the real expenditure is lower, the companies can pocket the difference as increased profit. This practice has been a persistent feature of regulatory governance since privatisation; the private companies' capital underspend from 1995-96 to 2005-06 has fuelled dividends to the tune of £4.3 billion (Hall and Lobina, 2008). In addition, a number of companies – including Severn Trent, Southern Water and Thames Water – have been found responsible by the Serious Fraud Office and Ofwat for providing false regulatory data with the effect of inflating water bills. For example, in 2006 Ofwat found – after the illicit practice had been revealed by a whistleblower - that Severn Trent customers would pay £42 million more by 2009-10 (Lobina and Hall, 2008b).

Some of the techniques of value extraction that risk undermining the maintenance of whole asset value fall outside the scope of regulatory scrutiny. Bayliss and Hall (2017) note that the full amounts gained through these techniques – which include shareholder loans at higher than market rates of interest, the sale of land and property, and the sale of ownership stakes in the utility - are difficult to determine due to dense corporate structures and to limited disclosure. The sale of land and property to remunerate shareholders is reminiscent of asset stripping in Tallinn, Estonia in the early 2000s – the private shareholders in local concessionaire Tallinna Vesi were a subsidiary of the WaSC United Utilities and of the multinational IWL – effectively in the form of special dividends funded by reducing the overcapitalization of Tallinna Vesi’s balance sheet and by the large amount of idle money on Tallinna Vesi’s bank account (Lobina and Hall, 2003).

Thanks to a generous tax regime, the contributions made by WaSCs to general fiscal expenditure can hardly be described as adequate. “Despite the profitability of the sector, water companies pay little tax. In a ten-year review of company accounts, the combined tax charge in profit and loss accounts comes to £1.7bn on a pre-tax profit of £20.7bn – around 8%. Actual tax paid can be much lower: in 2013 for example, the shareholders extracted nearly £1bn in dividends, but paid only £1m in taxes” (Bayliss and Hall, 2017: 4). Thames Water acknowledges in its Annual Report 2013/14 that they “have not paid substantial amounts of corporation tax in recent years, principally due to the capital allowances (Thames Water) have legitimately received to incentivise (their) infrastructure investments” (Thames Water, 2014: 43). Thames Water (2014) also argues that the deferment of tax payment is justified by high levels of investment in infrastructure – to the tune of £1 billion per year in the period 2010-2015 - and that tax relief enables utilities to lower customers’ bills. While this is true in principle, in practice WaSCs have proved able to extract profits irrespective of the price levels set by Ofwat – for example through gaming, asset sweating and practices falling outside the scope of the regulator – with the effect of exerting an upward pressure on future prices. Also, as discussed below, the cost-effectiveness of Thames Water’s investment programme is debatable and poses challenges for achieving technical sustainability.

4.3 Technical sustainability

Technical sustainability consists in the ability of utilities to maintain, renew and expand infrastructure and to upgrade operational systems so as to deliver quality services in the long-term.^{iv} Thames Water, the largest WaSC,^v appears to epitomise the challenges faced by the private water industry to achieve technical sustainability amid a culture of managed under-investment.

In June 2018, Ofwat imposed a penalty of £120 million on Thames Water for failing to cut leaks (International Water Association, 2018). Following a rising number of annual bursts of trunk mains – including 8 high profile bursts from October to December 2016, which repeatedly flooded homes, damaged businesses, and caused risk to life and road closures – Thames Water commissioned an independent review of the major bursts and leaks occurred in 2016, their potential causes and Thames Water’s own responses to the incidents. The review - carried out by Paul Cuttill, former Chief Operating Officer of EDF Energy Networks - found that the current rate of replacement for trunk mains was estimated at 0.19% per year and that Thames Water’s replacement programme was not keeping pace with deterioration (Cuttill, 2017). In Japan, where all water utilities are publicly-owned to date, the average rate of renewal of water pipelines in 2015 was 0.74% per year.^{vi} In Denmark, where the overwhelming majority of water utilities are municipally-owned, a survey of 61 utilities found that the average renewal rate in 2016 exceeded 1% per year.^{vii}

In 2017, average leakage in England was 20%, with leakage in Thames Water’s service area being estimated at more than double the national average. Average leakage in England was down from the national average of 31% recorded in 1994/95, but it had remained stable since 2013. Also in 2017, Ofwat set leakage reduction targets for the period 2015-2020 of zero for six companies, meaning that

no further reduction was expected of the companies, while for three other companies the targets would allow for an increase compared to the leakage levels already achieved by the companies (Carrington, 2017; Lobina and Hall, 2001). The relative ambition of leakage reduction targets can be explained by the principles underpinning Ofwat's leakage policy. Since the introduction of leakage targets in the mid-1990s, these have been informed by economic considerations such as conformity with the so-called sustainable economic leakage level – or the level at which it would cost more to make further reductions in leakage than to produce the water from another source (Lobina and Hall, 2008b, 2001).^{viii} The implications of the sustainable economic leakage level for environmental sustainability are discussed below.

4.4 Social sustainability

An important part of social sustainability is to ensure the reproduction and viability of water services while enhancing social inclusivity and expanding access to affordable water and sewerage. The profit-seeking practices of private providers – including the fraudulent misreporting of data, the gaming and asset sweating practices discussed above – exert an upward pressure on prices and represent a key determinant of an alarming increase in water poverty (Lobina and Hall, 2008a). In 2014-15, an estimated 23% of households in England were spending more than 3% of their income on water and sewerage and an additional 11% were spending over 5% of their income on water services (Ofwat, 2015). This meant that more than a third of households in England – that is, 34% - were affected by water poverty, defined as the condition of spending more than 3% of household disposable income in water and sewerage bills. Overall, in 2013 water bills represented more than 5% of average household spending for the poorest 10% of households compared to an average of around 2.3% for all households (NAO, 2015). As a result, arrears in water charges are a contributing factor of destitution in the UK (Fitzpatrick et al., 2016). Finally, there is evidence that those who fail to pay their bills tend to be poorer households and that the problem of water poverty is compounded by affordability problems in other utility sectors, while bad debts have risen by 44% between 2010 and 2015 and there has been a 305% increase in the number of people seeking help with their water debts from the National Debtline (Bayliss and Hall, 2018).

Figures on water poverty in England in 2014-15 remained similar to the figures for England and Wales in 2008-09 and 2009-10 (Ofwat, 2015; Bradshaw and Huby, 2013). However, they indicated a marked increase from the 9% of water poor recorded in the period 1997-98 to 2002-03 and the 15% recorded prior to 1997. Not only was there a clear correlation between price increases and affordability problems. Private companies' profit-seeking tactics and regulatory complacency were co-determinants of this alarming increase in water poverty (Lobina and Hall, 2008a). In that sense, Ofwat has been more part of the problem than of the solution. Irrespective of Ofwat's statutory responsibility for protecting the interests of all consumers, it has failed for over 25 years to take action to adequately address the issue of water affordability by a growing section of society. Ofwat has, in fact, interpreted its duty to protect customers as one to defend economic equity and the 'benefit principle' according to which individual consumers should be charged for the costs they impose on the system, not in view of their ability to pay. Ofwat demanded that governmental agencies should intervene to alleviate the social costs of water charges and it has even refused to allow one water company to extend their vulnerable groups scheme to customers who were not in receipt of benefits, or to non-metered customers. This contrasts with the robust action that Ofwat has taken to protect the interests of the companies and ensure their ability to remain profitable - for example with its 2002 decision to extend the advance termination notice to 25 years - and suggests that Ofwat has for too long selectively defined its own remit to exclude the protection of vulnerable consumers, either through pricing mechanisms or the promotion of policy measures. Ofwat's stance on the growing problem of water poverty can thus be described – at least until recently - as “principled inflexibility with the weak and accommodating leniency towards the powerful” (Lobina and Hall, 2008a: 113).

Ofwat (2015) expects that, as a result of the 2014 price review, average water bills will fall by 5% in real terms by 2020, and is introducing incentives in the price review for companies to strengthen customer orientation and deliver affordable services that customers are willing to pay for (Bayliss and Hall, 2018). This, however, is no guarantee that the problem of water poverty will be resolved in the short- or in the long-term. Ofwat had already imposed a 12% average price cut with the 1999 price review, but prices began rising sharply again in 2004 and in the space of only 4 years water poverty did reach alarming levels comparable to those recorded in 2014-15 (Lobina and Hall, 2008a). Overall, the English experience with water privatisation is one of regressive redistribution as rent is extracted from the many, including vulnerable consumers, in favour of the few - from domestic and foreign shareholders to lavishly paid managers (Bayliss and Hall, 2018; Lobina, 2017b).

4.4 Environmental sustainability

Environmental sustainability requires that water services are delivered in a way that prevents or minimises harm to the environment. Sewage flooding is a persistent problem in England which often results in pollution incidents. If Shaoul (1998: 32) observed that “(t)here was little improvement in industry performance and five companies had not reached their target performance in 1995”, in 2000 the Customer Service Committee for the North West of England described raw sewage flooding into homes as a misery (Lobina and Hall, 2001). In 2015-16 alone, a total of 37,434 areas were externally flooded by sewage in England and Wales. South West Water was facing a £1.7 million fine for poor performance on pollution, having been responsible for 171 sewage pollution incidents between 2015 and 2016. Offenders also included Southern Water – fined £2 million for flooding beaches in Kent with raw sewage – and other WaSCs (Priestley, 2016).

Ofwat argues that the sustainable economic leakage level (SELL) – whereby water companies are required to fix leaks “as long as the cost of doing so is less than the cost of not fixing the leak. The cost of not fixing a leak includes environmental damage and the cost of developing new water resources to compensate for the water lost through leaks” - gives consumers the best value for money.^{ix} However, conservation NGO WWF has complained that SELL meant that “it is cheaper to drain a river dry than fix a leak and is one of the reasons we have seen so many rivers dry up this spring.” (Carrington, 2017). In addition, the higher the leakage the heavier the environmental footprint of water service delivery owing to the impact of abstracting, treating and transporting drinking water that is not consumed – for example, the impact associated to additional requirements in terms of electricity consumed and chemicals used. It is thus questionable that SELL gives consumers the best environmental value for money. Interestingly, Ofwat has recently expressed concern that “SELL is not driving companies to become more efficient in how they tackle leakage” (Vallely, 2017). It remains to be seen however whether environmentally sustainable leakage levels can be achieved under private ownership. The international experience shows in fact that the lowest leakage levels are achieved in countries where water utilities are entirely or predominantly publicly-owned and managed. In the Netherlands, where all water supply operators are publicly owned, average leakage is around 4% (Lobina and Hall, 2000; Roeber, 2008). In Japan, where virtually all water supply operators are public, the average leakage level is 7.5% (Marques, et al., 2011). In Germany, where public water operators serve nearly 80% of the national population, average leakage is around 7% (Wackerbauer, 2009a, 2009b).^x

4.5 Political sustainability

Political sustainability comprises the ability of a society to reproduce the political and societal consensus that supports the viable and sustainable reproduction of a system of water governance. Failure to reproduce that consensus typically leads to weakened trust in the potential sustainability of a system of governance, and that might usher in its demise and facilitate its replacement with an alternative system of governance (Lobina, 2017c). The persistence of the private governance regime in the English water sector has been underpinned by the “Westminster Consensus” between the two

major parties in British politics, but this political consensus is apparently coming to an end as the Labour Party is reconsidering its position on the merits of privatisation. The Labour Party did in fact include proposals for the public ownership of water utilities in their 2017 Manifesto (Labour Party, 2017), a proposal that proved particularly popular at the 2017 general election and that has galvanised a resurgence of activism for the renationalisation of water utilities.^{xi} All this is taking place against the backdrop of a public opinion that has increasingly favoured a return to the public ownership of water: if an opinion poll found in 2006 that 56% of respondents would welcome the eventual renationalisation of water services, this percentage has grown to 71% in 2012 and to 83% in a 2017 poll (Lobina, 2018b).

Whether and when public ownership will replace the current private governance regime depends among other factors on the ability of the advocacy coalition backing water renationalisation to take advantage of political opportunity structures to achieve their intended mobilisation outcome, and on the responses of the advocacy coalition backing water privatisation (Lobina et al., 2011; Lobina, 2017c). In that sense, Ofwat has shifted emphasis in recent years and particularly since late 2017, and appears to be moving away from its traditional sympathy for the privatised companies. Ofwat has in fact signalled its intention to pay greater attention to the needs of consumers in the upcoming price review, and to intervene to curb excessive returns by demanding the companies to share part of their gains with the end consumer. Bayliss and Hall (2018) cast doubt on the feasibility of these regulatory proposals as credit rating agency Moody's has reacted by assigning a negative outlook to three of the nine English WaSCs – even if Moody's itself had described the amount of proposed gain sharing as modest – after having given a negative outlook to five WaSCs as a result of the growing pressure to meet customers' needs. They also point to the conflict, highlighted by the recent proposals, between Ofwat's duty to guarantee the financeability of the companies and its remit to protect the interests of consumers: “(t)hese latest measures do little to challenge the real concerns in the sector of financial engineering and lack of transparency, beyond the gain-sharing and a superficial requirement for firms to justify payments of dividends and directors' pay in (the 2019 price review). Yet the developments outlined above show that when the regulator does impose even slightly stricter rules on companies, their credit ratings fall. The regulator is thus caught in an impossible bind” (Bayliss and Hall, 2018: 5).

5. Discussion of findings and emerging issues

Before discussing the findings on the strong and weak lock-in of water governance outcomes in England, it is helpful to recall the theories that influenced the adoption of privatisation in 1989. Sawyer (2009) identifies Austrian economics and neoclassical economics as influential theories that favour private over public service provision. The Austrian tradition posits that profits are an important inducement in the attainment of productive efficiency, and that the market failure resulting from natural monopoly can be remedied by the introduction of competition. For its part, neo-classical economics proposes that it is possible to remedy the market failure resulting from natural monopoly by resorting to regulation. Also, neo-classical welfare economics remains woefully silent on issues of distribution. These and other perspectives – an example of which is Oliver Williamson's transaction cost economics – tend to embrace ideas of organisational efficiency that, like productive efficiency, are premised more on the extraction than the distribution of value (Sawyer, 2009; Lobina, 2018a).

5.1. Lock-in of water governance outcomes under public ownership in England

Water governance under public ownership has not been without problems, but it is important to recognise its central role in the universalisation of access to water in the second post-war period – what can be described as a triumph of distributive efficiency. Together with factors ranging from planning difficulties to politicised management and organisational fragmentation, macroeconomic considerations derived first from domestic industrial policy and then from international conditionality have all contributed to difficulties with achieving productive efficiency and generating the economic value necessary to achieve financeability and other forms of sustainability. In turn, failure to invest in

infrastructure led to growing levels of environmental pollution that were instrumental in the deterioration of collective trust in public ownership, and negatively affected distributive efficiency towards future generations. Still, despite these difficulties, it is under public ownership that the water industry was restructured and attained levels of productive efficiency that the privatised companies struggled to match in the first period of privatisation. The lock-in of public inefficiency was therefore weak as, once collective agency indicated a clear institutional trajectory, public ownership showed its ability to achieve distributive efficiency (as far as access is concerned) and to move from a position of productive inefficiency to one of productive efficiency.

Two theoretical implications can be derived. First, the relatively strong lock-in of distributive efficiency and the weak lock-in of productive inefficiency under public ownership appears to question Oliver Williamson's (2000) assessment of the public sector as the organisational mode of last resort, to choose "when all else fails".^{xii} In fact, distributional issues - including distributive efficiency - are central to water service governance and, more broadly, the organisation of public services (Dagdeviren and Robertson, 2016; Sawyer, 2009).^{xiii} Second, the findings lend support to Lobina's (2013) treatment of Lorrain's paradox, or the paradox of multiple agency. Lorrain's paradox can be illustrated as follows: a) Lorrain (1997) argues that the plurality of objectives pursued by the public sector, including social justice, goes to the detriment of productive efficiency and finds in favour of private over public ownership; b) Lobina (2013) observes that the private sector's profit maximisation imperative represents a strong incentive to extract value to the detriment of distributive efficiency, whereas the public sector - being less constrained by high-powered incentives to extract net gains - can more easily align productive and distributive efficiency; and, c) Lobina (2013) concludes that the public sector has a comparative advantage to promote sustainable water development in all its dimensions.

5.2. Lock-in of water governance outcomes under private ownership in England

Water governance after the 1989 privatisation^{xiv} has favoured the extraction of economic value with a view to guaranteeing short-term financeability and shareholder remuneration. This emphasis has been to the detriment of long-term financeability and economic, technical, social and political sustainability. The English experience with water privatisation is therefore characterised by the strong lock-in of both productive (internal) efficiency and distributive inefficiency, together with highly regressive outcomes and cost shifting to future generations. More precisely, the strong lock-in of private productive efficiency and distributive inefficiency can be seen as the result of the alignment of: i) private operators' high-powered incentives to extract net gains; ii) private operators' ability to pursue commercial objectives (an ability which results from the joint effect of asymmetric power and favourable institutions), and iii) the convergence of the interests of like-minded and powerful actors such as the private companies, Ofwat and credit rating agencies.

The upshot is threefold. First, the findings lend support to Lobina's (2013) treatment of Willig's paradox, which can also be described as an iron law of private monopolistic interest. Willig's paradox can be illustrated as follows: 1) Willig (1994) argues 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; 2) Lobina (2013) observes that the private sector is capable of taking advantage of asymmetric power and favourable institutions to extract net gains - drawing on a repertoire of tactics that includes adventurous bids and systematic renegotiation - while public decision makers face high costs to steer private agents away from an undesired course of action; and, therefore, 3) "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" (Lobina, 2013: 123). Second, considering the importance of distributive efficiency for sustainable water development, the strong lock-in of

distributive inefficiency under private ownership further shows the implausibility of characterising the public sector as the organisational mode of last resort for the provision of water services. Third, once it becomes apparent that the Williamsonian assumption - that the public sector is the organisational mode of last resort, to choose when all else fails - does not hold, similar assumptions of private sector superiority entertained by Austrian, neoclassical, and industrial economics are equally disproved.

5.3. International significance of the findings

Despite the institutional specificities that characterise private water governance in England, it would be a mistake to dismiss the strong lock-in of private distributive inefficiency as attributable to the exceptionalism of the English case. Indeed, Lobina (2013, 2005b) looks at the experience with over 40 contracts in more than 20 countries – covering diverse contractual typologies such as concessions, leases, contracts awarded to a private operator or a mixed-economy enterprise, and institutional settings across developed, transition and developing countries – to find evidence of systematic private interest-seeking irrespective of the type of contractual and regulatory arrangements adopted. While the interest-seeking tactics deployed by the private sector vary in function of the local institutional setting, the aim of these tactics remains the extraction of net gains. So, for example, the use of adventurous bids and systematic renegotiation under French-style privatisation by delegation is arguably equivalent – in terms of the pursuit of monopolistic gain – to the practice of gaming observed in England. Interestingly, Williamson (1976) identifies the role of sympathetic regulators as one of the contributing factors of what can be effectively described as the strong lock-in of private (distributive) inefficiency under franchise arrangements. There seems to be something fundamental that explains behavioural similarities between private water operators in different institutional contexts. In addition to the private sector's capability to take advantage of asymmetric power and formal institutions to extract net gains in what is a natural monopoly environment (Lobina, 2013), I suggest that such fundamental explanation is that all private firms pursue profit maximisation as their *raison d'être* (Friedman, 1953; Vickers, 1985). All this questions the exceptionalism of the governance outcomes of water privatisation in England.

6. Conclusions

Taking stock of nearly 30 years of water and sewerage privatisation in England and placing the analysis in a historical and international context, this chapter has looked at the governance outcomes of privatisation and their implications for sustainable water development. Attention has been paid to how water governance has resulted in different organisational efficiency outcomes and, in turn, affected systemic reproduction and viability across the different regimes of water sustainability: financial, economic, technical, social, environmental, and political.

Water governance after the 1989 privatisation has favoured the extraction of economic value with a view to guaranteeing short-term financeability and shareholder remuneration. This emphasis has been to the detriment of long-term financeability and other areas of sustainability. The English experience with water privatisation is characterised by the strong lock-in of both productive (internal) efficiency and distributive inefficiency, together with highly regressive outcomes and cost shifting to future generations. This strong lock-in can be explained by the alignment of private operators' incentives to extract net gains, their ability to pursue commercial objectives in their institutional environment, and the convergence of interests between like-minded and powerful actors. Hence, the rigidity with which shareholders and financial interests are protected at the expense of the majority of stakeholders makes privatisation inimical to sustainable water development.

Lessons can be drawn that are relevant to both theory and policy. First, it is important to unpack the notion of organisational efficiency and to carefully consider how productive and distributive efficiency impact on sustainable water development under different forms of ownership and governance. Second, once the comparative institutional analysis of public and private water operations is informed

by ambitious social welfare functions like sustainable water development, it becomes apparent that the assumption that the public sector is an intrinsically inferior organisational mode does not hold. Third and finally, the international experience with water privatisation and a variety of PPPs suggests that, as the interest-seeking tactics deployed by the private sector vary in function of local institutional settings, the governance problems discussed in this chapter – which are ultimately due to the unsustainability of private sector interests, in that the directionality of collective agency resulting from the governance of private water and sewerage services goes counter to collective expectations of development - have broader relevance beyond the English case.

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ⁱ For the purposes of this chapter, I look at two components of organisational efficiency: productive efficiency and distributive efficiency. By productive efficiency, I mean the generation of value through the production of water services irrespective of whether and how this value is redistributed to stakeholders external to the service provider. Some call this internal efficiency; see, for example, Vickers and Yarrow (1988). By distributive efficiency, I refer to the redistribution of value to stakeholders external to the service provider irrespective of how this value has been generated. Some call this distributive equity; see, for example, Mookherjee (2006).

ⁱⁱ On non-individualistic social welfare functions, see Desmarais-Tremblay (2016).

ⁱⁱⁱ The underlying assumption here is that the UK government's commitment to respecting EU law would not depend on the public or private ownership of water utilities.

^{iv} This section focuses on leakage reduction, which is an indicator of organisational efficiency adopted across the global water sector. On the persistent problem of sewage flooding in England, see Lobina and Hall (2001) and Priestley (2016). The latter finds that in 2015-16, 4,344 properties were internally flooded by sewage in England and Wales.

^v See Thames Water's website: <https://corporate.thameswater.co.uk/Media/Facts-and-figures>.

^{vi} I owe this insight to Junji Hashimoto. For details, see the Ministry of Health, Labor and Welfare of Japan's "Current trend of water administration", of 12 September 2017, particularly at page 5 (<https://www.mhlw.go.jp/file/06-Seisakujouhou-10900000-Kenkoukyoku/0000203990.pdf>).

^{vii} I owe this insight to Niels Knudsen. For details, please see the Danish Water and Wastewater Association DANVA's "Water in Figures 2017 – DANVA Statistics and Benchmarking", p. 24 (<http://www.e-pages.dk/danva/215/24>).

^{viii} See also Ofwat's website on Leakage: <https://www.ofwat.gov.uk/households/supply-and-standards/leakage>.

^{ix} See Ofwat's website on Leakage: <https://www.ofwat.gov.uk/households/supply-and-standards/leakage>.

^x For a more comprehensive discussion of leakage rates and international comparisons, see Hall and Lobina (2008).

^{xi} See <https://weownit.org.uk/act-now/lets-bring-water-public-ownership>.

^{xii} Dagdeviren and Robertson (2016) also find that Williamson's (2000) assessment of the public sector as the organisational mode of last resort does not reflect the empirical reality of the water sector.

^{xiii} In this vein, Lobina (2018a) argues that the alignment of productive and distributive efficiency is of fundamental importance for enhancing sustainable water development and the human right to water.

^{xiv} Similar considerations can however be made on privatisation period prior to the municipalisation process of the late 19th and early 20th centuries.