Why public ownership?
Urban utilities in London, 1870-1914

Submitted by

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Abstract (i)
Private gas and water companies received parliamentary permission to act as incorporated companies in the early 1800s. Then, the idea that gas and water would be anything other than a luxury was unthinkable, and government regulated by entry. But by the 1830s the problems with competition were clear. Under pressure from the new sanitary reformers, and from the companies themselves, parliament sought new ways to regulate. However, the institutional endowments of the British state did not facilitate a working regulatory regime, and by the 1870s, the regulatory foundations for public ownership had been set.

Public ownership was a viable alternative because of the administrative transformation of local government. There was a deliberate attempt to reduce corruption and make local governments capable of managing projects of increasing complexity. Politicians faced high costs if they used public utilities for personal gain, but the electoral system meant that utilities could be to court an increasingly strong working class and trade union vote.

The expansion of the franchise following the 1867 Reform Act reduced the level of wealth of the median consumer-voter and increased the preference for redistribution. Voters favoured higher levels of expenditure, and political parties converged on the policy of public provision. Politicians faced a trade-off. On one hand, they sought to maximize profits; on the other, they sought to maximize political support. Politicians attempted to conclude franchise agreements with private sector agents. However, the problems of contracting were one of the driving forces behind municipalisation. Once in public sector hands, a new contracting problem emerged:

Politicians showed themselves to be willing to increase the wages of municipal employees, both as an ideological choice and as an act of political calculation. The outcomes of these choices forced businessmen to weigh the costs and benefits of home versus overseas investment in urban infrastructure projects.

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Abstract (ii)

Methodology

This thesis borrows from the related social science fields of political science and the 'new institutional' economics. The historical analysis is supported by three key themes. The first theme is how government regulates private business, what determines the success of a regulatory regime, and the degree to which agency costs influenced the decision to absorb urban utilities within the public sector. The 'new institutional' economics explicitly identifies the problem of imperfect information and seeks to explain economic behaviour using the transaction as the basic unit of economic analysis. The transaction costs of public utilities are large. There are high upfront costs, and long payback periods. The nature of the investment is asset-specific. At the initial stages, entrepreneurs provide the capital and manage the fixed networks that they create in pursuit of rents. The networks are directly linked to the consumer, giving the owner of the utility high exploitative power. Over time, the technology becomes more diffused and more important to urban life. As this process occurs, politicians may intervene to regulate private firms in order to achieve price and quality benchmarks. Regulation, the process by which government attempts to control the actions of a private firm, can be conceptualised as a long-term contract. This thesis uses these concepts to offer an explanation of why attempts to regulate network utilities in Britain were unsuccessful.

The second theme is how preferences over urban utilities were revealed, how they were debated, and what role the electoral system played in influencing private

versus public provision. Urban utilities can be conceptualised as club goods. The debates over urban utilities were debates over the type of club, size of club, and means of exclusion from the club. Electoral politics provided a means of answering these questions. Consumer-voters elect politicians as their agents to achieve the collective action goals that they could not achieve for themselves. Political parties will compete with each other for the median voter. The challenge for politicians is to identify a point that will maximise their chances of election relative to others. If the franchise expands, as it did in 1867, then the position of the median voter shifts downwards on the income scale, and redistributive spending may result.

These concepts are the basis for a quantitative analysis of voting behaviour in London, and are also applied to the analysis of the management of tramway and electricity undertakings.

The third theme is the institutional context of urban utilities. Different countries resolved the dilemma of urban utilities in different ways. Institutional variables like the judiciary, the civil service, and the local government machinery played important roles in determining the historical path. The decisions over public or private ownership can be framed as an institutional choice variable, whereby previous decisions and actions influence later outcomes. Contemporaries had strong views on the place of locality within the English constitution and the role that the local government should play within civic life. Urban utilities were one way of working out the implications of these views.

Summary of key findings

Private gas and water companies received parliamentary permission to act as incorporated companies in the early 1800s. Then, the idea that gas and water would be anything other than a luxury was unthinkable, and government regulated by entry.

But by the 1830s the problems with competition were clear. Under pressure from the new sanitary reformers, and from the companies themselves, parliament sought new ways to regulate. However, the institutional endowments of the British state did not facilitate a working regulatory regime, and by the 1870s, the regulatory foundations for public ownership had been set.

Public ownership was a viable alternative because of the administrative transformation of local government. There was a deliberate attempt to reduce corruption and make local governments capable of managing projects of increasing complexity. Politicians faced high costs if they used public utilities for personal gain, but the electoral system meant that utilities could be to court an increasingly strong working class and trade union vote.

The expansion of the franchise following the 1867 Reform Act reduced the level of wealth of the median consumer-voter and increased the preference for redistribution. Voters favoured higher levels of expenditure, and political parties converged on the policy of public provision. Politicians faced a trade-off. On one hand, they sought to maximize profits; on the other, they sought to maximize political support. Politicians attempted to conclude franchise agreements with private sector agents. However, the problems of contracting were one of the driving forces behind municipalisation. Once in public sector hands, a new contracting problem emerged: Politicians showed themselves to be willing to increase the wages of municipal employees, both as an ideological choice and as an act of political calculation. The outcomes of these choices forced businessmen to weigh the costs and benefits of home versus overseas investment in urban infrastructure projects.

For my parents

Preface and Acknowledgements

If this thesis were the product of my labour alone then there would be no need to acknowledge anyone. However, many people have contributed to its creation, and I should like to thank them, even in this most modest and private of settings.

A scholar accumulates many debts to other scholars, and thanks are due to the many people who helped me along. I owe Sarah Butt, Joshua Getzler, Andrew Godley, Eugene Huang, Bryan Leach, David Levi-Faur, David Milosevic, Arthur Spirling, Christine Whelan and Chris Wlezien my sincere thanks for reading chapter drafts. Oliver Grant read the entire thesis and commented on it thoughtfully. Jane Humphries and John Davis provided many useful insights as examiners of my M.Phil. thesis. Terry Macdonald was a constant source of support (and perspective), and helped far more than she realised during the final stages. Finally, José Harris and Avner Offer were models of scholarship and sources of encouragement. I could not have asked for more involved supervisors. I hope that this work is a credit to them, while claiming any errors or omissions as my own.

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I owe the largest debt of thanks to my family: to my brother Gideon, sister Talya, and grandparents Sylvia, Judy and Barry, who all encouraged and supported me even though they were often unsure about the specifics of my project; and to my parents, Alan and Marion, who raised me to respect learning and to pursue education as an end in itself. This thesis is dedicated to them.

And in memory of my grandfather Maurie, who would have been proud.

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List of abbreviations

BET – British Electric Traction Company

BL – British Library

BLPS – British Library of Political Science Archives

BPP – British Parliamentary Papers

GL – Guildhall Library (in the City of London)

IEE – Institute of Electrical Engineers

JWB – John Williams Benn papers

LCC – London County Council

LMA – London Metropolitan Archives

LMS – London Municipal Society

MBW – Metropolitan Board of Works

PRO – Public Record Office

S – Shilling. 1s = 12d, 20s = £1

mWh – Megawatt hour. 1 mWh = 1,000 kWh

d – Old penny. 240 d = £1

kWh – Kilowatt hour. The Board of Trade unit of electrical production and consumption.

DC – Direct current. An electric current that flows in a single direction.

AC – Alternating current. An electric current that alternatively reverses the direction of its flow

Chapter 1: Utilities and the urban environment

The early nineteenth century was a time of urban immiseration. Municipal social overhead expenditure did not keep up with the requirements that population density and size generated. The result was a poor public health environment.[1] However, by the early twentieth century, quality of life had improved.[2] The economist Jeffrey Williamson argues that by 1830 'Britain had accumulated an enormous deficit in her social overhead stocks by pursuing seventy years of industrialization on the cheap.'[3] Between 1870 and 1914, British cities began to close the gap.

The term social overhead refers to urban infrastructure such as housing, water, transport, and power. The very structure of cities allows for a specialised division of labour and economies of scale in production. But urbanisation can also lead to diseconomies of scale in the absence of sufficient infrastructure. Water, urban transport and power supply were necessary to alleviate the urban disamenities. These network utilities presented a particular set of problems. The initial capital costs were high and the payback periods were long, creating a problem of investment. In addition, network utilities exhibited many of the characteristics of natural monopolies, and placed consumers at the mercy of suppliers for the essentials of daily life. There was therefore also a problem of regulation. These problems framed the policy debates that were intensely argued at central and local levels of government, and gained the attention of many leading intellectuals and politicians. For instance, George Bernard Shaw, the committed Fabian and playwright, wrote that the ownership of utilities by local governments 'seems a very simple matter of business. Yet it is conceivable that

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[1] A. S. Wohl, *Endangered lives: public health in Victorian Britain* (Cambridge, MA., 1983).
[2] N. Crafts, 'Some dimensions of the 'quality of life' during the British industrial revolution', *Economic History Review* 50 (1997) 690-712; N. Crafts, 'The human development index 1870-1999', *European review of economic history* 6:3 (2002) 395-405.
[3] J. G. Williamson, *Coping with city growth during the British Industrial Revolution* (Cambridge, 1990), 273.

the political struggle over it may come nearer to a civil war than any issue raised in England since the Reform Bill of 1832.'[4] It has been more than a century since issues surrounding the construction of the underground, waterworks, transport infrastructure and power came to dominate politics in London. How should these services be financed? Who could be trusted to provide them? How should a political community balance the sacrifices and the benefits? Should the choice be public or private ownership? The resolution of these dilemmas is the historical problem that we seek to describe.

The historical context

The urban growth that began during the Industrial Revolution continued into the late nineteenth century. The 1851 census and the 1911 census can be compared to illustrate the degree of urbanisation in England and Wales. In 1851, about 25 percent of the total population lived in towns with a population greater than 100,000 people. That figure reached 43 percent in 1911. The highest rate of urban growth was during the 1870s and 1880s. The dynamics of London's growth were linked to commerce and finance rather than industrialisation, and its economy was based on large numbers of small manufacturing firms serving a localised economy. It was the largest city in Britain, the global financial capital, and one of the largest urban areas in the world. In 1901, 18 percent of the population of England and Wales lived in London.[5]

Urban growth presented the opportunity for increased economic productivity and the challenge of providing the infrastructure required by the growing density of the population. Historians have argued that public sector failure was a partial explanation for why local governments did not meet the challenge appropriately

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[4] G. B. Shaw, *The commonsense of municipal trading* (London, 1908), 1.
[5] P. J. Waller, *Town, city and nation: England 1850-1914* (Oxford, 1983), 7-8. London is defined as the London County Council (LCC) area.

during the early nineteenth century.[6] The Webbs argued that the system of decentralised and ad hoc authorities lacked administrative capacity, although recent research has contested this claim.[7] Until 1835, many localities lacked legal standing as corporations and had limited powers and authority. Many historians of local government administration have seen the passage of the Municipal Corporations Act of that year as the beginning of the process of local government reform.[8] According to J.L. Hammond, the act was a 'revolutionary measure' in the sense that it swept away the 'little oligarchies of co-opted and self-elected' aldermen and burgesses and replaced that system with elected town councils. However, the revolution was potential rather than immediate. The franchise remained restricted to adult ratepayers. In Liverpool, for example, there were only 6,000 voters out of a population of 200,000 people.[9] The limited electorate, made up of property owners, opposed paying higher taxes, and this restricted the scope of municipal action.[10] So long as the people who suffered the most from urban life—the working classes—did not have effective political representation, municipal action was unlikely to follow.

In 1871, London's population was less than four million. In 1891, the population was more than five and a half million. By 1911 that number had increased

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[6] Williamson, 294ff; Wohl, chapter 7.
[7] S. Webb and B. P. Webb, *English local government: statutory authorities for special purposes* (London, 1922). For a critique of the Webbs based on the Poor Law and criminal justice policy, see J. Innes, 'Parliament and the shaping of eighteenth-century social policy', *Transactions of the Royal Historical Society* 40 (1990) 63-92.
[8] The title of an edited collection reflects this sentiment: H. J. Laski, et al., eds., *A century of municipal progress: the last hundred years*, (London, 1935). More recent research is critical of the Benthamite-Fabian perception of heroic reform in this decade; see J. Innes, 'Central Government interference: changing conceptions, powers, and concerns', in Jose Harris, ed. *Civil history in British society*, (Oxford, forthcoming).
[9] J. L. Hammond, 'The social background, 1835-1935', in Harold Laski, et al., eds., *A century of municipal progress*, (London, 1935) 37-54, 40-1.
[10] E. P. Hennock, 'Finance and politics in urban local government', *Historical journal* 6:2 (1963) 212-25.

to more than seven million.[11] Accompanying the increase in population was a shift in the spatial arrangement of London. The City, for example, became an exclusively commercial rather than a semi-residential area following the inward migration of continental finance firms. London was also a major railway terminus and port. Growth came at a price. Gareth Stedman Jones, for instance, argues that the demolition of older residential neighbourhoods to make way for commercial expansion involved a greater displacement of the population than the rebuilding of Paris under Hausmann.[12]

One of the largest urban problems was the shortage and cost of housing. Williamson's statistical analysis found that the degree of overcrowding and the density of the urban population were significant determinants of infant mortality.[13] The high death rate and infant mortality rate that predominated until about 1870 was the result of unregulated industrial and urban growth. Infectious diseases like whooping cough, measles, scarlet fever, smallpox and tuberculosis spread easily in an overcrowded environment. Outbreaks of typhus accompanied economic recession, as families tried to economise on rents.[14] Housing in London became a national issue. In 1883, Andrew Mearns published a sensationalist account of the housing problem entitled *The bitter cry of outcast London.*[15] The resulting press campaign prompted the formation of the Royal Commission on the Housing of the Working Classes in 1884. The 'condition of England,' as reflected by the state of urban areas, was a standing social issue.

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[11] B. R. Mitchell, *British historical statistics* (Cambridge, 1988), 25. London's population by year was as follows: 3,870,000 in 1871; 4,770,000 in 1881; 5,638,000 in 1891; 6,586,000 in 1901; 7,256,000 in 1911. The area used is the 1961 boundary of London adjusted for all years.

[12] G. Stedman Jones, *Outcast London: a study in the relationship between classes in Victorian society* (Oxford, 1971), 159.

[13] Williamson, 246.

[14] S. Szreter and A. Hardy, 'Urban fertility and mortality patterns', in M. J. Daunton, ed. *Cambridge urban history of Britain,* Vol. 3, 1840-1950, (Cambridge, 2000) 629-72, 632.

[15] A. Mearns, *The bitter cry of outcast London: an inquiry into the condition of the abject poor* (London, 1883).

The publication of the census in 1891 and Charles Booth's study on *The life and labour of the people in London* in 1892 showed the extent of the problem. According to the 1891 census, 19.7 percent of the population lived in overcrowded conditions, with overcrowded being defined as more than two people per room in tenements of less than five rooms.[16] Booth defined overcrowding as those living two or more to a room, and found an even higher proportion: about 30 percent of the population of London was overcrowded and about the same proportion lived in primary or secondary poverty.[17] C.F.G. Masterman, the Liberal social critic and politician, framed the issue in terms of market regulation in diagnosing the cause. '*Laissez faire* has here presented an object-lesson which he that runs may read,' he argued in 1901. 'The squalid inequality of unchecked private enterprise, operating through the greater part of the nineteenth century, has bound an almost unsupportable burden upon the shoulders of the succeeding generations.'[18] Government passed legislation in order to combat the problem, but early efforts were unsuccessful. For example, the Artisans' Dwelling Act of 1875 allowed London government to engage in slum clearance and rehousing programs, but the implementation was slow due to the high costs of compensating slum landlords and the perverse incentive that the Act created.[19] The high price of land in London made rehousing schemes difficult, and the private sector was more active than local authorities.[20]

Contemporaries realised that a policy of cheap transportation had the potential to relieve the pressure on the densely populated central areas. Housing in the central

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[16] As reported in Stedman Jones, 219.
[17] C. Booth, 'First results of an inquiry based on the 1891 census', *Journal of the Royal Statistical Society* 56:4 (1893) 557-93, 566.
[18] C. F. G. Masterman and B. B. Gilbert, eds., *The heart of the empire: discussions of problems of modern city life in England*, (Brighton, 1973 [1901]), 23.
[19] Stedman Jones, 220.
[20] S. Morris, 'Market solutions for social problems: working-class housing in nineteenth-century London', *Economic History Review* 54:3 (2001) 525-45; Waller, 31.

areas was costly because workers on low pay and especially those dependent on casual engagements had to live close to work. If the cost of commuting were low enough, some workers could migrate to the suburbs. In America, transport companies frequently speculated in land and encouraged suburbanisation. In Victorian Britain, transport networks tended to follow rather than lead suburban expansion.[21] It was the late-Victorian building boom that generated a need to invest in urban infrastructure, and not the other way around.[22] There were various modes of public transport: train, bus, underground and tramway. Tramways were the single largest mode of public transportation and had the highest rate of growth (figure 1.1). Tramways dramatically affected the spatial redistribution of London, and their effect was followed and amplified by the motorized omnibus near the very end of our period. As a result of increases in both public and private investment in transport, people began to live further from their place of work.[23] This alleviated, but did not solve, the housing problem.

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[21] J. Armstrong, 'Transport and the urban environment', in M. J. Daunton, ed. *The Cambridge urban history of Britain*, Vol. 3, (Cambridge, 2000) 229-57, 237.
[22] A. Offer, *Property and politics, 1870-1914* (Cambridge, 1981), 231-4.
[23] D. Green, 'Distance to work in Victorian London', *Business History* 30 (1988) 179-94; H. Dyos, 'Workmen's fares in South London 1860-1914', *Journal of transport history* 1 (1953) 12.

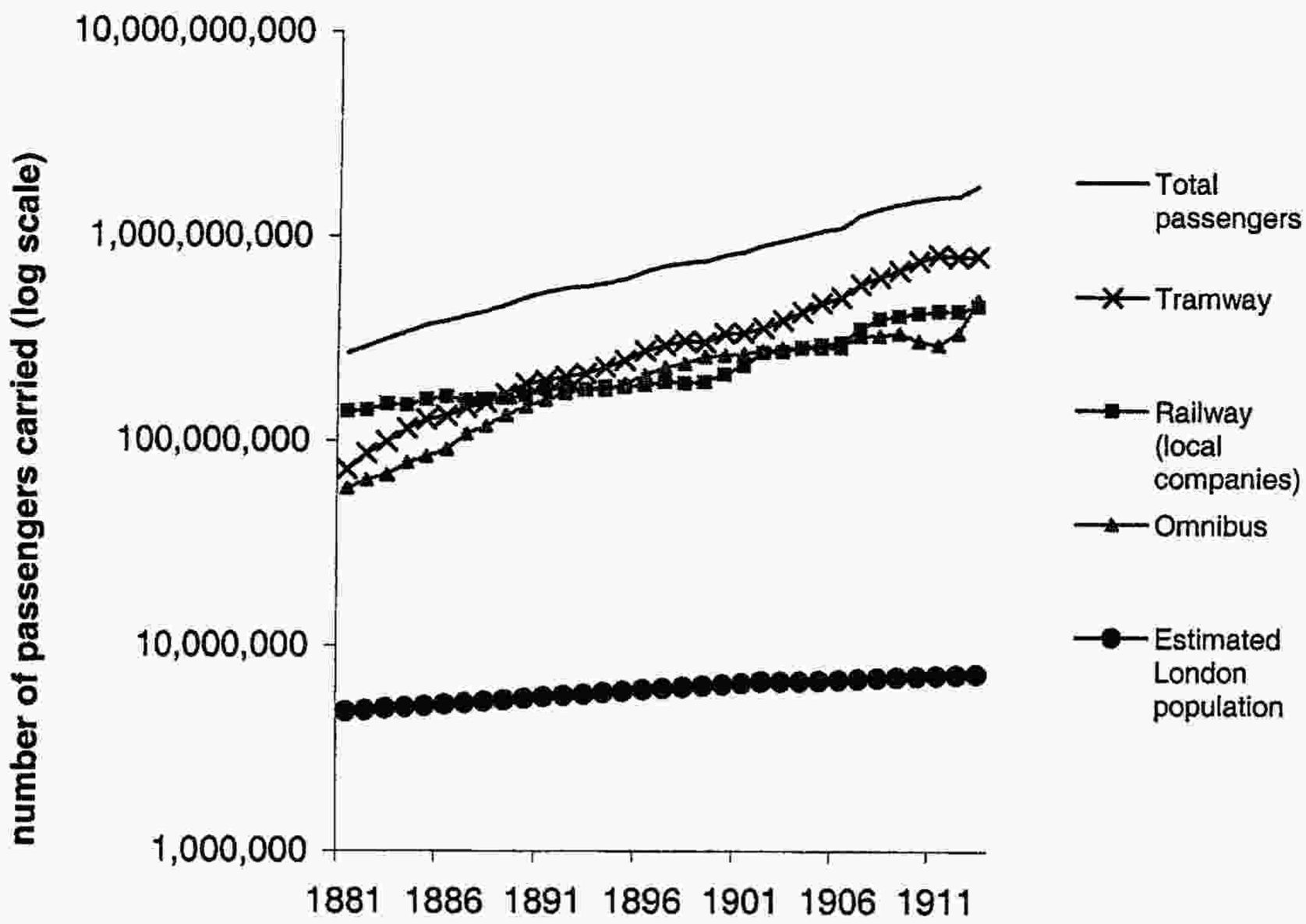

Figure 1.1
Passenger traffic in London
Source: *London statistics*

Local government expenditure on a large scale began in 1875, when Parliament gave local authorities new powers to engage in public health and infrastructure projects through the Public Health Act and the Artisans' Dwellings Act. In London, these functions were undertaken by the Metropolitan Board of Works. Local government expenditure on infrastructure was a large factor in the long-term rise of British capital expenditure. Based on Feinstein's estimates, municipal fixed capital formation between 1870 and 1914 accounted for 92 percent of all public investment, and 15 percent of total domestic gross fixed capital formation.[24] Urban utilities were a large component of municipal fixed capital investment. In terms of timing, figure 1.2 shows that local government borrowing for utilities peaked between 1900 and 1905.

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[24] Calculated based on C. H. Feinstein, *National income, expenditure and output of the United Kingdom, 1855-1965* (Cambridge, 1972), Table 39, T85-6.

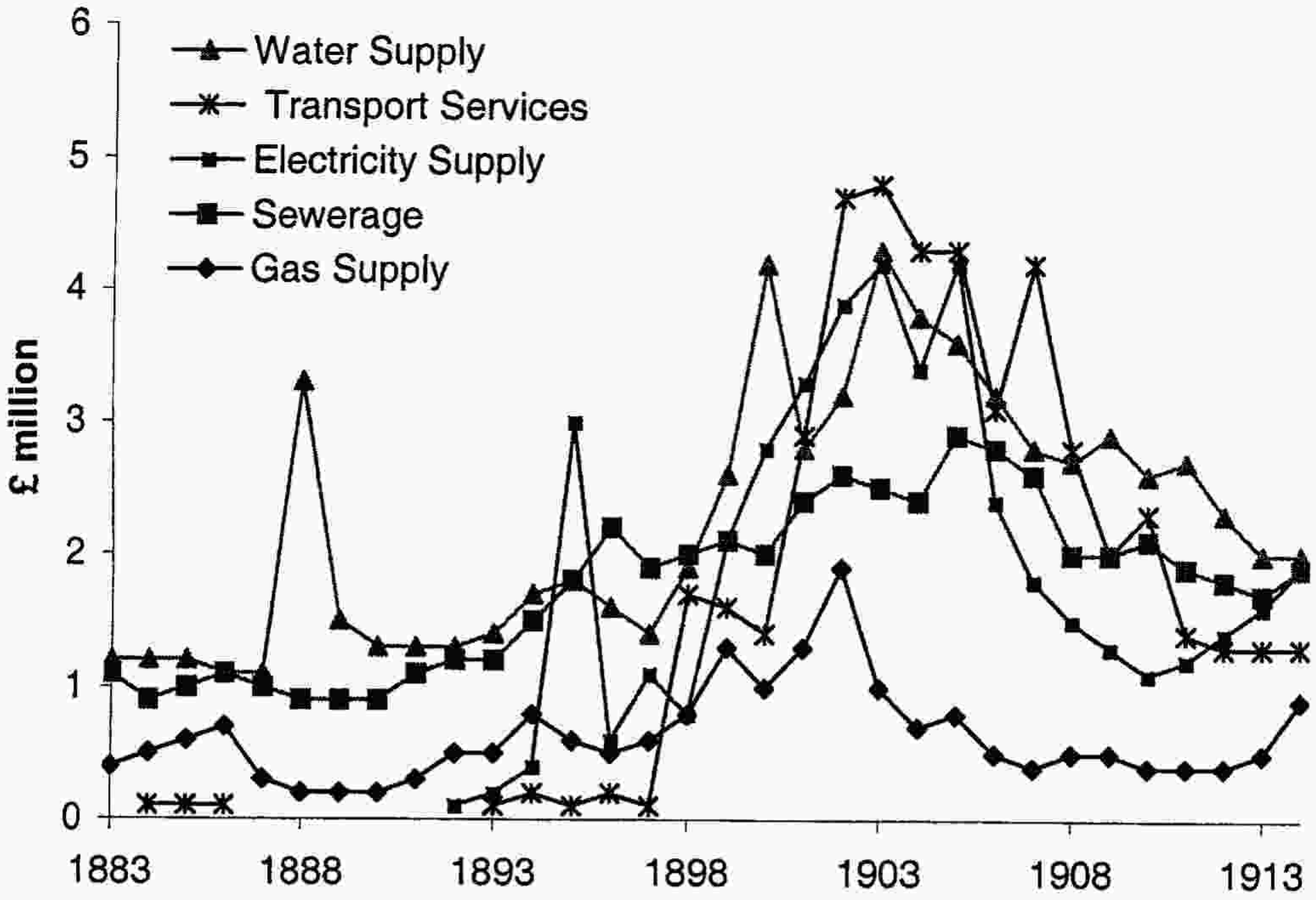

Figure 1.2
Municipal Capital Expenditure (out of Loans)
Source: B.R. Mitchell, *British historical statistics,* 619.

Table 1.1 shows that the burden of urban provision was carried predominantly by local governments. Local expenditure grew faster than central government expenditure up to 1914. When seen in percentage terms, the increase in local government spending from 1890 onwards is apparent. Central government financed the majority of the costs of administration and law and order, while local government financed the majority of economic, social, and environmental services.[25]

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[25] A. T. Peacock and J. Wiseman, *The growth of public expenditure in the United Kingdom* (London, 1961), Table A-24, 208.

Table 1.1: Central and local government expenditure

Year	Total expenditure (in £M at 1900 prices)		Local expenditure (at current prices)	
	by central government	*by local government*	*as % of total government expenditure*	*as % of GNP*
1890	82.2	51.1	38.4	3.4
1895	98.2	74.1	43.0	4.5
1900	181.9	98.9	35.2	5.1
1905	113.6	128.1	51.1	6.3
1910	129.3	134.3	47.9	6.1
1913	147.2	137	44.8	5.5
Percentage increase 1890-1913	79%	168%	26%	62%

Source: Calculations based on Peacock and Wiseman, table A-20.

The principal sources of local authority revenue were rates, loans and central government grants. Trading income was also a source of revenue and will be discussed later in the chapter. Rates were the largest source of local authority revenue, and London rates in the pound rose between 30 and 50 percent between 1891 and 1906.[26] Larger local government units like London were able to tap the private capital markets, while smaller units had to borrow from the Local Government Board.[27] A Select Committee empowered to investigate the issue reported that municipal debt grew from £93 million in 1874-5 to over £293 million in 1899-1900.[28] The accumulation of debt greatly exceeded the increase of property yields. In England and Wales, the local authority debt grew from little more than annual rental income from urban property in 1880 to twice the annual rental income in 1912.[29] Central government assistance remained low throughout the period. Figure 1.3 shows municipal receipts over time.

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[26] Offer, 283-5.
[27] J. F. Wilson, 'The finance of municipal capital expenditure in England and Wales, 1870-1914', *Financial History Review* 4 (1997) 31-50.
[28] Repayment of Loans by Local Authorities, Select Committee Report, BPP 1902 (239) viii, x.
[29] Offer, 226.

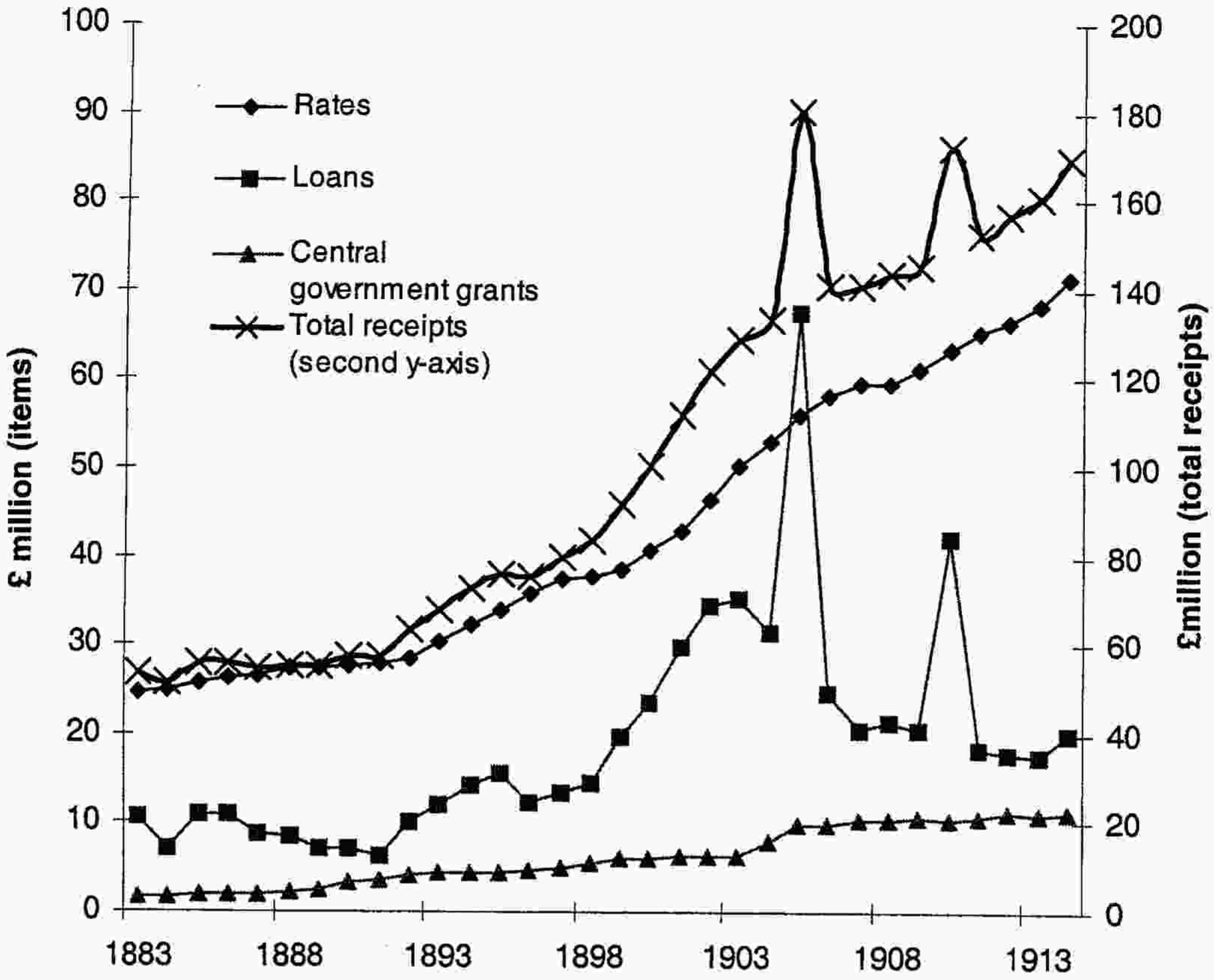

Figure 1.3
Local government receipts for England and Wales.
Source: Mitchell, 619. [30]

The persistent problem of urban infrastructure is who should pay for it and how. The debates over local taxation were technically complex and bitterly contested. Raising revenue from property rates did not give local authorities much room to manoeuvre.[31] A property tax is regressive, since the poor spend a greater proportion of their income on housing than the rich. Wealthy residents are able to move from areas with high taxes to areas with lower taxes, resulting in a vicious circle of both high taxes *and* high levels of poverty in certain areas. Offer argues that 'urbanisation gave rise to social costs as well as real estate windfalls. The direct cost was

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[30] Amounts listed at current prices. The spike in loans in 1905 is due to the establishment of the Metropolitan Water Board; the spike in 1910 is due to the establishment of the Port of London Authority.
[31] E. Cannan, *The history of local rates in England* (London, 1896), 181.

unquestionably borne by the poverty-stricken labouring population.'[32] Municipal income taxes, or contributions from central government, are possible complements to a system based mostly on property rates and borrowing secured by rates. Plans for a local income tax in relief of local rates were proposed as early as 1885 but were never implemented. Another device to relieve local rates is assigned revenues from central government. Goschen intended to assign revenues on the basis of indoor pauperism, but this proposal was abandoned under pressure from rural areas, and the allocation mechanism remained in the same proportions as the old grants-in-aid. The introduction of these assigned revenues did mitigate the urban fiscal problem, but Londoners continually complained that they were not receiving their fair share.[33]

Another dimension to the problem was the method of land valuation. One of the protagonists in the debates was Henry George, whose call for a single tax on land ignited the great debate over the taxation of land values. The owners of land were traditionally taxed based on the annual income from real property (the rateable value). George argued that this base did not reflect the true value of the land. There was a finite supply of land, yet the population continued to grow. In theory, the result was that that the landlord captured an 'unearned increment' simply by owning the land. The solution to this problem was not to tax the annual rental value, but rather to tax the site value of the land.[34] The Georgian doctrine appealed to elements within the Liberal party, and culminated in the land taxation proposals contained in Lloyd George's budget of 1909. It also appealed to the Progressives within the London County Council.

The technical debates over the taxation of land values in particular, and about local taxation in general, were not resolved, and moved from local to national levels

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[32] Offer, 252.
[33] Offer, 201-3.
[34] Offer, 184-200.

of political attention.[35] The Royal Commission on Local Taxation under Lord Balfour of Burleigh considered the issues exhaustively between 1896 and 1901. The commissioners made several policy suggestions. They acknowledged that local expenditure was too reliant on rates. The Treasury officials Sir Edward Hamilton and Sir George Murray framed the local taxation question as an issue of fiscal federalism. They suggested that one way out of the local taxation quagmire was for local authorities to administer services, but that central government should fund them.[36] The ongoing debates over local government finance throughout the twentieth century have shown how difficult it was to implement this policy. However, despite several attempts, little action was taken along these lines before World War One, which only sharpened the dilemmas of local finance with respect to social policy.[37] The reforms that did occur were prompted by the perceived crisis in public finance generated by the Boer War. The 1907 Liberal budget included such innovations as an increase in the progressive assessment of income tax levels and the introduction of a super-tax.[38] Lloyd George's budget of 1909 increased income tax on unearned incomes, and raised additional sums from stamp duties, death duties, liquor licenses, and a tax on petrol. Most controversial was the tax on the value of undeveloped land. The budget caused a constitutional crisis, but ultimately gave Britain the ability to raise taxes more efficiently than other European countries, which played an important role in continued social reform as well as the ability of the British state to fight the First World War.[39]

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[35] J. Harris, 'The transition to high politics', in Michael Bentley and John Stevenson, eds., *High and low politics in modern Britain: ten studies*, (Oxford, 1983) 58-79.
[36] Local Taxation, Royal Commission Report, BPP 1901 Cd.638 xxxiv, 117.
[37] J. Harris, *Unemployment and politics: a study in English social policy, 1886-1914* (Oxford, 1972), 369-70.
[38] L. C. Money, *Riches and poverty* (London, 1906).
[39] N. Ferguson, 'Public finance and national security: the domestic origins of the First World War revisited', *Past & present* 142 (1994) 141-68, 162; M. J. Daunton, *Trusting Leviathan: the politics of taxation in Britain, 1799-1914* (Cambridge, 2001), 375.

Urban expenditure was linked with broader patterns of home and overseas investment. Municipal governments obtained loan finance both from the private capital markets and through central government agencies. The Parliamentary Works Loan Commissioners was a statutory agency that had the authority to finance local government improvements, but high interest rates (five percent between 1875 and 1897) and a short repayment period (20 years) were disincentives. This form of finance was mostly used by small towns without access to the capital markets.[40] Larger towns had access to the private capital markets and obtained finance through the issuing of local government stock. Local government stock was considered a safe investment and local authorities were able to raise money at a low cost during the formative period of municipal investment between 1890 and 1905. During this period there was a lack of overseas opportunities, and municipal securities were a good alternative to safe foreign investments. This contributed to maintaining a good borrowing climate for local authorities: interest rates fell to 2.5 percent and municipal yields were as low as 2.85 percent in 1897.[41] However, after 1905, the cost of borrowing increased for local authorities. Investors resumed sending their capital overseas, and interest rates increased, slowing the domestic investment in infrastructure.[42] The Bank of England lending rate increased from a low of 2.0 percent in 1895 to 4.9 percent in 1907.[43] This study will show how municipalisation reduced the home rate of return on social overhead projects, and how this in turn encouraged overseas investment by entrepreneurs and investors.

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[40] Wilson, 35.
[41] Wilson, 46-8; Offer, 231.
[42] A. Offer, 'Empire and social reform: British overseas investment and domestic politics, 1908-1914', *Historical journal* 26:1 (1983) 119-38, 130.
[43] F. Capie and A. Webber, *A monetary history of the United Kingdom, 1870-1982* (London, 1985), vol. I, 494. The Bank of England rate was the rate at which the Bank of England would lend to the banking system. This indirectly determined many other rates of interest.

The level of urban expenditure was a political choice variable. In general, politics following the Second Reform Act became more programmatic. The expansion of the franchise placed a new importance on organisation, mobilisation and party politics, which Ostrogorski describes with particular reference to Joseph Chamberlain's Birmingham.[44] Joseph Chamberlain is an example of the new type of politician: populist, charismatic, and acutely aware of the demands of operating in a new political arena.[45] Chamberlain rose to the national stage after serving as Mayor of Birmingham. In 1889 John Burns led the Docker's strike; that same year he entered local government politics; in 1906, under a Liberal government, he was made head of the Local Government Board. Many Labour politicians began their careers at the local government level, including Sidney Webb and Ramsay McDonald.

At the national level, issues of redistribution and social welfare influenced the electoral environment.[46] However, religion and centre-periphery relations—especially Ireland—meant that politics was fought on more than just a single dimension.[47] At the local level the issues focussed primarily on the question of urban improvements. With the exception of the square mile that constituted the Corporation of the City of London, London was governed by autonomous vestries until 1855. In 1855 Parliament established the Metropolitan Board of Works (MBW) to meet the infrastructural needs of the metropolitan area. The Board embarked on several large scale projects, including sewerage schemes and the Embankment of the River Thames. However, the Board was indirectly elected by the vestries, and this resulted

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[44] M. Ostrogorski, *Democracy and the organization of political parties*. 2 vols (London, 1902), vol. I, 161.
[45] J. Harris, *Private lives, public spirit: a social history of Britain 1870-1914* (Oxford, 1993), 13-5; I. McLean, *Rational choice and British politics: an analysis of rhetoric and manipulation from Peel to Blair* (Oxford, 2001), 113ff.
[46] P. F. Clarke, *Lancashire and the new liberalism* (Cambridge, 1971).
[47] McLean, 5ff.

in a lack of supervision and accusations of incompetence and corruption.[48] The creation of the London County Council (LCC) in 1889 was intended to remedy the problem by introducing a directly elected council.

As the successor to the MBW, the LCC was the top tier administrative authority for London, with powers to engage in slum clearance and rehousing, health and education, and transport, among other powers. The Vestries, and after 1899 the Boroughs, remained as the second-tier of London administration. This arrangement produced some duplication of services and occasional political bickering. Although the LCC was the legally recognized first tier local authority, the borough councils were the second tier road authority, and they had to agree with each other on the nature, finance, and timing of street improvements to accommodate new tramways. Agreement was sometimes difficult to achieve. Some Boroughs had high rateable values and sought to limit LCC expenditure, while others with lower rateable values favoured more first-tier spending. There are many instances of the Borough Councils rejecting an LCC proposal because of disagreements over how the cost should be apportioned. The conflict between the two tiers of London government shows the extent to which the debate over municipal trading (the public management of utilities) was also a debate over the optimal size of local government. The Fabian Society favoured larger units in order to provide a wider pool of finance and achieve economies of service delivery. The Conservatives in Parliament, alarmed by the radicalisation of the LCC under the Progressives, passed the 1899 Local Government Act, which limited the influence of the LCC by creating the Borough Councils. The creation of the Boroughs hindered the ability of the LCC to expand its provision of services.

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[48] J. Davis, *Reforming London: the London government problem, 1855-1900* (Oxford, 1988), 96-114.

Bernard Shaw had London in mind when he used the phrase 'civil war' to describe the debate over municipal trading. London was too large and diverse to make expenditure decisions consensual. Almost any municipal action was redistributory in its effects, between classes or between areas.[49] A.V. Dicey has described social policy during this period as moving from 'individualism' to 'collectivism,' a convenient and much-criticised shorthand which nevertheless retains some validity.[50] Dicey regretted collectivism; the Fabian Society welcomed it. For them, local government was first step in a nationwide political transformation. Sidney Webb believed that local government represented the 'substitution of collective for individual spending, the progress from private to co-operative outlay.'[51] Within London politics, the Progressive party was associated with the Liberals and campaigned in favour of municipal ownership. The Moderates, who were aligned more closely with the Conservatives, opposed public ownership and represented the capitalist interest. Moderate supporters opposed municipal enterprise because they resented paying for it and believed that loan finance placed an unfair burden on the future. Under private provision, increased debt and rates would cease to be a burden. Their strategy was to attack municipal enterprise—through pamphlets, in the press, and in Parliament—in order to defend the private sector against the forces of 'socialism.' The Industrial Freedom League and the London Chamber of Commerce were linked to Emile Garcke, the Managing Director of the British Electric Traction Company, the largest private tramway company in Britain. Sir John Lubbock (later Lord Avebury) was the most eminent public face of the anti-municipal trading movement. Avebury was on the board of the Metropolitan Electric Supply Company

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[49] J. Davis, 'The first Progressive Council', in Andrew Saint, ed. *Politics and the people of London: the London County Council, 1889-1965*, (London, 1989), 34.
[50] A. V. Dicey, *Lectures on the relation between law & public opinion in England during the nineteenth century* 1926 ed (London, 1905).
[51] S. Webb, *The London programme* (London, 1892), 214.

and his merchant bank was listed the underwriter of its stock.[52] These were not idle debates over intricacies of municipal finance: millions of pounds were at stake. These were the two poles of public opinion. In between them was the great mass of users and ratepayers who expressed their collective opinion through elections.

Although the Conservative Party had won 45 out of 56 London seats in the 1886 general election, the LCC emerged as a platform for Radical reform, reflecting different political issues at the different levels of government. The Progressive Party, having as its members two individuals who feature prominently in this dissertation, Sidney Webb and John Williams Benn, was in control of the LCC between 1889 and 1907. In 1892, Webb wrote polemically that 'the London masses must be organized for a campaign against the speculators, vestry jobbers, house farmers, water sharks, market monopolists, ground landlords, and other social parasites now feeding upon their helplessness.'[53] The Progressives stood for capturing the 'unearned increment' of property through the taxation of site values, providing working class housing, the municipal provision of utilities, and the equalisation of rates to narrow the gap between the Vestries with high and low rateable value. The Progressive solution to the problems of sweating and working conditions was to act as a model employer, and the LCC adopted the controversial policy of regulating working conditions through the insertion of a 'Fair Wages' clause in its contracts. Webb presented all of these ideas compactly in his 'London Programme' of 1892.

Despite its association with the Fabians, public ownership was not just a policy instrument of the political left. The Association of Municipal Corporations provides an example of the extent to which the belief in public ownership transcended party doctrine. The President of the AMC was Sir Albert Rollit, who was the Mayor

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[52] E. Garcke, *Garcke's manual of electrical undertakings* (London, annual), 1914, 682.
[53] Webb, *The London programme*, 6.

of Hull before becoming a Conservative MP for South Islington in 1886.[54] Rollit favoured the devolution of power to local government, and approved of 'the modern tendency to widen the sphere of local government.'[55] The political philosophy espoused by Rollitt and the AMC can best be described as 'municipalism'. Dismissive of Fabian collectivism and right wing individualism alike, Rollit extolled the benefits of municipal activism. 'The necessary complement of Individualism is, for political and social stability and safety, some wise Collectivism, and municipal channels are best for this purpose.' The danger of inequalities 'may best be modified by wise and enterprising appreciation and application of the municipal spirit.'[56]

Rollit was an example (and perhaps the culmination) of the English political tradition that saw local government as the necessary focal point for the expression of public citizenship. He saw America as an example of the evils caused by private business. 'Let us always take care,' he lectured, 'through the representatives of the people, of the interests of the people, not only by a proper supply of the prime necessities of life, but also of the accessories of happy and liveable lives, not merely in the reduction of death rates, but of enabling men and women to live, during life, healthy lives, carrying with them strength and wealth to those people.'[57] However, the Conservative party in Parliament did not cater to the muncipalisers within its ranks. Instead, the party chose to cater to its traditional constituencies—the Church, the City, agricultural interests and landlords—which pushed municipalisers closer to the Radicals, Liberals and Labour.[58]

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[54] Offer, *Property and politics*, 222-8.
[55] Annual meeting of the AMC (1896) PRO 30/72/25, 54.
[56] Annual meeting of the AMC (1898) PRO 30/72/27, 65.
[57] Annual meeting of the AMC (1903) PRO 30/72/33, 33.
[58] Offer, *Property and politics*, 241.

The current state of historical research

Herman Finer's 1939 book explained municipal trading as the product of several independent factors: the need of the state to satisfy the majority; the need for regularity and certainty in the provision of these services; the imprudence of trusting the private entrepreneur; the nature of the high fixed costs as a barrier to entry; and the fact that since such undertakings required municipal streets and municipal permission, municipalities saw themselves as deserving of the resulting profits. This account identified some of the issues associated with municipal trading, but was more concerned with quantifying the costs and profits of municipal activity than providing a coherent explanation for the development of public and private ownership. Indeed, Finer argued that 'to explain the development of municipal trading as the exclusive result of recognition of certain truths of economic theory would be to introduce a clarity which did not in fact exist.'[59]

More recent historical research on urban utilities in Britain has sought to introduce that clarity. Hennock used the acquisition of Birmingham gas and water companies by Joseph Chamberlain in order to fund improvements as a typical example of municipalisation.[60] The leading historical explanation was advanced by Foreman-Peck and Millward in their co-authored book, *Public and private ownership of British industry,* which built upon earlier work by Millward and by Millward and Sheard.[61] A restatement by Millward appears in the recently-published *Cambridge*

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[59] Herman Finer, *Municipal trading: a study in public administration* (London: 1941), introduction.
[60] E. P. Hennock, *Fit and proper persons: ideal and reality in nineteenth- century urban government* (London, 1973); Hennock, 'Finance and politics'.
[61] J. Foreman-Peck and R. Millward, *Public and private ownership of British industry, 1820-1990* (Oxford, 1994); R. Millward, 'The market behaviour of local utilities in pre-WWI Britain: the case of gas', *Economic History Review* 44:1 (1991) 102-27; R. Millward and S. Sheard, 'The urban fiscal problem', *Economic History Review* 48:3 (1995) 501-35; R. Millward and R. Ward, 'From private to public ownership of gas undertakings in England and Wales, 1851-1947', *Business History* 35:3 (1993) 1-21.

urban history.[62] The specific question that was at issue was why some towns municipalised their gasworks while others did not. The method was an econometric analysis of a dataset of British towns. They found that the propensity to municipalize was greater the larger the potential for private gas monopoly profits, the smaller the fiscal revenues available to the local council, and the larger the expenditure program of the local authority.[63] The two most significant independent variables were the growth rate of the town, which affected the need for spending programs, and the population density of the town, which indicated the potential for private company profits.[64] Towns with a small tax base and growing populations required alternative sources of revenue and needed to appropriate the rents from trading enterprises in order to finance urban improvements while keeping rates low. Foreman-Peck and Millward argue that municipalisation was the result of local councils wishing to use trading profits in order to relieve the rates. The setting of fares and tariffs for electricity, gas, and tramways was a way of subsidising ratepayers and generating profits to finance urban improvements.

The existing literature provides an answer to one aspect of municipalisation, but it also raises more questions. First, was the desire to appropriate rents really the main reason for municipalisation? In America, private ownership of urban utilities persisted, while in Britain most private firms were municipalised. Millward asks what can explain the desire for public *ownership* rather than mere public *control*. His answer is the need for revenue. Missing from this answer is the difficulty of the problem of regulation. Although Foreman-Peck and Millward acknowledge that the regulatory regime in Britain was weak, they do not fully consider the implication that

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[62] R. Millward, 'The political economy of urban utilities', in Martin Daunton, ed. *The Cambridge urban history of Britain,* Vol. 3, (Cambridge, 2000) 315-49.
[63] Foreman-Peck and Millward, 177.
[64] Foreman-Peck and Millward, 188.

municipalisation was a response to a contractual dilemma.[65] In contrast, the literature on urban utilities in America employs 'new institutional' economic premises. Recent research by Troesken and Jacobson emphasises the problem of regulation and discusses the difficulties in public-private contracting.[66] Following these developments, this thesis brings the problem of regulation to the forefront, and argues that a stronger reason for public ownership was that adequate methods of public control had not been developed.

Second, were towns rate-reducing maximisers? Millward argues that the initial motivation behind municipalisation was the relief of rates. Foreman-Peck and Millward argue, through econometric analysis, that the municipal gasworks in their dataset exhibit behaviour that resembles profit maximisation.[67] The question is, if towns were *only* concerned about reducing rates, was municipalisation really the best way of doing this? Did owning the utility generate more revenues that leasing it to a private firm? Municipalities also could have received income by selling the concession, by taxing the private monopolist, or by making the monopolist pay over a portion of surplus revenue, which was precisely what many radicals, new Liberals and Henry George 'single taxers' found appealing. This was the common practice in Germany.[68] In the case of gas and water, municipalities had to buy the company in order to appropriate the rents, but in the case of tramways local authorities had a reversionary right of ownership. They had the option to lease the tramways to a private firm as well as municipalisation. The story that emerges here is that although financial motivations were important, there were other forces at work.

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[65] Foreman-Peck and Millward, 163.
[66] W. Troesken, *Why regulate utilities? the new institutional economics and the Chicago gas industry, 1849-1924* (Ann Arbor, 1996); C. D. Jacobson, *Ties that bind: economic and political dilemmas of urban utility networks, 1800-1990* (Pittsburgh, 2000). The issues are discussed in the next chapter.
[67] Foreman-Peck and Millward, 124-39.
[68] D. Knoop, *Principles and methods of municipal trading* (London, 1912), 41.

Third, what were the trends over time? The Foreman-Peck and Millward story can be criticised for being static. It takes the view that the subsidy flowed from users to ratepayers from the beginning of the period until the end. This study shows that although the initial impulse for municipalisation may have been to relieve rates, over time the users of the services pressured politicians to increase access and reduce user fees. There is also an inter-temporal dimension to the problem. Politicians, under pressure from users and ratepayers, tended to discount the future value of the networks. One of the findings of this research is that in the case of tramways, there were very few examples of towns both relieving rates *and* making adequate depreciation allowances. The subsidy did not always run from users to rate-payers. Under political pressure, urban utilities were sometimes financed out of rates by the end of the period, and politicians mortgaged the future by making inadequate depreciation allowances. There is a need to provide an account of the political pressures leading to expenditure decisions.

Fourth, there is the problem of investment. What needs to be explained is not why municipalities needed revenue, but why they borrowed to an unprecedented degree in order to invest further in urban infrastructure. Part of the answer is indeed that investment was required in order to increase revenues. But a large part of the answer to this question is found by comparing behaviour relative to the private sector. In many cases, local councils had specific agendas and public health was usually at the top. The interests of private firms (high rates of return) were sometimes incompatible with the social welfare goals of the town councils. When this was the case, as in the case of tramway electrification, the town council seized the initiative and invested. Current research on public and private ownership, especially in developing countries, places a greater emphasis on the need to assure investors that

their wealth will not be expropriated than on the need to ensure that citizens will not be expropriated by the investors. For instance, Levy and Spiller write that privately owned utilities are highly vulnerable to administrative expropriation of their rents, by forcing the price below long run average costs, or by imposing conditions on investment, equipment purchase or labour markets. Where the risk of administrative expropriation is great, investors will limit their exposure resulting in undeveloped infrastructure. In this case, public ownership of utilities arises because the hazards of direct private investment are too great.[69] However, this was not the case in Edwardian Britain. We need to understand why public ownership took place in spite of private investment.

A final criticism of the current research is that it claims to provide an account of the political economy of urban utilities but leaves out the politics. One important gap in the current literature is voter behaviour and political party responsiveness at the local government level. Szreter and Offer have argued that the increased public provision of urban services can be understood as an outcome of the electoral system.[70] Is it significant that urban expenditure massively increased after the franchise expanded? To what extent did the newly enfranchised voters demand urban improvements from their politicians, and how did politicians respond? On this issue, there is the question of the role of Labour in municipal decisions. Within the LCC, John Burns was the driving force behind the Fair Wages Clause and the Works Department.

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[69] B. Levy and P. T. Spiller, 'The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulation', *Journal of Law Economics and Organization* 10:2 (1994) 201-46, 204.

[70] A. Offer, *Why has the public sector grown so large in market societies? The political economy of prudence in the UK, c.1870-2000* (Oxford, 2003); S. Szreter, 'Economic growth, disruption, deprivation, disease and death: on the importance of the politics of public health for development', *Population and development review* 23:4 (1997) 693-728.

Other scholars have suggested that there is an additional political dimension to this story, which concerns the nature of trust and collective action. Daunton argues that the British system of taxation emerged as a response to widespread trust in the government. He writes further that 'in the third quarter of the nineteenth century, the ability of urban authorities to respond to the problems was transformed, with a greater sense of trust between taxpayers and in the virtues of public action.' He states that the same project of trust building that took place at the national level occurred at the local level as well. Furthermore, 'the Victorian and Edwardian city was successful in accumulating "social capital", in creating the conditions for collective action to deal with urban diseconomies....'[71] However, there is a lack of causal mechanism for what factors in particular helped to create the sense of trust in local governments to increase the scale and complexity of their operations. Victorian England had a per capita level of wealth comparable to several developing countries today, yet was far more successful in meeting the challenges of urban provision. What specific characteristics of English local government contributed to this outcome?

This study is broad in conception but focuses specifically on London between 1870-1914. The focus on London is a deliberate attempt to investigate an area that has been neglected in the literature. Millward and Foreman-Peck and Millward deal with a dataset of many towns, but focus on none in particular.[72] Hennock concentrates on Leeds and Birmingham.[73] Davis's book on London government stops at 1900, and most of the municipal improvements by the local authorities came after that date.[74] Offer's work on *Property and politics* describes the debates over urban

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[71] M. J. Daunton, ed. *The Cambridge urban history of Britain* Vol. 3, 1840-1950, (Cambridge, 2000), 25,53.
[72] Millward and Sheard, 'Urban fiscal problem'; Millward, 'Political economy'; Foreman-Peck and Millward.
[73] Hennock, *Fit and proper persons;* Hennock, 'Finance and politics'.
[74] Davis, *Reforming London.*

utilities within the larger urban context, but was not intended as a full account of how and why they were resolved.[75] One reason why historians of municipal trading have been wary of London is its complicated administrative structure. Delivery of services and fiscal responsibility were divided between the LCC, the boroughs, and ad hoc authorities like the Metropolitan Water Board and the Port of London Authority. This complexity provides a suitable challenge. A second reason to focus on London is its contemporary importance. London was the metropolis at the heart of the empire, and its problems received an intense level of scrutiny. London's problems were national problems. Indeed, despite the exceptional characteristics, the development of public ownership in London was not atypical of England as a whole, and useful comparisons can be drawn.

Summary

This introduction has generated the questions which the remainder of the study will address. Why was private ownership under public regulation not more widespread? What contributed to the belief that public authorities were worthy of being trusted? How did local government politics mediate the process of municipalisation? How did voters make their preferences known, and how did political parties respond? Finally, how did municipalisation affect private sector patterns of investment? Answers to these questions require a theoretical framework, and that is provided in the next chapter.

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[75] Offer, *Property and politics*, 221-41.

Chapter 2: The conceptual framework

It has been almost a century since issues surrounding the construction of waterworks, transport infrastructure and power supply first dominated British local government politics. The terms of present day debate over how to finance the London underground, how to manage the railways and how to operate an efficient system for public transportation are similar to the questions that prevailed during the late nineteenth and early twentieth centuries. We focus on a different period of history when different economic and political forces were operating, a time when municipalisation and private ownership were both considered to be viable options, and seek to provide a theoretically informed discussion on the origins and development of public ownership in Britain.

This study is concerned with motivations and mechanisms. 'Motivations' refers to explaining why historical actors made the choices that they did, and 'mechanisms' refers to the political, economic, ideological and financial structures that allowed for these choices to become outcomes. The intention is not to prescribe solutions for current debates on urban utilities, but to explain what occurred in the past. This study will not address normative questions such as whether public or private provision was optimal, or whether one was more efficient than the other.[1] The purpose is not to evaluate past decisions and outcomes, but to understand them. What follows is a discussion of some key themes that inform the analysis of the historical record.

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[1] For a study that focuses on efficiency, see J. Foreman-Peck and R. Millward, *Public and private ownership of British industry, 1820-1990* (Oxford, 1994).

Incomplete contracting and regulation

The first theme is how government regulates private business, what determines the success of a regulatory regime, and the degree to which agency costs influenced the decision to absorb urban utilities within the public sector.

Neoclassical economic theory assumes that economic agents are endowed with full information, that they transact costlessly with others, and that these transactions take place in a competitive market. The 'new institutional' economics explicitly identifies the problem of imperfect information and seeks to explain economic behaviour using the transaction as the basic unit of economic analysis.[2] The transaction costs of public utilities are large. There are high upfront costs, and long payback periods. The nature of the investment is asset-specific. At the initial stages, entrepreneurs provide the capital and manage the fixed networks that they create in pursuit of rents. The networks are directly linked to the consumer, giving the owner of the utility high exploitative power. Over time, the technology becomes more diffused and more important to urban life.[3] As this process occurs, politicians may intervene to regulate private firms in order to achieve price and quality benchmarks. Regulation, the process by which government attempts to control the actions of a private firm, can be conceptualised as a long-term contract.[4]

Long-term contracts where service is delegated are difficult to write and difficult to enforce. In the case of a utility, we can identify two parties to such a contract, the

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[2] For the pioneering article, see R. Coase, 'The nature of the firm', *Economica* 4 (1937) 386-405. A recent survey is O. E. Williamson, et al., *The nature of the firm: origins, evolution, and development* (Oxford, 1991).

[3] W. Robson, 'The public utility services', in Harold Laski, et al., eds., *A century of municipal progress, 1835-1935*, (London, 1935). See also D. F. Wilcox, *Municipal franchises*. 2 vols (New York, 1910), vol. 1, 3. For a more recent analysis, see A. Offer, *Why has the public sector grown so large in market societies? The political economy of prudence in the UK, c.1870-2000* (Oxford, 2003).

[4] D. Newbery, *Privatization, restructuring, and regulation of network utilities* (Cambridge, MA, 2000); G. Priest, 'The origins of utility regulation and the 'theories of regulation' debate', *Journal of Law and Economics* 36:1 (1993) 289-323.

principal and the agent. The principal is the government, who in turn acts on behalf of its constituents. The government's agent is the utility company. The difficulty inherent in an agency relationship is the need to ensure that the agent acts in the best interests of the principal. The principal contracts with the agent to accomplish a task, but is often unable to monitor the agent's performance and behaviour due to information asymmetries. If the contract is for a single transaction, the agency problems are minimal. But complexities arise when the relationship extends into the future, especially when the contract involves asset-specific capital investments.[5] This relaxation of the neoclassical assumption of full information implies that contracts are unavoidably incomplete. Hart and Moore argue that it is often impossible for parties to specify all of the relevant contingencies when contracting, either because they cannot foresee them or because it is too expensive to enumerate them in extensive detail. A 'complete contract' would never need to be renegotiated or revised, and lack of full information makes this condition unattainable. A consequence of contractual incompleteness is that parties to the contract look to the courts as a way of resolving the ambiguities.[6] When the government contracts with a private firm, there remains a continuing role for government in contract administration. That role involves monitoring, enforcing and bargaining over unexpected contingencies. As Vickers and Yarrow write, these activities may be one step away from regulation or having the public agency oversee the work directly.[7] A public-private contractual relationship is a distinctive one because government retains the power to

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[5] T. Eggertsson, *Economic behavior and institutions* (Cambridge, 1990), 148.
[6] O. Hart and J. Moore, 'Incomplete contracts and renegotiation', *Economica* 56:4 (1988) 755-85, 756.
[7] J. Vickers and G. Yarrow, 'Economic perspectives on privatization', *Journal of Economic Perspectives* 5:2 (1991) 112-32, 116.

legislate after the fact. In America this right is referred to as eminent domain, and in Britain as the right of compulsory purchase.

An additional problem of long term contracting is that both sides are prone to opportunistic behaviour. Opportunism occurs when the agent prefers his immediate interests to those of his principal. Parties to a contract may exploit asymmetries of information. Promises that are unsupported with credible commitments expose the parties to hazard, which constitutes an element of risk. Williamson argues that economic activity should therefore be organised 'to economize on bounded rationality while simultaneously safeguarding the transactions in question against the hazards of opportunism.'[8] 'But for the simultaneous existence of both bounded rationality and opportunism,' he writes, 'all economic problems are trivial and the study of economic institutions is unimportant. Thus, but for bounded rationality, all economic exchange could efficiently be organized by contract.'[9] For firms, a response to the problems of contracting is vertical integration. For governments, a response is to internalise the provision of services under public control. However, this does not completely resolve the problems of contracting: the firm must still contract with its workers, and the government with its bureaucrats and workers.

Hart, Shleifer and Vishny demonstrate that private ownership leads to an excessively strong incentive to engage in cost reduction and weaker incentives to engage in quality improvement. Public ownership removes the incentive to engage in cost reduction but replaces this with a weak incentive to engage in both cost reduction and

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[8] O. Williamson, 'The modern corporation: origins, evolution, attributes', *Journal of economic literature* 19:14 (1981) 1537-68; Williamson, et al., *The nature of the firm.* 'Bounded rationality,' means that the decision making ability of an economic agent is bounded by cognitive constraints.
[9] Williamson, 'The modern corporation', 1543.

quality improvement.[10] During this period, urban utilities were associated with broader issues of sanitation, public health, and housing. The quality of the service, which is the most difficult part of the contract to specify, was a persistent problem. In theory, managers of private firms have more incentive than government managers to invest in efficiency-enhancing ideas. However, they also have the incentive to cut costs and quality, while staying within the letter of the contract. The choice between public and private ownership depends on which of these effects is more important.[11]

Clubs, redistribution and electoral politics

The second theme is how preferences over urban utilities were revealed, how they were debated, and what role the electoral system played in influencing private versus public provision. Before we can conduct any useful analysis of urban utilities we need to outline how they can best be defined. Samuelson explicitly made a distinction between public goods and private goods. Public goods exhibit two characteristics: they are non-rival and non-excludable. 'Non-rival' means that the public good can be consumed by one individual without detracting, in the slightest, from the consumption opportunities available to others.[12] Examples include sunshine and national defence. 'Non-excludable' means that the benefits cannot be withheld costlessly by the owner or producer. In the case of street lighting, for example, it is difficult to limit who can and cannot enjoy the benefits.[13] The other type of good is a private consumption good, which can be acquired exclusively by different individuals. Private goods can be provided by the market since

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[10] O. Hart, et al., 'The proper scope of government: theory and an application to prisons', *Quarterly Journal of Economics*:November (1997) 1127-61.
[11] O. Hart, 'Incomplete contracts and public ownership: remarks, and an application to public-private partnerships', *Harvard University Department of Economics Working Paper* (July 2002).
[12] P. Samuelson, 'The pure theory of public expenditure', *The Review of Economics and Statistics* 36:4 (1954) 387-89, 387.
[13] R. Cornes and T. Sandler, *The theory of externalities, public goods, and club goods* 2nd ed (Cambridge, 1996), 4.

the price system is (theoretically) an efficient way of allocating resources. Because they are non-rival and non-excludable, public goods are often provided by the government and funded by taxation. The problem is to decide on the amount of the good to supply and the amount of tax to charge.[14]

It is useful to conceive of a continuum with pure public goods on one end and pure private goods on the other. In between are 'quasi-public' or 'impure public' goods. These goods exhibit degrees of rival consumption and excludability. Such goods can be conceptualised as 'club goods' following the work of Buchanan. Buchanan introduced his theory of clubs as a way of overcoming the Samuelsonian binary choice between public good and private good.[15] The theory of clubs is a theory of co-operative consumption. A club is an organisation offering a collective good exclusively to its members. The problem that the theory of clubs addresses is optimum club size. Exclusion is possible, but not costless. If economies of scale exist, then the addition of another member lowers the average cost. If the average cost falls indefinitely, then the optimal size is the whole population. But if costs start to rise, either because scale economies become exhausted or because of the additional costs of 'crowding,' then optimal size may be lower than the entire population.[16] Crowding refers to the condition when one user's utilization of the club good decreases the benefits or the quality of service to remaining users.[17] Examples of crowding are longer waits, slower delivery of service and other such issues that can range from having too many people in a swimming pool to spending too long on a hospital waiting list. Theoretically, so long as clubs are

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[14] D. C. Mueller, *Public choice II* (Cambridge, 1989), 171.
[15] J. Buchanan, 'An economic theory of clubs', *Economica* 32:1 (1965) 1-14.
[16] Mueller, 150-4.
[17] Cornes and Sandler, 348.

voluntary and have a mechanism for exclusion, they can provide collective goods at an optimal level to their members' preferences.

Within an urban context, Tiebout has framed local government units as competing clubs.[18] Tiebout argued that consumer mobility between local government units provided a means of revelation of preferences for expenditure on public goods. He observed that local government provided many collective goods including fire, police, and education. He used the term 'consumer-voter' to describe the economic agent who moves between local government units in order to find the desired level of expenditure and taxation. The term is useful one, and corresponds to the Webbs' description of local government as an association of consumers.[19] 'Spatial mobility provides the local public-goods counterpart to the private market's shopping trip.'[20] Critics of the Tiebout hypothesis argue that it rests upon a number of highly abstract assumptions. Consumer voters are assumed to: be fully mobile; have full knowledge of expenditure patterns; have a large number of communities from which to choose; have no restrictions relating to employment opportunities (live on dividend income). Further, public services are assumed to exhibit no economies of scale.[21]

In reality, the consumer-voter is not fully mobile. As we have already seen, exclusion is critical to the optimal functioning of a club. Tiebout therefore wrote that 'people with the same fiscal tastes, given the costs to each of them, should move together.' People with high incomes tend to band together to keep low income residents

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[18] C. M. Tiebout, 'A pure theory of local expenditures', *Journal of political economy* 64 (1956) 416-24.; see also J. Buchanan and C. Goetz, 'Efficiency limits of fiscal mobility: an assessment of the Tiebout model', *Journal of Public Economics* 1 (1972) 25-43.

[19] S. Webb and B. P. Webb, *English local government: statutory authorities for special purposes* (London, 1922), 437.

[20] Tiebout, 422.

[21] Tiebout, 419. K. Dowding, et al., 'Tiebout: a survey of the emperical literature', *Urban Studies* 31 (1994) 767-97.

out of the community through zoning laws, building restrictions, and other such means of control. Given the chance, the rich will tend to avoid paying taxes for the poor.[22] Stiglitz wrote that 'the problem of exclusion—of the rich attempting to keep the poor out of their community—has no obvious parallel in market economics.' Even with proportional wealth taxation, there is large element of redistribution involved in the provision of services to the local community.[23]

Debates over the size and composition of local government units, especially within large metropolitan areas, has produced and continues to produce policy debates and political conflict.[24] Why should this be the case? The answer may be that a majority of voters may prefer congested public clubs. Glazer and Niskanen imagine a world consisting of a poor majority and a rich minority. The rich voter is assumed to be more averse to poor quality (congestion) than the poor voter. Universal provision schemes have redistributive properties. The rich are taxed, and their wealth is used to fund the consumption of those who contribute less than they do. In addition, the rich may resort to the private sector while still financing the publicly provided good through taxation. At the same time, poor voters enjoy the benefits of having their services financed or subsidised by the rich.[25] In a large urban area, when rich and poor are combined into a single unit (as was the case with the London County Council) such redistribution will occur. However, if the rich choose to separate themselves from the poor both residentially and fiscally, they can achieve a closer approximation of their optimal club

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[22] C. M. Tiebout, 'An economic theory of fiscal decentralization', in J Buchanan, ed. *Public finances: needs, sources, and utilization*, (Princeton, 1961), 94.
[23] J. E. Stiglitz, 'The theory of local public goods', in Martin S Feldstein and Robert P Inman, eds., *The economics of public services*, (London, 1977), 275.
[24] Brookings Institute, 'The new metropolitan agenda,' *The Brookings Review*, Fall 1998.
[25] A. Glazer and E. Niskanen, 'Why voters may prefer congested public clubs', *Journal of Public Economics* 65:1 (1997) 37-44; T. Besley and S. Coate, 'Public provision of private goods and the redistribution of income', *American economic review* 81:4 (1991) 979-84.

size. A system that combines rich and poor areas within units of local government will tend to reduce inequalities, while a system of small, competing units will tend to reinforce them.[26] This was precisely the issue that arose in the debates over the relationship between the second-tier Vestries and Boroughs and the first-tier County Council.[27]

Mueller wrote that 'a local polity is a form of club, and clubs are a type of polity.'[28] Public utilities have attributes of club goods.[29] Clubs have institutional exclusion devices. Rich and poor have different preferences regarding quality and congestion. Preferences have to be taken as hetrogenous.[30] Both groups fought over establishing the club size that would most benefit them. During this period, the club size began as small and exclusive and then tended towards universal provision. The Webbs described local government as being 'virtually, an Association of Consumers, in which membership was obligatory and universal.'[31]

The debates over urban utilities were debates over the type of club, size of club, and means of exclusion from the club. Electoral politics provided a means of answering these questions. In democratic politics, the chain of principal-agent relationships begins with the consumer-voter. The consumer-voter seeks to improve his own welfare. Under conditions of indigence, the majority of consumer-voters cannot act alone to acquire goods like a water delivery system, transport or power. The rich ones are able to acquire

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[26] K. Newton, 'Is small really so beautiful? Is big really so ugly? Size, effectiveness and democracy in local government', *Political studies* 30:2 (1982) 190-206.
[27] A. Offer, *Property and politics, 1870-1914* (Cambridge, 1981), especially 228-41. See also J. Davis, *Reforming London: the London government problem, 1855-1900* (Oxford, 1988).
[28] Mueller, 155.
[29] J. Wiseman, 'The theory of public utility price- an empty box', *Oxford Economic Papers* 9:1 (1957) 56-74.
[30] A. Drazen, *Political economy in macroeconomics* (Princeton, 2000), 6.
[31] Webb and Webb, 437.

private supply of these goods, and in Victorian and Edwardian London there were many instances of personal water and electricity supply. But for the vast majority, the initial cost of setting up such a scheme is prohibitive. Co-ordination is required in order to finance the fixed investment and achieve lower unit costs through economies of scale. Initiating the programs to produce, finance and deliver these goods requires collective action, but collective action is difficult to generate successfully and becomes more difficult with greater numbers of people.[32] Politics provides a mechanism for collective action. Consumer-voters elect politicians as their agents to achieve the collective action goals that they could not achieve for themselves. The consumer-voter is the principal and the politician is the agent. The regular mechanism of electoral politics provides a means of monitoring (through an opposition party and a free press), aligns interests (the politician's goal is to remain in power, and remaining in power requires the approval of the voters), and provides a mechanism for resolving disputes (citizens can vote the politicians out of office if they are dissatisfied).

Political parties will compete with each other for the median voter.[33] Voters have different preferences at different stages of their life cycles: the elderly want social assistance but have no need for education; the young want education but have no use for old age pensions. In addition, voters have different tax obligations and the question of the distribution of these tax burdens is an important substantive issue that politicians have to resolve. By presenting voters with a basket of goods labelled 'expenditure,' politicians can cohere voters into coalitions. Voters are not given an opportunity to select from a menu of infinite choices. Elections are more like multiple-choice tests than essays:

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[32] M. Olson, *The logic of collective action: public goods and the theory of groups* (Cambridge, Mass, 1965).
[33] A. Downs, *An economic theory of democracy* (New York, 1957).

choose A or B. It follows then that policy outcomes will tend to converge on a single point along the continuum of reduced taxation at one end and increased expenditure at the other. This is an early finding of public choice theory.[34]

The challenge for politicians is to identify a point that will maximise their chances of election relative to others. If the franchise expands, as it did in 1867, then the position of the median voter shifts downwards on the income scale, and redistributive spending may result.[35] This, it must be pointed out, assumes that the politicians are responsive to the electorate; lobbying and corruption will short circuit the feedback mechanism and produce different policy outcomes. Indeed, the degree to which politicians show their responsiveness through corruption and patronage rather than through programmatic party politics affects the provision of these club goods.[36] Not all 'democratic' systems are responsive, and some authoritarian systems are. The degree to which the legitimacy and continued existence of a government depends on popular support will determine the level to which voters will influence spending decisions.

When utilities are provided publicly, politicians may be encouraged to make long-term investments and increase social welfare. But problems occur because politicians have an incentive to provide services at a loss, to under-invest, and to shift the resulting deficit onto the future. If voters (or politicians) are myopic, they will choose immediate gratification (lower taxes) over future reward (better infrastructure) and public infrastructure will suffer as a result. Thus, the same force that can motivate government

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[34]On the application of these theories to history, see the introduction to I. McLean, *Rational choice and British politics: an analysis of rhetoric and manipulation from Peel to Blair* (Oxford, 2001). The early finding was H. Hotelling, 'Stability in competition', *Economic Journal* 39:153 (1929) 41-57.

[35] A. H. Meltzer and S. F. Richard, 'A rational theory of the size of government', *Journal of political economy* 89:5 (1981) 914-27. See also Downs, 128.

[36] A. S. Orloff and T. Skocpol, 'Why not equal protection? Explaining the politics of public social spending in Britain, 1900-1911, and the United States, 1880s-1920', *American sociological review* 49:6 (1984) 726-50.

absorption of infrastructure in the first instance can also contribute to decreasing quality over time. Similarly, voters can also demand services but not be willing to pay for them, in which case the politicians behave opportunistically towards their own projects and will shift the fiscal deficit onto the future.[37] The economic literature on privatisation has observed that public ownership responds to political decision makers and the electorate.[38]

The importance of institutions

The institutional context of urban utilities is the third theme. The traditional concerns of economic history have been macroeconomic questions like economic growth and total factor productivity. A growing trend has been to explain the role of institutions.[39] Newbery argues that public utility policy is an outcome of the institutional endowments present in a particular country at a particular time.[40] Many of the topics addressed here, like local government administration, the function of the law, and parliamentary agencies, are associated with the generation of historians that wrote before the Second World War. For instance, a rich source of documentation was G.D.H. Cole's personal collection of books deposited at the Nuffield College Library. Different countries resolved the dilemma of urban utilities in different ways. Institutional variables like the judiciary, the civil service, and the local government machinery played important roles in determining the historical path. The decisions over public or private ownership can be framed as an institutional choice variable, whereby previous decisions and actions influence later outcomes.

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[37] Offer, *Public sector*.
[38] Vickers and Yarrow, 115.
[39] D. C. North, *Institutions, institutional change and economic performance* (Cambridge, 1990).
[40] Newbery, 1-25.

In the background to this discussion is the nature of the British state. José Harris has argued that the currently fashionable notions of 'civil society' apply much more to the German than to the British historical experience. The German tradition defines civil society as the area in between the state and the family. Current thinking about civil society and its close cousin, 'social capital,' tends to de-emphasise the role that the state can play in economic life. Following Harris, it is perhaps more appropriate in the British context to define the state as being a part of civil society than as being alien to it. The implication is that the relationship between the function of the state and the relationship of the state to its citizens needs to be reframed.[41] Contemporaries had strong views on the place of locality within the English constitution and the role that the local government should play within civic life.[42] Urban utilities were one way of working out the implications of these views.

The argument

The first providers of urban utilities were the private gas and water companies that received parliamentary permission to act as incorporated companies in the early 1800s. Then, the idea that gas and water would be anything other than a luxury was unthinkable, and many companies sought approval to initiate new schemes. When customers were unhappy with the terms of provision by one company, parliament empowered the creation of another. But by the 1830s the problems with competition were clear. Under pressure from the new sanitary reformers, who sought to reduce the negative public health externalities of private provision of water, and from the companies themselves,

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[41] J. Harris, ed. *Civil history in British society*, (Oxford, forthcoming).
[42] J. M. Prest, *Liberty and locality: Parliament, permissive legislation, and ratepayers' democracies in the nineteenth century* (Oxford, 1990); M. J. Daunton, *Trusting Leviathan: the politics of taxation in Britain, 1799-1914* (Cambridge, 2001).

who were wasting capital by providing duplicate networks, parliament sought new ways to regulate. It will be argued that the institutional endowments of the British state did not facilitate a working regulatory regime. By the 1870s, the regulatory foundations for public ownership had been set.

Public ownership was a viable alternative because local government was undergoing a great period of administrative transformation. There was a conscious attempt, through the legal system as well as through cultural norms, to reduce corruption and make local governments capable of managing projects of increasing complexity. American visitors to Britain in the 1900s were impressed by municipal ownership of utilities because they thought British cities had reached a higher stage of administrative and political capacity. Politicians faced high costs if they used public utilities for personal gain, but the electoral system meant that utilities could be used as a way of courting an increasingly strong working class and trade union vote.

The expansion of the franchise following the 1867 Reform Act reduced the level of wealth of the median consumer-voter and increased the preference for redistribution. Voters faced a trade-off: Would they support higher levels of taxation in exchange for higher levels of provision? The majority had an interest in a large public club. Voters favoured higher levels of expenditure, and political parties converged on the policy of public provision. Politicians too faced a trade-off. On one hand, they sought to maximize profits; on the other, they sought to maximize political support. Politicians were sensitive to the costs of provision of urban utilities, and were careful when taking on risk, lest they be punished by the voters. They attempted to conclude franchise agreements with private sector agents. However, the problems of contracting became

apparent, and this was one of the driving forces behind municipalisation. Once in public sector hands, a new contracting problem emerged: How should local government deal with municipal employees? Politicians showed themselves to be willing to increase the wages of municipal employees, both as an ideological choice and as an act of political calculation. The outcomes of these choices forced businessmen to weigh the costs and benefits of home versus overseas investment in urban infrastructure projects. The story that has been told by historians has been a financial story emphasizing the subsidy of ratepayers by users. This study shows that there were other dimensions to the issue.

Chapter 3: Why did regulation fail?

Urban utilities must be placed within a regulatory context if they are to be properly understood. The purpose of this chapter is to outline the historical development of the regulation of network utilities in Britain, with particular emphasis on urban utilities.[1] Privately-owned utilities can be regulated in a variety of ways, including specifying a maximum price or a maximum rate of return. Although the practical difference between a state-owned utility and a privately-owned utility under rate of return regulation may be small, the ownership structure is an outcome that requires explanation. The broad argument is that the failure to develop a viable regulatory compact made public ownership an attractive alternative, and that this outcome was conditioned by British institutional endowments.[2] The story that emerges out of this discussion of historical episodes is that the regulatory incentives contained in Parliamentary legislation did not produce a viable regulatory compact. The reason was that Britain lacked the administrative capacity to implement more appropriate measures. When the problem is viewed in comparative perspective, the absence of a constitution with American-style judicial review emerges as especially important.

Regulation in history and theory

Historians have given insufficient attention to the history of economic regulation in Britain.[3] Foreman-Peck and Millward, for example, wrote that the reasons for the failure of regulation were beyond the scope of their monograph.[4] American scholars have contributed to a vast literature examining utility regulation in America, and by

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[1] This chapter will not attempt to discuss social or employment regulation like the Factory Acts.
[2] D. Newbery, *Privatization, Restructuring, and Regulation of Network Utilities* (Cambridge, MA, 2000), 23.
[3] An notable exception is work by Foster and McLean: C. D. Foster, *Privatization, Public Ownership and the Regulation of Natural Monopoly* (Oxford, 1992); I. McLean, 'Railway Regulation as a Test-Bed of Rational Choice', in Keith Dowding and Desmond King, eds., *Preferences, Institutions and Rational Choice*, (Oxford, 1995) 134-61.
[4] J. Foreman-Peck and R. Millward, *Public and Private Ownership of British Industry, 1820-1990* (Oxford, 1994), 44.

comparison we know little about the historical experience of regulation in Britain. There has been much more written, for example, on the issue of town planning regulation. One reason for this could be that, until recently, British economic historians were writing against a backdrop of nationalised industry. Regulation was not a problem that needed to be addressed, by contrast with America where utilities mostly operated as private monopolies regulated by commissions. The historical literature on the development of municipal trading describes public ownership as a consequence of monopoly. The well-known argument, first made by Falkus, is that natural monopoly conditions of supply required regulation, and that over time public opinion grew to favour ownership by local government.[5] However, economic theory does not show that natural monopoly conditions *necessarily* lead to public ownership. Millward observes that historians have thus far been unable to produce an adequate explanation for why public ownership emerged rather than the regulation of private firms.[6] This chapter aims to provide the explanation.

The 'theories of regulation' debate began in the 1970s. One explanation of regulation is the public interest theory, which holds that regulation is a search for economic efficiency as a result of market failure. The sources of the market failure can be natural monopoly or negative externalities. Coase was the first of the Chicago economists to argue against this theory by stating that in a world of zero transaction costs, actors could bargain over externalities to produce an optimal outcome.[7] A second Chicago critique came from Stigler. He argued that regulation is a product of supply and demand forces, and sometimes producers effectively demand regulation in

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[5] M. Falkus, 'The Development of Municipal Trading in the Nineteenth Century', *Business History* 19:2 (1977) 134-61.
[6] R. Millward, 'The Political Economy of Urban Utilities', in Martin Daunton, ed. *The Cambridge Urban History of Britain,* Vol. 3, (Cambridge, 2000) 315-49, 325.
[7] R. H. Coase, 'The Problem of Social Cost', *Journal of Law and Economics* 3 (1960) 1-44.

order to further their own ends.[8] A strong expression of this 'economic' theory is the 'capture' model, which holds that the regulator is 'captured' by the regulated industry and therefore pursues distributional policies which are against the public interest. The concept, however, is a slippery one, since demonstrating capture involves demonstrating a situation that is contrary to the public interest, and the public interest in turn depends on specifying a social welfare function.[9] An earlier critique came from the Virginia public choice school, which argued that regulation is a self-enrichment by government (the 'Leviathan' theory).[10]

The problem with these theories is that they apply most pertinently to situations where regulation occurs on an ongoing basis, like American public utility commissions or federal agencies. They offer little help in explaining the conditions necessary for regulation to succeed at all. This question fits within the current 'new institutional' agenda. Spiller and Levy outline a theory which frames a country's ability to sustain regulation of a privatised industry as a product of institutional endowments.[11] By institutional endowments, they refer to five elements: legislative institutions; judicial institutions; customs and other informal norms; the character of contending social interests; and administrative capabilities. These elements may display elements of path dependence over time.[12] Spiller and Levy argue that a

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[8] G. Stigler, 'The Economic Theory of Regulation', *Bell journal of economics* 2 (1971) 3-21. Another variation of the economic theory is S. Peltzman, 'Toward a More General Theory of Regulation', *Journal of Law and Economics* 19 (1976) 211-40.

[9] For a review of the problems with the concept of regulatory capture, see M. E. Levine, 'Regulatory Capture', in P Newman and R Palgrave, eds., *The New Palgrave Dictionary of Economics and the Law*, (London, 1998) 267-71, 267-71.

[10] J. M. Buchanan and G. Tullock, *The Calculus of Consent: Logical Foundations of Constitutional Democracy* (Ann Arbor, 1962).

[11] This and the next paragraph refer to B. Levy and P. T. Spiller, 'The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulation', *Journal of Law Economics and Organization* 10:2 (1994) 201-46. They borrow some of their categories of institutional endowments from D. C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge, 1990).

[12] North, 92ff.

regulatory design that does not take account of the institutional endowments will not endure.

The problem that Spiller and Levy are trying to address is how to restrain arbitrary executive action. They believe that in order for a country to attract private investment, investors need to be reassured of the security of their assets. If private firms anticipate expropriation, they will not invest, and then there will be no choice except for government to invest in their place. Government ownership of utilities is therefore a consequence of unacceptably low levels of private investment. However, this conclusion does not accurately reflect Victorian Britain. Parliament created a safe property rights regime, and speculative capital poured into the new network utilities, especially railroads. Spiller and Levy write that the same mechanisms that protect investors against arbitrary changes in the rules also make it difficult to make sensible rules in the first place, or to adapt the initial rules to changing circumstances. It follows that if the rules cannot accommodate changing circumstances, there may be pressure from the public to dissolve them in favour of something else. Regulatory design requires a balance between restraint on one hand and flexibility on the other. Public ownership may result if the balance shifts too far in either direction.

Regulatory incentives

Regulation can be usefully conceptualised as a form of long term contracting between the regulator and the regulated firm.[13] The terms of the contract need to be specified and adjusted over time. In the Britain, the forum for regulation was Private Bill procedure. Private Bills affected the interests of individuals or particular localities rather than the general public, and were mostly used to govern local investment projects. The Private Bill procedure began with a petition by an individual member,

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[13] G. Priest, 'The Origins of Utility Regulation and the 'Theories of Regulation' Debate', *Journal of Law and Economics* 36:1 (1993) 289-323.

either a member of the House of Commons or House of Lords. The petition was sent to a Committee, which investigated the Bill, heard from affected parties, and finally ruled the Bill proved or not proved. If the Bill was proved, it could then be ratified as an Act of Parliament after approval by both Houses.[14] The investigation and passage of Private Acts occupied most of the time and attention of Parliament. Roads, waterworks, gasworks, canals and railroads all received legal sanction through Private Bills. This system favoured localised solutions to local problems, and produced a accumulation of statutes.[15] Unless British local governments received Parliamentary approval for their projects, their actions were judged to be *ultra vires*. When faced with a large amount of applications for a specific type of Private Bill, like Railroads in the 1840s or Tramways in the 1870s, Parliament simplified Private Bill procedure with Clauses Acts. These were basic templates applied to all future Private Bills. The Railroads Act, Tramways Act and Electric Lighting Act are examples of Clauses Acts. The record of Private Acts and Clauses Acts is the legal record of regulation in Victorian England.

Regulation by entry

Parliament's first attempt to regulate network utilities by entry was unsuccessful. The services that later acquired the label 'public utilities' emerged as luxuries rather than necessities.[16] Parliament granted the early gas and water companies the right to operate as incorporated companies. Earl Fortescue recalled that 'Sir Robert Peel used to speak of the "torpid hand of Government," and deprecated the State or public bodies doing what trading companies could do instead.' Peel described 'what, in his opinion, was a proper remedy for a bad, inadequate or unduly dear supply—namely,

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[14] F. Clifford, *A History of Private Bill Legislation* (London, 1885), vol. I, 267ff.
[15] S. Webb and B. P. Webb, *English Local Government: Statutory Authorities for Special Purposes* (London, 1922).
[16] W. Robson, 'The Public Utility Services', in Harold Laski, et al., eds., *A Century of Municipal Progress, 1835-1935*, (London, 1935) 299-331, 300.

to establish another company to compete with the one complained of.'[17] The result was a multiplicity of companies. By 1869, there were four gas companies in Glasgow; there were three water companies south of the Thames in London by 1833, and in some cases they all had mains on the same streets; the number of gas companies in London reached a high of fourteen.

Contemporary observers accurately identified the problems caused by regulation by entry. For consumers, the construction activity associated with breaking up the streets to install pipes was a constant nuisance. In the case of gas, the leakage from construction was a safety issue.[18] In the case of water, construction interrupted supply. The local authorities, who were responsible for roads, sometimes objected to the breaking up of the streets, and later regulation took account of their interests. But competition produced low prices at the initial stages, despite the inconveniences, and appeared to be effective.[19]

However, the competitive regime was unsustainable, and evolved into collusion. London's water supply by eight joint-stock companies is an example. On the North bank, the four companies involved in a furious price-cutting war partitioned the disputed territory in 1817 and immediately raised their prices. On the South bank, companies tore up the pavement, sometimes daily, in order to accommodate customers switching from one company to another. The returns on this investment were pitiful. In 1839, the Vauxhall Company spent £24,000 on pipes to win revenues that only amounted to £81.[20] Collusion eventually put an end to this practice, and the

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[17] E. Fortescue, 'Extracts from the Address of the President of Section F, 'Economic Science and Statistics' of the British Association for the Advancement of Science, at the Forty-Seventh Meeting, Held at Plymouth, August 1877', *Journal of the Statistical Society of London* 40:4 (1877) 557-67, 563.
[18] The Southampton Consumers Gas Light and Coke Bill, Report from the Surveying Officers, BPP 1847 xx, 33.
[19] Speech by Sir George Grey, 116 H.C. Debates 3rd Series, 29 April 1851, col. 309; National Civic Federation, *Municipal and Private Operation of Public Utilities*. 3 vols (New York, 1907), vol.II, 120.
[20] S. E. Finer, *The Life and Times of Sir Edwin Chadwick* (London, 1952), 391.

price charged to the public increased by 25 per cent.[21] Similar stories can be set in Sheffield and other British cities.[22] Edwin Chadwick, a leading agitator for London sanitary reform, summarised the situation as follows:

> competing companies always end by coming to an agreement, and making the public pay for the whole amount of previous waste, and wasteful expenditure in legislative conflicts, as well as for double capital, and in some places there have been as many as four sets of pipes going through the same streets, all of which the public have entirely to pay for; and frequently they pay for imperfect supplies of bad water at double the price for which they might get good.[23]

The surveying officers for the *Report on the existing system of lighting towns with gas* reported contemporaneously that they regarded the problems of gas provision to be 'with the system itself' and reported on social cost of competition.[24]

From the perspective of the companies, competition resulted in inefficient deployment of capital. In London, Parliament had deliberately assigned the companies overlapping concessions. The result, according to the Southwark and Vauxhall water companies, was

> an immense expenditure of capital in utter waste—double and treble sets of mains and pipes being laid down in districts where one set would have better served the inhabitants. An enormous capital outlay, equally in utter waste—in the salaries of canvassers and commission to agents, who procured tenants—in the bills of plumbers who changed the service pipes of tenants from one set of mains to another—in the charges of taking up and re-laying roads and pavements on the like occasions—in double and treble sets of turncocks and pipe-layers....[25]

There were already two competing gas companies south of Thames when the South Metropolitan entered the market in 1833. 'Each company attempted to lay its mains in every street and would have consumers at any cost.' The consumers did indeed

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[21] Finer, 392.
[22] Falkus, 147.
[23] Private Bills, Select Committee Minutes of Evidence, BPP 1846 (566) xii, q. 321 testimony of Edwin Chadwick.
[24] Observations or General Report on the Existing System of Lighting Towns with Gas, by Johnes and Clegg, Surveying Officers, BPP 1847 (106) xxii, pp. i-vii.
[25] Excerpted in H. Finer, *Municipal Trading: A Study in Public Administration* (London, 1941), 42.

benefit from a brief period decreasing prices. But then the water and gas companies colluded in order to shield themselves from the effects of competition. By the 1850s, however, the companies apportioned the district into monopoly areas and sought Parliamentary approval for their districting of the market. The companies had increased prices from 25 to 50 percent after making the agreement, and opposition was too strong for that measure to pass.[26] Consumers wanted access and fair prices. Companies wanted an environment in which they could deploy their capital productively.

Companies were reluctant to invest further because of the high possibility that competition would make such investments unrewarding.[27] Investments in water and gas infrastructure were asset-specific. Once the capital was sunk, the network could not be used for another purpose. Investment by London water companies occurred predominantly at the initial phase when the industry was still speculative. Chadwick described the public health externalities of low investment leading to poor water supply in his famous 1842 Report.[28] He singled out the London situation as especially poor. Supply was intermittent and water was only provided a few days a week. His goal of constant supply under pressure was impossible under competition, he argued, and could best be obtained under a regulated monopoly.[29] Indeed, the need for investment affected not only Chadwick's policy prescription but also the development of tramway and electricity legislation.

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[26] National Civic Federation, vol. II, 125.
[27] R. Millward, 'Emergence of Gas and Water Monopolies in Nineteenth-Century Britain', in James Foreman-Peck, ed. *New Perspectives on the Late Victorian Economy: Essays in Quantitative Economic History 1860-1914*, (Cambridge, 1991) 96-124..
[28] E. Chadwick, *Inquiry into the Sanitary Condition of the Labouring Population of Great Britain* (London, 1842).
[29] E. Chadwick, 'Results of Different Principles of Legislation and Administration in Europe; of Competition for the Field, as Compared with Competition within the Field, of Service', *Journal of the Statistical Society of London* 22:3 (1859) 381-420.

Regulation by maximum dividend

These problems prompted the onset of new regulatory legislation in the 1840s. A new technology—the railway—was expanding rapidly. W.E. Gladstone, while President of the Board of Trade, drafted the Regulation of Railways Act in 1844 in order to provide for a stable and effective operating environment.[30] The Act gave Parliament the power to cap the rates of new lines earning more than ten per cent per year based on paid up capital, and to purchase any railway company earning more than ten percent annual profits after a period of 21 years.[31] Two more acts that emerged out of 1840s debates were the Waterworks Clauses Acts and the Gas Clauses Acts. The 1847 Waterworks Clauses Act established clauses that were to be inserted into subsequent private acts to obligate the company to supply pure water for domestic use for those who were willing to pay for it, limited the water rate in accordance with the rateable value of the premises, and established a basis for fixing a maximum dividend of less than ten percent. Any profits in excess of the dividend would be used to reduce the water rate for consumers.[32] The Gasworks Clauses Act of the same year also prescribed maximum dividend and quality conditions.[33] Precedent played a large role in gas and water acts, as the ten percent figure was the same as had been issued to companies in Parliamentary Acts in 1818.[34]

In examining this new legislation, two points stand out. First, Parliament was more concerned with establishing a maximum dividend than it was with regulating price. Foster argues that this led to overinvestment in railway networks, a condition

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[30] McLean argues convincingly that Gladstone's motivation was to do what he thought was in the public interest.

[31] 7 & 8 Vict. c85. Foster presents an excellent account of railway regulation analysed in current economic language. For a detailed historical analysis, see H. Parris, *Government and the Railways in Nineteenth-Century Britain* (London, 1965).

[32] 1847, 10 & 11 Vict. c17.

[33] 1847, 10 & 11 Vict. c15.

[34] Falkus, 146.

referred to as the Averch-Johnson effect.[35] Foreman-Peck has argued that although an Averch-Johnson effect may not have actually occurred, railway regulation resulted in higher construction costs and a poorly integrated network.[36] It was argued that the whole principle behind maximum dividend legislation was flawed: the customer benefited from reductions in price, not a reduction in shareholder dividends, and it could not be assumed that the surplus would flow from shareholder to consumer. [37] As we will see, Parliament could not monitor firms effectively, and many of them successfully evaded the rate of return regulation by watering their capital.[38] The second point is that these acts contained no mechanism for adjustment over time.

Adjustment over time

The future is uncertain and difficult to specify. Contracts therefore need to provide for a mechanism for adjustment, or else the parties are locked-in to conditions which may no longer be appropriate. An early advocate of adjustment provisions was James Morrison, a Liberal MP who sat between 1830 and 1847. A self-made businessman, Morrison was a lone but articulate voice on Victorian railway regulation and indeed on regulation in general. He rose in the House of Commons in 1836 to propose a new direction in railway policy. Morrison's speech emphasised the need for a flexible regime that could change over time. Morrison observed the progress in cotton spinning and agricultural technology taking place around him and concluded that regulation must ensure that efficiency gains are shared with the consumer. Parliament, he argued, was legislating as if the railways had already achieved the 'highest degree

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[35] Foster, 29-30; H. Averch and L. Johnson, 'Behaviour of the Firm under Regulatory Constraint', *American economic review* 52:5 (1962) 1052-69.

[36] J. Foreman-Peck, 'Natural Monopoly and Railway Policy in the Nineteenth Century', *Oxford Economic Papers* 39 (1987) 699-718.

[37] T. Farrer, *The State and Its Relation to Trade* (London, 1883), 116.

[38] This was a problem in America as well: National Civic Federation, vol. I, 116.. For how American economists dealt with this problem, see M. Rutherford, 'Institutional Economics: Then and Now', *Journal of Economic Perspectives* 15:3 (2001) 173-94, 180-2.

of perfection'; efficiency gains would accrue to the producer rather than consumer. 'A toll that would have yielded an ample profit on a railway constructed a dozen or twenty years ago might now, perhaps, yield an equal amount of profit were rates reduced a half.'[39]

By itself, fixing a maximum dividend would be ineffective. Morrison argued that

> Nothing, in fact, can be more improvident, or more absurd, than that Parliament should, once and for all, fix the rate of toll when an undertaking is entered upon, and divest itself, unless by violating the right of property, of the power to reduce that rate in all time to come, how greatly soever it may exceed what would be liberal return for the capital vested in the undertaking.[40]

Morrison's logic was that there would be no need for the state ownership of railways outlined in the 1844 Act if prices could be adjusted periodically. The converse of this statement, which Morrison did not state, was that without adjustment over time state ownership (or the option of purchase) might become necessary. Indeed, this is precisely what emerged in Gladstone's Act, and what was later written into the Tramways and Electric Lighting Acts.

T.H. Farrer argued a similar view. He trained as a barrister, but left the bar to join the Board of Trade in 1850 as an assistant secretary to the Marine Department. He was a Permanent Secretary from 1865 to 1886 and exerted influence over railway and electric lighting legislation. After leaving the Board of Trade he served on the London County Council from 1889 to 1898. His book entitled *The state and its relation to trade*, published in 1883 when he was still at the Board of Trade, provides a valuable insight into contemporary policy decisions.[41] He argued that the

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[39] 33 H.C. Debates 3rd Series, 17 May 1836, col. 984.
[40] 33 H.C. Debates 3rd Series, 17 May 1836, col. 984.
[41] The value of Farrer's work is so high because the materials at the Public Record Office offer little insight into policy formation during our period. BT 5 and BT 78-9 refer mostly to new appointments to the Board. On electricity, BT 22 (Correspondence and papers 1882-85) has been heavily weeded.

Parliamentary attempts to regulate dividend and capital had 'gone on a perfectly wrong tack and have involved ourselves in a maze of absurdities. Coupled with the statutory price of gas, it really operates as a guarantee to the companies of an easy 10 per cent dividend.' Maximum dividend legislation, he argued, 'leads not only to extravagance in current expenses, but to an extravagant waste of capital.' [42]

Over time, costs and demand change. Train writes that if there is no adjustment, the regulated firm could end up losing money or making excessive profits, neither of which is financially or politically sustainable.[43] Present day price caps are therefore linked to price or wage indices, and change by a pre-established mechanism over time. In the current British RPI – X system, the company is allowed to increase prices by a value equal to the price index (the RPI) minus the value of X. The regulator has a high degree of discretion in setting the value of X, which is the amount that the firm is expected to decrease prices as a result of efficiency gains. It was not until the 1870s that Parliament implemented a regulatory mechanism that worked in such a way: the so-called 'sliding scale.' Under a sliding scale method of price regulation, the Board of Trade fixed a standard price, a standard dividend and an initial scale. If the standard price charged by the company were to be reduced, then the company could raise its dividend by a prescribed amount, and if the company raised its price it would have to reduce its dividend. For example, a gas company would receive parliamentary permission to provide gas under a perpetual concession. The standard price would be 3s 1d for 1000 cubic feet of 14 candlepower gas, with a standard dividend of 4 percent. For every 1d rise or decline in price, the dividend

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[42] Farrer, 116.
[43] K. Train, *Optimal Regulation: The Economic Theory of Natural Monopoly* (Cambridge, MA ; London, 1991), 318-28.

could be raised or lowered by the standard scale, 1/15 percent for every 1d of change.[44]

The quality of the gas was both specifiable and measurable, and could be measured with scientific equipment.[45] The major safety issues involved in gas supply were explosions at the storage tanks, and these issues were mostly resolved in the 1820s when gas safety was placed under control of the Home Office. In contrast to gas, water exhibited the more quality issues, ranging from the degree of filtration to the level of pressure required to fight fires. The difficulty in specifying quality issues, and the adverse effects of public health externalities, explains why water had the highest incidence of municipalisation, not only in Britain but in America as well.[46] We will discuss the difficulties in contracting for tramways and electricity separately in the case study chapters.

Parliament began to apply the sliding scale, almost exclusively to gas companies, in the 1870s, although the clause was first inserted in 1855.[47] An older view, first put forward by Chatterton, is that the sliding scale was decisive in ensuring lower gas prices.[48] Firms, he argued, responded to Parliamentary statute. A more recent view, advanced by Matthews, stresses that the cost structure of the gas industry, in particular the price of coal and iron, determined the price much more than regulation.[49] These views, however, are not mutually exclusive. Although the sliding scale may not have forced prices down, it did provide an incentive for companies to use cost savings to reduce prices rather than to pass the savings along to shareholders

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[44] D. Knoop, *Principles and Methods of Municipal Trading* (London, 1912), 24.
[45] For a description of the use of a photometer, see Metropolis Gas Companies Bill, Select Committee Report BPP 1875 (281) xii.
[46] J. A. Tarr, 'The Evolution of the Urban Infrastructure in the Nineteenth and Twentieth Centuries', in Royce Hanson, ed. *Perspectives on Urban Infrastructure*, (Washington, DC, 1984).
[47] Clifford, 226.
[48] D. Chatterton, 'State Control of Public Utilities in the Nineteenth Century: The London Gas Industry', *Business History* 14:2 (1972) 166-78.
[49] D. Matthews, 'Laissez-Faire and the London Gas Industry in the Nineteenth Century', *Economic History Review* 39:2 (1986) 244-63.

by watering the capital. When used in conjunction with auction clauses (which stipulated that any new capital issues be auctioned openly rather than issued to existing shareholders), it effectively aligned the company's interest in issuing high dividends to shareholders and the consumer's interest in lower prices.[50] This accounts for why gas was the least municipalised of the four urban utilities,[51] because it alone had a mechanism that adjusted over time and aligned interests accordingly. The scheme was robust: the sliding scale lasted past the First World War, and was ultimately confounded by inflation.[52]

The theme that emerges out of these episodes supports James Morrison's position on railway companies. Control becomes more difficult over time. The longer the term of ownership, the more sophisticated the control mechanism must be. But, instead of trying to develop new means of control, Parliament adapted by shortening the length of the franchise.

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[50] P. Joskow and R. Schmalensee, 'Incentive Regulation for Public Utlities', *Yale journal on regulation* 4:1 (1986) 1-49.
[51] Falkus, 136.
[52] Foster, 62.

Time duration

'The practical maxim of leaving contracts free, is not applicable without great limitations in case of engagements in perpetuity,' wrote John Stuart Mill in 1848. His argument was that individual judgement could only be considered to be legitimate if it were grounded in present, personal experience. A perpetual contract was based on future expectations, and knowledge of the future is 'commonly next to null.' [53] In successive editions of his *Principles* Mill applied the problem of perpetual contracts particularly to marriage, but his premise applies as well to public utilities.

Mill laid out the conditions under which public control could be warranted within his scheme of political economy and framed the topic in a way that made him a highly influential participant in the debate. He was a collaborator of Chadwick in 1842; Parliament consulted him on the Metropolitan Water Bill in 1851; Thomas Farrer cited Mill at great length in 1883.[54] 'The principle of government regulation,' Mill wrote during a Parliamentary debate on the London water issue, 'I conceive to be indisputable.' But Mill was less sure of whether government should discharge the function by itself or by regulating the conduct of others.[55] He framed the issue in contractual terms. The London gas and water companies operated as incorporated companies under what was in effect a perpetual franchise. Although there was competition, the ability to change the terms of the contract did not exist and consumers were locked-in. 'There are few householders,' he wrote, 'who make any distinction between their "water rate" and their other local taxes.'[56]

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[53] J. S. Mill, *Principles of Political Economy* (Toronto, 1965), Book V, Chapter xi, s. 10. This passage remained the same throughout successive editions.
[54] A. L. Harris, 'J. S. Mill on Monopoly and Socialism: A Note', *The Journal of Political Economy* 67:6 (1959) 604-11. The article contains large sections from an unpublished letter from Mill to the Metropolitan Sanitary Association; see also Farrer.
[55] John Stuart Mill quoted in debate by Sir George Grey, 116 H.C. Debates 3rd Series, 29 April 1851, col. 309.
[56] Mill, Book V, Chapter xi, s.11.

In such a situation, the enterprise could best be managed by what Mill called 'delegated agency.' The issues involved were the alignment of interests and the ability to monitor management decisions. The directors of a joint-stock company were usually shareholders, and within a corporate structure shareholders do have the ability to influence management. Practically, the collective action required to exercise this power was 'hardly ever used.' In contrast, governments had the potential to be more responsive. Compared to 'the very ineffectual security afforded by meetings of shareholders, and by their individual inspection and inquiries, may be placed the greater publicity and more active discussion and comment, to be expected in free countries with regard to affairs in which the general government takes part.' In the case of 'practical monopoly' conditions like water and gas provision, government management appeared a viable alternative. Mill admitted that government could be 'jobbing, careless and ineffective,' but also argued that joint-stock management displayed the same characteristics: 'they are found to be even more irresponsible, and unapproachable by individual complaints, than the government.'[57] Practical monopolies had the effective power of taxing the community, and taxation required ongoing consent and effective means of influencing decisions.

The greater the length of time, the more the regulated private companies were able to entrench themselves and pursue their own special interests. London water companies, for example, were an effective political interest group. They had a share capital of £5 million and a bloc of reliable votes in Parliament. It was said at the time that the companies spent over £100,000 on their counsel to defeat a bill in Select Committee, and even purchased a newspaper to harass and abuse Chadwick.[58] This

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[57] Mill, Book V Chapter xi, s. 11.
[58] Finer, *The Life and Times of Sir Edwin Chadwick*, 403-10.

was classic rent-seeking behaviour, and the companies had a low incentive to co-operate with reform-minded MPs and civil servants.[59]

The government that conceded a monopoly unreservedly to a private company was analogous to allowing 'an individual or association to levy any tax they chose, for their own benefit, on all the malt produced in the country, or all the cotton imported into it.' Although Mill argued that local government could be the best provider of services, he also recognized that private management may have greater expertise and knowledge. Railways or canals, for example, 'will almost always be better worked by means of a company, renting the railway or canal from a limited period of time from the state.' Mill did not support public control when he had a chance. He argued in 1851 that a proposed amalgamation of the London water companies should be operated by the private companies rather than by government because the companies had greater expertise.[60] The best policy was therefore the assignment of private management rights to a limited duration franchise period, with the public retaining reversionary ownership rights and the right to set maximum prices.

The experience of regulating water and gas companies was the context of Parliamentary regulation for new types of network utilities. By the time that tramways emerged as a growing technology in the 1860s, the structure of the regulatory problem was clearer than it had been when water and gas companies sought incorporation earlier in the century. The problem involved issues of investment and control. Horse-drawn tramways had proven themselves to be a viable and growing means of transport in America, and entrepreneurial interest was high.

The challenge was how to facilitate investment without giving away control over

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[59] A. O. Krueger, 'The Political Economy of the Rent-Seeking Society', *American economic review* 64:3 (1974) 291-303.

[60] Mill did not make the statement in Parliament, but was quoted by Sir George Grey, 116 H.C. Debates 3rd Series, 29 April 1851, col. 309; see also Harris.

public rights of way and public access to transport. The Tramways Act of 1870 can therefore be understood as a response to earlier problems of regulation.

In brief, the Tramways Act provided for a private franchise over a tramway route for a period of 21 years.[61] As a response to municipal pressure, a prospective company had to secure the approval of the local authority concerned as well as the approval of frontagers whose property faced the proposed line. Once that approval was granted, the company had the legal right to use the public right of way in order to lay down tracks for a tramway. The franchise period would be similar to a patent, during which the company had the chance to make a return on its initial investment.[62] The franchise specified maximum prices as well as provisions for workmens' trains. In order to encourage investment, there was no ceiling on dividends. The Act set the terms of the deal for 21 years; the Railways Department of the Board of Trade, the civil service office responsible for overseeing the implementation of the Bill, was not required to amend or adjust the terms of the contract on an ongoing basis. The critical clause of the Act was the clause which granted reversionary ownership to the local authority.[63]

At the end of the 21 year period, ownership would revert back from the entrepreneur to the local authority. The intention was that the local authority would enter into a sequence of lease agreements, and solve the issues that arose in each successive negotiation. The idea was that local government would approve tramway lines and have the power of residual ownership. Experience with gas and water companies contributed to the belief that a contract in perpetuity was not a viable

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[61] The following paragraphs are based on the Tramways Act, 33 & 34 Vict. 1870, c. 78. My intention is to treat the development of tramways more thoroughly as a case study in chapter 6, and electricity in chapter 7.
[62] For patents, see Farrer, 87ff.
[63] Clause 43.

option.[64] Private firms, rather than local governments, would actually operate and run the tramways. Clause 19 stated that 'nothing in this Act contained shall authorise any local authority to place or run carriages upon such tramway, and to demand and take tolls and charges in respect of the use of such carriages.'[65] It was left to the municipality and the company to settle on a maximum price in the Private Act. The Tramways Act effectively limited the tenure of ownership and gave an incentive to the company and the local authority to reach an amicable arrangement since a subsequent renegotiation was expected.

The period of 21 years that appeared in the Railway Act of 1844 and the Tramways Act of 1870 also appeared in the Electric Lighting Act of 1882. The period was an inheritance from Turnpike legislation going back to 1706. Turnpikes were established for 21 years in the first instance, with renewals possible for future years.[66] This reflects the high extent to which regulation was influenced by historical precedent.

A purchase clause made it easy for the local authority to purchase the tramway and negotiate with the company as a lessor. The local authority could purchase the tramway at the end of the franchise period at the 'then value (exclusive of any allowance for past or future profits of the undertaking, or any compensation for compulsory sale, or other consideration whatsoever).'[67] The Public Health Act of 1848 had permitted local authority purchase and control of water companies. However, the buyouts had to be by mutual agreement and were often expensive. Companies struck hard bargains and town councils often had the burden of repayment

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[64] National Civic Federation, vol. I, 187.
[65] Clause 19.
[66] B. Albert, *The Turnpike Road System in England, 1663-1840* (Cambridge, 1972), 29. See also S. Webb and B. P. Webb, *The Story of the King's Highway* (London, 1963).
[67] Section 43.

on their books for many years.[68] The Tramways Act presented the Board of Trade with a chance to correct this imbalance in favour of the municipalities. George John Shaw-Lefevre, the Parliamentary Secretary to the Board of Trade, was in charge of the Act since the President of the Board of Trade, John Bright, was occupied with the Irish question. Shaw-Lefevre, who later championed the cause of public footpaths, was adamant that only a buyout under the terms of the Act would be sufficient to ensure eventual local government ownership.[69]

The Electric Lighting Act of 1882 followed the same model as the Tramways Act. If the local authority chose to contract with a company, the Board of Trade issued licenses for a maximum of seven year periods. The local authority and the company would negotiate a maximum price, which would be included in the Private Act. The final interest of the public was protected by the power to purchase the monopoly.[70] After 21 years (extended to 42 years in 1888), the local authority had the power to purchase the undertaking based upon the depreciated value of the assets rather than the earning power of the enterprise.[71] The Act was novel because it awarded local government the opportunity to provide electric light should it choose to do so instead of relying on a company.[72] The legislation therefore favoured local authorities, both in terms of the opportunity to provide and the opportunity to purchase.

These Acts should be seen as the result of many years of wrestling with the problems involved in gas, water and railway companies. Writing in 1907, the American National Civic Association investigators reported that one of the axioms of British attitudes towards municipal ownership was that 'the Public can be trusted with

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[68] National Civic Federation, vol. II, 119-20.
[69] 199 H.C. Debates 3rd Series, 1 March 1870, col. 1083-4.
[70] Farrer, 119.
[71] Electric Lighting Act (1882) 45 & 46 Vict. c56. The purchase clause is s.27.
[72] Electric Lighting Act (1882), s. 3(7).

an unlimited franchise and a company cannot.'[73] It was easier to regulate time than it was to regulate price or rate of return. However, the specified time duration created investment issues. Companies who wished to recoup the full value of any investment were reluctant to invest as the end of the franchise approached. This was most particularly evident with respect to tramways.

Problems of asymmetric information

Regulatory incentives are only effective if they can be monitored and enforced. Monitoring involves developing the necessary bureaucratic and administrative agencies. The British state, at the central government level, did not develop the institutional capacity to monitor private firms.

The problem of asymmetric information is the central problem of the economics of regulation.[74] The behaviour of firms can be monitored only imperfectly, and the advantage lies with the regulated firm. It knows better than the regulator how its capital is deployed, what technological innovations are cost-effective, and what effect price structure has on profits. At the central government level, the cost of acquiring information was high. Local government had lower information and monitoring costs because urban utility services were inherently local in scope.

The lack of institutionalised information gathering procedures contributed to the ineffectiveness of railway regulation. Just two years after the passage of Gladstone's Act, the Select Committee on Railway Act Enactments met to discuss 'what conditions would make the Railroad Acts better fitted to promote and secure the interests of the public.' Among the committee members was James Morrison, who had warned of the problems with the 1844 Act. One of their conclusions was that a dedicated administrative agency should be set up to demand and compile accurate

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[73] National Civic Federation, vol. I, 262.
[74] J. Vickers and G. K. Yarrow, *Privatization: An Economic Analysis* (Cambridge, Mass ; London, 1988), 99.

periodical returns from the companies, according to a uniform scheme, and present these returns annually to Parliament.[75] The reason for this was that 'There existed no efficient system of accountability by which Parliament could obtain anything like an accurate knowledge of the net profits of railway companies.'[76] The committee thought that watering of capital was higher in Britain than in any other country.[77]

'Watering capital' is a term that refers to the ways in which companies under rate of return regulation evade regulation through the issue of share capital. A typical practice was to issue shares at par to shareholders when the shares were trading at a premium.[78] The net amount that the company issued in dividends was therefore higher than Parliament had envisioned, even if the rate of dividend was acceptable. Gas companies employed similar practices. Evidence presented to the Select Committee on the Metropolitan Gas Companies Bill showed how companies frequently converted loan capital to share capital.[79] This was technically allowed under the Company Clauses Act.[80] Parliament responded to this problem by inserting auction clauses into Private Acts that stipulated that any new capital issues be auctioned openly rather than issued to existing shareholders. The first such clause was used in 1847 and the practice was extended to all of the London gas companies in 1876.[81]

Accounting was an additional source of information asymmetry. The evidence presented to the Select Committee on Audit of Railway Accounts supports the conclusion that accounts were opaque, misleading, and showed a complete lack of

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[75] Railway Acts Enactments, First Report of the Select Committee, BPP 1846 (590) xiv, 4.
[76] Railway Acts Enactments, Second Report of the Select Committee, BPP 1846 (687) xiv, vi.
[77] Railway Acts Enactments, Second Report of the Select Committee, BPP 1846 (687) xiv, x.
[78] Clifford, 113.
[79] Metropolis Gas Companies Bill, Select Committee Report, xii.
[80] Clifford, 224.
[81] Clifford, 220.

uniformity.[82] There was no practice of external auditing. In many cases the auditors of the accounts were two shareholders.[83] Accounts were provided in the final three years of the 21 year period rather than throughout. Morrison wrote in 1848 that 'companies had it completely in their power to keep Parliament and public in the dark as to the real state of their affairs.'[84] A more recent study of railway economics by Pollins concurs with this view, stating that the lack of consistency among railway accounts makes a comprehensive study impossible.[85] It was not until 1868 that Parliament enacted a statue specifying the treatment of capital and revenue. A common practice involved booking revenue as capital so that that company could issue larger sums in dividends.[86] William Acworth, a railway economist writing in 1912, wrote that 'we do not know what the average rate for goods or the average fare for passengers is. Parliament has not so far thought fit to demand this information.'[87]

Part of the problem was that MPs did not insist on standard accounting procedures and regular reports. Hadley argues that the MPs opposed being guided by salaried civil servants.[88] This precluded the formation of a commission comparable to the American Interstate Commerce Commission. The 1846 Commissioners of Railways Act established the Board of Commissioners. A bill in 1847 proposed to give Commissioners the power to recommend new lines, to examine the compliance of existing companies with legislation, to examine the capitalisation of railway companies, and to report annually to Parliament on fares. The bill was withdrawn on

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[82] Audit of Railway Accounts, Minutes of Evidence for the Select Committee, BPP 1849 (371) x, q.481, testimony of Thomas Rennie Hutton, Official Assignee at Bristol, and a former accountant in the City. On accounting in general, T. A. Lee, 'Company Financial Statements: An Essay in Business History, 1830-1950', in S Marriner, ed. *Business and Businessmen*, (Liverpool, 1978) 235-62, 238.
[83] Audit of Railway Accounts, Select Committee Minutes of Evidence, 481.
[84] J. Morrison, *The Influence of English Railway Legislation on Trade and Industry, with an Appendix of Tracts and Documents* (London, 1848), 20.
[85] H. Pollins, 'Aspects of Railway Accounting before 1868', in M. C. Reed, ed. *Railways in the Victorian Economy: Studies in Finance and Economic Growth*, (Newton Abbot, 1969) 138-61, 140.
[86] Pollins, 146. Regulation of Railways Act, 31 & 32 Vict. c119.
[87] W. M. Acworth, *The Elements of Railway Economics* (Oxford, 1905), 6.
[88] A. T. Hadley, *Railroad Transportation: Its History and Its Laws* (New York, 1892), 171.

second reading, and the Board of Railway Commissioners was merged into the Board of Trade in 1851. A related proposal from a Lords committee that called for prescribed standardised accounts and outside auditors also failed to become law. [89]

A larger part of the problem was that the railway interest in Parliament was a strong opposition to the formation of an effective administrative agency. Herbert Spencer reported that in 1845, the names of 147 MPs were also on the register of new railway companies. Many MPs were canvassed by railway lobbyists.[90] Attempts to give the newly-created Railway and Canal Commission (created in 1873) the authority to review rates were thwarted by the railway interest in Parliament.[91] *Bradshaw's Railway Almanack* listed the names of railway directors who sat in Parliament. In 1873, there were 52 railway directors in the House of Lords and 123 MPs in the House of Commons.[92] This was a case of interest group politics rather than regulatory capture.

The failings of railway regulation may have come as a surprise to those who were unaware that British legislators had tried and failed before. Turnpikes had presented similar regulatory problems. Turnpike trustees adopted price discrimination and frequently mortgaged the tolls in order to receive an immediate cash flow; in some cases, the interest payments precluded making necessary improvements to the road. There were no provisions to monitor receipts or to require trustees to account to any public authority other than the local JP.[93]

The Board of Trade had the role of regulating much of the commercial activity occurring in England, from customs to railways, yet in 1840 the entire staff of the

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[89] Railways, Report of the Royal Commission, BPP 1867 xxxviii, xvii; Clifford, 113.
[90] H. Spencer, 'Railway Morals and Railway Policy', *Essays, Scientific, Political and Speculative,* 3 vols Vol. 3, (London, 1854) 52-112, 65.
[91] Foster, 47-9.
[92] G. Bradshaw, *Bradshaw's Railway Almanack, Directory, Shareholders' Guide, and Manual* (London, 1873), Appendix, 96.
[93] Webb and Webb, *The King's Highway*, 135.

Board numbered only thirty people.[94] Unlike in America, where a written constitution clearly delineated powers across three levels of government, the statutes that governed British local government evolved and increased in number over time.[95] The Private Acts procedure, which applied general clauses to specific instances, had created a massive amount of legislation. The provisions that regulated railways were scattered through 3,100 Acts of Parliament.[96] London water alone operated under 250 Local Acts.[97] Central government could not supervise urban utilities. Perhaps local governments could? The Public Health Act (1848), for example, sidestepped the problem of regulating on an on-going basis.[98] The initial Private Act for a company would stipulate the maximum profits. From that point onwards, it would be up to the residents of a community to exercise their 'delegated agency' to their local government. If one-tenth of the ratepayers approved, the town council could appoint an inspector. If the inspector agreed that public was better than private provision, the town council was empowered with the ability to finance the purchase of the water supply system out of rates. The Tramways and Electric Lighting Acts gave local authorities the responsibility of monitoring the undertaking, the option of purchasing it at a deeply discounted price, and the freedom to contract with private firms at the end of the franchise period. Later Parliaments expanded these freedoms to the freedom to run the undertaking for themselves. That is a theme of later chapters, but here are the root causes of that outcome.

Thomas Farrer, the Board of Trade official who appeared earlier, provides the clearest link between these legislative acts and contemporary thought on regulating

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[94] H. L. Smith, *The Board of Trade* (London ; New York, 1928), 52.
[95] Webb and Webb, *Statutory Authorities*, 478.
[96] Railways, Report of the Royal Commission (1867), xxxiv.
[97] Finer, *The Life and Times of Sir Edwin Chadwick*, 390-2. For a sense of the staggering degree to which Parliament legislated by Private Act, see Clifford, Appendix B. The number of Local and Personal Acts passed between 1800 and 1884 numbered 14,774.
[98] 1848 (11 & 12 Vict) c63.

network utilities. His thoughts are worth quoting at length, since they illustrate the beliefs of one of the men who personally shaped the future of regulation in Britain.

> there are many points in which the interests of these companies are at variance with those of the public; and that the conditions which the state has imposed on them for the purpose of preventing their monopoly from being injurious to the public are still tentative; that these remedies have often proved inadequate, and sometimes mischievous; and that whilst it is right and necessary to impose some restrictions on them, yet without great caution and wisdom such restrictions are likely to be injurious to the public as well as to the companies.

Farrer continued by expressing his belief that

> the endeavour to get local authorities to undertake these works themselves, and where concessions are made to private companies to limit them in point of time, as has been done in the case of tramways and electric lighting, though as yet experimental only, is a hopeful experiment.'

Where competition could be relied upon to prevent monopolistic abuse, the public was best served by private entrepreneurs. 'But where these conditions are not to be found,' he argued, 'and where the matter is of such a kind that a public governing body can properly manage it, experience and analogy show that there is no *a priori* or absolute objection to the state, whether in the form of the central government or of a local authority, acting as trader itself.' [99] This endorsement of public ownership should be seen as a practical rather than ideological solution to the problems of regulation.

There certainly was a substantial ideological dimension to the issue. One of the most forceful expressions of this view is the work of Joshua Toulmin Smith, the conservative London barrister. He wrote that the purpose of political society is to encourage the healthy development of the faculties of the constituent members. Participation was a virtue both as an end in itself, and as a mean to the end of protecting against despotism. This was best achieved through 'local self

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[99] Farrer, 122.

government', which he regarded as the basis for the English Constitution.[100] He was bitterly opposed to administrative centralization: ('between a bureaucracy and an individual despotism there is no difference in principle') and opposed the Public Health Act because it involved the Board of Health in local government decisions.[101] Centralization was 'the prop and means of despotism and tyranny' and 'Communism in another form.'[102] The authority of Parliament was legitimate only insofar as it did not encroach on local self government. 'No interference by any central authority can be permitted without a necessary consequent sacrifice of independence, self-reliance, and efficiency.'[103] Toulmin Smith is the most extreme example of a widely held belief that local governments were the best guardians of their interests. The controversy over Chadwick's plan to centralize public health monitoring is an example of this belief.[104] The decision to give local authorities the powers to monitor and purchase urban utilities was therefore in harmony rather than in opposition with ideological beliefs that persisted well into the twentieth century.[105] In addition to the reasons discussed earlier, the ideology of localism also helps to explain why the regulatory context shifted to the local level.

The role of judicial review

Newbery models the regulatory compact as a game. The community, represented by politicians, has the power to grant exclusive access rights to the utility, and the utility has the expertise and finance to undertake the investment and operations. The potential for conflict exists over the distribution of rents between utility and the

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[100] J. T. Smith, *Local Self-Government and Centralization* (Lond., 1851), 21.
[101] Smith, *Local Self-Government and Centralization*, 29.
[102] Smith, *Local Self-Government and Centralization*, 56.
[103] Smith, *Local Self-Government and Centralization*, 31.
[104] See W. C. Lubenow, *The Politics of Government Growth: Early Victorian Attitudes toward State Intervention, 1833-1848* (Newton Abbot, 1971).
[105] See for example W. A. Robson, *The Development of Local Government* (London, 1931); W. A. Robson, *The Government and Misgovernment of London* (London, 1939).

community. The two players, the regulator and the utility, are locked in a game of conflict and co-operation.[106] If it is a two-player game, the choice is either to co-operate or to defect. The previous section has shown how Parliament awarded local authorities the residual rights of ownership, and granted them generous terms of purchase of tramways and electricity undertakings. This gave the upper hand to local authorities. If they wished to defect, they had the necessary statutory powers to operate the utility themselves. However, if the game is a two-player game with a third party able to introduce new rules, the ability to defect is reduced. This is what took place in the United States, where the Supreme Court intervened in the regulatory game in a way that British courts did not.

In America the courts were active shapers of the regulatory regime. By 1886, 25 American states and territories had established railway commissions and another five had passed railway legislation that called for enforcement by the courts.[107] The commissions of Massachusetts and Illinois were a model for the federal Interstate Commerce Commission (ICC), established in 1887 in order to solve the limitations of state regulation of interstate operations.[108] But these commissions were not the final authority, and their powers were limited. Between 1887 and 1905, the Supreme Court found against the ICC in fifteen of the sixteen rate cases that reached it.[109]

The Supreme Court played a decisive role in shaping the development of rate of return regulation America. The first development was in 1876, when the Supreme Court ruled that such regulation was constitutional in *Munn v. State of Illinois.*[110] The Court upheld the sections of the Illinois State Constitution that allowed the State to

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[106] Newbery, 30.
[107] F. Dobbin, *Forging Industrial Policy: The United States, Britain, and France in the Railway Age* (Cambridge, 1994), 68.
[108] S. Breyer and R. Stewart, *Administrative Law and Regulatory Policy* (Boston, 1985), 17.
[109] Dobbin, 89.
[110] *Munn v. State of Illinois*, 94 U.S. 113 (1876).

regulate the rates charged in grain elevators, irrespective of whether the grain elevator operator received its authority by statute. Chief Justice Waite delivered the majority opinion. In it, he wrote that 'when private property is devoted to public use, it is subject to public regulation.' He drew heavily on English jurisprudence, in particular the work of Lord Hale. 'It is insisted,' he wrote, 'that the owner of property is entitled to a reasonable compensation for its use, even though it be clothed with a public interest, and what is reasonable is a judicial and not a legislative question.'[111]

The Court later outlined what was 'reasonable' in *Smyth v. Ames*.[112] In 1893 the Nebraska state legislature passed a statute imposing maximum rates on intrastate shipments of goods by railways operating within the state. These rates were on average about 30 per cent lower than the rates charged in immediately preceding years. What the railway companies claimed, and what the Court accepted, was that if those rates had been charged during the previous two years, they would not have made sufficient revenue to cover operating costs, service their debt, and issue dividends to shareholders.[113] At issue was whether this statute was constitutional according to the Fourteenth Amendment, which stipulated that no state shall deprive any person of property without due process of law. The lower court had ruled on those grounds that the statute was unconstitutional, and the Supreme Court affirmed the lower court's decision. Justice Harlan, writing for the majority, ruled that the public should not carry the burden of capitalisation above the 'fair value' of the company. Although railways were 'public highways', Harlan wrote that 'the corporation may not be required to use its property for the benefit of the public without receiving just compensation for the services rendered by it. How such

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[111] Quoted from the Judgement.
[112] *Smyth v. Ames*, 169 U.S. 466 (1898).
[113] Judgement of *Smyth v. Ames*; Breyer and Stewart, 240.

compensation may be ascertained, and what are the necessary elements in such an enquiry, will always be an embarrassing question.'[114]

The answer to Harlan's 'embarrassing question' was that the reasonableness of rates to be charged by a corporation must be the 'fair value' of the property being used by it for the convenience of the public. The fair value is composed of: the original cost of construction, the amount expended in permanent improvements, the market value of company's bonds and stock, the probable earning capacity of the property under the rates prescribed by statute; and the sum required to meet operating expenses. Two points should be made here. The first is that this test was imperfect. Justice Brandeis argued that not only was such a calculation of a rate base highly subjective ('Under Smyth v. Ames, an opinion, largely'), the courts were also asked to judge based on gross earnings (a prediction) and operating expenses (a prediction). Finally, the courts were also asked to decide what rate of return should be deemed fair ('an opinion, largely).[115] *Ames* was explicitly overturned by the court in 1942.[116] The second point is that, despite the flaws, *Ames* produced a robust system of regulation of private industry that persisted until deregulation of American utilities began in the late 1970s. Although *Ames* was eventually overturned, it was replaced with system that was more rigorous. Despite the flaws, rate of return regulation supervised by a commission and adjudicated by the courts did produce a workable system. According to Delos Wilcox, the Chief of the Bureau of Franchise of the Public Service Commission of the First District of New York, the courts regarded any return of less than six percent as confiscatory.[117] If one is concerned with the normative question of efficiency, then one can debate the merits of public ownership

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[114] Judgement of *Smyth v. Ames*; Breyer and Stewart, 240.
[115] Brandeis dissent, *Missouri ex rel. Southwestern Bell Tel. Co. v. Public Serv. Commn.*, 262 U.S. 276 (1923), excerpted in Breyer and Stewart, 241-5.
[116] *Federal Power Commission v. Natural Gas Pipeline Co. of America*, 315 US 575 (1942).
[117] D. F. Wilcox, *Municipal Franchises*. 2 vols (New York, 1910), vol. I, 43.

versus private ownership under rate of return regulation, even though comparisons are difficult to achieve under controlled conditions.[118] However, we are concerned with explaining an institutional outcome, and the different role that the judiciary played in Britain and America is striking. Delos Wilcox wrote a two volume book on the difficulties of contracting with private firms. He concluded that, based on his description, his readers would 'be eager to accept municipal ownership and operation as the simplest and most logical solution of the public utility problem.'[119] The problem of regulation existed in America as well as in Britain. Yet American judiciary performed two vital functions that kept public utilities in the private sector. First, it enforced private property rights under its constitution, and second, it prescribed a means of regulation. Both of these conditions were absent in British courts.

Would the American Supreme Court have ruled that Tramways and Electric Lighting Acts violated the Fourteenth Amendment since the purchase clause involved purchase at a heavy discount to the market value of the undertaking? This would have greatly increased the cost of public ownership. There was strong opposition to the British courts taking a role in debates over regulation. Farrer wrote that 'to suppose that any court of justice can constitute itself a judge of the price which will produce a certain profit and no more, is absurd.'[120] And, even if judges could address themselves to such questions, Parliament was sovereign. 'No matter whether the question which decides be administrative or legislative,' wrote Bagehot, 'no matter whether it concerns high matters of the essential constitution or small matters of daily detail... a new House of Commons can despotically and finally resolve.'[121] If, as

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[118] For a treatment of this issue see Foreman-Peck and Millward, *Public and Private Ownership*, 202.
[119] Wilcox, vol. II, 803.
[120] Farrer, 115.
[121] W. Bagehot, *The English Constitution* 2nd ed (London, 1919), 227.

Farrer argued, the regulation was ineffective, only Parliament could change it. There was no appeal to a parallel authority.

Although the provisions of Private Acts were often ineffective, there was no public prosecutor, and the legislation implied that enforcement was to be left to the JPs, but no enforcement procedure was specified clearly.[122] The Court of Common Pleas was reluctant to intervene in technical aspects of Railway regulation.[123] Within the law governing public undertakings, the general rule for remedy was that no remedy could be applied except for the one prescribed. If the Private Act stipulated arbitration by the Board of Trade, then recourse to common law courts was limited.[124] This is striking because there was apparently a large body of jurisprudence on the legal treatment of private property which served a public interest. Both the majority and minority Supreme Court opinions in *Munn v. Illinois* cited Sir Matthew Hale.

Current writing on regulation, especially as applied to developing countries, conceptualises the judiciary as a protector of private property rights against a government.[125] However, this historical experience has shown that the judiciary can serve a second, equally important role, which is to maintain flexibility within a system. One problem with the British system was that Parliament was reluctant to change the basis of previous Private Acts until late until the 1880s.[126] The American Supreme Court developed and subsequently revised the terms of rate of return regulation;[127] there was no similar process taking place in Britain. Parliament, as we have already discussed, produced legislation that was contested by special interests. Changing legislation was immensely difficult, as Gladstone himself discovered. He

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[122] Parris, 14.
[123] Hadley, 170.
[124] F. N. Keen, *The Law Relating to Public Service Undertakings* (London, 1925), 52.
[125] See for example Levy and Spiller.
[126] Foster, 47.
[127] Breyer and Stewart, Chapter 4.

spent a good part of his Parliamentary career dealing with the consequences of his 1844 Railways Act.[128] In the absence of flexibility within the regulatory system, public ownership of utilities was an attractive alternative.

Conclusion

How and why did public ownership become an attractive alternative to regulation? In answering this question we considered both deliberate choices and institutional constraints. The first deliberate choice that Parliament made was to regulate gas, water, and railroads by restricting the maximum dividend. This caused the problem of overcapitalisation as firms attempted to boost dividend income to shareholders by watering their capital. The flawed assumption was that the producer would transfer the savings to the consumer in the form of lower prices. The choice was affected by the administrative capabilities of the British state. The British state was not entirely laissez-faire. It was willing to intervene in the economy, but in the case of urban utilities it lacked the capacity to do this properly. The administrative capability of the Board of Trade was insufficient to deal with the problems of asymmetric information. This was compounded by the unwillingness on the part of MPs to cede power to the civil service and by the special interests in Parliament. When it was obvious that maximum dividend regulation was ineffective, Parliament responded in two ways. First, the sliding scale system attached the dividend to price movements, a critical innovation, but the system was only applied to gas. Second, Parliament shortened the terms of franchises, and placed no ceilings on dividends during this period. The shortened franchises made investment less attractive and this contributed to local government ownership, most particularly in the case of tramways.[129]

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[128] E. C. C. Stevens, *English Railways, Their Development and Their Relation to the State* (London, 1915), 107.
[129] This is the subject of chapter 6.

The second deliberate choice was to give local governments the residual rights of ownership of urban utilities. Giving local government the residual ownership of tramways and electricity was intended to give them the freedom to contract with private firms. This was a perceived solution to the problems of information asymmetries that confounded administrative capabilities.

These choices were made within specific constitutional contexts. In explaining why public ownership emerged in England, while private ownership dominated in America, a large part of the answer must be that there was no process of constitutionally prescribed judicial review in England as there was in America. In addition to protecting private property rights, the American Supreme Court also provided a basis for the regulation of utilities at a critical point in America's economic development. This maintained private ownership, even if the system of regulation was flawed according to current economic theory. In England, the courts were marginal in the adjudication of regulatory issues, although they were active in adjudicating corporate disputes.[130] There were a few landmark cases dealing with the ability of municipalities to acquire private property for public use, but the courts were largely quiet on the technical questions that dogged the implementation of legislation.[131]

What about regulatory capture by the regulated industries? The issues here go beyond a simple case of capture, since the debates occurred at the Parliamentary level rather than within a commission. The utility companies, especially the railways, but also the water and gas companies, were able to organise themselves into effective pressure groups. This fits within the logic of collective action: the cost of organising

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[130] R. W. Kostal, *Law and English Railway Capitalism 1825-1875* (Oxford, 1994).
[131] See, for instance, *Cooper v. Wandsworth Board of Works* 14 Common Bench Reports NS 180, 143 ER 414.

is less when the numbers are small and the objective is similar.[132] The question that needs to be asked is how these pressure groups did not secure a complete victory. If the private lobby was so powerful, how was there any public ownership at all? Part of the answer is that over the course of the nineteenth century the municipal corporations lobbied Parliament for their interests, in particular for control over the breaking up of streets. The Association of Municipal Corporations was formed in 1872 as a means for towns to ensure that Parliament took account of their interests. Records of the organisation show that it monitored the passage of private bill legislation carefully and nominated members to give evidence before Select Committees and Royal Commissions.[133] We have seen that policy makers like Shaw-Lefevre did indeed take account of the municipal corporations' interest when drafting the Tramways Act. But this does not explain the failure of regulation. It only helps to account for why public ownership appeared to be an attractive solution.

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[132] M. Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge, Mass, 1965).

[133] The Association's records are at the Public Record Office: PRO/30/72. See A. Offer, *Property and Politics, 1870-1914* (Cambridge, 1981), 222-8.

Chapter 4: Spoils, patronage and the origins of virtue

What characteristics of local government supported the emergence of public ownership? The previous chapter showed how British law and policy favoured the development of local government as the basic regulatory unit for water, tramways and electricity. All of these utilities first emerged in the private sector. The institutional change from private to public provision is not costless. In America, apart from water, private ownership remained the dominant institutional solution to the problem of network utilities.[1] But Britain saw a shift to public ownership, which suggests that the cost of institutional change was much less.

Contemporary observers of British politics, both foreign and domestic, emphasised the lack of corruption. Lord Bryce, whose book *The American commonwealth* made him an expert before he was appointed British Ambassador to the United States, wrote that America was rife with corruption and that American reformers looked to Britain for a more favourable model. 'There is no denying that the government of cities is the one conspicuous failure of the United States.'[2] The legal scholar A.V. Dicey stated that 'it was not till municipal reform had worked its salutary effects that any popular feeling grew up in favour of the management of trades, which may concern the public interest, by municipal corporations.'[3] Josef Redlich reported in 1903 that 'the old days of wholesale bribery and corruption have gone for ever and live only in the pages of the satirist and historian.'[4]

In 1907, the National Civic Federation (NCF) sent a diverse group of American academics, labour leaders and businessmen to Britain to compare the public provision of utilities in Britain with the private provision of utilities in America. Their three

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[1] The exception to this rule was water, which was mostly provided by public bodies by 1900.
[2] J. Bryce, *The American commonwealth* (New York, 1910), vol. I, 642.
[3] A. V. Dicey, *Lectures on the relation between law & public opinion in England during the nineteenth century* 1926 ed (London, 1905), 285.
[4] J. Redlich and F. Hirst, *Local government in England* (London, 1903), vol. I, 300.

volume report provides a wealth of quantitative and anecdotal information on the differences between the two countries. One of the major conclusions was that municipal trading was a unique consequence of British institutions:

> In municipal systems Great Britain has passed through the state of evolution in which our larger cities find themselves to-day, and as British cities, which are recognised as being among the best governed municipalities in the world formerly experienced a period of corrupt and inefficient administration similar to that which now afflicts many of our large American cities, the story of British successes and failures in this field constitutes a very instructive record for us.[5]

The Majority Report of the Committee concluded that 'the success of municipal operation of public utilities depends upon the existence in the city of a high capacity for municipal government.' Public provision in America, however ideologically desirable in theory for the progressive members of the committee, could only take place when American cities reduced their levels of corruption and improved the level of governance.[6]

This evidence is suggestive but not conclusive. Corruption is difficult to define, and there are many forms of it. Typically, the public servant or politician is a 'gatekeeper' to a process or procedure that is required by the state. In the simplest case, a bribe speeds up administrative procedures and increases the payer's chances of success.[7] The range of corruption can extend from the bribe required to get a passport stamped at a nation's border to the bribe required to gain a monopoly franchise of physical infrastructure. Like other types of crime, corruption defies accurate measurement. Many of the current assessments of corruption within governments rely

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[5] National Civic Federation, *Municipal and private operation of public utilities*. 3 vols (New York, 1907), vol. I, 114.
[6] National Civic Federation, vol. I, 25. See also D. F. Wilcox, *Municipal franchises*. 2 vols (New York, 1910), vol. II, 803.
[7] A. K. Jain, *Economics of corruption* (Boston ; London, 1998), 3.

on opinion polling and questionnaires rather than a specific measurement of incidence.[8]

In the introduction to his study of corruption at the national government level, G.R. Searle agreed with Walter Lipmann that historians can only write about 'the history of the exposure of political corruption.'[9] We have every reason to think that more corruption takes place than is detected.[10] Recorded facts alone cannot help us, so we need some conceptual leverage borrowed from economics and political science.[11] Rather than attempt to establish the exact level of corruption in English local government, we will instead develop a model of corrupt behaviour by politicians. From there, we can develop an understanding of the effect that corruption had on ownership of utilities by local government. Our discussion of corruption is necessarily limited to this instance. The rise of a culture of integrity within the public sector is an open historiographical question. Historians have yet to establish where the origins of civic virtue can be found. Examining one aspect of this question within the context of management of large-scale trading enterprises will contribute to this research question.

Arriving at a definition of corruption is difficult, and there are many contesting frameworks.[12] What counts as moral virtue in one historical/cultural context, such as finding jobs for one's extended family, may be considered corrupt behaviour in a different context. Let us proceed on the basis that corruption is an

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[8] See for example the work done by Transparency International, an anti-corruption NGO.
[9] G. R. Searle, *Corruption in British politics, 1895-1930* (Oxford, 1987), 8.
[10] A. Doig, *Corruption and misconduct in contemporary British politics* (Harmondsworth, 1984), 10.
[11] M. Darrough, 'Privatization and Corruption: Patronage vs. Spoils', *International public management journal* 2:2 (1999) 273-98; O. Hart, et al., 'The proper scope of government: theory and an application to prisons', *Quarterly Journal of Economics* November (1997) 1127-61; A. Shleifer and R. Vishny, 'Corruption', *Quarterly Journal of Economics* 108:3 (1993) 599-617; A. Shleifer and R. Vishny, 'Politicians and firms', *Quarterly Journal of Economics* 109:4 (1994) 995-1025; S. Rose-Ackerman, *Corruption and government: causes, consequences, and reform* (Cambridge, 1999); A. J. Heidenheimer, et al., *Political corruption: a handbook* (New Brunswick, N.J., 1989).
[12] M. Philp, 'Defining political corruption', *Political studies* 45 (1997) 436-62.

exchange between a politician and a private actor. [13] If we assume that people commit illegal acts because the expected utility to them exceeds the utility from not committing the act, we can frame the decision to be corrupt in terms of costs and benefits.[14] It is useful to conceptualise a market for corruption, with supply and demand functions, and model how changes in the legal, political and social environment affected the emergence of public ownership. Using an economic (or 'rational choice') model does not mean that norms do not figure in the analysis; on the contrary, this chapter shows how norms can be usefully integrated into rational actor explanations. There are two stylised forms of corruption: kickbacks and bribery under contracting out, and patronage under in-house delivery.[15] These categories are more ideal types than perfect representations of reality. Corruption can have elements of both forms. However, they do provide an analytic framework for assessing the viability of public and private provision. The argument of this chapter is that Britain developed institutional safeguards against the spoils system that existed in American cities. This is not to suggest that no corruption existed. Rather, the corruption that existed did not preclude the emergence of public ownership.

Contracting out (Spoils)

Contracting out occurs when a government arranges for the delivery of a service through contracts with a private provider. Examples can range from water to street cleaning to transport. In this case, the politician may receive a bribe, and the private firm receives a competitive advantage over other firms by securing the rights to a franchise. Rose-Ackerman provides a basic economic model of the benefits of corrupt

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[13] R. Goel and M. Nelson, 'Corruption and government size: a disagregated analysis', *Public choice* 97:1-2 (1998) 107-20.
[14] G. Becker, 'Crime and punishment: an economic approach', *Journal of political economy* 76:2 (1968) 167-217.
[15] Darrough, 274.

behaviour to a politician or official.[16] Following from her model, the costs and benefits of political corruption can be specified. Politicians can apply the benefits of corruption (the bribe) towards personal enrichment or towards election expenses. The costs involved in supplying corruption are the legal and reputational costs. The legal costs include the probability of being caught and the severity of punishment if found guilty. The reputational costs include the effect of being caught on the politician's social relationships with others: does society approve or disapprove of corruption, and what effect will this have on the politician's non-political life?[17] Politicians can be assumed to supply corruption when the benefits are greater than the costs.

Private firms bribe politicians in order to secure the income that flows from winning the contract. Firms also face legal costs similar to the politician. However, the reputational costs depend on the behaviour of other firms. If corruption is common, there is no social stigma in being caught. The following analysis will concentrate on the propensity of politicians to act in a corrupt fashion by awarding preferential access of a public resource to a private firm in exchange for money. The decision to focus on the supply-side is based on the premise that the politicians have a monopoly on the supply of corruption. If they choose not to supply private firms, then the level of corruption will drop. The factors that can reduce spoils are:

(a) Decreasing the need by politicians for election costs;
(b) Decreasing the need by politicians for personal enrichment;
(c) Increasing the legal costs;
(d) Increasing the reputational costs.

Each of these factors had an impact on corruption in English local government.

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[16] S. Rose-Ackerman, 'The economics of corruption', *Journal of Public Economics* 4 (1975) 187-203.
[17] Rose-Ackerman, *Corruption and government*, 130.

Election costs

Politicians require income in order to maximise their chances of defeating their opponents in electoral contests. The private ownership of utilities in America was enmeshed in campaigns, corruption, and political opportunism. Elections were costly. The flood of immigrants that poured into American cities may not have been able to read or speak English but they did have the right to vote. Bribery and purchasing votes were common electoral practices. American municipal politics were dominated by the political machine, and the party Boss.[18]

Politicians controlled the access of private companies to lucrative monopoly franchises, and granting contracts and renewing franchise agreements were a source of payoffs. Walter Fisher, an ex-President of the Municipal Voters League of Chicago, wrote that 'the chief sources of corruption in American cities are necessarily public contracts and the granting of special privileges and exemptions.'[19] Companies made large campaign contributions to both Democratic and Republican parties during elections in order to win influence and sought to control nominations before the elections even took place. The companies sought to 'control these governments to avoid being controlled by them in the assumed or real interest of the public'.[20] Politicians were willing and able to oblige. John Commons, a Progressive-minded professor at the University of Wisconsin, wrote that in many cases it was the politicians who blackmailed the capitalists.[21] The American Progressive Frederic Howe wrote that with respect to the awarding of municipal franchises, 'the cards are

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[18] R. Hofstadter, *The age of reform* (New York, 1955).
[19] National Civic Federation, vol. I, 38.
[20] National Civic Federation, vol. I, 94.
[21] National Civic Federation, vol. I, 65.

the parties, the winnings are franchises, and the stakes which are played with are our institutions.' Howe argued that election finance was responsible for the corruption.[22]

English elections also had a history of corruption and bribery. The lack of clear administrative structures, the prevalence of unmonitored ad hoc groups and commissions, and the belief that corruption was a valid social support system produced the system that Redlich and the Webbs described in their histories of English local government.[23] The legislation that reduced electoral corruption did so by increasing the punishments and by placing a maximum on campaign spending. The succession of laws began in 1835 and culminated in 1883.[24]

The Municipal Corporations Act (1835) established the basic functioning of the English local government unit. Municipal corporations were to be led by a directly elected Council, an indirectly elected board of Aldermen and a Mayor. Councillors were elected by Burgesses, whose names were to be placed on an electoral roll by the Town Clerk. Municipal accounts had to be audited and open for inspection. Persons convicted of Bribery were disqualified from voting at any Election in the Borough.[25] The Corrupt Practices Prevention Act (1854) applied a more detailed definition of corruption and bribery to Parliamentary elections.[26] The reduction of bribery at Parliamentary elections had a positive effect on municipal elections since they were frequently held at a similar time. However, the Act was not sufficient.[27] The House of Commons retained jurisdiction over electoral malpractice, a privilege that it transferred to the Court of Common Pleas at Westminster in 1868.

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[22] F. Howe, 'The case for municipal ownership', *Publications of the American Economic Association* 7:1 (1906) 113-32, 121-2.
[23] Redlich and Hirst; S. Webb and B. P. Webb, *English local government: statutory authorities for special purposes* (London, 1922), 377.
[24] For a detailed treatment, see C. O'Leary, *The elimination of corrupt practices in British elections 1868-1911* (Oxford, 1962).
[25] Municipal Corporations (England) Act (1835) 5 & 6 Will. 4 c76, section 54.
[26] Corrupt Practices Act (1854) 7 & 8 Vict. c102.
[27] O'Leary, 4.

A candidate could be banned from voting or holding office for seven years if found guilty of bribery.[28] The Ballot Act (1872) introduced the secret ballot and eliminated the open vote, another source of abuse and intimidation.[29] O'Leary writes that the struggle to sanitise elections was part of the middle class struggle to increase equality of opportunity. Along with the 1854 Northcote-Trevelyan Civil Service reforms, the abolition of purchasing army commissions, the Ballot Act marked a lessening of the influence of factory owners and landlords.[30] Old Corruption, as Rubinstein defines it, was the widespread use of pensions, sinecures and gratuities granted to persons whom the British government wanted to bribe, reward or buy. These practices were pervasive at all levels of government.[31] The 1832 Reform bill and the consequent Whig reforms were decisive in ending these practices. The Municipal Corporations Act of 1835 swept away the closed municipal practices that allowed nepotism, corruption and graft. In many cases reform came from the top down. It was a case of the elite actively reforming itself, in the civil service, in towns, and in the Church.[32] Rubinstein shows that the memory of Old Corruption was a pervasive ideological and cultural presence. It was, he argues, 'a revision of sensibility.'[33] The sensibility implies a change in the nature of ethical obligation towards the political community. He describes this process as taking place within the context of debates over free trade and government finance, but election reform was also critical to the process.[34]

The Municipal Corporations Act (1882) consolidated legal changes made after 1835. Section IV of the Act relates to corrupt practices and applies the same penalties

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[28] Parliamentary Elections Act (1868) 31 & 32 Vict. c125, section 2, 43.
[29] Ballot Act (1872) 35 & 36 Vict. c33.
[30] O'Leary, 87.
[31] W. D. Rubinstein, *Elites and the wealthy in modern British history: essays in social and economic history* (New York, 1987), 265.
[32] On the civil service reforms, see H. Finer, *The British Civil Service* (London, 1937), 42ff.
[33] Rubinstein, 294.
[34] P. Harling, *The waning of "Old Corruption": the politics of economical reform in Britain, 1779-1846* (Oxford, 1996).

and definitions as in Parliamentary rules to municipal elections.[35] However, evidence showed that corruption remained despite these Acts, and that without campaign spending limits it would continue. Gladstone's government, partly motivated by a genuine desire to see fair elections and also shamed that many of the worst violators were Liberals, produced the Corrupt and Illegal Practices Prevention Act of 1883. The Act had two principal objectives: to lower election expenditure, and to increase the penalties of transgression. Candidates were bound to operate through election agents. The agent was bound to submit a true and accurate report of expenditure.[36] Deception was punishable as perjury. For the first time, Parliament set maximum limits on what could be spent during elections and prohibited the ancillary expenses of public houses and other forms of entertainment. The punishment was a fine of £100 and a prohibition on voting or holding office for a period of five years.[37] During the early debates on the Bill, the *Times* wrote that 'if passed in its present form, it can scarcely fail to effect something like a revolution in the mode of conducting Parliamentary elections.'[38] When it passed into law, the *Times* expressed its fear that the penalties might even be too harsh.[39] Although the Act did succeed in reducing corruption, it did not eliminate the practice. There were still loopholes relating to the candidate's liability for the behaviour of his agent. Corruption was not eliminated, and there are many recorded instances of the persistence of corruption and bribery.[40] However, there can be no question that the Act drastically lowered the cost of

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[35] Municipal Corporations Act (1882) 45 & 46 Vict. c50.
[36] Corrupt and Illegal Practices Prevention Act (1883) 46 & 47 Vict. c51, section 33.
[37] Corrupt and Illegal Practices Prevention Act, see sections 10, 33 and Schedule 1.
[38] *Times*, 8 Jan 1881.
[39] O'Leary, 177-8.
[40] H. Hanham, *Elections and party management* (London, 1959), 262-83.

standing for office.[41] In the first general election after the Act was passed, the total official expenditure declined by three-quarters.[42]

A year later, in 1884, the Municipal Elections Act applied the same standards to municipal elections. Expenditure was fixed at £25 for the first 500 electors in each borough or ward, to be increased by an allowance of three pence for every additional elector. Prosecutions under the Act were undertaken by the Director of Public Prosecutions.[43] Albert Shaw, an American researcher of both English and continental local government, was impressed by the 'bristling regulations' and pronounced them to be 'absolutely efficacious.'[44] Candidates knew the law about election expenditure and political parties were vigilant in monitoring it, especially during a close election. The London Municipal Society wrote in an internal memorandum to candidates that 'However remote the possibility of an Election Petition, the Election should be managed just as if a petition and investigation of accounts or audit would follow as an ordinary formality.'[45] As stipulated by the Municipal Corporations (Corrupt and Illegal Practices) Act, the financial limitations on spending were high. Candidates could spend £37 10s on the first 500 electors, with increases for additional electors. For a borough of 5,000 electors, the candidate could spend £121; for a borough of 10,000 electors, they could spend £215.

The enforcement of the law was strict. One successful candidate for the Westminster vestry elections was disqualified in 1899 under the Corrupt Practices Act

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[41] Hanham, 249-61.
[42] O'Leary, 231.
[43] Municipal Elections (Corrupt and Illegal Practices) Act (1884) 47 & 48 Vict. c70, sections 5, 28.
[44] A. Shaw, *Municipal government in Great Britain* (London, 1895), 34.
[45] London Municipal Society, 'Notes on LCC elections: preparations and procedure,' (London: 1908), catalogued as London Guildhall Library, LMS SL6.5.

when her opponent brought a petition against her. Her mistake? Tipping the driver of a carriage lent to her for election day.[46]

Personal income

Corruption is a means for a politician to increase his personal income through the acceptance of bribes and kickbacks. The NCF investigators were impressed by how British politics were 'aristocratic' compared to the 'democratic' politics in America. Redlich wrote that 'British workmen are inclined to jealousy and suspicion. They know, and perhaps exaggerate, the temptations to which a man of small and precarious income' would be subjected. The working classes were 'well disposed to accept the advances made to them by men of wealth, leisure, and education.'[47] Whether Redlich's (rather patronizing) observation is true or not, English local government politicians were in general men who did not seek a direct pecuniary reward.[48] There were two structural reasons for this. First, council positions were unsalaried. John Burns, the LCC Councillor and later Chairman of the Local Government Board under Lloyd George, was an exception. Burns, who came from working class origins, was supported financially by Trade Unions. Second, there was no residence restriction that required councillors to live in the wards that they represented. In America, residence restrictions resulted in some wards being represented by less wealthy representatives, whose need for increased revenue from bribes would be higher than that experienced by a middle class businessman. The American visitors thought that voters in England did not mind being represented by

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[46] P. Hollis, *Ladies elect: women in English local government, 1865-1914* (Oxford, 1987), 348.
[47] Redlich and Hirst, 276.
[48] Prosperity and the growing domestic servant class also helped women to have the time and means to serve in local government; see Hollis, 5.

an outsider due to the absence of election and corruption funds as well as the inability of councillors to get jobs for their constituents.[49]

The LCC's composition in 1906 matched the attributes that the NCF investigators associated with honest government. Of the 118 councillors, 50 lived in their home districts while 68 lived outside. Twenty one were merchants, 15 manufacturers, 18 lawyers, 4 builders, 11 labour representatives. There were 10 retired civil servants and 26 gentlemen. Thirty four of the councillors had inherited their property in whole or in part. The same patterns of relative wealth and residency were also evident in Liverpool, Manchester, Birmingham, and Glasgow. This pattern did not apply just to London bankers. Secretaries and officials of Trade Unions also lived outside of the wards that they represented.[50] Commons wrote that the exclusion of businessmen from American local councils was an important factor in the rise of the professional politician.[51] The NCF reported, but did not demonstrate, that there was less evidence of real estate speculators and dealers in British than in American council chambers. Land speculation in utilities, they wrote, did not greatly affect the functioning of local councils.[52]

Legal penalties

Opportunistic behaviour occurs when the politician, as the agent of the public, benefits at the expense of his principal. The legal penalties of corruption were a product of the ability of individual citizens to resort to the law courts. The Public Health Act (1875) is a good example of how legislative provisions were designed to prevent a conflict of interest between members of the local boards and outside

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[49] National Civic Federation, vol. I, 95.
[50] National Civic Federation, vol. I, 45.
[51] J. R. Commons, 'Wages in municipal employment', *Quarterly Journal of Economics* 16:3 (1902) 433-50, 433.
[52] National Civic Federation, vol. I, 96.

contractors. All contracts valued at greater than £100 would be subject to tender.[53] The Act created incentives to promote the monitoring of the local board by members of the public. 'Officers or servants appointed or employed under this Act by the local authority shall not in anywise be concerned or interested in any bargain or contract made with such authority for any of the purposes of this Act.' It continued to state that

> If any such officer or servant is so concerned or interested, or, under colour of his office or employment, exacts or accepts any fee or reward whatsoever other than his proper salary wages and allowances, he shall be incapable of afterwards holding or continuing in any office or employment under this Act, and shall forfeit and pay the sum of fifty pounds, which may be recovered by any person, with full costs of suit, by action of debt. [54]

Having an 'interest in a contract' meant that a public health board member ceased to be a legal member of the board. The Act further clarified the nature of improper relationships and placed the burden of proof on the board member if the case went to court.[55] The Municipal Corporations Act (1882) made similar provisions.[56] The Law Reports show that actions by members of the public against board members did indeed take place, and that they were often successful.

Fletcher v. Hudson (1881) imposed a tight definition on what constituted a contractual relationship. Hudson, an inn keeper and member of the local public health board, was paid by the board to reimburse him for work he had done at the request of the surveyor. The surveyor was unable to get the work done by anyone else, and could not afford a delay. Hudson submitted that he has not profited from the transaction. Hudson's counsel argued that there was no contract express or implied with the board for the work. The court ruled that such an exchange was

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[53] Public Health Act (1875) 38 & 39 Vict. c55, section 174(4).
[54] Public Health Act, section 193. See also schedule II, section 64.
[55] Public Health Act, schedule II, section 70.
[56] Municipal Corporations Act (1882) 45 & 46 Vict. c50, sections 12 and 41. Discussed in E. P. Hennock, *Fit and proper persons: ideal and reality in nineteenth- century urban government* (London, 1973), 297.

indeed a contract, and therefore disqualified Hudson from holding office (under section 64). Hudson was therefore liable for acting as a member of the board when he was actually disabled by virtue of his contract (section 70). Justice Brett wrote in his judgement that he found 'this litigation is most lamentable, if not discreditable.' It appears that the facts of the case did not support the proposition that corruption had actually taken place. But the judge still enforced the letter of the law.[57]

The conflict of interest restrictions were strict. In *Burgess v. Clark (1884)* the Court of Appeal upheld an Assize Court ruling that when Clark (a member of the board) let a room to the board he had entered into a contract with the board under section 193. The letting of premises was considered by the court to be grounds for the cessation of office, even though Clark had no intention of acting improperly. Justice Lindley wrote that 'I wish that I could avoid a decision adverse to the defendants, but upon the construction of the Public Health Act, 1875, I am of opinion that the defendants are liable to the penalty.'[58]

In *Todd v. Robinson (1884)* the Court of Appeal ruled against the defendant, who was a clerk to the local board as well as a shareholder in the gas company with whom he had contracted to supply the town lamps. The issue was whether being a shareholder constituted having an interest. The court ruled that it did, even though the benefits arising to the defendant were small. Justice Cotton wrote that 'The defendant was not acting corruptly; but parliament has laid down a rule, that no man shall act as an officer of a local board if he takes part in any contract entered into by it, so that no official shall be under the temptation to act corruptly.'[59]

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[57] *Fletcher v. Hudson* (1881) 7 QBD 611.
[58] *Burgess v. Clark* (1884) 14 QBD 735. A similarly strict interpretation can be found in *Nutton v. Wilson* (1889) 22 QBD 744.
[59] *Todd v. Robinson* (1884) 14 QBD 739.

In *Whiteley v. Barley (1887),* a local authority employed their surveyor to superintend the construction of a drainage project, and agreed to remunerate him by a percentage of the outlay charged by the private contractor. Justice Matthew ruled that this payment structure constituted an interest in a contract, and placed the surveyor's duties in conflict with the interests of the municipal corporation that employed him. 'In the performance of this duty he was exposed to the temptation from which the statute was intended to protect him.' However, Matthew also wrote that 'I see no reason to doubt that he had served the corporation of Ramsgate with equal integrity and ability. The defendant would seem to be the victim of a law which in his case operates harshly. The motives for bringing this action were not disclosed at the trial, and I am not concerned in making them the subject of inquiry or comment.'[60] Thus, we can see how the implementation of the law was strict even when no corruption had taken place. The Law Reports say nothing of the plaintiffs, and we do not know what motivated them, whether it was the pursuit of financial gain or personal animosity. What is critical is that the legal costs for even the appearance of corruption were high and well enforced, and that monitoring could be effective.

In addition to these private actions under the Public Health Act, individual citizens could also hold municipal officials responsible for their actions through a writ of mandamus. In the case of the Public Health Act, the statute created a remedy for its enforcement. Where the statute did not specify a remedy, the general rule was that a common law remedy of mandamus could apply. Mandamus was a writ issued by the High Court to enforce the performance of a statutory duty of a public nature, such as the duty of a public service undertaker. The remedy for action ordinarily consisted of a claim for damages resulting to the plaintiff for the breach of statutory duty by the

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[60] *Whiteley v. Barley* (1887) 20 QBD 196. Two years later, the Court further extended the decision to disallow the payment of an additional allowance. See *R. v. The Mayor of Ramsgate* (1889) 23 QBD 66.

official.[61] In addition to private action by citizens, there were also inspection functions performed by central government agencies, most especially the Local Government Board. As an example, the Inspector of Audits issued a special report on corruption in the West Ham Union in 1908.[62] This raised the cost of corrupt behaviour, but did not eliminate it.

Reputational costs

If we conceptualise political behaviour as a function of norms within a society, then sanctions arise when these norms are not followed. According to Redlich, the late nineteenth and early twentieth centuries were the golden age of English local government. The Victorian Town Halls that still stand today in many cities remind us of the civic pride and public service that motivated many of the most capable men to serve on their local council. The NCF reported the English local government system attracted 'many of the best citizens of the city.' Shaw reported that 'the town-councillorships are the most important places in the gift of the people except the parliamentary seats.' American councils, he wrote, compete for good men at a great disadvantage. There were many opportunities for public election in America: town councils, clerks of the courts, commissioners, county governments, appointed officers, and finally the state legislature. In contrast, there were few corresponding positions in England: the school board, a Poor Law guardian, or 'the last and greatest,' a member of the municipal council. 'Surely,' he wrote, 'this condition of things affords one of the reasons why municipal government had more dignity, and attracts better men on the average, in England than in America.'[63] Joseph Chamberlain was perhaps describing his own motivation as Mayor of Birmingham when he proclaimed that

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[61] F. N. Keen, *The law relating to public service undertakings* (London, 1925), 53.
[62] C. Bellamy, *Administering central-local relations, 1871-1919: the Local Government Board in its fiscal and cultural context* (Manchester, 1988), 192.
[63] Shaw, 54-5.

'there is no nobler sphere for those who have not the opportunity of engaging in imperial politics than to take part in municipal work, to the wise conduct of which they owe their welfare, the wealth, the comfort, and the lives of 400,000 people.'[64]

The American visitors may have idealised the state of affairs. Such generalisations about English local government are difficult to make, and there was a high degree of variation between cities.[65] One trend that does appear to be generalisable is that the presence of upper-middle class elites on town councils declined towards the end of the century as they migrated away from the town centre towards the suburbs. By 1900, the composition of town councils reflected larger numbers of small businessmen, professionals (especially solicitors) and traders than upper-middle class elites.[66] In some cities, like Rochdale, Salford and Bolton, manufacturers and merchants continued to form the largest occupational group.[67] But this does not mean that town councils did not attract 'the best men.' F.M.L. Thompson writes that the 1870s saw the relocation of the landed aristocracy to a lower profile in urban life. In place of the aristocrats was a middle class culture characterised by a 'fervent commitment to virtues of work, earnestness, sobriety, and strict sexual morality.'[68]

Council positions were unsalaried and service came at the expense of other time demands. The decline of upper middle-class elites in local councils does not indicate a loss of integrity or honesty. The openness of local politics to broader civic participation may have increased the political capacity and legitimacy of municipal

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[64] A. Briggs, *Victorian cities* (London, 1963), 194.
[65] Briggs, 33.
[66] F. M. L. Thompson, 'The Town and the City', in F. M. L. Thompson, ed. *The Cambridge social history of Britain 1750-1950,* Vol. I, (Cambridge, 1990) 1-86; Hennock, 34.
[67] J. Garrard, *Leadership and power in Victorian industrial towns, 1830-80* (Manchester, 1983).
[68] Thompson, 44. There were also exceptions: J. Davies, 'Peers on the industrial frontier', in David Cannadine, ed. *Patricians, power, and politics in nineteenth century towns*, (New York, 1982) 17-61.

councils, making them 'the focus of citizenship of the local community.'[69] Service was accompanied by honour and prestige that spilled over into other areas of councillor's lives. For the middling shopkeeper or solicitor who began to make his presence increasingly felt by 1900, local politics was an opportunity to improve status.

Public conduct signalled integrity and probity; misconduct signalled dishonesty and distrust. John Commons wrote that 'the honour and distinction of public service on the council is really an advertising asset in their private business.'[70] In London in particular many councillors were involved in finance, like Lord Avebury, the first vice-chairman of the LCC. Many councillors were businessmen who had repeated interactions with others. Misconduct would have damaged their trust relationships. Long and untarnished service in local government had other social rewards, including a knighthood (like the one awarded to John Williams Benn). Benn travelled to America in 1894 to study municipal life there. He reported that 'the people have got so accustomed to the pernicious system of "to the victors go the spoils" that public conscience is woefully deadened. There is one standard of morality for public life and another—or, indeed, the lack of one—for public affairs.'[71] The English local government councillor was not a professional politician. He usually had other interests: a business, for example, or a legal practice. Unlike in America, where local politics was played by the code of the professional politician, English local government applied the standards of private life to public life.

The value of regard would be reduced by the appearance of corrupt activity. In America, such activity appears to have been tolerated as an undesirable but acceptable

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[69] D. Fraser, *Power and authority in the Victorian city* (Oxford, 1979).
[70] National Civic Federation, vol. I, 101; Redlich and Hirst, vol. I, 276.
[71] 'Municipal America, Mr. J.W. Benn's views,' *Daily Chronicle* 18 January 1895 (in John Williams Benn Papers).

practice of political life. When Chicago Alderman James Bowler was asked why he approved the rate schedule of the Edison and Commonwealth companies, he replied that

> the company had put seventy-five men to work for him since he had been elected alderman, and added that the demand for jobs was strong in the Nineteenth Ward, and an alderman had to do what he could to help his constituents. Alderman Bowler made this statement voluntarily and frankly, and in all innocence as if he regarded it—as he doubtless did—the proper thing of aldermen to get jobs for his constituents.[72]

The NCF report suggests that the norms in America were different from the norms in Britain, and that the sanctions attached to breaking them were not as severe.

Contemporaries thought that public ownership and public spirit were mutually supportive. Contemporary opinion, as exemplified by John Stuart Mill, held that high popular involvement was essential to the doctrinal legacy of safeguarding liberty. One of the characteristics of democratic society was participation in public life. For inspiration, Mill looked to Ancient Athens.[73] In 1883, Farrer wrote that the delegation of local matters to local bodies 'encourages the development of public spirit and political capacity throughout the country.'[74] John Burns argued that municipal trading strengthened civic institutions and 'democratic' participation in civic life.[75] It is plausible that municipal trading attracted the 'best men' to elected office in the first place, since their business experience was applicable to managing large trading concerns like water, gas and tramways. It is probable that there is an interaction between municipal trading and the reduction of corruption rather than a linear cause and effect relationship. The perception on the issue of municipal virtue and actual

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[72] National Civic Federation, vol I, 183.
[73] E. F. Biagini, 'J.S. Mill and the model of ancient Athens', in Eugenio F. Biagini, ed. *Citizenship and community: liberals, radicals and collective identities in the British Isles, 1865-1931*, (Cambridge, 1996) 21-44.
[74] T. Farrer, *The state and its relation to trade* (London, 1883), 35.
[75] National Civic Federation, vol. I, 117.

behaviour were mutually-enforcing. The *belief* that the system was not corrupt was an important element in engendering trust and establishing norms.

In-house delivery (Patronage)

In house delivery occurs when a government employs workers and managers to deliver a service. Under in house provision, the demand for corruption by private firms is eliminated. Private firms are willing to offer bribes to politicians because politicians are willing to give them access to a revenue producing franchise at a low price. The bribe paid to the politician is a portion of the difference between the purchase price and the market price. The difference between spoils and patronage is that spoils involves a contract while patronage involves internal provision. If the private firm were to be placed in charge of running the facility in-house, there would be nothing to stop the politician from replacing them with another firm. Without the security of future rents, the future payoff to the firm would be zero, and the politician's portion of that payoff would also be zero. Thus, a corrupt and opportunistic politician will choose to privatise rather than to provide in-house, and corruption may lead to an excess of privatisation over what is socially optimal.[76]

According to this model of patronage, the politician hires and pays workers based on political affiliation. Politicians often cater to special interest groups with large voting power, like labour unions, in order to win elections. The patronage system provides the politician with votes and political campaign funds and the workers with jobs. The supply function for the politician is based on the need for political support, both the need for votes and the need for campaign contributions

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[76] Hart, et al., 1145-6.

assessed on the workers, who form an organised pressure group.[77] In order to exercise patronage, the politician must secure the power to hire and remunerate employees. Not only must they win the election, but they must also impose their will on the officials who actually make the decisions. An additional cost is that voters may oppose the spending of public money in pursuit of a sectional benefit.[78] We can therefore impute a political support cost as well.

The factors that can reduce patronage are:

a) Decreasing the need by politicians for campaign income (discussed above);
b) Decreasing the reliance of politicians on labour for political support;
c) Increasing political support costs (by voters; by other political parties).

What does the historical record have to say about this?

The role of labour in politics

The Times, which had a strong bias against public ownership, published a series of articles in 1902 that focussed on patronage. 'The trade unions,' the author wrote, 'as well as the avowed socialists, have their own particular reasons for combining to capture local government, quite independently of the general aspiration of each to secure the provision of municipal luxuries for the masses at the expense of the classes.' According to the article, public ownership resulted in the enforcement of trade union rates upon municipal contractors, increased the vitality of trade unions, and increased pressure on manufacturers.[79] The enforcement of trade union wages was a controversial policy. The London Progressive platform of 1892 included the Fair Wages clause, which stated that 'the county council should not only treat its own

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[77] G. S. Becker, 'A theory of competition among pressure groups for political influence', *Quarterly Journal of Economics* 99 (1983) 371-400; G. Stigler, 'The economic theory of regulation', *Bell journal of economics* 2 (1971) 3-21.
[78] Rose-Ackerman, *Corruption and government*, 130.
[79] *Municipal socialism: a series of articles reprinted from the Times* (London, 1902), 10 September 1902.

workers fairly, but should set a good example to other employers in respect to the hours of labour, rate of wages, and conditions of employment generally.'[80] Furthermore, the Council passed a motion that same year that stipulated that all contractors be compelled to remunerate their workers according to trade union hours, wages, and working conditions.

John Commons wrote that dealing with municipal employees was the most difficult problem of municipal ownership in Britain. The power of municipal employees was alarming to some, and there was talk of disenfranchising municipal employees because of perceived inherent conflict of interest. Sir John Ure Primrose, the Lord Provost of Glasgow, and E.O. Smith, the Town Clerk of Birmingham, both expressed their preference for seeing municipal employees disenfranchised.[81] Municipal employees had the potential to exert direct electoral pressure. The NCF reported that the voting strength of municipal employees was six percent of the total registered voters in Glasgow, and seven percent of the registered voters in London.[82] Knoop estimated that up to five percent of registered voters were municipal employees in a sample of ten English towns that did not include Glasgow or London.[83] Lord Avebury, the leading figurehead of the anti-municipal trading movement, argued against municipal trading on the grounds that involving local governments in labour questions was undesirable. 'The workmen will not be employed by the council, but the council by the workmen.' Avebury also claimed

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[80] Shaw, 351.
[81] H. R. Meyer, *Municipal ownership in Great Britain* (London, 1906), 310-11.
[82] National Civic Federation, vol. I, 98.
[83] D. Knoop, *Principles and methods of municipal trading* (London, 1912), 278. The sample included Birmingham, Bradford, Bristol, Leeds, Leicester, Liverpool, Manchester, Nottingham, Salford, and Sheffield.

that two weeks prior to the 1904 election the Progressives issued a public document listing the wage increases awarded to council employees.[84]

Contemporary observers worried that labour organisations had the potential to influence patronage through the electoral system. Lord Farrer, who after retiring from the Board of Trade sat as a Progressive councillor on the London Council, disapproved of paying above market wages. 'The Council will no doubt be a gigantic employer of labour,' he wrote in a memo to councillors in 1892, 'and, for purposes connected to labour it will lose its independence, it will be run by the Trade Unions, and it will be bound hand and foot to obey their orders.'[85] The American union representative on the NCF study was J.W. Sullivan, the editor of the *Clothing Trades' Bulletin* of New York City. Sullivan expressed his opinion when he described the MEU as 'the prototype of combinations to be formed with more or less definiteness wherever the ballot may be used as a bludgeon.'[86] Records in the Webb Trade Union collection show that the Municipal Employees' Union (MEU) was active in negotiating better rates of pay for its workers. In a pamphlet sent to workers in 1908, the union listed its achievements as negotiating higher wages for employees working in LCC asylums, agitating against belligerent foreman on the LCC tramways, and achieving better meal arrangements for LCC tramway conductors, drivers, and conduit cleaners.[87] Another pamphlet estimated that there were 70,000 municipal workers around London, among whom about 12,000 were trade unionists. 'What an army of men if all together!'[88] However, the union's achievements did not match its rhetoric, and the MEU was repudiated by the Trades Union Congress due to

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[84] J. Lubbock, *On municipal and national trading* (London, 1906), ??
[85] T. H. Farrer, *The London county council's labour bill, memorandum for the use of members, revised with additions* (London, 1892).
[86] National Civic Federation, vol. I, 69.
[87]Webb Trade Union Collection, Transport workers and general labourers, BLPS Archives Collection E, section B, volume 105, item 5.
[88] Webb Trade Union Collection, volume 105, item 7.

accusations of mismanagement and because the TUC opposed dividing workmen with the same occupation into private and public sector categories.[89] In practice, councils in London and Manchester referred tramway workers' claims to an arbitration process facilitated by the Board of Trade, which insulated the council from direct pressure.[90]

Small-scale favouritism did exist. There were allegations that John Williams Benn issued tickets recommending certain men for employment on LCC building sites. The *Evening News and Post* reported that his son, Ernest Benn, informed the men that 'they'll have to thank Father for the job.' The newspaper asked that 'if all applicants are fairly treated, should anyone have to "thank Father" for being employed on a public work paid for out of the public rates?'[91] However, this patronage was present on a lesser level than in America. The NCF recognised that, for the most part, local governments hired men of good quality.[92] This was especially the case after the advent of salaried municipal officials like the Town Clerk.[93] American cities paid their labourers wages that were further above market wages than British cities did, especially in the case of unskilled labourers.[94] Patronage in Britain during this period did not reach the level of blatant abuse.

The introduction of municipal officials decreases patronage, especially if the officials see their role as managerial and administrative rather than narrowly political. Redlich wrote that 'a municipal spoils system in England is almost unthinkable. The whole structure of municipal government, with its permanent staff of officials, nominally dismissable at pleasure, but practically appointed for life, is opposed to any

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[89] Knoop, 297-8.
[90] Knoop, 303.
[91] *Evening News and Post* 21 December 1893 (in Williams Benn papers).
[92] National Civic Federation, vol. I, 76.
[93] T. E. Headrick and Royal Institute of Public Administration., *The town clerk in English local government* (London, 1962).
[94] Commons, 437ff.

open abuse of the party system.'[95] This does not suggest that no abuses took place, but does suggest that the costs associating with abuses would make patronage difficult. Local government officials were selected by merit, had an attractive rate of pay relative to private employment, and had a large body of observant voters ready to pounce on them if they acted improperly.[96]

The explanatory power of the permanent local government officials holds under the American experience as well. When public ownership did emerge in America, it was usually preceded by civil service reforms, as in the case of water and street lighting in Chicago. Transparency of purchasing was an especially important innovation. Likewise, street cleaning in New York improved after a new Commissioner took the power out of the hands of opportunistic politicians. Where there were no public sector reforms, public provision failed. Leo S. Rowe, the University of Pennsylvania Professor who wrote about the public ownership of the Philadelphia gas works for the National Civic Federation, argued that 'the crippling of the gas works for the benefit of private companies and the debauching of the management by the forced employment of political favourites could lead to but one result, the abandonment of the enterprise by the municipality.'[97]

What was critical to the development of public ownership in Britain is that the first English attempt in Birmingham and the first Scottish attempt in Glasgow were successful in a way that American cities were not. These cities showed that local governments did have the capacity to manage large-scale enterprises, and mismanagement did not force ownership back to the private sector. The contemporary Russian-French political analyst Moisei Ostrogorski sought to

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[95] Redlich and Hirst, 276.
[96] Shaw, 66.
[97] National Civic Federation, vol. II, 627. See also M. Ostrogorski, *Democracy and the organization of political parties*. 2 vols (London, 1902), vol. II, 171-4.

document the level of corruption in the British political system. Yet he wrote with respect to Birmingham that

> The knot of men who were working together under Mr. Chamberlain not only made all these personal sacrifices, but were just as ready to make pecuniary sacrifices as well. In every public subscription they invariably headed the list and with considerable sums. All schemes for the public good were sure to meet with their sympathy and interest.[98]

'Civic pride' was not by itself a cause of public ownership, but it did provide a nurturing environment.

Political costs

Patronage is most attractive when the public is disengaged.[99] So if the civil servants are watching the politicians, who is watching both of them? A free and active press can act as a surrogate for public monitoring. Redlich was impressed by the power of the press that followed 'every act of administration.' Newspapers sought out scandal in order to increase their circulation.

Improvements in printing technology during the 1860s reduced labour input costs, and the introduction of new typesetting technology further increased economies of production.[100] The challenge was not only producing newspapers, but also selling them. The response was sensationalism. The so-called 'New Journalism' was a movement to increase newspaper circulation through the presentation of pictures, stories, and typefaces. An example of the British version of the muckraking journalist was W.T. Stead, editor of the *Review of Reviews* and the *Pall Mall Gazette.* Stead was a radical who sought to expose corruption and raise awareness of what he thought were the injustices within Victorian society.[101] He had an interest in urban issues and

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[98] Ostrogorski, vol. I, 166.
[99] Shleifer and Vishny, 'Corruption', 610.
[100] L. Brown, *Victorian news and newspapers* (Oxford, 1985), 11.
[101] J. H. Wiener, *Papers for the millions: the new journalism in Britain, 1850's to 1914* (New York ; London, 1988), 102.

urban reform. One of his books, entitled *If Christ came to Chicago*, presented his vision of the potential of municipal initiative.[102] He ran stories calculated to 'arrest the eyes of the public' involving workhouses and hospitals. An expose of 'A night in a workhouse' increased both its circulation and advertising revenue.[103] The *Pall Mall Gazette* and the *Star* introduced typographical innovations which were influenced by the American dailies like Joseph Pullitzer's *New York World*. Technological changes included the adoption of wood pulp newsprint and the refinement of press design.[104] The circulation of newspapers was quite high. As examples, the circulation of the *Daily Telegraph* was 300,000 in 1888; the circulation of *The Times* was 60,886 in 1877; the *Daily Chronicle* had a circulation of 130,000 in 1886.[105] Newspapers were read widely, even by the poorest.[106]

The press functioned as a medium for the expression of middle-class grievances. 'The Bitter Cry of the Middle Classes', written by George R. Sims, appeared in the new Liberal daily *The Tribune* in 1906. The resulting press coverage reflected middle class anxiety over rising public expenditure, but also focussed on corrupt behaviour by local government officials.[107] The active role of the press in public debates meant that patronage came at a cost. For example, the Progressives in London built a large in-house public works department. As rates increased, their opposition campaigned against municipal expenditure, and the Progressives lost the 1907 election. The Works Department was a major political issue in that election, and the Municipal Reformers closed the Department once elected as a means of reducing

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[102] W. T. Stead, *If Christ came to Chicago! A plea for the union of all who love in the service of all who suffer* (London, 1894).
[103] Wiener, 28.
[104] Wiener, 75.
[105] Brown, 52.
[106] Brown, 48.
[107] P. J. Waller, 'Altercation over civil society: the bitter cry of the Edwardian middle classes', in Jose Harris, ed. *Civil history in British society*, (Oxford, forthcoming).

expenditure.[108] Electoral pressure was an effective means of reducing patronage. In Glasgow, Commons reported that favouritism in hiring tramway employees by the tramways department had almost disappeared by 1906. This was due to investigations by council, and because public spirited businessmen 'have been elected to the council on the issue of driving out favouritism.'[109]

Conclusion

Two interpretations arise from the evidence. The first interpretation is the there was a substantive transformation of English local government during the nineteenth century. The argument is that politicians had sufficient integrity to transcend personal interests and govern in what they regarded as the public interest. The costs associated with dishonesty were high, and politicians acted in a way that signalled their integrity. Although corruption was not eradicated from English local government, E.P. Hennock wrote that it was surprising that there was not more of it.[110]

The second interpretation is that politicians can never be assumed to govern in the public interest, and always seek to maximise their own utility. As James Buchanan writes, 'politicians and bureaucrats do not become saints when they assume agency roles, nor would they survive long electorally if they did so.'[111] According to this view, what occurred was that institutional changes forced up the price at which they would supply corruption under contracting out. Instead of accepting bribes for access to government contracts, politicians sought to improve their electoral chances by providing their constituents with higher wages. By owning public utilities and then paying trade union wages, the politician could build political support.

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[108] G. Gibbon and R. W. Bell, *History of the London County Council, 1889-1939* (London, 1939), 236.
[109] National Civic Federation, vol. I, 99.
[110] Hennock, 297.
[111] J. M. Buchanan and R. A. Musgrave, *Public finance and public choice : two contrasting visions of the State* (Cambridge, MA, 1999), 127.

This chapter has not argued that there was no corruption in British local government, nor has it argued that politicians acted with the utmost of personal integrity. Such claims are both unverifiable, and unlikely to be true in all cases. This chapter has argued that the choice to be corrupt was channelled in a particular direction. Election reform, legal institutions like the courts and the reputational environment of local government made the spoils system a poor choice in Britain. The public ownership of utilities provided the forum for the interaction between politicians and pressure groups, especially labour. The patronage was never on the same level as it was under American Boss rule, but it did exist.[112]

The question that began this chapter was how local government conditions made public ownership of utilities possible. Despite occasional press campaigns to the contrary, contemporaries in Britain of all political complexions generally thought that British local government was relatively free of the large-scale and deeply-entrenched capturing of the public sphere by private interests that was seen as endemic in American political life. Sir Albert Rollit, the President of the Association of Municipal Corporations, boasted with pride that 'neither the *Times* nor our opponents can or do attribute to our corporations corruption or malfeasance.'[113] This statement reinforces a powerful message: the origins of virtue are found in self-conceptions as well as in the costs and benefits of rational action.

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[112] P. J. Waller, *Democracy and sectarianism: a political and social history of Liverpool 1868-1939* (Liverpool, 1981).
[113] Association of Municipal Corporations General Meeting 1900, PRO 30/72/29, 40.

Chapter 5: Public utilities, public expenditure, and political choice

The debates over the growth of government have a long intellectual history, both within the disciplines of British history and political economy. Public utilities represented a new stage in the economic activity of the British state. In the case of Britain between 1870 and 1914, most of growth in government expenditure occurred at the local government level.[1] A striking fact is that expenditure at the local level began to increase after the franchise was expanded in 1867. The Education Act was passed in 1870; the Public Health Act, which compelled local authorities to provide clean water for their inhabitants, was passed in 1875; these are but two of the many examples of statutes that allowed local authorities to borrow, tax, and spend more money than had previously been possible.

Public investment in urban utilities was part of a larger pattern of increased local government expenditure between 1870 and 1914. In this case the figures tell the story well. Local authority expenditure grew from £50.1 million in 1890 to £98.9 million in 1900 and £130 million in 1910. This translates to 3.4% of GNP in 1890, 5.1% in 1900, and 6.1% in 1910. In 1905, local government expenditure constituted 51 percent of total government expenditure.[2] Taken together, social and economic services were the largest categories of local expenditure. Until 1914, they were overwhelmingly provided on the local rather than the central government level.[3]

Why did local authorities spend so much money? One explanation is that there was a need. Public health, housing, and transport were inadequate and needed to be improved. However, it does not follow that expenditure occurs simply because a need

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[1] This was discussed in the introduction, and referenced to A. T. Peacock and J. Wiseman, *The growth of public expenditure in the United Kingdom* (London, 1961), Table A-20.
[2] Peacock and Wiseman, Table A-20, 201
[3] Peacock and Wiseman, 107.

exists. For much of the nineteenth century British cities suffered under poor sanitary and living conditions. During this period of need, British cities invested too little in their urban infrastructure.[4] The question is what conditions influence public spending. Historians have separately discussed the issues related to urban finance and the issues related to urban politics.[5] This chapter intends to show the interaction between the two.

We have a prior hypothesis that electoral politics are important determinants of the fiscal outcomes. Public choice theory proposes that the growth of government can be accounted for by the electoral system.[6] Szreter, observing the public health improvements that followed the expansion of the franchise in 1867, argues that 'the British case indicates the great importance of constitutional arrangements and of political organization, particularly the extent to which the poorer sections of the community have an effective political voice.'[7] Similarly, Offer sees the extension of public services as a response by politicians to electoral incentives.[8] The expansion of the franchise produced a predominantly working class electorate. If the theories of government expenditure are correct, then the admission of poorer voters into the franchise will result in greater expenditure. This chapter will apply these insights and test them using an original dataset. Although statistical analysis cannot show cause and effect, it can provide a necessary test.

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[4] For the 'under investment' view, see J. G. Williamson, *Coping with city growth during the British Industrial Revolution* (Cambridge, 1990), 267-306.

[5] For an explanation of the urban fiscal situation, see R. Millward and S. Sheard, 'The urban fiscal problem', *Economic History Review* 48:3 (1995) 501-35. For urban politics during this period, see A. Offer, *Property and politics, 1870-1914* (Cambridge, 1981). For London in particular, see J. Davis, *Reforming London: the London government problem, 1855-1900* (Oxford, 1988).

[6] A. H. Meltzer and S. F. Richard, 'A rational theory of the size of government', *Journal of political economy* 89:5 (1981) 914-27.

[7] S. Szreter, 'Economic growth, disruption, deprivation, disease and death: on the importance of the politics of public health for development', *Population and development review* 23:4 (1997) 693-728.

[8] A. Offer, *Why has the public sector grown so large in market societies? The political economy of prudence in the UK, c.1870-2000* (Oxford, 2003).

The composition of the electorate

The Reform Act of 1867 extended the parliamentary franchise to occupiers of households with an annual rental value of greater than £10. The intention was to extend the franchise to the 'respectable' working classes in urban areas. As an example, the municipal electorate as a percentage of the total population in Birmingham grew from three percent in1861 to 18 percent in 1871.[9] In practice, the franchise was extended to a larger degree than the framers of the Act intended. Recent research by Davis and Tanner shows that the increase was even larger than previous historians had supposed. The Parliamentary borough electorate increased by 40 percent between 1868 and 1884. The increase was more random than legislators intended. Rich people often failed to register, and poor people were sometimes registered whether they wanted to be or not. Two factors further contributed to the growth of the working class electorate. First, registration of voters was not a rigorous process. Legal questions such as what constituted a household created further ambiguities so that unprofessional and part-time registrars usually resolved on the side of inclusion. In addition, political parties often added to the register in order to mobilise support.[10]

Second, the practice of compounding allowed those who did not pay the rates directly to vote anyway. Compounding was a system that allowed the owners to pay rates on behalf of their tenants. The practice of compounding emerged because rate collectors had difficulty collecting rates from mobile working class occupiers. The occupiers had difficulty accumulating a quarterly sum, and they often did not remain in the same premises for as long as three months. The Poor Relief Act of 1819 established the basis of the compounding system. In exchange for paying rates on

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[9] E. P. Hennock, *Fit and proper persons: ideal and reality in nineteenth- century urban government* (London, 1973), 12.

[10] J. Davis, 'The slums and the vote', *Historical research* 64:155 (1991) 375-88; J. Davis and D. Tanner, 'The borough franchise after 1867', *Historical research* 69:170 (1996) 306-27.

behalf of their tenants, owners were given a discount by the local authority. The Reform Act of 1867 abolished compounding in order to link the franchise with the direct payment of rates. However, the Poor Rate Assessment and Collection Act of 1869 reinstated the system since municipal finances suffered without the additional revenue.[11] The local authority had complete discretion about whether to allow compounding and what limitations to place upon its use.[12] As a result, rating practice was loosely implemented, and although many of the houses in London were above the compounding limit many owners compounded anyway. Offer reports that two-thirds to three-quarters of the population in London were compounders.[13] The decision to allow compounders to vote in municipal elections greatly expanded the participation of working class voters at the local level.[14]

From 1889, the London County Council franchise was composed of householders, freeholders and £10 occupiers. Unlike the Parliamentary franchise, women and peers meeting the above criteria were included while lodgers were excluded. The 1900 London Qualification Act extended the franchise to the Parliamentary criteria while continuing to include women and peers. The City had its own set of voting rules based on membership of livery companies, and was a special case. The County Council franchise was slightly larger: 15.7 percent of the population were electors, compared to the 13.2 percent eligible to vote in parliamentary elections in 1901.[15] By 1914, the LCC electorate numbered 826,000 while the parliamentary electorate numbered 690,000.[16]

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[11] Poor Rate Assessment and Collection Act (1869) 32 & 33 Vict. c41.
[12] Houseletting in Scotland, Departmental Commission Report, BPP 1908 (cd.3792) xlvii, 274-6, submitted memorial by Edgar Harper.
[13] Offer, *Property and politics*, 287.
[14] B. Keith-Lucas, *The English local government franchise: a short history* (Oxford, 1952), 74.
[15] *London Statistics* 16 (1904-5), 12-16. Calculations based on the 1901 Census results for population. This is the most accurate year to compare.
[16] P. Thompson, *Socialists, Liberals and Labour: the struggle for London, 1885-1914* (London, 1967), 81.

A model of political choice

Downs assumes that rational voters can assess the value of streams of costs and benefits from government programs.[17] George Murray and Sir Edward Hamilton, both senior Treasury officials, astutely recognised that the public sector was an alternative to the market in terms of provision of goods in their report on local taxation:

> it may be argued that, in so far as taxation implies a burthen, revenue raised by rates from all expenditure which the individual would, if it were not undertaken by the local community, have to incur himself, ought not to be reckoned as taxation at all.[18]

Hamilton's comments apply to public goods, which are non-rival and non-excludable. But they also apply to collective consumption goods (or 'club goods') which are not pure public goods. Goods like public transport, water provision, education, housing and electric lighting are examples. Under conditions of indigence, individuals may wish to pool their collective resources in order to secure long term improvements to their welfare. Alternatively, they may even be compelled to do so by the state, through compulsory school attendance, for example.

A willingness to vote for municipal improvements funded by taxation could therefore be modelled as a prudential choice, and a rational means of improving quality of life.[19] A.V. Dicey, who generally opposed collectivism, acknowledged that the aim of municipal trading was to 'use the wealth of the ratepayers in a way which may give to all the inhabitants of a particular locality benefits, e.g. in the way of cheap locomotion, which they could not obtain for themselves.'[20] B.F.C. Costelloe, the Chairman of the Local Government and Taxation Committee of the LCC from 1889-95 and close associate of Sidney and Beatrice Webb, agreed. 'There are large

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[17] A. Downs, *An economic theory of democracy* (New York, 1957), 37.
[18] Local Taxation, Royal Commission Minority Report, BPP 1901 (cd.638) xxiv, 110.
[19] For a discussion of the implications of this statement, see Offer, *Public sector*.
[20] A. V. Dicey, *Lectures on the relation between law & public opinion in England during the nineteenth century* 1926 ed (London, 1905), 287.

investments of public money,' he wrote, 'that will pay the taxpayer far better in the end, at least for the higher purposes of his life, than any personal use to which he could put the increment of rates.'[21] In short, voters faced a trade-off between taxation and personal discretionary expenditure, between collective spending through the pubic sector and private spending of their own income. The cartoon from *Punch* captures the trade-off well.

THE TWO DEMAND NOTES

RATEPAYER (*reading over his letter to "The Times"*). "Sir, why should London wait? Are we always to lag behind Paris and Berlin? We *must* have improvements, at whatever cost."

THE SAME (*later*). "What! Want *me* to pay a bill like that! I call it simply monstrous!"

[*Becomes incoherent*

Punch — *November, 1905*

Voters with different income levels faced different trade-offs, depending on how beneficial the services were to them. For the poor, public provision was a desirable means of obtaining collective goods. The rich had the ability to purchase what they needed and had less need for collective provision. In theory, universally provided private goods funded from general taxation are inherently redistributive, and the rich were often compelled to pay taxes for things that they neither needed nor

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[21] B. F. C. Costelloe, *The incidence of taxation, with the text of the Owner's rate bill, and an appendix on the equalisation of taxes* (London, 1893), 10.

wanted.[22] The working classes travelled by tramway; the rich had private carriages. That is not to say that the rich did not benefit from the increased supply of these goods. For example, one benefit of cheap transport is a more flexible labour market. However, in the interest of specification, we hypothesise that income determined the preference for expenditure, with lower income leading to a preference for greater expenditure. Politics provides a means for collective decision making about expenditure, and political party choice can be used as an indicator of revealed preferences.

Historians tend to grant politicians a high level of independent agency to draft, shape and implement their platforms. Frequently, historical discussions of politics centre on discussions of the ideologies of competing political parties. This type of narrative implicitly assumes that ideological choice by politicians is an independently derived preference. Although politicians do have some degree of autonomy in forming their party positions, they do so within the realm of electoral contests. Downs argued famously that 'parties formulate policies in order to win elections, rather than win elections in order to formulate policies.'[23] In public choice theory, party platforms should respond to public preferences for expenditure. The expansion of the franchise to include a greater number of working class voters should have led to an increased demand for public spending. The politicians who positioned themselves closer to the median position should have been rewarded by the electorate, and over time, party platforms should have converged on the preferences of the median voter.

There is a strong case for modelling local government elections during our period as being defined on the single dimension of expenditure (and the level of

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[22] T. Besley and S. Coate, 'Public provision of private goods and the redistribution of income', *American economic review* 81:4 (1991) 979-84. See also S. Webb and B. P. Webb, *English local government: statutory authorities for special purposes* (London, 1922), 436.
[23] Downs, 28.

taxation required to finance it). We also assume that voter preferences are single-peaked. The definition of single-peakedness is that issues are defined along a single dimensional vector: the choice is either more or less. Voters who have single-peaked preferences on an issue agree that there is an optimum level of a good. One voter may prefer for large amounts of the good, another voter may prefer smaller amounts. But both of their choices are points along a single line.[24] If the political process operates in such a way that voters perceive the proportions in which funds are spent as being constant between candidates, with each candidate simply taking a position on total expenditure, then the multi-dimensional urban issues (police, transport, housing, etc.) can be essentially reduced to a single dimension.[25] W.H. Dawson, contemporary scholar of comparative local government, wrote that 'the most attractive programme that can be placed before the ratepayers of an average English town is one of a single clause—a promise to keep the rates down at all costs....'[26] Leonard Courtenay once told Beatrice Webb that 'if you win you will win on your administration, if you lose you will lose on the increase or supposed increase in the rates.'[27] Years later, Herman Finer wrote that 'Elections usually revolve not around the trading services themselves, but the general issue of more or less expenditure of higher or lower rates.'[28] More to the point, the issue was not the absolute level of the rates, but what benefits they produced, and to whom.

The model that follows focuses on testing the specific hypothesis that class affected expenditure patterns, and does not attempt to provide an exhaustive model of voting behaviour. One necessary restriction is that local government elections are

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[24] D. C. Mueller, *Public choice II* (Cambridge, 1989), 65. In theory, the choice does not even have to be single peaked in order for a majority rule equilibrium to emerge; see K. Roberts, 'Voting over income tax schedules', *Journal of Public Economics* 8:3 (1977) 329-40.
[25] D. E. Wildasin, *Urban public finance* (London, 2001), 41.
[26] W. H. Dawson, *Municipal life and government in Germany* 2nd ed (London, 1916), 370.
[27] *Beatrice Webb's Diary,* 15 February 1895, quoted in Davis, *Reforming London*, 198.
[28] H. Finer, *Municipal trading: a study in public administration* (London, 1941), 163.

considered outside of the context of parliamentary elections. The statistical appendix to this chapter shows that Conservative support in parliamentary elections was higher than Moderate support at County Council elections for London as a whole. This gap was most pronounced in working class constituencies, which showed high support for Conservative candidates in parliamentary contests but not in LCC elections. This is indicative of the different dimensions of local and national politics. Local politics were mostly fought on the single dimension of expenditure, while national politics was fought on a number of different dimensions, especially centre-periphery relations.[29]

It is assumed that all candidates subscribed to a common party platform. A voter who voted Progressive in Hackney chose the same platform as a voter in Chelsea. Although it is true that individual candidates may deviate from the party line, it is plausible to assume party unity. Contemporaries perceived a strong partisan dimension to LCC politics.[30] The Progressives and the Moderates had central offices and monitored the activity in individual constituencies.[31]

The dataset

Despite the amount of material that has been written on the subject, few historians have applied formal statistical methods to London elections. One of the reasons why historians have neglected this task is because the data were not readily accessible. The publication in 2000 of earlier LCC election data provides an opportunity to make a first attempt.[32]

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[29] This is the main argument of I. McLean, *Rational choice and British politics: an analysis of rhetoric and manipulation from Peel to Blair* (Oxford, 2001). For the role of religion, see K. D. Wald, *Crosses on the ballot: patterns of British voter alignment since 1885* (Princeton, 1983).

[30] A. G. Gardiner, *John Benn and the progressive movement* (London, 1925), 31ff; J. Davis, 'The first Progressive Council', in Andrew Saint, ed. *Politics and the people of London: the London County Council, 1889-1965*, (London, 1989).

[31] See for example Progressive Minutes book, LMA ACC/1632/1 and the Minute Book of Executive Committee of the London Municipal Society, GL MS 19528-1.

[32] A. Willis and J. Woollard, *Twentieth century local election results* (Plymouth, 2000).

The hypothesis is that preferences for public expenditure will be a function of income (which determines the level of benefits) and the level of taxation (which is a function of the level of expenditure). The preference for public expenditure can be observed by political party choice. There were two main political parties in London. The Progressives were aligned with the national Liberal party, and were the party on the left. The Progressives stood for capturing the 'unearned increment' of property through the taxation of site values, providing working class housing, the municipal provision of utilities, and the equalisation of rates to narrow the gap between the Vestries with high and low rateable value. There were also Independent Labour and Independent candidates. The Moderates were closely associated with the national Conservative party. The Moderates opposed municipal enterprise because they were in favour of low levels of taxation and they argued that loan finance placed an unfair burden of the future. Since they were the only party on the right, we will use the support for Moderate candidates (compared to the support for all other candidates) as the measure of party support.

Finding a variable to capture the level of income is more difficult. In the absence of individual level data, a group-level measure will have to suffice. In this instance, rateable value per head provides an indication to measure income. Rateable value is a measure of income from real property. Rateable value, deflated to 1900 prices, is a consistent measure that can be found for each election period.[33] Divided by population, it provides a measure of the income within a spatial area.[34] The per-

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[33] The source for the rateable value is *London Statistics*, except for 1889. The 1889 data is from *Statistical Abstract for London* 5, 19. The volume and page in *London Statistics* for the rateable value in each election year are as follows: 1892 vol. 3, 633; 1895, vol. 6, 318; 1898 vol. 9, 402; 1901 vol. 12, 2; 1904 vol.15, 394; 1907 vol.17, 486; 1910 vol. 20, 486; 1913 vol.540, 'valuation.' The deflator used is 'Board of Trade Wholesale Price Index,' B. R. Mitchell, *British historical statistics* (Cambridge, 1988), 728.

[34] Census data for population in 1891, 1901 and 1911 can be found in *London Statistics* 24, 34. Interpolation provides a better measure of population than the official statistics. The official estimates for population were often too high. See *London Statistics* 24, 33.

capita measure effectively controls for population changes and the process of inter-urban migration over time. Boroughs with high rateable value per head were generally wealthy, and Boroughs with a low rateable per head value were generally poor. In 1889, the values ranged from a low of £3 in Bethnal Green to a high of £22 in Westminster. This does not imply that the populations were uniformly rich or poor, because Charles Booth's survey showed that there were pockets of poverty even in the wealthiest areas. Even after deflating the measurement, rateable value per head increased over time. Taxation figures are available for each year from *London Statistics* and the *Statistical Abstract of London.*[35]

London was divided into 57 constituencies for Parliamentary elections, and these constituencies also served as the unit for LCC elections. Electors elected two councillors from every constituency, except for the City which elected four. The boundaries of the constituencies were redrawn in 1885 but remained constant throughout the period.[36] The boundaries present a number of difficulties. First, the constituencies were political rather than administrative boundaries. No data could be found based on constituency boundaries. In order to analyse the voting behaviour, we had to group constituencies into Boroughs. In order to achieve a consistent basis for comparison, we have aggregated the electoral constituency results into Borough groupings. For example, the constituencies of Kensington North and South are combined into a single Borough level constituency that matches the Borough of Kensington by taking the mean support for Moderate candidates. The advantage of doing this is that the rateable values are given by Borough. This method is consistent with earlier work by political scientists.[37]

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[35] Rate data derived from *Statistical Abstract for London* 1912-13, 17.
[36] *London Statistics* 11, cxlx.
[37] Wald, 41.

The disadvantage is that the boundaries of constituencies and metropolitan Boroughs match closely but not perfectly. Sometimes discrepancy was too large for a valid association. The areas that are particularly affected by this are the metropolitan boroughs of Wandsworth and Battersea, and they have been removed from the dataset. The constituency of Hackney North is part of both Stoke Newington and Hackney, but this problem was solved by applying a rateable value for the combined area through a weighted population estimate. The boundaries of the administrative units changed over time. Before 1899, the rateable values are listed by Parish. Compiling a retroactive rateable value for each borough relied upon both cartographic and textual evidence.[38] The spatial relationship between parishes and boroughs is close but not perfect. However, this error is minimised since rateable value is divided by population.

Finally, the City of London has been removed because it is a large outlier. Its rateable value per head was more than five times larger than the next wealthiest Borough. In terms of size, wealth and the composition of the electorate it was atypical. We also removed cases in which the election was not contested since there was no observable voter choice in these instances. Between 1889 and 1913, there were 14 such elections.

As a result of using boroughs as the unit of analysis, we are constrained by the ecological inference problem.[39] What we are observing are ecological correlations rather than individual correlations. Properly phrased, we are observing the effect of the level of income of a Borough on the outcome of an election held in that Borough. The conclusion that we can draw is that within certain geographic areas, the level of income had an effect on party preference. We cannot extend the statistical result to

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[38] For a valuable map, see *London Statistics* 4, Map II and pp. 589-609.
[39] W. Robinson, 'Ecological correlations and the behaviour of individuals', *American sociological review* 15:3 (1950) 351-37.

individual level behaviour without subjecting the results to a more complicated set of procedures.[40] However, the probability that individual behaviour departed a great deal from the aggregate level behaviour is low.

Modelling London elections

Table 5.1 shows an overview of London County Council elections. The Progressives did not lose control of the council from 1889 until 1907. In 1895, there were more Progressive than Moderate Aldermen (who served six year terms), which ensured that the Progressives maintained control despite having less seats. In 1907 the Moderates gained control the council after a landslide election victory.

Table 5.1: Overview of LCC elections

Year	Number of elected councillors				% turnout
	Progressive	Moderate	Labour	Independent	
1889	73	45			50.0
1892	84	34			53.4
1895	58	59		1	49.8
1898	84	34			51.0
1901	87	31			41.6
1904	83	35			46.5
1907	38	79		1	56.5
1910	55	60	3		53.6
1913	50	67	1		54.2

Source: For election results, Gibbon, G., and Bell, R. W., *History of the London County Council, 1889-1939* (London: Macmillan, 1939), 677; for turnout figures, see Willis and Wollard dataset (2000). The turnout column excludes the City of London, while the City's seats are reflected in the number of elected councillors figures.

[40] G. King, *A solution to the ecological inference problem: reconstructing individual behavior from aggregate data* (Princeton, N.J., 1997).

The dataset is a pooled dataset, meaning that it contains both time-series and cross-sectional data of 25 Boroughs over nine elections. The issue in using such data is to control for spatially and temporally correlated errors. Following Beck and Katz, we will use OLS regressions with panel-corrected standard errors.[41] The first model tests for the effect of rateable value (as a proxy for income) on party choice.

Table 5.2: Model 1 - The effect of rateable value on party choice
Prais-Winsten Regression (OLS with panel corrected standard errors)

	Dependent variable: percentage Moderate support
Rateable value per head	1.03
	(0.18)**
Interaction of Rateable value and time	0.0005
	(0.06)
Time	1.14
	(0.74)
Constant	34.12
Observations	221
R-squared	0.26

Standard errors in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%

Variables appearing for the first time are as follows. Rateable value per head is a measure in £ of the rateable value divided by head of population. Time is measured in periods 1-9 for each election year. It is included in order to asses the extent to which support for Moderate candidates changed over time. The interaction between rateable value and time uses centred values of rateable value multiplied by time. It is included to assess whether the increase in rateable value over time was a significant variable. The percentage Moderate support is the percentage of the total votes in a Borough for Moderate candidates.

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[41] N. Beck and J. Katz, 'What to do (and not to do) with time-series cross-section data', *The American political science review* 89:3 (1995) 634-47. The panel corrected standard errors are obtained by running the 'xtpcse' command in STATA 7. As a check, the same regressions were run using different specifications, including a logarithmic transformation of the dependent variable. The results are robust. See statistical appendix to this chapter.

The results show that rateable value per head is a useful predictor of party support. Expressed in words, the regression shows that for every increase in rateable value per head of £1, the percentage support for Moderate candidates increased by about 1 percent. For example, in 1892 the rateable value per head of Bethnal Green was £3.33. The regression predicts that there is a constant level of Moderate support at 34 percent, plus another 3 percent, to produce a figure of 37 percent.[42] In Westminster, a rateable value per head of £22 should produce a figure of 66 percent.[43] This makes intuitive sense and compares well against the actual figures. The inference that can be drawn from this model is that the level of income was indeed a strong indicator of party choice.

However, this model makes the assumption that the support function was linear over time. The model in Table 5.3 seeks to correct this assumption by using time dummies for each election year. The model fit improved when the extra parameters were added.

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[42] The actual figure was 35 percent.
[43] The actual figure was 63 percent.

Table 5.3: Model 2 - The effect of income on party choice, with time effects
(OLS with time dummies)

	Dependent variable: percentage moderate support
Rateable value per head	1.14
	(0.10)**
1889	Dropped
1892	3.63
	(2.63)
1895	12.69
	(2.60)**
1898	10.68
	(2.60)**
1901	4.18
	(2.63)
1904	5.09
	(2.66)+
1907	13.55
	(2.62)**
1910	10.33
	(2.63)**
1913	10.62
	(2.64)**
Constant	30.13
Observations	221
R-squared	0.49
Adjusted R-squared	0.47

Standard errors in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%

It is reassuring that the coefficient for rateable value per head remained virtually the same. The significance of the time dummies reflects significant rises and falls in the support for Moderate candidates relative to the base year of 1889. The next step is to add variables that can account for change over time.

Model 3 seeks to test the hypothesis that a change in the level of taxation affected party support. The hypothesis is that there was a dynamic effect. Since the Moderates began by urging retrenchment and lower rates, it follows that an increase in the rates should lead to an increase in Moderate support. The model tests the effect

of a percentage change in rates on the percentage increase in Moderate support. If rates went up by 10 percent, what would happen to support for Moderate candidates?

Table 5.4: Model 3 – Dynamic effects between rates and party support
OLS Regression, change model

	Dependent variable: Percentage change in support for Moderate candidates
Percentage change in rates (from previous election year)	0.17
	(0.08)*
Constant	0.87
Observations	191
R-squared	0.02
Adjusted R-squared	0.018
F-statistic	4.53*
Standard errors in parentheses	
* significant at 5%; ** significant at 1%	

The answer is that a rise in taxation did result in a rise in support for Moderate candidates, but only did so by a small degree. Rates assessed were a Borough rate and a County rate, as well a Poor Law rate. The regression shows that for every increase in rates of 1 percent, support for the Moderate candidates only increased by 0.17 percent.

Figure 5.1 shows the support for Moderate candidates over time, plotted against the average rate in the pound (expressed in shillings/£).

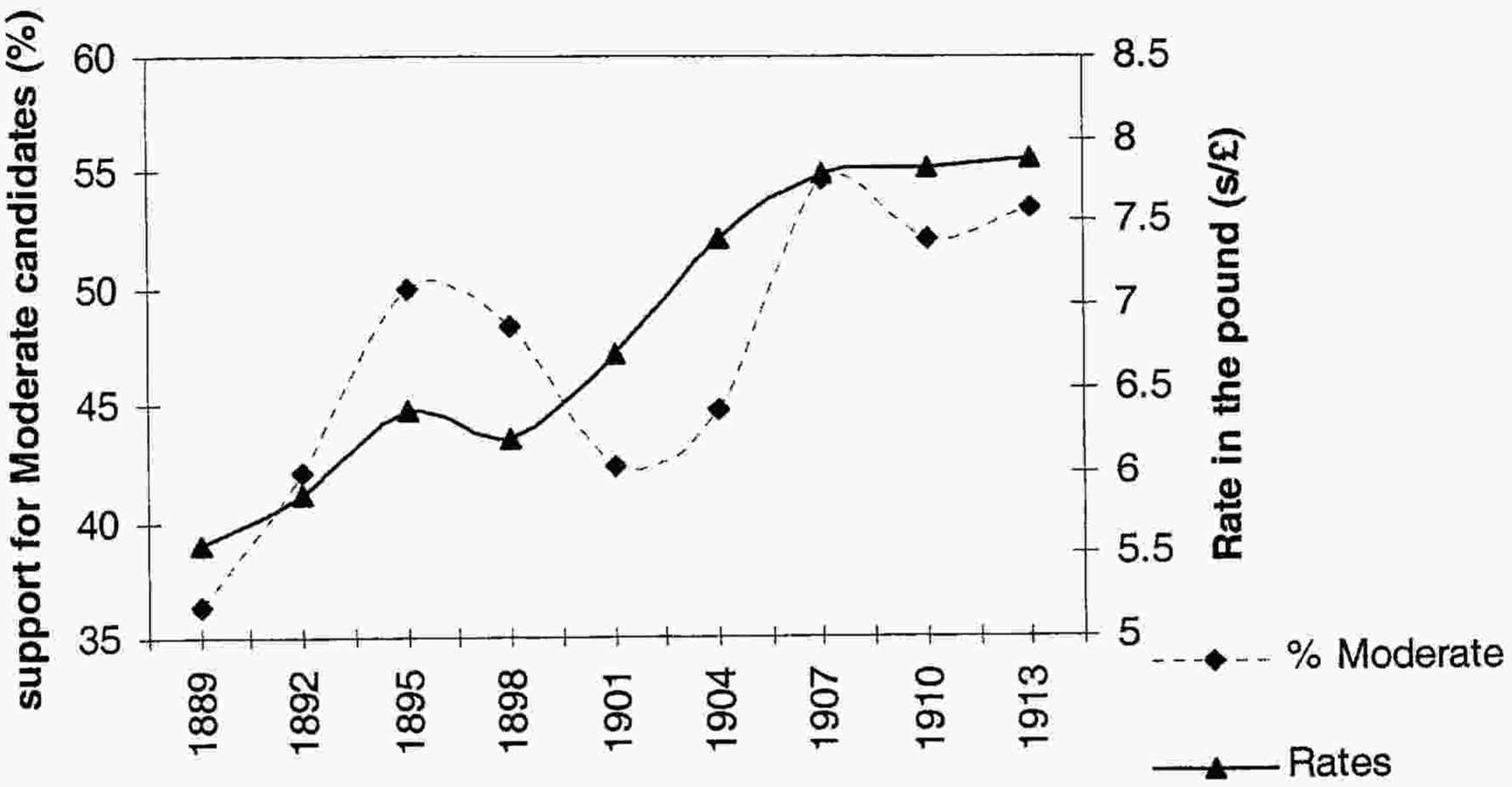

Figure 5.1
Rates and Moderate support over time
Source: *London Statistics,* LCC dataset.

This graph makes the trend more discernable and shows why the previous regression lacked explanatory power. In general, Moderate support did increase with the increase in rates, but did not do so evenly. At first, rises in rates did lead to higher Moderate support, up until 1898. Then the pattern changed between the 1898 and 1907 elections. During this time, the major public spending projects included the formation of the Metropolitan Water Board, the purchase of the tramways, as well as many housing projects. It is possible that the majority of voters favoured these projects and were therefore willing to finance greater levels of expenditure through rates. An additional explanation is that life in London was getting better. This period was a time of massive public health improvements. Public health is a complex issue, but one way of encapsulating it is to track infant mortality. Figure 5.2 shows this measure over time. Since the number can vary from year to year due to seasonal conditions like an exceptionally hot summer, the graph uses a two period moving average.

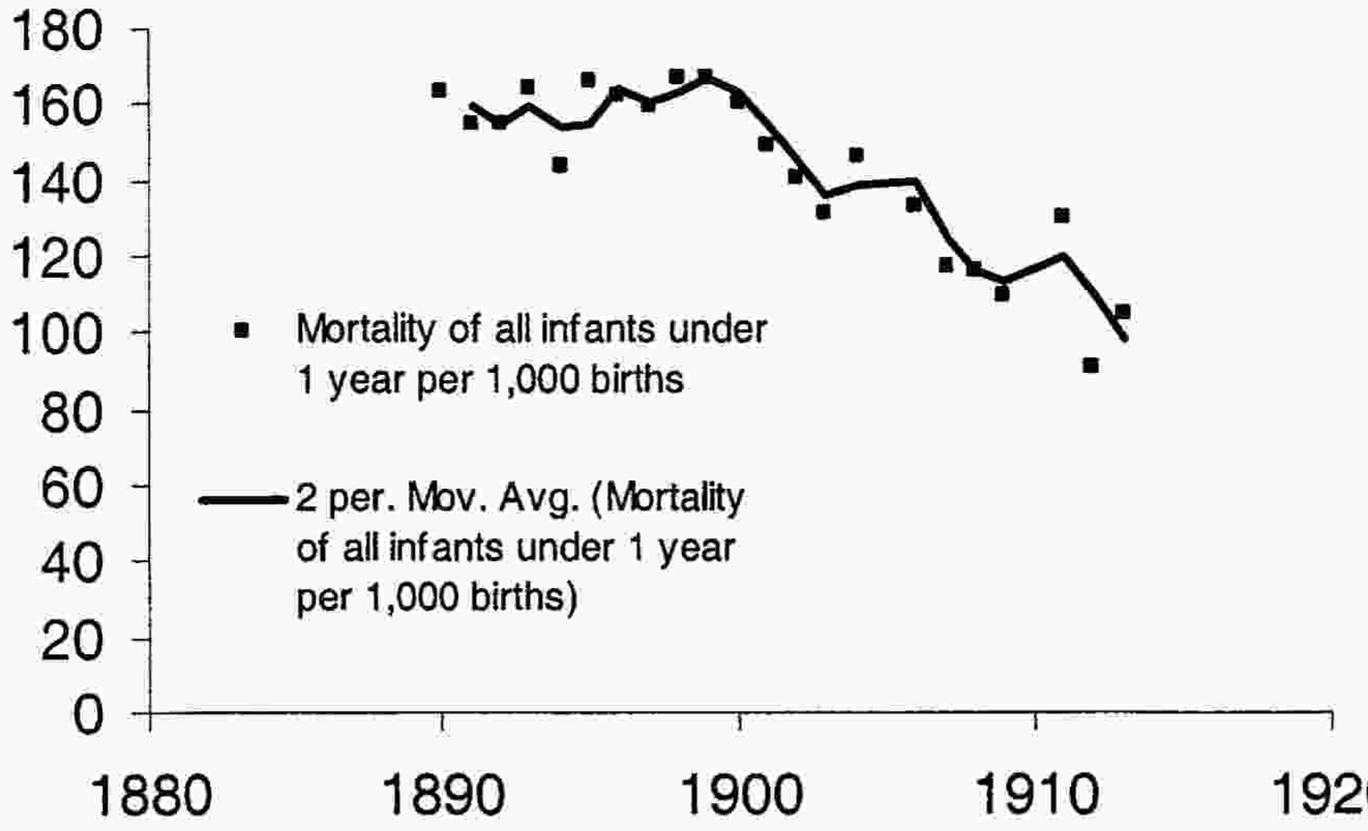

Figure 5.2
Infant mortality in London
Source: BPP, *Annual report of the registrar general*

Government expenditure alone does not account for the increase in public health levels; increasing real incomes, fertility patterns, and environmental conditions also played an important role.[44] However, an explanation that we can supply as a solution to this problem is that voters may have been prepared to pay higher levels of tax if their money resulted in better public health. The alleviation of overcrowding through cheap transport and public housing, as well as sanitary improvements did contribute to improved living conditions. The implication is that increases in rates did not immediately result in increased support for the Moderates because voters chose this method of increasing their welfare.

This result is interesting—and difficult to explain—because rates were a regressive tax. The poor at all times ended up contributing a higher share of their income than the rich.[45] The Independent Labour Party complained that 'the rates of London vary from 5s 11d in the rich area of Westminster to 12s in poverty-ridden

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[44] R. Millward and F. Bell, 'Infant mortality in Victorian Britain: the mother as medium', *Economic History Review* 54:4 (2001) 699-733, 728.
[45] Davis, *Reforming London*, 123.

Poplar.'[46] Part of the answer is that the Equalization of Rates Act of 1892 helped to reduce the rates in the poorer Boroughs through a contribution from the wealthier ones.[47] The equalization of rates may have helped to reduce (but not eliminate) the exposure of the poorer Boroughs to the effects of their electoral decisions. Sidney Webb argued just that in a handwritten letter to one of his constituents in Deptford before the 1895 election. 'The City and West End have to pay more in order that you may pay less. I seek to continue this equalisation policy. The "Moderates" are trying to stop it.'[48] One Progressive initiative called for amalgamation with the City. Such a move would have increased the coffers of the LCC and allowed for greater redistribution. This scheme, however, was bitterly contested and ultimately failed.[49]

Another issue is the extent to which voter participation affected the demand for public spending. Voters cannot influence elections unless they vote, and since the hypothesis has stressed the composition of the electorate it is important to establish the extent to which the working class actually voted. Using the limited data that is available, what were the determinants of voter participation?

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[46] 'Manifesto of the Independent Labour Party, London County Council Elections 1907,', BLPS Fabian Society Papers, B1/7 ff2.
[47] A good work on this technical subject is Davis, *Reforming London*, 149ff.
[48] Letter from Sidney Webb to an unknown constituent, 27 February 1895. BLPS Passfield Papers, 4/1/40.
[49] Amalgamation of the City and Council of London, Royal Commission, BPP 1894 (cd.7493) xvii.

Table 5.5: Model 4 – the effect of income on participation
Prais-Winsten Regression (OLS with panel corrected standard errors)

	Dependent variable: Percentage voter participation
Rateable value per head	-0.52
	(0.08)**
Time	0.83
	(0.50)+
Constant	52.21
Observations	221
Number of Boroughs	25
R-squared	0.32

Standard errors in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%

Voter participation is a measure of the number of voters who voted divided by the number of eligible voters. This model shows that income, as measured by rateable value per head, had a small effect on voter participation. A constant of 52 percent and a small coefficient for rateable value per head suggests that the voter participation did not vary much by Borough. However, the negative coefficient suggests that participation declined as the income of the borough increased: the working classes did indeed participate in the electoral process. There is another means of establishing this point. An early study of London parliamentary elections by Pelling classified constituencies as A (middle class), B (mixed class), and C (predominantly working class) based on the 1901 census and supplemented by data from Charles Booth's survey.[50] The problem with this method is that it takes a snapshot of class at only one period in time. In contrast, rateable value per head changes over time and is more appropriate to this exercise because it is a continuous measure. However, the Pelling-Booth class system is a useful means of supplementing the rateable value measure. Using the Pelling class system, class A (middle class) had a voter turnout of 46 percent, class B (mixed middle and working class) had a turnout of 54 percent, and

[50] For the method, see H. Pelling, *Social geography of British elections, 1885-1910* (London, 1967), 22-5.

class C (working class) had a turnout of 51 percent.[51] The newly enfranchised voters were indeed participating.

The turnout appears to have increased slightly over time. It was hypothesised that one reason for the significance of the time variable was the increase in rates from election to election. The regression of the percentage change in rates against the percentage change in participation showed that the change in rates was not statistically significant. This suggests that increases in the rate of taxation (compared to the previous election year) did not prompt a higher turnout. The turnout percentage ranged between 41 percent in 1901 and 55 percent in 1907. The mean turnout for all elections was 50 percent, which is high for local government elections. Since the level of taxation did not have a large effect on turnout, a likely explanation is that parties mobilised voters. This is consistent with the description of local government politics given by contemporary observers like Ostrogroski.[52] It fits with the facts as well. The year with the highest turnout, 1907, was the year that the Moderates made a concerted effort to improve their organisation and tactics. Prior to that, Moderate leaders like the Earl of Onslow complained about middle class apathy. In a letter to Lord Northcliffe, the publisher of the *Daily Mail,* Onslow asked for the publisher's help in mobilising the upper and middle classes voter: 'No mere municipal question and no burden of rates will bring him to the poll.'[53]

Party platforms

The previous models have assumed that party platforms have been static. Relaxing this assumption, however, reveals the dynamics behind the election system, and that is what produces an interesting result. The hypothesis was that party platforms respond

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[51] Calculation based on the LCC dataset.
[52] M. Ostrogorski, *Democracy and the organization of political parties*. 2 vols (London, 1902), vol. I, 371ff.
[53] Onslow to Northcliffe, 31 July 1897, Northcliffe Papers, BL Add. 62154.

to voter preferences. To what extend did this take place? The electoral environment in London favoured the working class voters. According to Pelling's categories, there were 16 Class A (middle class) constituencies, which translated into 32 council seats (36 including the City). There were 15 Class B (mixed middle and working class) constituencies, which translated into 30 council seats. There were 24 Class C (working class) constituencies, which translated into 48 council seats. Winning control of the Council meant looking beyond Class A. From 1889, the Moderates devoted themselves to ratepayer interests. They opposed municipal trading and were limited to a West End rump. In contrast, the Progressives achieved electoral success even in areas that consistently returned Conservatives to Parliament. The Progressives were guided by policies outlined in Webb's *London Programme* (1892): taxation of land values, public ownership of water, gas, and tramways, slum clearance schemes and Fair Wages.

The Moderates were the party of ratepayer interest and opposed these measures, as indicated by their early association with the reactionary Liberty and Property Defence League. Their trenchant opposition to a social policy funded by general taxation alienated the majority of people who benefited from precisely such policies. Davis cites the severity of the Moderate agenda as the main reason why the Moderates failed to achieve electoral success in constituencies that returned Conservatives to Parliament. 'Their failure to look beyond the West End proved disproportionately costly.'[54] Conversely, at every election since 1889, the Progressives asked the electors to expand the expenditure of the County Council, and with a few exceptions the electors gave them a mandate.

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[54] Davis, *Reforming London*, 190.

In 1901, after the Progressives won a landslide victory, the *Pall Mall Gazette* wrote that 'if the Moderates would undertake what other municipal authorities are actually doing… they would go to the County Council with a majority.'[55] Beatrice Webb wrote in her diary following the same election that 'the London elector has confidence in the "old gang" which has now ruled London for twelve years, and that, in spite of the fact that the old gang are exclusively Radicals whilst the vast majority of electors are Tories.'[56] It was not until 1907, when the average rate had increased 40 percent since 1889, that voters told the Progressives that they had had enough.

Let us explore this possibility more systematically. The hypothesis is that Moderate support is a function of the level of income and the party platform, and that political support should increase as the platform moves towards a centrist position. For each election year, we will assign to the Moderate platform a dummy variable reflecting its spatial positioning. If it is towards the centre we assign it a value of 1. If it is towards the right we assign it a value of 0. Since we know that debates over public ownership were divisive we will look specifically at support for public ownership of tramways and water, supplemented by comments from the actors themselves. The assessment of position is a subjective measure but can be supported with evidence from the archives of the London Municipal Society. Readers who object to the subjective coding of platforms should have their objections met to some extent by the following anecdotal evidence.

For the 1892 election the Moderate platform was to the right. It favoured keeping rates low. In contrast, the Progressive vision for London involved costly municipal improvements and the implementation of the 'Fair Wages Clause' which

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[55] Davis, 'The first Progressive Council', 41-4.
[56] B. P. Webb, et al., *The diary of Beatrice Webb* (London, 1982), 28 March 1901, vol. 2, 202.

increased the wages for workers on municipal contracts to Trade Union levels.[57] In 1895, the Moderate platform made rhetorical progress towards the centre, but remained to the right.[58]

The 1898 platform was also to the right. The Progressives favoured Council operation of the tramways, which the Moderates successfully defeated in Council, and the public ownership of the water companies. The Moderates emphasised the level of taxation rather than the quality of services. On the subject of water they wrote that 'ratepayers must consider the practical expediency of the proposed transaction. They must be satisfied that the terms of each separate purchase, while equitable to the companies, will be such as will enable the County Council to work the undertaking with advantage to the consumers, without disadvantage to the ratepayers.'[59] Regarding the tramways, the Moderates wrote that the plan to lease the Northern tramways to the North Metropolitan Company was a 'splendid investment, the best and most important that the council has made during its existence.'[60] 'The progressives, on the other hand, would prefer to acquire and work the lines, no matter what the result may be to the ratepayers.'[61]

The Moderates fought the 1901 election on the merits of further decentralisation after the passage of the London Government Act, while the Progressives maintained their programme of public tramways and public water supply.[62] In 1904 the Moderates maintained their opposition to the municipalisation of the Northern tramways. Public tramways would place the Council 'under the

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[57] S. Webb, *The London programme* (London, 1892). Davis, *Reforming London*, 186.
[58] Davis, *Reforming London*, 198, 207.
[59] London Municipal Society, *London County Council Election 1898: Facts and Arguments,* GL LMS box 106, 11.
[60] *1898 Election Facts and Arguments*, 48.
[61] *1898 Election Facts and Arguments*, 51.
[62] See for instance, London Municipal Society., *The London Municipal Society, 1894-1954: sixty years' service to London* (London, 1954), 30.

influence of the votes of many thousands of their own servants.' They emphasised that ratepayers interests could best be met under a leasing arrangement.[63] Again, we see their platform located to the right of centre.

In the early years the Moderates opposed municipal trading at every opportunity. They supported the private water companies, opposed the Council working the tramways, and railed against the LCC's Works Department. But in 1907 they rebranded themselves the Municipal Reformers and subtly moved closer to what had been historically Progressive positions. The question of tramways provides an example of the party shift, and we will discuss it in much greater depth in the case study chapter on tramways. In 1907, for the first time, they promised to maintain public ownership of the tramways. 'The Municipal Reform Party will feel bound to continue the policy which has been adopted by the Council, of working the tramways itself, but they will enforce the necessity of conducting the business on sound financial principles, with ample provision for renewals and reserve funds, and for a reasonable contribution from the tramway account towards the cost of street widening for tramway purposes.'[64] Minutes of the Executive Committee of the London Municipal Society reflect the party's strategy. Before the 1907 election, the Moderates adopted an aggressive programme of lectures in middle and lower income areas in order to broaden their appeal.[65]

In this respect, the platform had become centrist. But in other respects the platform continued the emphasis of limiting the level of taxation. They fought the election against the increase in rates and against alleged inefficiency by the Works

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[63] London Municipal Society, *London County Council Election 1904: Facts and Arguments*, GL LMS box 107, 105.

[64] London Municipal Society, *London County Council Election 1910: Facts and Arguments*, GL LMS boxes 108-9, vol. 1, 82. The 1910 platform quoted the 1907 platform. Curiously, the material relating to the 1907 platform was missing from the series.

[65] Minutes of the London Municipal Society, Executive Committee Meeting, 20 November 1907, GL MS 19528-1.

Department. Although there remained important differences, the shift towards the acceptance of public ownership leads to a classification of centrist. The similarity can be further illustrated in the 1910 and 1913 platforms. In 1910 they promised to maintain fiscally prudent management of the tramways (but promised to continue public management), and in 1913 the even boasted about how they had doubled the mileage of electric tramway lines, a project begun by John Williams Benn.[66] This aspect of Moderate policy has been underemphasised by earlier historians, who tend to emphasise their differences rather than similarities with the Progressives.[67]

The regressions show that the party platform can account for a change in the level of Moderate support, but only at the 90 percent level. Two models, one accounting for time and one without, reflect that when the Moderate platform was centrist, they gained about 6 percentage points worth of support. Including the platform variable appears to account for some of the change over time.

Table 5.6: Model 5 – Income, platform, and party choice
Prais-Winsten Regression (panel corrected standard errors)[68]

	Dependent variable: Percentage Moderate support	
	(1)	(2)
Rateable value per head	1.03	1.00
	(0.11)**	(0.13)**
Time	-0.50	
	(1.13)	
Centrist platform	8.08	6.74
	(4.95)	(3.67)+
Constant	38.64	37.19
Observations	196	196
Number of Boroughs	25	25
R-squared	0.47	0.47

Standard errors in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%

[66] London Municipal Society, *London County Council Election 1913: Facts and Arguments*, GL LMS box 110, 67-8.
[67] K. Young, *Local politics and the rise of party: the London Municipal Society and the Conservative intervention in local elections, 1894-1963* (Leicester, 1975).
[68] The party positions were not entrenched during 1889 election, so for the purposes of this exercise we will begin from the 1892 year.

By 1907, the Moderates promised the status quo rather than retrenchment. Rather than promising tax cuts, they promised that rates would not increase and to maintain them at the current level. And rather than promising the privatization of services, they promised that they would run municipal services on more 'business-like' principles. This appeared to resonate well with voters and resulted in increased levels of support. In contrast, the Progressives drifted too far to the left by supporting projects with high degrees of financial risk. Chapter seven discusses the biggest of these projects, bulk electricity supply, in detail.

The reader who is more inclined towards the traditional historical method of archival evidence gathered on a case-by-case basis may object to the reductionism of this method. The answer to this objection is that this quantitative exercise gives an added dimension to textual accounts of other historians. The treatment of the London voter as an economic decision maker is a useful way to generate a testable model. Obviously issues differ from election to election and in practice voter choice is influenced by national crises: rises in unemployment in 1892 and 1903-4, for example, and the Boer War. The purpose was not to provide an extensive model of voter behaviour, but to assess the extent to which voting may have contributed to the provision of urban utilities by the public sector.

This chapter began by asking what mechanism can account for how fiscal outcomes were determined by political choice. What we observe here is that the level of income and party platform were significant determinants of party support. The Downsian theory predicts that party platforms tend to converge on the preferences of the median voter if the issue is single peaked. Since parties compete against each other, each tries to present a package to voters to increase their chances of election. There is good evidence here, both anecdotal and quantitative, to support that basic

insight. The question is why the process took so long. In this case, the convergence of party platforms was not an instantaneous process. In practice, politicians can argue for their own preferences rather than the preferences of the median voter. Political parties are not unitary actors, and fringe elements within the party can influence the party platform away from a centrist position. This explains why the Moderates were so slow in moving from the right, and why the Progressives eventually moved too far to the left. Beatrice Webb, an acute political observer, commented on the median voter effect in her diary. 'Just as the Progressives have permeated the Moderates with all that was immediately practicable in their schemes, so the Moderates have permeated the Progressives and forced them to adopt economical and business-like methods.'[69]

Meltzer and Richard provide an application of the median voter model to the growth of government expenditure. They provide a model in which the level of government spending is set by the rational choices of utility-maximising individuals aware of the consequences of taxation and income redistribution. Their hypothesis is that the size of government depends on the relation of mean income to the income of the median voter. Extensions of the franchise to include more voters below the mean income will increase the number of votes for redistribution.[70] Lindert provides empirical evidence that wealth differential between rich and poor influence results in increased public sector spending, although it is not the single cause.[71] We have not tested directly for the effect of the expansion of the franchise, since the local government election data only start from the inception of the London County Council in 1889.

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[69] Webb, et al., *The diary of Beatrice Webb*, 15 June 1903, vol. II, 282.
[70] Meltzer and Richard, 921.
[71] P. Lindert, 'What limits social spending', *Explorations in economic history* 33:1 (1996) 1-34.

Contemporaries were well aware of the redistributive nature of urban politics. Beatrice Webb described the discrepancy between the Fabianism of her and her husband and the popular politics that was taking place around her:

> There is a real cleavage between our views and those of the rank-and-file Radicals that I do not see my way honestly to bridge it. We are not in favour of the cruder from of democracy. And we *do* believe in expenditure on services which will benefit other classes besides the working class and which will open the way to working-men to become fit to govern, not simply to represent their own class; and we are in favour of economy as well as expenditure.[72]

By implication, the rank-and-file Radicals who formed the mainstream of Progressive politics were more biased towards class politics and redistribution than a rational reordering of administration. From the other side of the political spectrum, Dicey noted a similar effect. Dicey wrote that although there was no necessary connection between democracy and collectivism, the expansion of the franchise did lead to collectivist outcomes

> …above all the competition for office which is the bane of the party system, have at last revealed to the electorate the extent of their power, and has taught them that political authority can easily be used for the immediate advantage, not for the country but for a class. Collectivism or socialism promises unlimited benefits to the poor. Voters who are poor, naturally enough adopt some form of socialism.[73]

The competition for office was the mechanism through which preferences were channelled into policies.

The historical complexity of this period means that the models shown earlier need to be qualified with additional factors. Opponents of municipal trading argued that compounders were inadequately informed to make expenditure decisions. The Earl of Wemyss, the founder of the right-wing Liberty and Property Defence League, argued that 'the mass of electors—the working classes—do not feel, do not know,

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[72] Webb, et al., *The diary of Beatrice Webb*, 15 March 1903, vol. II, 274.
[73] Dicey, lxv.

what the rating is; and it is the representatives they return, pledged to extravagant fads, who are responsible for municipal trading and heavy rating.'[74] The working class elector saw the benefits of municipal trading without feeling the incremental burdens. The argument was that compounding protected the working classes from bearing the full incidence of rate increases while granting them electoral power. Wemyss's criticism was taken to the most extreme position by the Association for the Protection of Property Owners, who proposed abolishing compounding altogether.[75] Edgar Harper, the Chief Statistician of the LCC, admitted that tenants received no official statement of the amount of rates charged to them when their landlords compound. They had no ability to discern what percentage of their rent was composed of taxation through rates.[76] The Royal Commission on Local Taxation concluded that voters should be made to pay taxes directly 'in order that they may appreciate directly the effect of economical and extravagant administration.'[77] We can therefore conclude that to a certain extent the lack of information did play a role in influencing public spending decisions. However, this was probably a contributing rather than causal factor. The impulse to vote for expenditure had to come from somewhere else. All compounding did was lessen the apparent cost of that decision.

Another qualification is that voters did not bear the full cost of their decision due to the incidence of local taxation. The incidence of local taxation was one of the most troublesome policy issues of the Victorian and Edwardian period. Even Sir Edward Hamilton, a permanent secretary at the Treasury, admitted that it was impossible to determine the proportion that local rates fell on occupier and owner. He

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[74] Liberty and property defence league., *Second annual dinner. Report of proceedings and speeches* (London, 1889), 1.
[75] Offer, *Property and politics*, 303.
[76] Houseletting in Scotland, Departmental Commission Report, 274-6, submitted memorial by Edgar Harper.
[77] Local Taxation, Royal Commission Final Report, 51.

called incidence one of the most perplexing problems of economic science.[78] Offer has argued that although landlords were able to shift higher rates onto tenants in the form of higher rents, rates cut into the landlord's profits. 'Local taxation was already intercepting and creaming off most or all of the landlords' unearned increment in the 1890s.'[79] The implication is that landlords rather than tenants carried the burden of expenditure funded by rate increases. 'Tenants,' wrote George Head, 'outnumber landlords by a hundred to one, and a very large number of them have votes; anything therefore which affects them is bound to find a voice in the ballot box to a very greater extent than anything which affects the landlords.'[80] This possibility can be discounted by the intricate nature of the incidence of local taxation. If a Treasury mandarin was perplexed by the incidence of taxation then surely individual voters were as well, if they ever seriously thought about it. Again, we have identified a possibly contributing but not causal link.

Religion was also part of local politics at the time. The papers of John Burns contain an invitation for him to appear a meeting of the London Nonconformist Council before the 1892 LCC election. Burns was told that 'the object of the meeting is to urge electors to vote in accordance with the principles laid down in the Manifesto of the London Nonconformist Council, with which I am sure you will find yourself in hearty accord.'[81] Sidney Webb regularly met with the Bishop of Stepney, who generally supported the Moderates.[82] The *Diary of Beatrice Webb* is a good record of the role that nonconformists played in the debate over London's education system.[83]

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[78] Local Taxation, Royal Commission Minority Report, 109.
[79] Offer, *Property and politics*, 290-4.
[80] Head quoted in Offer, *Property and politics*, 148.
[81] W.T. Stead to John Burns, 23 February 1895, Burns Papers, BL Add 46287 no. 225
[82] Webb, et al., *The diary of Beatrice Webb*, vol. II, 308.
[83] Webb, et al., *The diary of Beatrice Webb*, vol. II, 227-356.

Religion and class were closely linked. A valuable source on religions practice is the *Daily News* religious census, edited by Richard Mudie-Smith and published as *The religious life of London* in 1904.[84] The census enumerators visited one Borough every Sunday between November 1902 and June 1903. They measured attendance at Established, Roman Catholic, and non-conformist churches. Although Church attendance is an imperfect measure of religions sentiment, it provides us with a good source of cross-sectional data. The first conclusion that we draw is that religion and class were closely correlated. Since the religious data is for 1902-3, we use an average of the rateable values for the years 1901 and 1904. The results of a Spearman rank correlation (Spearman's rho) between rateable value per head and the percentage attendance in established churches was 0.4692, and the probability that the two variables are independent was 0.0118. Opposite results obtained when testing the percentage of non-conformist attendance. The correlation was -0.5458 and the probability that the two variables are independent was 0.0027. This does not mean that religion was not a force in LCC politics, but it does mean that it does not present a competing hypothesis to income hypothesis used here.

Immigration was another non-expenditure related issue. There was opposition to Jewish immigration to the East End, for example, as well as Irish immigration. However, local government did not have jurisdiction over immigration policy, and it appears to have had more of an effect on national government elections. Bethnal Green, with a large Eastern European Jewish population, supported the Liberals while the East End generally supported the Conservatives.[85] However, recent research has questioned the degree that religion influenced East End politics, in comparison to

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[84] R. M. Smith, *The religious life of London* (London, 1904). The relevant tables can be found at 266-71.
[85] Thompson, 29ff.

personal and communal ties. Religious affiliation was not an all-encompassing aspect of political life.[86]

Conclusions

The object of this chapter was to take a hypothesis that historians have proposed as true and provide empirical evidence to support it using formal statistical analysis. The broad hypothesis was that electoral choices had an effect on urban expenditure. If this hypothesis is true, then we would see the level of income act as a significant determinant of party choice. The data analysed here support this view. The higher the level of income of a Borough, the more likely that Borough was likely to vote Moderate. Conversely, decreasing levels of income are associated with support for the political parties on the left: the Progressives, and the labour parties. The implication of this is that the working and middle classes had a higher utility from public expenditure than the wealthy.

The second conclusion relates to the sensitivity of voters to the level of taxation. Voters with lower income levels were less likely to support retrenchment programs. Moderate support was concentrated in the wealthier (class A) areas with higher rateable values per head. However, there was a period of time between 1898 and 1907 when voters were not rate sensitive. This was the great period of public ownership—the tramways and the water companies both passed from private into public hands—and the great period of public health improvements. This can help explain why there appears to have been a period of time when voters were willing to

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[86] M. Brodie, *Politics stirs them very little: Conservatism and apathy in the East End of London, 1885-1914* (Oxford University unpublished D.Phil. thesis, 1999), 280-1.

incur additional taxation. Local government can be viewed as a means of collective consumption. If we grant voters the ability to rationally calculate their income utility from government, it appears that at the margin they calculated that utility to be positive even when incurring extra costs. This choice may have been moulded by the effects of compounding and the incidence of local taxation.

This conclusion is supported by the fact that party platforms were significant. There was a trade-off between the benefits of expenditure and the costs of taxation. Politicians were aware of this trade-off and packaged campaign platforms accordingly. Eventually, the two main political parties in London converged on a median point. When the Moderates moved towards the centre, they were rewarded by the voters. So long as the Moderates remained a party of ratepayer interests, they did not win elections. The pattern that appears is that voters wanted a certain level of municipal expenditure. Once that level was reached, they supported a party that promised to maintain the status quo. The Moderates promised to cap rate increases after 1907, but they also promised to maintain public ownership.

This chapter has provided empirical support for the premise that the expansion of urban infrastructure could be seen as the outcome of a choice made by hundreds of thousands of voters. Many of these voters would not have been able to vote before 1867. We began with the question of why public spending increased so much before World War One. A good part of the answer is that, given the composition of the electorate, the majority of voters were willing to pay for it.

Statistical appendix to chapter 5

Table 1: Parliamentary and local elections compared

Parliamentary elections		*LCC elections*	
Year	% support for Conservative candidates	Year	% support for Moderate candidates
1885	51.8	1889	36.9
1886	57.9	1892	40.6
1892	51.1	1895	48.9
1895	55.2	1898	47.7
1900	59.6	1901	43.0
1906	46.4	1904	44.1
1910 [1]	52.1	1907	53.7
1910 [2]	52.5	1910	51.5
		1913	52.8
Mean (1892-1910)	**52.8**	**Mean (1892-1913)**	**47.8**

Sources: For Parliamentary elections: Elections in Europe since 1815 CD-ROM database; For LCC elections, Willis and Woodward (2000).
Notes: There were two elections in 1910, and they have been treated separately. The City of London has been excluded.

Table 2: London elections by Pelling class designation

Parliamentary elections				LCC elections			
% support for Conservative candidates, by class				*% support for Moderate candidates, by class*			
Year	A	B	C	Year	A	B	C
1885	59.8	50.6	47.1	1889	45.1	37.2	31.1
1886	66.7	56.7	53.5	1892	51.8	40.9	34.3
1892	59.0	51.3	46.5	1895	60.4	44.5	43.2
1895	64.4	56.7	50.9	1898	61.0	45.0	39.5
1900	71.2	62.5	53.9	1901	51.4	40.9	36.9
1906	55.3	40.5	42.8	1904	56.6	40.8	36.5
1910 [1]	62.5	49.0	45.8	1907	66.9	51.5	45.1
1910 [2]	64.7	48.9	45.4	1910	67.5	50.2	40.2
				1913	68.3	50.3	42.7
Mean (1892-1910)	**62.8**	**51.5**	**47.6**	**Mean (1892-1913)**	**60.5**	**45.5**	**39.8**

Sources: Pelling (1867) and as above. Notes: A = predominantly middle class, B = mixed middle class and working class, C = predominantly working class.

Table B.3: Alternative model specifications

The values used by model 1 did not lead to floor and ceiling effects (e.g. a party earning more than 100% or less than 0% of support). However, as a test of the robustness of the results, the following table shows the regression results on a transformed dependent variable, according to the formula ln (y/ (1-y)). The results showed identical significance levels to the panel corrected standard error model and confirmed the robustness of rateable value per head as a predictor of Moderate support.

	Dependent variable: logarithmic transformation of percentage Moderate support	
	(1)	(2)
Ratable value per head	0.051	0.052
	(0.004)**	(0.01)**
Time	0.04	
	(0.03)	
Interaction of rateable value with time	-0.008	
	(0.001)	
Constant	-0.66	-0.53
Observations	220	220
R-squared	0.31	0.27
Number of Boroughs	25	25

Standard errors in parentheses
+ significant at 10%; * significant at 5%; ** significant at 1%

Chapter 6: Tramways

The tramway, or street railway as it was called in America, was the most frequently used mode of transport in London between 1890 and 1914.[1] Tramways are a good case study because they involve a public right of way (the street), and changing technological specifications (the advent of electricity), and were subject to heated contemporary debates. Today, we are dealing with the same intractable questions of public or private ownership that first emerged during the late nineteenth and early twentieth centuries. What is the effect of ownership structure on capital investment, and what form of ownership best responds to the needs of the public? What are the costs and benefits of different ownership structures? This chapter will frame answers to these questions along four themes. The first theme is the problem of contracting, and how agency problems led to the muncipalisation of London's tramways. The second theme involves a discussion of management and operations, about how and why the LCC arrived at decisions about pricing and labour policy. The third theme is electoral politics. Tramways were an important political issue, and both major political parties in London eventually converged on the policy of public management of tramways. The chapter will close by discussing the issues that arise from an analysis of accounting practices.

Contracting problems

The contractual relations between the LCC and private firms were governed by Parliamentary legislation. The impetus for the tramway legislation was the technological innovation of improving the horse drawn carriage by laying rails down on the road. Since rolling resistance of iron wheels on rails was much less than on ordinary road surfaces, two horses could pull a vehicle weighing a few tonnes

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[1] *London Statistics* 24, 477.

carrying up to 50 passengers. Although the first attempt to introduce tramways to London in 1857 was a failure, by 1869 Parliament received private bill applications from a number from companies keen to invest. G.F. Shaw-Lefevre, the Secretary to the Board of Trade, introduced the Tramways Act in 1870 in order to enable entrepreneurs to apply for a provisional order without having to go through the time and expense of the private bill procedure.

Shaw-Lefevre's guiding principle was that since a tramway involved a right of way to public streets, local authorities should have supervisory powers over construction and fares. A right of way is a grant of property right in use rather than a property right in ownership. The Act granted entrepreneurs a concession period of 21 years, subject to the approval of local authorities. At the end of the 21 years, local authorities had the right to buy out the tramway for the depreciated cost of materials, plus the cost of any street widenings and exclusive of any allowance for goodwill or for future profit. The purchase clause excluded goodwill and future profits so that local authorities could purchase undertakings without the legal difficulties associated with valuation disputes. Local authorities that were contemporaneously trying to buy out gas and water companies were confronted with exorbitant prices based on goodwill and future earnings, so the valuation based on depreciated value of materials was designed to protect against that abuse. The provision for local authority buyouts of tramways was intended to ensure that local authorities received some revenue if the undertaking proved to be financially profitable, but was not intended to further the development of municipal trading.[2]

Shaw-Lefevre envisioned municipalities proposing route plans, gaining Parliamentary sanction, and then awarding concessions to tramway contractors and

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[2] A. Ochojna, 'The influence of local and national politics on the development of urban passenger transport in Britain, 1850-1900', *Journal of transport history* 4:3 (1978) 125-46, 125.

operators. Section 19 of the Act read: 'But nothing in this Act contained shall authorise any local authority to place or run carriages upon such tramways and to demand and take tolls and charges in respect to the use of such tramways.' It did not give local authorities the permission to operate their tramways, but it did not expressly prohibit them from doing so either. The Act attempted to create a situation where local authorities owned the track, while private firms managed the operations.[3] There was a Standing Order in Parliament that no clause should be introduced into private bills allowing municipalities to work their own tramways. The standing order was lifted in 1896 only after the town of Huddersfield could not find a private firm to mange its tramways.[4]

In order to encourage private investment within the limited concessionary period, Parliament did not impose ceilings on dividends. The result was a tramway investment mania. In 1869, six private bills came before Parliament seeking to build 80km of track with an authorized capital of £811,000. After the passing of the Tramways Act in 1870, 27 companies sought to build 829 km of track with a capital authorization of £4million in that year alone.[5] In addition to the promise of future operating profits, many investors reaped high returns on the construction of tramways.[6] At the time, the Tramways Act seemed like a bonanza for private entrepreneurs. Tramway representatives reported to the Select Committee on Tramways in 1870 that they were certain that the act would be in the best interests of tramway companies and that companies were anxious for it to pass.[7] Average rates of

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[3] Tramways Act, 1870 (33 & 34 Vict.) c78. Section 19 of the Act read: 'But nothing in this Act contained shall authorise any local authority to place or run carriages upon such tramways and to demand and take tolls and charges in respect to the use of such tramways.' See also Ochojna.
[4] Municipal Trading, Select Committee Minutes of Evidence, BPP 1900 (305) vii, q. 99, 108.
[5] 199 H.C. Debates 3rd Series, 1 March 1870, col. 1081-2.
[6] J. P. McKay, *Tramways and trolleys: the rise of urban mass transport in Europe* (Princeton, 1976), 21.
[7] Tramways Bill, Select Committee Minutes of Evidence, BPP 1870 (205) x, q. 924.

return were in excess of 13 per cent between 1870 and 1886.[8] Although the tramway representatives were enthusiastic in 1870, they bemoaned their collective dilemma when the purchase period arrived. The terms of the buyout were favourable to the municipality since they acquired an operating business for only the replacement value of the materials. 'The Tramways Act was a disastrous failure, not only to the companies but to the public' said one director in 1900. A senior Board of Trade official reported in 1905 that in retrospect that buyout should have been structured on market value based on future profits instead of the value of fixed assets.[9]

The Metropolitan Board of Works successfully achieved recognition as the local authority, a status later inherited by the LCC. The first LCC buyout occurred in 1895 with the purchase of London Street Tramways. The company valued itself as a going concern at £604,000, based on market value and future profits. The LCC argued that the Tramways Act provided for a buyout under structural value. This was a test case, and as the parties were unable to resolve it themselves it went to arbitration. The arbitrator found in favour of the LCC and set a purchase price of £64,540, or about one-tenth of what the company was asking. The company appealed to the High Court, but the arbitrator's decision stood. Soon after, the LCC purchased the lines of the Northwest Tramway Company, which had joined earlier with the London Street Tramways, for the price of £799,000 (which included the price paid earlier for the London Street Tramways).[10]

John Williams Benn was the driving force behind the Progressive tramway initiative and served as the Chairman of the LCC Highways Committee from 1898 to 1907. Born in Cheshire but raised in Stepney, Benn was the son of a Congregational

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[8] M. Edelstein, *Overseas investment in the age of high imperialism: the United Kingdom, 1850-1914* (London, 1982), 153.
[9] London Traffic, Royal Commission Minutes of Evidence, BPP 1906 (Cd. 2751) xl, q.239, testimony of Sir Herbert Jekyll, Assistant Secretary to the Railway Department of the Board of Trade.
[10] Royal Commission on London Traffic, Minutes, q.5332.

minister. He began work when he was 11 in the furniture business and later founded a trade journal called 'The Cabinet Maker,' which grew into a successful publishing company. Benn's politics were described by the *East End Observer* as being typically Liberal. He was in favour of

> Home Rule, free education, separation of Church and State, land law and reform, taxation of ground values, proper adjustment of the death duties, reasonable registration facilities, shorter Parliaments, paid members, leasehold enfranchisement, one man one vote, with elections all in one day, and reform of the Poor Law....[11]

He was not a firebrand ideologue, and presented himself to voters as a pragmatic businessman, untainted by the corruption of the MBW.[12] He served on the LCC continuously from 1889 to his death in 1922 and was the Liberal M.P. for St. George's in the East from 1892-5 and for Davenport from 1904-10. Benn sought and gained Parliamentary approval for the LCC to work the tramways for itself in 1896, on the grounds that this right was necessary to gain leverage in negotiations with private companies. Since the concession periods of the various tramway concessions were due to expire at different times, the Progressives wanted to grant a series of short leases so that the LCC could assume management over a complete network by 1900.[13]

However, Benn's Progressives did not have a majority on council. The 1895 elections had resulted in a tie: 58 Progressives, 59 Moderates, and one independent. Although the Progressives did not have a majority, they retained control of the council by relying on Progressive aldermen.[14] The Moderates, who opposed

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[11] *East End Observer,* 14 March 1891. Clipping found in volume 3 of the John Williams Benn Archival Papers (JWB). The papers are organized into bound volumes and are catalogued by date. The author wishes to thank Sir Jonathan Benn for allowing him to examine the papers that were in his possession.

[12] Benn election pamphlet entitled 'London County Council', January 1889, JWB vol 2.

[13] T. C. Barker and M. Robbins, *A history of London Transport: passenger travel and the development of the metropolis.* 2 vols (London, 1963), vol. II, 22-31

[14] Aldermen were appointed by party nomination in proportion to the strength of parties among elected councillors. Since their term of service was six years, the Progressives relied upon a majority of aldermen from three years before. G. Gibbon and R. W. Bell, *History of the London County Council, 1889-1939* (London, 1939), 92.

municipalization, had control of the Highways Committee and recommended that the LCC sign a 14 year lease with the North Metropolitan Company to manage the LCC tramways in North London beginning in 1896 and lasting until 1910. In 1898, the Progressives won a majority in the LCC elections and from then until 1906 purchased and ran the remainder of London's tramways: the London Tramways in 1889, the South London Tramways in 1902, the South East Metropolitan Tramways in 1904, the Woolwich and South East London in 1905, and the London Street Tramways in 1906. In 1902 London had 115 miles of tramways. Of these, 43 miles were privately owned and were to be acquired later by the LCC. Of the 72 miles remaining, the LCC managed 24 and leased 48 to the North Metropolitan Company.

The private sector lease was the favoured model of opponents of municipal enterprise. At first, the lease appeared to be beneficial to the LCC. The basic rent was £45,000 per year, plus a 5 per cent rent on the purchase price of freehold land and 6 per cent of the value of leasehold depots, plus a 12.5 per cent share of any amount by which the gross profits of the whole company system exceeded gross receipts of 1895. The LCC inserted clauses relating to hours of labour and pay, the running of workmen's cars, conditions of good repair and the renewal fund. The LCC therefore benefited from a stable source of income without risking any of its own funds.[15]

However, there was a non-monetary aspect to the lease that proved to be problematic. Wilfred Knoop, who wrote one of the most thorough contemporary accounts of municipal trading, described the problem of contractual incompleteness when he wrote that 'it is practically impossible to draft a lease or franchise embodying the various conditions, in which, sooner or later, one or more serious defects may not

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[15] The lease was formalised by the 1897 North Metropolitan Tramways Act; Royal Commission on London Traffic Minutes, q. 5339.

prove to exist.'[16] In this case, the serious defect of the lease was electrification. Electrification of tramways had already shown its value in the United States. Benn reported that according to industry standards, the 1900 profit of a horse tramway was 2.12d per mile run while the electrical tramway profit was 5.5d per mile largely because of the extra capacity gained through larger carriages powered by stronger engines.[17] Electric traction showed enormous promise to reshape London, and the LCC was keen to electrify.

The problem was what form of electrification to use. There were two types: the conduit system, which had the electric current running from a main within the rails of the tracks to a rod protruding from the train; and the overhead system, which had the power transferred to the carriage through overhead lines. The main disadvantage of the conduit system was that it cost 33 per cent more per mile to install than the overhead line. Its advantages were that it required no overhead wires, did not do any damage to the existing gas and water mains since the conduit was completely insulated, and required less maintenance than the overhead system. The overhead system was cheaper, but eight of the ten affected Borough Councils opposed it because they objected to both the aesthetics and the safety of the electrified overhead wires.[18] Accidents caused by the overhead wires were common and many European municipalities also objected to the aesthetics of overhead wires.[19]

The dispute over the type of electrification to be used lasted for years. The LCC gave notice to the North Metropolitan Company that it wished to introduce electrification on 20 November 1901.[20] 'The North of London,' Benn said four years

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[16] D. Knoop, *Principles and methods of municipal trading* (London, 1912), 381.
[17] Select Committee on Municipal Trading Minutes, q. 4107.
[18] Royal Commission on London Traffic Minutes q. 5496-99; LCC Minutes, 2 February 1904.
[19] H. R. Meyer, 'Municipal ownership in Germany', *Journal of political economy* 14:9 (1906) 553-67, 553; McKay, 87.
[20] LCC Highways Committee Minutes, 21 April 1904, LMA.

later in 1905, 'is crying out very properly for the advantages of electric traction to meet the circumstances of the case. We, speaking personally, reluctantly submitted to a compromise which shows half system overhead and half conduit… the company will not put up anything else.'[21] The compromise to which Benn referred was never implemented. The LCC had gained the power to run tramways by electric traction in 1900 and had successfully introduced the conduit system on the tramways in South London. Benn boasted that 2,615 electric tramway cars could do the work of 5,500 horse-drawn tramways.[22] James Devonshire, the Managing Director of the North Metropolitan Company was equally frustrated with the 'seemingly hopeless project of coming to any working agreement' due to 'implacable attitude of the County Council when the question of electrification arises.'[23] Ongoing problems with the lessor were often referred to Parliament, or the law courts, which created a lot of bitterness between the two parties.[24] It was quite natural, Benn argued, for the North Metropolitan Company not to want to introduce electrification since their lease was expiring in 1910.[25] His Progressive colleague on the LCC, W.H. Dickinson, estimated that the LCC would have to grant a lease term of 40-50 years, as was the practice in New York, in order to make electrification attractive to companies.[26]

The dispute over the type of electrification spilled over onto other areas of the lease. The LCC Highways Committee Minutes record a continuous exchange of letters between the LCC, the company, and their solicitors. The LCC contended that the company failed to carry out repair and renewal according the lease and undertook

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[21] Royal Commission on London Traffic Minutes, q. 5523.
[22] Royal Commission on London Traffic Minutes, q. 5438.
[23] Royal Commission on London Traffic, Memorandum of Evidence of James Devonshire, 664.
[24] Royal Commission on London Traffic Minutes, q. 22271.
[25] Select Committee on Municipal Trading Minutes, q. 4113.
[26] Royal Commission on London Traffic Minutes, q. 2508.

unauthorised repairs.[27] The company replied that since the lines were to be electrified eventually, it made sense to postpone repairs until electrification occurred. The LCC filed a lawsuit against the company in order to make it comply with the terms of the lease. It had told the LCC that it would honour its obligations when electrification took place, yet it obstinately refused to agree to electrify using the conduit method. When it was clear that no agreement was possible, both parties terminated the agreement in 1906, four years before it was due to expire. The LCC and the North Metropolitan Company negotiated the surrender of the lease in May 1905 and the LCC gained possession of the Northern tramway lines in April 1906. The council's annual report for that year states that 'the tenour of the negotiations, and the practical difficulties which came to light as the question reached a more advanced state, showed clearly that this work could only be carried out satisfactorily and expeditiously provided the lines were in Council's own hands.'[28]

Emile Garcke provides contemporary awareness of the forces affecting the LCC decision. Garcke had been born in Germany in 1856 and became a naturalized British citizen in 1880. He was the City's leading expert on electrical promotions. In addition to being the Chairman of the Electrical Chairman of the London Chamber of Commerce, he was also a Fellow of the Royal Statistical Society and a member of the Institute of Actuaries. His holding company, British Electric Traction, controlled 40 undertakings and 124 miles of electrified track by 1901, prompting his detractors to call him the 'oligarcke.'[29] One of his associated companies was the North Metropolitan Company. He stated that 'the problem of a lease is that improvements

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[27] LCC Highways Committee Minutes, 28 January 1904, LMA.
[28] *Report of the London County Council for the year 1904-1905*, (London: 1906), 133, on open shelf at LMA.
[29] Richard Roberts, 'Emile Oscar Garcke,' *Dictionary of business biography* (London: 1984), 474.

are discouraged at the end of the tenure—this applies to any specific period.' [30] The only way to ensure that lessees would invest in capital improvements would be to grant them perpetual concessions while maintaining the municipal power to buy out the lease at any time at full market value.[31] Garcke observed that municipalities had an obvious advantage over entrepreneurs due to their perpetual ownership of public rights of way. 'In the case of gas undertakings, water undertakings, and tramway undertakings too, local authorities have these rights in perpetuity; these rights are granted to private capitalists for specific terms, and unless the private capitalist is very much encouraged, and has facilities offered him, instead of obstacles put in his way, he is very much hampered to supply the commodities and render these public services on anything like the favourable terms that a [municipal] corporation could do.'[32]

However, granting a long lease meant ceding control, and that was problematic in an era of urban growth and swiftly changing spatial organisation. E.O. Smith, Town Clerk of Birmingham, described the problem of being locked-in to a contract. 'If you have leased your tramways, you cannot get hold of them for 21 years, and you cannot make alternatives that may be very necessary in the interests of public safety that you can if they belong to the corporation.'[33] The LCC had learned through experience that it could only exercise control over the private sector through extreme pressure and effort. The example of workmen's fares is an illustrative example. The LCC had two means of action on workmen's fares. First, it could exert pressure directly on the railway companies to honour their statutory obligations under the Cheap Trains Act. Second, it could pressure for the insertion of clauses into railway bills at the committee stage in parliamentary approval. The Board of Trade,

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[30] Select Committee on Municipal Trading Minutes, q. 1112-3.
[31] Select Committee on Municipal Trading Minutes, q. 1220-3.
[32] Select Committee on Municipal Trading Minutes, q. 1129.
[33] Select Committee on Municipal Trading Minutes, q. 1998.

which was the agency responsible for interpreting and enforcing these provisions, did not act except on the submission of a formal complaint. A successful complaint was required to prove in the first instance that insufficient workmen's service was being offered, and in the second instance that demand existed for that service. The process took considerable time and effort and the LCC considered it to be altogether unsatisfactory.[34] The Progressive Councillor W.H. Dickinson supported the creation of a London Traffic Board since question of workmen's fares, general fares, and workmen's trains had to be fought over every time anew. He hoped that an independent arbitrator would reduce the transaction cost of negotiation.[35]

The Borough Councils had also had unsatisfactory dealings with the railway companies, and they lacked the political power and influence of the LCC. Alexander Bryceson, the Town Clerk of Woolwich, complained that the railways could only be disciplined on the basis of their statutory commitments. The non-statutory aspects of the relationship, whether they were excluded from the statute because of lack of the foresight or because they were too costly to specify, were outside his sphere of influence. Requests for station improvements, for example, went unheeded.[36] The municipal experience with the railways taught the LCC that a long-term lease created problems of enforcement of contract.

The resolution of agency problems provides some insight into global electrification of tramways. British electrification lagged behind both America and Germany. The reason for this has been cited as British entrepreneurial failure compared to German dynamism. The answer is perhaps more related to problems of asset-specific investments. There was an effective absence of public control in America until at least the early 1900s. Tramway companies operated under franchises

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[34] Royal Commission on London Traffic Minutes, q. 5135, testimony of Edgar Harper.
[35] Royal Commission on London Traffic Minutes, q. 2233.
[36] Royal Commission on London Traffic Minutes, q. 9440.

granted by the state and confirmed by the individual cities. New York's formidable tramway development can be attributed to the fact that until 1884 franchises were perpetual. The American trade publication *Street Railway Journal* reported that 'most tramway companies that have changed from horse to mechanical traction have done so on the basis of an extension of franchise to justify laying out the capital; typical is a line with a 17 year franchise which secured a 25 year extension.'[37]

The same journal bemoaned the fact that European franchises were too short in general.

> Does anyone suppose that the New York City street railway companies would have spent $30,000,000 to $40,000,000 in the adoption of cable and electricity, or would have instituted their almost universal transfer system and improved their cars and car service so tremendously had their franchises been granted for twenty-five, or even fifty years, instead of in perpetuity?[38]

As we have already seen, companies in America often achieved extension by resorting to bribery. This was less prevalent in Britain, and may be an additional reason that can explain why long-term franchises did not emerge in British cities.

Municipalisation in London was part of a larger British trend. Britain only began to catch up between 1900 and 1905, when municipal authorities invested heavily after they gained ownership of the tramways in perpetuity.[39] (See figure 6.1).

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[37] *Street Railway Journal*, 1 August 1891, 429.
[38] *Street Railway Journal*, 3 July 1899, 28.
[39] J. Foreman-Peck and R. Millward, *Public and private ownership of British industry, 1820-1990* (Oxford, 1994), 166.

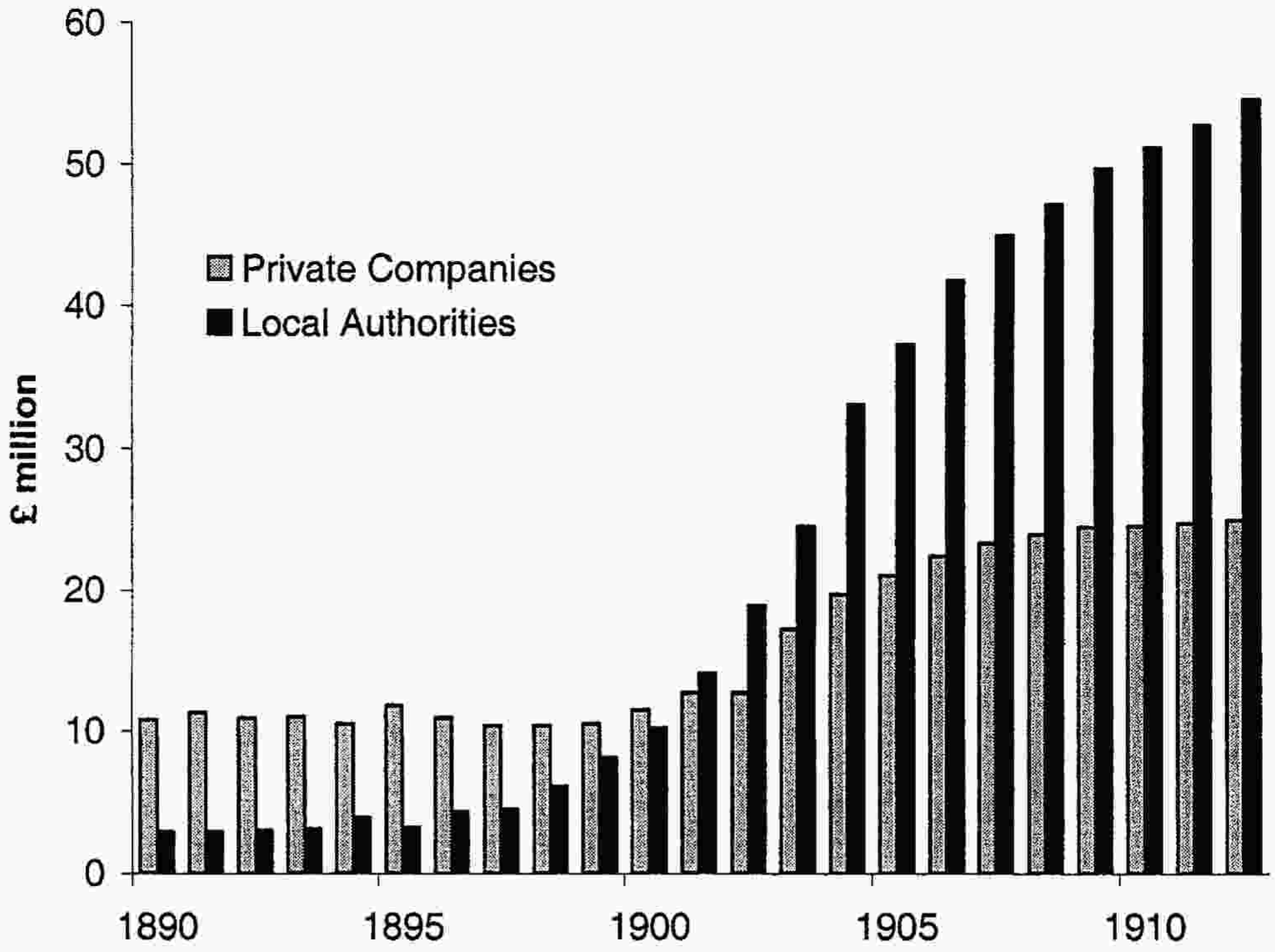

Figure 6.1
Capitalisation of British tramways.
Source: McKay, 69.

Once they acquired ownership, local authorities invested heavily in electrification and line extensions. Frank Parsons, the National Civic Federation investigator who wrote the section on tramways, argued that 'municipalisation has been a more potent force for development than electric traction.'[40] Table 6.1 compares municipal and private tramway companies. The table divides the municipal tramways into two periods of equal duration, the first under company management and the second under municipal management. The table also divides the periods of company ownership into corresponding equal periods. The resulting calculations show the increase in investment after municipalisation.

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[40] National Civic Federation, *Municipal and private operation of public utilities*. 3 vols (New York, 1907), vol. I, 267. The NCF sub-committee reporting on British and American utilities consisted of Edward Bemis, the Superintendent of the Cleveland Water Works, Professor Frank Parsons, and Milo Maltbie, a member of the Public Service Commission for New York City.

Table 6.1: Comparison of municipal and company operation of tramways for various cities

Section 1: Municipalities

			Average annual % increase in mileage		Average annual % reduction of fare		Average annual % increase in traffic	
	Date of municipalisation	Years in each period	Company period	Municipal period	Company period	Municipal period	Company period	Municipal period
Glasgow	1894	12	2.7	14.0	0.1	1.5	4.8	23.9
Leeds	1894	12	0.3	16.8	1.3	1.3	3.5	60.3
Sheffield	1896	10	0.0	27.5	0.2	3.9	2.7	93.7
Liverpool	1897	9	0.7	5.0	0.5	4.6	3.3	33.4
Manchester	1901	5	2.2	14.0	0.1	8.2	4.0	117.0
Group Average			**1.2**	**15.5**	**0.4**	**3.9**	**3.7**	**65.7**

Section 2: Companies

			Average annual % increase in mileage		Average annual % reduction of fare		Average annual % increase in traffic	
	Dividing Date	Years in each period	Early period	Later period	Early period	Later period	Early period	Later period
Dublin	1894	12	0.5	4	7.6	13.6	7.6	13.6
Edinburgh	1894	12	3.1	7.8	7.7	20.3	7.7	20.3
Belfast	1896	10	5.2	7	25.8	3.6	25.8	3.6
Bristol	1897	9	8.3	4.8	22.7	14.4	22.7	14.4
Group Average			**4.3**	**5.9**	**2.5**	**0.9**	**16.0**	**13.0**

Source: Calculated based on National Civic Federation, vol. I, 264.

The LCC resolved the agency problems of a lease by internalising the principal-agent problem. The North Metropolitan Company only had a lease until 1910. Electrification in 1901, when the LCC first requested it, would have provided the company with a limited time in which to recoup its capital investment. Its discount rate was therefore high. The LCC faced a time horizon equalling the life of the asset that reduced its discount rate and enabled it to make the capital investment. There was no alignment between the interests of the principal (LCC) and its agent (the company). In order for interests to be properly aligned, the term of the lease would have to be long rather than short or medium term to allow a capital investment to pay for itself. The longer the term of the lease the more difficult it is to write a complete contract, especially in an environment requiring investment in developing technology. These opposing forces created an intractable problem eventually resolved by municipalisation.

Management and operations: pricing

According to the Fabians, tramway municipalization was necessary since 'public bodies have public duties, and are directly responsible to the working classes, by whose votes they are elected.'[41] What did the Progressive LCC see as its duty? A transport policy was desirable in order to alleviate overcrowding in the central districts of London. Pricing policy made transportation available to the working classes. Low prices increased the passenger volume on LCC tramways, and also forced the rate of return down for indirectly competing private firms.

Thinking about municipalization was linked to contemporary concerns about provision of housing for the working classes. The civil servants at the Local Government Board were in favour of alleviating overcrowding through the provision

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[41] Fabian Society, *Municipalization of the tramways: Fabian Tract No. 77* (London, 1897), 10.

of cheap transport.[42] The 1906 Royal Commissioners on London Traffic concluded that it was not practical to house the working classes in the central districts at economic rents. An LCC rehousing plan in central London resulted in rents between 9s 6d to 11s a week because of high land costs, and the LCC suffered a loss of £60 per person. The total shortfall of this project was £412,683 which fell on rates. In contrast, an LCC scheme in Tooting, which was accessible by tramway, had rents of 7s to 7s 6d per week, and was self-supporting with no burden on the rates.[43] Edgar Harper, the Chief Statistical Officer of the LCC, reported that cheap fares made it possible to live outside of central London where the rents were cheaper. Rents in central London were 3s 3 ½ d per room per week, compared to 2s 4 ½ d per room per week in the rest of the County.[44] Working men could therefore be expected to pay no more than 2d per day, or 1s a week on transport costs.[45] On LCC tramways, 1d could take a workman almost seven miles.[46] The Council did not have the power to control the rental housing market, but between internal management of the tramways and the statutory requirements of the Cheap Trains Act they could regulate the price of workmen's transportation. Railways were preferred for longer distances while tramways were better suited for short to medium length travel. The maximum time that Harper thought reasonable for travel was one and one-half to two hours return, so the type of transportation chosen would vary depending on the place of residence and the place of employment.[47]

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[42] An example of an internal memorandum is notes on the *Housing of the working classes bill,* PRO HLG 29/66, 56.
[43] Royal Commission on London Traffic, Report, BPP 1905 (Cd. 2751) xxx, 9.
[44] Royal Commission on London Traffic, Minutes, q. 4658-9.
[45] Royal Commission on London Traffic, Minutes, q. 4677.
[46] Royal Commission on London Traffic, Minutes, q. 5727. In 1906, the National Civic Federation reported that municipalities gave a 40 per cent longer ride for a 1/2d fare than companies did. See National Civic Federation, vol.I, 283.
[47] Royal Commission on London Traffic Minutes, q. 5118.

The Progressive Council made the link between transport policy and overcrowding a political issue. One pamphlet stated that 'the slum landlords in the middle of London want to keep the workmen in the slums. A determined attempt is being made to defeat the Progressives, so as to stop all pressure in favour of more Workmen's trains. Workmen, if you want good work continued, VOTE FOR THE PROGRESSIVES!'[48] It is unclear whether slum landlords really were on the side of the Moderates, but the policy of improved transport in general and cheap tramways in particular encouraged outward migration and contributed to falling rents in London during the Edwardian period.[49]

The LCC had both the market power and the financial ability to drive the rate of return down.[50] After 1906, the LCC had a virtual monopoly on tramways within the London County administrative district and used its veto granted under the Tramways Act to block private proposals. The first source of the LCC's strong financial position was the fact that it acquired lines on advantageous terms. The second reason was that its borrowing costs were less than those of private firms. American researchers reported that the rate of interest paid by British municipalities in 1906 was up to one-per cent lower than the rate paid by companies.[51] An example can be found in the evidence collected by the Royal Commission on Local Taxation. The comptroller of the LCC reported that the tube was financed by 4 per cent debentures, while the LCC raised funds at 3 per cent plus 0.25 per cent for expenses and stamp duties.[52] Investors regarded LCC debt as a conservative investment. As a

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[48] 'London Municipal Reform Leaflet no. 60', BLPS Passfield 4/1/26.
[49] See A. Offer, *Property and politics, 1870-1914* (Cambridge, 1981), 281.
[50] Royal Commission on London Traffic, Report, 51.
[51] National Civic Federation, vol. I, 279.
[52] Royal Commission on London Traffic, Minutes, q. 6652-3.

measure of demand, Benn claimed that several LCC tramway loans secured against rates were oversubscribed by three or four times.[53]

C.G. Mott, the Chairman of the City and South London Railway, reported on the effects of LCC competition to the Royal Commission on London Traffic. He stated that his company used to charge a uniform fare of 2d on a South London route until the LCC worked the tramway there for itself on the same route. After the LCC introduced 1/2d fares, the company was forced to follow. The competition reduced the company's dividend from 3.5 to 2 per cent in 1902, and the price of its stock fell.[54] Benn told the Select Committee on Municipal Trading that the LCC had reduced the average fare per passenger paid in 1902 from 94d under private ownership to 89d under LCC control, largely by extending the offering of 1/2d fares. In a pattern consistent with municipal management throughout England, the volume of use of the tramways increased from 7 million under private ownership to 11.7 million under reduced fares.[55] The LCC attempt to target workmen was apparently successful. Intriguingly, Mott reported that his business was not completely ruined; 'respectable people' preferred his railroad to the tramways.[56]

Clifton Robinson, the Managing Director of the London United Tramways Company, similarly objected to local authorities working the tramways for themselves. 'They enter the field as competing promoters, and the conditions under which they enter as competitors are not fair to a private company.' Specifically, he claimed that local authorities (the LCC) have a closer relationship with the road authorities (the Boroughs) and can be more generous in street improvements because street improvements could be funded through rates, and that the term of ownership for

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[53] Royal Commission on London Traffic, Minutes, q. 5632.
[54] Royal Commission on London Traffic, Minutes, q. 16510, 16528.
[55] Select Committee on Municipal Trading, Minutes, q. 4103.
[56] Royal Commission on London Traffic, Minutes, q.16521.

local authorities is perpetual instead of 21 years which gave them a wider scope of action.[57] He reported that his company had abandoned London County for the unclaimed markets of Surrey and Middlesex, whose undercapitalised councils were forced to lease the tramways to them.[58]

The desire by local government to reduce prices appears to have been nation-wide. Birmingham has long been hailed as the originator of municipal trading, where mayor Joseph Chamberlain municipalized the gas works in order to fund improvements and alleviate rates.[59] Contemporaries believed that municipal enterprise as a whole—the combined activities of water, gas, tramways and electricity—alleviated or had a neutral effect on rates while increasing municipal debt.[60] Some municipal corporations were able to apply profits from trading activities in aid of rates. Manchester, for example, made a profit on electric lighting of 5.75-6 per cent, which was still below what private firms were declaring at the time.[61] In 1900, the Town Clerk of Birmingham dissented from this approach by arguing that Chamberlain's arguments only applied to the gas works and only to that particular historical moment. Profits, he concluded, were not only unwise but also entirely undesirable.[62] What had begun as a movement to transfer the proceeds of trading activities to the ratepayers was becoming a movement to transfer the proceeds of the rates to trading activities.

If the LCC were concerned only with relieving rates, then the best way of achieving that objective would have been through leasing rather than managing the tramways. The Moderates justified blocking the purchase of the Northern tramways

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[57] Royal Commission on London Traffic, Minutes, q. 24826.
[58] Royal Commission on London Traffic, Minutes, q. 4833.
[59] E. P. Hennock, 'Finance and politics in urban local government', *Historical journal* 6:2 (1963) 212-25.
[60] Local Taxation, Royal Commission Minutes of Evidence, BPP 1898 (cd. 8763) xli, q. 1722, 1790.
[61] Royal Commission on Local Taxation, Minutes, q. 5002-9.
[62] Select Committee on Municipal Trading, Minutes, q. 1974.

in 1895 for this precise reason. The lease agreement was a 'splendid investment, the best and most important that the council has made during its existence.' The Moderates appealed to the voters on financial grounds, arguing that 'the Progressives, on the other hand, would prefer to acquire and work the lines, no matter what the result may be to the ratepayers.' [63] Tramways contributed funds in relief of rates only between 1897 and 1902. Of the total amount contributed during that period, nearly all of it came from the lease payments received from the Northern lines.[64] The southern lines, which the council was electrifying, did not relieve rates.

Whether to use trading profits in aid of rates was a raucous debate. At the national level the issues were debated in the pages of the *Economic Journal*. Robert Donald, the editor of the *Municipal Yearbook*, argued that 'it is seldom that a municipality decides to displace a private monopoly and provide a new service for the sole object of obtaining a profit to relieve the general body of ratepayers. Higher interests are kept in view....'[65] There were debates at the local level as well, throughout England.[66] The Fabian Society took the position that municipalities should operate 'regardless of all profit and expense, except that it should try and make the undertaking self-supporting.' 'The only real economic benefit the citizen should expect from municipalization of tramways is cheaper and better transit.'[67] The financial and political issue was whether the users of the service should subsidise the ratepayers, or whether the ratepayers, both through higher rates and foregone revenue,

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[63] London Municipal Society, *London County Council Election 1898- Facts and arguments*, GL LMS 106, 48-51.
[64] The figures are as follows: in 1897, funds for rate relief were £49,000; in 1898-1900, funds were £110,000; in 1901, £45,000 and in 1902 £20,000. The source of these figures is London Municipal Society, *Facts and arguments for the London County Council Election 1910- Facts and arguments*, Guildhall Library LMS 108-9, 80. These figures are consistent with LCC accounts.
[65] R. Donald, 'Municipal trading and profits', *Economic Journal* 9:35 (1899) 378-83, 379. Other contributions to the debate include E. Cannan, 'Ought municipal enterprises be allowed to yield a profit?' *Economic Journal* 9:33 (1899) 1-9.
[66] National Civic Federation, vol. I, 278.
[67] Fabian Society, 'Tramways', 6.

should subsidise the users. We will see that the electoral environment of the period led politicians ultimately to choose the second of the two options. In light of the evidence presented in this section, the argument for municipal trading as primarily a source of rate relief appears to have been overstated.[68] Labour issues sharpen the picture.

Management and operations: labour

Labour policies were an important issue in the debate over municipal trading. In 1899 Parliament received between 400 and 500 petitions signed by railway, gas, water, tramway, engineering and electrical companies, by Chambers of Commerce, and by Ratepayers associations throughout Britain opposing municipal trading. The petitions were presented by Sir John Lubbock (later Lord Avebury) in the House of Commons and by the Earl of Wemyss in the House of Lords.[69] These two men were at the forefront of the fight against municipal trading. Lubbock was the President of the English Bankers Association, the Vice President of the London Chamber of Commerce, President of the Statistical Society, and ex-Chairman of the LCC. He first outlined his critiques in his testimony to the 1900 Select Committee on Municipal Trading and repeated them in pamphlets and lectures: the increased debt would have to be financed through rates; and local government interference with the natural laws of 'old-school political economy,' checked industrial progress as local authorities lacked the sophistication to invest in new technology. Municipal trading involved government in 'the labour question' as well, and he accused the Progressive bloc of

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[68] R. Millward and S. Sheard, 'The urban fiscal problem', *Economic History Review* 48:3 (1995) 501-35. With regards to gas in particular, see R. Millward and R. Ward, 'From private to public ownership of gas undertakings in England and Wales, 1851-1947', *Business History* 35:3 (1993) 1-21; R. Millward, 'The market behaviour of local utilities in pre-WWI Britain: the case of gas', *Economic History Review* 44:1 (1991) 102-27.

[69] Offer, 235.

the LCC of wooing residents of the Borough of Southwark with higher wages during an election.[70]

His accusation had a basis in fact. In his 1892 'London Programme,' Sidney Webb condemned the 'white slavery' practiced by the tramway companies. His (possibly exaggerated) claim was that despite earning a ten per cent dividend, a tramway company forced its employees to work 16 hours a day, most of it standing up. Webb used the pragmatic argument that labour problems could result in a paralysing transport strike and therefore called for an enlightened labour policy.[71] When the LCC decided to run the South London Tramways for themselves, one of the first changes they made was to increase wages and improve working conditions. Benn reported that hours decreased from a range of 11 to 13 hours, seven days a week to 10 hours, six days a week, at 25s per week instead of 22s. The change cost council £14,000 per year, which decreased profits by 16 per cent compared to the previous year under private management.[72] Under examination, Benn acknowledged these wages to be a 'gratuitous present' unreflective of the state of the labour market.[73] This implementation of the Fair Wages clause deliberately overrode the market in the interests of welfare—and Progressive political gain. The Progressive Party was associated with Trade Unionism. One of the leading Progressives, John Burns, was a senior Trade Union official who took a keen interest in raising municipal wages.[74] We shall soon see that LCC labour policy did not differ under the Moderates, which makes Lubbock's criticism of the Progressives apply to both political parties.

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[70] Select Committee on Municipal Trading, Minutes, q. 1528. Lord Avebury's publications include J. Lubbock, *On the real issues of the London county council elections* (Westminster, 1898); J. Lubbock, *On municipal and national trading* (London, 1906); J. Lubbock, *Municipal trading, a speech. (Industrial freedom league)* (Westminster, 1903).

[71] S. Webb, *The London programme* (London, 1892), 77.

[72] Select Committee on Municipal Trading, Minutes, q. 4107.

[73] Select Committee on Municipal Trading, Minutes, q. 4128.

[74] See for instance a letter from Sidney Webb to John Burns discussing the Works Department; Burns Papers, British Library Add MS 46287 no. 285, 7 December 1896.

Similar labour policies prevailed throughout Britain. After municipalisation, Liverpool, Manchester, Leeds, and Birmingham all decreased hours and increased wages. Sheffield nearly doubled the wages of tramway employees, and Manchester increased the wages of conductors by 63 per cent.[75] Table 6.2 compares company and municipal wages as reported in 1906.

Table 6.2: Wages of and hours of motormen and conductors, and operating costs, for companies and municipalities in 1906

	Hours per week	Per hour min (d)	per hour max (d)	Operating cost (d/ car mile)
Glasgow	54	5.6	7.0	10.5
Manchester	54	5.6	6.9	14.69
Liverpool	60	5.5	6.3	14.94
London County Council	60	5.8	7.5	16.17
Average Municipalities	**57**	**5.6**	**6.9**	**14.1**
London United	70	5.4	6.6	11.39
Dublin United	70	3.9	5.3	9.62
Norwich	70	4.1	4.8	11.09
Bristol	70	4.0	4.4	13.34
Average Companies	**70**	**4.4**	**5.2**	**11.4**

Source: Calculated based on figures found in National Civic Federation, vol. I, 280-96.

The table shows that the higher wage inputs resulted in higher operating costs for municipalities. Sidney Webb openly campaigned on the Progressive labour policy.

> Do you wish your county council to attempt nothing more for London than the old Metropolitan Board of Works? This is, in effect, the Reactionary, or so-called 'Moderate' programme… I am in favour of Trade Union wages and an eight hour day for all personnel employed by Council. I am dead against sub-contracting, and would like to see the council itself the direct employer of all labour.[76]

One of the arguments that the Moderates made against the municipalisation of the tramways was that they would be 'under the influence of the votes of many thousands

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[75] National Civic Federation, vol. I, 268.
[76] 'Address of Mr. Sidney Webb to the electors of Deptford,' (1892), BLPS Passfield Papers 41/1.

of their own servants.'[77] To what extent were the pricing and labour policies that we just discussed conditioned by electoral politics?

Electoral politics

Tramways were not something that politicians had to sell to the people. In 1891, before the negotiations with private companies began, Council received a petition from 60,000 residents of South London supporting an extension of the London Tramways Company.[78] The inhabitants of Central Finsbury submitted a petition supporting municipal ownership.[79] In a period of suburbanisation and migration away from the overcrowded central districts, tramways were an important electoral issue. We have already discussed how important working class voters were to the dynamics of London politics in chapter 5. Let us now examine this effect with specific reference to tramways.

Benn's election platforms emphasised his commitment to the tramways, and before elections he wrote letters to the newspapers to cement the issue to the Progressives. One such article, entitled 'London's trams: an inestimable boon to the workers,' highlighted the contributions that the Progressives had made towards cheap transport.[80] Benn's Progressives supported tramways from the beginning, while the Moderates opposed. But Benn always knew that the issue could be seized from them if the Moderates were to move towards the centre. 'Moderates,—never averse to throwing a program or two—will, of course, drop the anti-working clause from their current manifesto, wherever and whenever it happens to see the light.'[81] Before the 1907 election, Benn wrote that 'in sight of the ballot box, the Moderates give guarded

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[77] London Municipal Society, *London County Council Election 1904- Facts and arguments*, GL LMS 107, 105.
[78] LCC Minutes, 14 April 1891, LMA.
[79] Minutes of Council, 16 April 1891, LMA.
[80] 'London's trams: an inestimable boon to the workers', *Daily Chronicle*, JWB vol. 10.
[81] Letter from Benn to the *Daily Chronicle*, February 1895, in JWB vol 6.

approval of 'working' the LCC trams. I regard with grave suspicion this death-bed repentance....'[82] The shift in Moderate policy is an example of political platforms converging on a single point. After the 1907 election, when many Progressives feared that municipal management of the tramways would cease, George Bernard Shaw assured them that municipal ownership would continue. 'I knew,' he wrote, 'and everybody who had ever served on a public body knew, that the first hour spent on a committee would knock out of the new representatives most of the nonsense they had been talking at their election meetings, and that the most intelligent and disinterested of them would become ardent municipalizers.'[83]

At the beginning, the Moderates devoted themselves to ratepayer interests. They opposed municipal trading and their support was limited to the wealthy districts in the West End. In contrast, the Progressives achieved electoral success even in areas that consistently returned Conservatives to Parliament. In 1901, after the Progressives won a landslide victory, the *Pall Mall Gazette* wrote that 'if the Moderates would undertake what other municipal authorities are actually doing... they would go to the County Council with a majority.'[84] If they could define the message of financial prudence to accommodate the delivery of services, they could challenge the Progressives for the median voter. 1907 was an ideal opportunity to unseat the Progressive regime that had governed London uninterrupted since 1889.

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[82] Letter to the *Daily Chronicle*, 1906, JWB vol. 10
[83] G. B. Shaw, *The commonsense of municipal trading* (London, 1908), ix.
[84] J. Davis, 'The first Progressive Council', in Andrew Saint, ed. *Politics and the people of London: the London County Council, 1889-1965*, (London, 1989), 41-4.

THE PROGRESSIVE SNOWBALL

SIR EDWIN CORNWALL. "Go on pushing, Wood, we have made it a whopper."

MR. MCKINNON WOOD. "Yes, I know, but have you any idea where RATEPAYER is? It's his field, you know, and I haven't seen him for some time."

London Municipal Society *1907*

The Liberals won a resounding victory in the 1906 general election. Faced with the possibility of a Progressive LCC allied with a Liberal government, conservative opinion mobilised behind the Moderates, who shed their earlier image by renaming themselves the Municipal Reformers. The central election issue was municipal finance. In 1893 the LCC inherited the debt of the MBW, which was about £18,000,000. Fourteen years of Progressive control increased the debt to £48,000,000. In 1904, the LCC assumed the responsibilities and the debt as well as the rating powers of the London School Board, a non-remunerative activity with growing expenses. Rates had increased in every London Borough.[85] The cartoon can be taken as an indication of popular sentiment. The Municipal Reformers' main promise, which they kept, was not to raise the rates. They also promised to defer to the LCC Finance Committee before embarking on any new capital projects. In attempt to demonise their opposition, the Progressives warned that the Municipal Reformers were indifferent to the tramways, and, by extension, working class

[85] For a list of rate increases for each Borough from 1871-1911, see *London Statistics* 23, 608-9.

transportation. Progressive literature stated that the Municipal Reformers were planning to lease or sell the tramways. However, the Municipal Reformers were not outmanoeuvred. They felt 'bound to continue' the Progressive policy of internal management of the tramways, but would 'enforce the necessity of conducting business on sound financial principles.'[86] A 1907 pamphlet promised to increase the hours available for workmen's fares on the North London system.[87] This blend of fiscal prudence with municipal service was effective, and the Municipal Reformers won a majority of 40.

Despite their message of fiscal prudence, the Moderates made direct provision for working class tramway use. In 1910, immediately before another LCC election, they boasted that the number of half-penny fares had increased from 63,231,526 journeys in 1907 to 100,013,282 journeys in 1910. Their election pamphlet claimed that 'practically, the Municipal Reformers have been spending on the average half-a-million a year more than the Progressive party in improving and electrifying the tramway system.'[88] The continuity between the two Councils extended to labour relations. Although the Municipal Reformers kept their campaign promise to disband the Works Department, the internal contracting arm of the LCC, they extended wage increases to tramway employees. Whitaker Thompson declared at a political rally that 'we are using the revenue we get, not only justly to the public, but I venture to think even generously to our men. Our men deserve it; I have told them so when I had the opportunity of speaking to them, and I believe they appreciate it.'[89]

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[86] London Municipal Society, *London County Council Election 1910- facts and arguments,* Guildhall Library LMS 108, 82. The quote is from an election manifesto from 1906.
[87] London Municipal Society, *Specimen leaflets* (London, 1907), 1.
[88] London Municipal Society, *London County Council election, 1910. Facts & arguments for municipal reform speakers and candidates* (Westminster, 1910), 143.
[89] London Municipal Society, *London County Council Election, 1910*, 146.

Although the profits arising from electrification of the Northern lines made early decisions easy, the Moderates did prove willing to incur a cost when they were forced to choose between the strict principles of fiscal prudence and some form of redistribution in order to maintain the expected level of service. A second choice was whether to adopt a policy that reflected the preferences of a sizeable bloc of voters or a policy that reflected the narrower interests of the West End elite. In both cases the choice was clear. In 1911, the LCC reported that it carried workmen for longer distances without an increase in fares, a loss that was 'justified by the benefit conferred upon that class.' The Finance Committee continued to warn against falling receipts per car mile (figure 6.2). Eleven per cent of the passengers carried on the network travelled under workmen's fares, which produced revenue of 7.554d per car mile instead of 11.414 per car mile under full fares. The loss for 1911 was £65,932.[90] By 1911, the LCC tramways had begun to suffer from competition with the motorbus. In response, the LCC continued to issue workmen's tickets and the number of workmen's car journeys continued to grow rapidly, from 42 million in 1910-11 to 77 million in 1913-14.[91] Sir Harry Haward, the LCC comptroller, wrote in his memoirs that the council 'stoutly resisted' the abolition of 1/2d fares, even when that policy resulted in losses, in order to keep omnibus fares low.

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[90] Report of the London Traffic Branch of the Board of Trade, BPP 1911 (cd. 5972) xxxiv, 265.
[91] Barker and Robbins, vol. II, 187-89.

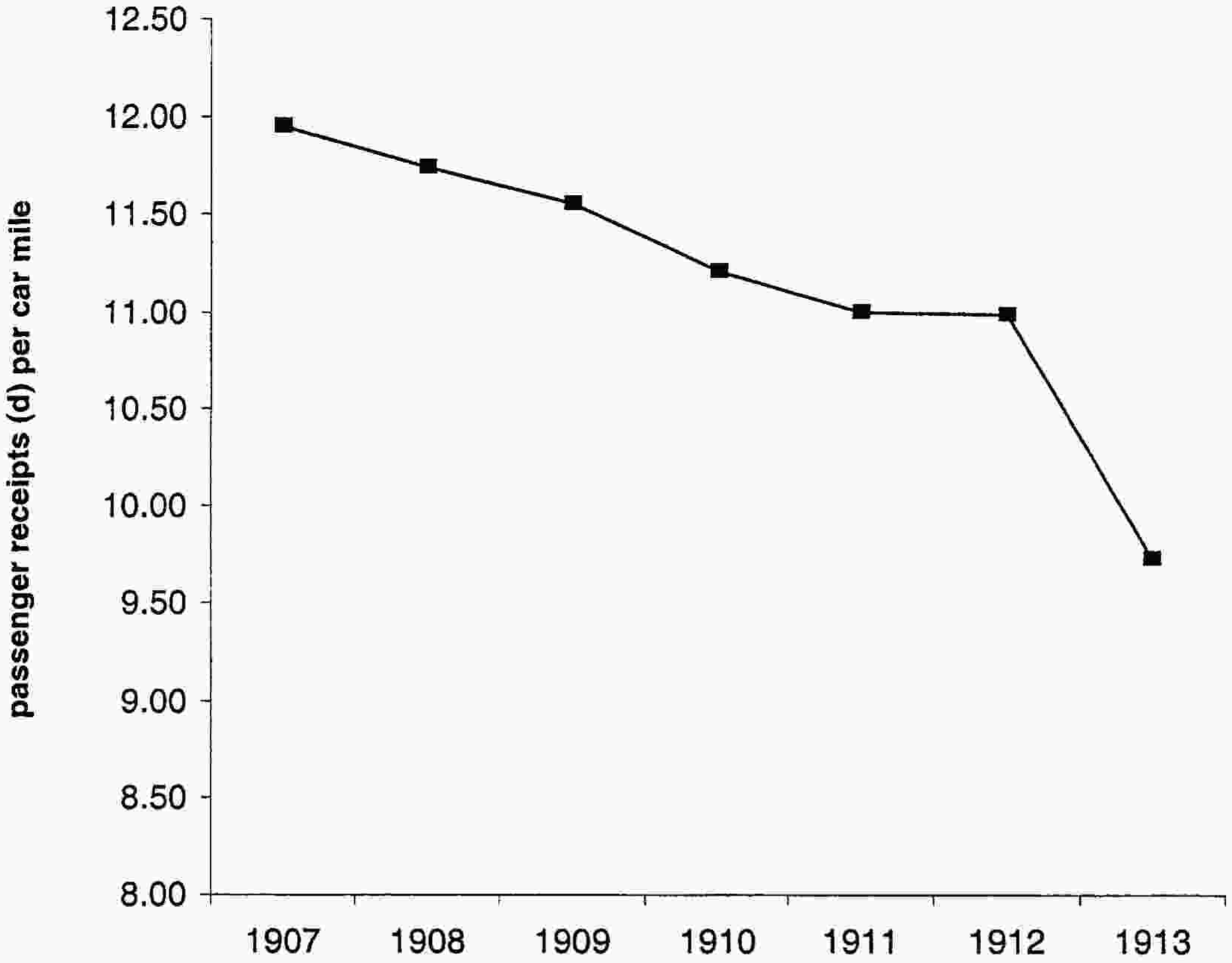

Figure 6.2
LCC tramway results under the Municipal Reformers.
Source: 5th Report of the London Traffic Branch of the Board of Trade

Omnibus fares were always higher when there was no competing tramway route.[92] By 1914, tramways had to be financed out of rates.[93]

Tramways were not a pure public good. They were both rival and excludable. Under private provision, firms charged a user fee based on their incentive to make a profit. The size of the tramway corporation was limited to what the company projected as profitable. Under public provision, the tramway club tended towards universal provision. Fares were lowered and service extended. Universal provision schemes have redistributive properties as the rich may resort to the private sector while still financing the publicly provided good through taxation. At the same time,

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[92] S. H. E. Haward, *The London County council from within; forty years' official recollections* (London, 1932), 304-5.
[93] Barker and Robbins, vol. II, 189.

poor voters enjoy the benefits of having their services financed subsidised by the rich. This was precisely the criticism stated by the spokesmen for capitalist interests. Sydney Morse, who features prominently in the government documents of this period, is an example of this view. He was the Chairman of the Municipal Trading Committee of the London Chamber of Commerce, whose pressure instigated the establishment of the Select Committee on Municipal Trading in 1900, and also acted as a solicitor and parliamentary agent for tramway companies, especially BET.

'I do not think' he argued to the Select Committee, 'that a ratepayer should have to-day to pay the sinking fund for a railway or a tramway by paying a higher fare than he otherwise would... a large proportion of London never dream of using the tramways.'[94] If Morse had had his way, municipal trading would have been limited to water alone, for it alone was a universal good that did not privilege any single sector of society above any others.[95] However, the electoral calculus trumped economic calculations. The technical issues of municipal accounting illuminate the costs of this choice.

Accounting issues: hidden subsidies and future costs

We are concerned with two particular areas of municipal accounting: inter-departmental accounting and depreciation. Soon after winning the 1907 election, the Moderates initiated an audit of the Progressive tramway accounts. The Council retained Sir W.B. Peat, the President of the Institute for Chartered Accountants, and F.W. Pixley. Peat and Pixley found that the LCC had undercharged the tramway account in order to show a paper profit in several instances. The first item was the street widenings which had to be completed before a track could be laid. The Progressives allocated one-third of the cost of street improvements each to the

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[94] Select Committee on Municipal Trading, Minutes, q. 856.
[95] Select Committee on Municipal Trading, q. 887.

Borough Council, the tramways account, and the street improvements account. Peat and Pixley demonstrated that the tramways account should have borne more of the cost when a tramway scheme required the streets to be widened. Street widenings were at partially financed out of rates, rather than the tramway revenues. A private company would have had to pay the full cost of street widenings. Second, the Progressives did not charge the tramway account for the use of other departmental services, especially the Parliamentary Committee which promoted and defended LCC interest in Parliament. These findings undermined the claim that the LCC tramways were self-sufficient. Harry Haward, who served as the comptroller of the LCC from 1893 to 1920, wrote that the Peat and Pixley report highlighted a difference 'in policy, not accounting.'[96] The evidence therefore suggests that the Progressive LCC indirectly subsidized its tramways out of rates to provide for low cost provision of transport.

Similar criticisms of accounting practices extended throughout England. Sydney Morse stated that he believed that the city of Leeds spent £300,000 on street widenings, but did not charge the tramway account. He also alleged that the city also did not expense general office expenses and the services provided by other departments properly.[97] The writer of a series of anti-municipal trading editorials in *The Times* seized on the accounting question. One article reported that the city of Sheffield reported a profit of £32,000, but that this profit was simply the difference between income and expenditure without providing an allowance for contingencies, depreciation and inter-departmental expenses like street improvements. 'To the everyday remark that "you can prove anything with figures" might be added "especially corporation figures" for it is certain that they are "manipulated" in order to

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[96] Haward, 303-4.
[97] National Civic Federation, vol. I, 468.

represent imaginary or excessive profits, or to minimise, if not to conceal, more or less serious losses.' The article concluded that in apportionment decisions 'the tramways get the full benefit of the doubt by as much as possible being thrown on the general rates.'[98] Indeed, a major problem cited by the Select Committee on Municipal Trading was the absence of uniform accounting standards.[99]

Depreciation was another problem that deeply concerned contemporaries. Although municipalities had statutory obligations to retire their loans through sinking funds, the guidelines on depreciation were not as forceful. Depreciation is a measure of writing off the value of an asset so that it can be replaced when the asset is obsolete. It is a different measure than repairs and maintenance, which can be funded out of revenues. For example, the reasonable period assumed for the life of a tramway track was 15 years. Local authorities should have written off the value of their tramways so that at the end of 15 years they had enough money to replace the tracks. Depreciation is a cost item that should be counted against revenue before profit can be calculated.

In an article published in the *Economic Journal,* S.E. Turner judged that 'depreciation Funds are absurdly inadequate.' [100] Peat and Pixley demonstrated that the LCC accounts were debited at an amount lower than commercial best practice. Knoop agreed that the LCC did not make adequate provision for tramway depreciation.[101] Turner wrote that standards and practices varied widely between cities. One city would not declare its profits until the sinking fund and depreciation had been paid; another would neglect the depreciation fund and give the name profits

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[98] *The Times*, 28 August 1902. The articles have been reprinted as *Municipal socialism: a series of articles reprinted from the Times* (London, 1902).
[99] This was the conclusion of the Select Committee on Municipal Trading in 1903; BPP 1903 (270) vii.
[100] S. H. Turner, 'Depreciation and sinking funds in municipal undertakings', *Economic Journal* 14:53 (1904) 47-56, 51.
[101] Knoop, 161.

to what is left of when current expenses and sinking fund had been met. 'Any one who has carefully examined the Parliamentary returns of the reproductive undertakings carried on by municipal boroughs, will be bewildered by the evidence of divergent methods of bookkeeping, and will be sure of only one thing, that the sum shown as profits is entirely arbitrary, and that no sound conclusions can be drawn from it.'[102] Politicians displayed a tendency to commit future generations to repay their deficits. Depreciation was left to the discretion of municipal authorities, and it provided an easy way to declare a surplus even though that surplus ignored the need for renewals. 'If provision of renewals and replacement funds were obligatory,' Knoop wrote, 'town councils would be unable to continue the exploitation of future rate-payers for the advantage of present rate payers.'[103]

J.H. Rogers, the Chairman of the Newcastle Corporation Tramways, reached the conclusion that of all the municipal tramways operating in Britain in 1910, only one-third were making adequate depreciation provisions. 'They may please their constituents, for the time being, and perhaps that is all they really care about, but the time will undoubtedly come when many will have good cause to regret it.'[104] Politicians were able to turn 'profits' over in aid of rates, which pleased their immediate constituents at the cost of the future constituents. This behaviour is to be expected if the time horizon of a politician is not coincident with the life of the asset. This is not to say that all municipalities in Britain were placing the present ahead of the future. In London, the Moderates adopted the policy of increasing the contributions to the renewal fund. The cost of this decision was that tramways contributed nothing to reducing rates, and was explicitly presented to the voters in

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[102] S. H. Turner, 'Financial aspects of municipal undertakings which extend beyond the municipal boundaries', *Economic Journal* 15:57 (1905) 12-22, 19.
[103] Knoop, 375.
[104] Quoted from McKay, 190.

those terms. In an election pamphlet, the Moderates promised to 'enforce the necessity of conducting the business on sound financial principles, with ample provision for renewals and reserve funds, and for a reasonable contribution from the tramway account towards the cost of street widening for tramway purposes.'[105] This is an example of politicians educating voters about the future costs of present policies.

The implication of this discussion on current historical research is that the profit figures listed in the tramway returns should be approached with caution. Research by Millward and Sheard has shown that the amount of profit generated by municipal trading activities was small. For a sample of 25 towns, the surplus of trading profits over loan charges was £42,500 per town per annum. This, they point out, was enough to fund police and public health activities, and they proceeded to design and test a model predicated upon income from trading activities.[106] However, they make no allowance for the possibility that depreciation allowances were too small. Historians using municipal accounts should be mindful of this omission as a source of error, and perhaps allow for a sensitivity analysis of depreciation levels. Given that the 'profit' was in the tens of thousands when the capital investment was in the millions of pounds, a variance of one or two per cent in depreciation would make a large difference to the figures. When we compare the 25 towns and cities included in the sample against the list of what towns and cities provided adequate depreciation according to *Tramway and Railway World*, we find that only four cities contributed to rates *and* made adequate depreciation of tramways: Leeds, Liverpool, Manchester, and Northampton. Cities like Leicester, London and Preston made adequate depreciation but did not contribute to rates. Many other cities made contributions to

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[105] London Municipal Society, *London County Council Election 1910- facts and arguments,* GL LMS 108, 82. The quote is from an election manifesto from 1906.
[106] Millward and Sheard, 'Urban fiscal problem'.

rates but did not depreciate adequately.[107] The abandonment of tramways in the 1930s was partly caused by the fiscal decisions made in the 1900s.[108]

There was a trade-off between present ratepayers who had a vote and future ratepayers who did not, and as we have seen politicians frequently exercised myopia rather than prudence. However, before we condemn politicians for their myopic behaviour, we should emphasise the fiscal constraints that they were operating under were difficult, and that there was a wider impasse in local government financial restructuring in this period. The level of assistance from Central Government through Grants in Aid was low, and observers of local government finance ranging in perspective from Fabian to Tory favoured increased Grants, albeit for different reasons.[109] Financing urban expenditure projects was difficult given the limited tax base of rates on property, and perhaps deferring some of the challenge to the future was the best possible response given the limitations.

Conclusion

The Tramways Act of 1870 did not intend to create municipal ownership. Private entrepreneurs invested heavily in tramways in the nineteenth century, but by 1900 tramways were an essential part of London's infrastructure vital to achieving a solution to the shortage of working class housing. This social goal, combined with the importance of the working class electorate, prompted politicians to regulate prices, labour conditions and capital investment. But agency problems intervened resulting in public ownership of the tramways. Under public ownership, politicians continued to have the incentive to reduce fares and increase access in response to the electorate, and by 1914 the LCC ran their tramways at a loss.

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[107] The date of comparison is 1910. 'The financial position of tramway undertakings,' *Tramway and Railway World,* 10 March 1910, 185-7.
[108] N. Scheiber, *The battle for the 'burbs: the effects of firm size, managerial incompetence, and suburban bus competition on tram abandonment* (Oxford University unpublished M.Phil. thesis, 2000).
[109] S. Webb, *Grants in aid: a criticism and a proposal* (London, 1911); Offer, 207-17.

The National Civic Federation investigators reported favourably on British tramways and on the institutional structure of public ownership.

> It makes managers the direct agents and employees of the people instead of the agents of a company employed and paid by private parties to work for the interest and obey the instructions of those parties—a city as well as an individual can control its own servants and make them obey its will and wish better than the servants of some other person.[110]

This was a blessing as well as a curse. London tramways were, as Benn described them, 'the people's carriage.' The level of investment and service helped to ameliorate crowded housing conditions and to decrease the travel time to work. Improved housing conditions and increased time, whether that time was used for leisure or not, must be taken as important social benefits. C.F.G. Masterman, the Liberal social critic, wrote that 'each workman to-day in the district has had an hour added to his life... the two greatest boons which have come to our working people are the gas stove and the fast electric tram.'[111] However, the evidence suggests that the voters may have exercised too much control over their political servants. By assigning tramway expenses to other departments politicians were charging what was in effect a hidden subsidy, and by charging inadequate depreciation they were shifting the burden onto the future. A greater degree of central government auditing of accounts could possibly have ameliorated these costs while still preserving the benefits, and a great degree of central government revenue could have removed the need to resort to such tactics in the first place.

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[110] National Civic Federation, vol. I, 270.
[111] L. B. L. Masterman, *C.F.G. Masterman, a biography* (London, 1939), 83.

Chapter 7: The risks and regulation of electricity

The theme of this chapter is how contemporaries sought to allocate risk between the public and private sectors. In 1906, the same year that the LCC successfully became the dominant tramway provider for London, it failed to become the supplier of bulk electricity. The problem addressed in this chapter is why no wholesale public electricity supply emerged in London when retail public supply did. Although retail electrical supply at the Borough level had existed since the 1880s, the technology and economics of the industry evolved to make wholesale supply on a metropolitan level desirable. The LCC tried to secure Parliamentary permission in 1906 and 1907, and failed both times. A private company would have been successful if Parliament had not been prorogued for the 1906 general election. The capital and risk tolerance required for a publicly owned and operated bulk supply scheme for London were in excess of what voters were willing to grant. Contemporaries believed that private ownership was the best means of allocating risk. Winning market power required permission, knowledge and capital. The private firm had knowledge and capital. The LCC had access to capital, but lacked knowledge. The fact that both of them were refused permission was a product of the changes in government following the general election of 1906 and the LCC election of 1907 and a regulatory mechanism that was unable to cope with such a large project.

This chapter will first provide a background of the development and early use of electricity. It will then discuss the private initiatives and their reasons for failure, followed by the public initiatives and an explanation for their lack of success. It will conclude by arguing that, despite the many complications arising from this historical narrative, general conclusions about the suitable demarcation between public and private ownership can still be drawn.

Background

In the early 1880s there was a flurry of speculative activity by companies to provide for arc and incandescent light. The Electric Lighting Act of 1882 regulated the industry. Modelled after the Tramways Act, it granted entrepreneurs franchise periods of 21 years, after which the local authority could purchase the undertaking at depreciated value. The Board of Trade under Joseph Chamberlain indicated that it had no doubt about the rights of local authorities. Not only could they purchase the undertaking at the end of the concession period, but the Board also gave municipalities preference over companies if both applied for orders at the same time. Despite the short concession period, finding private capital during this period was not difficult.[1] Still, entrepreneurs led by Emile Garcke, the Managing Director of the British Electric Traction Company, successfully lobbied Parliament to extend the franchise period to 42 years. After the Marindin Report of 1889, the Board of Trade favoured competition between private firms and allowed two undertakings in each parish, usually one using direct and the other using alternating current.[2] The Board did not encourage competition where the local authority was the initial provider of electricity.[3]

The Acts specified that power could only be generated within the area of supply in order to maintain the integrity of the geographic boundaries of local government. In London, the basic unit of administration at the time of the Electric Lighting Acts was the Vestry, and so each London Borough was either a purchasing

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[1] L. Hannah, *Electricity before nationalisation: a study of the development of the electricity supply industry in Britain to 1948* (London, 1979), 5-6.
[2] Electrical Energy (Generating Stations and Supply), Joint Select Committee Minutes of Evidence, BPP 1898 (609) ix, q. 32, 107. The Marindin report was prepared by Board of Trade inspector Major Francis Marindin.
[3] I. Byatt, *The British electrical industry, 1875-1914: the economic returns to a new technology* (Oxford, 1979), 199.

authority or a provider of electricity. Private provision emerged in Boroughs with a high rateable value and companies provided their wealthy residential customers with the luxury of electric light. Development was concentrated in the west and central areas where early development had taken place and where borough councils were conservative. Companies invested more than local authorities (figure 7.1). Although electrical undertakings were a developing technology, there was no shortage of capital for well-planned company schemes. The London Stock Exchange raised more than £18 million in new issues for the industry between 1899 and 1913.[4]

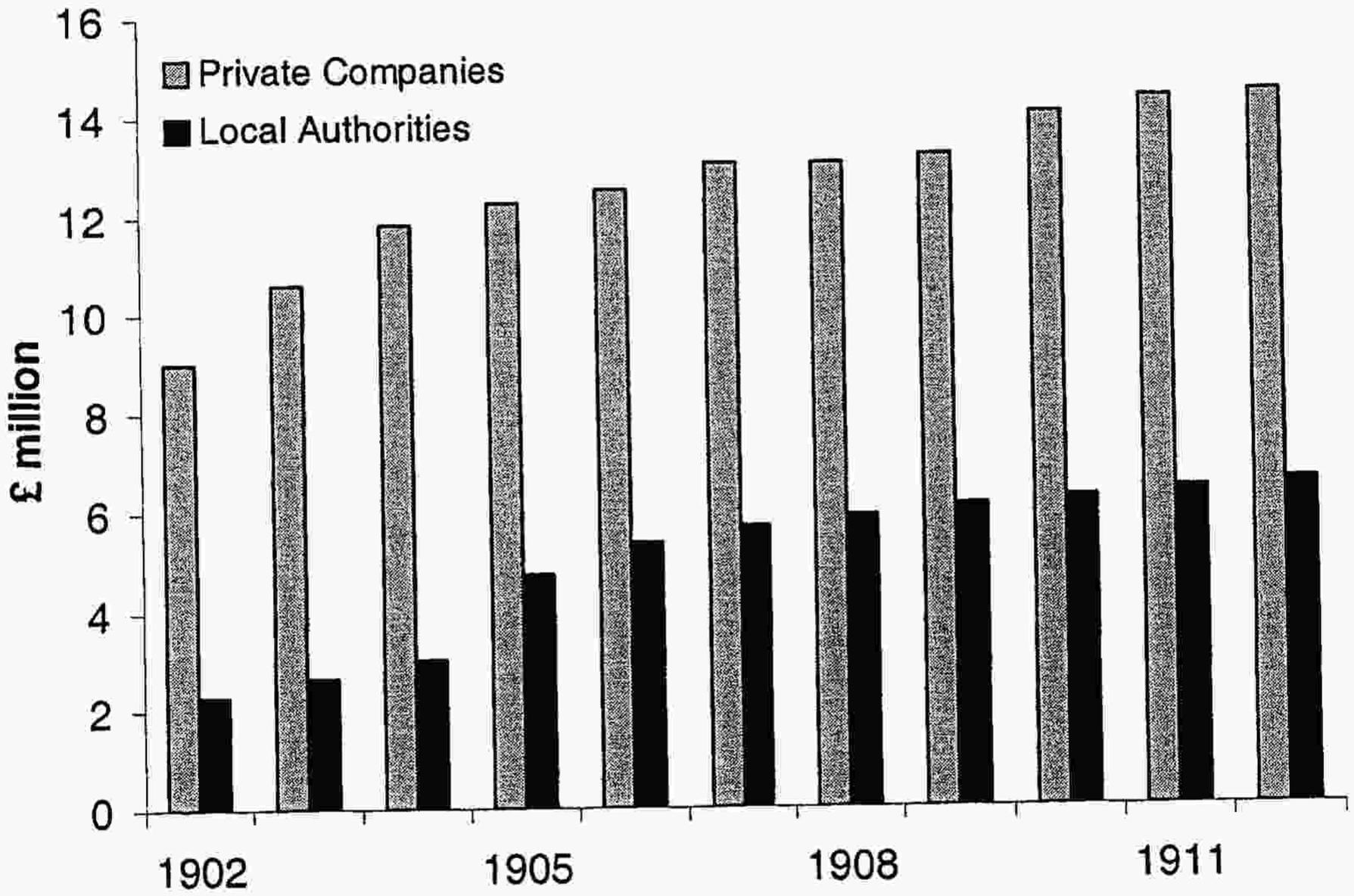

Figure 7.1
Capitalisation of London electricity providers.
Source: *London Statistics*, 1902-12.

Public ownership emerged in boroughs with a low rateable value and provided electricity for street lighting.[5] Public street lighting appears to have been subsidised through limited sale of power for private lighting.[6] On the whole, the Borough

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[4] Hannah, 43.
[5] *London statistics* 1908-9, 397
[6] *London statistics* 1905-6, 393; *London statistics* 1909-10, 452.

electrical supply schemes were self-sufficient. In 1904, four boroughs contributed a total of £45,956 to the rates, five boroughs called for £139,362, and the rest were rate-neutral.[7] In 1908, only Hammersmith and St. Pancras contributed to rates, Woolwich and Battersea called on rates, and the rest were neutral.[8] By 1913, all Boroughs except Woolwich profited from the increased use of private lighting, and either contributed to the rates or were rate-neutral.[9] The Borough councils received the vast majority of their capital from the LCC. By 1906, the LCC had provided the Boroughs with approximately £4,500,000 in loans.[10] Financing through the LCC was the cheapest means of securing funds, since the Boroughs would not have had privileged access to the financial markets.[11] In 1906, there were 16 local authorities and 13 companies supplying electricity, with combined capital expenditure growing at about £1 million per year. Table 7.1 shows a snapshot of the electric supply industry in London and in Britain. The general impression that the table provides is that companies sold their current for a higher price, and as a result had higher profits. Cost of production was nearly the same between municipal and company operations in London, and for Britain as a whole municipalities had cheaper unit costs. This is mostly attributable to the favourable financing conditions and lower rates of interest that the municipalities were able to secure. These numbers are only averages and it would be difficult to make any more detailed comparisons; there was great variation within municipalities and among companies.[12] As we shall see, some were great successes and others were miserable failures.

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[7] *London statistics* 1904-5, 394.
[8] *London statistics* 1908-9, 443.
[9] *London statistics* 1913-14, 457, 478.
[10] As reported by David Lloyd George in 154 H.C. Debates 4th Series, 26 March 1906, col. 960. Also referred to in Parliamentary Committee Report to Council, LCC Minutes, 28 February 1905
[11] J. F. Wilson, 'The finance of municipal capital expenditure in England and Wales, 1870-1914', *Financial History Review* 4 (1997) 31-50.
[12] National Civic Federation, *Municipal and private operation of public utilities*. 3 vols (New York, 1907), vol.I,185ff.

Table 7.1: The electricity industry at a glance, 1904-5

Part I. London	Public	Private
Number	16	13
Area of supply	56 sq. miles	64.5 sq. miles
Population	2,550,228	2,225,540
Number of houses	324,492	316,081
Rateable value of property in area	£16,225,000	£26,065,000
Capacity of plants	54,157 k.w	128,175 k.w.
Load factor	17.43%	16.30%
Units sold for light, power and heating	33,816,335	115,332,110
Units sold for public lighting	9,181,983	4,214,624
Total working costs per unit sold	1.50 d	1.52 d
Total working revenue per unit sold	3.02 d	3.37 d
Gross profit on working per unit sold	1.52 d	1.85 d
Interest and dividends paid	0.92 d	1.50 d
Redemption of loans	0.43 d	0.01 d
Transfers to renewals, reserve funds	0.17 d	0.44 d
Contributions in aid of rates	< 0.01 d	---
Average price per unit- private supply	3.14 d	3.76 d
Average price per unit- public lighting	1.94 d	2.02 d
Average price per unit- traction	---	1.48 d
Average price per unit*	2.89 d	3.34 d

Part II. United Kingdom	Public	Private
Number	182	71
Units sold	356,759,088	166,101,141
Average number of units sold per undertaking	1,960,215	2,372,873
Revenue per unit sold	2.57 d	3.39 d
Expenses per unit sold	1.21 d	1.59 d
Gross profit per unit sold	1.36 d	1.79 d
Sinking fund, depreciation, and reserve fund per unit sold	0.64 d	0.30 d
Net profit	£989,620	£1,009,029
Net profit per unit sold	0.66 d	1.45 d

Source: National Civic Federation vol. 1, 244 for London; Garcke's Manual, 1904-5 for the UK. *includes meter rentals and bad debts.

Providing electricity in bulk (a large supply station serving a large area, but not necessarily connected directly to the end users) required a workable technology and a large market. Improvements in technology allowed for the economy of scale that was required. The first development was the advent of alternating current (AC).

Direct current (DC), the previous standard, had to be carried at the voltage level of end use resulting in heavy transmission losses. In contrast, AC can be transformed from high voltage to low voltage current which reduced the transmission loss. The first attempt at a power station using AC was by Ferranti and his London Electric Supply Company, who built a station in Deptford in 1887. Unlike previous bulk supply undertakings, the demand existed, but the technology was untested and ultimately failed. A second technological development was the steam turbine, patented by Charles Parsons in 1884. This technology had greater mechanical efficiency than the conventional reciprocating steam engine.[13]

The first two central power stations in England were technically workable but failed due to weak demand. The pioneer central power station was at Godalming in Surrey. Installed by Siemens, it was powered by water to light the streets and supply individual consumers, but demand for electricity proved to be inadequate and it closed. The first steam station was located at the Holborn viaduct in London. Financed by Thomas Edison and opened in January 1892, it was a technical success, but demand was insufficient. Both undertakings found it difficult to compete with gas. British gas companies were efficient by international standards and lighting by gas was cheaper than lighting by electricity until the end of the nineteenth century. Early residential lighting developments were limited to high-income areas such as the central commercial and residential districts of London and provincial cities. [14] As a result, the optimal size of a power station was eight machines no larger than 0.1 mW (about 134hp) in capacity.[15]

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[13] Hannah, 13.
[14] Hannah, 8-9.
[15] Byatt, 67-8.

The fixed costs of building a power station composed the majority of the costs per unit of power.[16] Electric current could not be practically stored, so power companies had to be able to provide for the peak load of their network, for example night time in the middle of winter. The most economical model of organization was to maximize the ability of a station to deliver as close to its peak load as possible for the longest possible time in order to increase the load factor. The load factor is the ratio between the maximum load and the average load of the power station. The higher the average load as a percentage of the maximum load, the more the company is spreading its fixed costs over a larger number of units.

The transition of electrical use from lighting to power opened up a wide market in electricity, and one of the most effective possibilities for maximizing the load factor was to diversify the type of consumer. The expanding urban network of tramways and the possibility of driving industrial machinery by electricity were the two largest factors driving non-lighting demand. While America had electrified almost 90 percent of its tramway mileage in 1897, Britain did not reach that point until 1905.[17] A second means of capturing a more diverse load was to alter the pricing structure to entice consumers to use power at off-peak times. The Electric Lighting Acts prohibited undertakings from locating the generating station outside of the area of supply. In London, where the relevant local authority boundaries were the Boroughs, this meant that the electricity supply was dispersed inefficiently. The need for locating the generating station outside of the area of supply became clear. For example, E.J.A. Balfour, the Chairman of the St. James's and Pall Mall Electric Lighting Company, reported in 1898 that his station located in Westminster but away from the Thames required 200 tons of coal per week. He stated that the cost to

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[16] E. Garcke, *Garcke's manual of electrical undertakings* (London, annual), 1897, 77.
[17] Byatt, 163.

consumers would be less if a station were to be located on the Thames and could receive its coal by river.[18]

In order to circumvent the restrictions of the Electric Lighting Acts, entrepreneurs applied for the right to supply electricity through private bills. In response, the government formed the Joint Select Committee on Electrical Energy (Generating Stations and Supply), chaired by Viscount Cross, in 1898. The Cross Committee decided that this situation was unacceptable and recommended that powers should be given for supply over a district composed of numerous local authorities from a station located elsewhere. Electricity producers could then sell in bulk to existing distributors to deliver power directly to end-users. On the subject of purchase by local authorities, the Committee decided that the 1882 and 1888 Acts did not contemplate bulk supply, and that co-ordinating the purchase between many local authorities would be complicated.[19] Bulk supply in London began in 1899 when the Central Electric Supply Company obtained permission to supply the St. James's and Pall Mall companies from a station located in St. Marylebone, built in 1902. Through the London Electric Supply Bill of 1902, the LCC attempted unsuccessfully to achieve permission for local authorities to combine in order to achieve economies of scale and distribution. But both of these plans were not the type of bulk supply that was suitable for a large metropolitan area.

The model for bulk supply was Newcastle-upon-Tyne Electric Supply Company (NESCo). NESCo began in 1889 as a distribution company and already had customers for lighting. The consulting engineer to NESCo was Charles Merz, the man Leslie Hannah calls 'the British Edison.' Merz was born in Gateshead in 1874. His father John was an industrialist who also wrote a four volume treatise on

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[18] Joint Select Committee on Electrical Energy (Generating Stations and Supply), q. 489.
[19] Joint Select Committee on Electrical Energy (Generating Stations and Supply), Report.

European thought. Merz trained as an engineer with the American-owned British Thomson-Houston Company until 1899, when he began his career as a consulting electrical engineer. His firm, Merz and McLellan, was among the most pre-eminent of British engineering firms, and Merz travelled as far as Australia to offer his expertise.[20]

Merz designed a power station using the same three-phase AC distribution that Westinghouse had established in America. This type of generation allowed the station to supply industrial motors with higher voltages and domestic and lighting consumers with lower voltages. In 1900, NESCo successfully received permission from Parliament to extend the area of its supply to both the north and south banks of the Tyne. As Tyneside industry became acquainted with the advantages of electricity, Merz and his partner William McLellan designed a new station at Carville, near Newcastle. It was the largest public supply station in Europe: its two 1.5 mW and two 3.5 mW Parson's turbines were ten times as large as the average size being installed in other British stations. The fact that NESCo supplied large area allowed it the benefit of standardizing the system and connecting a large network, increasing its diversity of load and therefore its load factor. Even the visiting Americans were impressed.[21] Merz adopted an ingenious scheme of using waste heat to power generating stations at the collieries in order to put electricity back into the network.[22] In 1899, NESCo's cost per unit was 2.00d with revenue of 4.12d per unit. In 1905, their cost had shrunk to 0.56d and their revenue had also shrunk to 1.03d per unit, but the company was still able to issue an 8 percent dividend every year as it was on the

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[20] D. J. Jeremy, *Dictionary of business biography* (London, 1984), vol. 4, 221ff.
[21] National Civic Federation, vol. I, 242.
[22] Merz describes the scheme in the 'Typescript of autobiography of Charles Merz', (unpublished manuscript: 1936), Archives of the Institute of Electrical Engineers, NAEST 91/2/1. Abbreviated as 'Merz'.

sliding scale (which allowed the dividends to increase when prices fell).[23] While perhaps one-twentieth of the UK population lived in the North East, the NESCo network accounted for one-eighth of UK electricity sales.[24]

NESCo was the biggest integrated power system in Europe at this time and serves as a model of what British engineering could accomplish. There were several factors behind NESCo's success. It was started in 1889 as a distribution company and so already had lighting customers. There was a large concentration of industry at the Tyneside, it was located close to coalfields, it had Merz's engineering expertise, and it did not face municipal opposition. Although these conditions made the North East especially advantageous, Merz and his colleagues were convinced that the same principles could work elsewhere.

Private schemes

Merz moved to London in 1902 in order to investigate the possibility of a scheme to provide London with bulk supply. His solution, first conceived in 1904, was an ambitious engineering project. His description of electricity resembles the description of London water companies fifty years earlier.

> London electricity was in a chaotic condition… neither parliament nor the local authorities nor the public had yet realised that electricity ought to be a monopoly – (there was little or no argument for competition other than with gas) – with the result that not only was the London area supplied by some seventy undertakings, some company, some municipal, but in several districts there was overlapping: in one case there were three companies' mains in one street.[25]

There were 70 authorised distributors using 20 different kinds of pressures with a great variety of tariffs and prices. The potential for economies of scale was huge. Merz estimated that the continuation of the small power stations would require an

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[23] É. Garcke, *The progress of electrical enterprise, reproduction of articles from the engineering supplament of the Times on the British electrical industries* (London, 1907), 34.
[24] Hannah, 33.
[25] Merz, 3-4.

aggregate capital outlay of £1,000,000 a year. He thought he could reduce this figure by £600,000 if the supply area was large enough. Of the 500,000 hp used to supply London factories, only 20,000 hp was generated electrically. Ninety-five percent of aggregate revenue was provided from lighting. Merz's colleague spent several weeks at the British museum going over ordnance survey sheets of London, finding the location of every factory and then getting returns from many of them. It was only proposed to supply power direct to a customer in cases where the existing authorities could not do so equally cheaply, but since he forecast prices to be as low as .6d per unit it was to be expected that a good deal of direct supply would be given. Merz envisioned regulating his scheme based on a sliding scale with a maximum price of 1.5d per unit, a standard dividend of eight percent and a factor of increase when price the price was below 1d per unit. The proposal received backing from the City, especially Barings. Merz was not a new figure to the City financiers; Lazards had close links with NESCo. He writes that he received no criticism of the financial stability of the project.[26]

From 1905, Merz acted as the consulting engineer to the Administrative County of London and District Electric Power Company. He believed that high power costs deterred manufacturers from using electricity. In 1905, the Administrative County of London and District Electric Power Company and six other companies all submitted private bills in the House of Lords to gain the right to provide bulk power to London. The Administrative County Company struck deals with the other applicants and emerged as the leading contender to provide bulk supply. The Bill provided for three generating stations on the banks of the Thames with a total capital expenditure of about £6,600,000. The estimated total cost of .52d

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[26] Merz, 5-8

per unit was well below the existing standard of 1.46d per unit.[27] The technology and method of production were similar to NESCo and its feasibility, rightly or wrongly, was unquestioned by the engineering community.

The Administrative County of London Bill was first introduced in the House of Lords in February 1905 and was sent to the House of Commons in June after going through committee. The bill passed easily in the House Lords and political debate over it did not ensue until its progression to the House of Commons. The debate focused on what regulatory structure would be necessary to protect consumers and allow the development of electricity, and what role local authorities had in this regulatory scheme.

The Board of Trade was responsible for initially addressing these questions and implementing Parliamentary decisions. The challenge that the Board of Trade had to meet was the regulation of price. One way to do this was the sliding scale, and another was the setting of a maximum price. Under a sliding scale system of price regulation, the Board of Trade would fix a standard price, a standard dividend and an initial scale. If the standard price charged by the company were to be reduced, then the company could raise its dividend by a prescribed amount, and if the company raised its price it would have to reduce its dividend. For example, a gas company would receive Parliamentary permission to provide gas under a perpetual concession. The standard price would be 3s1d for 1000 cubic feet of 14 candlepower gas, with a standard dividend of 4 percent. For every 1d rise or decline in price, the dividend could be raised or lowered by the standard scale, 1/15 percent for every 1d of change.[28]

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[27] Garcke, *Progress of electrical enterprise*, 39-42.
[28] D. Knoop, *Principles and methods of municipal trading* (London, 1912), 24.

The problem of the sliding scale system (as is arguably the case with all sliding scale arrangements) was that the initial values had to be set properly. It was most appropriate for mature industries displaying little price movement, since changing the price on a regular basis would involve a complicated parliamentary procedure. For example, when Merz was preparing his initial London proposals in 1904 the maximum prices allowable under most London franchises were 7d or 8d per unit and the average price charged by a sample of undertakings was 3.5d. Ten years later the average price had fallen to 2d. (The Merz plan assumed a maximum price of 1.5d per unit.) A second problem was the 'watering' of capital. In an effort to provide higher returns to shareholders without reducing the price, companies would issue more shares to existing stockholders. However, it was possible to implement a clause against this in the Act of Parliament.[29]

The second means of regulation was setting a maximum price. However, if this initial price were set too high, it would become meaningless as industrial and technological development proceeded. The company would be able to overcharge consumers without exceeding the maximum price. The logical solution to this was to review and change the maximum price at periodic intervals. However, Knoop, writing in 1912, could not cite a single instance of the Board of Trade changing a maximum price. Sir Courtenay Boyle, the Permanent Secretary to the Board of Trade, admitted that regulation of a new technology by setting initial values was ineffective.[30] A third means of regulation was through competition, but electricity was a natural monopoly and achieved the greatest efficiency under a uniform distribution standard. In addition, contemporaries doubted whether competition would be effective. Binnie, the

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[29] Knoop, 25.
[30] Joint Select Committee on Electrical Energy (Generating Stations and Supply), Minutes, q. 2044.

LCC engineer, argued that competition in electricity, like competition in water, would break down.[31]

The LCC, which at the time was led by a Progressive majority, decided to oppose in a council meeting on 31 January 1905. The Parliamentary Committee's report called the pending bulk supply bills 'one of the most important' matters to engage the council in recent years and held a conference with the metropolitan boroughs to attempt organize concerted opposition to the bill.[32] The Parliamentary Committee of the LCC argued that the Electric Lighting Acts safeguarded the public interest because they had purchase clauses, because the company was required to post security bond for performance, and because the Board of Trade had set a maximum price. Since the bulk supply schemes were over a large number of purchasing authorities, the purchase clause was difficult to implement. The powers sought by the private companies were a 'serious menace' to the existing municipal and private undertakings. The Committee urged the LCC to take the position that the companies be placed on a sliding scale and that the LCC should have powers of purchase, or that the LCC be made the electrical generating authority.[33] It argued that the monopoly over the supply of power was a dangerous thing, even though NESCo had shown that low prices to the consumer and monopoly control were not mutually exclusive.

The second reading in the Commons in July 1905 produced lively debate. John Burns, MP for Battersea and Progressive member of the LCC, argued that the purchase clause contained in the bill was vague, and blamed the committee for being swayed by the 'wiles of the provincial promoter.' He stated that 16 Borough councils were against the bill, since it threatened their power undertakings. 'In four or five

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[31] Joint Select Committee on Electrical Energy (Generating Stations and Supply), Minutes, q. 1824.
[32] LCC Minutes, 31 January 1905. The minutes are on open shelf at the London Metropolitan Archives.
[33] Parliamentary Committee Report to Council, LCC Minutes, 28 February 1905.

years,' he warned, 'London would be in the hands of a large syndicate running on American lines, and would be faced with the same difficulties it had experienced in the past in connection with telephones, water, telegraphs and other monopolies.'[34] Andrew Bonar Law, then the Parliamentary Secretary to the Board of Trade, replied that the bulk of industry in London, mostly small workshops, needed cheap electric power in order to make its use commercially viable. Only a large-scale generating station could produce efficiencies of scale with respect to fuel. Bonar Law was also convinced by Merz's success with NESCo, calling it 'little less than a revolution' for Tyneside industry and was convinced that only a large private company could still provide London with cheap power. 'It is the kind of business which could only be secured by extreme business push and energy,' he responded to John Burns, 'and by taking risks which local authorities ought not to take.'[35]

The bill passed second reading by a majority of 198 to 158. It is impossible to say that the bill would have become law, but the ease with which it passed through the Lord's committee and the favour which it enjoyed with the Board of Trade are indicators that its passage was likely. However, the government called a general election and the bill's passage ended when Parliament was prorogued. Grouse shooting season traditionally began on 12 August, and Prime Minister Balfour was unwilling to prolong the session in order to save the London bill.[36] The advent of a new government gave the LCC the chance it needed to introduce its own power supply scheme. The LCC had previously been opposed by a Conservative majority at Westminster, and saw the new Liberal government as an ally.

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[34] 148 H.C. Debates 4th Series, 6 July 1905 cols. 1418, 1422.
[35] 148 H.C. Debates 4th Series, 6 July 1905 col. 1427,
[36] The source of this was a speech by James Beard, Senior partner of Merz and McLellan, at the proceedings at the unveiling of a memorial tablet to the late Charles Hesterman Merz, on October 11 1946. IEE Archives NAEST 14 (2-18)

The public scheme

The Highways Committee of the LCC was in charge of electricity undertakings. Had the Administrative County Bill become law, the Highways Committee reported, 'an enormous monopoly would have been created in the supply in what is now one of the most important and vital factors in the commercial development of London and the neighboring districts. The danger of such a state of affairs is such that we do not feel it necessary to enlarge upon it now.' [37] The LCC introduced its legislation in the House of Commons on 12 February 1906. The LCC's plan was to substitute a privately owned monopoly with a publicly owned one. The LCC (Electric Supply) Bill of 1906 allowed the LCC to supply bulk electricity to authorized distributors, large commercial undertakings like tramways, railroads and the docks in an area of 387 square miles which included the LCC area and portions of Kent, Middlesex and Surrey.

The Finance Committee of the LCC did not report favourably on the Highways Committee's initial plan to provide bulk supply. The Finance Committee's first question was whether or not the bulk supply undertaking could be self-supporting, that is, whether it could generate enough revenue to make interest and loan payments without requiring assistance from rates. The Administrative County Company sought powers to raise £6.6 million with an initial expenditure of £2.1 million. The company was forecasting an initial loss as demand grew. It estimated a demand of 133,500,000 units sold at 0.7d per unit in 1910, and a demand of 600,000,000 units to be sold at 0.55d per unit in 1916. To put these numbers in context, the total output of the borough and private electrical undertakings in 1903-4 was 113,896,163 units. Profitability depended on the market growing by nearly four

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[37] LCC Minutes, 14 November 1905.

times over the course of six years. Lord Welby, the chair of the Finance Committee, wrote that it was doubtful that the company would make a profit in the early years.

Educated at Eton and Trinity College, Cambridge, Welby entered the Civil Service in 1856. He retired in 1894 as Permanent Secretary to the Treasury, where one of his admirers wrote that 'never was there at the Treasury such a resisting force, and he had to fight against men in high places. The ever-increasing demands of the spending departments were painful to him.' He had sympathy for the liberal ideas of the Progressives, and sat as a Progressive, but was always the restraining hand. Sir Laurence Gomme, the Clerk of the Council, remembered Welby saying to John Williams Benn that 'the difference between me and you is that you want everything at once, but I want something left for the next generation to do for London.'[38] In this case, Welby believed that the demands on public finance were too great.

The second question was whether the Council could raise enough capital to finance the project. Again, Welby's conclusion was unfavourable. The council had already committed itself to the electrifying the Northern tramways, and raising more funds would jeopardize the Council's credit position and impair its ability to raise future capital.[39] In addition, the London supply schemes often provided for an area outside of the LCC area, which meant that citizens of Middlesex or Surrey would gain the benefits of a power station located in London without being rated for its cost.

The publicly owned and managed bulk electricity supply to London would have to have been on an unprecedented scale for municipal ownership. In 1898, the Chairman of the Electricity Committee of Manchester reported that his area of supply was about 20 square miles.[40] The LCC wanted to assume control over an area of 387

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[38] A. West, 'The Right Hon. Lord Welby, CGB. An Appreciation', *Journal of the Royal Statistical Society* 79:1 (1916) 1-6.
[39] Finance Committee Report, LCC Minutes, 14 November 1905.
[40] Joint Select Committee on Electrical Energy (Generating Stations and Supply), Minutes, q. 1261.

square miles. This desire exceeded the limits of municipal enterprise. W.F.D. Smith, Conservative MP for Strand-Westminster, opposed the bill and claimed that it was 'undoubtedly ill-prepared and showed an utter disregard of the financial considerations.' 'It was,' he continued, 'a scheme which partook largely of the speculative character and was, therefore, in his opinion, not suited for the purposes of municipal enterprise.' He thought that the LCC valued the strategic position of having control more highly than the desire to supply electricity, an argument which advocates of the bill used in their favour. MP Wood, of Glasgow, argued that 'the policy of the County Council now was to be in time to prevent the creation of a gigantic monopoly.' [41]

The debate in Commons on 26 March ended when David Lloyd George, President of the Board of Trade, sent the bill to Select Committee.[42] The Committee began to deliberate on 1 May. It heard 75 petitions against the bill: among them were eight borough councils, the City Corporation, the Middlesex County Council, and the promoters of the Administrative County of London Bill. All nine members of the committee were unanimous in opposing the bill. The metropolitan borough councils felt threatened by the possibility that the LCC would compete with their lighting undertakings, even though the LCC scheme did not call for the retail supply of electricity. The committee objected to the permissive nature of the bill since the LCC would not be bound to provide power in any specified scale before any specified time. In its report, it wrote that the Council could exercise the powers that it sought in more than one way. It could do the whole work, providing distribution to consumer under a maximum price, by itself. It could retain part while leasing part to private enterprise,

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[41] Mr. W.F.D. Smith, MP for Strand-Westminster, quoted in 154 H.C. Debates 1906 col. 939, M.P. Wood quoted on col. 952.

[42] Members of the Committee were Sir Francis Lowe, Henry Norman, Richard Bell, J.H. Duncan, Mr. Chance, Joseph Nolan, James Parker, Watson Rutherford and Luke White.

or it could lease the entire undertaking to private enterprise. The Committee showed its preference for public ownership by recommending that all private bills be postponed until the LCC reintroduced the bill, even as it acknowledged that the alternative, the Administrative County Bill, was 'conceived on scientific lines, and calculated to afford a cheap supply at private risk.' [43]

The LCC Finance Committee remained opposed to the revised bill, the London County Council (Electric Supply) Bill 1907. In accordance with the Select Committee's recommendation, the LCC would now have an obligation to supply. It was obliged to meet all future demand, and the progress of expenditure would be 'beyond the council's control.' Garcke considered the LCC to be unable to cope with future demand. [44] The LCC forecast an initial loss, which would be paid out of a future surplus. The goal of the scheme was to give the consumer the cheapest price rather to avoid financing from rates. Welby concluded his report by arguing that 'the council has adopted the policy which involves these financial responsibilities because, we understand, of its apprehension of the results which might follow the establishment of a vast monopoly in the hands of a company.' However, the public advantages of public ownership did not outweigh the financial risks. The best situation, the committee concluded, would be to 'lease for a substantial consideration the whole enterprise to a private enterprise, to resume possession of it when the initial stages are over.' [45] Ferranti, one the pioneers of British electricity, agreed that the risks to public enterprise were too great, and proposed a scheme that would divide the supply of electricity into two segments. The speculative element, the generation of power, should be in private hands, while the non-speculative element, the breaking up

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[43] Report of Select Committee on London County Council (Electric Supply) Bill as reported in the Report of Parliamentary Committee, LCC Minutes, 17 July 1906.
[44] Garcke, *Garcke's manual*, 1907, 8.
[45] LCC Minutes, 11 December 1906.

of the streets and laying power mains, should in public hands.[46] Although Garcke dismissed Ferranti's plan as unpractical, it was similar to the co-operation of public and private that took place in Germany.

Again, we cannot speculate whether or not this bill would have been successful since the Progressives were decisively voted out of office in 1907. Although the 1907 Municipal Reform (Moderate) platform opposed risking ratepayer's money, it also promised to regulate in their interests. It stated that the Moderates would 'make it their policy to establish effective control over the whole area, and ensure that all parties worked together for the good of the whole, without allowing the interests of private investors to prevent the sale of electric current at low rates.'[47] After the election, the Reformers stated their intention to use the powers of the pending London County Council (Electric Supply) Act to lease London's power supply to a private firm. Progressive MPs sitting in Parliament, including John Williams Benn but especially John Burns, opposed leasing the system, and attempted to bind the new council to specific conditions. The LCC rejected the conditions on the grounds that it should have full freedom to contract and withdrew the bill on 10 May 1907. The Municipal Reform Council consolidated the powers of purchase under LCC from the Boroughs through the London Electrical Supply Acts of 1908 and 1910. The Board of Trade had synchronized the dates of purchase so that all of the London undertakings would become due at the same time in 1931. When the 42 year concessions ended, it would be the LCC that could preside over London electricity, and potentially capture some of the benefits of central control.[48] In the absence of a solution, the question had simply been deferred.

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[46] Garcke, *Progress of electrical enterprise*, 43.
[47] {London Municipal Society, 1910 #36@324}
[48] London Electric Supply Act (1908).

There were still schemes for public provision of bulk electricity. In 1914, Merz and his partner McLellan wrote a report for the LCC analyzing the potential for bulk supply. The fact that the Moderate council was willing even to consider these schemes so quickly after it had denounced them can be taken as an indication of their importance. The major conclusion of the report was that the sunk costs were negligible. They demonstrated that a large power station could easily deliver a bulk supply at a lower cost than all of the individual power stations, and that the cost was low enough to warrant closing all smaller stations. But no action was taken, and by 1914 London had 70 generating stations while New York City only had four.[49] Like other large users, the LCC powered its own tramways from a station in Greenwich. This provided the tramways with cheap electricity, but the efficiencies that came from distributing the load factor across various uses over the course of a day were not realised.

Issues in risk allocation

The complexity of the structure of London's politics made its electrical development a special case. Historians have been wary of using London as a basis for case studies for this reason. The situation described above contains many contingencies and events that could have transpired altogether differently given different conditions; the Administrative Council of London Bill, for example, might have become law. However, we can still extrapolate an important principle that explains the role of the public sector during this period. In London, as in the rest of the country, local authorities played 'catch up' with technology, letting entrepreneurs take the full risk and reward of the early stages while municipalising it once they had sufficient knowledge.

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[49] Hannah, 52.

The Leeds Corporation for example experimented with electric lighting in the mid-1880s, but in 1889 turned down a proposal to be the electrical supplier since the industry was too speculative. However, they purchased the private Yorkshire House-to-House Electricity Co. in 1898. Glasgow, Birmingham, Liverpool and Sheffield also took over their electricity undertakings in the same way.[50] Local authorities in Glasgow and Manchester were able to achieve large-scale power supply. Glasgow corporation bought out the local company undertaking in 1892 and raised its output from under 1GWh to 17.8GWh in 1903 and 92GWh by 1914. Manchester corporation was able to halve unit costs between 1903 and 1908. Both cities were able to finance their electrical undertakings on favourable terms and attracted some of the leading engineering talents of the day.[51] But they operated in a single administrative area much smaller than either of the London bills proposed. If the demand was limited to electric lighting for a small area, the undertaking was not speculative and could be considered a municipal service. The public lighting provided by the London Boroughs effectively replaced gas light, and the local authorities acted as both producer of the electricity and as the largest consumer.

Parliament's intention in inserting the purchase clause was to limit the period during which a private firm could have a monopoly. If the Board of Trade overestimated a maximum price or if the need for a technology became so great that there was electoral pressure to deliver it more cheaply in a more targeted manner, the purchase clause allowed an undertaking to revert to public ownership. In the case of tramways for example, the concession period to private companies functioned as a time for public authorities to learn about the industry and monitor its prices and technology. By the time the concession period ended, they were capable of running

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[50] Hannah, 22.
[51] Hannah, 40. Merz also spoke favourably about Fell, the LCC Engineer; Merz, 11.

the enterprise. The Board of Trade felt that local authorities would act in the best interests of consumers, as indicated by the fact that it did not allow public and private electrical undertakings to compete in the London Boroughs. The concession period provided entrepreneurs with just enough market power to attract risk capital and build up an infrastructure suitable for public ownership.

Municipalities were deterred by speculative ventures, and it was this conservatism that meant that existing profit levels under a protected legal monopoly could have seemed more attractive than the greater risks and rewards of large-scale power generation and distribution. Tramways were a known technology where the ratio of fixed to unit costs was high and demand could not only be projected but also increased through favourable pricing policies. Furthermore, tramways were a means of tackling the housing question. Electricity had higher risks attached to it: fixed costs composed a much larger share of total costs than in the case of tramways, and demand was uncertain. The LCC plans were motivated by a fear of monopoly—perhaps exaggerated—rather than the desire to achieve electricity provision for its own sake. Merz recalled the opposition of John Burns as being especially vocal.

> I saw Burns personally more than once. He thoroughly believed in the scheme but would have none of it unless run by the LCC. They had just completed their large tramways scheme and were quite convinced that the LCC ought and could do everything. It was impossible to convince him that regulated private enterprise had any merits. Their opposition cost London many millions... it was not post 1926 that London electricity got out of politics and was dealt with on a business basis.[52]

Merz was, in fact, one of the advisors to the Central Electricity Board in the 1920s. Corroboration for Merz's views comes from Robert Donald, the editor of the *Municipal Yearbook* and supporter of municipal trading. He wrote in the *Economic Journal* that 'many enterprises have been started by municipal Corporations with the

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[52] Merz, 14.

certainty that they would not pay—but might on the contrary incur a loss for a number of years at least—with the object of keeping private interests out.'[53]

So why tramways but not bulk electricity? The first reason is that the electorate had more reason to favour tramways than bulk power supply. Tramways were the single most used mode of transportation in London and contributed greatly to urban expansion and the alleviation of the housing crisis. The Council's pricing policies encouraged tramway use among the working classes and treated tramways as an essential service rather than as a luxury good. Electricity, however, did not have the same level of penetration into London life. Only in the wealthy areas of Central and West London—Westminster, Chelsea, Kensington, Knightsbridge and the City—was electricity used on a household level for heating and light. Industry in London was small-scale compared to industry in the northeast and Tyneside. The majority of the city continued to rely on gas for household heating and light and saw electricity only on streetlights until after the Great War.

This explains why there was little electoral pressure to provide electricity. The Union of Stepney Ratepayers submitted a petition to the LCC urging the Council not to proceed with its bill in January 1906.[54] This petition was a taste of things to come, as the LCC electricity bills were an election issue in 1907 and contributed to the defeat of the Progressives. The Moderates, by now calling themselves the Municipal Reformers, boasted in 1910 that 'fortunately the present Municipal Reform majority was elected just in time to save London from a gigantic municipal monopoly, which would have involved the ratepayers in an unknown, but certainly heavy,

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[53] R. Donald, 'Municipal trading and profits', *Economic Journal* 9:35 (1899) 378-83, 379.
[54] LCC Minutes, 30 January 1906.

financial liability.'[55] Although there were inequalities among the boroughs with respect to the provision of street lighting, voters appeared to care more about rates than about light in this instance.[56]

The second reason is that tramways presented difficult issues of contractual specification, while electricity was apparently less complex. Concerns about quality were adequately met through statute. One of the functions of the LCC was as the electricity safety inspector, responsible for testing fittings, power mains and the accuracy of meters. Private suppliers were unable to provide unsafe and unreliable electricity supply with impunity. In the case of tramways, there were problems of access and pricing. Routes had to be built to connect suburban housing developments to the urban centre and fares had to be low enough in order to encourage people to migrate from the overcrowded core. The LCC undercharged railways and omnibuses in order to bring down their prices, even when this produced a loss. Not only did the majority of London voters not use electricity, but those who did saw no unsafe or deleterious effects of private versus public provision.

Finally, tramway technology was at a mature stage in its development while electricity technology continued to undergo tremendous change. In France, for example, the tramway industry was considered to be mature by 1900.[57] British municipalities also had a 'late starter' advantage in that they learned from earlier applications of electric traction in America. The maximum demand for tramways had been achieved, and the internal combustion engine, not the electrified track, attracted speculative capital. Electricity displayed a much swifter rate of change. The average

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[55]London Municipal Society, *London County Council election, 1910. Facts & arguments for municipal reform speakers and candidates* (Westminster, 1910). Guildhall Library LMS 108-9 (2 vols.), vol. 2, 303.

[56] B. F. C. Costelloe, *The incidence of taxation, with the text of the Owner's rate bill, and an appendix on the equalisation of taxes* (London, 1893), 35.

[57] J. P. McKay, *Tramways and trolleys: the rise of urban mass transport in Europe* (Princeton, 1976), 155.

size of a generator, only 0.1 mW in 1895, rose to five times that level in 1905 and ten times that level in 1913.[58] Electric consumption was still rising, and showed no sign of having reached the maximum demand. Figure 7.2 shows that the rate of increase in electricity consumption was high. The LCC was trying to co-ordinate supply with changing demand, and that was a risk best left to the private sector.

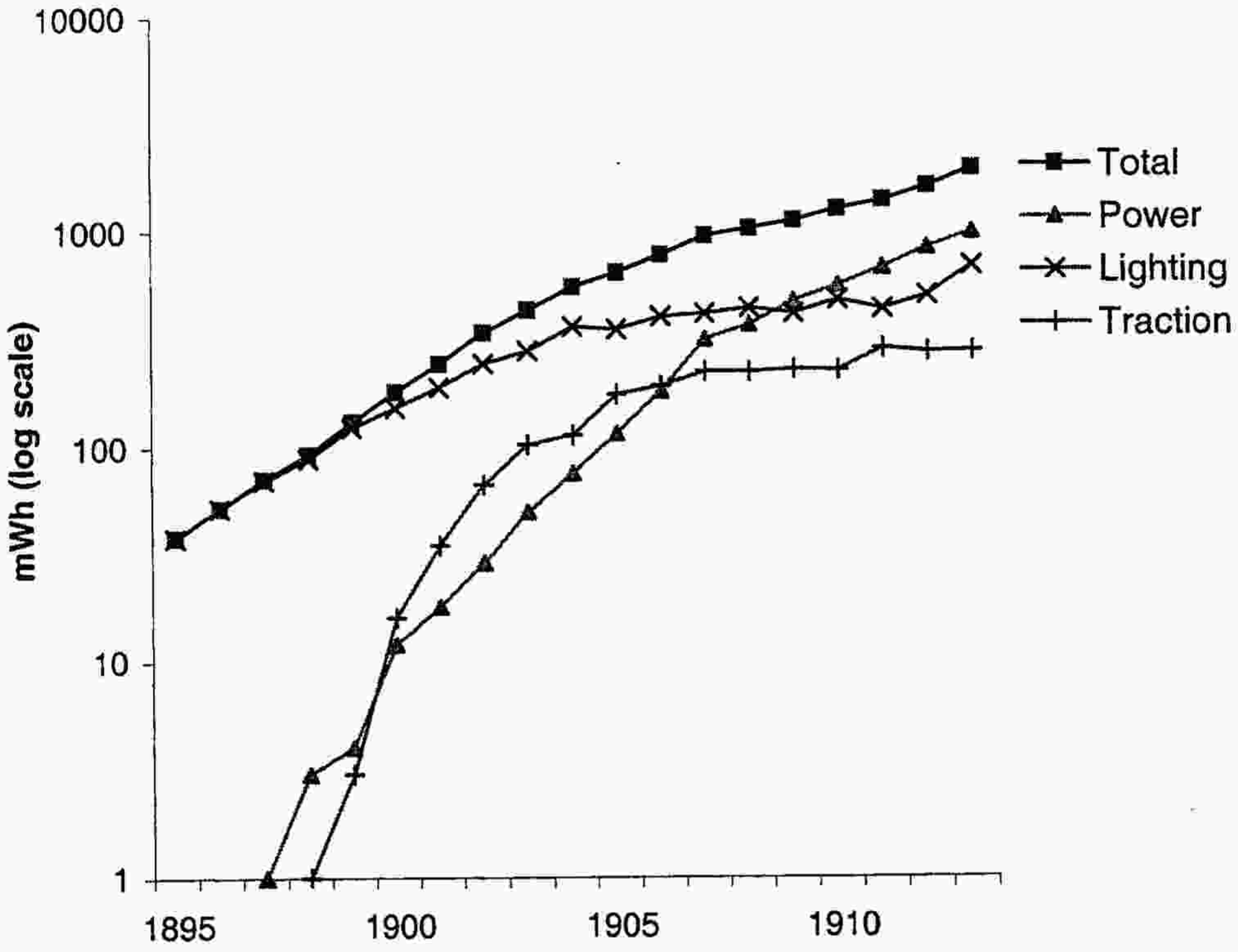

Figure 7.2
Electrical consumption in Britain.
Source: Calculated based on Byatt, 92.

Perhaps the most poignant indicator of the relationship between technology and municipal ownership is the fact that George Bernard Shaw, the committed Fabian, and the Earl of Wemyss, the individualist reactionary, both came to the same conclusion. Bernard Shaw wrote that 'a moments consideration will shew that the success of municipal electricity belong to the early stages of the industry, and can only be maintained if the municipalities deliberately check its inevitable development

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[58] Byatt, 110.

by suppressing private competitors.'[59] The Earl of Wemyss came to a similar conclusion in a parliamentary debate, arguing that

> An electric patent, for example, may be purchased by a municipality and a large amount of money spent on bringing it into use for the benefit of ratepayers. Shortly afterwards, however, it may be found that another invention is better and of more public utility, and the result would be that the money expended by the municipality on the prior invention would be rendered useless.[60]

Technology was changing, entrepreneurs had market power and bulk supply was not municipalized. Resolution of the problems outlined in this chapter came only in 1926 with the creation, by a Conservative government, of the Central Electricity Board, which had the power to manage the power grid on behalf of the state.

Conclusion

'My dear young friend,' said David Lloyd George to Charles Merz, 'this is not a question of engineering, but a question of politics.'[61] Thomas Hughes, in his book on global electrification entitled *Networks of power*, calls his chapter on London 'the primacy of politics.' The story Hughes tells is that private enterprise was frustrated by conservative political institutions and by politicians who had an insufficient understanding of technology.[62] This chapter has revealed a more complex and nuanced story. The political institutions actually worked quite well with respect to London electricity: Merz's scheme nearly got approved.

Unfortunately, 1905 was the best chance for the bill to pass. After 1905, the Progressive LCC sought to overreach its financial possibilities. For that error, they were punished by the voters, who were not willing to incur the risk of higher rates. The Moderate council followed Lord Welby's advice and withdrew its support for any public scheme. Unfortunately the newly elected Liberal government favoured a public

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[59] G. B. Shaw, *The commonsense of municipal trading* (London, 1908), 58.
[60] 67 H.C. Debates 4th Series 1899, col. 1179.
[61] Merz, 19.
[62] T. P. Hughes, *Networks of power* (Baltimore, 1983), 266.

scheme over a private one. Merz and McLellan were advising the LCC up until the outbreak of war in 1914, but the war put an end to any large scheme. There was little consolation for those who understood the potential of electric power and sought to bring its power to London.

The solution to the problem of risk was Ferranti's suggestion to break up the network. The risk of supplying would be carried by the company, and the municipality would remain in charge of breaking up the streets, pricing, and distribution. These were the aspects of the relationship with the highest transaction costs and the highest issues of contractual specification. Electricity does not vary in terms of quality: the electrons that run through the system are identical to each other. The issue is pricing, but the sliding scale would have been an appropriate means of addressing this problem, provided that the initial values were set correctly. The fact that Garcke dismissed this solution as impractical, and the fact that government did not pursue it until 1926, reveals not the weakness of the politics, but the contemporary belief that a network had to be wholly private or wholly public.

Chapter 8: Public ownership and private investment: the case of British Electric Traction

Between 1870 and 1914, Britain exported capital overseas on an unprecedented scale.[1] Was there a relationship between municipalisation of urban utilities and home and foreign investment? By Simon's estimates, sixty-nine percent of British portfolio investment funded 'social overhead' projects. Social overhead projects include public utilities like water, electricity and gasworks, tramways and most importantly railroads.[2] Existing explanations of overseas investment focus on macro-economic forces, such as savings and consumption (Hobson) the functioning of capital markets (Kennedy) and the rational pursuit of higher returns (Edelstein).[3] Concurrent with the British financing of overseas social overhead, a second process was taking place: the municipalisation of urban utilities within Britain. Perhaps there is another dimension that needs to be addressed.

Home and overseas rates of return

Edelstein's rate of return calculations provide us with a point of departure. He has argued that overseas returns were generally higher than home returns, even on a risk-adjusted basis. [4] The following table uses Edelstein's assessment of the non-risk adjusted rate of return for industries that came under municipal control during this period.

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[1] A. Cairncross, *Home and Foreign Investment, 1870-1913: Studies in Capital Accumulation* (Cambridge, 1953), 3.
[2] M. Simon, 'The pattern of new British portfolio foreign investment, 1865-1914', in AR Hall, ed. *The export of capital from Britain 1870-1914*, (London, 1968) 15-45, 23.
[3] C. K. Hobson, *The export of capital* (London, 1914); W. Kennedy, *Industrial structure, capital markets and the origins of British economic decline* (Cambridge, 1987); M. Edelstein, *Overseas investment in the age of high imperialism: the United Kingdom, 1850-1914* (London, 1982).
[4] M. Edelstein, 'Foreign investment and empire 1860-1914', in R Floud and D McCloskey, eds., *The economic history of Britain since 1700*, (Cambridge, 1981) 70-99, 80.

Table 8.1: Realised (non-risk adjusted) rates of return by industry and by time period

	1870-6	1877-86	1887-96	1897-09	1910-13	Weighted average 1870-1913	Weighted average 1887-1913
Domestic equity							
Tramways and omnibuses	13.78	13.79	4.43	-2.7	3.82	5.25	0.73
Electricity				-1.33	7.92		
Gas	11.12	9.87	8.62	2.07	2.13	6.15	4.19
Non-domestic equity							
Tramways	-7.49	15.23	5.45	10.61	1.58	6.35	6.97
Electricity				n.a	8.16		
Gas	12.21	12.38	6.35	3.57	2.61	6.80	4.15

Source: calculated based on Edelstein, *Overseas investment,* p. 153.

Although Edelstein's measures are imperfect and have been criticised, they do clarify a fact that needs to be explained.[5] There were no major differences between home and foreign rate of return in gas and electricity in a similar period (assuming for a normal risk premium). There was no major difference for home and overseas tramways returns over the whole period. However, there was a major difference between home and foreign returns on tramways between 1887 and 1913, the period that best approximates the years during which municipalisation took place. Why was the gap so large? The highest private rates of return were earned during the tramway mania of the 1870s. The lowest private rates of return occurred during the peak of the municipal trading movement, when Feinstein's data shows a large increase in fixed capital formation by local governments.

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[5] S. Pollard, 'Capital exports 1870-1914: Harmful or beneficial?' *Economic History Review* 38:4 (1985) 489-514.

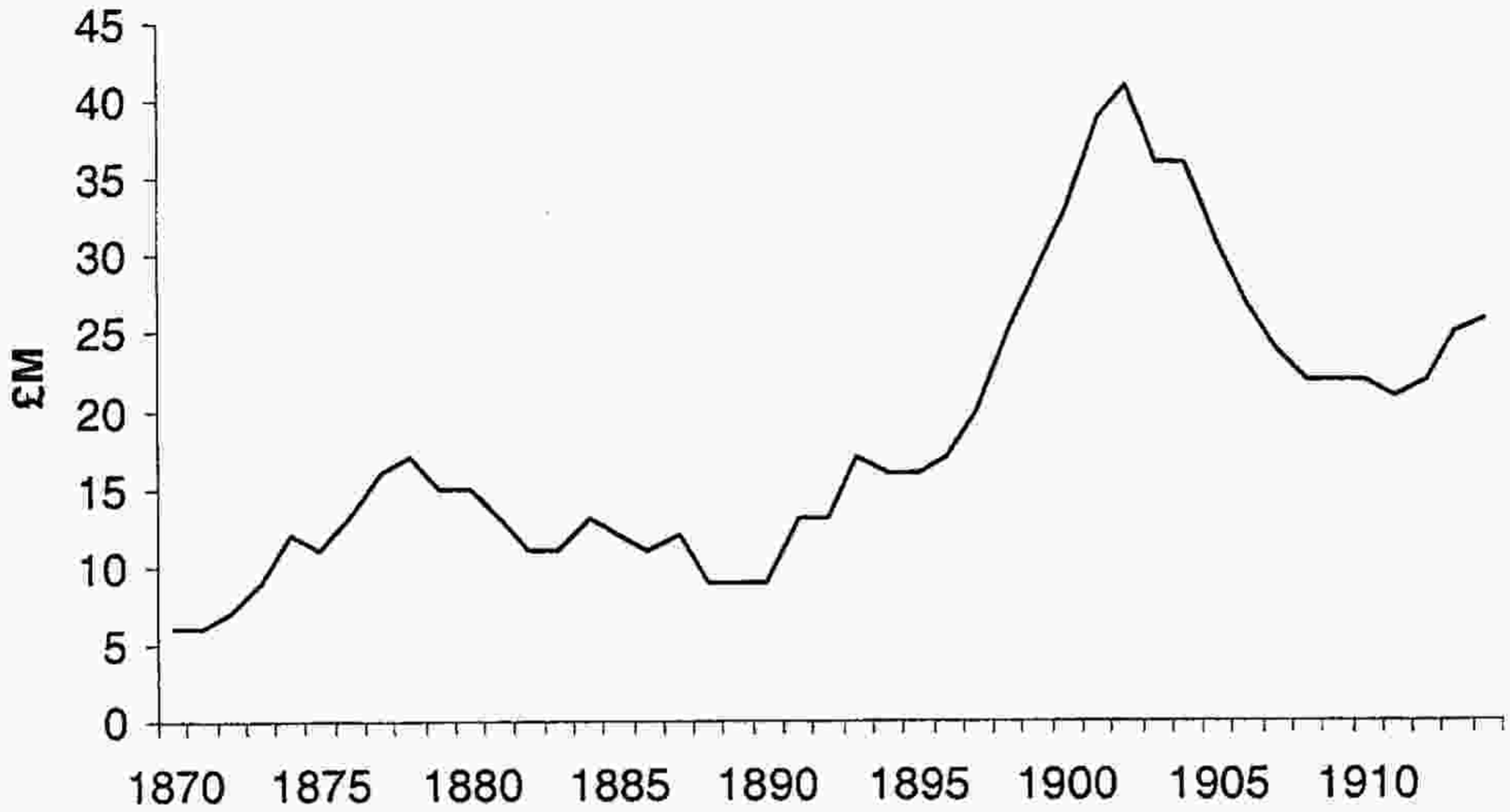

Figure 8.1: Fixed capital formation by local authorities, 1870-1914
Source: Feinstein, *National Income, Expenditure and Output of the United Kingdom,* table 85. Figures are at current prices.

Railroads were, by far, the largest recipient of overseas investment. Paish estimated portfolio investment in railways (Colonial, American, Indian and other) to be £1,521 million in 1913. After railways, tramways were the second largest social overhead recipient. According to Paish's estimates, £77.8 million were invested in tramway portfolio investments. As a category, cumulative tramway investments were larger than the separate categories of banks, gas, water, electricity, oil, and rubber at the end of 1913.[6]

The argument that needs to be tested is that municipal ownership of social overhead projects drove down the private domestic rate of return. In order to probe this intuition more deeply, we will consider the operations and investment decisions of British Electric Traction (BET), the largest private tramway and motor omnibus company in Britain. BET appears in many historical sources of the period, and is also featured in the leading studies of the British electrical industry.[7] This chapter will

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[6] Paish (1914), found in Kennedy, 181.
[7] See for example Byatt and Hannah. Fulford is a commissioned company history rather than an academic work.

supplement these studies by using archival sources and attempting to provide a more detailed picture of the company's operations.

BET provides a rich source of data because it operated as a holding company. Each subsidiary company in the group was separately incorporated and many were independently listed on the London or provincial stock exchanges. From its accounts we can observe the functioning of thirty subsidiary tramway companies as well as the overall operations of the holding company. We can use the case of tramways to test our hypothesis. The analysis presented here is based on sources found in the BET archives.[8] Much of the analysis relies upon a dataset constructed out of tramway operations for about thirty companies operating between 1899 and 1910. This data appeared the BET Annual Reports and in the internal company newsletter, the *BET Gazette.* BET often held a controlling share interest in its subsidiary companies rather than a full stake. The profits for BET were the dividends paid on the shares of the subsidiary companies. The company did not include the physical assets of its subsidiary companies as its assets. Although we cannot calculate the real rate of return on capital investments, we can measure the financial rate of return to domestic tramways through tramway revenues and dividends.

BET: From growth company to a utility

The British Electric Traction Company (BET) was formed on 7 November 1895 to develop electric traction in the United Kingdom and elsewhere. Its directors fused together imperial, financial and electrical interests. The Chairman of BET was Sir Charles Rivers Wilson. Educated at Eton and Balliol, Wilson had served as a civil servant in the Treasury and held several overseas posts including with the Suez Canal

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[8] The archives are located at the National Tramway Museum in Crich, Derbyshire. The author wishes to thank Mrs. Rosy Thacker, librarian of the John Price Memorial Library and Archive, for her patient assistance. The records are uncatalogued and will be cited according to the name of the publication, e.g. Annual Report .

Company. He was President of the Grand Trunk Railway Company of Canada, Chairman of the Rand Central Electric Works Company and a Director of the Alliance Assurance Company. Another Board member was Sir Charles Freemantle who was educated at Eton and had also served as a civil servant. He served as Private Secretary to Disraeli and also as an English representative on the Suez Canal Company board. David Robert Plunket (Lord Rathmore) became a member of the Board in 1898 and was a Director of the Bank of Egypt, Central London Railway, and the Brush Electric Lighting Company.

The Managing Director of BET was Emile Garcke. Born in Germany in 1856 and naturalised a British citizen in 1880, Garcke was the Managing Director of the Brush Company before becoming Managing Director of the Electric and General Investment Company. The Electric and General Company issued the initial stock of BET and the Chairman of Electric and General, George Herring, was a large shareholder. Garcke was instrumental in forming the Electrical Section of the London Chamber of Commerce and the Tramways and Light Railways Association. In addition to being a Member of the Institution for Electrical Engineers, he was also a Fellow of the Royal Statistical Society and the Institute for Actuaries and published *Garcke's Manual of Electrical Undertakings,* an industry yearbook.[9]

The company had good access to capital markets and raised money easily during its period of expansion. It issued shares and debentures on the London Stock Exchange many times between 1896 and 1900. Electric and General appears to have assisted in the early years, and J.P.Morgan assisted with an issue in 1901 that nearly doubled the share capital. Issues of equity were followed with issues of debt in the

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[9] Biographical information came from the *BET Monthly Gazette*, September 1901, 121-3 (BET Archives).

form of debentures. Shares and debentures were widely held. In 1900, there were 1950 shareholders and 360 debenture holders.[10]

Table 8.2: BET Capital Structure (figures listed in £)

	Preference shares (a)	Ordinary shares (b)	Long term debt (c)	Total financing
1896		200,000		200,000
1897		300,000		300,000
1898	100,000	300,000	100,000	500,000
1899	300,000	450,000	200,000	950,000
1900	400,000	600,000	350,000	1,350,000
1901	600,000	620,740	600,000	1,820,740
1902	1,000,000	1,000,000	810,906	2,810,906
1903	1,414,370	1,320,660	1,059,572	3,794,602
1904	1,564,370	1,333,010	1,506,225	4,403,605
1905	1,614,370	1,333,010	1,827,443	4,774,823
1906	1,614,370	1,333,010	2,002,589	4,949,969
1907	1,614,370	1,333,010	2,002,589	4,949,969
1908	1,614,370	1,333,010	2,002,589	4,949,969
1909	1,614,370	1,333,010	2,002,589	4,949,969
1910	1,614,370	1,333,010	1,946,383	4,893,763
1911	1,614,370	1,333,010	1,903,841	4,851,221
1912 (d)	1,210,777	1,736,602	1,895,632	4,843,011
1913	1,210,777	1,736,602	1,872,267	4,819,646
1914	1,210,777	1,736,602	1,868,667	4,816,046

(a) 6% cumulative preferred shares;
(b) Ordinary shares;
(c) 5% perpetual debenture stock and 4.5% second debenture stock
(d) Restructuring of capital into 6% cumulative preferred stock, 7% non-cumulative preference stock, 6% preferred ordinary non-cumulative stock, and deferred ordinary stock.
Source: BET Annual Reports.

We can gain a picture of corporate profits using the earnings before interest, taxation, depreciation and amortisation listed on the BET accounts. Although we should approach the corporate accounts with caution, the dividends paid to ordinary shares corroborate a downward trend. Profits in the early years were good, but fell after 1906.

[10] Report of proceedings at the ordinary general meeting, 1900.

Table 8.3: Profits, dividends and return on equity of ordinary shares

	Profits (£)	Dividends (%)
1897	14,422	-
1898	-	6
1899	67,778	6
1900	159,122	8
1901	157,382	9
1902	224,727	9
1903	266,399	8
1904	290,123	6
1905	260,611	6
1906	277,754	3
1907	231,159	Nil
1908	250,539	Nil
1909	161,922	Nil
1910	160,738	Nil
1911	166,108	Nil
1912	205,872	Nil
1913	221,631	Nil
1914	238,248	Nil

Source: BET Annual Reports

The tramways were regulated by private acts, which were modelled on the Tramways Act or the Light Railways Act. The difference was that the Tramways Act had more stringent approval processes and veto rights for local authorities. Even though Garcke favoured the Light Railways Act, most of the subsidiary companies operated through Tramways Act conventions. The private acts stipulated maximum prices, and often stipulated the adjustment of fares at regular intervals.

Garcke blamed municipal governments for BET's declining profits. He was one of the most vocal opponents of municipal ownership of public utilities. His comments can be found in Parliamentary Royal Commissions, the *Times*, the London Chamber of Commerce, and the publications of the Industrial Freedom League. Specifically, he argued that municipalisation resulted in reduced fares, which produced decreased revenues. BET's 1907 Annual Report states that local authorities owned two-thirds of total tramway mileage in Britain, compared to one-third before electrification was adopted. 'There has been a never-ceasing agitation for reduction

of fares.' BET's fares were 'too low, having regard to the character of the districts we serve, as well as to the large capital outlay which has been necessary for the purpose of adopting electric traction… A stand must be made against the perpetual clamour for the reduction of fares and increased concessions.'[11]

Garcke thought that municipal operators lowered their fares upon taking control of the tramways in order to serve the interests of their constituents.[12] The pressure was sometimes so great that even the tramway managers of municipal corporations resisted taking further profits away from the undertakings. The 1907 Report mentions a report issued by the General Manger of the Glasgow Tramways which stated that 'the only safe course for the Corporation to take is absolutely to refuse to make any reduction in the fares to any section of the travelling public.'[13] Tramways were predominantly used by the working classes, and workmen's trains were not priced as profit making operations. 'The curious thing about this cry of municipalisation for the benefit of the ratepayers is that in most cases where the corporations have thus municipalized commercial undertakings, the rates do not go down, but, on the contrary, are steadily increasing.'[14] From Garcke's perspective, municipalisation was the least successful means of reducing rates. BET reported that the tramway operating accounts for the Birmingham corporation showed a surplus of £12,000, but the corporation could have achieved a profit of three to four times that amount if it had leased the lines to a private company.[15]

We would expect that the asymmetries of information between BET and the local authority that had contracted with them would work in BET's favour. They would know better than the town councillors what the tramway fares should be. But

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[11] Report of proceedings at the ordinary general meeting, 1907, 3.
[12] Report of proceedings at the ordinary general meeting, 1911, 4.
[13] Report of proceedings at the ordinary general meeting, 1907, 3.
[14] Report of proceedings at the ordinary general meeting, 1899.
[15] Report of proceedings at the ordinary general meeting, 1907,5.

municipal ownership was a controversial issue, and Parliament collected tramway returns showing operational results. It was thus possible for information to be disseminated widely. Many of the local authorities that had contracted with BET frequently negotiated reductions in fares. BET had sunk costs into fixed networks, and local authorities had bargaining power. 'The constant demand of the public, supported in large measure by Local Authorities, for increased facilities and reduced fares,' was the most important explanation for 'why industrial undertakings, which were established on the basis of making a reasonable commercial profit, do not yield an adequate return.'[16]

Forced reductions in fares was BET's principal response against a shareholder revolt in 1910. The share price for both preferred and ordinary shares had fallen steeply from their highs. Figure 8.2 shows the firm's performance based on quarterly results from the *Investor's monthly manual.*

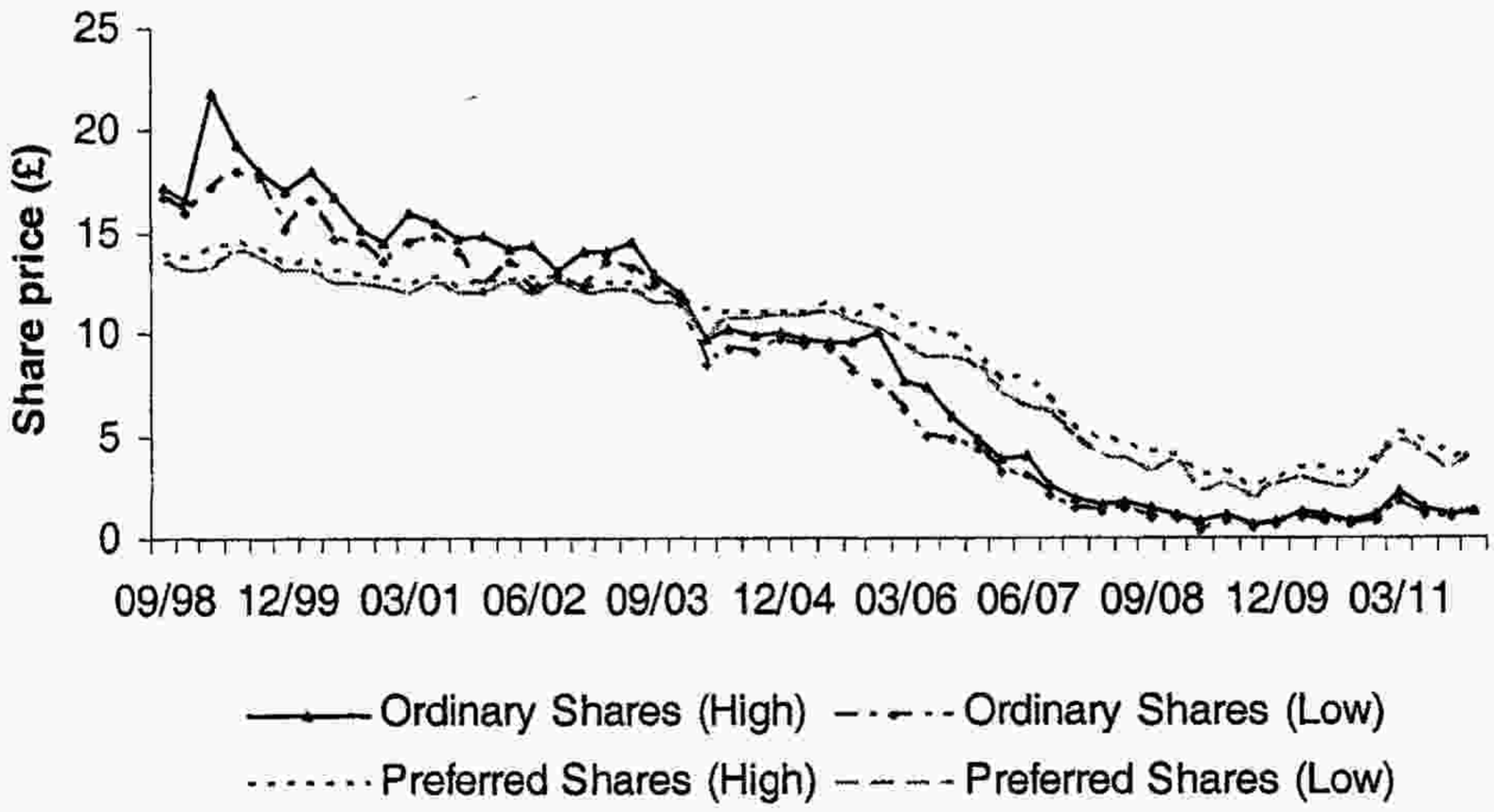

Figure 8.2
BET share price, 1898-1911
Source: *Investor's monthly manual*. Given at current prices.

[16] Report of proceedings at the ordinary general meeting, 1908,5.

A shareholder's association was formed in 1910. 'How do you account for the profits of the company falling from 9% in 1902 to their present low ebb?' the Chairman of the Association demanded to the corporate secretary.[17] Dividends were 'a forlorn hope.' A.H. Chalmers, the corporate secretary, replied that BET's average fare per passenger had declined since the early days of operation, and this accounted for decreased profits.[18]

Table 8.4: Decline of fares and rate of passenger volume growth, for all BET companies

Year	Number of Passengers	Rate of change (%)	Average fare (d)
1899	55,430,891		1.37
1900	72,025,757	0.30	1.47
1901	97,671,747	0.36	1.38
1902	170,340,465	0.74	1.3
1903	219,714,189	0.29	1.27
1904	242,640,521	0.10	1.25
1905	278,404,026	0.15	1.23
1906	301,835,724	0.08	1.22
1907	288,770,028	-0.04	1.21
1908	295,164,032	0.02	1.24
1909	302,727,657	0.03	1.24
1910	324,796,450	0.07	1.25

Source: BET Dataset.

The margins of profit were so small that even a slight increase was important to the company's revenues. The small rise in fares in 1908-1910 was due to the 'Fair fare' system, in which BET divided its lines into smaller stages instead of allowing for a universal fare. This had the effect of increasing fares for longer journeys and increasing average receipts. However, the bargaining power still rested with local authorities. *Tramway and Railway World* reported that 'the authorities have the

[17] Letter from E. Bond to Board of Directors, 2 April 1910, Shareholder's Association Box, BET Archives.
[18] A.H. Chalmers to E. Bond, 6 June 1910, Shareholder's Association Box, BET Archives. The amounts are consistent with other BET published results.

assurance, however, that if the scheme does not finally meet with public approval it must be withdrawn.'[19]

BET did better than other private tramway companies. Many other private tramway companies paid no dividends at all.[20] In 1910, Garcke wrote that 'we are inadequately remunerated for the services that we render to the public, and our profits are small.'[21] BET had become a utility. Its assets were locked-in and its capital sunk into fixed networks. It had to restructure its share equity in 1911 in order to shift its obligations away from paying dividends on preferred shares because it was not generating the cash flow to do so.[22] As information about the operations of tramways throughout the United Kingdom entered the public domain, customers demanded increased accessibility to transport. Where local authorities owned the tramways, they reduced fares, and their profits. Where BET owned the tramways, local authorities used their superior bargaining position to force the fares down.

The problem of sustained growth

Then as now, we should be sceptical of the excuses that company directors make for their poor performance. There were two additional issues. First, BET had a high rate of growth so long as it was converting lines to electrification. Electrification resulted in sharp increases in the revenue per mile of track. Second, many BET tramways were often located in small markets ill-suited for tramways. There was a wide gap between top performers and laggards.

Electrification was a rewarding investment. BET kept records of the mileage, type of traction, passenger volume and receipts for each of its associated companies. The company reported whether a tramway was electric, horse, steam, in the course of

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[19] *Tramway and Railway World,* 22 January 1910.
[20] Report of proceedings at the ordinary general meeting, 1910, 6. Of the 59 British private tramway companies in which BET did not have an interest, only 23 paid dividends.
[21] Report of proceedings at the ordinary general meeting, 1910, 5.
[22] Special Report of proceedings at the ordinary general meeting, 1911.

conversion, or in the course of conversion to electric. The data used here is a compilation of the BET companies for which we have data that operated between 1899 and 1910. In order to control for network expansion, we express revenue and passenger volume as per route mile. In order to categorise electrification, a tramway was not considered to be electric unless the company specified it was electric only. Horse, steam and other tramways are classified as non-electric.

Table 8.5 : Comparison of mean values for electric and non-electric tramways

Year	Non- Electric (Steam, horse, cable)		Electric	
	Receipts/ route mile (£)	Passengers/ route mile	Receipts/ route mile (£)	Passengers/ route mile
1899	1,590	256,757	1,708	303,374
1900	1,584	236,581	1,901	348,892
1901	1,557	241,755	2,657	435,036
1902	1,858	283,343	2,682	517,282
1903	2,443	422,628	2,807	550,222
1904	1,964	314,586	3,066	569,000
1905	2,208	377,075	2,780	536,192
1906	2,227	328,931	3,017	586,246
1907	1,656	198,628	3,036	593,436
1908	1,538	175,326	3,053	584,537
1909	1,941	223,384	3,034	582,492
1910	1,730	179,255	3,160	597,457

Source: BET dataset.

Table 8.5 shows the comparison of electrified and non-electrified tramways. Analysis of the BET dataset shows that electrification increased revenues. Tramways powered by electric rather than horse power carried twice as many people (60 to 100 instead of 25 to 50) and could move at a much greater speed. From the cost side, electric traction was cheaper to run than horse traction. Byatt reports returns to capital of 4 percent over a 20 year period. [23] According to Byatt's figures, working costs for tramways on the whole decreased from 9.3d/car mile in 1898 to 6.6d/car

[23] I. Byatt, *The British electrical industry, 1875-1914: the economic returns to a new technology* (Oxford, 1979), 37.

mile in 1906.[24] The number of passengers carried per mile of track was higher on electrified lines. The increased capacity resulted in higher receipts per route mile of track. This is why it makes sense that BET experienced its highest rate of growth of tramway receipts during the formative period of electrification. Between 1899 and 1904, BET doubled the percentage of its lines that were electrified from 42 percent to 81 percent. After 1904 the rate of growth declined. This is consistent with the profitability figures listed earlier in table 8.4.

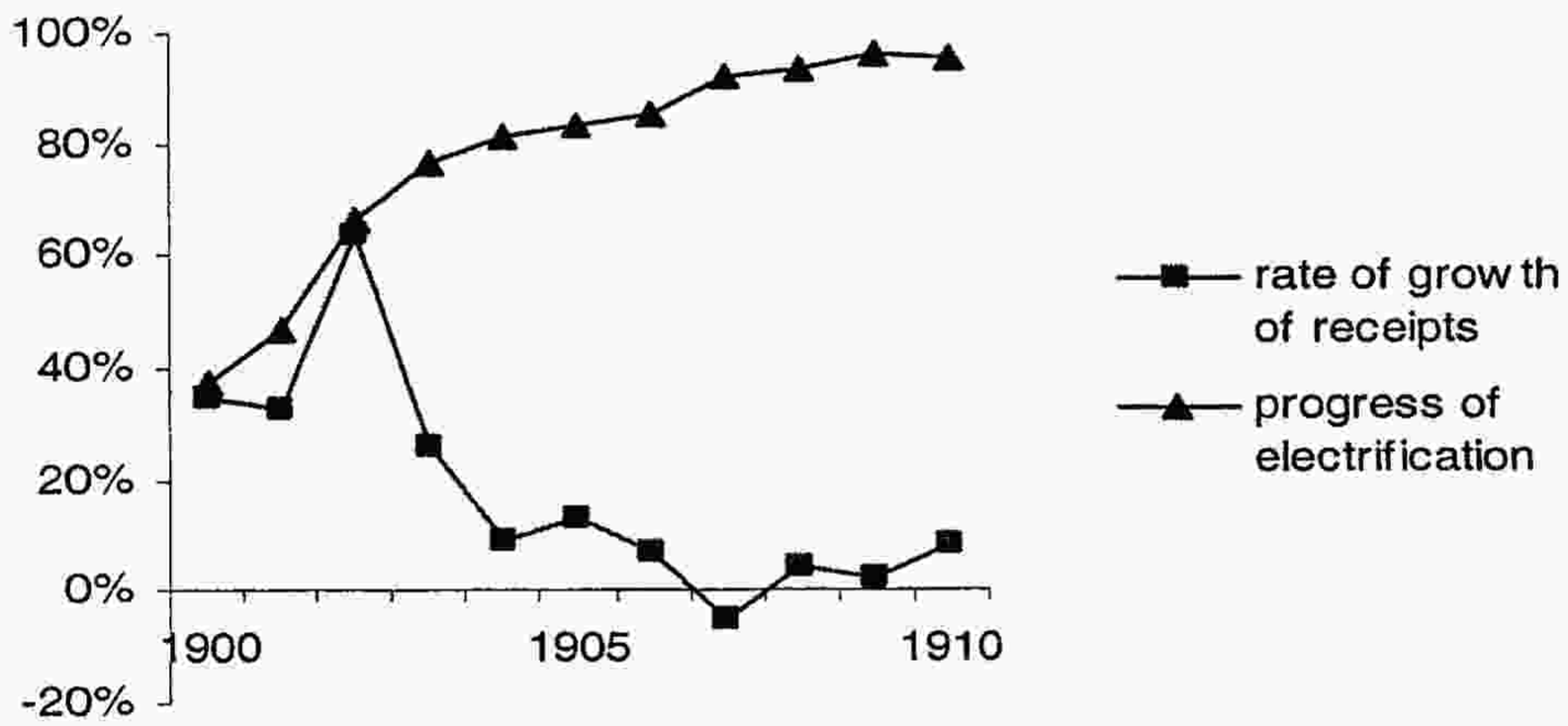

Figure 8.3
The rate of revenue growth versus the progress of electrification.
The rate of growth slowed as the percentage of electrified miles increased.
Source: BET Dataset; Annual Reports

At the early stages, the viability of each tramway company appears to have been less important than capturing the one-off gains from electrification. Many of the subsidiary companies had low tramway mileage and small population bases. Using a cross-section from the dataset in 1905, BET tramways were an average of 10.23 miles and were supported by an average population of 165,625. Only ten companies out of 29 were above the mean BET mileage, and only eight above the mean BET population. The average receipts per unit mile for the company was £3,248. Only

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[24] I. C. R. Byatt, *The British electrical industry, 1875-1914* (Oxford, 1962), 181.

seven companies exceeded this mean.[25] The company reported on the returns of its subsidiary companies to the invested capital of about £5 million in 1908. £3.25 million earned a rate of return of 4.75 percent, while £1.5 million did not yield a return at all.[26] This suggests the BET's holdings were skewed into top performers and laggards.

The top performing lines, as judged by receipts per route mile, were Auckland, Bombay, the City of Birmingham, and the Metropolitan lines.

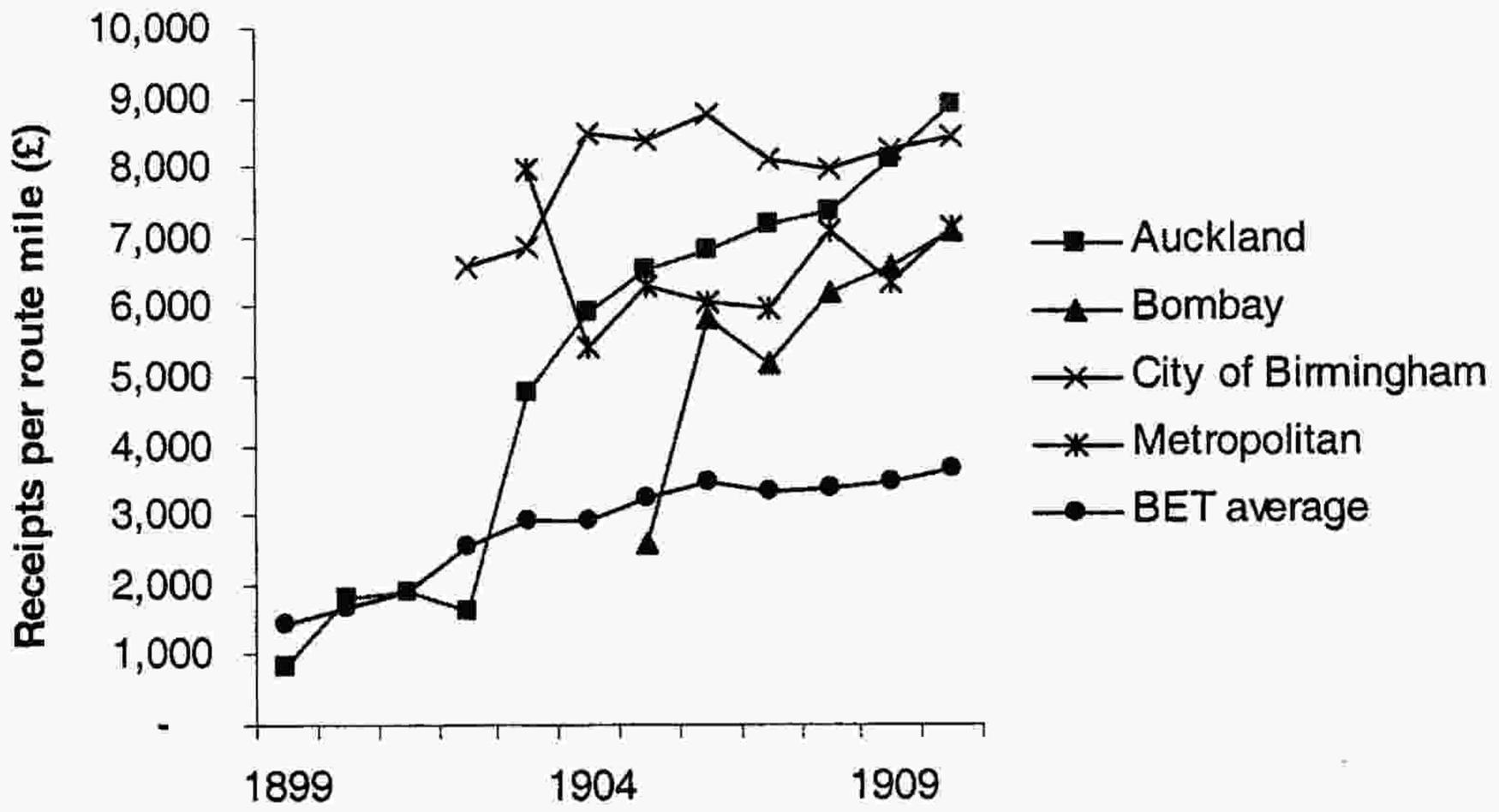

Figure 8.4
The top revenue producing lines
Source: BET Dataset.
Note the sharp increases in revenue due to the electrification of the Auckland and Bombay lines.

The fact that the City of Birmingham line was a top performer even before it electrified shows the importance of market size to tramway revenues. The Birmingham tramway lines served a population of about 700,000 people. The major urban areas in Britain—Liverpool, Manchester, London, Glasgow—municipalised their tramways during this period. It was difficult for private companies to operate in

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[25] 1905 Results, BET Archives.
[26] Report of proceedings at the ordinary general meeting, 1908, 5-6.

these large markets. In 1910, Garcke wrote that 'it is not right to compare our tramways in the sparsely populated districts with tramways and large cities… the lines worked by local authorities are to a much greater extent in the large cities where the traffic is heavy, while most of the lines worked by companies are on inter-urban and rural routes where the traffic is much lighter.'[27] BET was able to gain access to two large markets, Birmingham and London, through lease agreements with the local authorities. But both of these lease agreements ended in municipalisation. The municipalisation of the City of Birmingham system by the municipality in 1907 reduced the company's mileage from 32 to 18. BET was left with a system of lines outside of the main metropolitan area of Birmingham. Although the municipality and the company came to an agreement regarding through traffic, BET's revenues from the City of Birmingham line decreased from £277,760 in 1906 to £146,761 in 1907.[28] Another BET company affected by municipalisation was the North Metropolitan system in London, which the LCC municipalised in 1907. The Metropolitan Electric Tramways Company served the North London areas outside of the Administrative County of London. However, this market continued to expand and remained profitable.

In Britain, the legislation governing tramways and electric supply undertakings placed the governance of these utilities within the administrative districts of local authorities. Often, these districts were based on historical urban units and did not reflect the optimum boundaries for large-scale utilities.[29] For example, each London borough was the unit for electricity provision which resulted in a large number of small capacity power stations. As the process of suburbanisation expanded

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[27] Report of proceedings at the ordinary general meeting, 1910, 6.
[28] BET Dataset.
[29] L. Hannah, *Electricity before nationalisation: a study of the development of the electricity supply industry in Britain to 1948* (London, 1979).

the market for tramways and electric supply, the urban boundaries remained fixed. Since power costs were a determinant of tramway profits, BET built several of its own electric supply stations to supply its trams. In each case, the prices that it charged to itself were lower than the prices charged by other suppliers.[30] Garcke complained to the Select Committee on municipal trading that municipal governments extorted higher prices for power since they had the monopoly.[31] So BET had three main criteria in seeking overseas opportunities: a large, un-electrified market with a favourable geography; a single urban authority over a large area; and the right to build and operate a power station.

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[30] BET Dataset, 1905 cross sectional analysis.
[31] Municipal Trading, Select Committee Minutes of Evidence, BPP 1900 (305) vii, q.1180.

Overseas investment: Auckland and Bombay

The graph of top performers reflects the fact that two of the top lines were located overseas, in Bombay and Auckland. These two lines alone accounted for 20 percent of tramway revenues for all of the Associated Companies in 1910. This does not mean that they accounted for 20 percent of BET's revenues, since BET's revenues were the dividends issued by the companies.

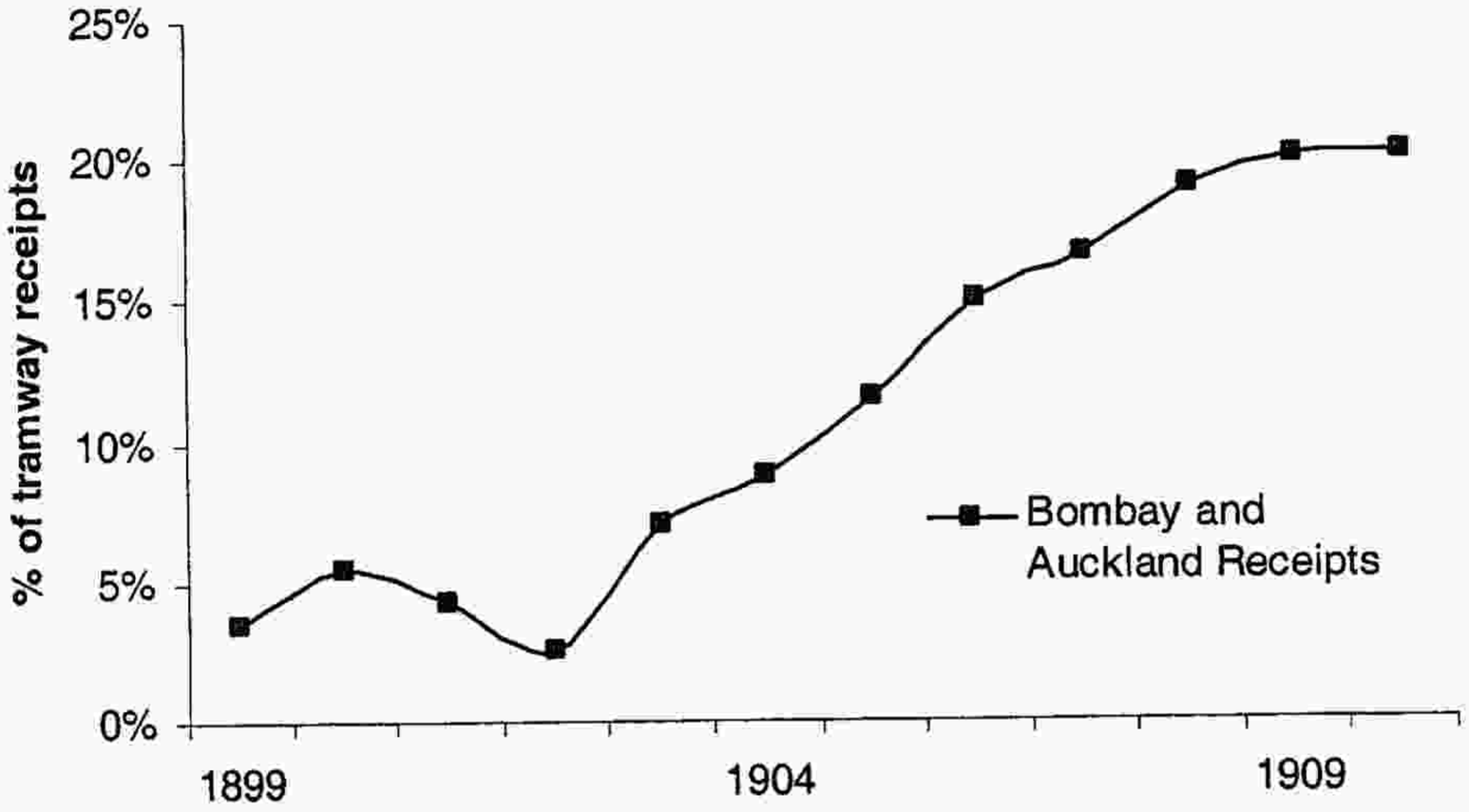

Figure 8.5
Overseas tramways as a percentage of total corporate revenues
Source: BET Dataset

Overseas investment was one of BET's strategies from the early stages. The 1899 Report quotes the Chairman's views on investing capital overseas: 'I insist on it, in connection with the question of the opposition we encounter from local authorities, as a sort of object lesson showing how the policy of these bodies has a tendency to drive British expertise and capital out of this country.'[32] In 1908, the Report claimed that although there were plenty of possible markets for further development, BET was concerned about government regulations that they thought unduly favoured municipal governments. 'Consequently we are giving our consideration to various foreign and colonial proposals which have been submitted to us. Foreign business, however,

[32] Report of proceedings at the ordinary general meeting, 1899.

requires much closer study and negotiations are carried on under great difficulties. The responsibility of doing foreign business is greater, although the prospect of profits may be better.'[33]

The standard definition of foreign direct investment (FDI) is an investment made for business purposes with the investors seeking to control or having the potential to control foreign operations.[34] A holding of 30 percent or more is also applied as a base test. BET had two major FDI projects, in Auckland and Bombay. Its investments in other tramway companies were smaller portfolio investments. BET was from the start an international company. Many of its directors had served Imperial or business interests in an overseas capacity. They had particular knowledge of India and New Zealand. James Devonshire, the BET district manager for London, had experience in India. After being educated at Rugby and Trinity College Cambridge, C. Shireff Hilton went into business in an Indian house in 1877-78 and then was in business connected with Australia and New Zealand in 1879-1895 before joining BET's Board in 1900. He was also a Director of the New Zealand Midland Railway Company.[35]

The Auckland Electric Tramways Company Limited was registered in March 1899. It combined tramways and electric supply. The basis of the agreement with the City of Auckland was a thirty year lease with the purchase price set on the value of the undertaking as a going concern (including goodwill). This value was higher than the valuation imposed in Britain by the Tramways Act (1870) which valued the tramway at the price of the physical assets only. The issued capital of the undertaking

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[33] Report of proceedings at the ordinary general meeting, 1908, 6.
[34] M. Wilkins, 'The free-standing company, 1870-1914: an important type of British foreign direct investment', *Economic History Review* 41:2 (1988) 259-82.
[35] *BET Gazette*, September 1901, 122.

was £450,000 of 6% cumulative preferred shares and £150,000 of ordinary shares.[36] BET invested £290,000 in the project.[37] Although the company's bank was the bank of New Zealand, the company's solicitor remained Sydney Morse (BET's corporate solicitor) and the registered office remained with BET. BET representatives on the Board included Garcke and Hilton, who was the Chairman in the early stages.[38] He was succeeded as Chairman by Charles Tegetmeier, another BET board member.[39] The ordinary shares of the company and debentures were quoted on the London Stock Exchange.

BET reported that the Auckland Tramways 'serves to illustrate what profits can be made by tramways working under better conditions than unfortunately obtain in our own country… the people travel very much more and pay higher fares.'[40] Under its lease agreement with the city, the company also had the right to generate and sell electricity, which helped keep power costs low and raise dividend yields. The power station appears to have been a dedicated source of power for tramways rather than for public lighting or consumers.[41] Dividends on ordinary shares increased from 4.5 percent per share in 1903 to 7 percent in 1911.[42] Wages were also higher in Auckland. In addition, the geography of Auckland was favourable to tramways. The city was largely flat and was expanding outwards rapidly. BET held the tramway until 1919, when it sold the tramway to the city for £1.2 million on the city's initiative.[43]

The Bombay tramways began as a joint-venture between the Brush Company and the Pioneer Company. The Brush Company had purchased the Bombay

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[36] E. Garcke, *Garcke's manual of electrical undertakings* (London, annual), 1901, 92. Abbreviated as 'Garcke' in following footnotes, with the year showing the volume number.
[37] 'List of investments,' Report of proceedings at the ordinary general meeting, 1903, 16.
[38] Garcke, 1901, 92.
[39] Garcke, 1914, 422.
[40] Report of proceedings at the ordinary general meeting 1910, 4.
[41] 'Comparative table of power station costs and records,' *BET Gazette*, June 25, 1907, 41.
[42] Garcke, 1911, 423.
[43] R. T. B. Fulford, *Five decades of B.E.T.: the story of the British electric traction company, limited* (London, 1946).

Tramway Company in 1901. BET had links to Brush through a large investment and because Garcke was a former managing director. Under an agreement between Brush and BET, BET assumed the obligations of the Brush Company to construct and electrify tramway lines and to install an electric supply plant. The Bombay Electric Supply and Tramways Company Limited was formed in June 1905 in India and England. The agreement between the Company and the City was a perpetual franchise with the municipal option to purchase at the end of 42, 56, or 63 years. The valuation would be set at the bona fide value exclusive of property, plus an allowance for goodwill if the city exercised its right to purchase before 63 years. The Company made an annual lease payment to the City.[44]

BET promoted the undertaking and then sold it to the Bombay Electric Supply and Traction Company. BET received £225,000 in cash, £600,000 in 4.25 percent debenture stock, and £125,000 in ordinary stock in the Bombay Electric Supply and Tramways Company. The Electric and General Investment Company purchased the debenture stock from BET at par and offered the stock for sale. They also underwrote a new £600,000 issue of cumulative 6% preference stock. The working capital of the Bombay Company was £1.2 million in equity (£600,000 in preferred and £600,000 in ordinary shares) plus £600,000 in debentures.[45] The shares and debentures were listed on the London stock exchange in 1907. According to a 1907 report, BET assumed a position of about £270,000 in securities, two thirds in ordinary stock and one-third in preference.[46] Although BET had less of a stake in Bombay than in Auckland, it participated in management decisions through two seats on the Board (Garcke and

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[44] P. Mahalumivala, *History of the Bombay Electric Supply and Tramways Company Limited 1905-1932* (BET Archives.)
[45] Mahalumivala.
[46] Report of proceedings at the ordinary general meeting, 1907, 8

Hilton). The company was run from England and operated in British currency until 1916, when management and currency operations shifted to India for tax reasons.

The Bombay company was profitable and showed large increases in passenger volume. Its receipts per route mile grew from £5818 in 1906 to £7075 in 1910.[47] It paid dividends on its preference shares and 3% on ordinary shares in 1911, 5% in 1912, and 6% in 1913-14. Unlike in Auckland, the Bombay company was more involved in electric supply. By 1914, it sold 4,364,977 units to lighting and power undertakings and 4,792,167 units to tramways.[48] This was important because the tramway provided a higher load factor for the power station and lower costs than outside purchase of electricity.

These investments are two of the many overseas tramways projects funded by British capital. *Garcke's Manual of Electrical Undertakings* is filled with other instances. Two South American examples include the Buenos Ayres and Belgrano Electric Tramways Company Limited, in which BET held a portfolio investment, and the Anglo-Argentine Tramways Company, which had issued £5.7 million in preferred stock and £3.25 million in ordinary stock by 1914. The dividends on ordinary shares in the Anglo-Argentine Company were 8% in 1905-7, 7.25% in 1908, 6% in 1909, 7.75% in 1910-11, and 8.25% in 1912.[49] There are examples for Canada, Australia, and China as well. Many of these overseas tramway companies were listed on the London exchange, and many appear to have been what Wilkins has called 'free standing companies' that took advantage of the corporate governance structure mandated by British law in order to engage in specific enterprises overseas.[50]

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[47] BET Dataset.
[48] Garcke, 1914, 463.
[49] Garcke, 1914, 141.
[50] For a detailed study see M. Wilkins and H. G. Schröter, *The free-standing company in the world economy, 1830-1996* (Oxford, 1998).

From tramways to buses

Investing overseas was one strategic response to the domestic business environment. Another decision was to invest in a new technology: the motor bus. BET did not invest in the motor bus in the initial stages of its technological development. The company reported in 1905 that 'well designed electric tramways have nothing whatsoever to fear from competition by motor omnibuses.'[51] Buses were initially intended as a feeder system for tramways. BET invested in the British Automobile Development Company. It decided to run motor buses in London in 1912, as a joint venture with the London General Omnibus Company and the underground electric railways. The 1913 report stated that

> It has been said that the situation presented by this Company—formed to promote electric traction—adopting motor omnibuses, is not without its ironical features, and that it is a significant sign of the ever-changing possibilities of mechanical invention, but that is not a complete statement... the management of the Company is moving with the times, and is alert to take advantage of any opportunity which may present itself to compensate for past misfortunes and improve our future prospects.[52]

The process of change from tramway to bus accelerated after the World War. By 1946, when Fulford published his company history, BET had almost totally abandoned the tramway and operated as a bus company.

Conclusions

What does the case of BET tell us about municipalisation and home and overseas investment? This story is situated within a larger context of a decline in home investment mediated by global economic cycles.[53] Municipalisation drove down the rates of return on tramways by reducing fares. Municipal operators had the discretion over how to operate. They could price higher, and break even or make a profit for ratepayers, or they could price lower and increase access to the tramways. In general, municipalities that owned tramways reduced their prices, especially workmen's fares.

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[51] Report of proceedings at the ordinary general meeting, 1905.
[52] Report of proceedings at the ordinary general meeting, 1913, 11.
[53] W. A. Lewis, *Growth and fluctuations, 1870-1913* (London, 1978).

Municipalities that contracted with private firms negotiated the fares down in accordance with the fares charged by other local authorities. In the absence of an American-style judiciary to whom private property could appeal, private firms were subject to the problem of 'hold-up.' However, even though American firms had limited recourse to judicial review, tramway profits decreased as a result of regulation.[54] 'As soon as cities had become accustomed to having car tracks in their streets,' wrote Delos Wilcox, 'the pressure for improved transportation became irresistible.'[55] Intriguingly, municipalisation might not have been the best financial option for local governments. If the BET claims are accurate, then local authorities could have relieved rates to a larger extent through receiving lease payments rather than operating the lines themselves. Furthermore, if local authorities wanted to relieve rates, they could have operated the lines themselves and charged higher fares. Municipalisation can therefore be interpreted as maximising a political rather than financial return. The case of BET highlights the investment problems inherent in urban utilities.

Although some municipalities did apply tramway revenues to rate relief, it appears that the decision to municipalize cannot be conceptualised using purely financial motivations. If, following Edelstein, we believe that overseas investment was the rational pursuit of higher returns, then we can see how municipalisation contributed to overseas investment. Not only did they reduce the number of possible markets for private tramway firms, but they also reduced the profits that private investors could expect. Municipalisation was the mature stage of the product cycle of urban tramways. Once the technology had diffused, the public nature of the tramway made it a political issue. Robson described this product cycle when he wrote that 'the

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[54] T. Conway, 'The decreasing financial returns upon urban street railways properties', *Annals of the American Academy of Political and Social Sciences* 37:1 (1911) 14-30.
[55] D. F. Wilcox, *Municipal franchises*. 2 vols (New York, 1910), vol. I, 3.

luxuries of one age become the necessities of the next.'[56] Home investment was lucrative at the early stage of the product cycle, when the municipal authorities preferred to let the private sector assume the risk of financing and developing the tramways. However, once the tramways were established, the municipal authorities regulated in a way that reduced profits. The profits were in development, not in operation. The best markets in Britain were the large urban cities, and these tramways were municipalized. Investment overseas was an adaptive strategic response to this situation.

Michie has argued that the failure of entrepreneurs to seize the opportunities presented by the electrical industry was more to do with the effects of government legislation than to the capital markets.[57] He specifically discusses the Electric Lighting Act as a deterrent to investment. However, BET had no trouble raising capital on the London capital markets, despite the fact that the Tramways Act produced a regulatory framework that was more favourable to the municipalities than to private enterprise. Investors appeared willing to place risk capital in electric traction provided that the firm signalled that it was stable; one way of doing that was to issue preferred shares, which behave like fixed income investments, and debentures. This evidence can support Kennedy's claim that the capital markets favoured conservative rather than risky investments. It appears that it was the competition from municipalities rather than limited duration franchises entrenched in the legislation that caused rates of return to fall. Municipalities could borrow more cheaply than private firms, and they were not constrained by the need to pay annual

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[56] W. Robson, 'The public utility services', in Harold Laski, et al., eds., *A century of municipal progress, 1835-1935*, (London, 1935) 299-331, 300.
[57] R. Michie, 'The finance of innovation in late Victorian and Edwardian Britain: possibilities and constraints', *Journal of European Economic History* 17:3 (1988) 491-530.

dividends. Other things being equal, they had the ability to charge less for their services.

Municipalisation was an outcome of the political responsiveness of English local governments and a solution to the problem of regulation. In this sense, it was a sensible institutional arrangement and had its social benefits. However, it had its private costs as well, and the case of BET shows how costly the British system was to private enterprise.

Chapter 9: Comparisons and conclusions

Public ownership of urban utilities in Britain emerged as a solution to the problem of regulation, as an outcome of British institutional endowments, and was mediated by electoral politics. The purpose of this concluding section is to weave these strands together in a meaningful synthesis. Social scientists sometimes criticise historians for working with small samples.[1] What follows is an attempt to place these findings within a broader comparative context.

Regulation and the problem of contracting

The first questions are how government regulated private business, what determined the success of a regulatory regime, and the degree to which agency problems influenced the decision to absorb urban utilities within the public sector. The answers have been placed within the framework of regulation as a long-term contract. Chapter 3 argued that the regulatory incentives contained in Parliamentary legislation did not produce a viable regulatory regime. Government encouraged competition from the 1800s to the 1840s. During this period, companies reduced prices in order to compete with each other, but colluded to raise prices when the competition became ruinous. Until the passage of the Tramways Act in 1870, government sought to regulate by maximum price, which was an ineffective incentive since technology improved over time. Regulation by maximum dividend, as was attempted with the railways, was frustrated by information asymmetries and the inability to monitor capital expenditure. With the exception of the sliding scale, which was applied almost exclusively to gas companies, Parliament did not implement a system of regulation that contained automatic mechanisms for adjustment over time. From 1870, parliament regulated through a limited length franchise, after which local authorities

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[1] I thank David Levi-Faur for bringing this criticism to my attention and for helping me to address it.

had the statutory power to purchase tramways and electric lighting companies at a favourable price. The limited length franchises did not provide sufficient incentives to invest near the end of the franchise. Public ownership was the default outcome of unsuccessful attempts at regulation.

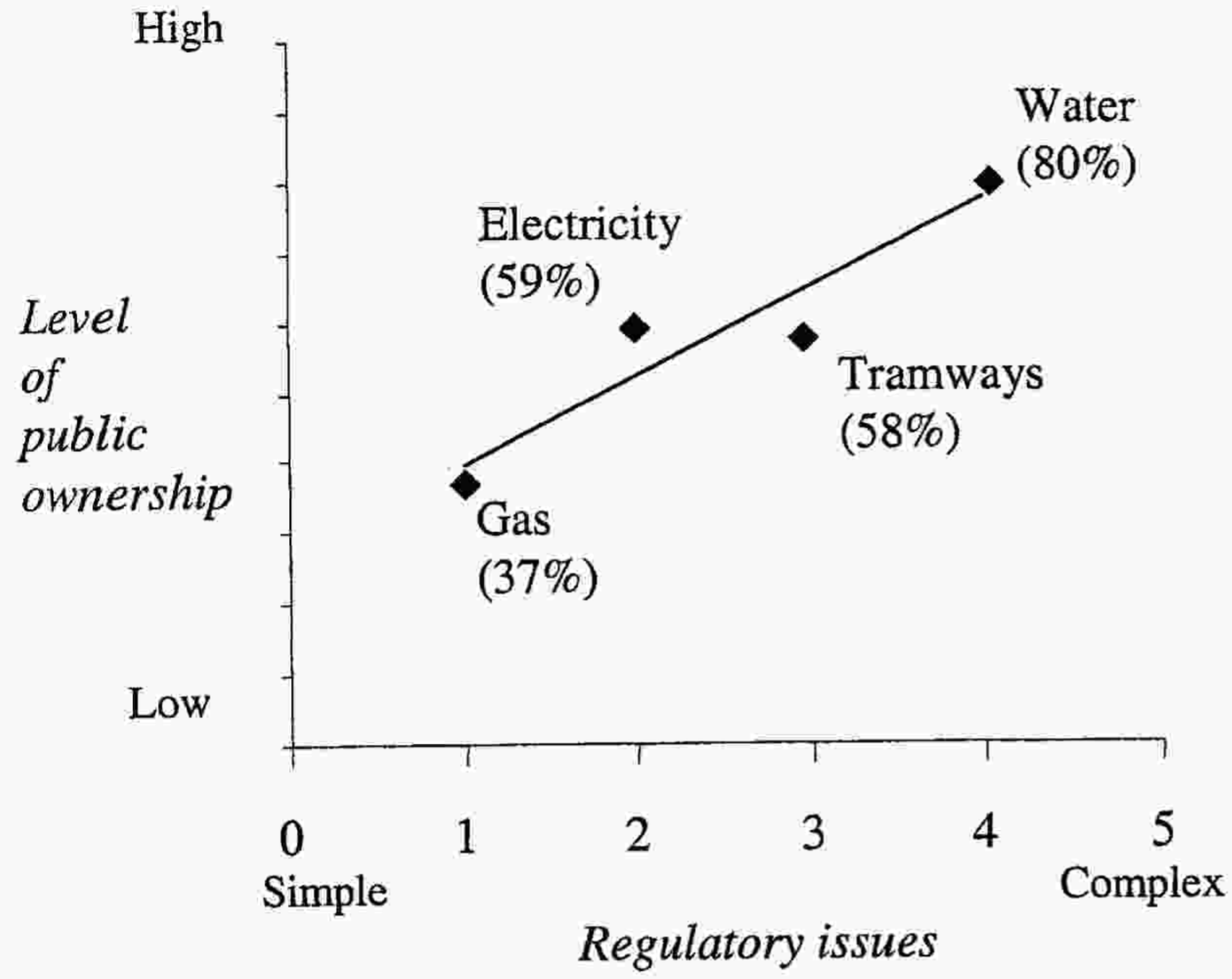
Institutional endowments determined the viability of a regulatory regime. America and Britain shared a common language, liberal culture and common law legal system, yet America maintained a system of regulation of private utilities while Britain tended towards public ownership and management. Part of the explanation is that central government chose not to acquire the administrative capacity to regulate. It was prevented from developing the administrative agencies required to do this by public opinion and private interests. Centralisers like Chadwick might have proved more adept at solving the institutional problems of monitoring and enforcing regulatory statutes, but public opinion was against them. During the debates on the problem of water and gas regulation during the 1840s and 1850s, there was a strong contemporary feeling that excessive centralisation was something to be avoided. Similarly, MPs resisted the growth within the Civil Service of stronger administrative agencies, either out of ideological principle or because of connections to the railway industry. The regulation of urban utilities at the municipal rather than central level was an outcome of these pressures.

Another institutional variable was the way in which the rules of the regulatory game were made and changed. Government is a unique partner to a contract because it retains the power to legislate after the fact. Constitutions are commitment devices that can be used to compel government to continue playing the regulatory game. A critical dimension that the American comparison illuminates is the role of judicial review. The American judiciary broadly interpreted the American constitution to

include regulatory issues. The Supreme Court entrenched the principle of rate of return regulation, which the state utility commissions adopted as the basic standard of regulation. The willingness of the courts to interpret rules gave the American system flexibility, which is what the British system lacked. Disputes between local authorities and private firms were inevitable due to changes in technology and the urban environment, but there was no mechanism to review and revise contracts. These disputes—whether they were about water, or about tramways—prompted local authorities to internalise the regulatory contract. Public ownership *and* public management was the outcome of local governments cornered into internalising the contracts that they had made with private sector agents.

The incidence of municipalisation of the different utilities can be partially accounted for by the degree of complexity of the agency relationship between government and private firms. The complexity depends on two variables: pricing and quality. Figure 9.1 represents this argument diagrammatically. The numbers shown in parenthesis are the percentage of undertakings owned by local authorities in 1909. The table shows that there are no instances of complex regulatory issues and low levels of public ownership. In general, complex regulatory issues accompanied high degrees of public ownership.

Figure 9.1: Municipalisation as a function of regulation



Water had the highest degree of municipalisation in Britain. Approximately 80 percent of water undertakings in the United Kingdom were municipally owned in 1909.[2] Water quality was difficult to regulate due to the need for constant monitoring, the consequences of poor quality water were disastrous, and there were no substitutes.[3] Negative public health effects (including death and disease) followed from the failure to deliver water, or the delivery of poor quality water. The examples are many, but here is one. The East London Water Company supplied a district of 1.2 million people, with a daily supply per head of 35 gallons. In the summer of 1895, there were service disruptions and at one point supply was only given for three hours a day. The LCC engineer argued that the mains were improperly installed because they were laid too close to the surface of the road and were damaged by frost. The Vestries alleged that the company did not use all the means in its power to maintain a

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[2] D. Knoop, *Principles and methods of municipal trading* (London, 1912), 101.
[3] J. Tarr and C. Jacobson, 'Patterns and Policy Choices in Infrastructure History: The United States, France, and Great Britain', *Public Works Management & Policy* 1 (1996) 60-75; D. F. Wilcox, *Municipal franchises*. 2 vols (New York, 1910), vol. II, 400-3.

constant supply, and did not attempt to make up its shortfall by purchasing water from other water companies. Further, the Vestries argued that the customers who paid for water by meter were given supply when water was short, while those who paid out of rates received an intermittent supply.[4] The complex agency problems of water regulation prompted the enactment of the Public Health Act of 1875, which compelled (rather than permitted) local authorities to ensure the supply of clean water. The creation of the Metropolitan Water Board in 1902 was a delayed outcome prompted by similar reasons.[5]

Tramways also had a high incidence of municipalisation. Fifty-eight percent of tramway undertakings were publicly owned in 1909, which corresponded to 66 percent of British tramway miles.[6] Because they were linked to the housing and labour markets, tramways had to run frequently and cheaply. During the period of the lease agreements, municipalities tried to specify the price and quality of designated workmen's trains, but the outcomes were similar to earlier attempts by parliament to encourage the railway companies to carry more third-class passengers. The companies did what they could to minimise the service and to increase their profits. Tramways also represented a utility that was undergoing technological change from horse to electric power. It was impossible to specify technological change into a contract, which resulted in electrification becoming the deal-breaking issue in the lease between the LCC and the North Metropolitan Tramways Company.

Electricity also had a high degree of municipalisation. Approximately 59 percent of electric supply undertakings in Britain were publicly owned, which

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[4] *Inquiry into the Alleged Failure of the East London Water Supply in the Summer of 1895*, PRO HLG 29/55.
[5] W. A. Robson, *The government and misgovernment of London* (London, 1939), 100-20.
[6] Knoop, 357.

corresponded to 64 percent of the output.[7] However, the regulatory issues with electricity were not as complicated as tramways. As a product, electric current is the same no matter who produces it. The first reason why there was a high degree of municipalisation despite relatively low regulatory issues is that legislation favoured public ownership from the start. By 1882, the Board of Trade accorded local authorities preferred status over private providers of electricity. There are two classes of electricity undertaking: small-scale undertakings that generated power mostly for street lighting, and large-scale supply schemes. The Electric Lighting Act of 1882 allowed many municipalities to become the owners of small-scale schemes without giving private firms a limited franchise first. The schematic diagram shown above does a better job of explaining large-scale supply schemes, as discussed in chapter seven. Since the level of risk was high, and the price could be regulated by sliding scale, London nearly ended up with a privately-owned electricity company in 1905. The fact that it did not was a product of contingency. Thus, the level of risk is also an important explanatory variable in addition to the nature of regulation. The debate over large-scale supply in London showed the ways in which contemporaries thought that low risk, small-scale supply schemes that catered mostly for street lighting should be public; high risk, large-scale supply schemes that aimed to provide for undetermined future growth were best allocated to the private sector. The misallocation of this risk contributed to a multiplicity of small undertakings and unrealised economies of scale.

Gas was the least municipalised of the urban utilities. Thirty-six percent of gas undertakings were public, which corresponded to 37 percent of output in 1909.[8] Part of the reason for this was the nature of the purchase terms. Parliament did not compel local authorities to supply, nor did it grant local authorities favourable terms

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[7] E. Garcke, *Garcke's manual of electrical undertakings* (London, annual), 1914-15, 6.
[8] Knoop, 351.

of purchase. When Glasgow and Birmingham purchased the private gasworks, the terms of the buyout were expensive since the companies were valued as going concerns. Despite the best efforts of the Fabians and other partisans of public ownership, Parliament did not grant compulsory purchase rights to the LCC. One reason for this may be that the contractual relationship with private firms was easy to maintain. During the early stages of the industry, gas main explosions were common and at one point the Home Office assumed responsibility for supervising gas mains. After these initial problems were resolved, the quality of the gas could be easily measured in candlepower using scientific equipment. The remaining issue was price, which the sliding scale system addressed well, although declining coal and iron prices also contributed to falling prices.[9] Another factor was that electricity was a substitute for gas, which introduced an element of competition between the industries.

These ownership patterns persisted until after the Second World War. Water remained in the public sector.[10] The public sector absorption of transport increased with the creation of the London Transport Board in 1933.[11] The Central Electricity Board integrated electricity networks without making any statutory changes to ownership.[12] Gas remained privately provided in London until nationalisation.[13] The resolution of regulatory problems though public ownership at the local level in the nineteenth century set the stage for subsequent public ownership at the national level in the mid-twentieth century. The lack of a stable regulatory equilibrium in the nineteenth century meant that policy makers in the mid-twentieth century were more

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[9] This was discussed in Chapter 3.
[10] J. Hassan, *A history of water in modern England and Wales* (Manchester, 1998).
[11] T. C. Barker and M. Robbins, *A history of London Transport: passenger travel and the development of the metropolis*. 2 vols (London, 1963), 271-82.
[12] L. Hannah, *Electricity before nationalisation: a study of the development of the electricity supply industry in Britain to 1948* (London, 1979), 100.
[13] R. Millward and J. Singleton, *The Political economy of nationalisation in Britain 1920-1950* (Cambridge, 1995), 144.

inclined to see the solution to the post-war problem of network utilities as being more public ownership, and on a larger scale.[14]

Politics, political participation, and redistribution

The second theme was the role of the electoral system in influencing private versus public provision. The question that needs to be explained is not how urban utilities contributed to the financial relief of ratepayers. By the end of our period, only a minority of trading undertakings relieved rates. The majority were either rate-neutral or were actually subsidised from the rates.[15] The issue is why ratepayers were willing to approve historically unprecedented levels of local government expenditure. The expansion of the local government franchise increased the level of working class participation. The application in Chapter 5 of an economic model of voting to London elections produced three main findings. First, the rateable value of a Borough was a significant predictor of party support. Second, voters were not always sensitive to rises in taxation. Between the 1898 and 1907 elections, increases in rates produced only small levels of change in party support. This is consistent with the insight that collective provision is an alternative to market provision, and that voters valued the benefits more than the costs. Third, the linear positioning of political platforms on a taxation scale reflected the desire by politicians to win elections. When the Moderates moved towards the centre, they were rewarded by the voters. So long as the Moderates remained a party of retrenchment, they did not win elections. Voters appear to have wanted a certain level of municipal expenditure. Once that level was reached, they supported a party that promised to maintain it.

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[14] D. Newbery, *Privatization, restructuring, and regulation of network utilities* (Cambridge, MA, 2000), 23; C. D. Foster, *Privatization, public ownership and the regulation of natural monopoly* (Oxford, 1992), 71; Millward and Singleton, 311.

[15] See Appendix A for the figures.

By the end of our period, public ownership did not generate high levels of profits for the relief of rates. Although some towns (notably Manchester) did secure considerable profits from trading enterprises, the average amount was not very large relative to the amount of capital required.[16] These profits, if they were profits at all, were not necessarily applied to rate relief. By 1909, only the minority of towns relieved the rates; most undertakings were either rate neutral or were subsidised from the rates. Based on a sample of county and non-county boroughs taken from the 1909 Local Taxation Returns, only 19 percent of tramways, 23 percent of water undertakings, and 24 percent of electricity undertakings relieved rates. In contrast, 66 percent of gas undertakings relieved the rates. The percentages were only slightly higher for the county boroughs alone, where 29 percent of tramways, 29 percent of water undertakings, and 38 percent of electricity undertakings relieved rates. Eighty-two percent of municipal gas undertakings relieved the rates. The conclusion that should be drawn is that gas, rather than urban utilities as a whole, was used as a source of revenue to relieve the rates. Using the same 1909 data, only 37 percent of gas undertakings were municipalised. The biggest cash cow was actually the least municipalised of all of the urban utilities.[17] This suggests that by 1914 the trading services subsidised ratepayers in England and Wales much less than the current historical research suggests.[18]

In many cases subsidies to rates were often the result of inadequate depreciation allowances. With respect to tramways, there were few instances of municipalities both making adequate depreciation *and* relieving the rates. Douglas

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[16] Knoop, 330. For another sample, see R. Millward and S. Sheard, 'The urban fiscal problem', *Economic History Review* 48:3 (1995) 501-35..

[17] The data from the Local Taxation Returns is cited in Knoop, 315. See Appendix A for a detailed treatment. The sample does not include the Metropolitan boroughs.

[18] For example, Millward and Sheard use unweighted average profits as a measure of rate relief, a measure that is distorted by Metropolitan outliers. Millward and Sheard, 'Urban fiscal problem', 509.

Knoop, a contemporary policy academic, believed that this trend extended to other trading services as well.[19] In many cases, it was a case of policy myopia: future ratepayers subsidised present ratepayers. There was a widespread belief that municipal accounts did not reflect the true costs of providing the service. In the case of tramways in London, outside auditors concluded that the LCC had incorrectly billed street improvements related to tramway construction to the street improvements account rather than to the tramways account, which resulted in a higher paper profit for tramways, but not necessarily a higher net profit for ratepayers. Tramways were also inadequately billed for the administrative work that they required. Then as now, accounts should not be taken as absolute statements of truth.

Another aspect of redistribution was towards the employees. One of Lord Avebury's objections to municipal trading was that it involved municipal governments in labour questions.[20] Municipal managers increased the wages of their municipal employees, which increased the costs and reduced the profit to the ratepayers. One reason for this was the ideological belief that the city had an obligation to act as a model employer in order to show the lead in alleviating poor working conditions. This was the idea behind the Fair Wages Clause, introduced by John Burns before the LCC in 1892. A second reason, which is entirely compatible with the first, is that municipal employees were an important voting bloc and that trade unions were effective political pressure groups. In London, public utilities were part of local government politics. Corruption was harshly punished and election expenses were closely controlled. The replacement of the regime of 'Old Corruption' with strictly enforced election rules compelled political parties to compete with political platforms rather than with bribery.

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[19] Knoop, 136-49.
[20] J. Lubbock, *On municipal and national trading* (London, 1906).

The cause of the low level of overall redistribution from users to ratepayers becomes clearer upon comparison with Germany. W.H. Dawson, an English scholar of German local government, estimated that utilities in his sample of German cities contributed to the relief of local taxation nearly three times more than English cities did.[21] The town of Cologne produced particularly high profits that were far in excess of anything produced in England.[22] Prussian municipalities in particular contributed a greater share of municipal trading profits to tax relief than English cities.[23] Prussian cities differed from English cities because the working classes had less political influence. In Prussia, the 'three-class' system of voting predominated. Under this system the electorate was divided into thirds by the amount of taxation paid. The first third composed the precise number of electors that paid one-third of the taxation, and second third composed the number of electors that paid the second third, and the last third was composed of the electors that paid the bottom third. Each group in turn elected one-third of the town council. This voting rule gave the wealthy a disproportionate share of political power. The most extreme example of this was the case of Essen, where the Krupp family, together with three other individuals, elected one-third of the town council.[24] The Prussian system (which diffused unevenly into Saxony and other Germany states) was, in Dawson's words, 'the only way of preventing the capture of the councils by the working classes.' The mass of small taxpayers was unable to commit a town to large enterprises, the cost of which would have fallen mostly on the rich. Profits were not diluted by demands for trade union

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[21] W. H. Dawson, *Municipal life and government in Germany* 2nd ed (London, 1916), 190-2. The figures are listed in Appendix A. This statistic is striking because German cities had greater access to revenues from forests and other lands than English cities did.
[22] Knoop, 336.
[23] This is even more striking because German cities had access to demesne lands to a much greater extent than anything that existed in England. See Dawson?
[24] Dawson, 55-7.

wages; German municipalities did not have Fair Wages policies.[25] Albert Shaw, a contemporary American scholar of local government, observed that 'the recent growth of social democracy would have a sharper effect upon the city councils if the class system were abolished.' He reflected: 'What social overturning will some day give these splendid business machines into the keeping of the working classes is a speculative topic that may be suggested here, but need not be discussed.'[26] Indeed, attempts to restrict the franchise further were violently resisted.[27]

An additional factor was the administrative structure of Prussian towns. Prussian towns were run primarily by the *Magistrat*, a group of salaried officials and honorary members, headed by the *Buergermeister*. The *Buergermeister* was a trained professional civic servant with greater powers than anyone within English municipal government. The town council, the *Stadverordneten,* approved expenditure, but policy initiatives and execution came from the *Magistrat.* Within the *Magistrat*, the key posts were always filled by professional civic servants.[28] This further insulated the elected politicians from the working classes and gave the municipal managers an incentive to generate high profits. In contrast, although English utilities were run on a day-to-day basis by trained managers, elected politicians exercised control over pricing and labour policy.

There was a trade-off between profits and representation. By all appearances, Britain was ripe for the worker's revolution that never came. It was a highly urbanised society. In 1901, over eighty percent of the total workforce was employed by others. There was great inequality of incomes. Yet Trade Unions directed their

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[25] Dawson, 220.
[26] A. Shaw, *Municipal government in continental Europe* (London, 1895), 312.
[27] R. J. Evans, '"Red Wednesday" in Hamburg: Social Democrats, poice, and lumpenproletariat in the suffrage disturbances of 17 January 1906', *Social history* 4:1 (1979) 1-31.
[28] E. P. Hennock, *Fit and proper persons: ideal and reality in nineteenth- century urban government* (London, 1973), 300.

efforts at achieving its goals through the political process rather than revolution. The presence of a redistributive local government should be added to the list of factors that historians have already identified as precluding the development of Marxism in Britain.[29] In England, the working classes participated in local government politics and influenced electoral outcomes to some extent. British local government, as discussed here through the case of London, did not eliminate class antagonisms, but presented a structure that accommodated them. Programmatic politics encapsulated Trade Union demands. There were many examples of cross-class alliances: wealthy reformers and civic notables participating in local government shared a common goal of civic improvement with their working class constituents.[30] Hennock has written that the three-class system insulated the Prussian upper classes from the impact of democracy; in contrast, English electoral conditions produced councillors 'who knew how to live in the world of democratic parties and to think in categories that could unite men of different social and economic experiences.'[31] The high politics of central government may have been more dramatic, but the low politics of local government was more proximate to most people, and delivered the services that they used on a daily basis. The British state, at the local government level, showed itself to be capable of integrating an expanded electorate into the political process.

The importance of institutions

What contributed to the belief that local authorities were worthy of being trusted? Britain saw a dramatic shift to from private to public ownership, which suggests that the cost of institutional change was low. Dicey famously described the shift from

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[29] R. McKibbin, 'Why was there no Marxism in Great Britain', *English historical review* 99:131 (1984) 297-331.
[30] S. Szreter, 'Economic growth, disruption, deprivation, disease and death: on the importance of the politics of public health for development', *Population and development review* 23:4 (1997) 693-728, 711.
[31] Hennock, 307.

individualism to collectivism.[32] The question that needs to be asked is not whether the collectivism that he described was normatively a good thing, but why it was an option. The answer is formal institutions conditioned by norms. English local government underwent and substantive transformation during the nineteenth century. The growing middle classes sought to reform the institutions that favoured aristocratic privilege, and at the highest levels policy makers were fearful of expanding the franchise without reforming the political process as well. Parliament passed laws that the courts rigorously enforced as punishment for illegal political behaviour. Formal institutions like election reform and courts, as well as informal reputational networks made the spoils system a poor choice. Chapter four showed that corruption can be modelled as a rational action which decreased when the costs outweighed the benefits. The institutional changes reduced the incidence of spoils. Public ownership of utilities provided a forum for the interaction between politicians and pressure groups, especially labour. Patronage was reduced (though not eliminated) through a competitive political process and the watchful eye of the 'new journalists.'

Contemporaries saw local government as a vehicle for good citizenship and participation. It would be an improper historical conclusion to conceive of a 'civil society' in Britain that did not include local government. Local government was a type of association (or club) and a facilitator of collective action. Douglass North, in his treatment of institutions in economic history, emphasises that ideology should be considered as an informal institutional variable.[33] North characterises institutions as constraints on behaviour, but in this instance normative beliefs were an enabling force. The normative beliefs about what local government *should* do had a very real

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[32] Historians have since pointed out the problems with this view. J. Harris, *Private lives, public spirit: a social history of Britain 1870-1914* (Oxford, 1993), 13.

[33] D. C. North, *Institutions, institutional change and economic performance* (Cambridge, 1990).. The theme runs through the book, but see especially page 23ff.

influence on what local government did. The fact that Dicey and his contemporaries accepted the viability of collective action through local government shows the degree to which this view influenced the decisions that people made.

In 1870, Britain had a Human Development Index (HDI) value of 0.500 which is classified as 'low.' By 1914, the value had increased to 0.644, which is considered to be 'medium.' The HDI, a retrospective historical statistic, measures quality of life based on longevity, knowledge, and standard of living. The components of the index are life expectancy at birth, literacy and school enrolment, and income per capita. Only part of the rise in Britain can be attributed to rising incomes, although this clearly played an important part and we do not wish to discount it. Increases in life expectancy played a large role in increasing the measure of quality of life.[34] Infant mortality fell dramatically. Although the precise cause of the improvements remains open to debate, investment in urban infrastructure almost certainly made a major contribution.[35] Educational attainment and public health improvements were obtained through collective provision, through the state, at the local government level. Public ownership did have private its costs, which this thesis has been careful to indicate, but it also had its benefits. There are many countries in the world today, with higher per capita income levels than Victorian and Edwardian Britain, that have failed to attain the same welfare achievements. British institutions, which channelled political participation towards making these improvements, deserve at least some of the credit.

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[34] N. Crafts, 'The human development index 1870-1999', *European review of economic history* 6:3 (2002) 395-405, 396.

[35] F. Bell and R. Millward, 'Public health expenditures and mortality in England and Wales, 1870–1914', *Continuity and change* 13:2 (1998) 221-49.

The patterns of private investment

The final question was what effect municipalisation had on private sector investment. Municipalisation was an outcome of the political responsiveness of English local governments and a solution to the problem of regulation. In this sense, it was a sensible institutional arrangement and had its benefits. However, it had its costs as well, and the case of British Electric Traction showed how costly the British system was to private enterprise. The finding of this study has been that municipalisation contributed to overseas investment in social overhead projects as investors sought higher rates of return and firms sought direct investment opportunities.

There are a number of dimensions to the issue. German cities had a stronger desire to distance utility operations from electoral politics. There was close relationship between local authorities and companies that was largely absent from English cities. In many German cities, the town council purchased shares in the private company that held the franchise. The result of this was that managerial decisions were made with reference to profits rather than political support. Knoop wrote that this form of organisation was less susceptible to political pressure, particularly in the case of tramways, which were most exposed to popular agitations in favour of increased access and decreased prices.[36] In other cases, German companies obtained longer term franchises because of their willingness to improve the technology when it became profitable.[37] This gave German companies an advantage that English companies did not have. They were able to achieve the integrated economies of scale that eluded British cities. The combination of an electrified tramway system and an electric supply grid increased the load factor and decreased the average costs of power. This integration, as we have seen, did not

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[36] Knoop, 124.
[37] J. P. McKay, *Tramways and trolleys: the rise of urban mass transport in Europe* (Princeton, 1976), 119.

emerge in London. Furthermore, German companies were able to make minor but important innovations through close association with their municipal principals. This process of learning-by-doing contributed to the increase in electrical knowledge. British cities relied much more on the consulting engineer, who helped to establish high standards but had less of an incentive to make continued innovations.[38]

Electric power was one of the fastest growing technologies, and has been used by historians as an example of Britain ceding industrial dominance to Germany and America.[39] One main difference between Britain and Germany is that German manufacturing companies were the ones who were running the urban tramway and power schemes. The two biggest of these were AEG and Siemens. In contrast, private tramway companies in Britain—like Garcke's British Electric Traction—were not manufacturing companies. BET held shares in the Brush Company, yet most of its technology was based on American designs. The problems that existed with the British electrical industry can only partly be attributed to the regulatory environment. Historians have pointed to the lack of firm amalgamation, the lack of technical expertise by businessmen, as well as the workings of capital markets.[40] There was a trade-off between giving private firms the freedom to grow versus providing services publicly, but the size of the trade-off remains an open question. With the exception of Charles Merz's NESCo, it is difficult to find examples of private firms that were significantly more efficient than public firms.[41] The deficiencies with the way that British firms embarked on technological innovation transcended the public/private divide.

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[38] I. Byatt, *The British electrical industry, 1875-1914: the economic returns to a new technology* (Oxford, 1979), 178.
[39] W. Kennedy, *Industrial structure, capital markets and the origins of British economic decline* (Cambridge, 1987).
[40] Byatt, 177ff.
[41] For electricity comparisons, see J. Foreman-Peck and R. Millward, *Public and private ownership of British industry, 1820-1990* (Oxford, 1994), 202.

Conclusion

A truly *political* economic history helps to fill in the gaps that standard economic history does not cover. Urban utilities were a political choice variable, and heterogeneous individual preferences were aggregated using the electoral system. The dynamics of London government politics in particular, and British local government politics in general, were an important determinant of the historical outcome. An additional determinant was the nature of local government institutions, which favoured public ownership and operation of utilities rather than private sector provision. Urban utilities produced increases in welfare. In 1935, William Robson wrote that municipal utilities 'have played an important part, both materially and in the psychological sense, in helping to realise the ideal of a national minimum of civilised life for every member of the community… They may be found to contain the germs of further changes more far-reaching than any which occurred during the past century.'[42] The contribution of this study has been to show the nature of these germs at the micro-level.

The dilemmas of urban utilities had a number of dimensions: between collective and individual consumption, between the present and the future, and between public or private sector agents. The dilemmas remain intractable, whether the context is present-day debates over the partial privatisation of the London underground or those over the provision of water in the developing world. Current discussions of urban utilities and network utilities in general are framed primarily in terms of economic efficiency. History shows there are other dimensions.

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[42] W. Robson, 'The public utility services', in Harold Laski, et al., eds., *A century of municipal progress, 1835-1935*, (London, 1935) 299-331, 331.

Appendix A: Municipal profits and rate relief

Part 1: Britain and Germany
The following tables show the level of profits available for reduction of rates for three trading services in Britain and Germany.
(N = number of towns in the sample.)

Table B.1: Gasworks

	Level of Profit (per head of population)			
	For Towns > 50,000 inhabitants	For Towns > 200,000 inhabitants	For Towns >100,000 >200,000 inhabitants	For Towns >50,000 >100,000 inhabitants
Germany				
N	72	21	20	31
Profit	3s 6d	3s 9d	3s 2d	3s
Britain				
N	37	11	11	15
Profit	1s 3d	1s 0.5d	1s 4d	2s

Table B.2: Electricity

	Level of Profit (per head of population)			
	For Towns > 50,000 inhabitants	For Towns > 200,000 inhabitants	For Towns >100,000 >200,000 inhabitants	For Towns >50,000 >100,000 inhabitants
Germany				
N	72	20	19	33
Profit	2s 3.5d	2s 8.5d	1s 11.25d	9d
Britain				
N	100	19	35	46
Profit	2.75d	4d	1.5d	1.25d

Table B.3: Tramways

	Level of Profit (per head of population)			
	For Towns > 50,000 inhabitants	For Towns > 200,000 inhabitants	For Towns >100,000 >200,000 inhabitants	For Towns >50,000 >100,000 inhabitants
Germany				
N	74	22	24	28
Profit	10d	1s 5d	1.5d	1.25d
Britain				
N	58	16	23	19
Profit	9d	1s 1d	3.5d	2d

Table B.4: Total profits available for rate relief for the above three services

Germany: 6s 7.5d per head of population
Britain: 2s 2.75d per head of population

Source: Dawson, W. H., *Municipal life and government in Germany*. 2nd ed (London: Longmans Green and Co., 1916), 189-92. The level of profits show money available for reduction of local taxation or rates, after allowance for renewal or reserve funds. The date of the comparison is the 1910-11 year for Germany and the 1911-12 year for Britain.

Part 2: Rate relief and trading profits for England and Wales (other than Metropolitan Boroughs)

(a) Numbers

	Number which relieved rates			Number that assisted out of rates			Number that were rate neutral		
Undertakings	County	Non County	All	County	Non County	All	County	Non County	All
Tramways	17	2	19	11	21	32	31	17	48
Water	15	36	51	16	47	63	20	88	108
Gas	28	41	69	0	2	2	6	28	34
Electricity	25	12	37	5	29	34	36	45	81

(b) Percentages

	Number which relieved rates			Number that called on rates			Number that were rate neutral		
Undertakings	County	Non County	All	County	Non County	All	County	Non County	All
Tramways	29%	5%	19%	19%	53%	32%	53%	43%	48%
Water	29%	21%	23%	31%	27%	28%	39%	51%	49%
Gas	82%	58%	66%	0%	3%	2%	18%	39%	32%
Electricity	38%	14%	24%	8%	34%	22%	55%	52%	53%

Source: Calculations based on figures listed in Knoop, 315

Bibliography

I. Manuscript and archival sources

British Library
John Burns papers
Northcliffe papers

British Library of Political Science Archives
Passfield papers
Webb local government collection
Webb trade union collection

Guildhall Library
London Municipal Society papers

Institute of Electrical Engineers Archives
Charles Merz collection

London Metropolitan Archives
London County Council minutes and committee minutes

National Tramway Museum
British Electric Traction Company papers

Privately held
John Williams Benn papers

Public Record Office
Association of Municipal Corporations papers
Ministry of Housing and Local Government papers
Board of Trade papers

II. Unpublished thesis and typescripts

Brodie, M., *Politics stirs them very little: Conservatism and apathy in the East End of London, 1885-1914* (Oxford University unpublished D.Phil. thesis: 1999).

Byatt, I. C. R., *The British electrical industry, 1875-1914* (Oxford: Unpublished D.Phil. thesis, 1962).

Ochojna, A. "Lines of class distinction: an economic and social history of the British tramcar, 1860-1960.", University of Edinburgh unpublished D.Phil. thesis, 1974.

Scheiber, N., *The battle for the 'burbs: the effects of firm size, managerial incompetence, and suburban bus competition on tram abandonment* (Oxford University unpublished M.Phil. thesis: 2000).

III. PARLIAMENTARY PAPERS

A. Debates

House of Commons Debates, 3rd and 4th series.

B. Annual reports and statistical series in the sessional papers

Report of the London Board of Traffic
Report of the registrar general

C. Other sessional papers (in chronological order)

Great Britain. Poor Law Commissioners., Chadwick, E., and Flinn, M. W., *Report on the sanitary condition of the labouring population of Great Britain* (Edinburgh: University Press, 1965 [1842]).

Select committee on private bills (1846) *BPP* xii.

Select committee on railway acts enactments (1846) *BPP* xiv.

Observations or general report on the existing system of lighting towns with gas, by Johnes and Clegg, Surveying Officers (1847) *BPP* xxii.

Report form the surveying officers on the Southampton consumers gas light and coke bill (1847) *BPP* xx.

Select committee on audit of railway accounts (1849) *BPP* x.

Report of the royal commission on railways (1867) *BPP* xxxviii.

Select committee on Tramways Bill (1870) *BPP* x.

Report of the select committee on Metropolis gas companies bill (1875) *BPP* xii.

Royal commission on the amalgamation of the City and Council of London (1894) *BPP* xvii.

Joint select committee on electrical energy (Generating stations and supply) (1898) *BPP* ix.

Royal commission on local taxation (1898) *BPP* xli.

Select committee on municipal trading (1900) *BPP* vii.

Select committee on repayment of loans by local authorities (1902) *BPP* viii.

Report of the select committee on municipal trading (1903) *BPP* vii.

Royal commission on London traffic (1906) *BPP* xl.

Departmental comission on houseletting in Scotland (1908) *BPP* xlvii.

Report of the London traffic branch of the Board of Trade (1911) *BPP* xxxiv.

D. Acts (in chronological order)

Municipal corporations (England) act (1835), 5 & 6 Will. c76.

Regulation of railways act (1844), 7 & 8 Vict. c85.

Gasworks clauses act (1847), 10 & 11 Vict. c17.

Public health act (1848), 11 & 12 Vict. c63.

Corrupt practices act (1854), 7 & 8 Vict. c102.

Parliamentary elections act (1868), 31 & 32 Vict. c25.

Regulation of railways act (1868), 31 & 32 Vict. c119.

Poor rate assessment and collection act (1869), 32 & 33 Vict. c41.

Tramways act (1870), 33 & 34 Vict. c78.

Ballot act (1872), 35 & 36 Vict. c33.

Public health act (1875), 38 & 39 Vict. c55.

Electric lighting act (1882), 45 & 46 Vict. c56.

Municipal corporations act (1882), 45 & 46 Vict. c50.

Corrupt and illegal practices prevention act (1883), 46 & 47 Vict. c51.

Municipal elections (Corrupt and illegal practices) act (1884), 47 & 48 Vict. c70.

E. Cases cited in law reports

Burgess v. Clark (1884) 14 QBD 735.

Fletcher v. Hudson (1881) 7 QBD 611.

Missouri ex. rel. Southwestern Bell Tel. Co. v. Public Serv. Commn. (1923) 262 U.S. 276.

Munn v. State of Illinois (1876) 94 U.S. 113.

Nutton v. Wilson (1889) 14 QBD 439.

R. v. The Mayor of Ramsgate (1889) 23 QBD 66.

Smyth v. Ames (1898) 169 U.S. 466.

Todd v. Robinson (1884) 14 QBD 739.

Whitely v. Barley (1887) 20 QBD 196.

IV. Contemporary writings

Municipal socialism: a series of articles reprinted from the Times (London: George Edward Wright, 1902).

Acworth, W. M., *The elements of railway economics* (Oxford: 1905).

Ashley, P., 'Municipal trading in Great Britain', *Quarterly Journal of Economics* 15 (1900), 458-64.

Avebury, L., 'The growth of municipal and national expenditure', *Journal of the Royal Statistical Society* 64:1 (1901), 73-84.

Bemis, E. W., *Local government in Michigan and the Northwest: Read before the American social science association, September 7, 1882* (Baltimore: Johns Hopkins university, 1883).

Bagehot, W., *The English constitution*. 2nd ed (London: Kegan Paul Trench Trübner, 1919).

Bemis, E. W., *Questions of monopoly and taxation: syllabus of a course* (Chicago: 1893).

Booth, C., *Life and labour of the people in London* (London: Macmillan, 1892).

Booth, C., 'First results of an inquiry based on the 1891 census', *Journal of the Royal Statistical Society* 56:4 (1893), 557-93.

Bradshaw, G., *Bradshaw's railway almanack, directory, shareholders' guide, and manual* (London: 1873).

Brice, S., and Great Britain., *The law specially relating to tramways and light railways* (London: Stevens and Haynes, 1898).

Bryce, J., *The American commonwealth* (New York: Macmillan, 1910).

Cannan, E., *The history of local rates in England* (London: 1896).

Cannan, E., 'Ought municipal enterprises be allowed to yield a profit?' *Economic Journal* 9:33 (1899), 1-9.

Chadwick, E., *Inquiry into the Sanitary Condition of the Labouring Population of Great Britain* (London: H.M.S.O, 1842).

Chadwick, E., 'Results of different principles of legislation and administration in Europe; of competition for the Field, as compared with competition within the field, of service', *Journal of the Statistical Society of London* 22:3 (1859), 381-420.

Chubb, H., 'Supply of Gas to the Metropolis', *Journal of the Statistical Society of London* 39:2 (1876), 350-80.

Clifford, F., *A history of private bill legislation* (London: Butterworth's, 1885).

Commons, J. R., 'Wages in municipal employment', *Quarterly Journal of Economics* 16:3 (1902), 433-50.

Conway, T., 'The decreasing financial returns upon urban street railways properties', *Annals of the American Academy of Political and Social Sciences* 37:1 (1911), 14-30.

Costelloe, B. F. C., *The incidence of taxation, with the text of the Owner's rate bill, and an appendix on the equalisation of taxes* (London: 1893).

Courtney, L., 'Address to the Economic Science and Statistics Section of the British Association, Held at Liverpool, 1896', *Journal of the Royal Statistical Society* 59:4 (1896), 631-43.

Cunynghame, H. H., *A treatise on the law of electric lighting* (London: Stevens, 1883).

Darwin, L., *Municipal trade, the advantages and disadvantages resulting from the substitution of representative bodies for private proprietors* (London: 1903).

Darwin, L., *Municipal ownership, 4 lectures* (London: 1907).

Dawson, W. H., *Municipal life and government in Germany*. 2nd ed (London: Longmans Green and Co., 1916).

Dicey, A. V., and Wade, E. C. S., *Introduction to the study of the law of the constitution*. 9th / ed (London: Macmillan, 1939).

Dicey, A. V., *Lectures on the relation between law & public opinion in England during the nineteenth century*. 1926 ed (London: 1905).

Donald, R., *The Municipal year book* (London: 1897).

Donald, R., 'Municipal trading and profits', *Economic Journal* 9:35 (1899), 378-83.

Edwards, C., *Railway nationalization* (London: Methuen, 1898).

Fabian Society, *Municipalization of the tramways: Fabian Tract No. 77* (London: Fabian Society, 1897).

Fairlie, J. A., 'The street railway question in Chicago', *Quarterly Journal of Economics* 21:3 (1907), 371-404.

Farrer, T., *The state and its relation to trade* (London: Macmillan, 1883).

Farrer, T. H., *The London county council's labour bill, memorandum for the use of members, revised with additions* (London: 1892).

Farrer, T. H., *The London county council's wages bill. Market rate or fancy rate. Memorandum for the use of members, revised with additions* (London: 1892).

Fortescue, E., 'Extracts from the Address of the President of Section F, 'Economic Science and Statistics' of the British Association for the Advancement of Science, at the Forty-Seventh Meeting, held at Plymouth, August 1877', *Journal of the Statistical Society of London* 40:4 (1877), 557-67.

Garcke, E., *Garcke's manual of electrical undertakings* (London: P.S. King., annual).

Garcke, É. *The progress of electrical enterprise, reproduction of articles from the engineering supplament of the Times on the British electrical industries* (London: 1907).

Gibbons, H., 'The opposition to municipal socialism in England', *Journal of political economy* 9:2 (1901), 243-59.

Graham, J. C., and Warmington, M. D., *Taxation, local and imperial. Revised and enlarged by M.D. Warmington.* 4th ed (London: 1906).

Grice, J. W., *National and local finance: a review of the relations between the central and local authorities in England, France, Belgium, and Prussia, during the nineteenth century* (London: P.S. King, 1910).

Hadley, A. T., *Railroad transportation: its history and its laws* (New York: G. T. Putnam's Sons, 1892).

Hirst, F., 'Municipal finance', *Economic Journal* 9:35 (1899), 383-93.

Hobson, C. K., *The export of capital* (London: Constable and Company ltd., 1914).

Howe, F., 'The case for municipal ownership', *Publications of the American Economic Association* 7:1 (1906), 113-32.

Industrial freedom league, and Lubbock, J., *Municipal trading: speeches delivered by lord Avebury [and others] at the annual meeting, 1905* (Westminster: 1905).

Jackson, W., 'The depreciation problem', *Annals of the American Academy of Political and Social Sciences* 37:1 (1911), 31-42.

Jevons, W. S., and Hirst, F. W., *The State in relation to labour*, F.W. Hirst ed., (London: 1910).

Knoop, D., *Principles and methods of municipal trading* (London: Macmillan, 1912).

Knox, V., 'The economic effect of the Tramways Act of 1870', *Economic Journal* 11:44 (1901), 492-510.

Levy, H., *Monopoly and competition, a study of English industrial organisation* (London: 1911).

Liberty and property defence league., *Second annual dinner. Report of proceedings and speeches* (London: 1889).

London County Council, *London statistics*. (London: annual)

Lubbock, J., *On the real issues of the London county council elections* (Westminster: 1898).

Lubbock, J., *Municipal trading, a speech. (Industrial freedom league)* (Westminster: 1903).

Lubbock, J., *On municipal and national trading* (London: 1906).

Maine, H. S., *Ancient law: its connection with the early history of society and its relation to modern ideas* (London: J. Murray, 1861).

Masterman, C. F. G., and Gilbert, B. B., eds., *The heart of the empire: discussions of problems of modern city life in England* (Brighton: Harvester,1973 [1901]).

Mearns, A., *The bitter cry of outcast London: an inquiry into the condition of the abject poor* (London: Jason Clarke, 1883).

Meyer, H. R., 'Municipal ownership in Germany', *Journal of political economy* 14:9 (1906), 553-67.

Meyer, H. R., *Municipal ownership in Great Britain* (London: Macmillan, 1906).

Michael, W. H., Will, J. S., and Great Britain., *The law relating to gas and water* (London: Butterworths, 1877).

Mill, J. S., *Principles of political economy* (Toronto: University of Toronto Press, 1965).

Mill, J. S., and McCallum, R. B., *On liberty; and, Considerations on representative government* (Oxford: Blackwell, 1946).

Money, L. C., *Riches and poverty* (London: Methuen, 1906).

Morrison, J., *The influence of English railway legislation on trade and industry* (London: 1848).

National Civic Federation, *Municipal and private operation of public utilities*. 3 vols (New York: National Civic Federation, 1907).

Onslow, E. o., 'The rise and development of local legislation by Private Bill', *Journal of the Royal Statistical Society* 69:1 (1906), 1-31.

Onslow, W. H., *Proposed municipalities for London* (London: Wightman & Co, 1898).

Ostrogorski, M., *Democracy and the organization of political parties*. 2 vols (London: Macmillan, 1902).

Porter, R. P., *The dangers of municipal trading* (London: 1907).

Redlich, J., and Hirst, F., *Local government in England* (London: Macmillan, 1903).

Rowe, L., 'Municipal ownership and operation of street railways in Germany', *Annals of the American Academy of Political and Social Sciences* 27 (1906), 40?

Rowe, L. S., 'Municipal ownership and operation of street railways in Germany', *Annals of the American Academy of Political and Social Sciences* 27:1 (1906), 37-65.

Rowe, L. S., *Problems of city government* (New York: 1908).

Ryde, W. C., and Great Britain., *The law and practice of rating, both within and without the metropolis*. 2d ed (London: Butterworth & Co. [etc.], 1904).

Shaw, A., *Municipal government in continental Europe* (London: 1895).

Shaw, A., *Municipal government in Great Britain* (London: 1895).

Shaw, G. B., *The commonsense of municipal trading* (London: A.C. Fifield, 1908).

Simon, J., *English sanitary institutions*. 2nd ed (London: John Murray, 1897).

Smith, R. M., *The religious life of London* (London: 1904).

Spencer, H., 'Railway morals and railway policy,' in *Essays, scientific, political and speculative*, (London: 1854), 52-112.

Stamp, J., *British incomes and property: the application of official statistics to economic problems* (London: P.S. King & Son, 1916).

Stead, W. T., *If Christ came to Chicago! A plea for the union of all who love in the service of all who suffer* (London: 1894).

Stevens, E. C. C., *English railways, their development and their relation to the State* (London: 1915).

Suthers, R. B., *Mind your own busines: the case for municipal management* (London: 1905).

Sutton, H., *The tramway acts of the United Kingdom* (London: Stevens and sons, 1874).

Toulmin Smith, J., *Local self-government and centralization* (London: 1851).

Towler, W. G., *Socialism in local government* (London: 1908).

Traill, H. D., and Craik, H., *Central government* (London: 1908).

Turner, S. H., 'Depreciation and sinking funds in municipal undertakings', *Economic Journal* 14:53 (1904), 47-56.

Turner, S. H., 'Financial aspects of municipal undertakings which extend beyond the municipal boundaries', *Economic Journal* 15:57 (1905), 12-22.

Webb, B. P., MacKenzie, N. I., and MacKenzie, J., *The diary of Beatrice Webb* (London: Virago in association with the London School of Economics and Political Science, 1982).

Webb, S., *Grants in aid: a criticism and a proposal* (London: Longmans Green and Co., 1911).

Webb, S., *The London programme* (London: Swan Sonnenschein & Co., 1892).

Webb, S., and Webb, B. P., *English local government: statutory authorities for special purposes* (London: Longmans Green, 1922).

Webb, S., and Webb, B. P., *The story of the king's highway* (London: Cass, 1963).

West, A., 'The Right Hon. Lord Welby, CGB. An Appreciation', *Journal of the Royal Statistical Society* 79:1 (1916), 1-6.

Wilcox, D. F., *The study of city government: an outline of the problems of municipal functions control and organization* (New York &c.: 1897).

Wilcox, D. F., *The American city: a problem in democracy* (New York: The Macmillan company, 1904).

Wilcox, D. F., *Municipal franchises*. 2 vols (New York: Engineering news book department, 1910).

V. SECONDARY SOURCES

Albert, B., *The turnpike road system in England, 1663-1840* (Cambridge: University Press, 1972).

Alt, J. E., and Shepsle, K. A., *Perspectives on positive political economy* (Cambridge: Cambridge University Press, 1990).

Anderson, D., *Regulatory politics and electric utilities* (Boston: Auburn House, 1981).

Armstrong, J., 'Transport and the urban environment,' in *The Cambridge urban history of Britain*, Daunton, M. J., ed. (Cambridge: Cambridge University Press, 2000), 229-57.

Arrow, K., 'The economics of agency,' in *Principals and agents: the structure of business*, Pratt, John W. and Zeckhauser, Richard J., eds., (Boston: Harvard Business School Press, 1985), 37-51.

Aspinall, B., 'Glasgow trams and American politics', *Scottish historical review* 56 (1976).

Averch, H., and Johnson, L., 'Behaviour of the firm under regulatory constraint', *American economic review* 52:5 (1962), 1052-69.

Barker, T. C., and Robbins, M., *A history of London Transport: passenger travel and the development of the metropolis*. 2 vols (London: Allen & Unwin, 1963).

Beck, N., and Katz, J., 'What to do (and not to do) with time-series cross-section data', *The American political science review* 89:3 (1995), 634-47.

Becker, G., 'Crime and punishment: an economic approach', *Journal of political economy* 76:2 (1968), 167-217.

Becker, G. S., 'A theory of competition among pressure groups for political influence', *Quarterly Journal of Economics* 99 (1983), 371-400.

Bell, F., and Millward, R., 'Public health expenditures and mortality in England and Wales, 1870–1914', *Continuity and change* 13:2 (1998), 221-49.

Bellamy, C., *Administering central-local relations, 1871-1919: the Local Government Board in its fiscal and cultural context* (Manchester: Manchester University Press, 1988).

Bentley, M., and Stevenson, J., *High and low politics in modern Britain: ten studies* (Oxford: Clarendon Press, 1983).

Besley, T., and Coate, S., 'Public provision of private goods and the redistribution of income', *American economic review* 81:4 (1991), 979-84.

Biagini, E. F., 'J.S. Mill and the model of ancient Athens,' in *Citizenship and community: liberals, radicals and collective identities in the British Isles, 1865-1931*, Biagini, Eugenio F., ed. (Cambridge: Cambridge University Press, 1996), 21-44.

Black, D., 'On the rationale of group decision making', *Journal of political economy* 56:1 (1948), 23-34.

Black, D., *The theory of committees and elections* (Cambridge: Cambridge University Press, 1958).

Blackbourn, D., *Class, religion, and local politics in Wilhelmine Germany: the Centre Party in Württemberg before 1914* (New Haven ; London: Yale University Press, 1980).

Blank, R., 'When can public policy makers rely on private markets? the effective provision of social services', *Economic Journal* 110:462 (2000), 34-49.

Blanning, T. C. W., and Wende, P., *Reform in Great Britain and Germany, 1750-1850* (Oxford: British Academy by Oxford University Press, 1999).

Bourke, J., *Working-class cultures in Britain, 1890-1960: gender, class and ethnicity* (London: Routledge, 1994).

Braeutigam, R., 'Optimal policies for natural monopolies,' in *Handbook of industrial organization*, Schmalensee, R and Willig, R, eds., (Amsterdam: North Holland, 1989).

Breyer, S., and Stewart, R., *Administrative law and regulatory policy* (Boston: Little, Brown, 1985).

Briggs, A., *Victorian cities* (London: Odhams Press, 1963).

Bristow, E., 'The Liberty and Property Defence League and individualism', *Historical journal* 18 (1965), 761-89.

Brodie, M., *Politics stirs them very little: Conservatism and apathy in the East End of London, 1885-1914* (Oxford University unpublished D.Phil. thesis: 1999).

Brookings Institute. 'The new metropolitan agenda.' *The Brookings review*, Fall 1998.

Brown, L., *Victorian news and newspapers* (Oxford: Clarendon Press, 1985).

Buchanan, J., 'An economic theory of clubs', *Economica* 32:1 (1965), 1-14.

Buchanan, J., and Goetz, C., 'Efficiency limits of fiscal mobility: an assessment of the Tiebout model', *Journal of Public Economics* 1 (1972), 25-43.

Buchanan, J. M., and Musgrave, R. A., *Public finance and public choice: two contrasting visions of the State* (Cambridge, MA: MIT Press, 1999).

Buchanan, J. M., and Tullock, G., *The calculus of consent: logical foundations of constitutional democracy* (Ann Arbor: University of Michigan Press, 1962).

Burke, P., Harrison, B. H., Slack, P., and Thomas, K., *Civil histories: essays presented to Sir Keith Thomas* (Oxford: Oxford University Press, 2000).

Burrows, E. G., and Wallace, M., *Gotham: a history of New York City to 1898* (New York ; Oxford: Oxford University Press, 1999).

Bussing, I., *Public utility regulation and the so-called sliding scale* (New York: Columbia University Press, 1936).

Byatt, I., *The British electrical industry, 1875-1914: the economic returns to a new technology* (Oxford: Clarendon Press, 1979).

Cairncross, A., *Home and Foreign Investment, 1870-1913: Studies in Capital Accumulation* (Cambridge: Cambridge University Press, 1953).

Capie, F., and Webber, A., *A monetary history of the United Kingdom, 1870-1982* (London: Allen & Unwin, 1985).

Carroll, G., and Teece, D. J., *Firms, markets, and hierarchies: the transaction cost economics perspective* (New York ; Oxford: Oxford University Press, 1999).

Chatterton, D., 'State control of public utilities in the nineteenth century: the London gas industry', *Business History* 14:2 (1972), 166-78.

Cheape, C. W., *Moving the masses: urban public transit in New York, Boston, and Philadelphia, 1880-1912* (Cambridge, MA. ; London: Harvard University Press, 1980).

Clarke, M., *Corruption: causes, consequences and control* (London: Pinter, 1983).

Clarke, P. F., *Lancashire and the new liberalism* (Cambridge: Cambridge University Press, 1971).

Coase, R., 'The nature of the firm', *Economica* 4 (1937), 386-405.

Coase, R. H., 'The problem of social cost', *Journal of Law and Economics* 3 (1960), 1-44.

Cohen, E., *The growth of the British Civil Service* (London: Allen and Unwin, 1941).

Cornes, R., and Sandler, T., *The theory of externalities, public goods, and club goods*. 2nd ed (Cambridge: Cambridge University Press, 1996).

Crafts, N., 'Some dimensions of the 'quality of life' during the British industrial revolution', *Economic History Review* 50 (1997), 690-712.

Crafts, N., 'The human development index 1870-1999', *European review of economic history* 6:3 (2002), 395-405.

Cullis, J. G., and Jones, P. R., *Public finance and public choice*. 2nd ed (Oxford: Oxford University Press, 1998).

Darrough, M., 'Privatization and Corruption: Patronage vs. Spoils', *International public management journal* 2:2 (1999), 273-98.

Daunton, M. J., *Coal metropolis: Cardiff 1870-1914* (Leicester: Leicester University Press, 1977).

Daunton, M. J., ed. *The Cambridge urban history of Britain*. 3 vols. Vol. 3, 1840-1950 (Cambridge: Cambridge University Press,2000).

Daunton, M. J., *Trusting Leviathan: the politics of taxation in Britain, 1799-1914* (Cambridge: Cambridge University Press, 2001).

Davies, J., 'Peers on the industrial frontier,' in *Patricians, power, and politics in nineteenth century towns*, Cannadine, David, ed. (New York: St. Martin's Press, 1982), 17-61.

Davis, J., *Reforming London: the London government problem, 1855-1900* (Oxford: Clarendon Press, 1988).

Davis, J., 'The first Progressive Council,' in *Politics and the people of London: the London County Council, 1889-1965*, Saint, Andrew, ed. (London: Hambledon, 1989).

Davis, J., 'The slums and the vote', *Historical research* 64:155 (1991), 375-88.

Davis, J., and Tanner, D., 'The borough franchise after 1867', *Historical research* 69:170 (1996), 306-27.

de Figueiredo, R. J.-P., Spiller, P., and Urbiztondo, S., 'An informational perspective on administrative procedures', *Journal of Law Economics and Organization* 15:1 (1999), 283-305.

Demsetz, H., 'Why regulate utilities?' *Journal of Law and Economics* 11 (1968), 55-66.

Dimock, M. E., *British public utilities and national development* (London: Allen & Unwin, 1933).

Dobbin, F., *Forging industrial policy: the United States, Britain, and France in the railway age* (Cambridge: Cambridge University Press, 1994).

Doig, A., *Corruption and misconduct in contemporary British politics* (Harmondsworth: Penguin, 1984).

Dorau, H. B., *The changing character and extent of municipal ownership in the electric light and power industry* (Chicago, Ill: The Institute for research in land economics and public utilities, 1929).

Douglas, R., *A history of the Liberal Party* (London: Sidgwick and Jackson, 1971).

Dowding, K., and Hindmoor, A., 'The usual suspects: rational choice, socialism and political theory', *New Political Economy* 2:3 (1997), 451-63.

Dowding, K., John, P., and Biggs, S., 'Tiebout: a survey of the emperical literature', *Urban Studies* 31 (1994), 767-97.

Dowding, K., John, P., and Briggs, S., 'Teibout: a survey of the emperical literature', *Urban Studies* 31 (1994), 767-97.

Dowding, K. M., and King, D. S., *Preferences, institutions, and rational choice* (Oxford: Clarendon Press, 1995).

Downs, A., *An economic theory of democracy* (New York: Harper & Row, 1957).

Drazen, A., *Political economy in macroeconomics* (Princeton: Princeton University Press, 2000).

Dyos, H., 'Workmen's fares in South London 1860-1914', *Journal of transport history* 1 (1953), 12.

Dyos, H. J., ed. *The study of urban history* (London: Edward Arnold,1968).

Eatwell, J., Milgate, M., and Newman, P. K., *The New Palgrave: a dictionary of economics* (London: Macmillan Reference, 1998).

Edelstein, M., 'Foreign investment and empire 1860-1914,' in *The economic history of Britain since 1700*, Floud, R and McCloskey, D, eds., (Cambridge: Cambridge UP, 1981), 70-99.

Edelstein, M., *Overseas investment in the age of high imperialism: the United Kingdom, 1850-1914* (London: Methuen, 1982).

Eggertsson, T., *Economic behavior and institutions* (Cambridge: Cambridge University Press, 1990).

Evans, R. J., '"Red Wednesday" in Hamburg: Social Democrats, poice, and lumpenproletariat in the suffrage disturbances of 17 January 1906', *Social history* 4:1 (1979), 1-31.

Falkus, M., 'The development of municipal trading in the nineteenth century', *Business History* 19:2 (1977), 134-61.

Feinstein, C. H., *National income, expenditure and output of the United Kingdom, 1855-1965* (Cambridge: University Press, 1972).

Ferguson, N., 'Public finance and national security: the domestic origins of the First World War revisited', *Past & present* 142 (1994), 141-68.

Finer, H., *The British Civil Service* (London: Allen and Unwin, 1937).

Finer, H., *Municipal trading: a study in public administration* (London: G. Allen & Unwin, 1941).

Finer, S. E., *The life and times of Sir Edwin Chadwick* (London: Methuen, 1952).

Foreman-Peck, J., 'Natural monopoly and railway policy in the nineteenth century', *Oxford Economic Papers* 39 (1987), 699-718.

Foreman-Peck, J., and Millward, R., *Public and private ownership of British industry, 1820-1990* (Oxford: Clarendon Press, 1994).

Forrence, L. a., 'Regulatory capture, public interest and the public agenda: toward a synthesis', *Journal of Law Economics and Organization* 6 special issue (1990), 167-98.

Foster, C. D., *Privatization, public ownership and the regulation of natural monopoly* (Oxford: Blackwell, 1992).

Fraser, D., *Power and authority in the Victorian city* (Oxford: Basil Blackwell, 1979).

Fraser, D., *The evolution of the British Welfare State: a history of social policy since the Industrial Revolution*. 2nd ed ed (Basingstoke: Macmillan, 1984).

Fraser, W., 'Municipal socialism and social policy,' Rodger, Morris and, ed.: 1993).

Fried, B., *The progressive assault on laissez faire* (Cambridge, MA: Harvard University Press, 1998).

Fulford, R. T. B., *Five decades of B.E.T.: the story of the British electric traction company, limited* (London: 1946).

Gardiner, A. G., *John Benn and the progressive movement* (London: E. Benn Limited, 1925).

Garrard, J., *Leadership and power in Victorian industrial towns, 1830-80* (Manchester: Manchester University Press, 1983).

Gibbon, G., and Bell, R. W., *History of the London County Council, 1889-1939* (London: Macmillan, 1939).

Gill, C., *History of Birmingham* (London, New York,: Published for the Birmingham City Council by Oxford University Press, 1952).

Glaeser, E. L., 'Public ownership in the American city', *Harvard Institute of Economic Research* Discussion paper 1930 (2001).

Glazer, A., and Niskanen, E., 'Why voters may prefer congested public clubs', *Journal of Public Economics* 65:1 (1997), 37-44.

Goel, R., and Nelson, M., 'Corruption and government size: a disagregated analysis', *Public choice* 97:1-2 (1998), 107-20.

Goodin, R. E., *The theory of institutional design* (Cambridge: Cambridge University Press, 1996).

Green, D., 'Distance to work in Victorian London', *Business History* 30 (1988), 179-94.

Grossman, R. S., 'New Indices of British Equity Prices, 1870-1913', *Journal of economic history* 62:1 (2002), 121-46.

Gwyn, W. B., *Democracy and the cost of politics in Britain* (London: University of London Athlone Press, 1962).

Habbakkuk, H. J., 'Fluctuations in housebuilding in Britain and the United States in the nineteenth century', *Journal of economic history* 22 (p. 211) (1962).

Halévy, E., Watkins, E. I., and Butler, D. A., *A history of the English people in 1815-1915* (London: 1924).

Hammond, J. L., 'The social background, 1835-1935,' in *A century of municipal progress*, Laski, Harold, Jennings, Ivor and Robson, William, eds., (London: George Allen and Unwin, 1935), 37-54.

Hanham, H., *Elections and party management* (London: Longmans Green, 1959).

Hannah, L., *Electricity before nationalisation: a study of the development of the electricity supply industry in Britain to 1948* (London: Macmillan, 1979).

Harling, P., *The waning of "Old Corruption": the politics of economical reform in Britain, 1779-1846* (Oxford: Clarendon Press, 1996).

Harris, A. L., 'J. S. Mill on monopoly and socialism: a note', *Journal of political economy* 67:6 (1959), 604-11.

Harris, J., *Unemployment and politics: a study in English social policy, 1886-1914* (Oxford: Clarendon Press, 1972).

Harris, J., 'The transition to high politics,' in *High and low politics in modern Britain: ten studies*, Bentley, Michael and Stevenson, John, eds., (Oxford: Clarendon Press, 1983), 58-79.

Harris, J., *Private lives, public spirit: a social history of Britain 1870-1914* (Oxford: Oxford University Press, 1993).

Harris, J., ed. *Civil history in British society* (Oxford: Oxford University Press, forthcoming).

Hart, O., 'Incomplete contracts and public ownership: remarks, and an application to public-private partnerships', *Harvard University Department of Economics Working Paper* (July 2002).

Hart, O., and Moore, J., 'Incomplete contracts and renegotiation', *Economica* 56:4 (1988), 755-85.

Hart, O., Shleifer, A., and Vishny, R. W., 'The proper scope of government: theory and an application to prisons', *Quarterly Journal of Economics* November (1997), 1127-61.

Hart, O. D., *Firms, contracts, and financial structure* (Oxford: Clarendon Press, 1995).

Hassan, J., 'The growth and impact of the water industry in the nineteenth century', *Economic History Review* 38:4 (1985), 531-47.

Hassan, J., *A history of water in modern England and Wales* (Manchester: Manchester University Press, 1998).

Haward, S. H. E., *The London County council from within; forty years' official recollections* (London: Chapman & Hall ltd, 1932).

Headrick, T. E., and Royal Institute of Public Administration., *The town clerk in English local government* (London: Published for the Royal Institute of Public Administration [by] Allen & Unwin, 1962).

Heidenheimer, A. J., *Political corruption; readings in comparative analysis* (New York,: Holt Rinehart and Winston, 1970).

Heidenheimer, A. J., Johnston, M., and Levine, V., *Political corruption: a handbook* (New Brunswick, N.J.: Transaction Books, 1989).

Hennessey, R. A. S., *The electric revolution* (Newcastle upon Tyne: Oriel, 1972).

Hennock, E. P., 'Finance and politics in urban local government', *Historical journal* 6:2 (1963), 212-25.

Hennock, E. P., *Fit and proper persons: ideal and reality in nineteenth- century urban government* (London: Edward Arnold, 1973).

Hirschman, A. O., *Exit, voice, and loyalty; responses to decline in firms, organizations, and states* (Cambridge, MA.: Harvard University Press, 1970).

Hofstadter, R., *The age of reform* (New York: Vintage Books, 1955).

Hollis, P., *Ladies elect: women in English local government, 1865-1914* (Oxford: Clarendon, 1987).

Horn, M. J., *The political economy of public administration: institutional choice in the public sector* (Cambridge: Cambridge University Press, 1995).

Hotelling, H., 'Stability in competition', *Economic Journal* 39:153 (1929), 41-57.

Hovenkamp, H., 'Technology, Politics, and Regulated Monopoly - an American Historical-Perspective', *Texas law review* 62:7 (1984), 1263-312.

Hovenkamp, H., *Enterprise and American law, 1836-1937* (Cambridge, Mass ; London: Harvard University Press, 1991).

Hughes, T. P., *Networks of power* (Baltimore: Johns Hopkins UP, 1983).

Hutchison, T. W., *A review of economic doctrines, 1870-1929* (Oxford: Clarendon Press, 1953).

Innes, J., 'Parliament and the shaping of eighteenth-century social policy', *Transactions of the Royal Historical Society* 40 (1990), 63-92.

Innes, J., 'The Local Acts of a national Parliament: Parliament's role in sanctioning local action in eighteenth-century Britain', *Parliamentary History* 17 (1998), 23-47.

Innes, J., 'Central Government interference: changing conceptions, powers, and concerns,' in *Civil history in British society*, Harris, Jose, ed. (Oxford: Oxford University Press, forthcoming).

Jacobson, C. D., 'Private firms and public goods: historical perspectives on contracting out for public services,' in *Public private partnerships: privatization in historical perspective*, Keating, Ann Durkin, ed. (Chicago: Public works historical society, 1989).

Jacobson, C. D., *Ties that bind: economic and political dilemmas of urban utility networks, 1800-1990* (Pittsburgh: University of Pittsburgh Press, 2000).

Jain, A. K., *Economics of corruption* (Boston ; London: Kluwer, 1998).

Jeremy, D. J., *Dictionary of business biography* (London: Butterworths, 1984).

Johnson, P., 'Civilizing Mammon: Laws, morals, and the City in nineteenth century England,' in *Civil histories*, Burke, Peter, Harrison, Brian Howard, Slack, Paul and Thomas, Keith, eds., (Oxford: Oxford University Press, 2000), 301-20.

Joskow, P., and Schmalensee, R., 'Incentive regulation for public utilities', *Yale journal on regulation* 4:1 (1986), 1-49.

Joyce, P., *Work, society and politics: the culture of the factory in later Victorian England* (Brighton: Harvester, 1980).

Keeler, T., and Foreman, S., 'Regulation and deregulation,' in *New Palgrave dictionary of economics and the law*, (London: Macmillan Reference, 1998), 213-21.

Keith-Lucas, B., *The English local government franchise: a short history* (Oxford: Basil Blackwell, 1952).

Kellett, J., 'Municipal socialism, enterprise and trading in the Victorian city', *Urban history yearbook* (1978), 36-45.

Kennedy, W., *Industrial structure, capital markets and the origins of British economic decline* (Cambridge: Cambridge University Press, 1987).

King, G., *A solution to the ecological inference problem: reconstructing individual behavior from aggregate data* (Princeton, N.J.: Princeton University Press, 1997).

Klapper, C. F., *The golden age of tramways* (London: Routledge & Kegan Paul, 1961).

Kostal, R. W., *Law and English railway capitalism 1825-1875* (Oxford: Clarendon Press, 1994).

Krueger, A. O., 'The Political Economy of the Rent-Seeking Society', *American economic review* 64:3 (1974), 291-303.

Ladd, B., *Urban planning and civic order in Germany, 1860-1914* (Cambridge, MA: Harvard University Press, 1990).

Laski, H. J., Jennings, I., and Robson, W. A., eds., *A century of municipal progress: the last hundred years* (London: George Allen & Unwin,1935).

Lee, F. G., *The Board of Trade* ([London]: University of London Athlone Press, 1958).

Lee, T. A., 'Company financial statements: an essay in business history, 1830-1950,' in *Business and businessmen*, Marriner, S, ed. (Liverpool: Liverpool university press, 1978), 235-62.

Levine, M. E., 'Regulatory capture,' in *The new Palgrave dictionary of economics and the law*, Newman, P and Palgrave, R, eds., (London: Macmillan Reference, 1998), 267-71.

Levine, M. E., and Forrence, J. L., 'Regulatory capture, public interest and the public agenda: toward a synthesis', *Journal of Law Economics and Organization* (1990).

Levy, B., and Spiller, P. T., 'The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulation', *Journal of Law Economics and Organization* 10:2 (1994), 201-46.

Lewis, W. A., *Growth and fluctuations, 1870-1913* (London: Allen & Unwin, 1978).

Lidtke, V. L., *The alternative culture: socialist labour in Imperial Germany* (Oxford: Oxford University Press, 1985).

Lindert, P., 'What limits social spending', *Explorations in economic history* 33:1 (1996), 1-34.

London Municipal Society., *The London Municipal Society, 1894-1954: sixty years' service to London* (London: The Society, 1954).

Lubenow, W. C., *The politics of government growth: early Victorian attitudes toward state intervention, 1833-1848* (Newton Abbot: David & Charles, 1971).

Masterman, L. B. L., *C.F.G. Masterman, a biography* (London: Nicholson and Watson limited, 1939).

Matthews, D., 'Laissez-faire and the London gas industry in the nineteenth century', *Economic History Review* 39:2 (1986), 244-63.

McCormick, R., 'The party period and party policy', *Journal of American History* 66 (1979), 279-98.

McCormick, R., 'The discovery that busiens corrupts politics: a reappraisal of the origins of Progressivism', *American historical review* 86 (1981), 247-74.

McGuire, M. C., 'Private production, collective consumption, and regional population structure', *Journal of regional science* 26:4 (1986), 683-705.

McKay, J. P., *Tramways and trolleys: the rise of urban mass transport in Europe* (Princeton: Princeton University Press, 1976).

McKibbin, R., 'Why was there no Marxism in Great Britain', *English historical review* 99:131 (1984), 297-331.

McKibbin, R., Matthew, H., and Kay, J., 'The franchise factor in the rise of the labour party', *English historical review* 91:361 (1976), 723-52.

McLean, I., *Public choice: an introduction* (Oxford: Basil Blackwell, 1987).

McLean, I., 'Railway regulation as a test-bed of rational choice,' in *Preferences, institutions and rational choice*, Dowding, Keith and King, Desmond, eds., (Oxford: Clarendon Press, 1995), 134-61.

McLean, I., *Rational choice and British politics: an analysis of rhetoric and manipulation from Peel to Blair* (Oxford: Oxford University Press, 2001).

Meltzer, A. H., and Richard, S. F., 'A rational theory of the size of government', *Journal of political economy* 89:5 (1981), 914-27.

Messager, R., 'Municipalities as managers,' in *Technology and the rise of the networked city in Europe and America*, Tarr, Joel and Dupuy, Gabriel, eds., (Philadelphia: Temple University Press, 1988), 282-94.

Michie, R., 'The finance of innovation in late Victorian and Edwardian Britain: possibilities and constraints', *Journal of European Economic History* 17:3 (1988), 491-530.

Middleton, R., *Government versus the market: the growth of the public sector, economic management and British economic performance c. 1890-1979* (Cheltenham: Elgar, 1996).

Mieszkowski, P. M., and Straszheim, M. R., *Current issues in urban economics* (Baltimore: Johns Hopkins University Press, 1979).

Millward, R., 'Emergence of gas and water monopolies in nineteenth-century Britain,' in *New perspectives on the late Victorian economy: essays in quantitative economic history 1860-1914*, Foreman-Peck, James, ed. (Cambridge: Cambridge University Press, 1991), 96-124.

Millward, R., 'The market behaviour of local utilities in pre-WWI Britain: the case of gas', *Economic History Review* 44:1 (1991), 102-27.

Millward, R., 'The political economy of urban utilities,' in *The Cambridge urban history of Britain*, Daunton, Martin, ed. (Cambridge: Cambridge University Press, 2000), 315-49.

Millward, R., and Bell, F., 'Infant mortality in Victorian Britain: the mother as medium', *Economic History Review* 54:4 (2001), 699-733.

Millward, R., and Sheard, S., 'The urban fiscal problem', *Economic History Review* 48:3 (1995), 501-35.

Millward, R., and Singleton, J., *The Political economy of nationalisation in Britain 1920-1950* (Cambridge: Cambridge University Press, 1995).

Millward, R., and Ward, R., 'From private to public ownership of gas undertakings in England and Wales, 1851-1947', *Business History* 35:3 (1993), 1-21.

Mitchell, B. R., *British historical statistics* (Cambridge: Cambridge University Press, 1988).

Moe, T., 'The new economics of organization', *American journal of political science* 28:4 (1984), 739-77.

Morris, S., 'Market solutions for social problems: working-class housing in nineteenth-century London', *Economic History Review* 54:3 (2001), 525-45.

Mosher, W., *Electrical utilities* (New York: Harper and Brothers, 1929).

Mosher, W. E., *Public utility regulation* (New York ; London: Harper & brothers, 1933).

Mueller, D. C., *Public choice II* (Cambridge: Cambridge University Press, 1989).

Mueller, D. C., *The public choice approach to politics* (Aldershot: Elgar, 1993).

Mueller, D. C., *Perspectives on public choice: a handbook* (Cambridge: Cambridge University Press, 1997).

Newbery, D., *Privatization, restructuring, and regulation of network utilities* (Cambridge, MA: MIT Press, 2000).

Newman, P. K., and Palgrave, R. H. I., *The new Palgrave dictionary of economics and the law* (London: Macmillan Reference, 1998).

Newton, K., 'Is small really so beautiful? Is big really so ugly? Size, effectiveness and democracy in local government', *Political studies* 30:2 (1982), 190-206.

Noll, R., 'Politics of regulation,' in *Handbook of industrial organization*, Willig, R Schmalensee and R, ed. (Amsterdam: North Holland, 1989), 1254-87.

North, D. C., *Institutions, institutional change and economic performance* (Cambridge: Cambridge University Press, 1990).

Oakland, W., 'Congestion, public goods, and welfare', *Journal of Public Economics* 1 (1972), 339-57.

Oakley, E. R., *The London County Council Tramways* (Bexleyheath: Tramway & Light Railway Society, 1989).

Oates, W. E., *Fiscal federalism* (New York: Harcourt Brace Jovanovich, 1972).

Oates, W. E., 'The use local zoning ordinances to regulate population flows and the quality of local services,' in *Essays in labour market analysis*, Ashenfelter, O and Oates, Wallace E, eds., (New York: Columbia University Press, 1977), 201-19.

Oates, W. E., 'On local finance and the Tiebout model', *American economic review* 71 (1981), 93-8.

Ochojna, A., 'The influence of local and national politics on the development of urban passenger transport in Britain, 1850-1900', *Journal of transport history* 4:3 (1978), 125-46.

Offer, A., 'Ricardo's paradox and the movement of rents in England, c.1870-1910', *Economic History Review* 33:2 (1980), 236-52.

Offer, A., *Property and politics, 1870-1914* (Cambridge: Cambridge University Press, 1981).

Offer, A., 'Empire and social reform: British overseas investment and domestic politics, 1908-1914', *Historical journal* 26:1 (1983), 119-38.

Offer, A., *Why has the public sector grown so large in market societies? The political economy of prudence in the UK, c.1870-2000* (Oxford: Oxford University Press, 2003).

O'Leary, C., *The elimination of corrupt practices in British elections 1868-1911* (Oxford: Clarendon Press, 1962).

Olson, M., *The logic of collective action: public goods and the theory of groups* (Cambridge, Mass: Harvard University Press, 1965).

Orloff, A. S., and Skocpol, T., 'Why not equal protection? Explaining the politics of public social spending in Britain, 1900-1911, and the United States, 1880s-1920', *American sociological review* 49:6 (1984), 726-50.

Page, H., *Local authority borrowing: past, present, and future* (London: G. Allen & Unwin, 1985).

Palmowksi, J., 'Liberalism in local government in late nineteenth century Germany and England', *Historical journal* 45:2 (2002), 381-410.

Palmowski, J., *Urban liberalism in imperial Germany: Frankfurt am Main, 1866-1914* (Oxford: Oxford University Press, 1999).

Parris, H., *Government and the railways in nineteenth-century Britain* (London: Routledge & Kegan Paul, 1965).

Parris, H., *Constitutional bureaucracy: the development of British central administration since the eighteenth century* (London: Allen & Unwin, 1969).

Peacock, A. T., and Wiseman, J., *The growth of public expenditure in the United Kingdom* (London: Oxford University Press, 1961).

Pelling, H., *Social geography of British elections, 1885-1910* (London: Macmillan, 1967).

Peltzman, S., 'Toward a more general theory of regulation', *Journal of Law and Economics* 19 (1976), 211-40.

Philp, M., 'Defining political corruption', *Political studies* 45 (1997), 436-62.

Pollard, S., 'Capital exports 1870-1914: Harmful or beneficial?' *Economic History Review* 38:4 (1985), 489-514.

Pollins, H., 'Aspects of railway accounting before 1868,' in *Railways in the Victorian economy: studies in finance and economic growth*, Reed, M. C., ed. (Newton Abbot: David & Charles, 1969), 138-61.

Pratt, J. W., and Zeckhauser, R. J., *Principals and agents: the structure of business* (Boston: Harvard Business School Press, 1985).

Prest, J. M., *Liberty and locality: Parliament, permissive legislation, and ratepayers' democracies in the nineteenth century* (Oxford: Clarendon Press, 1990).

Priest, G., 'The origins of utility regulation and the 'theories of regulation' debate', *Journal of Law and Economics* 36:1 (1993), 289-323.

Pulzer, P. G. J., *Germany, 1870-1945: politics, state formation, and war* (Oxford: Oxford University Press, 1997).

Redcliffe-Maud, J. P. R. M., and Wood, B., *English local government reformed* (Oxford University Press: London, 1974).

Robb, G., *White-collar crime in modern England: financial fraud and business morality, 1845-1929* (Cambridge: Cambridge University Press, 1992).

Roberts, K., 'Voting over income tax schedules', *Journal of Public Economics* 8:3 (1977), 329-40.

Robinson, W., 'Ecological correlations and the behaviour of individuals', *American sociological review* 15:3 (1950), 351-37.

Robson, W., 'The public utility services,' in *A century of municipal progress, 1835-1935*, Laski, Harold, Jennings, Ivor and Robson, William, eds., (London: George Allen & Unwin, 1935), 299-331.

Robson, W. A., *The development of local government* (London: Allen & Unwin, 1931).

Robson, W. A., *The government and misgovernment of London* (London: G. Allen & Unwin, 1939).

Rose, P. J. a. N., 'Effects of economic regulation,' in *Handbook of industrial organization*, Schmalensee, Richard, ed. (Amsterdam: North Holland, 1989).

Rose-Ackerman, S., 'The economics of corruption', *Journal of Public Economics* 4 (1975), 187-203.

Rose-Ackerman, S., *Corruption: a study in political economy* (New York: Academic Press, 1978).

Rose-Ackerman, S., *Corruption and government: causes, consequences, and reform* (Cambridge: Cambridge Unversity Press, 1999).

Ross, R. L., and Wolf, C., *Government and the private sector: who should do what?* (Crane Russak: New York: London, 1988).

Rubinstein, W. D., *Elites and the wealthy in modern British history: essays in social and economic history* (New York: St. Martin's Press, 1987).

Rutherford, M., 'Institutional economics: then and now', *Journal of Economic Perspectives* 15:3 (2001), 173-94.

Samuelson, P., 'The pure theory of public expenditure', *The Review of Economics and Statistics* 36:4 (1954), 387-89.

Schap, D., *Municipal ownership in the electric utility industry* (New York ; Eastbourne: Praeger, 1986).

Schmalensee, R., *The control of natural monopolies* (Lexington, MA: Lexington Books, 1979).

Schwartz, P., 'John Stuart Mill and laissez faire: London water', *Economica* New Series 33:129 (1966), 71-83.

Searle, G. R., *Corruption in British politics, 1895-1930* (Oxford: Clarendon Press, 1987).

Searle, G. R., *Entrepreneurial politics in mid-victorian Britain* (New York, NY: Oxford University Press, 1993).

Self, A. H., and Watson, E. M., *Electricity supply in Great Britain: its development and organization* (London: Allen and Unwin, 1952).

Shefter, M., 'Party and Patronage: Germany, England and Italy', *Politics and Society* 7 (1959), 403-51.

Shleifer, A., 'State versus private ownership', *Journal of Economic Perspectives* 12:4 (1998), 133-50.

Shleifer, A., and Vishny, R., 'Corruption', *Quarterly Journal of Economics* 108:3 (1993), 599-617.

Shleifer, A., and Vishny, R., 'Politicians and firms', *Quarterly Journal of Economics* 109:4 (1994), 995-1025.

Simon, M., 'The pattern of new British portfolio foreign investment, 1865-1914,' in *The export of capital from Britain 1870-1914*, Hall, AR, ed. (London: Methuen, 1968), 15-45.

Smellie, K. B., *A Hundred Years of English Government* (London: Duckworth, 1950).

Smith, H. L., *The Board of Trade* (London: G. P. Putnam's Sons, 1928).

Stedman Jones, G., *Outcast London: a study in the relationship between classes in Victorian society* (Oxford: Clarendon Press, 1971).

Stigler, G., 'The economic theory of regulation', *Bell journal of economics* 2 (1971), 3-21.

Stiglitz, J. E., 'The theory of local public goods,' in *The economics of public services*, Feldstein, Martin S and Inman, Robert P, eds., (London: Macmillan, 1977), 274-333.

Stiglitz, J. E., *Economics of the public sector*. 2nd ed (New York ; London: Norton, 1988).

Sutcliffe, A., *Towards the planned city* (New York: St. Martin's, 1981).

Szreter, S., 'Economic growth, disruption, deprivation, disease and death: on the importance of the politics of public health for development', *Population and development review* 23:4 (1997), 693-728.

Szreter, S., and Hardy, A., 'Urban fertility and mortality patterns,' in *Cambridge urban history of Britain*, Daunton, M. J., ed. (Cambridge: Cambridge University Press, 2000), 629-72.

Tarr, J., and Dupuy, G., eds., *Technology and the rise of the networked city in Europe and America* (Philadelphia: Temple University Press,1988).

Tarr, J., and Jacobson, C., 'Patterns and Policy Choices in Infrastructure History: The United States, France, and Great Britain', *Public Works Management & Policy* 1 (1996), 60-75.

Tarr, J. A., 'The evolution of the urban infrastructure in the nineteenth and twentieth centuries,' in *Perspectives on urban infrastructure*, Hanson, Royce, ed. (Washington, DC: National Academy Press, 1984).

Taylor, A. J., and Economic History Society., *Laissez-faire and state intervention in nineteenth-century Britain* (London: Macmillan, 1972).

Thompson, F. M. L., 'The Town and the City,' in *The Cambridge social history of Britain 1750-1950*, Thompson, F. M. L., ed. (Cambridge: Cambridge University Press, 1990), 1-86.

Thompson, P., *Socialists, Liberals and Labour: the struggle for London, 1885-1914* (London: Routledge & Kegan Paul, 1967).

Tiebout, C. M., 'A pure theory of local expenditures', *Journal of political economy* 64 (1956), 416-24.

Tiebout, C. M., 'An economic theory of fiscal decentralization,' in *Public finances: needs, sources, and utilization*, Buchanan, J, ed. (Princeton: Princeton University Press and National Bureau of Economic Research, 1961), 79-96.

Train, K., *Optimal regulation: the economic theory of natural monopoly* (Cambridge, MA ; London: MIT Press, 1991).

Troesken, W., *Why regulate utilities? the new institutional economics and the Chicago gas industry, 1849-1924* (Ann Arbor: University of Michigan Press, 1996).

Trollope, A., *The way we live now* (London: Oxford University Press, 1951).

Vickers, J., and Yarrow, G., 'Economic perspectives on privatization', *Journal of Economic Perspectives* 5:2 (1991), 112-32.

Vickers, J., and Yarrow, G. K., *Privatization: an economic analysis* (Cambridge, Mass ; London: MIT Press, 1988).

Wald, K., 'The rise of class-based voting in London', *Comparative Politics* 9 (1972), 219-29.

Wald, K. D., *Crosses on the ballot: patterns of British voter alignment since 1885* (Princeton: Princeton University Press, 1983).

Waller, P. J., *Democracy and sectarianism: a political and social history of Liverpool 1868-1939* (Liverpool: Liverpool University Press, 1981).

Waller, P. J., *Town, city and nation: England 1850-1914* (Oxford: Oxford University Press, 1983).

Waller, P. J., 'Altercation over civil society: the bitter cry of the Edwardian middle classes,' in *Civil history in British society*, Harris, Jose, ed. (Oxford: Oxford University Press, forthcoming).

Wiener, J. H., *Papers for the millions: the new journalism in Britain, 1850's to 1914* (New York ; London: Greenwood, 1988).

Wilcox, D. F., *Working capital in street railway valuation* (Philadelphia: The American Academy of Political and Social Science, 1920).

Wildasin, D. E., *Urban public finance* (London: Routledge, 2001).

Wilkins, M., 'The free-standing company, 1870-1914: an important type of British foreign direct investment', *Economic History Review* 41:2 (1988), 259-82.

Wilkins, M., and Schröter, H. G., *The free-standing company in the world economy, 1830-1996* (Oxford: Oxford University Press, 1998).

Williamson, J. G., *Coping with city growth during the British Industrial Revolution* (Cambridge: Cambridge University Press, 1990).

Williamson, O., 'Markets and hierarchies: some elementary considerations', *American economic review* 63:2 (1973), 316-25.

Williamson, O., 'The modern corporation: origins, evolution, attributes', *Journal of economic literature* 19:14 (1981), 1537-68.

Williamson, O., 'Public and private bureaucracies: a transaction cost economics perspective', *Journal of Law Economics and Organization* 15:1 (1999), 306-42.

Williamson, O. E., *The economic institutions of capitalism* (New York: Collier Macmillan, 1985).

Williamson, O. E., and Masten, S. E., *The economics of transaction costs* (Cheltenham: Edward Elgar, 1999).

Williamson, O. E., Winter, S. G., and Coase, R. H., *The nature of the firm: origins, evolution, and development* (Oxford: Oxford University Press, 1991).

Willis, A., and Woollard, J., *Twentieth century local election results* (Plymouth: Local Government Chronicle Elections Centre, 2000).

Wilson, J. F., 'The finance of municipal capital expenditure in England and Wales, 1870-1914', *Financial History Review* 4 (1997), 31-50.

Wiseman, J., 'The theory of public utility price- an empty box', *Oxford Economic Papers* 9:1 (1957), 56-74.

Wohl, A. S., *Endangered lives: public health in Victorian Britain* (Cambridge, MA.: Harvard University Press, 1983).

Young, K., 'The politics of local government, 1880-1899', *Public Administration* 51:1 (1973), 91-108.

Young, K., *Local politics and the rise of party: the London Municipal Society and the Conservative intervention in local elections, 1894-1963* (Leicester: Leicester University Press, 1975).

Zamagni, S., and Fiorentini, G., *The economics of corruption and illegal markets* (Cheltenham: Edward Elgar, 1999).