

Héritier, Adrienne

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After liberalization: public-interest services in the utilities

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After liberalization: public-interest services in the utilities

von
Adrienne Héritier



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Adrienne Héri-tier

1 Introduction

Public-interest services constitute an essential element of the modern welfare state. The provision of utilities for all at an affordable price have long been regarded as a prerequisite of everyday life generally guaranteed by the state. But in recent years, publicly-owned utilities throughout Europe have come under increasing fire for their poor performance in productive efficiency, identifying consumer demands, and service innovation. As a consequence, and driven by the influence of neo-liberal thought, many public monopolies have been, or are in the course of being, privatized and utility markets of being deregulated. This on-going process spreads across a variety of utilities such as transportation, telecommunications, postal services, and the provision of energy. While some countries, such as Britain, took radical measures early on, others, such as France, have been more hesitant. The experience of early reform measures, instruments and institutional arrangements allow us to tentatively take stock of the situation with regard to the quality of service provision. Moreover, the mixed performance of privatized and deregulated utilities *vis-à-vis* the public-interest goals traditionally linked to their provision have led to a reform of the early reforms, in so far as deregulation was followed by re-regulation. This gives rise to the following questions: Are the public-service goals of accessibility, security, continuity and affordability in the countries undergoing a reform process still in place? If so, to what extent have they been achieved? If only partially, what are the underlying causes, and what consequences have been drawn in terms of re-regulation? Can utility services be provided under conditions of competition so as to guarantee public-interest goals?

In what follows I will start by outlining the pertinent theoretical questions and derive propositions as to the factors accounting for the performance of privatized and deregulated utilities. I will then briefly outline the regulatory structure, goals and performance of the former public monopolies before going on to examine the reformed regulatory structure and its impacts

on service provision. Finally, the question is addressed: ‘What can we learn from the outcomes of the reform?’ The analysis will focus on the liberalization of network-based utilities, that is, rail transport and telecommunications, using the empirical examples of Britain, Germany and France.

2 The theoretical and analytical background

Possible answers to the question of how the regulation of utilities affects the service outcomes in terms of public-interest goals are offered by theories of market regulation, natural monopolies and public goods and a theory of contracting between regulator and regulatee. As regards the theory of market regulation we are dealing with two different types of activities. The first type, that of market-making regulation, tries to create markets and competition by establishing rules specifying the allocation of property rights and terms of ‘fair’ competition. In sectors dominated by monopolies market-making regulations imply the abolition of restrictions on market access and of fixed prices, the introduction of competition as well as privatization, that is, the transfer of public utilities into private ownership (Majone 1996). Once market processes have been created they will need to be protected and controlled ‘in a sustained and focussed way’ (Selznick 1985: 363–4; Majone 1996) to prevent anti-competitive behaviour. These market-making activities constitute the core of the reform of the public utilities. By increasing the allocative and investment efficiency of utility providers market-making regulatory activities try to ensure more customer-friendliness in utility services such as easier accessibility, more innovation and lower prices. In so doing, they link up with the second type of regulatory activity examined here, that of market-correcting regulation. Specific outcomes of market processes are considered to be politically undesirable *vis-à-vis* specific social goals. In our case, a consensus that utilities should measure up to the public-interest goals of accessibility, equality, and continuity reflects such a political consensus, in so far as governments decide that certain user interests which are not catered for by the market be guaranteed at least by some minimum service at an affordable price. Here a political rationality is at work where political decision-makers try to defend the interests of utility users, who constitute virtually ‘the entire voting population of a country’ (Levy and Spiller 1996: 3).¹

Against this backdrop of two types of regulatory activities, the crucial question, in view of recent reforms, is, ‘How can the market-creating and market efficiency-enhancing aspects of the first regulatory activity be reconciled with the market-correcting goals of the second?’ The two logics may easily conflict with one another. For example, the provision of reduced tariffs for low-

income groups will be unacceptable to a private telecoms service firm, and a large-scale cutting back on employment in privatized railways will be difficult for a politician.

The way in which the two logics interlink is influenced by the fact that the regulatory activities extend to the provision of services based on a network infrastructure which has long been considered as a natural monopoly of a public good character. This brings us to the second complex of theory offering answers as to how regulation affects outcome. The general reasoning underlying the establishment of public monopolies, or licensed private monopolies, in the utility sector is of an economic, technological and socio-political nature. From the economic perspective, a natural monopoly is defined by high start-up costs through investment in a technical network whose long-run average costs of production decline as output increases, that is, which is characterized by economies of scope and scale (Berg and Tschirhart 1988: 3). Hence, in an industry which is a natural monopoly the operation of a single company minimizes production costs. Therefore the provider is sheltered from competition by public intervention in order to increase its operations to the level where average cost is minimized. However, the same provider will be tempted to charge a monopoly price for its services, unless prevented from doing so by price regulation. The economic justification for a natural monopoly may be challenged by technological development, such as the automobile and airplane industry undermined the railway monopoly in the past. Similarly, computer-based technology and satellite communications have challenged the dominance of the national post and telegraph monopolies (Nicolaidis 1997: 49).

But beyond economic and technological reasons for constituting natural monopolies, normative reasons, such as redistribution or national defense, have played a role in legitimizing the public monopoly provision of the utilities, and lead to the sort of market correction by regulation discussed above. Thus, public service provision is intended not only to guarantee the conditions of daily life, but also to protect the community and to enhance social cohesion (see Forsthoff's concept of *Daseinsvorsorge*, Forsthoff 1968: 148; 1938).² In this way, the fixed network (railtrack, grids or pipes) vital for the provision of infrastructural services, such as transport or communication, is regarded as a public good with the typical properties of non-excludability and non-subtractability (Samuelson 1954; Hardin 1982) to which the state guarantees equal access by means of intervention. The public-service notion reflects this wish to give infrastructure services the quality of a public good. Equal access, equality, affordability, continuity and safety constitute the core elements of the notion of *Daseinsvorsorge*, *service public* or public-interest services

(Bazex 1996; Henry 1997; Bauby and Boual 1993).³ The regulatory means used have been public ownership or exclusive licensing to private providers, subject to rules serving the public interest.

In short, drawing the two theoretical approaches together, the diverse rationalities underlying market-making and market-correcting regulation in the process of reform must be read against the background of the particular features of network-based infrastructure with a public good character, long regarded as natural monopolies. The relevant question to ask then is, 'How do specific regulatory solutions work to the advantage of one or the other rationality, taking into account that network services are to be provided?'

The conflicting imperatives of regulation are reflected in the interaction between regulator and regulatee which can be conceived of in terms of a contract. From both perspectives, that of the regulatee and that of the regulator, there are, in view of their divergent objectives, inherent risks and uncertainty in the relationship. It is an incomplete contract. For the private service provider, obliged to provide goods under conditions of competition, and who seeks to satisfy both consumers and shareholders, there is the uncertainty of changing regulations and the risk of being 'expropriated' by political decisions. Frequent changes in regulation disturb long-term investment plans (Nicolaidis 1997: 5). This may be all the more disturbing since most utilities have capital-intensive assets which are specific and non-redeployable. Therefore, the regulatee prefers a clear and stable regulatory framework which, by limiting the discretion of regulators, prevents the manipulation of utilities (Levy and Spiller 1996: 1). The risk of being 'expropriated' by the regulators may mean that, for public-service reasons, the regulator sets utility prices below a company's long-term average costs, imposes specific requirements for investment and the purchase of equipment, favouring local industry or special conditions in labour contracts (Levy and Spiller 1996: 1, 3).

From the viewpoint of governments and regulators, changing regulation and expropriation may be to some extent desirable in order to respond to changing political conditions and to achieve politically defined goals such as the provision of public services. In contrast to the regulatee, they prefer regulatory flexibility and discretion, enabling them to follow newly emerging political needs, and, where necessary, to respond to unsatisfactory performance on the part of service providers. Hence, governments and regulators prefer an incomplete contract (Eberlein 1998: 17). At the same time the regulator needs to set regulatory incentives such as to 'spur investment, efficient pricing, and the introduction of new services and technologies' (Levy and Spiller 1996: 6). In doing so, he finds himself in a situation of informational asymmetry, for he

depends upon being correctly informed by the service provider (Majone 1996) who has a monopoly of information on technical and commercial details. Thus, it requires a great deal of information to set a price level which still leaves incentives for technological improvements and increasing productivity, in particular when it extends across compacted price structures and quality levels (Nicolaidis 1996: 50). In brief, from the view of the regulator, the relationship requires constant instrumental and institutional fine-tuning to strike a balance between market efficiency on the one hand and public-interest goals on the other (Eberlein 1998).

The dominance of the first goal implies that the regulator is instrumentalised by the provider's commercial goals which are not mitigated by public-interest prescriptions. In the second case, profit-linked interests are subject to politically defined public-interest goals and private providers may have little economic incentive to stay in the game. Most regulatory solutions lie somewhere in-between, and what I expect to find are specific mixes of goals and instruments reflecting a compromise between profit-maximizing and public-interest goals. Depending on the national regulatory tradition, the specific institutional set-up and instruments used, and sector-specific aspects, such compromises may have either a more commercial or a more public-service emphasis.

How do the two different goals mesh under the old and new regulatory regimes, and what are their outcomes as regards service performance? These questions are explored in two sectors, passenger rail and telecommunications services in three countries, Britain, Germany and France.

3 The status quo ante: the utilities in public ownership

3.1 The railways

3.1.1 The old regulatory regime

Railways were long considered a natural monopoly because of high fixed sunk costs in terms of investment in network and rolling stock, and recurrent and extensive phases of excess capacity (Baumol, Panzar and Willig 1982). Consequently they were dominated by single public enterprises owning both infrastructure and providing services. As public services enterprises railways were subject to state intervention leaving limited management autonomy. One goal of state intervention was to impose public-service obligations in order to secure mobility for all and to enhance regional integration within the nation-state. Employees in the railway sector have traditionally enjoyed a

relatively high status in comparison to their counterparts in the private sector as regards job security, pensions and private health care (Nicolaidis 1997: 53).

In Britain, British Rail (BR) consisted of a single hierarchically structured organizational public entity comprising all functions from the provision and maintenance of infrastructure and rolling stock to freight and passenger operations. Although the management board had substantial autonomy in day-to-day business, it was supervised by the government and questions of finance and investment were decided by government intervention (Knill 1998). A similar structure existed in Germany where the railways were in public ownership. The German Railway, *Deutsche Bundesbahn* (DBB) was an administration with special status under the auspices of the federal transport ministry which had to authorise tariffs, budgets, salaries and infrastructural investment decisions (Teutsch 1998). The same holds true for the *Société Nationale des Chemins de Fer Français* (SNCF) which as an integrated public enterprise is subject to government intervention as regards rates, wages and employment as well as level of service (Douillet 1998).

Thus, prior to reform, all three rail industries were, and still are, under public ownership and subject to considerable political intervention. On a goal continuum, marked by politically-defined goals at one end and commercial interests at the other, the railways under public ownership are positioned close to the former. If, by political decision, top priority is accorded to public-service goals, then a high standing service performance would be expected. However, the relationship between regulatory model and service outcomes is not as simple. Instead, in the process of service production there may be additional actors, such as public managers, trade unions, and privileged suppliers which claim a slice of the monopoly profits. Nevertheless, since all these public ownership enterprises were, and still are, heavily subsidized, public-interest goals may still be present, albeit at the cost of running high deficits. Does the performance of service provision under the old regulatory regimes stand up to these expectations?

3.1.2 Performance under the old regime

The success of rail services can be measured by their take-up rate in inter-modal competition with other means of transport. While the number of passenger kilometers in Europe has increased from 213 billion in 1970 to 264 billion in 1993, mainly as a result of passenger transport in the large urban agglomerations, the use, and hence the market share of rail transport has continually declined from 10.4 percent in 1970 to 6.6 percent in 1993 (Henry 1997: 65). In Britain, passenger

kilometres fell from 40,000 million passenger kilometres in 1989 to 36,900 million in 1995 (Annual Abstract of Statistics 1997: 222). In France, the number of passengers transported by SNCF declined between 1990 and 1995 from 842 million to 741 million, and the number of passenger kilometres fell from 63,74 billion in 1990 to 56,85 in 1995 (*Annuaire statistique de la France* 1998: 756). In Germany, rail services were used by 1,725 million people in 1989 (of which 1,027 million were offered by the DBB and 591,000 by the Deutsche Reichsbahn (*Statistische Jahrbuch* 1992: 337), whereas this figure had dropped to 1,530,000 in 1991 (Deutsche Bundesbahn: 1,070,000; Deutsche Reichsbahn: 328,000) (*Statistische Jahrbuch* 1993: 342). The number of passenger kilometres fell from 65,611 million in 1989 to 57,034 million in 1991 (*Statistische Jahrbuch* 1993: 342, and 1992: 337).

The evident consumer preference for other means of transport may be interpreted as a negative verdict on the performance of rail transport. But what precisely are the grounds for dissatisfaction in terms of the general interest goals of accessibility, equality, affordable price, continuity, safety?⁴

The extent of accessibility and continuity is measured empirically in terms of services eliminated. In Britain, the government tended to reject the option of line closure, even where unprofitable (Button 1974; Gwilliam and Mackie 1975). In Germany, by contrast, many lines were closed in the 1970s, generating a vicious circle of declining service quality, a concomitant fall in demand for rail services, followed by price hikes and cuts, which further reduced quality.

The relative costliness of rail travels are another important gravamina of the industry. In Britain, despite the drop in passenger kilometres, customer expenditure for rail services (corrected for inflation) increased from 2,002 million pounds in 1989 to 2,754 million pounds in 1995 (Annual Abstract of Statistics 1997: 291), reflecting price increases.

As regards safety, rail transport fares well in comparison to other means of transport. Over time, safety has also increased within the sector, although this may be a reflection of the shrinking market share. In Britain the number of accidents declined from 1,434 in 1989 to 989 in 1995/96. The number of persons killed fell from 18 in 1989 to 7 in 1995/6, and those injured from 404 (1989) to 166 (1995/96) (Annual Abstract of Statistics 1997: 233). In France, too, safety increased. The number of train accidents fell from 96 in 1991 to 74 in 1995, the number of casualties declined from 167 to 72, and the number of injured persons from 173 to 80 (*Annuaire statistique de la France* 1998: 759). However, the opposite development is observable in Germany where fatal accidents increased from 196 in 1989 to 319 in 1991, the number of injured

from 1,389 to 1,530 (*Statistische Jarhrbuch* 1993: 367). Taking into account the drop in the number of people travelling by rail, this indicates a net decline in safety in Germany.

In sum, this brief view of performance as regards general-interest goals under the old regime reveals mixed results at best. Declining use and accessibility, relatively high prices and good scores on safety make up the overall picture. Why is it that, although the power and the instruments of political intervention in favour of service improvement were available, performance was not strong? Three factors, not considered here in more depth, may account for this—the deadweight costs inherent in the production process and generated by management, unions, and suppliers, trying to secure a part of the profit for their own purposes; the availability of cheaper alternative means of transport—the private car and air transport—which offer attractive ‘exit options’ from rail transport; and finally, the absence of significant cost-reducing technological innovations which is particularly striking in comparison with telecommunications. These three additional factors have to be borne in mind when explaining the performance of institutional and instrumental regulatory arrangements in the two sectors.

3.2 Telecommunications

3.2.1 The old regulatory regime

In the past, the telecommunications industry was typically structured by a public or private monopoly. This was justified in economic terms by the high sunk costs of network construction and economies of scope and scale of service production, the non-storability of output and the time-varying and stochastic demands, together with the positive network externalities between users, in so far as existing subscribers benefit when new subscribers join. In political terms, the monopolistic market structure was legitimized with the need to ensure universal access, that is to connect remote areas to national networks and to provide services at a reasonable and geographically averaged price (Henry 1997: 166; OECD Report on Regulatory Reform 1997, Vol. II: 48). The public-interest aspects of regulation warranted the direct subsidization, or cross-subsidization, of some services by other more profitable activities (Armstrong, Cowan and Vickers 1994: 285). The regulatory instruments used to achieve public-interest goals have been statutory barriers to entry and price and quality regulations.

In Britain, the Post Office (BPO) was originally a department of state under direct supervision of a minister which controlled the telephone network and terminal equipment. In 1981 it was converted into an independent public corporation, British Telecom, and in 1984 BT was privatized (Spiller and Vogelsang 1996: 83–84). Under the old regime decisions on pricing, investment and technology were taken in a closed network of public monopoly managers, government officials, supplier industry and unions (Schneider 1998; Schneider, Dang-Nguyen, and Werle 1994; Spiller and Vogelsang 1996: 84). There was a large degree of political interference and a concomitant lack of managerial incentives (Moore 1986; Spiller and Vogelsang 1996: 85–86). In Germany and France the basic institutional and instrumental arrangements under the public monopoly were very similar to those of Britain.

3.2.2 Performance under the old regime

As in the case of the railways, the likelihood and scope for political intervention to secure general-interest goals in service provision were great, leading us to expect a good performance with respect to these politically defined goals. Accessibility, as one of the public-interest goals of service provision may be measured by the number of voice telephony lines per 100 inhabitants prior to liberalization. Whilst there are no figures for Britain before privatization in 1984, in France the number of lines increased from 41.7 in 1985 to 56.3 in 1995; in Germany from 41.9 to 49.5 (Communications Outlook 1997, Vol. 1, Table 4.2). The absolute figure of cellular mobile subscribers in France in 1990 was 287,056, in 1995 1,302,400, in Germany 430,000 and 3,750,000 (*ibid.*, Table 4.3). Access to innovative services rose from 0.26 per 1,000 inhabitants in 1991 to 8.84 in 1997 in Germany, from 0.16 to 4.22 (*ibid.*, Table 4.8). The quality of service, as measured by the time necessary to obtain a connection, fell in France from fifteen in 1992 to seven days in 1995; and the number of outstanding connections dropped from 110,341 in 1992 to zero in 1995 (*ibid.*, Table 7.1).⁵ The number of public telephones per 1,000 inhabitants in France declined slightly from 4.4 to 3.6 between 1993 and 1995; while in Germany with 2.0 it remained the same (*ibid.*, Table 7.2). As regards charges, these fell in France from 1.14 US\$ (average peak hour one minute charge) in 1991 to 0.89 US\$ in 1996; in Germany they declined from 1US\$ to 0.65 US\$ (*ibid.*, Table 6.8).

The empirical data on market penetration, the quality of service and pricing indicate that the old regime fared relatively well with respect to service provision. However, it may well be that

the anticipation of liberalization, which had already taken place in other countries such as the UK, led to efforts to improve service quality under the old regime. Another reason for the relatively good performance is the availability of new technology. Nevertheless, there was still dissatisfaction too. Industrial consumers complained that the close interaction between PTTs, governments, domestic equipment industry, labour unions and households, did not allow them to exploit the full potential of technological progress in order to satisfy their demands for specialized, international and cheap communication services. In Britain equipment was considered overpriced, the services of low quality, the standards idiosyncratic and hence impeding innovation, and long-distance tariffs too expensive (Hulsink 1996: 12). These complaints together with the enormous competitive pressure caused by the technology push of the 1980s and the liberalized US market prepared the grounds for the reform in Britain.

What do the new regimes in the two sectors look like? Are they linked with improved performance as regards public-interest services? To what extent are the latter still pursued under the new competitive regime? And if not, is re-regulation (Vogel 1996) necessary for their security?

4 The status quo: the liberalized utilities

In the mid-1980s the notion of ‘contested markets’ was increasingly applied in order to introduce market elements into ‘natural monopoly’ sectors under public ownership. While infrastructure was still regarded as a monopoly, service operations were to be handed over to the market. Liberalization may imply various measures, the foremost being the abolition of restrictions to market access, followed by privatization, where the terms of ownership are changed, and nationalized industries under state ownership are transformed into joint stock companies in which the state holds either no, or some, shares. This by itself does not introduce competition, but may merely replace a public monopoly with its private equivalent. Where market access requires high investments in specific and non-redeployable assets (Levy and Spiller 1996), as is typically the case for network utilities, monopoly markets are not easily contested by new competitors. Therefore further regulatory measures are needed. One response is to break up the market into regional monopolies, thereby introducing ‘yardstick competition’, to publicly tender licenses and franchises for the provision of services in these regional markets and introducing competition ‘for’ the market. The presence of separate providers in different regional markets allows the regulator to compare the performance of the different operators. However, regulatory measures are necessary

to prevent private regional monopolies from exploiting their market dominance, such as price regulation or the specifying of permissible profit rates. In the first case, a price ceiling is set allowing the monopolist to cover full costs and to generate a reasonable rate of return (Nicolaidis 1996: 50). In order to set the price 'right', the regulator depends on the monopolist to know the real costs, but this is frequently impossible. Furthermore, price ceilings do not prevent the monopolist from reaping profits deriving from an increase in productivity and the use of new technology.⁶ In the second case, a permissible rate of return is specified. However, this does not provide the monopolist with a sufficient incentive to contain costs and to improve efficiency.⁷

The extent and scope of privatization and liberalization in the sectors and countries examined here differ to a large extent. Radical forms have been chosen in Britain in both sectors, much more limited ones in France, whilst Germany has liberalized extensively in one sector, telecommunications, and less in railways.

4.1 Rail

4.1.1 Britain: the new regulatory regime, performance and re-regulation

In 1993, the most extensive reform in Britain transformed British Rail, a public sector monopoly, into multiple enterprises in private ownership linked by contracts (Gibb *et al.* 1996: 36). Infrastructure and train operation services have been separated institutionally. The infrastructure, together with its construction, management and maintenance (including stations, time-tabling, signalling) were transferred to Railtrack, a private monopoly. Train operation was split into twenty-five enterprises, and rolling stock into three leasing companies. The organizational break-up was followed by the privatization of these services. The twenty-five passenger services were franchised to private companies. Railtrack, the network, was privatised by stock market flotation. Only the residual BR has remained in the public sector, but is no longer commercially active.

Two new regulatory authorities were created: in order to offer services, train operators must apply to the Office of Passenger Rail Franchising (OPRAF) for a franchise, to procure access to track they must obtain a contract with Railtrack and lease rolling stock from the Rolling Stock Companies. Franchises are granted in most cases as regional monopolies in competitive bidding 'for' the market for a specified period between seven to fifteen years (interview with OPRAF,

June 1998). Lines which are not economically profitable, but where it is deemed necessary to maintain passenger services for social or political reasons, still receive government subsidies decreasing over the years.⁸ All contracts contain performance regimes which offer economic 'benchmark' incentives to help meet contractual conditions. Fines are payable where contract conditions are not honoured (interview with OPRAF, Sept. 1998). Yardstick competition is possible because the performance of the regional train operators can be compared. The Office of the Rail Regulator (ORR) mainly deals with aspects of competition and monopoly control, considers applications for operating licenses, approves track access agreements and prices, and protects consumer interests. Thus, the space within which Railtrack and train operators can negotiate on charges for track access is determined by the Regulator, depending on Railtrack's investment and performance on a five-year basis. The regulated price-ceiling is adjusted in the light of general price level changes (Retail Price Index, RPI) (Kay and Thompson 1991: 27). As regards rail safety Her Majesty's Railway Inspectorate, since 1993 part of the Health and Safety Executive (HSE) supervises and issues regulations, and Local Users Councils monitor the service performance of the train operator companies (interview with RI, Oct. 1998).

So we have various elements of a new market and efficiency oriented regime in passenger services setting economic incentives in the context of yardstick competition. At the same time, elements of market-correcting regulation are included in a franchise performance contract, and designed to safeguard the public interest in service provision in exchange for public subsidies.

But just how successful have these attempts been?⁹ The results of performance evaluation are paradoxical in so far as the clear increase in the use of passenger rail transport services is offset by the drop in the quality of services offered (interview with RUCC, Oct. 1998).¹⁰ The number of passenger kilometres increased from 36.8 million in 1995 to 38.9 million in 1997 (Annual Abstract of Statistics 1998, No. 134, p. 222), and the number of commuter passengers into London has grown by 10 percent from 1996 to 1997 reflecting increased employment and effective marketing, such as the offer of special fares made by some operators (interview with the RUCC, Oct. 1998; *The Guardian*, 27 March 1998, p. 4).¹¹ Trade-offs between different public service goals emerged: increased accessibility in the form of more train stops implies longer travel times, and indeed the much lamented rail slow-down is (also) caused by more stops. Thus, on the 110-mile Liverpool to Nottingham line Central Trains uses fast locomotives, but so many stops have been introduced to boost ticket revenue that all the savings in time are lost, which caused one passenger to comment of its being 'like a suburban bus' (*The Sunday Times*, 3 May 1998, p. 9).

Overall customer satisfaction improved in ten service categories, declined in seven, and stayed roughly the same in two in the period 1997/1998 (interview with OPRAF, Sept. 1998; *The Guardian*, 20 February 1998, p. 5). More specifically, South West Trains failed to reach its benchmark in nine out of twelve areas of service. North Western trains failed in seven out of eight categories, while West Anglia Great Northern improved its figures in two of its six categories (OPRAF Bulletin 1998). On the Chiltern line running from London to Birmingham passengers reported a decline in service in fourteen out of the fifteen categories. The Gatwick Express, which takes of passengers to the airport from Victoria, was blamed for slow ticket purchases, a lack of available seats, cleanliness and a poor refreshment service (OPRAF Bulletin 1998). Overcrowding has also caused many complaints and five commuter rail routes into London were officially confirmed as overcrowded in spring 1998; that is, they are in excess of the 3 percent limit on overcrowding at peak times (*The Guardian*, 27 March 1998, p. 4).¹²

Furthermore, the goal of continuity/reliability, as measured by punctuality and cancellations, has not been reached. The proportion of trains running late increased by 16 percent between April 1997 and April 1998, and only 88.4 percent of trains arrived within 5–10 minutes of scheduled time between October to December 1997 (OPRAF Report 1998). Thus, on the Chiltern line, running from London to Birmingham, more than 1 percent of trains were cancelled in four consecutive four-week periods (*The Guardian*, 20 August 1998, p. 5).¹³

As regards safety, accidents on railways increased from 989 to 1,753 in the period 1995/96–1996/97. While the number of collisions remained about the same at 123 (1995/96), this had increased to 120 by 1996/97, the number of ‘running into level crossing gates and other obstructions’ increased from 488 (1995/96) to 741 (1996/97), the number of persons killed fell from 7 to 1, and the number of passengers injured rose from 62 to 182 (Annual Abstract of Statistics 1998, No. 134, p. 234).

The network operator, Railtrack, was blamed for poor performance in both track maintenance and signalling. After an accident in which one person was killed and seventy injured, due to an incorrectly positioned speed restriction sign there has been a critical discussion as to faulty signalling and lack of track repair. Instead of repairing or replacing the latter, Railtrack—pointing to years of underinvestment—has introduced a host of temporary speed restrictions which have in effect become permanent (*The Guardian*, 27 March 1998, p. 16). There have been few complaints as regards the level of rail fares, because prices are subject to regulation (*Services publics comparés* 1997, Vol. II, p. 727).

All in all the assessment of the operators' performance after liberalization is rather poor. While trains have attracted more passengers, many other things appear to have gone wrong: under-investment, a lack of punctuality, and a drop in safety standards. In order to remedy this situation, two different types of measures have been taken. The existing sanctions were used to generate improved performance, and the institutional arrangements created by the reform been subject to a renewed reform. As regards the first, to improve the quality of service, fines, stipulated in the contracts, have been imposed by the franchise director. Thus, to combat overcrowding companies had to pay 750,000 pounds for running short trains during peak hours in 1997 (interview with the RUCC, Oct. 1998; *The Guardian*, 27 March 1998, p. 4). Twenty-four train operators compensated delays by doubling the minimum compensation payments for late arrivals to 20 pounds (interview with the RUCC, Oct. 1998; *The Guardian*, 10 March 1998, p. 12).¹⁴

Declining safety has essentially been attributed to a poor performance of Railtrack and the latter's lack of investment, and the neglect of maintenance work despite high profits of 184 million pounds in six months on revenues of 1,226 billion and annual public subsidies of 1.7 billion pounds (*The Guardian*, 19 March 1998, p. 9).¹⁵ The rail regulator, to whom Railtrack is, by contract, publicly accountable for its performance, demanded 277 million pounds of investment underspending in track expenditure (*The Guardian*, 5 March 1998, p. 1).¹⁶ The Rail Inspectorate proceeded to nine prosecutions (interview with the RI, Oct. 1998) In response to more frequent accidents, the HSE put forward Railway Safety Regulations which provide for the installation of train protection systems whose job it is to prevent collisions between trains, buffer-stop collisions and derailments due to excessive speed (HSC Consultative Document August 1998: 1).

In a measure warmly welcomed by the train operating companies, the rail regulator subjected Railtrack to a two-year scrutiny of its access charges to passenger train operators. While in 1994 the overriding priority was to ensure that Railtrack obtained sufficient revenues from the operating companies, the focus now is on identifying an appropriate return for Railtrack shareholders while taking into account the interests of customers. This is done by investigating what Railtrack does with its property profits and who benefits from savings on track maintenance costs (*The Financial Times*, 11 December 1997).

With respect to the second type of measures, the institutional setup has been reconsidered so as to enhance the power of the regulator and political guidance. Thus, attempts are made to strengthen the regulator's authority by increasing his power to sanction operators and Railtrack

(interview with OPRAF, Sept. 1998; *The Guardian*, 20 August 1998, p. 5). Another institutional measure designed to boost the authority of regulators is the abolition of the overlap of functions between the two regulatory agencies, OPRAF and the ORR and the creation of one Strategic Rail Authority (interview with OPRAF, Sept. 1998; *The Guardian*, 19 March 1998, p. 3). A separate independent safety authority is to take over safety responsibilities, and the authority of the passenger watchdog bodies and their funding are to be increased.¹⁷

From the view of the train operators, network and rolling stock companies this sort of ‘regulatory turbulence’ constitutes precisely the sort of uncertain environment which makes long-term investments—even though they may improve services—so risky. The regulators’ insistence on high quality service in the public interest is seen as tantamount to a threat of administrative expropriation.¹⁸ Moreover, the perspective of a franchise lasting only seven years offers little incentive for investment in new rolling stock.

Given these contractual conditions, and since the utilities depend on private financing which is in turn dependent on stock market shares, the corporate boards are responsive not only to the consumers of services and the general public interest, but also to the judgements of the financial markets. In this situation, they have frequently opted for the latter so it has been said that ‘British utility regulation has fallen victim to the worst excesses of stock-market capitalism’ (Wilks 1997: 285). Even larger shareholder benefits may be achieved if franchises are sold off as long as subsidies are high. In the past year for example rail companies have repeatedly been taken over by other companies while their senior managers and shareholders made big profits. The present government, although declaring its concern with regard to the amount of windfall profits involved, has not passed any legislation to prevent it and will not act retrospectively.¹⁹ To some extent, however, a change of hands gives the franchise director the opportunity to redefine the terms of service delivery in favour of customers. Transactions have been used to wrestle investments and better services from the new owner. However, the gains of the shareholders still are disproportionately high in comparison to consumer gains.^{20 21}

4.1.2 Germany: the new regulatory regime, performance and further liberalization

In 1993 the former western Deutsche Bundesbahn and the eastern Deutsche Reichsbahn were transformed into a unified joint-stock company, the Deutsche Bahn AG (DBAG), of which the federal government is the sole owner. However, government intervention is contained by a legal division of competences between the management board, the supervisory board and the shareholders of the DBAG. The rail network and rail operations were organizationally separated and the network opened for access of new operators.²² A new regulatory body, the Federal Railway Agency, oversees the DBAG and is responsible for licensing railway enterprises and guaranteeing technical safety. The government assumed all financial liabilities of the former DBB and still plays a role in financing regional rail services and infrastructure. Nevertheless, the pressure on the railways to introduce more rigorous financial accounting has increased and a contract-based regime has been introduced in regional passenger transport which is put up for tendering. Whereas in the past the federal government paid an annual lump sum to the DBB by way of compensation for public service obligations, public actors now pay for those specific services which are deemed either necessary or expedient (Teutsch 1998: 28).

As regards performance, in the first four years following the reform, DBAG transported 15.1 percent more passengers as compared to the previous years (BMV June 1998), largely due to regional transport. Despite a downturn in the long-distance transport market in 1997, the long-distance passenger traffic turnover in ICE trains and IC/EC trains was positive (Deutsche Bahn, Annual Report and Accounts 1997). However, from 1996 to 1997 rail lost out to air transport, with DBAG losing 2 percent of domestic passenger kilometres, while air transport gained 6 percent (Ludewig, Chef DBAG, in *Süddeutsche Zeitung*, 6 March 1998, p. 25), and this trend became even more evident in 1998 (*Süddeutsche Zeitung*, 24 July 1998, p. 5).²³ The response to this decline has been to earmark a number of long-distance services for abolition by the end of 1998. This will, however, impinge negatively on the number of short-distance rail connections, increasing waiting time at the regional level (*Süddeutsche Zeitung*, 14 July 1998, p. 1), making accessibility and continuity decline even further.²⁴

Rail fares in Germany are relatively high and reflect the attempt to pursue a policy of economic profitability, supplemented however by a series of special-rate tariffs.²⁵ The result is a system which is not particularly transparent for customers (*Services publics comparés* 1997, Vol. II, p. 727). In order to guarantee access in regions with a lower level of demand, Germany has a

system of regional tariff balancing (*ibid.*, p. 7).

In view of the rather disappointing results regarding performance for rail passengers there have been calls to accelerate the reform. It is thought that the introduction of more competition on the rail network and the *total* separation of track and operation will improve services and pricing. Competition between passenger rail operators on the German network is expected to bring down prices and help make train services affordable as one element of service delivery in the public interest. But the DBAG has recently attempted to make network access difficult for its competitors.²⁶ But despite this, the DBAG has recently attempted to limit network access for its competitors.

4.1.3 France: the new regulatory regime, performance and further liberalization

The regulatory reform in France has been characterised by a twofold development. Although the public monopoly of the SNCF in the operation of services has been maintained the latter has undergone a series of reforms. In 1983 it was transformed into an autonomous public enterprise, and management was given more independence *vis-à-vis* government. State influence is, however, still pronounced as regards fares, investment decisions and employment (Douillet 1998: 33–34). The SNCF comprises all service operations (the *Grandes Lignes*, the suburbs of Paris, regional services and freight), whilst a separate railway infrastructure enterprise (*Réseau Ferré de France*) was created in 1997 which owns the infrastructure and is responsible for its development and planning, charging the operators of SNCF using its network. The SNCF manages the infrastructure on behalf of RFF and is responsible for the functioning and maintenance of technical and security equipment. These tasks have been left with the SNCF for public-service reasons, that is, to safeguard the safety and the continuity of train operations. RFF is responsible for planning and securing the necessary financial means for infrastructure investments (Henry 1997: 93). The creation of RFF also helped reduce the SNCF debts which it partially absorbed, whilst the French government took over another part (Douillet 1998: 31).

The political consensus to maintain a railway service committed to the principles of public service has always been strong in France. Unprofitable lines are maintained by political decision, and the government compensates the SNCF for keeping them in operation. The SNCF has started to draw up a consumer charter in which it lays claim to a high quality of service, but commitment to the charter remains rather ‘soft’ and difficult to quantify, and passengers are only reimbursed

with respect to punctuality (*Services publique comparés* 1997, Vol. II, p. 738).

The performance of the only slightly liberalised SNCF has been mixed. Although the high-speed trains (*trains à grande vitesse*, TGV) have been very successful in attracting passengers, the overall number of rail passengers has been declining since 1989 (*Services public comparés* 1997, Vol. I, p. 148). In 1994, the TGV transported over 50 million travellers and realised half of the business volume of the *Grandes Lignes* of SNCF (Henry 1997: 83). But despite this, the profitability of the TGV remained modest (Henry 1997: 84), in so far as its success has been the loss of the regular train service on which the number of passengers has declined. There has, moreover, been much criticism regarding the conditions of railway stations and safety standards (*Services publiques comparés en Europe* 1997, Vol. I, p. 109).

The SNCF has shelved any policy of low prices, using increased earnings instead to attract new customers and to maximise returns on the profit-producing lines, in particular the TGV. In fact, normal rail transport is becoming increasingly costly for passengers, despite the fact that fares are in fact lower than in Britain or Germany as a result of higher government subsidies (*Service publics comparés* 1997, Vol. II, p. 727). Furthermore, the many offers of reduced fares for business or social travel have created what is a very complex and opaque tariff structure.²⁷ A system of regional tariff balancing also guarantees access to rail transport in geographically marginal regions (*ibid.*, p. 743). In stark contrast to the British rail industry, the SNCF, with its strongly integrated services, imposes lower co-ordination costs on customers, making it easier to draw up timetables, to exchange rolling stock when the need arises, and to set train priorities for large public events (Henry 1997: 93).

4.2 Telecommunications

The telecommunications industry was typically a regulated public or private monopoly but in recent years, as a result of technological innovation, it has undergone an extensive transformation. Different types of data transmission services between fixed points gave rise to specialised networks and digital technology. With the new technologies the cost of extending and maintaining networks declined changing thereby the competitive conditions in the industry and eroding its formerly monolithic structure (OECD RRR 1997, Vol. II: 46).

Regulatory reform has developed at a different pace in the different segments of the telecommunications market. In the traditional fixed-network-based voice telephony and in cellular

telecommunications market entry is subject to licensing and most governments have allowed some competition on their domestic markets. Prices in the cellular telecommunications market are generally not regulated by the government and most countries have fully liberalised the market for equipment and value-added services (e.g. voice mail) (OECD RRR 1997, Vol. II: 48).

4.2.1 Britain: the new regulatory regime: performance

Entry restriction has been eased substantially in Britain. With the privatization of the industry in 1984 a duopoly with price-cap regulation was established.²⁸ This was subsequently abolished in 1991 and followed by a rapid entry of new companies. In spite of the granting of a large number of licenses, the domestic market remains dominated by British Telecom with 95 percent of residential call revenues and 79 percent of the business market in 1996. Thus, the newly created market is still biased in favour of the incumbent monopolist and the market not very competitive (Bishop, Kay and Mayer 1995: 14). Recently, however, cable telephone companies have begun to offer competitive packages of telecoms, data transmission and television, which are likely to challenge the market dominance of British Telecoms (OECD RRR 1997, Vol. II: 140).

With liberalization a new regulatory structure was established. The Monopolies and Merger Commission, together with the Office of Fair Trading, is responsible for problems of competition. Licenses to service providers, specifying obligations and duties, are granted and amended by the Secretary of the State. The regulator is appointed by the government and heads the Office of Telecommunications (OFTEL), a non-ministerial government department responsible for the enforcement of licensing conditions (Helm 1994: 19).

The regulatory instruments used are the setting of maximum prices at levels calculated to produce 'normal' profits, using the RPI-minus-x-formula.²⁹ Any profits above these levels can be retained. Every five years, price ceilings are adjusted so as to push profits back to the supposedly normal level. This means that companies must continually strive to increase efficiency in order to maintain their profit stream (Spiller and Vogelsang 1996: 16).

Customer can address complaints to OFTEL, the Department of Trade and Industry, as well as the Citizens Advice Bureau. British Telecom provides OFTEL with monthly quality of service statistics and a six monthly report containing details on the number of representations received (Communication Outlook 1997, Vol. 2, p. 127), and standardised rates of compensation are payable to customers in instances of poor service (Armstrong, Cowan and Vickers 1994: 298).

Elements of basic performance are basic voice telephony including fax services, public call boxes and access to emergency services. With respect to accessibility of the services, the performance has improved. The number of mainlines per 100 inhabitants has increased from 44.2 to 50.2 between 1990 and 1995 (Communications Outlook 1997, Vol. 2, Table 4.2). The number of cellular mobile telephone subscribers rose from 1,230,000 in 1990 to 5,670,000 in 1995 (*ibid.*, Table 4.3). The British mobile telecoms market is now the largest in Europe in terms of number of subscribers. The use of the Internet has increased per 1,000 inhabitants from 4.97 to 10.09 (*ibid.*, Table 4.8). The number of public telephones per 1,000 inhabitants has dropped slightly from 5.4 to 4.9 (*ibid.*, Table 7.2). Finally, the percentage of residential orders completed in eight working days has risen from 40 percent to 83 percent from 1987 to 1991 (Armstrong, Cowan and Vickers 1994: 298).

As regards affordable prices, the improvement in performance has been remarkable. Prices for telecoms services have fallen sharply in Britain, although it is unclear whether this is due to the change in regulatory regime or to technological progress. Relative to the general (retail or consumer) price index, prices have fallen by more than 60 percent (as required by the RPI-x regulation) since 1985, but dropped less steeply in the first half of the 1990s (OECD RRR 1997, Vol. II: 50). The price of long-distance calls fell by more than domestic calls, and business prices dropped more than residential charges (OECD RRR 1997, Vol. II: 140–41). The average annual spending by a business user in 1996 (fixed plus user charges) were with 844.43 US\$ lower than in France (997.83 US\$) and the same as in Germany (844.43 US\$) (Communications Outlook 1997, Vol. 2, Table 6.1); the same holds for residential telephone charges in 1996 which were 586.59 US\$ in Britain as compared to 914.37 in Germany and 799.40 in France (*ibid.*, Table 6.2).

We can also record an improvement with respect to the standard of services. In the period 1993 to 1995, the incidence of faults (per 100 lines per year) and repair time have fallen from 15.0 to 14.0; and the percentage of repaired faults within five to nine working hours has risen from 80.2 to 82.0 (Communications Outlook 1997, Vol. 2, Table 7.2). Between 1987 and 1991 the percentage of national calls that fail fell from 4.2 percent to 0.5 percent (Armstrong, Cowan and Vickers 1994: 298). But this improvement in performance did not come easily. In the period immediately following privatization the quality of service was not explicitly regulated and became the subject of widespread criticism. OFTEL intervened in order to enhance quality and transparency of performance. ‘Overall there has been a steady tightening of British Telecoms price regulation.’ (Spiller and Vogelsang 1996: 116), for the preparation of the next price regulation,

the composing of the regulated basket of services, control of quality and competitive access have kept the regulatory process lively. As a response to much public indignation over excessive utility profits of shareholders, the Labour government introduced a windfall tax on the latter. And in the most recent utility report regulators across all privatised utilities announce that they will give priority to promoting the interests of consumers (*The Guardian*, 3 March 1998, p. 12).

4.2.2 Germany: the new regulatory regime, performance and re-regulation

The regulatory reform in Germany—Postreform I—of 1989, divided the federal post office into three public enterprises (postal services, post-bank and telecoms) and introduced competition in parts of the telecoms market, the market for equipment, teletext, satellite communication and mobile telephony. At present, three major players operate in the market of mobile telephony.³⁰ In 1995, Postreform II transformed the three public enterprises (Telekom, Post and Postbank) into joint stock companies. Until 1996 when a first batch of shares were floated, all shares were owned by the *Bundesanstalt für Post und Telekommunikation*. Prices were subject to approval by the government in Germany until 1995 (OECD RRR 1997, Vol. II: 48). Although there are about fifty licensed competitors to Deutsche Telekom, the current regulatory arrangements still provide for only a limited degree of competition, thus in the area of local voice telephony.³¹ and equipment markets (OECD RRR 1997, Vol. II: 120).

The regulatory authorities underwent change as well. In 1998 the Ministry for Postal Services and Telecoms was dissolved and a new federal regulatory agency was established which operates under the supervision of the Federal Ministry of Economics. The declared goal of the new authority which is responsible for the granting of licenses is to serve as a competition watchdog, a function it shares with the federal antitrust authority, as well as to protect consumers' interests. Customers can address the regulatory authority in case of complaints.

As regards performance, universal service comprises a minimum of telecoms services, voice telephony with ISDN features, free-of-charge information, subscribers' directories, and public telephones at an affordable price, irrespective of where a user lives or does business. With respect to the goal of accessibility of telecoms services the indicator of mainlines per 100 inhabitants shows an increase from 47.5 in 1990 to 49.5 in 1995 prior to liberalization; the number of cellular mobile subscribers rose from 430,000 to 3,750,000 between 1990 and 1995 (Communications Outlook 1997, Vol. 1, Table 4.3). The 16 million subscribers anticipated for the

year 2000, will bring domestic market penetration up to 25 percent from the present 20 percent (president debitel, in *Süddeutsche Zeitung* 10 August 1998, p. 15). Use of the Internet has increased per 1000 inhabitants from 4.29 to 8.84 (Communications Outlook 1997, Vol. 1, Table 4.8). The availability of public telephones per 1,000 inhabitants has slightly decreased from 2.2 to 2.0 in the same period (*ibid.*, Table 7.2).

As regards the goal of affordability, prices have fallen steeply relative to the general (retail or consumer) price index in the period 1990–1994 prior to liberalization (OECD RRR 1997, Vol. II: 50). It is estimated that deregulation has led to a drop of producer prices of 0.33 percent (direct effect) and 0.49 percent (total effect).³² As compared to the OECD average (=100 percent) the basket of total charges for telecommunication services and equipment in January 1997 was 96.5 percent for business and 94.4 for residential users (OECD RRR 1997, Vol. II: 47).³³ In costs of equipment (particularly switching equipment) the German market is far out of line with world market prices. This is considered to be a result from a strong reliance on local suppliers as well as from relatively complicated equipment specifications (OECD RRR 1997, Vol. II: 120).

As far as service quality is concerned, between 1990 and 1994 the fault incidence per 100 lines per year fell from 16.0 to 8.7 and the percentage of faults repaired within three working days rose from 81 to 93 percent (Communications Outlook 1997, Vol. 2, Table 7.2).

The regulatory activity of the newly established authority seeking to enhance the competitiveness and customer-friendliness of the liberalised sector led to conflicts with the still powerful incumbent. Thus, the Deutsche Telekom wanted to impose a relatively high rate on customers switching to another provider of services for long-distance calls, whereas the regulator granted a much lower rate to the benefit of new market entrants and customers.³⁴ In other cases the new agency was criticised for being too close to the interests of the monopolist. In one instance the regulator criticised DT for having set the price-cap for local calls too high. Deutsche Telekom, which has a monopoly position in the local network, argued that it would use these profits to cross-subsidise lower tariffs for long-distance calls. This provoked protest from the Federal Competition Authority which pointed out that this would in effect give DT a competitive advantage for long-distance calls.

4.2.3 France: the new regulatory regime, performance

In France increased competition in the telecoms market has been slow to arrive. France

Télécom was, and still is, the dominant provider of telecoms services. Until 1998 it held the legal monopoly on fixed-network telephony, with the exception of closed private networks. The principle of third party access was not generally applied until 1998, and cable companies are still not allowed to provide telephony services. France Télécom only started to float shares on the stock market in spring 1997, and even then the government intends to keep a 51 percent stake in the company (OECD RRR 1997, Vol. II: 130).

However a few liberalising steps were taken earlier as regards the provision of telecommunications material, data transmission and a few other 'value added' services. Furthermore, the mobile telecoms market was opened to competition. An independent regulatory authority, the *Autorité de Réglementation des Télécommunications* (ART), was created in 1997 to supervise the activities in the liberalising market (OECD RRR 1997, Vol. II: 130). Customers can address complaints to the regulatory agency, the ministry responsible for consumer affairs, the business practices council and the courts.

Under the slightly reformed regime the elements defined as universal are a quality telephone service at an affordable price, emergency calls, directory assistance, telephone directories and public telephones (Communications Outlook 1997: 55). The license contract of France Télécom, the incumbent monopolist, stipulates the objectives for the attainment of quality service, and must present an annual statement of performance (Communications Outlook 1997: 55).

As regards accessibility, mainlines per 100 inhabitants increased between 1990 and 1995 (without privatization) from 47.4 to 56.3 (Communications Outlook 1997, Vol. 2, Table 4.2), and the number of cellular mobile subscribers rose from 287,000 to 1,302,400 (*ibid.*, Table 4.3).

However due to only modest competition and high prices the density of cellular telephone subscribers among the total population, although growing rapidly, is one of the lowest in the OECD. The use of the Internet increased between July 1995 and January 1997 from 113,974 to 245,501 (Communications Outlook 1997, Vol. 2, Table 4.7); per 1,000 inhabitants the number rose from 1.96 to 4.22 (*ibid.*, Table 4.8).

As regards prices for national and international services, these have fallen by more than 60 percent, in current prices, since 1985 (OECD RRR 1997, Vol. II: 50). The average annual spending by a business user in 1996 (fixed plus usage charges) stood at 997,83 US\$ in France, as compared to 1,258,02 US\$ in Germany and 844,43 US\$ in Britain (Communications Outlook 1997, Vol. 2, Table 6.1). The respective figures for residential telephone charges in 1996 were

799,40 in France, 914,37 in Germany, and 586,59 in Britain (*ibid.*, Table 6.2). Total telecoms charges with 83.7 for businesses and 84.5 for residential use are in line with the OECD average (=100 percent), and in 1996 were actually below the level of Britain (92.4 business, 93.4 residential) (OECD RRR 1997, Vol. II: 47). This is partly due to relatively low fixed charges. In terms of user charges alone, Britain has significantly lower tariffs (OECD RRR 1997, Vol. II: 131).

The quality of services also improved prior to the limited reform. The waiting time for telephone installation fell from fifteen (1992) to seven (1995) days (Communications Outlook 1997, Vol. 2, Table 7.1). The number of public telephones per 1,000 people has fallen from 4.4 in 1993 to 3.6 in 1995 (*ibid.*, Table 7.2). Fault incidence (per 100 lines per year) and repair time from 1993 to 1995 fell from 7.5 to 6.3, the percentage of faults repaired within twenty-four hours increased from 86.3 to 88.3 percent (*ibid.*, Table 7.2).

Regulatory conflicts in respect of the newly established authority have led to frequent legal wrangles in France too, one thorny question being the regulator's allocation of longer prefix numbers to the incumbent's competitors.

5 Conclusion

From this analysis it is clear that the liberalization and deregulation of the utilities will need intensive re-regulation if the latter are to maintain their public-service objectives. The reason being that liberalization exposes private providers to the conflicting goals of guaranteeing the needs of all types of customers, including economically weak ones, whilst simultaneously taking shareholders' interests into account. In this situation of conflicting objectives, the provider, who is dependent on the financial markets to provide his financial resources, is under pressure to favour shareholders' interests. Therefore, unless private providers are forced by regulation—or indeed supported by public subsidies—to take low-income customers' interests into account, they will tend to neglect them. This means that not only in spite of, but because of, liberalization and deregulation, a new and extensive body of regulation will have to be formulated.

There are, however, sectoral differences in the goal conflicts caused by liberalization and faced by providers. The dilemma, and hence the need, to re-regulate is particularly acute in sectors such as the rail industry where the distributional blow following liberalization is not cushioned by more aggregate gains generated by pronounced technological innovation. Moreover, passenger

rail transport suffers from harsh competition in the form of air transport and the private car. Hence, under the new regulatory scheme distributional decisions have to be made under 'conditions of misery'. In the case of British Rail, where the far-reaching liberalization was simultaneously confronted with a high need for reinvestment and a low likelihood of obtaining commercial profits, the conflict of goals and the consequent need for re-regulation on behalf of consumers became particularly acute. Attempts to squeeze profits out of operations directly was to the detriment of users in terms of overcrowding, and so forth, whilst selling stock off rapidly and changing ownership in order to realize large profits was, and is, an attractive perspective. Hence the urgent need to re-regulate.

The goal conflict between customers needs on the one hand and shareholders gains on the other is less dramatic in sectors where it is mitigated by the impact of rapid technological progress leading to improved conditions of mass consumption. This is the case in telecommunications. Here indeed market liberalization reinforces and amplifies forces of innovation at a large-scale which benefits customers to an extensive degree, leading to a marked drop in prices which also benefits low-income customers. However, it was not the dominant factor. The positive impact of technological innovation on price reductions and a diversification of the service and product offer was evident in France and Germany prior to liberalization. Nevertheless, in spite of the technology push favouring more customer-oriented behaviour, there is still a need to regulate in favour of customers with a weak market position, albeit not as urgent as in the rail passenger services. So although the need for a sound institutional design of regulation after liberalization is much more acute in the rail sector, it is by no means unimportant in telecommunications.

What then can be learnt from the empirical evidence of two sectors and three countries in terms of regulatory design? If the regulatory process is viewed as a contractual relation between regulator and regulatee, one may conclude that the relative strength of the regulator *vis-à-vis* the regulatee depends on the following factors: on the political/institutional side, the degree of consolidation of regulatory power does play a role. In a fragmented authority structure, as in the British rail industry, where the functions of the rail regulator and the franchise director overlap, actors can be played off against one other which may weaken the regulatory position. The inclusion of courts in the decisional process in cases of conflict provides more opportunities for reopening conflictual regulatory decisions,³⁵ as shown by the examples of the German and French telecommunications sectors.

The position of the regulatee *vis-à-vis* the regulator is stronger if he has a dominant market

position. In this case much depends on the initial process of privatization and the extent to which it has been able to dismantle the public monopoly. If it just created a new private monopoly to replace the old public one, the regulator's task is difficult (Veljanowski 1991: 22). This difficulty is exacerbated if the regulatee is an international player with more freedom than any domestic counterpart to withdraw from a national regulatory regime. Once again, the British example of the rail sector is a case in point. Privatisation was pushed through hastily, in view of the approaching general elections and the flotation brought a favourable deal for the industry (Veljanovski 1991: 22). High shareholder profits could subsequently be obtained during take-overs whilst the private companies still received high public subsidies. Hence, the newly established regulatory authorities are now struggling to correct that initial bias of benefits and trying to force operators into compliance with public-service goals as defined in the franchise contracts.

Due to the informational asymmetry between regulator and regulatee as regards the technicalities and the commercial viability of the provision of goods and services, the regulator depends on the willingness of regulatees to cooperate (Windhoff-Héritier 1987). The regulator must therefore tread a narrow path between credibly threatening sanctions in the case of non-compliance with the service contract-standards and the need to build up a trusting relationship with the regulatee whose information are crucial for him if he wants to set the incentives right. Once again the British experience is instructive. The present Labour government is trying to resolve the problem of asymmetrical information and to meet the claims of commercial confidentiality by opting for a strengthened version of price regulation forcing companies to cut prices based on a specific formula (RPI-x). This is supplemented by an additional 'error-correcting mechanism' built into the contract between regulator and franchisee/licensee to cover cases where operators benefitted from 'specific factors outside their control' which enables the regulator to revise the franchise before it expires (*The Guardian*, 3 March 1998, p. 12).

The regulators position is defined not only with respect to the regulatee, but also *vis-à-vis* government and the public. Some regulators are held more accountable to political decision-makers, whilst others have a higher degree of professional autonomy (Majone 1996). The second lays regulators open to the accusation of lacking democratic legitimacy. However, their 'seclusion' has to some extent been counter-balanced by the political salience of the sectors involved, on account of the controversy generated by privatization and deregulation. The private owners of infrastructure and service operators are under close public scrutiny and in the British case in particular, demands for transparency and public disclosure are defined in the rail franchise

contracts. Improved institutional modes of customer representation mean that companies are under pressure to comply with public-interest goals. 'The process has become more public; they are no more negotiations behind closed doors' (Spiller and Vogelsang 1995: 116). There are open discussions on the extent to which shareholders', as opposed to consumers', interests should be honoured, as in the case of the Railtrack consultation process (*Financial Times*, 11 December 1997). This discussion is less pronounced in the German and French rail and telecoms industries where privatization has not occurred to the same degree, but is still an unfolding process. However, in all cases, the regulation of liberalized utilities has been subject to continuous substantive and institutional scrutiny.

Notes

- ¹ Another important type of regulatory activity, not discussed in the current analysis, deals with the negative external effects of market activities, such as pollution, and in the imposition of regulatory restrictions on firms producing such externalities.
- ² Forsthoff argues that in the course of economic and technological development, men started living on a wider spatial scale, as a result of which they are not longer able to govern their conditions of subsistence (*beherrschter Lebensraum*), and that gives rise to the state's obligation to provide basic utilities (Forsthoff 1968).
- ³ In France, the notion of 'service public' guarantees the satisfaction of services of general interest (Bazex 1996: 120), invoking the principles of continuity, universality, equality and adaptability which largely overlap with the German notion. Continuity implies the obligation to avoid interruption of service, such as cutting off the electricity supply or suppressing trains, without prior notice and the provision of a substitute service of comparable quality and price. Adaptability means that the service must be adapted to new conditions without penalising specific groups of users, and guaranteeing that production capacity is sufficient so that the peak time tariffs are not excessive. Universality or equality (accessibility and affordability) mean that a disadvantage such as low income or a marginal geographical location should not exclude users from enjoying the services or goods in question. Finally, the principles of practicality and flexibility should guarantee easy and comprehensible access to the public service, including a relatively simple and not over-diversified tariff structure (Henry 1997: 162–63).
- ⁴ Only very partial empirical data are available on all aspects of performance.
- ⁵ The data for Germany are not comparable as a result of unification.
- ⁶ Thus, if the price ceiling is too low to 'mop up excess profits' (Nicolaidis 1997: 50), the monopolist has no incentive to make long-term investments.
- ⁷ As long as the specified rate of return is generated by a price which is below the profit maximising level. Costs and prices will be allowed to drift upwards until this point is reached.
- ⁸ In allocating public revenues provided by the DoT, OPRAF is subject to guidance from the Secretary of State, but this still leaves it with ample leeway in respect of its day-to-day management.
- ⁹ In order to monitor the performance of the privatized British railway industry, the franchise agreements between the TOCs and OPRAF/RR stipulate that all operators carry out customer satisfaction surveys by independent and professionally accredited research companies at least once every six months. Initial surveys, carried out shortly after the franchises were granted, identified the salient issues for passengers and established benchmark standards. The figures on customer satisfaction released in 1998 test satisfaction on a variety of issues from punctuality to cleanliness and can be compared with the initial benchmarks as in the generally positive example of Anglia Railways and the more contested, Virgin Rail Group, given below.

Anglia Railways: initial benchmarks and 1998 customer ratings

	benchmark	rating
punctuality of trains	6.94	7.14
keeping delays and cancellations to minimum	6.44	6.44
reacting quickly when there are problems	5.64	5.85
general conditions and maintenance of trains	6.32	6.43
provision of alternative transport for missed connections	5.78	5.98
providing information when there are delays	5.96	6.18
frequency of trains	6.94	6.99
availability of seating	7.05	7.07
providing a service you feel safe using	7.53	7.55
waiting time between connections	6.23	6.31

availability of direct services	6.88	6.95
ease of buying a ticket	7.43	7.47
attitude and helpfulness of staff	7.19	7.27
telephone inquiry services	6.22	6.40
providing information about train times and platforms	7.44	7.54
numbers of staff available	6.46	6.55
providing printed information about train times and fares	6.77	6.85
catering on board train	6.04	6.12
provision of advance booking facility	7.00	7.11
general condition and maintenance of stations	6.50	6.48
availability of facilities at local stations	6.10	6.01

Source: OPRAF Bulletin, February 1988, p. 4.

Note: Anglia Railways operates InterCity and local services in Eastern Britain and interviews some 2,000 passengers three times a year across all its routes.

Virgin Rail Group: initial benchmarks and 1997 customer ratings

warnings of delays a/o cancellations	5.6	5.9
buying the best ticket for the journey	7.2	6.4
availability of seats on the train	9.0	8.4
information on train times and platforms	9.4	9.2
availability of food and drink on train	8.1	7.8
on-time arrival	6.2	6.3
cleanliness of the seating area on train	6.9	6.7
ease of understanding timetables	8.1	8.1

Source: OPRAF Bulletin Feb. 1998: 35.

Note: Virgin Rail operates West Coast Trains and interviews 2,000 passengers twice a year. Given Virgin's bad record for punctuality it is interesting that there is no question on delays and cancellations, but only on 'warnings of delays a/o cancellations'.

¹⁰ RUCC stands for The Rail Users Consultative Committee.

¹¹ Thus, Great Western Holdings which operates the Great Western service experienced a 13 percent increase in passenger traffic (*The Guardian*, 5 March 1998, p. 12).

¹² The worst overcrowding is on Connex South Central (4.8 percent), Thameslink (4.4 percent), South West Trains (3.8 percent), and Great Eastern (3.3 percent) (*The Guardian*, 27 March 1998, p. 4).

¹³ Other operators carry out far more extensive cancellations, but as Chiltern took over one of the best services this made its performance targets tougher (*The Guardian* 20 August 1998, p. 5).

¹⁴ Chiltern Rail fully refund tickets to passengers subject to 'delay of over one hour, and half the fare to those delayed by over half an hour' (*The Guardian*, 20 August 1998, p. 5).

¹⁵ Thus, Railtrack was threatened with prosecution by the Rail Inspectorate for failing to complete 3 million repairs on 8 miles of the main-line track between Nottingham and Chesterfield (*The Guardian*, 27 March 1998, p. 16). To upgrade the West coast mainline from London to Glasgow, Virgin Rail and Railtrack, have struck a deal for an additional 500 million pounds investment, allowing trains to travel faster and reduce journey time. Instead of earning a return on its investment by charging Virgin, Railtrack will take a share of Virgin's ticket revenues. This is intended to provide a strong incentive for Railtrack to complete the work on time (*The Financial Times*, 24 October 1998).

¹⁶ A few months later 1998 Railtrack faced a renewed row with the rail regulator for having imposed a 25 percent cut on track maintenance—which, in order to save 80 million pounds, had been put up for

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- competitive tendering by subcontractors—when parts of its 11,000 mile network have been declared unsafe. Railtrack pointed out that it is spending 300 million pounds on track renewals this year, twice as much as BR achieved (*The Guardian*, 5 March 1998, p. 1).
- ¹⁷ Another political option which goes further is the proposed reintroduction of elements of public ownership, allowing government to take over an equity share in Railtrack and to bring British Rail—which still exists as a shell company—back into the game by allowing it to take over rail operating companies which have gone bankrupt (*The Guardian*, 19 March 1998, p. 3). While this mode of coming to grips with unsatisfactory performance of service and infrastructure operators are enhancing the regulators’ powers and state intervention, the other mode which is being considered by the rail regulator is to ‘deepen’ competition. As of 1999 the tight control over competitive entry on routes where two or more franchisees already provide services will be relaxed. Beyond the individual franchise holder additional companies will be admitted to passenger service on one and the same line as a catalyst for significant passenger benefits such as lower fares, more frequent services, better quality standards and more direct services. At the same time, destructive competition such as predatory service time-tabling and predatory pricing are to be avoided by using market control mechanisms (Office of the Rail Regulator, *New Service Opportunities 1997*: 14–15).
- ¹⁸ The operators do, however, receive substantial public subsidies (decreasing over time) in order to help them comply with these performance goals. The subsidy reduction over the franchising period is intended to provide significant incentives for cost reductions by the franchisees. But bearing in mind that franchisees can only influence 20 per cent of their costs, whilst the other 80 percent are determined by charges for rolling stock and track access, there is limited room for efficiency gains and they may just as well save on costs by cutting services (Knill 1998: 29).
- ¹⁹ In the words of the Save Our Railways pressure group, ‘[w]e have the obscene spectacle of managers of privatised companies being transformed into fat cats, even though they ran a worse service than BR [...] at the taxpayers’ expense.’ (*The Guardian*, 27 March 1998, p. 16). And in March 1998, the Minister of the Environment, Transport and the Regions, John Prescott, considered enacting tougher rules forcing rail companies to share up to 25 percent of their profits with government (*The Guardian* 5 March 1998).
- ²⁰ One example is that when Thames Trains is taken over by the Go-Ahead Group as planned, nearly 70,000 shares owned by six managers and personnel involved in the buy-out are expected to be bought. Some of those six managers will be better off by hundreds of thousands of pounds, while one thousand personnel will make up to 800 pounds each. The rail franchise director approved the take-over after securing commitments for 1 million pounds of improvements, including a new through service from Oxford to Bristol. The deputy minister responsible for transport was ‘sceptical about the deal’ but was of the opinion that ‘there was nothing he could do about it’ (*The Guardian*, 5 March 1998, p. 12).
- ²¹ Similarly the three rolling stock leasing companies have been sold on for high profits by their managers (*The Financial Times*, 23 January 1998). These sales have to be seen against the backdrop of an over-cheap sale of rail assets by the Conservative government in order to realise the reform before the general election (National Audit Office cited in *The Guardian*, 10 March 1998, p. 12). Over and above the domestic context, the regulators’ problems in securing customers’ interests are exacerbated by increasing international ownership in the global environment (Sturm and Wilks 1997).
- ²² These will eventually be transformed into single joint-stock companies.
- ²³ The train accident at Eschede in June 1998 caused a sharp decline in long-distance passenger transport (*Süddeutsche Zeitung*, 24 July 1998, p. 5).
- ²⁴ There is no legal obligation for rail operators to systematically assess customer satisfaction as there is in Britain.

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- ²⁵ In Britain, Virgin Rail introduced seven different classes of tickets varying according to the quality of refreshments served, parking and tube passes, advance booking, peak and off-peak hours, etc.
- ²⁶ There are indications that the infrastructure unit of the DBAG discriminates against the competitors of its operational branch. Thus, the DBAG's first charging system for track use was heavily criticised for giving high discounts to large customers, which in practice could only be its own operational units but not new rail operators trying to enter the market (Teutsch 1998: 27).
- ²⁷ Railway timetables do not give fare prices and Minitel is not particularly customer-friendly (*Services publics comparés* 1997, Vol. I, p. 108).
- ²⁸ To increase competition a second operator, Mercury, was given a licence to provide telecoms services. Both companies were given full access to each others' networks, but BT dominated the market (OECD RRR 1997(2): 140).
- ²⁹ The price formula is RPI-x, where RPI stands for Retail Price Index, and x is the regulator's estimate of the presumed movement of productivity and costs within the industry, normally fixed in advance for a period of four to five years (Nicolaidis 1997).
- ³⁰ DeTe Mobil—a subsidiary of Deutsche Telecom—Mannesmann and E-Plus.
- ³¹ As a consequence, assessments of labour and capital productivity in the German telecoms industry indicate a significant gap with productivity levels in the United States and Britain (OECD RRR 1997(2): 120).
- ³² This combines the direct effect of the fall in prices of the sector being deregulated with the effect of the fall in prices in other sectors generated by lower input costs (OECD RRR 1997, Vol. II: 123).
- ³³ Re-nationalization must be ruled out in the British case since the combined assets of the four utility industries are about 250 billion pounds, which is equivalent to over half the gross national debt (*The Financial Times* 10 March 1998, p. 12).
- ³⁴ Deutsche Telekom applied to the regulatory agency for the authorization of a fare of 49 DM. The agency, however, only accepted a rate of 27 DM, which will subsequently drop to 10 DM by the year 2000 (*Süddeutsche Zeitung* 20 July 1998, p. 20).
- ³⁵ Observations made to the author by F. van Waarden in Autumn 1998.

Selected bibliography

Annuaire statistique de la France, Paris: INSEE, 1998.

Annual Abstract of Statistics, Central Statistical Office. London: HMSO, 1997.

Annual Abstract of Statistics, Central Statistical Office. London: HMSO, 1998.

Armstrong, M., S. Cowan, and J. Vickers, *Regulatory Reform: Economic Analysis and British Experience*. Cambridge: MIT Press, 1994.

Bauby, P., and J.-C. Boual, eds., *Les services publics au défi de l'Europe*. Paris: Editions Ouvrières, 1993.

Baumol, W. J., J. C. Panzar, and R. D. Willig, *Contestable Markets and the Theory of Industry Structure*. New York: Harcourt Brace Jovanovich, 1982.

Bazex, M., 'France.' In *Vers un service public européen: initiative pour des services d'utilité publique en Europe*. eds. L. Grard, and J. Vandamme, 117–32. Paris: ASP Europe, 1996.

Berg, S. V., and J. Tschirhart, *Natural Monopoly Regulation: Principles and Practice*. Cambridge: Cambridge University Press, 1988.

Bishop, M., J. Kay, and C. Mayer, (eds.), *The Regulatory Challenge*. Oxford: Oxford University Press, 1995.

Bundesministerium für Verkehr, 'Strukturreform der Bundeseisenbahnen.' Bonn, 1998.

Button, K., 'Transport Policy in the United Kingdom: 1968–1974.' *Three Banks Review* 103 (1974): 26–48.

Deutsche Bahn. 'Annual Report & Accounts.' Berlin, 1997.

Douillet, A.-C., 'France: A Slow Acceptance of European Orientations.' In *Differential Europe*. Héritier *et al.* Manuscript, Florence: 1998.

Eberlein, B., 'Regulating Public Utilities in Europe: Mapping the Problem.' Manuscript European University Institute, 1998.

- Forsthoff, E., 'Verfassungsprobleme des Sozialstaats (1954).' In *Rechtsstaatlichkeit Und Sozialstaatlichkeit*. ed. E. Forsthoff, 145–64. Darmstadt: Wissenschaftliche Buchgesellschaft, 1968.
- Gibb, R., T. Lowndes, and C. Charlton, 'The Privatisation of British Rail.' *Applied Geography* 16, No. 1 (1996): 35–51.
- Gwilliam, K. M., and P. J. Mackie, *Economics and Transport Policy*. London: Allen & Unwin, 1975.
- Hardin, R., *Collective Action*. Baltimore: John Hopkins University Press, 1982.
- Health and Safety Commission, 'Rail Safety: Proposals for Regulations on Train Protection Systems and Mark 1 Rolling Stock.' HSC Consultative Document, 1998.
- Helm, D., 'British Utility Regulation: Theory, Practice and Reform.' *Oxford Review of Economic Policy* 10, No. 3 (1994): 17–39.
- Henry, C., *Concurrence et services publics dans l'Union européenne*. Paris: Presses Universitaires de France, 1997.
- Hulsink, W., *Do Nations Matter in a Globalising Industry? The Restructuring of Telecommunications Governance Regimes in France, the Netherlands and the United Kingdom (1980–1994)*. Delft: Eburon, 1996.
- Kay, J., and D. Thompson, 'Regulatory Reform in Transport in the United Kingdom: Principles and Application' in *Transport in a Free Market Economy*, D. Banister, and K. Button (eds.), 19–42. London: Macmillan, 1991.
- Knill, C., 'Reforming Transport Policy in the United Kingdom: Concurrence With Europe but Separate Developments.' In *Differential Europe*. Héritier et al Manuscript, Florence: 1998.
- Levy, B., and P. T. Spiller, eds. *Regulations, Institutions, and Commitment: Comparative Studies of Telecommunications*. Cambridge: Cambridge University Press, 1996.
- Majone, G., *Regulating Europe*. London: Routledge, 1996.
- Moore, J., 'Why Privatise (1983)?' In *Privatisation and Regulation: The UK Experience*.

- eds. J. Kay, C. Mayer, and D. Thompson, 78–93. Oxford: Clarendon Press, 1986.
- Nicolaides, P., ‘The Role of the State in the Single European Market: How to Reconcile Social Responsibility With Competition?’ In *Managing Universal Service Obligations in Public Utilities in the European Union: Compilation of Contributions to the Above Colloquium Held in Maastricht (NL) on 28–29 November 1996*, 39–62. Maastricht: European Institute of Public Administration, 1997.
- Office of Passenger Rail Franchising, ‘OPRAF Bulletin: Customer Satisfaction on the Rail Network — Initial Toc Survey Results Published’, 1998.
- Office of the Rail Regulator, ‘New Service Opportunities for Passengers: A Consultation Document on the Competitive Framework for Passenger Rail Services.’ Office of the Rail Regulator, London, 1997.
- OECD, *The OECD Report on Regulatory Reform*, Vol. 1: Sectoral Studies. Paris: OECD, 1997.
- OECD, *The OECD Report on Regulatory Reform*, Vol. 2: Thematic Studies. Paris: OECD, 1997.
- OECD, Committee for Information Computer and Communications Policy. *Communications Outlook, Vol 1*. Paris: OECD, 1997.
- OECD, Committee for Information Computer and Communications Policy. *Communications Outlook, Vol 2*. Paris: OECD, 1997.
- Samuelson, P. A., ‘The Pure Theory of Public Expenditure.’ *Review of Economics and Statistics* 36 (1954): 387–89.
- Schneider, F., ‘Deregulierung und Privatisierung als Allheilmittel gegen ineffiziente Produktion von öffentlichen Unternehmen?: Ein Erklärungsversuch mit Hilfe der ökonomischen Theorie der Politik.’ Linz: Johannes Kepler Universität Linz, 1998.
- Schneider, V., G. Dang-Nguyen, and R. Werle, ‘Corporate Actor Networks in European Policy-Making: Harmonising Telecommunications Policy.’ *Journal of Common Market Studies* 32 (1994): 473–98.

- Selznick, P., 'Focusing Organizational Research on Regulation.' In *Regulatory Policy and the Social Sciences*. ed. R. Noll, 363–67. Berkeley: University of California Press, 1985.
- Spiller, P. T., and I. Vogelsang, 'The United Kingdom: A Pacesetter in Regulatory Incentives.' In *Regulations, Institutions, and Commitment*. eds. B. Levy, and P. T. Spiller, 79120. Cambridge: Cambridge University Press, 1996.
- Statistisches Jahrbuch für die Bundesrepublik Deutschland*. Stuttgart: Statistisches Bundesamt, 1992.
- Statistisches Jahrbuch für die Bundesrepublik Deutschland*. Stuttgart: Statistisches Bundesamt, 1993.
- Stoffaes, C., and Ecole nationale d'administration, *Services publics comparés en Europe: Exception française, exigence européenne: rapports de séminaires établis par les élèves de la promotion Marc Bloch; Ecole nationale d'administration; sous la dir. de Christian Stoffaes; Vol 1*. Paris: La Documentation Française, 1997.
- . *Services publics comparés en Europe: Exception française, exigence européenne: rapports de séminaires établis par les élèves de la promotion Marc Bloch; Ecole nationale d'administration; sous la dir. de Christian Stoffaes; Vol 2*. Paris: La Documentation Française, 1997.
- Sturm, R., and S. Wilks, *Competition Policy and the Regulation of the Electricity Supply Industry in Britain and Germany*. London: Anglo-German Foundation for the Study of Industrial Society, 1997.
- Süddeutsche Zeitung*, "'Ein eklatanter Eingriff in die Unabhängigkeit': Viag-Interkom-Chef Briese: Die Politik setzt zunehmend die Regulierungsbehörde unter Druck." 20 July 1998, p. 20.
- Süddeutsche Zeitung*, 'Drastische Sparmassnahmen geplant: Bahn will zahlreiche Züge streichen.' 14 July 1998, p. 1.
- Süddeutsche Zeitung*, Ludwig, J. 'Personenverkehr der Bahn leidet unter der Wirtschaftsmisere: DBAG-Chef Johannes Ludwig sieht Unternehmen dennoch im

- Aufwärtstrend/Konkurrenz durch Flugzeug trifft ICE.' 6 March 1998, p. 25.
- Süddeutsche Zeitung*: Nachrichten, 'Internes DB-Papier für Führungskräfte belegt: Auto und Flugzeug hängen die Bahn ab: "Zugverkehr hat stagniert, während die innerdeutsche Konkurrenz zugelegt hat"'. 24 July 1998, p. 5.
- Süddeutsche Zeitung*: Wirtschaft, 'Telephonieren mit dem Handy wird angeblich billiger als im Festnetz: debitel-Chef Joachim Dreyer: Zahl der Mobilfunkgeräte verdoppelt sich in nur zwei Jahren.' 10 August 1998, p. 15.
- Teutsch, M., 'Regulatory Reforms in the German Transport Sector: How to Overcome Multiple Veto Points.' In *Differential Europe*. Héritier et al. Manuscript, Florence: 1998.
- The Financial Times*, 'Rolling Stock Leasing: Rail Regulator to Mount Inquiry.' 23 January 1998.
- The Financial Times*, 'UK News Digest: \$700m Wiped Off Railtrack.' 11 December 1997.
- The Guardian*, 'Anger as Managers Clean Up in Thames Trains Buy-Out.' 27 March 1998, p. 16 .
- The Guardian*, 'The Failure of Rail: Tough Regulation Is the Answer.' 19 March 1998, p. 9.
- The Guardian*, 'Free Travel on Chiltern As Regulator Gets Tough.' 20 August 1998, p. 5.
- The Guardian*, 'Late-Train Payout Set to Double.' 10 March 1998, p. 12.
- The Guardian*, 'MPs Urge State Holding in Railtrack: Prescott Likely to Consider Plan to Hand Failing Rail Operators to BR.' 19 March 1998, p. 3.
- The Guardian*, 'Passenger Rail at Poor Privatised Train Services: Virgin Among Seven Firms Found to Have Declining Levels of Performance.' 20 February 1998, p. 5.
- The Guardian*, 'Rail Operators Given Warning.' 27 March 1998, p. 4.
- The Guardian*, 'Railtrack Ignores Maintenance Warning: Company on Collision Course With Regulator Over £80m Saving.' 5 March 1998, p. 1.

The Guardian, 'Safety Officials Threaten to Prosecute Railtrack.' 27 March 1998, p. 16.

The Guardian, 'Tough Controls on Rail Sale.' 5 March 1998, p. 12.

The Sunday Times, 'Trains Were Faster in the Last Century.' 3 May 1998, p. 9.

Veljanovski, C., 'The Regulation Game', in C. Veljanovski (ed.) *Regulators and the Market: An Assessment of the Growth of Regulation in the UK*, London: Institute of Economic Affairs, 1991

Vogel, S. K., *Free Markets, More Rules: Regulatory Reform in Advanced Industrial Countries*. Ithaca: Cornell University Press, 1996.

Wilks, S., 'The Amoral Corporation and British Utility Regulation'. *New Political Economy* 2, No. 2 (1997): 279–98.

Windhoff-Héritier, A., *Policy-Analyse. Eine Einführung*, Frankfurt: Campus, 1987.