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0521835240 - Private and Public Enterprise in Europe: Energy, Telecommunications and
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Robert Millward

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Part I

Introduction

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1 Ideology, technology and economic policy

How effectively have energy, transport and telecommunications been delivered over the last two centuries? What role was played by ideologies of socialism and capitalism? What has been the role of government? These sectors, sometimes called infrastructure industries, provide services and commodities that meet both a commercial demand (a rail service for tourists, mobile phones) and a public service (road, rail and telephone links for military/strategic aims). They have traditionally been delivered by enterprises that have a commercial orientation. Many are, or were, in complete private ownership like the Electric and International Telegraph Company, Edison, the Berlin Tramways Company, British Telecom. Some, such as the oil distributor British Petroleum, the German electricity utility Rheinisch-Westfälisches Elektrizitätswerk and the Danish telephone enterprise Fyass Kommunale had mixed private/public ownership. Others were run by local government: the Bologna municipal gas undertaking, the London Metropolitan Water Board. Others were state-owned enterprises: Alitalia, the French railway enterprise Société Nationale des Chemins de Fer Français, the National Coal Board in Britain, the telecommunications enterprises in Spain (Telefónica), Germany (Deutsche Bundespost) and Sweden (Televerket). Some then were privately owned enterprises, many still are, some are public but in all cases their position on the border between the private and the public sector make them of special interest in the economic history of Western Europe. This book analyses the development of energy, transport and communications from the arrival of the railways in the 1830s, through the emergence of large electricity, gas, water and tramways undertakings in the nineteenth century, to the replacement of coal by oil in the mid-twentieth century and the electronic transformation of communications in the 1980s.

One aim is to assess how far common patterns of regulation and ownership emerged across the seemingly different contexts of southern Europe, Scandinavia, France, Germany, the Low Countries and the UK. These regions had different resource endowments and were positioned

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differently with respect to trading opportunities. There was no coal industry to nationalise in Scandinavia. The British had to travel for sunny holidays and were pioneers in the development of charter airlines in the 1960s but had few mountains suitable for hydroelectricity, which met only a small part of UK energy requirements. Germany had poor access to the sea, saw only limited development of merchant shipping but had excellent rivers and canals for inland waterways. Spain had unreliable rainfall and few canals but its airline flourished from tourism. Italy had a mountain range forbidding for the construction of railways but it proved great for hydroelectricity. Europe as a whole has an array of languages and nation states, which contrasts vividly with the USA. Such differences affected the attitudes of governments, at both state and municipal level, to the industries but do not in themselves mean that similar responses to the same economic pressures could not be expected. The challenge here then is to see how far there was a common pattern of regulatory behaviour and ownership across Europe.

The starting point in the early nineteenth century is a period when isolated villages, manors and cottage industries were giving way to economic activities that were, physically, drawing communities together and in urban areas creating new problems for health and housing. The shift to mass production in manufacturing factories was complemented by a gradual move to mass joint consumption of services – away from the stagecoach, the river and stream for water supply, peat and wood for fuel, the messenger for communications, to the railway train, the distribution networks for gas and water, the telegraph for communications and, later in the century, the spread of electric cables, tramlines and telephones wires. The new means of transport and communications had significant strategic and political potentialities, of which the new nation states of Europe were well aware – breaking down regional enclaves and offering the prospect of new military instruments and political and social unification.

At the beginning, in the 1830s, factory development was well advanced in Belgium and Britain. In France and Germany it followed slightly later, whilst Italy, Norway and Sweden experienced their main industrial spurt at the end of the century. In the 1830s there were wide differences in income per head as may be seen in the first column of Table 1.1. The spread of factory industry and the growth of urban areas were important in providing a demand for better and cheaper energy, transport and communications. A key indicator was how much of the labour force had shifted to industry and how much was still in agriculture. A measure of the extent to which Britain had already been transformed was that only 29% of its male labour force was employed in agriculture in 1840. Britain differed markedly from

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[More information](#)Table 1.1 *Income levels and economic structure in the early nineteenth century (contemporary geographic boundaries)*

	Gross Domestic Product per head of population in 1820 in 1985 US dollars	Share of male labour force in agriculture in the year when 1840 British GDP per head was attained ^a	
		%	Year
UK	1405	29 ^b	1840
Netherlands	1307	41	1860
France	1052	51	1870
Belgium	1024	49	1850
Denmark	988	48	1870
Italy	960	54	1910
Sweden	947	53	1900
Germany	937	58 ^c	1870
Spain	931 ^d	56	1890
Norway	856	60	1910

Notes:^a Estimated by Crafts (*British Economic Growth*) as 550 US dollars in 1970 prices.^b Britain, i.e. excludes all Ireland.^c Rough estimate based on Milward and Saul, *Development of the Economies*, 44–6.^d Assumed to be 93% of Italy. See Maddison, *Monitoring the World Economy*, 194 and 198.

Sources: N. F. R. Crafts, *British Economic Growth during the Industrial Revolution* (Oxford: Clarendon Press, 1985), Table 3.4; A. Maddison, *Dynamic Forces in Capitalist Development* (Oxford University Press, 1991), Table 1.1; A. Maddison, *Monitoring the World Economy 1820–1992* (Paris: OECD, 1995); A. S. Milward and S. B. Saul, *The Development of the Economies of Continental Europe 1850–1914* (Cambridge, Mass.: Harvard University Press, 1977).

the others, not so much because of income levels or productivity growth, but because of the size of the structural shift of economic activity from agriculture to industry. The income level that Britain had reached by 1840 was attained in Denmark, France and Germany by 1870, but at that date one half or more of their male labour forces was still in agriculture. The full set of corresponding figures for the share of male employees in agriculture is given in the second column of Table 1.1.

When the steam-propelled railways came on the scene in the 1830s, Britain already had a big industrial sector that could benefit from better transport services, but this was very different, as will be seen in chapter 4, from the situation in Italy, Norway, Spain and Sweden and also in eastern Germany, which in the nineteenth century stretched across the vast rural

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areas of eastern Prussia, that is, present-day Poland and Lithuania (see the map at the front of this book). Perhaps the railways could stimulate economic development by opening up new regions as in the USA? Many Norwegian communities were self-sufficient for fishing and farming. Sweden was also heavily dependent on agriculture but had good resources of timber and iron, exports of which formed the initial response to industrialisation in Britain, Belgium, France and Germany. Shipping was a major infrastructure industry in Scandinavia, especially important in Denmark with its long coastline and easy access to British coal supplies and markets for Danish food products. Spain and Italy were not so fortunate. They were both mountainous countries with few inland waterways, apart from the Po Valley in Italy. The silk industry was well developed in Italy but was not of sufficient size to form an export growth pole in the same fashion as Scandinavia's iron and timber. The same could be said of Spain's rather poor quality coal and other minerals.

Nineteenth-century Europe saw a massive expansion of railway track, telegraph lines, electricity stations and cables, gas and water works and mains, followed at the turn of the century by tramways and telephone lines. Apart from water supply, these infrastructure industries were offering new services based on technological innovations. They exhibited all the classic problems of monopoly. Railways in a given region were often owned by a single company, so also for the electric telegraph, while the towns witnessed bursts of competition between suppliers of gas, electricity and water followed closely by the emergence of a local monopoly or inter-company agreements on districts to be served. These networks had great potential for opening up regions and perhaps stimulating economic growth. The methods of supply were, however, very intrusive, especially in growing urban areas where disease, housing squalor, unsightly cables, mains and drains were common. From an early twenty-first century perspective it is not surprising to find that, notwithstanding the nineteenth-century commitment to free enterprise capitalism and self-help, these sectors were closely regulated and sometimes taken over by local and central governments. Private enterprise was nonetheless pervasive. Almost without exception it was involved in all the initial construction and operation of the new networks and, across Europe, was still the dominant form of undertaking in 1913 on the eve of the First World War.

All countries faced many common economic problems but, by 1913, the pattern of regulation and ownership did vary enormously. Legislative ceilings on fares, tariffs and rates were common, but the use of the concession system, franchises, profit sharing, subsidies and grants varied considerably. Municipal ownership of gas, water and electricity was strong in Germany and Scandinavia but not in Spain and Italy.

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Railways were still mainly privately owned in Britain, France and Spain but not in Norway, Italy or Germany. One result of the complex institutional pattern is that the economic history of these sectors has usually been written as a separate story for each country. Despite some recent attempts to draw out common themes,¹ the literature is dominated by the separate stories, and the explanations of the differences, whether implicit or explicit, often invoke socio-political factors: Scandinavian local community life, the orchestrative role of the French state, the pressures for cultural and political unification in Italy, Belgium and Sweden, the addiction to free trade in Britain, Prussian regulation by administration rather than by the legal system. All of these are relevant and important but how do they relate to the economic issues of monopoly and network development? That is the subject of Parts II and III whilst Part IV takes the story on to the era of state enterprise 1945–90.

The analytical framework is as follows. Comparable cross-European data on the different patterns of ownership and regulation are patchy, and assembling such a picture has been the first major task. It was decided to concentrate on Western Europe and to obtain a good spread of experience by covering Denmark, France, Germany, Italy, Norway, Spain, Sweden and the UK, consistently from 1830 to 1990. The experiences of Belgium and the Netherlands are an important part of the story even though quantitative information is not presented consistently for these countries. Secondly, the inherent economic characteristics of the infrastructure industries in terms of their need for rights of way, the monopoly problem, network effects, the potential for stimulating economic growth are identified and the implications for government assessed in relation to the actual experience in each country. How much of the actual pattern of regulation and public ownership do they explain and at what point is it necessary to invoke socio-political issues? Thirdly, the whole of the period c. 1830–1990 is broken up into phases, characterised mainly by technological changes or the discovery of new resources. For each phase, an exogenous force is identified, such as the advent of steam railways in the 1830s, the emergence in the early twentieth century of techniques for long distance transmission of electricity, the discovery of European deposits of oil and natural gas in the 1960s and 1970s. The economic implications are then analysed and some of the likely government responses assessed and then compared with the actual responses. For example, the controls on railway company charges and profits in the nineteenth century followed from the monopoly characteristics of railway technology. Another example is the mushrooming of fax and email in the late twentieth century with a potentially important influence on the structure of the market for customer premises equipment – computers,

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fax machines and so on. The effect of technological changes will vary in different geographical regions so that similar behavioural responses to technological and economic forces may prompt a different reaction in different settings; the governments of Norway and Sweden, with their scantily populated land masses, were likely to react differently to the advent of railways than the government of densely populated Britain. Discoveries of new resources and technological changes in the infrastructure industries were continuously presenting governments with new instruments of social and economic policy. Indigenous deposits of oil had great strategic significance in the twentieth century in times of war and other crises; railways offered a way of facilitating political unification in Belgium in the 1830s and Italy in the 1860s. The analysis and quantification of these factors will not explain everything but will allow an assessment of how much is left for cultural and ideological influences.

A common characterisation of the economic history of the infrastructure industries over the last 150 years or so is that private enterprise and free trade were dominant in the nineteenth century at the national level whilst municipal socialism paved the way for municipal enterprise at the local level. The vicissitudes of the 1930s' depression and the Second World War then heralded, so the story goes, a period of socialist-inspired state monopolies from the late 1940s followed by a return to the free enterprise creed in privatisation programmes from the 1980s. These ideological shifts were certainly present but it is far from clear that they can account for the timing and incidence of the regulatory and ownership changes since 1830. So far as the nineteenth century is concerned, John Moore claimed that the infrastructure business had 'been founded by the great Victorian entrepreneurs. They would not even have been created, let alone flourished, if there had not been a free market.'² He was perhaps unduly influenced by the history of the railways in Britain since, as will be clear from chapter 3, many an enterprise in electricity, gas and water supply and tramways in the nineteenth century was introduced by municipalities in Scandinavia, Britain and Germany whilst the nation state was heavily involved in building up the Belgian railway system and all European governments were deeply involved in regulation. On the other hand, Parts II and III also consider how far the role of socialist ideology has also been exaggerated. The spread of municipally owned and managed enterprises in gas, electricity, water and tramways is often attributed to the supporters of municipal socialism. In Germany 'municipal socialism was identified ... [says Kuhl] ... with efforts ... to provide services ... by municipalisation of private monopoly enterprises ... The rapid reception of municipal socialism is commonly attributed to the activities of a group of economists and sociologists in

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the Association for Social Policy.’ But Kuhl points out that the major initial burst of municipalisation occurred well before the activities of the Association, which are usually dated at the end of the nineteenth century.³ Similar remarks can be made about the Webbs and the Fabians in Britain. Chapter 3 suggests that hard-nosed shopkeepers, business men and other wealthy elites on town councils encouraged municipal enterprise in the growing industrial towns.

Ideological influences are also an issue in the context of mid-twentieth century changes, about which there is much confusion. Parts II and III show that by the late 1940s most Western European countries had a substantial state enterprise sector. This was true of Italy and Germany but, in these former fascist regimes, it had little to do with socialism; the same applies to Spain. Romano Prodi was keen to emphasise that in Italy ‘the major institutional innovations that increased public ownership and public influence ... have not been taken in response to some political demand for state ownership of the means of production as in Britain’.⁴ Students of Swedish politics are prone to say something similar. ‘It is relatively easy in Sweden ... [says Coombe] ... to justify every example of public ownership according to some specific social or economic policy of government’.⁵ This writer and others want to see Sweden as exceptional yet, as is argued in the following chapters, the experiences of Italy and Germany have many similarities. What happened in France and Britain does seem to be different, and certainly these two countries witnessed some dramatic parliamentary legislation in the 1945–8 period when coal, railways, electricity and gas were nationalised. The war-time resistance movement in France (Conseil National de Résistance) was politically influential towards the end of the Second World War and it declared on 15 March 1944 that in order ‘to bring about indispensable ... reforms ... in the economic ... sphere ... [there should be a] ... return to the nation of the chief means of production, now monopolies, which are the result of communal labour ... and the participation by the worker in the direction of the economy’.⁶ These allusions to neo-Marxist concepts of means of production find echoes in Kelf-Cohen’s argument that, in Britain, public ownership was a product of socialism, which itself stemmed from the social upheavals associated with nineteenth-century industrialisation.⁷ ‘Public ownership was, after all ... [said Cairncross] ... at the centre of the socialist vision of the future in 1945’.⁸ Yet socialism seemed to stop at the gates of manufacturing industry (apart from steel in Britain and the Renault car company in France, the latter deemed to have collaborated during the war) and left land and commerce in the private sector. Moreover the cumulative experience of regulation, municipalisation and state ownership over the previous 100 years, ensured, as will be seen in

the following chapters, that the central governments of France and Britain had a strong grip on all the infrastructure industries by the end of the 1930s, before the electoral success of social democratic parties in the 1940s. And finally even some of the students of the privatisation programmes of the late twentieth century doubt whether the ideologies associated with the 1980s' Thatcher government in the UK can explain the timing and incidence of the programmes in other Western European countries.⁹

The differences between Europe and the USA are also often portrayed in idealistic terms but in some respects this is also misleading. The geography and political fragmentation of Western Europe made for large contrasts with the USA and indeed Eastern Europe, with respect to the regulation and ownership of the infrastructure industries. In the second half of the twentieth century, many in Europe looked over their shoulders to the relatively unregulated free market economy of the USA and to its continuing economic success. The approach to regulation and government has been very different. By the late nineteenth century the USA's huge land area was relatively unencumbered with internal trade barriers and language differences. Western Europe is also a large land mass, but one populated by nations with potentially hostile states on each country's borders. Each had certain social and political objectives, not unlike those of the US federal government, but in Europe this inevitably meant a more fragmented set of infrastructure industries with each country controlling its own airspace, railway system, telecommunications and energy supply. Comparisons of the regulation and ownership of the infrastructure industries that do not allow for these differences are empty of meaning. It is no point arguing that American airlines were more economically efficient in the 1950–80 period than national airlines like Air France and Alitalia and attributing this to the more liberal regime in the USA.¹⁰ When the airline business took off in the late 1940s, each nation wanted to exert some control over its aviation industry (as did the USA), an industry that had great strategic and military significance, so pan-European airlines did not emerge. Unfortunately this was not the most economical way of running airlines – it simply reflected the constitutional and political realities. Similarly it can be misleading to compare enterprise performance in the Third World and Eastern Europe with Western Europe. By the end of the nineteenth century, several Western European states had strong bureaucracies, civil service codes and democratic processes. They were the administrative backup for the regulation and public ownership of the infrastructure industries. Many of the latter were economically efficient. They contrast strongly then with the fledgling public sectors emerging from the 1960s in many Third World countries. The latter's failure to provide efficient public services in

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transport, telecommunications and energy and the subsequent recourse to privatisation, often to a foreign company, tells us little about the efficiency or otherwise of state enterprise in Western Europe. Statistical regressions over worldwide populations tell us little about the differences and similarities within Western Europe.¹¹ The benefits of privatisation in late twentieth-century Eastern Europe reflect more on the nature of the communist economies of the 1920–90 period than on the relative performance of public and private enterprise in Western Europe in the nineteenth and twentieth century.

A final note about what is not covered. The aim is to provide, for the first time I believe, a cross-European perspective on regulation and government ownership of the infrastructure industries from the arrival of the railways in the 1830s to the onset of privatisation in the 1980s. This is a huge unexplored area, and I have tried to focus on some central issues, leaving many gaps. Thus for much of the twentieth century the problem facing the railways was one inherited from the nineteenth century and brought to a head with the arrival of competition from road transport in the 1920s. There is much in the book about nineteenth-century railways and a section on road–rail competition in the inter-war period but that issue is not followed through in any detail for the post-1945 period. In turn, the emphasis for that later period is on the regulatory issues associated with the new competitor, the airlines. Similarly, water supplies are at the centre of debates about nineteenth-century urbanisation and public health programmes but are less of an issue in the twentieth century, at least in Europe. They are discussed in chapter 3 but, because of space limitations, not thereafter. The coal industry's problems are discussed in chapter 11, along with the other major post-1945 fuel commodity, oil, and it includes a discussion of the underlying causes of government action, which date from the nineteenth century. Virtually nothing is said about airports, inland waterways, harbours, shipping, nuclear power, roads and road transport, or industrial relations, safety, pollution and other environmental issues. There is nothing on Austria, Portugal and Switzerland and much less than full justice is done to Belgium, Ireland and the Netherlands. I hope this book and its bibliography, limited as it largely is to work in English and French, will be a starting point for others.

Notes

- 1 N. Lucas, *Western European Energy Policies* (Oxford: Clarendon Press, 1985); F. Cardot (ed.), *1880–1980: Une siècle de l'électricité dans le monde* (Paris: Presses Universitaires de France, 1978); V. Zamagni, *Origins and Development of Publicly*