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BRITAIN'S RAILWAY CRISIS
~ A REVIEW OF THE ARGUMENTS
IN COMPARATIVE PERSPECTIVE

Ian Bartle



UNIVERSITY OF
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**BRITAIN'S RAILWAY CRISIS
A REVIEW OF THE ARGUMENTS IN
COMPARATIVE PERSPECTIVE**

Occasional Paper 20

Ian Bartle

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Further information about the work of the CRI can be obtained from:-

Peter Vass, Director-CRI, School of Management, University of Bath, Bath, BA2 7AY
or

CRI Administrator, Jan Marchant, Tel: 01225 383197, Fax: 01225 383221,
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PREFACE

The CRI is pleased to publish *Britain's Railway Crisis - A Review of the Arguments in Comparative Perspective* by Ian Bartle as CRI Occasional Paper 20. Ian Bartle is a Research Officer at the CRI. His previous research post was in the Department of Politics, University of Exeter.

The railway industry, uniquely among the utilities and network industries privatised since 1984, has found itself described as suffering a 'crisis'. Unfortunately, it has also become the subject of hyperbole and divisive debate, where the rhetoric is often more about politics than analysis. One commentator referred to Railtrack as having suffered a 'collective nervous breakdown' following the Hatfield rail crash. Tom Winsor, the Rail Regulator, captured the tendency when he said in a recent CRI Occasional Lecture¹ that, as a response to the Government's announcement of a further review of the railway industry, "the Cassandras will parade their ignorance, their vendettas and their prejudices". That comment engendered its own reaction, as a glance at the columns of *Modern Railways* and *Rail* magazine will well attest.

Nevertheless, compared with the other essential service industries - water, energy, transport and communications - it is fair to say that there has been a railway crisis, not least measured by the public's perception, reinforced by a succession of Government initiatives and reforms since 1997, following the years of rail privatisation. Whether there is, or has been, a substantive crisis, and, if so, what have been the causes of that crisis, is clearly an important question. Failure in one sector can imperil public confidence and the regulatory framework in relation to all sectors. We need to stand back, document the arguments and assess the issues. This includes the complexity caused by the possibility of multiple causations interacting one with another, and potentially involving industry, regulatory and political failures of various sorts. We hope that Ian Bartle's occasional paper contributes to this analysis, and thereby provides a platform for further research and policy analysis.

We would be pleased to receive comments on the occasional paper, and in order to promote further debate in this area of regulatory practice, the CRI would welcome enquiries or manuscripts to be considered for publication. The views of authors are their own, and do not necessarily represent those of the CRI.

Peter Vass,
Director, CRI
March 2004

¹ Winsor T (2004), *The Future of the Railway Industry Through Effective Independent Regulation*, CRI Occasional Lecture 10, University of Bath, Bath.

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PREAMBLE

A decade after the radical restructuring and privatisation of British Rail it is a commonplace perception that Britain's rail industry is in crisis and that the reforms were flawed. The word 'crisis' is strong and emotive; while undoubtedly the months following the Hatfield crash in October 2000 can be termed a crisis, in fairness to the industry it may paint an exaggerated picture of the problems. Nevertheless, the problems in the rail industry stand out in comparison to the other great network industries which were privatised (telecommunications, gas, water, electricity), although the latter have not been problem-free. This raises a number of questions which are addressed in this paper: What are the chief reasons for the crisis? In comparison to the other utilities to what extent is the rail industry special? How do/should any special characteristics of the rail industry impact on its organisation and regulation? How appropriate for rail is the model of privatisation and regulation developed for the other network utilities? The purpose of this paper is to examine the various arguments on the rail crisis and to place them in the context of the privatisation and regulation of the other utility industries.

For background purposes the paper commences with an outline of the rail industry structure and history up to privatisation in 1994-96. The Labour party was highly critical of the privatisation and there follows a summary of the reforms since the election of the Labour government in 1997 which culminated in the announcement in late 2003 that Network Rail is to carry out all maintenance in-house. To indicate the extent of the crisis, the paper then outlines the main objectives of the reform of the industry with some key performance statistics. In order to assess the crisis in cross-sectoral perspective four possible reasons why the rail industry is different from the other regulated industries are outlined: the need for substantial public subsidy; the industry's particular interface complexity; network capacity limitations; and land scarcity. This is followed by a review and evaluation in cross-sectoral perspective of five arguments about the causes of the crisis: private ownership; fragmentation; regulatory failure; bad management; rushed reform. A sixth argument, that there has been some improvement and the reforms have not been that bad, is then considered.

The paper concludes that most of the arguments have some plausibility though the most substantial and root causes are (i) excessive fragmentation and the industry's interface complexity and (ii) the problems of political, governmental and regulatory management of the large public subsidy. Other problems such as regulatory failure, bad management and rushed reform are separate to a degree but are argued to follow substantially from the two root causes. Ultimately of course the blame for public policy problems can be laid at the government. Governmental failure in the rail sector is evident not only in the flawed model of privatisation and rushed reform but also the failure to set up a clear system of government-regulator-industry relations. Moreover, governmental failure is evident in the current government's lack of conviction about the organisation of the industry as reflected for example in the initiation of another governmental review of the industry in early 2004. It could, for example, be argued that after much upheaval and reorganisation the current model is much more effective. However, it appears that this has been stumbled on, and the government is too often defensive, stressing what change is not - renationalisation or the recreation of British Rail - rather than stressing what they believe it might be - an improvement on the first model of rail privatisation.

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The author would like to thank those who commented on an earlier draft; the comments have been incorporated where appropriate and consistent. Some of the comments will be taken forward to a more narrowly focused study of the rail regulatory framework later in 2004. The latter will particularly examine the issues on regulation which have arisen in the government's review of the industry in 2004.

1 INTRODUCTION

A decade after the radical restructuring, privatisation and market orientated reregulation of the railways in Britain, it is commonplace to hear of the railway industry in crisis. Railways are highly prominent in the media, the BBC, for example, has a web site “*railways in crisis*” and many relatively minor initiatives gain high prominence in the press.¹ Railway reform has been described as a “*policy catastrophe*”² and a “*great rail crisis*”³; the industry has been “*wrecked*” by privatisation⁴ and almost none of the original policy objectives have been achieved.⁵ The regulatory framework for the reformed rail industry has also been strongly criticised. Helm, for example, is particularly critical of institutional structure of rail regulation, as well as the conduct of matters such as the period reviews and the franchising process, while Vass argues that the fragmentation of regulation can create confusion and conflict.^{6 7}

Amongst the regulated utilities and the other transport sectors the rail sector stands out as in crisis. It is true that in the early and mid 1990s there were wide ranging and highly prominent criticisms of utility regulation in general, including huge profits, extremely high directors’ pay, and dubious service quality.⁸ However, while there are still difficulties in other utility sectors, these criticisms have declined. Also while there are problems in all transport sectors, such as congested roads and airspace, and environmental pollution, it is the railways which stand out above all as in crisis. After a decade or two the privatisation of the utility sectors, such as telecommunications, gas, electricity and water, are broadly accepted if not widely loved, but the performance of the private rail industry has given rise to widespread criticism and disenchantment with rail privatisation which appears to be beyond the abilities of the regulatory framework to address.⁹

Many attempts have been made to explain the simple and crucial questions: why is the rail industry in crisis? Why has restructuring and regulatory reform apparently failed? There is a growing literature on the failure of railway reform, the reasons of which vary on a spectrum from a critique of the fundamental principles of the private ownership and liberalisation on the one hand, to criticism only of the implementation. On one end of the spectrum two reasons can be distinguished which relate to the fundamentals of railway privatisation: private ownership and fragmentation. The critique of private ownership strikes right at the heart of the whole reform process while the fragmentation argument strongly criticises the new structures, though private ownership per se is not necessarily wrong. Two less fundamental

¹ BBC (2003), Railways in Crisis, http://news.bbc.co.uk/1/hi/in_depth/uk/2003/railways_in_crisis/default.stm [15 July 2003].

² Moran M (2001), Not Steering but Drowning - Policy Catastrophes and the Regulatory State, *Political Quarterly*, 72:4, pp414-427.

³ Murray A (2001), *Off the Rails, Britain’s Great Rail Crisis - Cause, Consequences and Cure*, Verso, London.

⁴ Wolmar C (2001), *Broken Rails - How Privatisation Wrecked Britain’s Railways*, Aurum, London.

⁵ Haubrich D (2001), UK Rail Privatisation Five Years Down the Line: an Evaluation of Nine Policy Objectives, *Policy & Politics*, 29:3, pp317-36.

⁶ Helm D (2002), A Critique of Rail Regulation, chapter 2, *Utility Regulation and Competition Policy*, (ed) Robinson C, pp19-41, IEA, Elgar, Cheltenham.

⁷ Vass P (2003), The Regulatory Framework - Continuity or Reform, chapter 15, *CRI Regulatory Review 2002/2003*, (ed) Vass P, pp315-349, Centre for the study of Regulated Industries, University of Bath, Bath.

⁸ Bartle I and Wilks S (2002), Utility Regulation, Competition Policy and Regulatory Reform in Britain, chapter 7, *Reforming Public and Corporate Governance: Management and the Market in Australia, Britain and Korea*, (eds) Ahn B, Halligan J and Wilks S, pp123-142, Elgar, Cheltenham.

⁹ Ahn B, Halligan J and Wilks S (2002), Conclusion, chapter 13, *Reforming Public and Corporate Governance: Management and the Market in Australia, Britain and Korea*, (eds) Ahn B, Halligan J and Wilks S, p251, Elgar, Cheltenham.

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but still significant reasons are regulatory failure and bad management, particularly in Railtrack. The regulatory failure argument is that privatisation and restructuring were in themselves fine but the regulatory process and framework put in place were inappropriate and ineffective. A fifth reason is that the process of privatisation was rushed and ineffectively implemented. This reason on its own is not critical of reform itself rather that it was undertaken too quickly and ineffectively implemented. This reason, however, is often combined with others - a rushed process led to bad decisions about the industry structure and the regulatory framework. In fact many critics argue that there were a combination of causes and it is plausible that there has been a unique synergy between the different elements and the overall effect has been much more than a sum of a number of different factors.

Continuing along the spectrum an argument can be added that the railway reform was not a failure and the crisis is more apparent than real, caused by public perception rather than reality. In this perspective the difficulties experienced during and after the reforms were teething problems which will be ironed out. Arguably the safety record, despite the high profile accidents, has improved, and general service levels, and industry efficiency levels have improved since privatisation, though efficiency and performance declined notably after the Hatfield crash in October 2000.¹⁰ Public perceptions of safety and demands for impossibly perfect safety might mask an improving industry. Privatisation and regulatory reform might have also led to greater transparency in the regulatory and industry structure with clearer delineation of responsibilities.

Underlying many critiques of rail reform is the widespread belief that the rail industry has certain special characteristics which make it stand out amongst the utility industries, and even different transport sectors. Four aspects of the rail industry can be distinguished which arguably set it apart. First, and perhaps the most well known, is that it is an inherently loss-making industry dependent on government subsidy, and unlike coal and steel, for example, the supply of rail services cannot be imported, and the British rail industry must be kept in business (although individual companies could be allowed to go bankrupt and taken over by others). Secondly, the rail industry is constrained by highly complex interfaces, a result, in part, of the 170 year legacy of its infrastructure. Significant upgrades, such as new rolling stock or lines, cannot be installed and operated with clearly discrete and limited interfaces; new trains, for example, must be compatible with the tracks, bridges and tunnels, signalling systems and station platforms, most of which were built at different times with different interfacing requirements. Thirdly, there are significant network capacity limitations which have become increasingly evident during the 1990s as a result of the substantial increase in user demand. While other network industries have network problems, none has had its performance compromised by its capacity in similar ways. Fourthly, the rail industry in Britain is also severely constrained by the scarcity of land particularly in densely populated areas of England which also have a high demand for services. This is a serious constraint if the network capacity problems are to be addressed by network expansion. It is much more difficult to develop new lines (such as high speed inter city lines) in England than in countries such as France and Germany which are much less densely populated, and new lines on green field sites are more easily achieved.

This paper commences with a background of the rail industry structures since the inception of the railways and the key recent reforms followed by an outline of the key objectives, service outputs and performance of the industry. The paper follows with an outline of the special features of the rail industry relative to other regulated network industries. It then goes on to

¹⁰ Pollitt M G and Smith A S J (2002), *The Restructuring and Privatisation of British Rail: Was it Really That Bad?*, *Fiscal Studies*, 23:4, pp463-502.

consider the possible causes of the crisis in the light of reform in other regulated sectors and the arguments that the rail industry is special and requires very different organisational structures and regulatory systems. The aim is to attempt to shed light on whether special features of, or arguments about the rail industry are justifiable, and whether or not lessons can be learned in the reforms undertaken in other utility sectors.

2 BACKGROUND: RAIL INDUSTRY STRUCTURES AND REGULATION

The structure and regulation of the rail industry has continually evolved and been subject to frequent policy changes since the advent of passenger railways in 1830 with the opening of the Liverpool to Manchester line. Nevertheless four distinctive periods marked by abrupt policy changes can be distinguished, each of which reflects an organisational model which may be relevant to contemporary policy discussions. The four periods are outlined as follows:

1830 - 1921: The birth and growth of the railways - fragmentation and vertical integration

The structure of the rail industry in its early 19th century years evolved from a number of separate small local lines to something approaching a national network by the mid century. The organisation was geographically fragmented: there were a large number of companies, with up to 200 companies by mid 19th century though most were small local companies. There were a small number of large companies, the biggest four were: London and North Western, Great Western, North Eastern, Midland which accounted for about one third of the railways.¹¹ The companies owned and operated the trains and the track (ie, wheel and track were integrated) and mostly used their own trains on their own tracks but there were some intercompany agreements for the tolls for the use of tracks of other companies.

At first the perception was of competition - with canals, roads and, with line duplication, between different railway companies. But later it appeared to be like a monopoly and thus increasingly regulated. Regulation was provided by a series of acts of parliament and in the late 19th century a regulatory commission.¹² Regulation was mainly of prices charged to railway users, social regulation - ie, the requirement to run certain services at prices affordable by the majority of the population, and safety regulation.

In the first world war the state took charge of the operation of the railways (though not through ownership or by restructuring). This was seen to be successful and led to pressures for amalgamation of companies and integration of operation.

1922 - 1947: Regional integration

There were four regional companies, each being vertically integrated monopolies:

- London, Midland Scotland (LMS);
- London North Eastern Railway (LNER);
- Great Western Railway (GWR);
- Southern.

¹¹ Freeman M and Aldcroft D (1985), *The Atlas of British Railway History*, p33, Croom Helm, London.

¹² Foster C (1992), *Privatisation, Public Ownership and the Regulation of Natural Monopoly*, Blackwell, Oxford.

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In effect, the idea of competition was given up and companies were integrated to minimise administration transaction costs.¹³ Policy and regulation was undertaken by a new Ministry of Transport, together with the pre-existing Railway and Canal Commission and a new Railway Rates Tribunal. Prices and profits were regulated. Despite the desire to draw on the benefits of centralisation in the reform, the ministry had limited powers; a corporatist arrangement was evident with railway and business interest groups playing significant roles in ministry committees.

1948 - 1994: Nationalisation

British Railways was set up in 1948 as a public corporation 'board' model, already established in other sectors prior to World War II. BR was divided into six regions - London Midland, Eastern, North Eastern, Western, Southern and Scottish - which partly reflected the pre-existing regional structure. The multi functional region led by a regional general manager was central to operation of BR. The British Transport Commission was also set up, with responsibility for planning, investment, prices, profits and integration of transport, and was in part a response to the desire to minimise ministerial control of the industry. The overall structure was intended to reap economic benefits of scale and eliminate excess profits.

The apparently simple structure should not hide the many exercises in restructuring and reorganisation that took place within British Rail and its regulatory environment. In 1962, for example, the British Transport Commission was abolished and British Railways board strengthened.¹⁴ In 1967 the regions were reduced to five with the merger of North Eastern and Eastern.

Substantial reorganisation of BR took place under the Conservative government in the 1980s and early 1990s which in retrospect can be seen as moving towards privatisation. The first major thrust was the introduction of 'sector management', the underlying rationale of which involved a shift towards business-led management.¹⁵ Five sectors were introduced - Inter-City; London and South East; Provincial; Freight; and Parcels - each having a director with 'bottom-line' managerial and financial responsibility. The sectors provided the business front, but the regions and regional general managers were not abolished but formed part of a 'matrix' system in which the sectors received, by internal transactions, operational and engineering services from the regions. In general terms, sector management has been seen as positive in subordinating operations and engineering to financial fundamentals. There were nevertheless tensions between the sector directors and regional general managers and doubts as to the extent to which sector directors had captured the 'bottom-line' (Gourvish, 2002, p139).

The next major reform initiative, entitled 'Organising for Quality' (OfQ), built on sector management which was perceived as over complicated and financial responsibility was too centralised and insufficiently focused (Gourvish, 2002, pp374-383). OfQ represented a shift towards a 'profit centre' approach in which all areas were to be business led with designated profit centres having full financial responsibility. A three tier organisation was set up: the

¹³ Lodge M (2002), *On Different Tracks: Designing Railway Regulation in Britain and Germany*, p41, Praeger, Westport.

¹⁴ Gourvish T (1986), *British Railways 1948-1973, A Business History*, Cambridge University Press, Cambridge.

¹⁵ Gourvish T (2002), *British Rail 1974-97: From Integration to Privatisation*, pp103-107, Oxford University Press, Oxford.

board level, business units (including Network South East, Regional Railways, InterCity, Trainload Freight and Railfreight Distribution) and profit centres within the business units (eg in the InterCity business, Central, North East, North West, ScotRail, South Wales and West). Production, operation and financial functions were highly decentralised with responsibility much closer to the operations on the ground and the customer. By April 1992 most of the changes were in place and the organisation ‘represented the full flowering of the business-led, sector management concept in BR introduced on a modest scale in 1982’ (Gourvish, 2002, p383). While some critics argued that OfQ unnecessarily fragmented operations and engineering and introduced too much complexity, many saw it as an excellent manifestation of virtues of flexibility and focusing on core tasks. However, OfQ was not given the opportunity to prove itself; just as it became established, the Conservative government, re-elected in 1992, developed much more radical plans for Britain’s railways.

1994 - 2004: Privatisation, vertical and horizontal separation

The privatisation of the railways was initiated by the Conservative government with a white paper in 1992 (Department of Transport (DoT), 1992) followed by the Railways Act 1993. The main aspects of the reform established between 1994-1997 is shown in the outline of the industry and regulatory structure in **Figure 1**. The central aspect of structural change to the industry involved the separation of the monopoly infrastructure, managed by Railtrack, from train operation, network maintenance, renewals and design, rolling stock ownership and maintenance, all of which were deemed to be competitive and organised into over 50 different companies. The key inter-company relations within the new structure were access to train operating slots provided by Railtrack to the train operating companies; the contracting out of track maintenance and renewals by Railtrack; and the leasing of rolling stock by the rolling stock companies to the train operating companies. The regulatory framework involved an independent regulator, the Rail Regulator, who heads the Office of the Rail Regulator (ORR), modelled on the other utility industry regulators with guidance, but not direction from the DoT, and a franchising office, the Office of Passenger Rail Franchising (OPRAF) under the direction of the DoT. The ORR’s role is to regulate the monopoly infrastructure provider, Railtrack, to licence those who operate railway assets, and to approve the access agreements between the operating companies and Railtrack. OPRAF’s role was to manage the franchising of the train operating companies while the residual British Rail Board managed the train operating companies during the period between 1994 and 1997 up to the time when the franchises were let. The rationale was to reduce government intervention, to enable more managerial autonomy, to promote competition, and to increase transparency of state subsidies and the state involvement by clear policy objectives and independent regulation; all of which was to increase efficiency and performance of the industry.

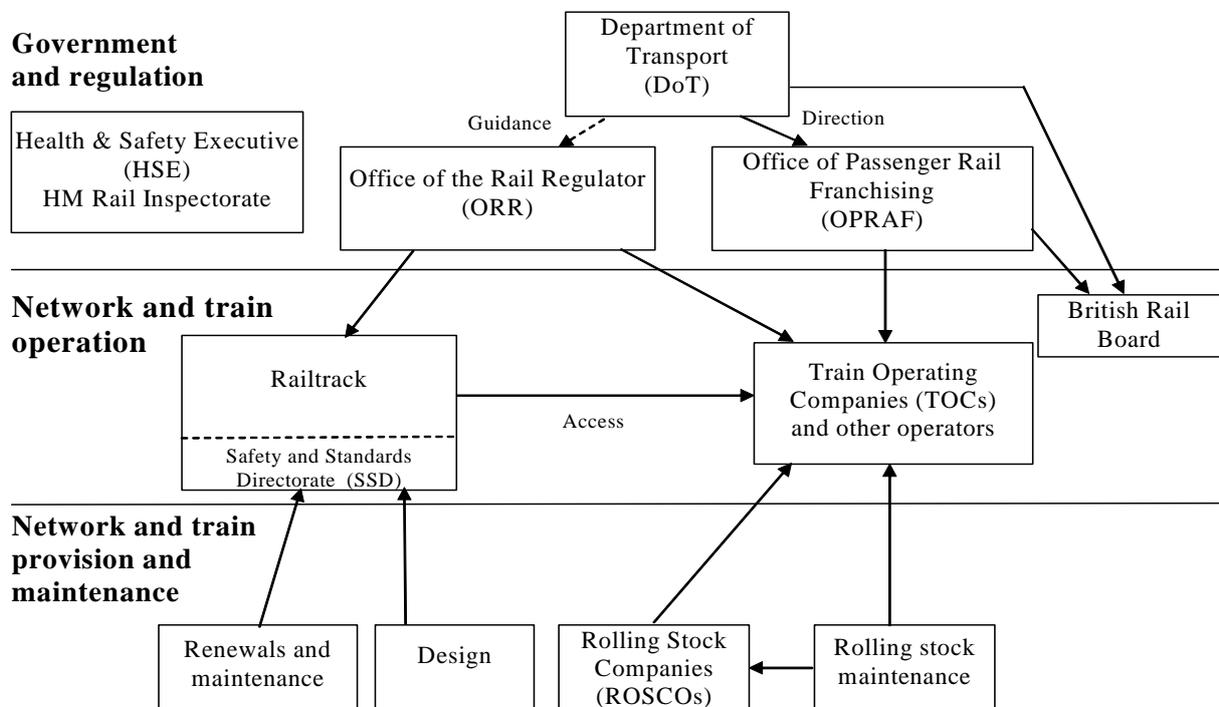
Whilst in opposition up to 1997 the Labour party was highly critical of railway privatisation. Initially renationalisation was on its agenda but this was gradually diluted to reforms to overcome some of the perceived negative aspects of industry fragmentation. In office since 1997 Labour stressed that fragmentation was the central problem (DETR, 1998a), but reintegration and renationalisation would be too expensive and better coordination and regulation would be a better solution. A central aspect of Labour’s agenda was an ‘integrated transport policy’ which, for reasons of the environment and social inclusion, involved a shift from private to public transport, implying significant rail network improvements.¹⁶ In order

¹⁶ Nash C (2002a), Regulatory Reform in Rail Transport-the UK Experience, Swedish Economic Policy Review, 9, pp259-286.

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to attempt to overcome the problems of fragmentation and facilitate network improvements since 1997 there have been a number of significant reforms to the industry and regulatory structure whilst retaining the central structural feature of the privatised industry - the separation of infrastructure from train operation.

Figure 1: Industry and regulatory structure 1994-96¹⁷



Some of the main changes are summarised below and the structure of the industry in 2004 which reflects the changes since 1997 is shown in **Figure 2**. A list of some of the key documents which initiated and reflect key changes produced by the government department, the regulatory agencies, the National Audit Office and Railtrack/Network Rail is given in **Appendix 1**.

1. The establishment of the Strategic Rail Authority (SRA). The SRA, set up by the 2000 Transport Act, has been the most significant institutional reform. It was the response of the new Labour government proposed after a review of railway regulation in 1997. The review concluded that within the rail industry there was a lack of vision, strategic direction, focus and coordination which was provided by British Rail before privatisation but was lacking in the new fragmented structure.¹⁸ The review noted heavy dependence on public subsidy as an important reason for the need for better strategic direction. As well as issues of direction and coordination the SRA took over the responsibility for franchising from the OPRAF. British Railways Board, which managed the train operating companies before the franchises were let, became the BRB (Residuary) Ltd, a wholly owned subsidiary of the SRA, which manages the majority of the remaining property, rights and liabilities of BRB, which were transferred to the SRA on 1st February 2001.

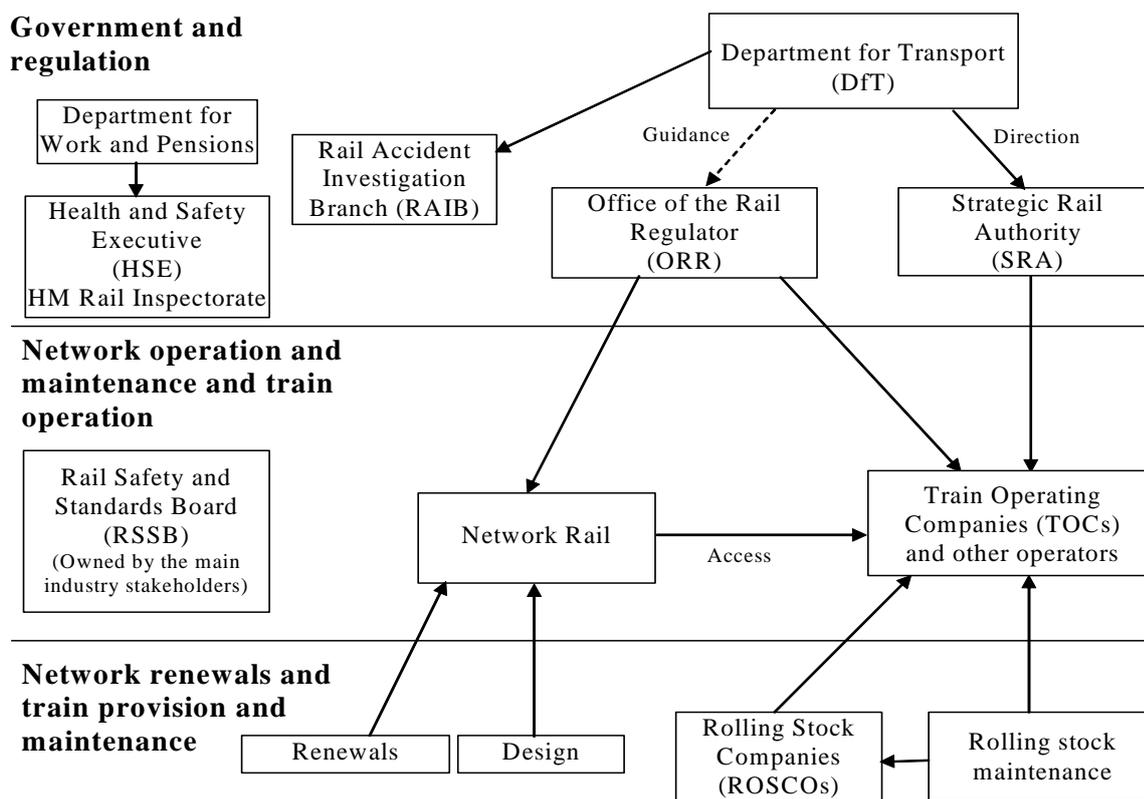
2. A not-for-dividend company Network Rail replaces Railtrack. In 2001, following an application from the government, Railtrack was put into administration and replaced with

¹⁷ Figures 1 and 2 show the principal policy and economic links. The complex interactions between the various safety bodies and the industry are not shown.

¹⁸ DETR (1998a), A New Deal for the Railways, White Paper, September.

Network Rail, a company limited by guarantee (Nash, 2002a). Railtrack was put in administration as it was unable to finance its activities without substantial new funds due to the large increase in expenditure on maintenance and renewals after the Hatfield accident in October 2000 and compensation to the Train Operating Companies (TOCs) for the network speed and capacity reductions. The political controversy was compounded by Railtrack continuing to pay dividends to shareholders after the Hatfield accident.

Figure 2: Industry and regulatory structure 2004



The rationale for the not-for-dividend company is to combine the best features of public and private sectors.¹⁹ It would have sufficient distance from government to prevent day-to-day interference and have access to private finance for expenditure, without recourse to the Treasury for public money which would be the case if it was publicly owned. It would also reduce the possible conflict between commercial and public interests by being more focused on operating, renewing and maintaining an effective railway network.

3. A reformed safety regime. A new safety regime has been established in response to accident reports, most notably the Uff Report into the Southall accident of 1997 and the Cullen report into the Ladbroke Grove, Paddington accident of 1999.²⁰ The Cullen report suggested a large number of reforms including the institutions and organisation of safety, safety case management, training, signalling, train protection, vehicle integrity and accreditation of suppliers and contractors. Two key institutional recommendations were the establishment of a body (independent and separate from the Health and Safety Executive

¹⁹ Grayling T (2001), *Getting Back on Track - Reforming the Ownership and Regulation of Britain's Railways*, IPPR, London.

²⁰ An outline of the safety regime since privatisation and the changes since 2000 is given in annex 1 of Health and Safety Commission (HSC) (2003), *Safety on the Railway - Shaping the Future*, a Discussion Document.

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(HSE)) to investigate rail accidents and an industry safety body wholly separate from the organisation and commercial interests of Railtrack.

The first body, the Rail Accident Investigation Branch (RAIB) (modelled on the Air Accidents Investigation Branch and the Marine Accident Investigation Branch) is being set up by the DfT.²¹ The body will be able to draw lessons from all investigations and will have an oversight role in all industry inquiries and investigations related to accidents. The rationale for the separation from the HSE is that there is potential for conflict within the HSE between its roles as a regulator and enforcement of safety and the investigation of accidents. The HSE nevertheless will continue to investigate accidents for the purpose of enforcement of safety legislation and is working with the RAIB to ensure clear working protocols when it begins work.

The second body, the Rail Safety and Standards Board (RSSB) was established in 2003 and replaced Railway Safety (a wholly owned subsidiary of Railtrack), which in 2000 replaced the Safety and Standards Directorate of Railtrack. The RSSB is a company limited by guarantee and owned by the main industry stakeholders - Network Rail, the train and freight operating companies, the rolling stock companies and the major infrastructure contractors.²² The RSSB's main activities include the development of the Railway Group Safety Plan, leading a long-term safety strategy and setting up and maintaining existing Railway Group Standards. In December 2003 a new Railway Group Standards Code was approved by the rail regulator and came into force on 19 January 2004.

A key related aspect of this institutional reform is a change to the safety case procedure from the 'cascade' system, ie, Railtrack was responsible for assessment and acceptance of the Train Operating Companies' safety cases and the HSE was responsible for Railtrack's safety cases. In 2000 the HSE took over the responsibility for the assessment and acceptance of all the safety cases with the requirement that Railtrack undertake a further assessment of the safety case. In 2003 the latter requirement was removed to simplify the procedure and safety case assessment became entirely a matter for the HSE.

4. Better network stewardship and maintenance. As a result of train accidents and problems of investment in the network there have been initiatives to improve Network Rail's stewardship of the network. In terms of industry structure one of the most notable changes was bringing all maintenance in-house from the maintenance contractors.²³ This was announced in October 2003 and involves a phased transfer scheduled for completion in 2004. This is to enable Network Rail develop better knowledge of the maintenance process and its assets in order to improve its stewardship of the network. Regulatory reforms have also been undertaken to improve network stewardship.

5. Regulatory reform. With the aim of improving network stewardship and investment programmes the regulator has instituted a much more rigorous regime to gain knowledge of the assets of Network Rail. A key reform initiated in 1999 was the reform of the network licence which was brought more in line with the other network utilities.²⁴ For better knowledge and management of assets licence changes included an annual return from

²¹ DfT (2001), Railways and Transport Safety Bill, Regulatory Impact Assessment; DfT (2004), Accident Investigation, www.dft.gov.uk, February.

²² See the RSSB web site www.rssb.co.uk

²³ Network Rail (2003), Network Rail 2003 Business Plan; Financial Times (2003), Network Rail to Take £1.3bn Track Maintenance Contracts in House, p1, 24 October.

²⁴ Plummer P (2001), Rail Regulation, chapter 5, CRI Regulatory Review 2000-2001, (ed) Vass P, pp91-109, Centre for the study of Regulated Industries, University of Bath, Bath.

Network Rail to the regulator of performance, condition and serviceability of its assets together with a comprehensive register of its assets. In addition the regulator has also reformed the contract regime between Network Rail and the train operators. In order to strengthen, standardise and simplify the contract regime a template model for a track access contract has been developed and was published in 2003.²⁵

6. Franchising reform. The franchising system set up after privatisation while leading to some benefits has become increasingly problematic. There were some successes such as a buoyant interest in bidding for the franchises between 1995 and 1997 after initial hesitation, substantial investment in new rolling stock, stronger marketing and passenger growth.²⁶ Nevertheless there have been significant problems such as poor performance and reliability, subsidies considerably higher than the franchise bids, and difficulty of incentivising output improvements. The franchising system and the TOCs themselves are not necessarily the root causes of the problems; serious network constraints and the post Hatfield problems have meant a considerably deteriorated operating environment for the TOCs. New franchising agreements are being developed by the SRA which represent a move from the specification of a regulated minimum service towards more precise specification of a franchise in terms of services to be run and performance standards to be met, and taking a more industry-wide view due to network capacity constraints. Reform will also include the simplification of franchises operating from London. The SRA intends to establish single operators out of London termini, initially creating Greater Anglia (Liverpool Street), Greater Western (Paddington) and South West (Waterloo) with possible later changes at Euston and Kings Cross.

7. Better integration. In addition to the establishment of the SRA and bringing maintenance in-house, there have been several initiatives to counter the problems of poor coordination and cross-industry cooperation created by fragmentation. A Wheel Rail Interface System Authority has been established including Network Rail, train operating companies and ROSCOs. In order to counter the problem of fragmentation and loss of knowledge cross-industry bodies - the Rail Skills Board and the Centres for Rail Skills - were set up 2002-03.²⁷ There have also been substantial modifications to regulation to improve inter alia the relationships between Network Rail and the train operating companies. These include changes to the network licence between 2000 - 2003, an improved network management statement (included in Network Rail's annual business plan) by Network Rail including better information for the train operators, and the development of model access clauses by the ORR, designed to simplify and streamline access of train operators to the network.²⁸

²⁵ ORR (2003a), Office of the Rail Regulator, Annual Report 2002-2003.

²⁶ SRA (2002), Franchising Policy Statement; Shaw, J (2000a) Competition, Regulation and the Privatisation of British Rail, pp103-129, Ashgate, Aldershot.

²⁷ Modern Railways (2003), What's in a Name?, p28, September.

²⁸ DfT (2003a), Network Licence Granted to Railtrack plc, including modifications up to 1 April 2003.

3 OBJECTIVES, SERVICE OUTPUTS AND THE PERCEIVED PROBLEMS

As Haubrich (2001) notes, the identification of policy objectives for the reform of the railways is not an easy task. Privatisation and restructuring was an extensive programme with a variety of objectives which varied over time. The stress of the original reformers in the early 1990s was the reduction and transparency of the state subsidy, and more efficient management and improved service quality that would arise from efficiency.^{29 30} Under the Labour government since 1997, long term investment and an increase in the use of rail transport for environmental reasons have been stressed in the white papers in 1998, and in 2000 the Transport Ten Year Plan and the Transport Act 2000 (DETR, 1998a).³¹ In addition, while safety has always been important it has risen in profile since the series of accidents between 1997 and 2000 (Southall, Ladbroke Grove and Hatfield).

From the above, six key policy objectives can be identified: service quality; efficiency; transparent and declining state subsidies; increasing investment; increasing rail share of transport; and improved safety. The objectives and the extent to which they have been achieved are summarised in the following.

Service quality

The improvement of services to passengers is very obviously and fundamentally a key objective. Although the reforms of the 1980s led to significant improvement, the report on the 1988 Clapham Junction accident concluded inter alia the poor state of the network and underinvestment (Lodge, 2002, pp122-123; Gourvish, 2002). Although it suited its agenda, the government appeared to have good reason to argue that the quality of the nationalised British Rail failed to meet public expectations (DoT, 1992). The post Hatfield crisis and current problems are also a reflection of the perceived continuing poor service quality. There are several measures of service quality such as reliability and punctuality, comfort and cleanliness, seat availability and crowding, information availability and clarity, all of which have been given different levels of emphasis at different times by different parties.

The most distinctive performance measure stressed by the regulators has been reliability and punctuality of the train operators. Reliability and punctuality have had a high profile partly because they are central to the performance incentive regimes of the TOCs. The SRA's 'Public Performance Measure' is a composite series of figures since 2000 to measure reliability and punctuality.³² A key figure of the public performance measure is the percentage of trains arriving on time (defined as long distance trains arriving within 10 minutes of timetable and regional and shorter distance trains within 5 minutes). **Figure 3** is a summary of performance by this measure since 1997. The large fall in 2000-01 reflects the crisis after the Hatfield accident and although the figures for 2002-03 are still a long way behind the pre-Hatfield figures, the SRA stresses that there has been some improvement since

²⁹ DoT (1992), *New Opportunities for the Railways, The Privatisation of British Rail, White Paper*, July.

³⁰ DoT (1993), *Railways Act 1993*.

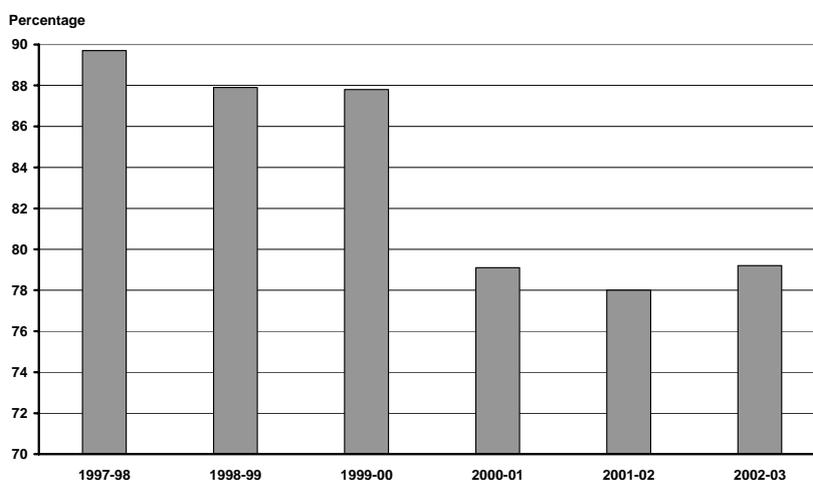
³¹ DETR (1998b), *New Deal for Transport - Better for Everyone, White Paper* July; DETR (2000a), *Transport 2010. The 10 Year Plan*, July 2000 and DETR (2000b), *Transport Act 2000*.

³² SRA (2003a), *Ontrack - Rail Performance Trends*, October 2002 to March 2003.

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2001 and that its policy to make better use of the network capacity should show more improvements in the coming years.

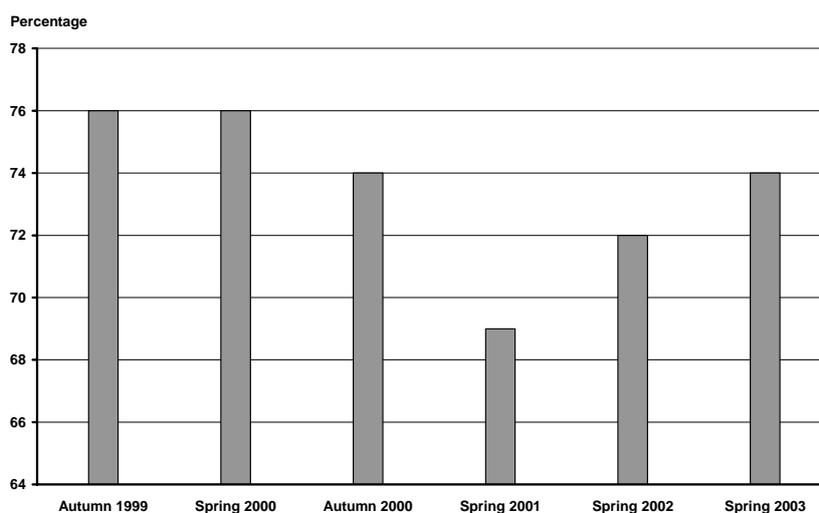
Figure 3: Percentage of trains arriving on time



Source: SRA, 2003b, p15

Overcrowding has risen in profile as a performance problem highlighted, for example, in the House of Commons Transport Committee's report 'Overcrowding on Public Transport'.³³ The SRA's measure of overcrowding is 'Passengers in Excess of Capacity' and focuses on excesses in the morning and evening peaks and notes a fall in the excess from 3.6% in 2001 to 2.9% in 2002. However, the impression of a steady decline in overcrowding is contradicted by the House of Commons report that notes that overcrowding in the London area despite a fall in 2002 is higher than 1998 and 1999. Also a *Which?* report rail passenger survey noted a significant increase (45% to 56%) of the number of commuters who experience trains in which some passengers have to stand every day.³⁴

Figure 4: Satisfaction level - overall opinion of journey



Source: SRA, 2003a

³³ House of Commons (2003), Transport Committee, Overcrowding on Public Transport, Seventh Report of Session 2002-03, Volume 1, 15 October.

³⁴ Which (2003), On the Wrong Track, pp10-13, September.

A further way of measuring performance is by surveys of passenger satisfaction (see **Figure 4**). Since 1999 the SRA has carried out a National Passenger Survey, the aggregated (theme and type of train journey) results of which are shown in the table. The SRA figures, which indicate only a small fall in overall satisfaction, however, are contradicted by the 2003 *Which?* report survey which noted a much more significant fall in the level of passenger satisfaction (though the SRA dismisses the report as “*incomplete and inaccurate*”).³⁵ The *Which?* survey appears to be more consistent with the number of passenger complaints which the SRA notes increased by 8% between 2001 and 2003.

Efficiency

Improved efficiency (ie, unit output costs) was clearly a central objective of the original reformers and remains a key objective of the current policy-makers and regulators. However, efficiency changes in the rail industry, particularly over longer periods, are extremely difficult to measure. As Haubrich (2001) observes, the outputs of railway companies are produced by complex processes and it is difficult to compare outputs of different firms and the same firm over time. It is also difficult to make pre and post-privatisation comparisons because of the structural differences and to compare post-privatisation efficiency with the counterfactual of the continuation of the nationalised BR.

Despite these difficulties attempts to assess efficiency have been made by Haubrich (2001) and Pollitt and Smith (2002). Haubrich (**Table 1**) considers two measures: passenger revenue per employee, which has risen significantly after privatisation, indicating increased efficiency; and government subsidy per passenger km, which has increased, indicating a fall in efficiency. These figures are, however, of limited use as Haubrich recognises: the increase in contracting out will increase the passenger revenue per employee without necessarily increasing efficiency while different government financing regimes make direct comparison of government subsidy difficult. Pollitt and Smith (2002) (**Table 2**) assess the efficiency savings made on total costs up to 2000 in comparison to the counterfactual case if privatisation had not taken place which uses data from the period 1988/89-1992/93. These figures, however, have to be treated with caution due to the problem of not knowing the counterfactual. Also the efficiency of the privatised industry might have appeared less favourable if the prior 5 year period (1983-88) had been chosen as BR was widely seen to have performed better in this period (Gourvish, 2002; Harris and Godward, 1997).

Table 1: Efficiency

	1986-87	1998-99
Passenger revenue per employee	100	280
Government subsidy per passenger km	100	120

(base 100 1986-87)

Source: Haubrich, 2001

³⁵ SRA (2003b), The Which? Report, No End in Sight for Misery of Rail Commuters, SRA response, 3 Sept.

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Table 2: Efficiency savings

	Up to 2000	Future: 2000 - 2015	Total privatisation to 2015
Efficiency gain (loss)	800	1,700	2,500
Restructuring costs	(1,400)	-	(1,400)
Net efficiency gain (loss)	(600)	1,700	1,100

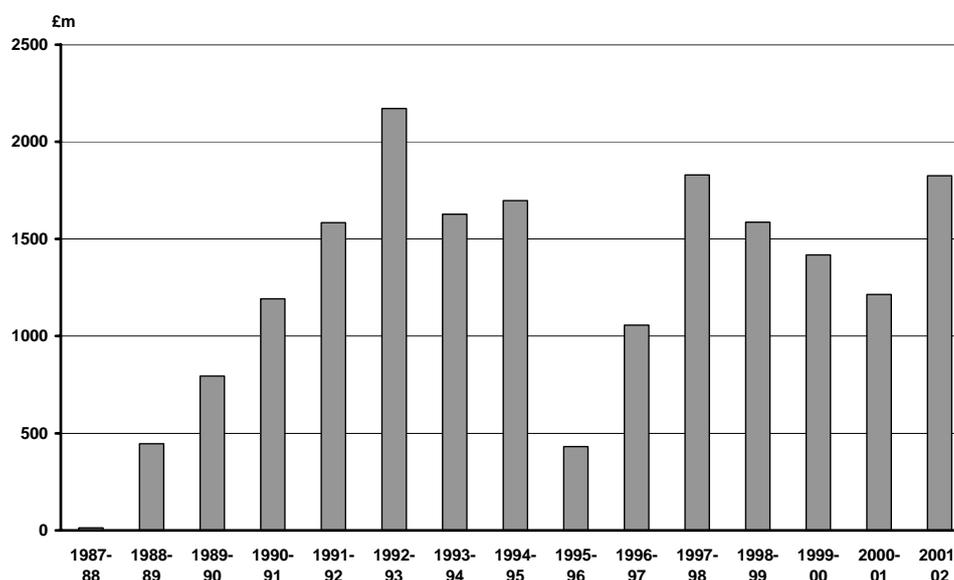
(£m 1999-2000 prices; 6% discount rate; counterfactual - BR remaining nationalised - 1% annual efficiency gain)

Source: Pollitt and Smith, 2002, p483

Transparent subsidy regime

The objective of creating a transparent subsidy regime is to highlight clearly the destination of the subsidy in order to assess whether the government is getting value for its money and to create effective incentives to the reduction of the subsidy. Fragmentation has enabled subsidies per passenger mile to be much more visible in that figures are available for each train operator (Haubrich, 2001; SRA, 2003a).

Figure 5: Total government support to the rail industry (£m)

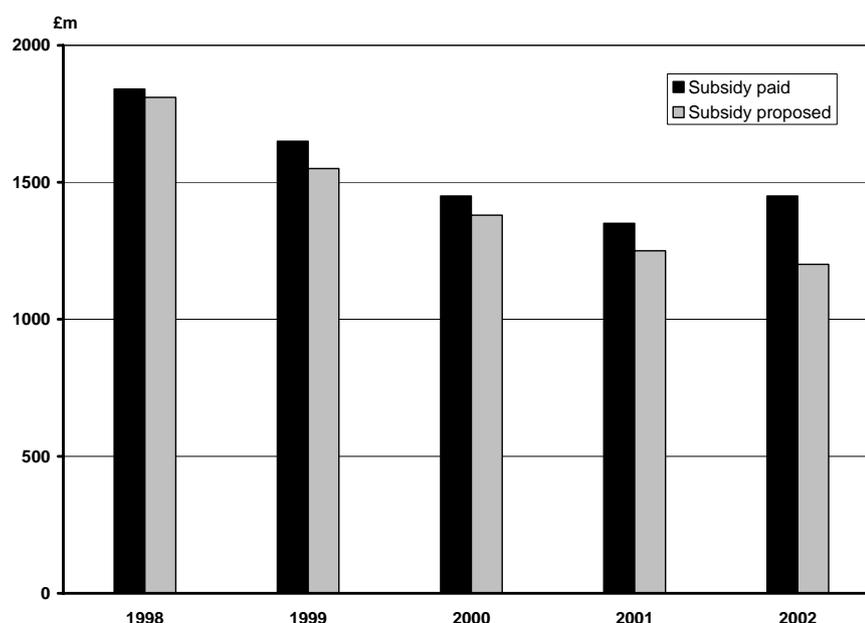


Source: SRA, 2003b, p31

The extent to which transparency and subsidy fall has been fully achieved is, however, open to question. First, the ultimate beneficiary of the subsidy is far from transparent as funds indirectly reach Railtrack/Network Rail and others such as the rolling stock companies (Haubrich, 2001). While the channelling of track access charges to Railtrack/Network Rail is transparent in the periodic review conclusions, it is difficult to be clear what aspect of a service is loss-making - is it the TOC, the network operator or the rolling stock company? Also the 2000 periodic review, implemented from April 2001, introduced the possibility of

direct grants to Railtrack/Network Rail which added a further dimension to the complexity.³⁶ Second, the government subsidy shows no sign of long term decline; **Figure 5** shows the total government support for the rail industry since 1987. Most notably since the Hatfield crash in 2000 the requirement for government support has increased steeply and Railtrack received a grant of £499m in 2001-02.³⁷ Also as indicated in **Figure 6** the overall subsidy paid to the TOCs has been greater than the franchise bids and has risen significantly in the aftermath of Hatfield and this figure excludes the additional direct grants to Network Rail.

Figure 6: Total subsidy paid to TOCs versus proposed subsidy in franchise bids



Source: SRA (2002).

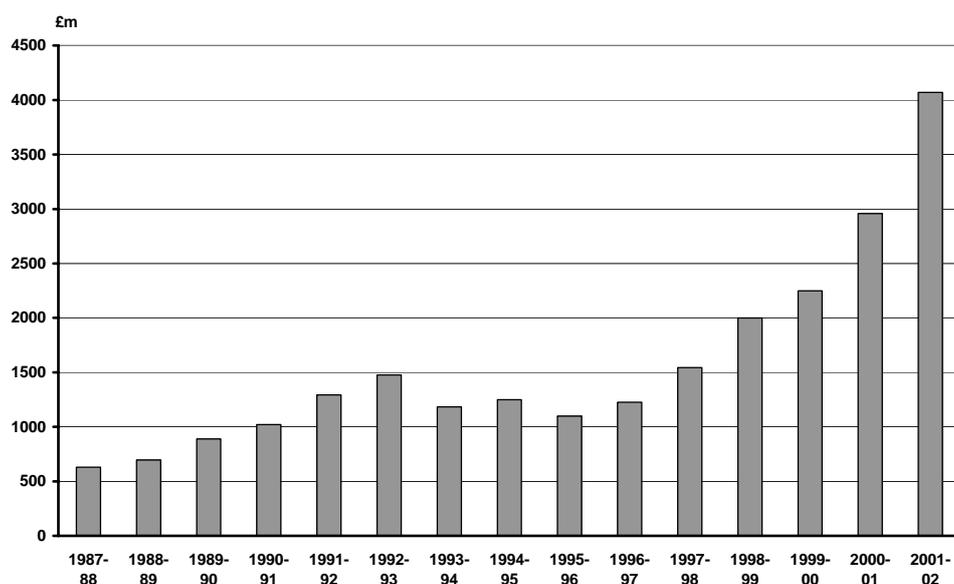
Increasing investment

The rail industry in the UK is generally perceived to have suffered from historic underinvestment thus a key objective of reform has been to increase investment. Privatisation would not only remove the industry from government financing limits but also open the door for the investment of private capital (Haubrich, 2001). Total rail industry investment since 1987 is given in **Figure 7**, the figures include rolling stock, track renewals, new routes and electrification, signalling, buildings, plant and equipment and exclude depreciation (SRA, 2003b). While Haubrich (2001) notes that the objective of increased investment up to 1999 has not been accomplished, the record since 1999 appears to be better and reflects the increased emphasis on investment since and recognition of historic underinvestment which became more and more apparent with traffic growth in the 1990s. However, the figures should be treated with a degree of caution as definitions of investment have varied over the years.

³⁶ Smith J (2003a), Rail Regulation, chapter 5, CRI Regulatory Review 2002/2003, (ed) Vass P, pp85-122, Centre for the study of Regulated Industries, University of Bath, Bath.

³⁷ SRA (2003c) National Rail Trends, January to March 2003, p31.

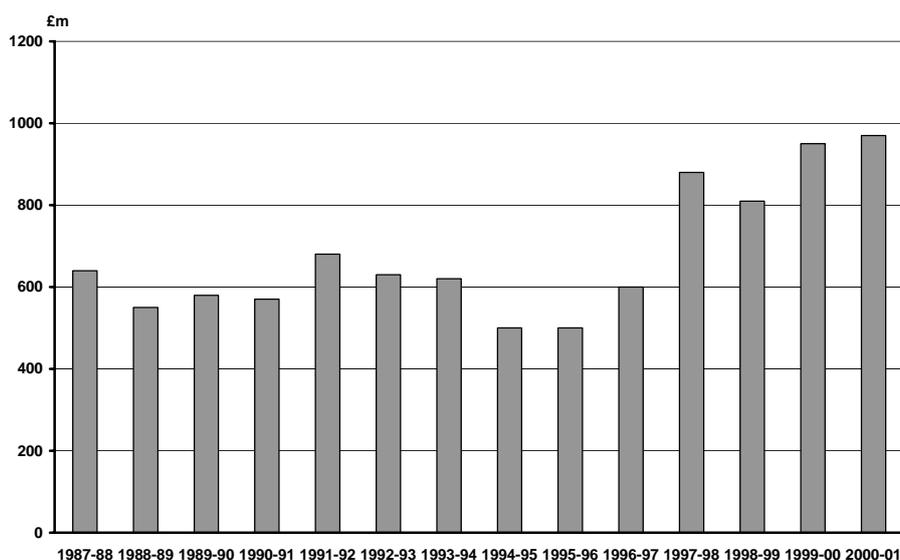
Figure 7: Total rail industry investment: £m (nominal prices)



Source: SRA, 2003b, p32

Moreover, in recent years a substantial amount of investment has been on track renewals the inclusion of which as investment is questionable given that renewals maintain rather than enhance the network's capacity and performance. Also a significant element of the latter is the post-Hatfield renewal programme which was substantially funded by the government. The level of investment on infrastructure and length of track renewed each year reflect this trend with a fall in the first three years after privatisation, a subsequent increase from 1998 with a massive increase after the Hatfield crash in late 2000 (see **Figure 8**). The figures for rail renewals (see **Figure 9**) with the current track km of about 32000 should be 800km/year has not been maintained since 1985.³⁸

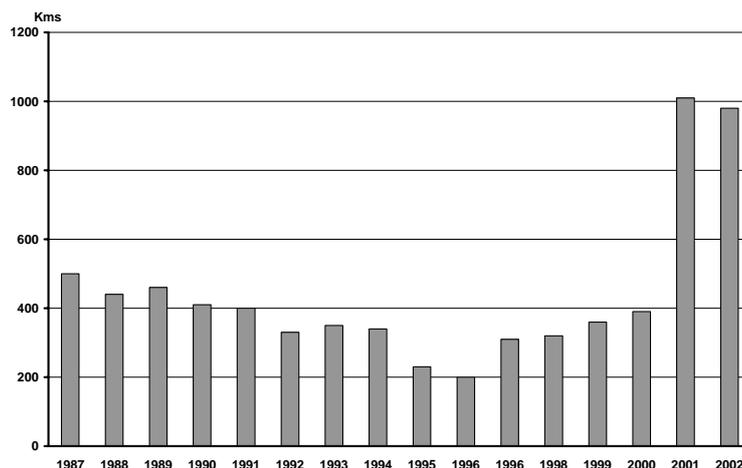
Figure 8: Infrastructure renewals expenditure: £m (2003-04 prices)



Source: Ford, 2003a³⁹

³⁸ Ford R (2003a), Rail Renewals - Time to Play Catch Up, Modern Railways, p21, May.

³⁹ Ford R (2003b), BR Infrastructure Maintenance Spend Shock, Modern Railways, pp16-18, August.

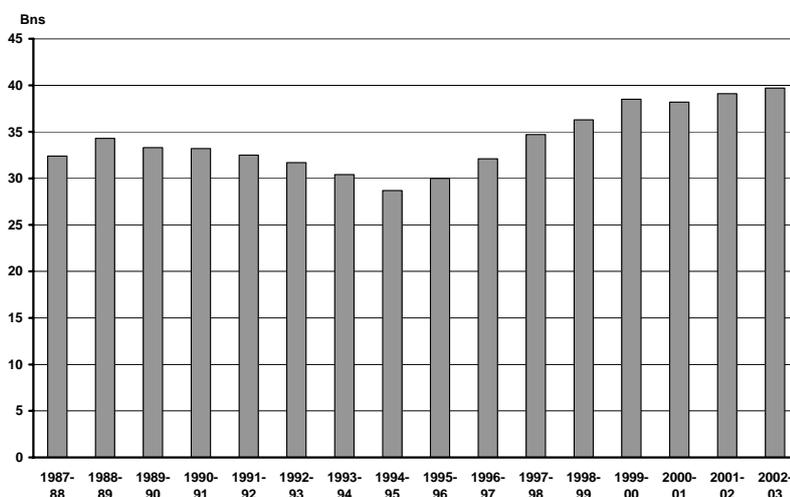
Figure 9: Rail renewals: km of track per year (approx)

Source: Ford, 2003b

Increasing rail share of transport - better environment

The objective of increasing the railway's overall share of transport has gained in salience since the Labour government came to power in 1997 reflected notably in the 1998 White Paper on transport (DETR, 1998b). The original policy makers were less explicit about this objective but nevertheless expected that an improved service after privatisation would attract road users onto the railways and reduce pollution and road congestion.

Since the mid 1990s there has been a significant increase in rail usage which is reflected in the level of passenger kilometres and freight traffic shown in **Figures 10 and 11**. These increases are also exemplified by an increase in rail's overall share of transport usage which increased from 5.1% in the early 1990s to 6% in the late 1990s (Haubrich, 2001). Figures from the DfT's 2002 National Travel Survey paint a slightly more modest picture of rail's share of transport, and thus environmental improvements: between 1991/93 and 2002 rail's overall share of the average distance travelled increased from 4.8% to 5.3%, however, in the same period car journeys increased from 76.4% to 77.9% and air travel also increased.⁴⁰

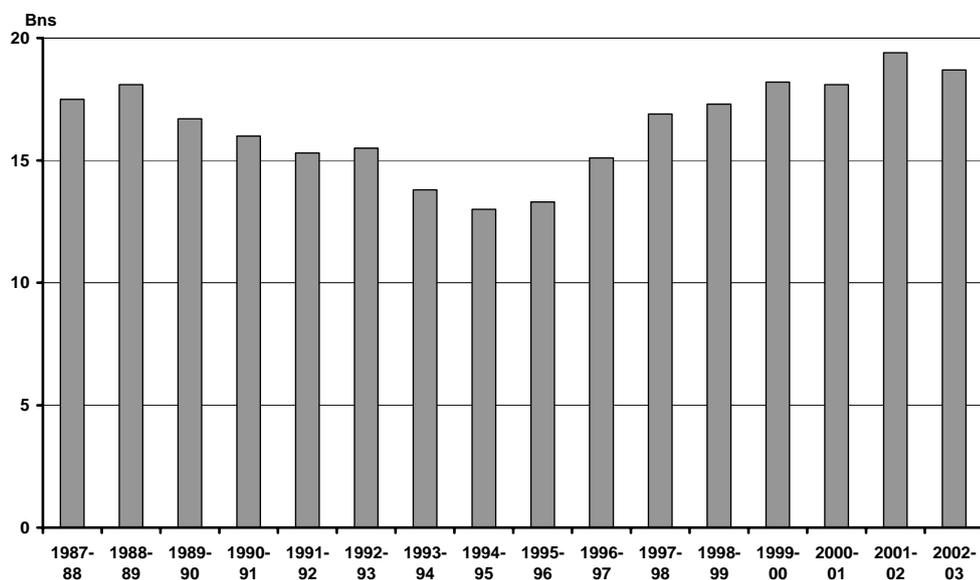
Figure 10: Total passenger km (billions)

Source: SRA, 2003b, p3

⁴⁰ DfT (2003b), Transport Statistics Bulletin, National Travel Survey, 2002 Provisional Results, Table 4, p6.

The overall message is that this objective has been modestly achieved. Of course the increases cannot easily be attributed to improvements since privatisation; the improvement of the economy and increased economic activity, and increasing congestion on the roads are possible explanations.

Figure 11: Total freight traffic net tonne-km (billions)



Source: SRA, 2003b, p26.

Improved safety

A high and improving level of safety has always been a key objective of the rail industry and is visible in the secular decline in the number of deaths on the railways. Over a 35 year period from 1967 to 2003 the number of fatal train accidents per passenger km has fallen by 80%, though in recent years the number of fatalities in each accident has shown a small rise.^{41 42}

The record before and after privatisation is mixed and open to different interpretations. **Figure 12** shows the number of deaths caused by 'train incidents', ie, where the prime cause is a train fault excluding, for example, trespassers and suicides, passengers falling from doors and fatalities at level crossings.

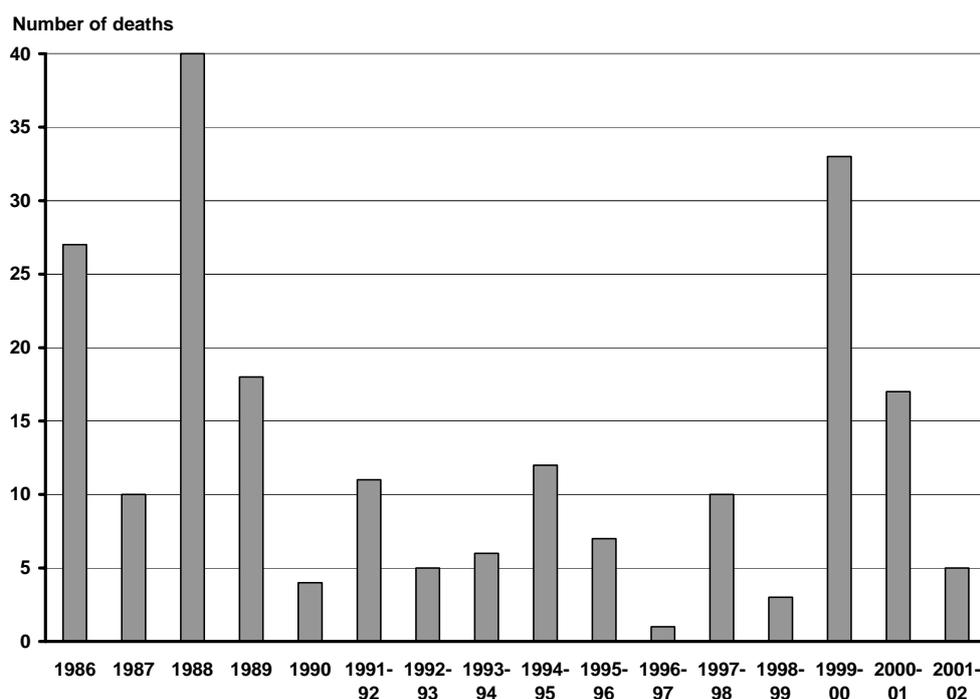
The figures can be interpreted variously in relation to privatisation (see **Table 3** and **Figure 13**). For example, positively for privatisation the total number of fatalities in the 8 year period (1986-1994) before privatisation was 121 while the number in the 8 year period (1994-2002) following privatisation was 88. However, negatively for privatisation, the number (26) in the 4 year period before privatisation was slightly below the number (30) in the 4 year period after privatisation and, more distinctively, the large increase in the number (58) in the second 4 year period of privatisation. The point about comparing the different sets of figures is to indicate the need to treat the statistics about safety and privatisation with a degree of caution due to the wide annual variation and the questionable statistical significance of the 8 and 4 year periods selected.

⁴¹ SRA (2003d), Everyone's Railway: The Wider Case for Rail.

⁴² Evans A (2002), Are Train Accident Risks Increasing?, Modern Railways, pp49-51, August.

It is therefore difficult to be conclusive about the impact of privatisation and restructuring on safety. The figures nevertheless raise legitimate questions such as, did the increase in the 1998-2002 period reflect ‘accidents waiting to happen’ as a result of the misconceived privatisation and fragmentation of the industry (Wolmar, 2001)? Or have the problems of the late 1990s and early 2000s (which reflect particularly the Southall (1997), Paddington (1999) and Hatfield (2000) accidents) been addressed by the reforms to the safety regimes recommended by the crash inquiries?

Figure 12: Deaths caused by train incidents



Source: HSE, 2002 ⁴³

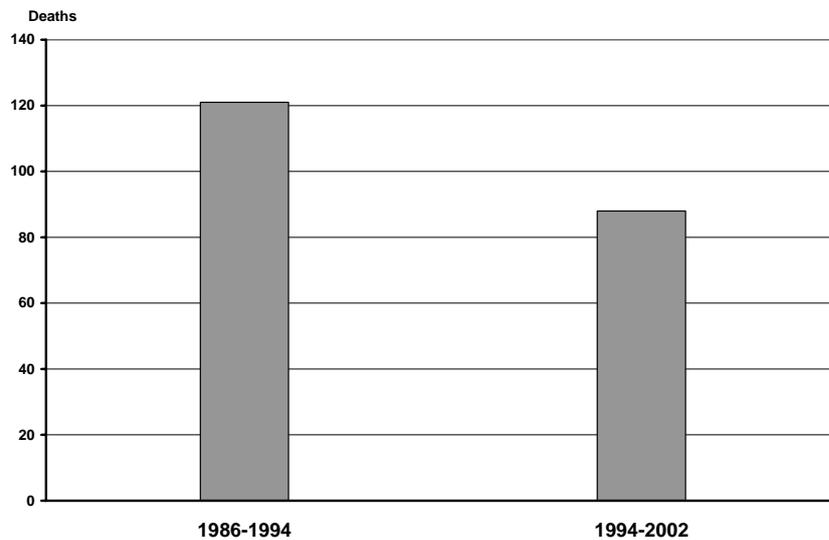
Table 3: Train incident deaths in relation to privatisation

Period	Number
8 years before (1986-1994)	121
8 years after (1994-2002)	88
4 years before (1990-1994)	26
4 years after (1994-1998)	30
First 4 years of privatisation (1994-1998)	30
Second 4 years of privatisation (1998-2002)	58

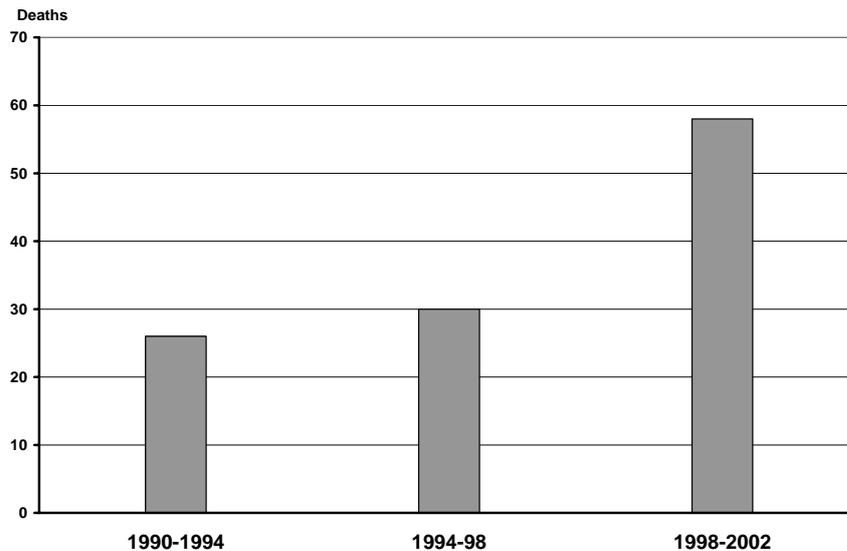
⁴³ HSE (2002), Railway Safety 2001/02, www.hse.gov.uk

Figure 13: Deceiving with statistics: two interpretations of railway safety post- privatisation

An 8 year perspective on post-privatisation rail safety



A 4 year perspective on post-privatisation rail safety



The six policy objectives - a summary

The extent of the achievement of the six policy objectives is summarised as follows:

1. Service quality - not achieved

There has been a clear reduction in quality, particularly after the Hatfield accident.

2. Efficiency - unclear

There is some evidence of efficiency improvements pre Hatfield but they appear subsequently to have fallen.

3. Transparent subsidy regime - partly achieved

Some transparency improvements but destination of subsidy still not fully clear. The hoped for reduction of subsidy requirement not achieved.

4. Increased investment - partly achieved

Investment has increased but much of this is from government, particularly post Hatfield. Also there are definitional problems of investment.

5. Rail share of transport - partly achieved

Rail share has increased by a small amount, but usage of car and air transport also increased.

6. Improved safety - unclear

Evidence can be interpreted in different ways.

In summary none of the policy objectives have been unequivocally achieved. Improvements in service quality have clearly not been achieved; efficiency and safety are unclear; while the other objectives have at best only been partly achieved.

4 SPECIAL FEATURES OF THE RAIL INDUSTRY

Analysis of the rail sector from a comparative perspective requires identification of characteristics which distinguish it from other regulated industries. This is important given that underlying many critiques of rail reform is the belief that the rail industry is fundamentally different from the other utilities and transport sectors and the established model of privatisation and regulation might not be appropriate for rail. Rail industry analysts often perceive unique characteristics of the rail industry and are resistant to advice and new ideas from outside. This is often tacitly assumed by analysts of the railways, but not stated explicitly in comparison to other sectors. For example, “*but for the railways key issues are engineering and people*” (as if they aren’t for other sectors), and “*because the railways are such an inherently integrated industry*” (Wolmar, 2001, pp176, 256) (ie, much more so than other sectors). Rail industry experts are imbued with a sense of the specialness of the sector (though many other sector experts are) and are inherently suspicious of outside ideas, “*The facile prescriptions of many newcomers ... were bound to irritate*” (Gourvish, 2002, p435).

The extent to which the rail industry is unique, however, can be questioned and a critical mindset is required when examining the rail industry in this manner. In particular, issues in the rail industry are seldom explicitly addressed in a cross-sectoral manner, an approach which could be illuminating. Most academic studies of the rail industry tend to be single sector in approach, often single country, though cross-national analysis is well established. Cross-sectoral analysis tends to be limited to comparisons with the utility privatisation programme of the 1980s (Shaw, 2000a; Lodge, 2002). They show how the impetus for rail privatisation came from the privatisation of the other utilities in the 1980s and the desire for fragmentation came from the perceived limitations of the privatisations such as British Telecommunications and British Gas which were sold off in one piece. While the designers of rail privatisation drew somewhat from the other utilities there are few systematic comparisons of rail regulation with other sectors. One comparison of the rail and water sectors notes that both required substantial investment with clear public service obligations and were controversial privatisations.⁴⁴ The fragmented structure, ineffective regulation and politically determined rushed process contributed to the crisis in the rail industry. In addition while the government faced up to the scale of investment required in the water industry it was unwilling to do so in rail, which could be connected to the rushed and complex privatisation. Also while it was possible to finance water investment from customer charges (though not without some controversy), similar financing rail investment would have been untenable. Also it was widely assumed that the industry would continue to decline.

Four features of the rail industry can be distinguished which arguably set it apart:

- the need for large public subsidy;
- the industry’s particular interface complexity;
- land scarcity;
- network capacity constraints.

⁴⁴ Smith J (2003b), What Have We Learnt? A Comparative Perspective of Water and Rail, chapter 7, The UK Model of Utility Regulation: A 20th Anniversary Collection to mark the ‘Littlechild Report’ - Retrospect and Prospect, Proceedings of a CRI, London Business School and City University London conference, (ed) Bartle I, pp87-120, Centre for the study of Regulated Industries, University of Bath, Bath.

Public subsidy

The first apparently unique feature of the rail industry is that it is an inherently loss-making industry dependent on substantial government subsidy. This clearly sets the industry apart from other privatised utilities, though not necessarily two other transport modes - road and air. State funded road building and maintenance can be compared to the rail subsidy but spending on roads is seen as an investment in public infrastructure, whereas spending on rail is a subsidy of a private company. Also the lack of tax on aviation fuel could be considered an indirect subsidy. Rail is also set apart from other one-time loss-making industries such as coal and steel as rail services cannot be imported, and the British rail industry must be kept in business, although individual companies could be allowed to go bankrupt and taken over. Another reason for public subsidy is that some services, such as many local and regional services are inherently loss-making because of low usage but are kept in service for social reasons.

Interface complexity

The second way in which the rail industry appears to stand apart is its interface complexity, which is much greater than other network industries and integrated operation is a greater imperative. The industry is constrained by highly complex interfaces, a result, in part, of the 170 year legacy of its infrastructure. Significant network enhancements, such as new rolling stock or lines, cannot be installed and operated with clearly discrete and limited interfaces: new trains, for example, must be compatible with the tracks, bridges and tunnels, signalling systems and station platforms, most of which were built at different times with different interfacing requirements. The wheel-rail interface can also create a different set of problems for different types of train. The long history of the industry has also bequeathed a vast variety of assets which, with over 700 asset categories, has made the compilation of a credible asset register an extremely difficult task. Interface complexity is compounded by the requirement for a train service to have a path on a specific route at a specific time. This does not apply in the other utility industries such as gas, electricity and water, though there are some parallels with telecommunications (the need to connect two points) but new IT and communications technology has eased network problems (Nash, 2002a). Interface complexity is particularly acute in areas of high network density, such as Clapham Junction and Birmingham New Street, areas which are compounded by the problem of land scarcity, discussed below.

Complexity per se is evident in other industries but their interfaces are more clearly defined. Nuclear power generation is an example of complexity in another utility sector which has led to serious performance problems, particularly in the construction programmes of some of the stations built in the 1960s and 1970s. Nevertheless the interfaces between nuclear power and the rest of the electricity supply system are much more discrete and clearly defined than the interfaces in the rail industry. The main interface is the steam output of the nuclear boilers which is set at a particular temperature and pressure and then feeds to a turbine-generator which is much the same as others in conventional power stations. Nuclear reactor developments had their problems but the limited interfaces meant that they did not cascade through the electricity supply system.

The inherent interface complexity has also been compounded by the highly complex structure of the privatised industry. For example, there are special difficulties with the contracting out of maintenance which include close coordination required for working on the track whilst trains are operating and the need for the network operator to have detailed knowledge of the

state of its assets both to operate the network effectively and manage maintenance contracts efficiently (Nash, 2002b, p7).

Land scarcity

A third feature of the rail industry, which applies particularly to the south of England, is that the scarcity of land, particularly long narrow strips required to connect urban areas, puts a severe constraint on development of the network. In contrast to the many other countries such as France and Germany (which are much less densely populated), it is rarely possible to build significant enhancements on green field sites. Land is especially constrained in comparison to France, for example, which with its much lower population density, has been able to develop a high speed network on new dedicated tracks. A new high speed network in Britain could ease track congestion by releasing space on local and regional lines, but whether it is possible to obtain the new land is questionable. The new Channel Tunnel fast link to London is the first new major railway line built since the late 19th century. This contrasts to France which has built many new high speed lines in the second half of the 20th century and built a new fast line to the tunnel about decade before the fast line to London. It is, moreover, easier to obtain greenfield sites for new facilities in other sectors such as electricity or water.

The overall significance of land scarcity and its uniqueness to the rail industry should not be overstated. Land scarcity particularly applies to network expansion, ie new intercity and urban lines and station extensions, rather than the effective operation of the existing system. Land scarcity is also inherent in the transport sector as a whole and not just confined to the railways which begs the question whether it is a major cause of the problems specific to the rail industry. Road developments and airport expansions demand large areas of land which constrain their development. Effective mass transport is necessarily a requirement of densely populated areas yet the very fact of their dense population militates against the land necessary for transport network development.

Capacity constraints

A fourth feature which applies specifically to the rail industry in comparison to other regulated utilities is network capacity constraints. This problem has become particularly acute in the decade since privatisation because of the rise in usage of rail transport. This is closely linked to the previous point about land scarcity as network capacity problems are particularly significant in and around large urban areas such as London and Birmingham. The significance to the rail industry is a matter of degree not kind; other sectors such as electricity and gas do have network constraints (and the shift towards embedded generation in electricity has raised a series of question about the electricity network) but no other sector has been confronted with the severity of the problem as in the rail industry since the mid 1990s.

The extent to which these features are unique and their implications for the organisation and regulation of the industry are, however, not self-evident. For example, other utility sectors are required to provide loss-making social services without public subsidy such as public telephone boxes, emergency services, and provision of services to remote locations at affordable prices. Regulatory mechanisms such as the universal service funds or price controls are used to ensure the companies can effectively provide these services. It is also not clear that the rail industry is qualitatively more complex than other utility industries. The airports industry, for example, is a complex, safety critical industry with many interacting

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operations and inter-organisational interfaces all of which have to be centrally controlled. Also the electricity grid system has to be operated as an integrated whole with interfaces between generators, the grid system and a continuously changing demand. The problems of land scarcity are not necessarily unique to the railways, particularly in south east England. If the demand for water and air travel in the south east continues to rise there is likely to be a need for new reservoirs, airport runways and even a new airport in a region where land is at a premium. In the following evaluation the arguments about the crisis in the industry, these apparently special features of rail will be examined.

5 CAUSES OF THE CRISIS - REVIEW AND EVALUATION

The two most prominent and frequently voiced causes of the crisis are private ownership and fragmentation. An equally substantial, but much less prominent argument, is regulatory failure, ie, an ineffective regulatory framework and regulatory processes were set up post-privatisation. Other arguments are bad management, particularly in Railtrack, an over hasty privatisation process and bad implementation.

Private ownership

The issue here is whether private ownership of the rail industry per se is flawed. The term ‘private ownership’ rather than ‘privatisation’ is used here to distinguish between private ownership and the process of privatisation. While there is widespread public support and support across the political spectrum for renationalisation (Murray, 2001; Wolmar, 2001, pp250-253) and campaigns for that end, critics of privatisation often criticise the way it was undertaken, for example, the high level of fragmentation or the rushed process, rather than private ownership per se.⁴⁵ The other arguments, considered in later sections, although often entangled with, and similar to arguments surrounding private ownership, are not necessarily the same. Three arguments against private ownership are considered here: first, private ownership of an essential public service; second, private ownership of a heavily subsidised industry; and third, private ownership of the rail infrastructure which is a natural monopoly.

Public interest

The first and broadest argument against private ownership is that the rail industry is amongst a small number of industries which provide an essential public service. The argument is that a small number of industries can be distinguished from others in that they provide services which are both essential for modern life and non-substitutable is well established.⁴⁶ The industries are also strategically significant for the whole economy and the benefits to society as a whole are greater than the sum of the benefits of the individual consumers of the service. If the industries are privately owned the pursuit of private profit and shareholder value can be in conflict with the achievement of public interest objectives. The goals of the companies therefore need to be orientated towards public interest objectives.

The public interest equals public ownership argument appears particularly strong in the rail sector and a number of commentators on the rail industry and rail unions invoke these arguments. Murray (2001, p150), for example, argues that “*society will benefit as a whole, both economically and environmentally, [from a public transport system with] an extensive and efficient railway network*”. And Wolmar (2001, p193) (making a general point with the example of the provision of cycle parking at major railway stations) notes the “*incompatibility of having a profit-maximising firm at the heart of an industry that has major social responsibilities*”. Crow also notes that “*the rail industry is a key public service*” and

⁴⁵ For example, Save Our Railways, www.saveourrailways.com and the Campaign for the Re-nationalisation of the Railways, www.publictrains.co.uk; RMT survey 2003 - 72% support re-nationalisation of the train operators, www.rmt.org.uk

⁴⁶ Ernst J (1994), *Whose Utility? The Social Impact of Public Utility Privatisation and Regulation in Britain*, pp37-40, Open University Press, Buckingham.

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that privatisation has led to a “*built in reflex to protect the share price above all other interests*” (though Network Rail does not have a share price).⁴⁷ These arguments are based on the commonplace view that the railway industry is in crisis and that privatisation has been a failure.

These arguments do not necessarily lead to an unequivocal case for public ownership, Ernst (1994), for example, stresses the importance of a public interest orientated regulatory framework more strongly than public ownership. Also given that other utilities such as energy have been privatised and have not suffered the same problems as the rail sector, it appears that public ownership is not necessary for effective management of public interest issues and a network monopoly. There are clearly strong public interest issues in the energy sector: the essential nature of the product, electricity particularly, for individuals and the economy, the need to ensure security of supply and protection of the environment at acceptable price levels.

Public subsidy

A second argument is that private ownership is incompatible with a heavily subsidised industry. Amongst the utility industries this argument applies specifically to the rail industry as the other utility industries, except road construction, receive little if any subsidy. There is a straightforward point that private ownership simply leads to substantial public money being paid in private dividends.⁴⁸ More fundamentally for the operation of the industry is the question of incentives. Private rail companies know the necessity of public subsidy, particularly for investment (Crompton and Jupe, 2002), they know the strong political, social and economic needs for an effective railway system thus know they are likely to be bailed out in the event of serious financial problems. This has happened in the case of some of the TOC franchises and Railtrack/Network Rail after Hatfield (Wolmar, 2001, pp229, 244-245).

There are two key reasons for substantial subsidy of the railways: historic under-investment in the system and the need to provide loss-making services for social reasons. Cross-sectoral evidence indicates that public subsidy is not always necessary to make up for historic under investment. The water industry up to the 1980s also suffered from years of under investment but an effective regulatory regime incorporating a substantial investment programme, funded by regulated consumer charges, has delivered positive results (Smith, 2003b). Although there has been no requirement for big investment in the electricity grid there will be soon with the push for renewable and distributed generation, but the aim at present is for this to be funded indirectly by the consumer through regulated grid access charges. The need to subsidise loss-making services for social reasons can also be questioned. Christopher Foster, an advocate of privatisation and an advisor on rail privatisation to the Conservative government, argues there should be a radical rethink about the public subsidy as its main beneficiary is the middle class who should not be in receipt of such substantial state money.⁴⁹

Significant subsidy reduction and full funding by user charges are not, however, realistic in the railways. Shifting the burden of overcoming the historic under investment onto the users of rail services will result in an unacceptably high increase in prices which will lead to a move from rail transport to road and air transport which would not only be environmentally

⁴⁷ Crow B (2003), Losing Track, Guardian, 12 May.

⁴⁸ Jack I (2001), The Crash that Stopped Britain, Granta, London, p75.

⁴⁹ Foster C (2003), End of the Line for Rail Subsidies, Observer, 3 August.

damaging but would also stretch road and air transport beyond their limits.⁵⁰ Identifying and reducing the level of social subsidy, particularly if it is mainly to the middle classes has appeal but also has drawbacks. While as noted above, subsidies to the TOCs are transparent, it is difficult to be clear who the ultimate beneficiaries are and what aspect of a service is loss-making, given that much of the subsidy is channelled through to Network Rail via the track access charges. More fundamentally it is not clear that the beneficiaries of the subsidy should be individually identified in this way - arguably society as a whole benefits from a publicly subsidised railway more than the sum of all individual benefits. This idea clearly runs through the SRA's recent publication entitled 'Everyone's railway' which argued that although rail travel represents only 6% of all travel its benefits and necessity far outweigh this small figure (SRA, 2003c). Its usage is much higher for certain kinds of travel (long distance and journeys to city centres) which are crucial for economic development, and moreover other transport modes simply could not act as substitutes. Despite 'not even the tiniest mea culpa' from Foster (a respondent to Foster's article), one wonders, given his advisory role in privatisation, whether his argument that the middle classes are the main beneficiaries is an attempt at retrospective justification of a flawed model of privatisation.

Whilst a substantial subsidy appears to be unavoidable, it possibly could be effectively managed by good regulation and clearly set government objectives without public ownership. A case can be made for setting and regulating the use of subsidy in a similar way to the established techniques of the periodic reviews of utility regulation. Like the setting of price caps in the RPI-X price control mechanism, a public subsidy (say an amount per passenger km for particular services) could be set at a fixed level for a period such as five years. The level of the subsidy would be based on performance benchmarks for the regulated companies and required outputs specified by the government. Incentives would operate in the normal way: the company would be able to keep any benefits from performance over and above the benchmark for the period of the review but the benchmark would be adjusted for the following review period. The response to performance under the benchmark would be that the company would have to make the case for a lower benchmark within the next period or at an interim point within the period. If the company failed to make the case it would either have to survive as best as it could or go bankrupt and be taken over in the normal manner for an equity based company.

The management of the subsidy, however, is a vexed issue, and effective political and regulatory management has not been demonstrated in practice. There might be a conflict, for example, between the large subsidy and the equity model of corporate governance. If the industry is managed effectively there will be some private profit and shareholder dividends yet there could be serious questions of legitimacy if these are perceived to have come from the public subsidy. There might also be a conflict between the various governmental departments and regulatory bodies (SRA, ORR, DfT, Treasury) over the setting and management of the subsidy. The subsidy may compromise the independence of the regulator in setting the financial framework for the industry, particularly Network Rail. With the government providing much of its funds (via direct grants since 2001 and indirectly via TOC subsidies and track access charges), Network Rail may be able to appeal beyond the regulator to the government in circumstances of dissatisfaction with the regulator's decisions.

⁵⁰ Cost-benefit comparisons between the three main transport modes, road, rail and air, are very difficult due to different financial frameworks. It has been argued, for example that there is a stronger case for road investment than conventionally thought, see Affusa L, Masson J and Newbery D (2003), Comparing Investments in New Transport Infrastructure: Roads Versus Railways?, Fiscal Studies, 24:3, pp275-315.

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In late 2003 in the conclusion to the interim review a version of this problem took place. The regulator set a five year financial regime which, with a revenue requirement for Network Rail at about £22bn is closer to that proposed by Network Rail (about £25bn) than the revenue requirement set for the period 2001-2006 (about £14bn) (part of which comes indirectly from the subsidy via access charges).⁵¹ The essence of the problem was that during the interim review and in December 2003 when its conclusions were published, the SRA said that it could not accommodate the proposed increase in access charges under its allocated funding from the DfT which was not willing to increase the funding.⁵² The regulator nevertheless expected the government to honour a commitment (made after privatisation) to provide the necessary funds (mainly via subsidies to the TOCs) for the regulator's financial settlement.⁵³ Although the Secretary of State stressed that the independent regulation was not under threat (and thus the requirement to pay the necessary subsidies to the TOCs), there were clashes between the regulator and ministers. The transport minister Kim Howells, for example, said that it is within the government's power to provide a much lower level of funding. A satisfactory financial settlement was achieved after difficult negotiations involving Network Rail, the ORR, the SRA and the DfT in late 2003 and early 2004 (ORR 2004).⁵⁴ Network Rail proposed a reprofiling of revenue which involved a deferral of part of the track access revenue to the last three years of the control period with the shortfall made up by additional borrowing by Network Rail of about £1.5bn in each of the first two years of the period. Despite this settlement, the clashes and the adversarial style of Winsor appear to be one of the reasons for the initiation of a review of the industry in January 2004.⁵⁵ The roles, relationships, commitments of the government, regulators and industry appear complex, unclear and riddled with conflict.

Natural monopoly

A third and narrower argument against private ownership is that private ownership of the natural monopoly infrastructure is inappropriate. The arguments above about the limitations of private ownership apply *a fortiori* to the monopoly infrastructure. Clearly the lack of direct competition is an aspect that distinguishes the infrastructure from other parts of the industry, though there is indirect competition with other transport modes and possible competition for the corporate control of the network operator. The latter, however, means dependence on the vagaries of the equity model and the need to accept long term uncertainty and the instabilities of failure and takeover, particularly in cases such as the railways in which there very high risks involved to private buyers. The drawn out administration procedure (a special procedure which draws on conventional procedures), involving meeting obligations to creditors and shareholders can, and appeared to, in the case of Railtrack, work against the public and industry's interest as it requires rapid establishment of new management and refinancing.⁵⁶ This would be problematic for one particular local or regional train operator but the failure of the network operator can have implications for the whole industry as witnessed in recent years with the failure of Railtrack. Also if Railtrack had remained a public company it could have played a greater role in long term network development (Nash, 2002a), alongside or even in place of the SRA.

⁵¹ ORR (2003c), Access Charges Review 2003, Final Conclusions, December.

⁵² ORR (2004), Access Charges Review 2003, Regulator's Approval of Network Rail's Proposed Financing Arrangements, March.

⁵³ Financial Times (2003), Rail Regulator in Clash with Minister over Funding, 21 November, p6.

⁵⁴ Daily Telegraph (2003a), 'Heavy lifters' Sweat over Rail's £8bn Gap, 5 November, p29.

⁵⁵ Harris N (2004), Consensus and Compromise are the Only Way Forward for Rail, Rail, 480, p3, February 4.

⁵⁶ Kay J (2002), Twenty Years of Privatisation, Prospect, pp22-29, July.

Although strictly not renationalisation, many of the objectives of the public ownership of the monopoly infrastructure are reflected in the establishment of Network Rail, the not-for-dividend company limited by guarantee. This is a hybrid model of corporate governance which its supporters believe combines the best features of the public and private models (Grayling, 2001). It has the advantages of a public company in that it is run in the public interest, rather than to maximise private profit, it is accountable to a broad range of stakeholders rather than shareholders and there is stronger imperative to concentrate on the core activities of operating, maintaining, renewing and improving the rail network. It also has advantages of a private company with access to private capital for expenditure without recourse to the Treasury which is necessary for a public company seeking public money. In addition the financing costs should be lower as it is financed only by debt, rather than debt and equity, and interest payments on its bonds should be lower than interest payments on dividends on shares.

The not-for-dividend model is open to the criticism that the absence of shareholders means incentives are lower. However, incentives can still matter: the employees have the incentive to be part of a successful company, it will remain a strongly regulated company and the company has the incentive to avoid 'micro-management' by the regulators, and the company has an incentive to maintain sufficient financial reserves to satisfy their lenders and deliver the required outputs.⁵⁷ It remains to be seen whether the model is successful, there are untested elements of it, particularly its unique corporate structure. Many see it as a temporary expedient possibly until full integration of track and trains can be achieved, or a return to full nationalisation, or even a return to the equity model once the post-privatisation problems of regulatory failure and bad management are overcome.

The not-for-dividend model therefore is a possibility but it remains unproven in practice. Also comparison with other industries such as gas and electricity which have transmission and distribution systems which are natural monopolies, but regulated private companies is an indication that the equity based model can work. With effective independent regulation and the use of periodic reviews, evidence from the energy industry indicates that public interest objectives and effective operation of a network monopoly can be achieved without recourse to public ownership, nor the not-for-dividend model.

The network infrastructure is the most obvious area of the industry which is a natural monopoly, but another key area, rail research, can be viewed in a similar light. Some research in any industry is perceived as 'pre-competitive', that is it has benefits for whole industries and private profit seeking enterprises are unlikely to engage in it. The normal rules on state aid in competition policy are often not applied and state aid for research, or even the nationalisation of research are seen as legitimate. Rail research appears a classic example of this process: it is both essential for the industry and, in the UK it has declined substantially since privatisation (Wolmar, 2001, pp171-172). In contrast, Japan, which has a much more successful rail industry, has a privately run rail but rail research remains government funded.

Private or public?

The above outlines arguments that do not inevitably militate towards public ownership, though the case for private ownership of the infrastructure monopoly or when a large public subsidy is involved is not as strong as when there are simply strong public interest issues. An argument for private ownership of the railways can therefore be sketched out. One of the

⁵⁷ Plummer P (2003), Regulation of Network Rail - A Commercial Company Without Shareholders, CRI Occasional Lecture 9, 3 June, Centre for the study of Regulated Industries, University of Bath, Bath.

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fundamental arguments against public ownership is that government intervention is likely to be much more arbitrary and unclear which creates an unstable environment for management decisions. In utility industries the main thrust since the 1980s has been that these problems can be overcome by privatisation and good economic regulation to achieve public interest objectives and regulate natural monopoly. Cross-sectoral evidence, particularly from energy and water, indicates that public interest objectives and an efficient private monopoly infrastructure operator can be achieved by good economic regulation together with clearly stated government objectives and a clearly delineated role for the government. These industries like the railways, have a strong public interest dimension and an infrastructure monopoly and have been privatised and regulated in this manner without the experiencing the crisis of the railways.

There is still of course the problem of the public subsidy. While small subsidies are available in electricity for promoting new technologies, renewables and energy conservation, no other utility industry is as dependent on a huge level of public subsidy for its basic operation and investment as the rail industry. Clearly the obvious limitation of energy (and other utility sectors) as comparators for rail is the lack of subsidy - the idea that large subsidy can be effectively managed, say in a periodic incentive based manner, is unproven. This idea is based on a priori argument rather than empirical evidence given that there is no experience of successfully managing a large public subsidy in this way.

How valid is the comparison with the energy sector and what lessons can be learned from it? One significant difference between the railways and energy (and other utilities) is that energy companies have for much of their regulated history over-performed their benchmarks whereas the rail industry has underperformed, and in recent years have confronted severe network capacity constraints. Over-performance in energy might have been because of a good asset base or scope for productivity improvements which were not possible in the rail industry. There are particularly different sets of problems and pressures in an over-performing industry compared to one which is under performing. In an over performing industry the problems amount to the legitimacy of what may be perceived as unacceptable profits (leading for example to political pressures for the windfall tax), and what profit level is acceptable when setting the benchmark for the subsequent periodic review. The problems of under-performance, however, are very different. It is not clear that regulation is effective, flexible and durable enough to cope with problems such as, questionable benchmarking, conflicting objectives, political pressures for increased subsidy and 'events' (the bane of all governments). How are the government and the regulators to respond to pressures from the under-performing company for a review of its financial framework? Would they be willing to undertake an interim review of the benchmark but undermining stability and incentives provided by a full period? Are the government and regulators willing to let the company go into administration and be replaced by alternative private sector management and experience the upheaval and uncertainty of being replaced by new management?

The energy sector also cannot be held up as an exemplary model of utility regulation with clear government-industry relations. As Dieter Helm notes there are multiple objectives in energy policy, at the very least, low prices, environmental protection and security of supply.⁵⁸ These objectives can be conflicting and the government has a problem of setting the objectives and clearly stating the trade-offs. Governmental clarity is critical in an environment in which the conflicting objectives are likely to be met with strong and conflicting political pressures. It is entirely plausible that the relative calm in the energy

⁵⁸ Helm D (2003), *Energy, the State, and the Market - British Energy Policy since 1979*, Oxford University Press, Oxford.

sector in the 1990s was due to favourable circumstances which will not continue. The favourable circumstances - cheap fuel (gas) to generate electricity in cheap power stations with lower carbon dioxide emissions - is a fortunate occurrence which is not likely to be repeated.

A manifestation of increasing difficulty in the energy industry is the problems of the nuclear generator, British Energy. Given the specialised and long term issues of nuclear safety management, as well as the substantial contribution of nuclear power (approximately 20%) to current electricity consumption, BE's failure to operate profitably in the current market (and the new trading arrangements) has led to questions about the need for public financial support and whether the privately owned equity model is appropriate. The government is reluctant to let it go into administration without a clear alternative and with no more than the hope of a private takeover.

For an underperforming but vital industry such as the railways (and nuclear generation) there are also significant problems with letting the companies go bust. Firstly, the regulator is legally bound not to make it unduly difficult for the regulated company to finance its activities. Secondly, how can it be known that a new company will perform better? It may be the case that the government and regulators have overestimated what a private company can reasonably deliver. Thirdly, and most importantly the unstable environment thus created is not conducive to the development of companies most suited to running the railways. As Will Hutton argues, "*successful businesses are, above all, successful organisations made dynamic by an overriding sense of purpose at their core*".⁵⁹ The uncertainty and short-termism created by the ethos of letting companies go bust as the main performance incentive is contrary to creation of a clear sense of purpose at the core. While this may apply to any business, in the rail industry the need for public subsidy, and substantial investment, and the great complexity of the industry mean stability and certainty are of much greater concern. To some extent Network Rail, the non-profit limited by guarantee reflects these arguments but it is open to the criticism that the absence of shareholders means incentives are lower.

In conclusion, what the rail and energy sectors show is that the right politics-government-industry relationship, whether publicly or privately owned, are of overriding importance in industries with multiple, often conflicting objectives and strong public interest issues. One of the biggest challenges is to specify a clearly workable government-industry framework, including clear roles for the government departments, the regulators and the regulated in the various aspects of this relationship such as setting objectives and outputs, setting subsidy levels and price caps and setting benchmarks. The comparison also indicates that the utility regulation framework as established for the privatised industries has not been demonstrated to be successful when the industry has under-performed and is up against strongly unfavourable operating conditions. In addition the 'politics' dimension of the relationship should not be neglected, particularly the need for political legitimacy. Without a clear and legitimate framework, government intervention in the basic operation of the industry is more likely, thus creating a less stable environment for the effective management of the industry.

It is all too easy to quickly dismiss the case for public ownership of the railways by invoking the problem of government intervention.⁶⁰ However, this argument and its underlying assumption that less government intervention per se is better and that privatisation necessarily means less intervention furthers the fiction that privatisation has solved the problem of

⁵⁹ Hutton W (2003), Kick Out the Fat Controllers, Observer, 29 June.

⁶⁰ Bradshaw B (2000), New Directions for Britain's Railways, chapter 10, All Change: British Railway Privatisation, Freeman R and Shaw J (eds), pp229-241, McGraw Hill, London.

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government-industry relations. As John Kay (2002) notes, there is a surprising parallel between the development of nationalisation from the 1950s to the 1970s and the privatisations of the 1980s and later. Initial confidence within autonomous businesses was gradually replaced by increased and unwelcome intervention as performance did not live up to expectations. In both cases relations became strained but government intervention of some form remained necessary due to the strong public interest dimension of the industry. Ownership per se therefore is not the central issue, what matters and what is more challenging is setting up the right government-industry relationship. It is easy to imply that government-industry relations are straightforward if only the government would give up its interventionist tendencies. One can imagine a straightforward relationship with the government simply setting outputs in broad terms then letting the industry and regulators get on with the job (with the regulator having more detailed responsibility to take heed of the governments requirements and carry out economic regulation). While being a laudable aim, this is an idealised view of politics, government and regulation: can output specification, regulation and implementation be so easily and clearly separated? Can the government stand back (after broad output specification) in a high profile and highly subsidised industry? A further argument about government distancing from industry via privatisation is that risks are transferred from the taxpayer to the private sector and the private sector will be fully responsible for the investment and operational decisions. However, the continuing requirement for substantial public subsidy means the risks to the taxpayer are not eliminated as investment in many parts of the rail industry without government subsidy will never earn an acceptable commercial rate of return (Wolmar, 2001 pp238-241). Also subsidy will increase the perceived risk to private investors due to the increased risk of government intervention.

Fragmentation

Fragmentation is the second of the two most substantial and frequently voiced arguments against the privatisation process. The argument is that fragmentation into many parts of a complex industry requiring integrated operation was flawed. Fragmentation is often interlinked with privatisation and some authors stress that the problems were due to the combination of private ownership and fragmentation (Murray, 2001; Jack, 2001).⁶¹ Nevertheless others have stressed the problems of fragmentation much more than private ownership (Wolmar, 2001; Gourvish, 2002).

A key objective of the fragmented structure sought by the architects of privatisation was the creation of competition. The model drew from the privatised structure of the electricity in which the monopoly infrastructure, the electricity grid, was separated from the competitive element, the generation and supply of electricity (Shaw, 2000a). This model enabled competition to develop more so in electricity than, for example, the gas industry which was privatised as a single company in the 1980s.

A model of on-rail competition outlined in the 1992 white paper involved open access to the rail network. On-rail competition could be achieved by train operating companies competing for 'slots', ie, particularly times and routes in the railway system, for example, by a system of auctioning (which was briefly considered), or by competition between franchised operators, or between franchise and non-franchised operators (Shaw, 2000a pp130-167). The franchise

⁶¹ Crompton G and Jupe R (2002), *Delivering Better Transport? An Evaluation of the Ten-Year Plan for the Railway Industry, Public Money and Management*, July-September 2002, pp41-48.

model was adopted with franchisees bidding to operate a number of services including a specified minimum public service requirement. There were, however, doubts about the workability of on-rail competition even amongst the proponents of privatisation and competition and in early 1993 the government decided to moderate the idea of on-rail competition by effectively scrapping the idea of open access for passenger services (though open access remained for some services such as freight and international). One of the main concerns was that non-franchised operators (without a public service requirement) competing for access would cherry pick the most profitable services, thereby reducing the revenue for the franchisees and increasing the public subsidy. It was hoped that as the privatised industry developed, and subsidies fell, on-rail competition by open access would become a more realistic possibility but severe network capacity constraints which became more and more apparent in the late 1990s further limited the possibilities of competition.

Fragmentation in the rail industry

Fragmentation abounds in the privatised rail industry. Two of the main areas of fragmentation are: (i) the separation of the wheel and track ie, the operation of infrastructure (Railtrack/Network Rail) from the trains (TOCs), and (ii) the separation of the operation of the track (Railtrack/Network Rail) from the track maintenance and renewal companies.

The interface between the wheel and rail must be managed effectively: different train types can be more or less damaging to the rail, and the rail damaging to the wheel. Wolmar (2001) catalogues numerous problems which can result from ineffective management of the interface caused by separation of the management of either side of the interface. He stresses the importance of unified management of all the key aspects of the wheel-rail interface, which since privatisation have been undertaken by several organisations including Railtrack, train operating companies, rolling stock companies, and track maintenance companies. He notes, for example, the importance of taking heed of all participants in the safety process and lack of this may have contributed to the Paddington crash; the difficulty of implementing the automatic train protection (p130); and the variety of damage that can be caused to the track by different kinds of trains. He notes that, whereas BR had a single manager responsible for all aspects of engineering of trains and tracks in a particular area, the post-privatisation organisation had three organisations responsible: Railtrack, the train operating company and the leasing company (p154). Also the quality and quantity of infrastructure available to train operators is very variable and not well known and have a big impact on the efficiency of a train operator, but the latter has little control over the track.⁶² Also although signalling systems coordinate the divide between train operation and infrastructure, the separation of the management of wheel and rail can create difficulties related to signalling. While physically integrated into the track infrastructure an intimate knowledge of the operation of signalling is also required by train drivers, problems of coordination were significant in the Paddington rail crash in 1999.⁶³

The second area of fragmentation is the three way split between track operation, renewal and maintenance. One rail analyst who saw few problems in the contracting out of maintenance (he saw the TOC-Railtrack relationship as the principal problem area) has recently conceded that “*working on the track, particularly whilst trains are running, imposes problems that are different from those experienced in other industries*”.⁶⁴ The separation of track operation

⁶² Nash C (1994), Rail Transport Regulation, CRI Regulatory Review 1994, pp99-115, University of Bath, Bath.

⁶³ Hall S (2003), Safety on the New Railway, Modern Railways, pp34-37, September.

⁶⁴ Nash C (2002b), What To Do About the Railways, The Beesley Lectures on Regulation Series XII 2002, p7, Institute of Economic Affairs, London Business School, London.

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from maintenance and renewals also made it difficult for Railtrack to build up a good register of the state of its assets. Without a good asset register it is difficult to judge precisely what maintenance and renewals are required as well as effective monitoring of the work being undertaken. The contracting out of maintenance and renewal activities to different contractors can also exacerbate the problems of separation. For example, under the initial contracts set up after privatisation (which were later improved), if a rail needed replacing the maintenance company had to ask Railtrack which, on the basis of poor knowledge of the track, had to judge whether renewal was required because of poor maintenance or age, then it had to arrange it with the renewal company which in turn had to fit that into work programmes with Railtrack and the maintenance company (Wolmar, 2001, p92).

Problems of fragmentation

Why has fragmentation been a particularly significant problem in the privatised rail industry, particularly when other utility industries, such as electricity and water are fragmented? The first and probably most obvious reason is simply the extent of fragmentation and the complexity of rail privatisation. While the rail industry was broken into over 100 parts (30 of which were the core operations of train and track operation, maintenance and renewal) the fragmentation in the water and electricity industries was either already established (in the case of the regional companies in both sectors) or was, in comparison to rail, very limited (the division of the CEGB into three companies at privatisation). Thus the post-privatisation rail industry not only had a very complex maze of contractual arrangements between the constituent parts, it was transformed from a single company (though with sector and regional management, less monolithic than it outwardly appeared) to a large number of parts in a very short period.

Extensive fragmentation has also led to a severe loss of institutional and organisational memory unsatisfactorily replaced by a complex maze of contracts many of which are incompletely specified and very difficult to enforce. Within and between organisations 'social capital', although a rather intangible concept, is an essential lubricant which ensures that organisational cogs run smoothly and effectively. Social capital refers to established norms, working practices and trust which cannot be created in a formalistic contractual way and without which the transaction costs of commercial contracts would become unacceptably high. Shared understandings encapsulated within the notion of social capital can mean that the spirit of the contract can be followed even if not specified in precise legal detail. A central aspect of the organisational loss was the loss of engineering skills and knowledge within Railtrack which struggled to replace them with good contract management skills. These problems are recognised within the industry where there is a poor level of cooperation and knowledge sharing which impacts negatively on industry performance (Mercer, 2002).

A clear connection is therefore evident between the fragmentation of the industry, which has had a devastating effect on corporate memory and industry working practices, and the difficulty experienced of effectively managing and enforcing the vast array of contracts which govern the fragmented industry.⁶⁵ It is of course possible that new and effective norms and practices will slowly but surely emerge and some industry employees recognise that changes such as more collaborative maintenance contracts and regulatory changes have improved working relationships (Mercer, 2002, p16).

A second reason why fragmentation has been problematic is the particular interface complexity of the railways. The rail industry, so the argument runs, stands out as different

⁶⁵ Jenkins S (2003), Hypersafety is the Greatest Danger to Rail, The Times, 11 July.

and special in comparison to other network industries and therefore requires integrated operation. It has much more complex interfaces compared to other network industries making integrated operation a greater imperative. The comparison with other sectors is almost invariably tacitly assumed by analysts of the railways but not justified nor stated explicitly.

The problems of fragmentation are also reflected in the opinions of many employees in the rail industry. An extensive survey of participants in the rail industry by Mercer Management Consulting revealed that two of the underlying causes of the problems in the rail industry were poor “*industry leadership*” and “*industry relationships*”.⁶⁶ Fragmentation in particular was seen to be at the heart of the problems of poor industry relationships. Interviewees in the survey felt that fragmentation had led to “*limited co-operation and knowledge sharing*” and a “*confusion of responsibilities and an increase in costs across interfaces*” (Mercer, 2002 p15).

The recent reforms of the rail industry appear to reflect a recognition of the problems of fragmentation although the government often stresses that the recreation of British Rail is not on the agenda. Many of the reforms of the last few years can be distinguished as reintegration and attempts to overcome the problems of fragmentation. Thus the establishment of the SRA was an attempt to increase coordination and inject strategic direction and leadership into the industry. Other less prominent reforms, such as the wheel rail interface authority or the Rail Skills Centre, rather than reintegration per se, are similar attempts to mitigate the problems of fragmentation. Some actual reintegration has also taken place. The most spectacular act of reintegration, announced in October 2003, is the taking in-house by Network Rail of all maintenance work. This was the culmination of Network Rail’s experiment of taking in house of three maintenance areas and the withdrawal from rail maintenance and the loss of public credibility of Jarvis, one of the main contractors.

Railway fragmentation: comparisons with other network industries

The main comparator for competition in rail was the electricity industry from which a certain logic for the fragmentation of the railways can be inferred (Shaw, 2000a, pp2-43). It is therefore worth examining the issue of the separation of network from product/service in rail and electricity in comparative perspective. The electricity industry was the first of the big utility privatisations which involved the separation of the monopoly network infrastructure from service provision in order to facilitate competition amongst suppliers. Although this enabled some competition to develop, the problems of the financing of nuclear power meant that the CEGB was split only into three generators as opposed to some original ideas of creating up to ten generating companies. The logic for extensive fragmentation of the railways is that CEGB split was seen as better than the unified telecommunications and gas privatisations, but the constraints on CEGB separation, meant that the next major privatisation, the railways, should be fragmented even more.

How appropriate is the comparison with electricity? One of the central features of competition in electricity was the auctioning of electricity in 30 minute intervals within the electricity pool. A comparable idea in the railways considered by the architects of privatisation was the auctioning of groups of rail ‘slots’. However, initial comparisons with the electricity made by the government and advisors turned out to be over-simplistic and early ideas of on-rail competition were reduced to competition for franchises.⁶⁷ Competition

⁶⁶ Mercer Management Consulting (2002), *The GB Rail Industry: In its Own Words, Problems and Solutions*, May.

⁶⁷ Shaw J (2000b), *Designing a Method of Rail Privatisation*, chapter 1, *All Change - British Railways Privatisation*, (eds) Freeman R and Shaw J, pp23-24, McGraw Hill, London.

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has developed very differently in the railways: competition in electricity supply, though not without its problems, has become established whereas competition in the rail sector has proved to be very limited.

An argument against vertical separation is that it is ineffective when, for technical reasons, integrated operation is required. However, on the positive side for vertical separation of the railway, the experience of the electricity industry indicates that vertical integration may not be necessary for integrated operation. There is no question that integrated operation of electricity generation, transmission and distribution is essential. Continuous close control of the whole system is required to ensure that electricity generated within the single national grid system is exactly matched by the load within very narrow frequency and voltage ranges. Since privatisation this has been achieved not by vertical integration but by close technical cooperation of different organisations, based on contractual relations. Although the technicalities of the railways are different it would seem that close technical integrated operation can be achieved by different organisations through commercial contracts.

There are two objections to this argument. The first is that the nature of the interfaces in the two industries are very different and what might be appropriate for electricity may not be for the railway. The active interfaces (between infrastructure and supply where special coordination is required) in electricity are limited to a relatively small number of discrete generators which, with established techniques and clearly defined parameters of voltage, frequency etc, are synchronised to the grid. The output of the generators once within the grid system is operated in an integrated way by the grid controllers. No one, not even the most fervent competition creating economists, would suggest the separation of the wire-electron interface. Once within the system there is no difference between the electrons of generating company X compared to generating company Y. In contrast in the railways the interface has to be controlled throughout the network, not just at a small number of interface points. The trains of company X compared to company Y's need to be interfaced to the tracks throughout the network, not just at railway stations. From different track curves and gradients to different level crossings and bridges; from the complexities of advanced signalling and train protection systems to the apparent banalities of autumn leaves on lines. All of this creates interfacing issues all the way along the line, not just at discrete interface points such as stations, which can affect train X in a very different way to train Y. Thus the quality of tracks available to operators can vary significantly but without full knowledge and control of track quality, train operators cannot operate efficiently (Nash, 1994). Also once trains are within the rail network, there are complex problems of coordination, timetabling and the allocation of capacity (Shaw, 2000a, p60). While there are bottlenecks and capacity problems in the electricity grid, once within the system there is no problem of coordination and timetabling the electricity of different suppliers.

The second objection to the rail-electricity comparison is that, from a technical and engineering management viewpoint, the interfaces in electricity were well established in the nationalised structure and the new structure did not involve radical change, while organisational change in the railways was extensive. In England and Wales, the three main segments of electricity supply - generation, transmission and distribution - were already partly fragmented before privatisation with generation and transmission (in the CEGB) separate from distribution (the Area Electricity Boards). The key vertical split at privatisation was, of course, between generation and transmission which were all within the CEGB. However, although in the same company, generation and transmission were operationally clearly separate. Privatisation principally involved only a change in the decision-making mechanism about which power stations to operate: from a 'merit order' system of station efficiency in the CEGB, to the auctioning system in the electricity pool in the privatised

industry. Organisational interfaces for technical operation remained much the same, although based more on commercial contracts rather than internal company agreements. In the railways, while there were internal divisions in British Rail, and to a certain degree the privatised structure reflected these, organisational change was much more extensive. It was not only the extensive change from cooperative relations to commercial contractual relations, but also the wholesale organisational change within the railways which destroyed many established organisational interfaces and associated working practices and created many new interfaces without establishing effective new working practices.

Comparisons with other fragmented industries such as the airlines and water are more challenging to the arguments against fragmentation. The airline industry has a better record than the railways, yet it is also highly complex: there is a complex infrastructure of airports and air traffic control, there are many different kinds of aeroplanes operated mainly by private companies and safety is of critical importance. Also the travelling space, though not as constrained as the railways, needs close and continuous control with particular diligence in congested airspace, such as over the south east of England. However, there is one important difference: the current structure of the airline industry and the all-important inter-organisational coordination and development of working practices have evolved over decades whereas the rail industry was subject to the shock of a 'big bang' reform. Similarly in the water sector there was little restructuring at privatisation, all the regional water companies were retained and although there has been some restructuring since privatisation this has evolved over a period of more than a decade.

Experience of other utilities does indicate that contracting out certain work is possible but must be more controlled. The more gradualist approach of reform in the other utilities has meant that they have been able to successfully contract out work after several years of in-house work. They then became the informed buyers necessary for successful contracting out. In rail the opposite process is underway. Work is being brought in house to acquire knowledge and benchmark costs, a process which could have been achieved many years ago without the big bang reforms.

A further example of the specialness of the railway infrastructure is the directness of the public's experience. While in industries such as water and energy the public experience is simply one of purchasing and receiving a product from a pipe or wire, in the railways the public experience is much more direct and involved. From entering the station at departure to leaving at the destination, the rail user, in effect, lives in railway infrastructure, and requires all the services of a lived experience such as comfortable temperatures, seating, eating and toilet arrangements. Each of these in themselves may not be fundamentally difficult to provide, but quality problems with one service may affect public perceptions of the whole service.

Fragmentation or integration?

There are therefore particular problems with a fragmented rail industry when it is viewed in isolation or in comparison with other network industries. Close coordination of the various parts of the industry by some means is clearly essential, but does this necessarily militate towards an integrated organisation?

In response to the objections to fragmentation it might be countered that before privatisation British Rail operations and maintenance were managed in separate divisions and the industry was not as integrated as is often assumed. This argument requires further investigation,

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however, whether the comparison is valid is open to question. All large organisations are divided and sub-divided, but the glue that holds the parts together is very different. While an industry with multiple companies is held together by a series of contracts which also govern the objectives of the various parts, the sub-divisions of a single organisation are bound by more informal relations and, if effectively managed, are much more clearly orientated towards the overall goals of the organisation.

Fragmentation also appears questionable as the case for it has not always been made convincingly by its proponents. For example, a rather dubious argument made by the reformers in the early 1990s was that separation of wheel and track was a requirement of the 1991 EU directive. However, full corporate separation not required by directive; the requirement was that the accounts of the two activities were separate (Wolmar, 2001, p64). It was also a little ironic that Euro-sceptic Conservatives used this argument and is an indicator that they had no other credible means of justifying fragmentation. There are also some doubts in the current Conservative party about the way that industry was privatised. David Willetts, its policy chief, recently admitted that fragmentation and drawing a model from other network industries were flawed.⁶⁸ There are some other arguments for fragmentation which similarly lack any sustained justification. Helm (2002, p21), for example, notes that advances in IT could improve coordination in the industry but does not provide any justification of the argument.

Cross-country evidence also supports the arguments against excessive fragmentation and the hasty reform process. Rail services in France and Germany are perceived to be better yet the French railways are still organised on the nationalised monolithic model while the German railways have some fragmentation they are much more integrated than British railways (Lodge, 2002).⁶⁹ ⁷⁰ Reform in Japan included privatisation and regional fragmentation (but only into six regional companies) but retained vertical integration and is perceived to have been much more successful than British reform.⁷¹ ⁷²

These objections to fragmentation do not prove conclusively that, for effective operation, the railways must be operated in an integrated organisation, and that commercial and contractual relations between the various elements are always inappropriate. They do, however, indicate that the problems of coordinated operation and interfacing in the railways are of a very different order to other industries such as electricity. Further investigation is required on the kinds of inter-organisational coordination required for effective railway operation, the necessity of integrated operation, the extent to which commercial contracts are workable, and the effectiveness of special mechanisms of coordination, such as the wheel-rail interface authority. Further investigation is also required into the extent to which rail restructuring involved completely new inter-organisational relations and the extent to which established inter-divisional working practices within British Rail were destroyed and not recreated in the new structure.

A degree of fragmentation therefore is not necessarily bad but the extent and speed of fragmentation was excessive and was something altogether new in the history of utility privatisation. Some have argued that a small degree of rail fragmentation may have worked.

⁶⁸ Daily Telegraph (2003b), Tories: We Were Wrong on Rail, 13 December, p1.

⁶⁹ OECD (2001), Railway Reform - Regulation of Freight Transport Markets, OECD and European Conference of Ministers of Transport, Paris.

⁷⁰ van de Velde D (1999), Changing Trains: Railway Reform and the Role of Competition - The Experience of Six Countries, Ashgate, Aldershot.

⁷¹ Wolmar C (2003a), Unlike UK, the Sun is Rising on Japan's Privatisation, Rail, 470, pp30-31, 17 September.

⁷² Kasai Y (2003), Japanese National Railways, its Break-up and Privatization, Global Oriental, Folkestone.

It has been argued on the basis of a study in the early 1990s which compared Britain to other European countries, that an economically ideal structure is three vertically integrated regional companies (Harris and Godward, 1997, p83). This structure would avoid the two critical fragmentations noted above - that between the track and wheel, and that between the track operation, maintenance and renewal. Even a strong critic of fragmentation such as Wolmar is likely to support this: he argues that the Japanese fragmentation and privatisation, which involved division into six regional companies, has been much more successful than the British case (Wolmar, 2003b).

Regulatory failure

A much less prominent but equally substantial argument is regulatory failure. This argument is not only publicly less prominent, but in the academic and other literature on the crisis in the industry it has not been thoroughly analysed. In broad terms there are two aspects of regulation that have been seen to have failed: first the regulatory process; and second the institutional framework.

The regulatory process

The first reason for regulatory failure is that the techniques of good regulation developed in the other privatised utilities have not been effectively implemented. The main objectives of utility regulation are establishing the revenue requirements for capital and operational expenditure and ensuring the regulated companies meet their licence obligations. Good practice in relation to revenue requirements, particularly where large capital investment is required, requires establishing and maintaining a good knowledge of the industry assets and clearly defining the capital investment programme. In a comparison with the water sector Smith (2003b) argued that in the earlier years of rail regulation the assessment and knowledge of capital assets and the definition of capital investment programme and outputs were particularly inadequate and were major contributory factors to the poor performance of the industry.

The extent of the regulatory reforms since 1999 amount to a tacit recognition that regulation in the early years was flawed. A key regulatory reform initiated in 1999 was the reform of the network licence which was brought more in line with the other network utilities (Plummer, 2001). For better knowledge and management of assets licence changes included an annual return from Network Rail to the regulator of performance, condition and serviceability of its assets together with a comprehensive register of its assets. The admission of regulatory failure has not always been tacit, in 1999, for example, Winsor noted that “*best practice was not always taken and some significant shortcomings were built into the regulatory system for railways which I regarded ... as unacceptable*” (Winsor, 1999, p4).

Why was regulatory practice in other utilities not effectively set up in the rail sector? One of the reasons inadequate regulation for investment was that regulation was not targeted directly at investment. In the early days of rail privatisation the main thrust of achieving investment was by financial incentives on Railtrack via the performance regime and commercial negotiations with train operating companies for network enhancement. However, these incentives proved inadequate and the improvement of investment via stronger regulation was not initiated until 1997, and remained poorly specified until 2000 (Smith, 2003b, p98).

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A more substantial reason for regulatory failure was the adoption of the wrong regulatory philosophy, ie one which emphasised the approval and arbitration of contracts over economic regulation of the monopoly infrastructure provider. The rail regulator was preoccupied with the contract regime which was not a significant part of the regulation of other utilities. The regulatory philosophy adopted in the early years was over legalistic and contract orientated, as evidenced, for example, with the appointment of lawyers such as John Swift and Tom Winsor. Regulation was geared towards the oversight of the complex array of contracts set up in the privatised structure. This contrasted notably with the other utilities in which economic regulation, ie, the regulation of monopoly and promotion of competition where appropriate, was the defining feature. Rail regulators concentrated too much on contracts, partly because of the extent and complexity of contracts in the privatised railway, also because the regulators were lawyers and more likely to take a contractual perspective, rather than an economic and engineering perspective on regulation. Winsor himself has blamed the poor contract regime for many of the problems but, while this may be the case, it is arguably an indication of too much focus on legal contracts to the detriment of effective procedures of economic regulation (Wolmar, 2001, pp116, 144).⁷³ He has also noted with regard to the interface between infrastructure user and provider that “*the contractual regime established at the time of privatisation ... malfunctions too badly and too often*” (Winsor, 2002, p7).

This does not mean to say contract regulation was good, or should be underplayed. Another key area of regulatory reform, particularly important for the fragmented rail is the improvement of the contract regime between Network Rail and the train operators which Winsor noted has functioned badly (Winsor, 2002). In order to strengthen, standardise and simplify the contract regime the regulator has developed a template model for a track access contract which was published in 2003 (ORR, 2003). The model is designed to reduce transaction costs and encourage compliance and new contracts will be expected to be based on the model with the possibility that existing contracts are reformed to fit the model. For the 2003 interim review the regulator has also scrutinised the work, costs and procurement activity of Network Rail much more closely.⁷⁴ There have been extensive efficiency evaluations of Network Rail with comparisons where appropriate with comparable overseas companies, between the seven regions of Network Rail and comparisons with similar activity of non-railway companies. The regulatory regime also includes stronger financial incentives on Network Rail and the train operating companies (ORR, 2003b).

The recent reforms and Winsor's recent point that “*rail regulation is [now] fit for purpose*” clearly indicate that he considers regulatory failure occurred in the early years and that these failures have now been remedied. Whether all these regulatory reforms will solve the problems of the rail industry of course remains to be seen.

Evaluating the extent of regulatory failure as distinct from other factors involved in the organisation of the railways is a difficult task. The above discussion on public/private ownership tended to move towards questions of regulation, for example, the extent to which the public subsidy can be managed by an effective regulatory framework with clearly specified governmental roles. An evaluation of regulatory failure therefore spills over into questions about the industry structure and the role of government in a heavily subsidised industry. Also radical restructuring and fragmentation might have severely exacerbated the problems, for example, the contracting out of maintenance meant that Railtrack had insufficient knowledge of its infrastructure assets in order to effectively manage them (Smith, 2003b).

⁷³ Winsor T (2002), Why Rail Regulation is Now Fit for Purpose, 8 October, www.orr.gov.uk.

⁷⁴ ORR (2003b), Interim Review of Track Access Charges, Draft Conclusions, October.

Regulatory problems might be connected to other problems in the rail industry and a manifestation of governmental failure. For example, the initial licences and access agreements were put in place on 1 April 1994 by the Secretary of state just before the rail regulator gained powers under the Railways Act 1993. The neglect of economic regulation in the early years in favour of regulation of contracts might have been a failure of the regulator but can also be directly connected to the inappropriate model of competition and structure of the industry adopted by the government at privatisation. Gourvish (2002), for example, is critical of “*facile prescriptions of the many newcomers*”, that is the fragmentation and the model of competition, and eschews any easy blame on the first rail regulatory John Swift for regulatory failure. Swift, noted that “*the structure ... proved more complex, more difficult and more costly to implement than those textbook ... and blackboard designers thought in the first place*” (Gourvish, 2002, p434). Also perhaps too much of a burden has been placed on the shoulders of regulation. The hope that better regulation will overcome the problems of the industry rests not only on belief that the new regulatory structure will be effective but also on the assumption that regulatory failure was the main cause of the rail crisis which is, of course open to debate. The Labour government has clearly accepted that fragmentation of the industry has been a problem (DETR, 1998a) but has always argued that reintegration or renationalisation were too difficult and expensive and that the problems could be overcome by better and stronger regulation, and greater strategic direction. John Prescott arguably invested too much in this, particularly better strategic direction by the SRA, and it was a mistake to think that the latter could pull together the fragmented industry, when it was the fragmentation itself that was at the core of the problem (Wolmar, 2001, p116).

The institutional framework

A central perceived problem of the institutional framework is fragmentation, particularly the separation of the ORR and the SRA, but also the separation of the regulation of safety. Despite different perceptions of the regulatory problems several critics of fragmented rail regulation point to the confused roles, responsibilities and accountabilities of the ORR and SRA and how this can create uncertainty and have a detrimental effect operation and investment in the industry (Grayling, 2001; Helm, 2002; Vass, 2003). One of the key problems of fragmentation is the management of the subsidy which has three bodies involved - the ORR, the SRA and the DfT (Helm, 2002). The regulator is concerned with the financing of Network Rail via track access charges which are derived in substantial part from the subsidies paid to the train operating companies. The latter in turn are managed by the SRA which also has the central role in strategic planning long term investment. All these activities are in turn overseen by the Department for Transport which sets general policy outputs and the overall subsidy. Vass (2003) points to a ‘moral hazard’ when the government remains the owner or has an open-ended financial commitment as in the case of Network Rail. Although Network Rail claims that it would not appeal directly to the government as its funder, independent economic regulation can be undermined if it did.

While the organisations have striven to clarify their relationships, for instance with a Concordat between SRA and ORR and the publication of guidance by the DfT to the SRA and ORR, these may simply be symptomatic of the unclear relationships and provide no more than a sticking plaster patch-up. For example, there were severe tensions between the government and the regulator during the 2003 interim review which set Network Rail’s budget for the next five years. The conflict is that Network Rail’s revenue requirements were assessed and agreed by the regulator but an increase in the subsidy, requiring DfT and Treasury approval, which could compromise the regulator’s independence if it was not forthcoming.

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These overlapping functions vis-à-vis the subsidy and other differences between regulatory bodies all compound to create an uncertain climate for the operation of the industry. Helm (2002) for example, notes that the ORR and SRA have different mindsets regarding the organisation of the industry. The ORR sees the industry in much more of a vertically separated form with the focus on the regulation of the infrastructure operator while the SRA's mindset is much more towards vertical integration. This, combined with what Helm sees as excessive personal discretion in regulation, leads to uncertainty and increased investment risk which raises the cost of capital and reduces the flow of private investment. Furthermore the overlapping functions and uncertain roles can impact on the efficiency of the industry workforce. The employee survey by Mercer Consulting (2002) stresses that lack of clear industry leadership is a problem and the fragmentation of the regulatory bodies is a particularly important contributor.

A solution favoured by some authors is some form of integration of the regulatory and government functions and bodies. Helm (2002) and Grayling (2001) suggest integrating the ORR into the SRA. This would overcome the problems of overlapping roles and different organisation and personal visions of the regulation of the industry. Merging the organisations would, however, require new legislation which would be a longer term solution but a shorter term solution within existing legislation would involve a clear statement from the Secretary of State on how the two bodies can 'join-up' their activities more effectively (Helm, 2002, p34). Grayling makes a similar case for merging the ORR and SRA but goes further by arguing for the integration of safety functions carried out by the HSE into the single regulatory body. His argument is that there is a significant overlap between the HSE's regulation of safety which requires monitoring of the network and ORR's role in ensuring satisfactory stewardship of the network by Network Rail (Grayling, 2001, pp24-27).

Another form of institutional reform could involve the abolition of the SRA and maintaining the ORR as it stands with clear governmental backing of its independence. The responsibilities of the SRA would be distributed between the government department (the setting of objectives and outputs) and Network Rail (strategic direction and the management of franchising). This reform depends on a clear definition of the regulator's and the governmental department's responsibilities. A clear definition of the roles vis-à-vis the subsidy, for example, would involve the government specifying either the output or the subsidy level, but not both and leaving the other variable to the independent regulator. It is of course unlikely that the government would be willing to surrender control of one of these variables even for a fixed period (say 3-5 years). This could be overcome by an iterative planning system in which the government initially sets outputs and the regulator determines costs. Then if the government considers the outputs are unaffordable there are multilateral processes involving the government, regulator and regulated companies are initiated to reconcile output requirements with affordability.

These ideas require in depth investigation, however, it is not clear that the integration of regulatory institutions in itself would have overcome the regulatory problems.

The latter model involving the abolition of the SRA and an iterative planning system depends on a number of uncertainties. It needs to be clear that the current strategic planning functions of the SRA either are not required or can be satisfactorily undertaken by the DfT and Network Rail. The iterative planning model draws from the water sector in which a large scale investment was required and there were questions similar questions of affordability. Given the differences between rail and water, most notably the requirement for public subsidy in rail, it is not obvious and it needs to be demonstrated that the model for water can be adequately transferred. There are also questions about the 'hard' model of independence

advocated by Winsor.⁷⁵ Tensions between Winsor and the government arose in the 2003 interim review as a result of the demonstration of independence by Winsor over the funding requirements for the next regulatory control period. However, these tensions, combined with the governmental review in 2004 (called for a variety of reasons but partly due to the tensions in the 2003 review) have in themselves created instability and uncertainty which undermine the very benefits that independence is intended to achieve. Perhaps the tensions were the result of Winsor's overly adversarial style, perhaps they can be resolved by clearer government-regulator relations (drawn from the iterative model for example). However, without such clarity, as Grayling (2001) argues, independence from government in a heavily subsidised industry is "*overrated and overstated*".

The option of institutional integration - merging regulatory functions into the SRA - does not involve the pretence of independence but nevertheless is still dependent on good government-regulator-industry relations. These models of institutional reform require further investigation; institutional reordering might be necessary but is only part of the broader problem of establishing good relations between politics, government, regulator(s) and industry.

Bad management

Bad management is a frequently voiced argument, particularly contract management in Railtrack and Network Rail and the management of the train operating companies. Experience in other regulated sectors and industry generally indicates that the quality of management can vary significantly. There is therefore not a necessary link between structure and management quality - whatever the structure and ownership of the industry there is an imperative to get the management right. It appears plausible to argue that rail industry management has been particularly bad, the escalating cost of the west coast main line is perhaps the most salient example of poor project management (Crompton and Jupe, 2002). The focus should be on improving management rather than on industry structures and ownership.⁷⁶ Important reasons for, and objectives of the establishment of Network Rail were to address the problems in Railtrack.

The view that Railtrack and Network Rail have been badly managed is reflected in a series of statements by Tom Winsor since he became the rail regulator in 1999. Winsor has frequently admonished management within the industry, for example, in 1999 he noted that "*it is about time the management of the companies woke up to the legitimate expectations of those with whom they do business*".⁷⁷ In 2003 in relation to the interim review, although Winsor recognised that Network Rail has put some initiatives in place and they may take many months to come to fruition, he has made frequent comments about bad management at Network Rail and he would not continue to pay for inefficiency (ORR, 2003c).⁷⁸

The view that bad management is a central problem is not limited just to the regulator. In the survey of industry employees by Mercer Consulting, Railtrack management and culture was seen as a fundamental problem (Mercer, 2002). This is also reflected in consultations undertaken by the ORR for the interim review which indicate that many parties in the

⁷⁵ Winsor T (2004), The Future of the Railway Industry through Effective Independent Regulation, CRI Occasional Lecture 10, 21 January, Centre for the study of Regulated Industries, University of Bath, Bath.

⁷⁶ Harris N (2003), Argue...Don't Argue - But Let's Keep it Civil as We Move Forward, Rail 465, p3, July 9.

⁷⁷ Winsor T (1999), The New Regulatory Agenda, 9 July, www.orr.gov.uk

⁷⁸ Observer (2003), Shambles of Wasted Billions, p13, 27 July.

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industry believe that there is inefficiency.⁷⁹ The SRA also has taken the view that management in the industry has been poor, particularly in Railtrack. One manifestation of the lack of faith in Railtrack's project management skills for major investment projects and its inability to finance such large investment is the promotion by the (shadow) SRA in 1999/2000 of the idea of 'Special Purpose Vehicles', which are companies set up for the infrastructure investment outside of Railtrack (Crompton and Jupe, 2002). Recently Richard Bowker, the SRA chairman, has been highly critical of management in Railtrack, particularly the management of contracts.⁸⁰

Although the ORR's 2003 interim review was called due to a material change in circumstances (the Hatfield aftermath and Network Rail's acquisition of Railtrack) an aspect of the ORR's work promoting increased efficiency of Network Rail by identifying cost savings creating a more effective incentive environment (ORR, 2002). As noted above these feature in the conclusions of the interim review, though the question rises whether these regulatory initiatives should have been undertaken much earlier and whether the problem was bad management per se or regulatory failure. Bowker also believes there are significant inefficiencies in the operation of the franchises and the SRA has looked closely at the spending plans of the TOCs to seek out greater efficiency. This does of course beg the question about whether poor management can be overcome by better regulation of the TOCs by the SRA, if so the problem is more of regulatory failure rather than poor management per se.

Bad management appears beyond reasonable doubt, but is it sufficient simply to blame the management? At privatisation Railtrack was confronted with a lack of clarity of objectives and an increasingly challenging performance environment. There was an inadequate framework for investment with a loss of core engineering skills and limited control over maintenance and renewal. The primary objective appeared to be maintenance of the existing network to the necessary minimum to ensure satisfactory performance (as well as maximising shareholder value), rather than major network development such as the west coast line modernisation. The pressure for more investment and development intensified in the late 1990s following passenger and traffic growth and the Labour government's railway growth agenda. Although (or because) Railtrack attempted to respond to this agenda, its financial framework for investment remained inadequate and it had not concentrated on the core tasks of building up good engineering and management skills and a good asset register.

While management can be blamed for not focusing on the core tasks, many of the problems can be traced back to poor regulation and industry structure. Good economic regulation of Railtrack/Network Rail is required for good management because it is a monopoly not subject to the usual pressures for good management from the market, though there are other pressures other than external regulation for better management such as public scrutiny and reputation. The lack of an effective financial framework for investment and good asset knowledge can be attributed at least as much to bad regulation as to bad management. Bad management can also be attributed to industry fragmentation, particularly the separation of maintenance from infrastructure operation. Recently it has become more and more clear that the simple maximisation of contracting out does not necessarily maximise efficiency.⁸¹ It very much depends on the nature of the task, its complexity and connection to the core tasks of the company. There is a strong argument that maintenance is a core task of Network Rail but Railtrack were constrained by the industry structure and did not have the latitude to

⁷⁹ ORR (2002), Interim Review of Track Access Charges, Initial Consultation Paper, November.

⁸⁰ Wolmar C (2003b), Bowker and Wolmar Go Head-to-Head, Rail, 473, pp33-39, 29 October.

⁸¹ Caulkin S (2003), In-House and Back on Track, Observer, 30 November.

decide what was appropriate to contract out and what not. Also the private equity model may have contributed to bad management by the concentration on financial management and the satisfaction of shareholders at the expense of good engineering. As noted above while the private sector incentive of bankruptcy could have overcome such problems the knowledge that it is an essential industry and the government will bail them out could have reduced incentives.

Rushed reform

A common theme running throughout many analyses and critiques of rail privatisation is that for reasons of political expediency the whole process was undertaken with too much haste (Gourvish, 2002; Lodge, 2002; Murray, 2001; Wolmar, 2001). Some critics rather stridently note that “*haste was added to the combustible cocktail of ideological intransigence and greed*” (Murray, 2001, p12) and the pursuit of a “*scorched earth policy*” to ensure that privatisation was irreversible (Wolmar, 2001, p93). In more measured tones Gourvish notes the “*tight deadlines*” and the “*clear achievement to set Railtrack up and prepare the ground for franchising and sales in little over a year and a half*” (Gourvish, 2002, pp433-434) and Lodge notes of the political “*need to signal commitment by making reversal seemingly too costly for a future government and [reduce] the opportunities for the BR executive to delay the process*” (Lodge, 2002, pp130-131).

One argument is that the rushed reform process exacerbated some of the flaws noted above such as the fragmented structure and regulation. The privatised industry structure was predicated on the idea of on-rail competition yet this proved unworkable and competition had to be moderated. Rather than take more time to think of a structure more appropriate for moderated competition, the government in its haste, continued with the flawed structure (Wolmar, 2001, pp66-85). Hasty reform may have also contributed to regulatory failure. Tom Winsor, the third rail regulator, “*argued that Railtrack was privatised in a hurry with weak financial incentives, inadequate regulation and poor contracts*” (Grayling, 2001, p12).

There is also an argument that the privatisation model adopted was not bad per se but was very poorly implemented because of the rushed process. For example, more time to set up a system that enables the need for subsidy of a private business to work, or more time to set up workable contracts between the various fragments of the industry, or more time to develop an effective regulatory process. Even John MacGregor, the Transport Minister in John Major’s Conservative government in 1992, expected the franchising process and the development of competition to take 10 years (Lodge, 2002, p129) and was not proposing the privatisation of Railtrack in the 1992-1997 parliament (Wolmar, 2001, p86). It was particularly the conflicts between competition, the need for acceptable access terms for the train operators without stretching the public subsidy too high that made MacGregor think it would be a long process. In the event, the privatisation of Railtrack was brought forward to 1996 when a less ambitious schedule would have enabled better knowledge of the state of the network to be obtained and more informed assessments of the spending requirements. Despite the rushed process in the first two or three years of privatisation, a credible argument could be made that there were short term teething problems and many of the problems such as with the franchises would gradually be overcome, though in hindsight this argument appears hopelessly optimistic.⁸²

⁸² Curwen P (1997), *The End of the Line for British Rail, Public Money and Management*, pp55.67, October-December.

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The argument about rushed reform is backed not only with evidence from within the sector but from other sectors and countries. For example, in comparison to water privatisation in the UK, railway privatisation was a rushed 'big bang' approach as opposed to the more careful and incremental process in the water sector (Smith, 2003b). Sweden provides an interesting cross-national comparison as reform there as in Britain included vertical separation. However, Swedish rail reform has been described as "*gradual and methodical deregulation*"; the changes were much more incremental than in Britain which enabled them to be more effectively implemented and bed down more easily (Smith, 2003b).⁸³

Again, however, this argument seems to be clearly connected with other aspects of the reform, particularly fragmentation, its complexity and the political imperative to complete it by 1997. If the industry had been privatised like the other utilities, that is either in one piece (telecommunications and gas) (possibly leaving vertical separation to a later date as in gas), in line with the pre-existing structure (water) or with very limited fragmentation (electricity), it seems very likely that, within the same time period, the process would have been more successful. However, the scale and pace of rail fragmentation have been unique in comparison to other sectors. While the electricity industry in 2003 is radically different in structure compared to the late 1980s in contrast to rail, electricity reform was incremental; competition was introduced gradually over a period of about ten years and, although restructuring at privatisation was significant, all the industry restructuring occurred not in a 'big bang' but over a period of several years.

Was it that bad?

Finally there is the argument that the crisis in the railways is greatly exaggerated. Despite the prominent accidents and the public complaints, by some measures and on some readings, performance has improved, the accident rate down and efficiency is up (Pollitt and Smith, 2002). Soon after privatisation there were expectations that efficiency would rise particularly after the problems of setting up the new structure were ironed out (Curwen, 1997).⁸⁴ Up to the year 2000 this is indeed what Pollitt and Smith argue has happened. As noted in section 3 on a 'central scenario' they argue that there were costs savings (excluding restructuring costs) of £800m by 2000 and expect cost savings of £2.5bn by 2015. These savings, they argue, have not been achieved at the detriment of output quality: reliability and punctuality and safety (pre-Hatfield) have improved and while other outputs such as overcrowding and asset condition have deteriorated, under similar financial conditions they would have done so under a nationalised British Rail.

This argument is much less self-evident than bad management and hasty reform. One element of this argument is that teething problems were to be expected and patience is required until the fruits of reform become clear to see once the reforms have bedded down (Curwen, 1997). That argument could have been plausible in 1997, however, in 2003 in retrospect the teething problems seem to have spread to the whole body. For example, in 1997 Curwen positively cites OPRAF's hope that rail privatisation would save £2bn in franchise subsidies over 7 years, yet nearly 7 years later the level of subsidy is if anything higher than it was before privatisation.

⁸³ Baumstark L (2001), *The Pioneering Swedish Experiment in Railway Regulation*, chapter 5, *Regulation of Network Utilities - The European Experience*, (eds) Henry C, Mathieu M and Jeunemaître A, pp94-120, Oxford University Press, Oxford.

⁸⁴ Harris N and Godward E (1997), *The Privatisation of British Rail*, p146, Railway Consultancy Press, London.

Perhaps the most substantive case made for the argument the reforms have not been that bad is by Pollitt and Smith (2002) outlined above. Their argument, however, suffers from two limitations. The first is the validity of the counterfactual of a continuing nationalised British Rail. Aside from the obvious limitation that the counterfactual is unknowable, the data Pollitt and Smith use (a five year period 1988-1993) for BR's possible efficiency improvements was not only a poor period for BR but excluded any possible improvement from the 'Organising for Quality' reform instigated in the late 1980s and early 1990s. This reform has been regarded as one of the best reforms of British Rail since nationalisation (Gourvish, 2002; Harris and Godward, 1997) but instead of waiting for its benefits the industry was plunged into another big reform process.

The second limitation is that the main source of their data for performance and efficiency is pre-Hatfield (October 2000). While a plausible story of success could have been presented in prior to Hatfield (30% passenger growth, some delay reductions despite increasing network congestion and subsidy reductions), their assessment of the industry post Hatfield is unconvincing. They recognise that performance and efficiency dropped significantly post-Hatfield but they argue that post-Hatfield performance, would very likely have been no better and possibly worse under British Rail. This assumes that Hatfield had no link to the privatised industry structure and would have happened under British Rail. It is, however, a plausible interpretation that the Hatfield accident and the post-Hatfield problems were the consequences of a flawed privatisation. A plausible case can be made that the restructuring processes - bad management (caused in part by fragmentation) and poor maintenance and renewal (based on the historically low rates of investment and rail renewals in the mid 1990s) - led to problems of the late 1990s and early 2000s. Moreover the efficiency savings they report might have been part of the problem (such as inadequate spending on maintenance and renewals) rather than a reflection of a better industry. Also Pollitt and Smith (and others generally supportive of the privatised structure - see note) argue that despite public concerns about safety since privatisation it has improved, yet as noted in section 3 the safety statistics are open to contrasting interpretations indicating that the post-privatisation safety record can only properly be described as mixed.⁸⁵

Even if rail industry performance is worse than it could and should have been, there is still a plausible argument that the extent of the crisis (or with the exception of the year following Hatfield the existence of a crisis) belies its real performance. The problem may be one of public perception and the public and media sport of knocking the rail industry. The industry may have its problems but other transport industries do also, for example, road transport and air travel have problems with congestion and punctuality which do not have the same level of salience.

Moreover, the public might be extremely sensitive about performance and safety on the railways, in particular in comparison to the far worse road safety record. While it can be argued that the sensitivity is due to a belief that some accidents, such as Hatfield were wholly preventable, the reaction of Railtrack and the government to the accident at Hatfield may be symptomatic of over-sensitivity. Rather than trying to learn from the accident in a measured way there was a panic reaction on the basis that the railways should be 100% safe. The different levels of acceptability of rail and road safety may be due to illusions of individual control. Car drivers often have illusions of lower risk and infallibility when they are in control (accidents may happen but always to other people who are bad drivers, not good drivers like they are). These societal perceptions and concerns, even if false, are often taken

⁸⁵ Wright R (2003), *Steamed Up but Going Nowhere*, Financial Times, p13, 17 November.

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into account when assessing risk and measures to overcome risk.⁸⁶ Legitimacy and trust are important in any decision making environment, if the railway system needs a much higher level of safety than car travel then it has to be accepted.

The reason why the public/citizen's perceptions may vary so much may relate to the nature of rail travel which, irrespective of ownership, is perceived as a public service. As long as the railways continue to be perceived as a public service (the level of public subsidy, extent of government and regulatory involvement and their necessity for the functioning of society and the economy indicate that this will be a long time) private providers are likely to struggle for legitimacy and the public's expectations will be correspondingly higher. The railways are a particular example of a broader problem of the legitimacy of the 'New Public Management' which stresses the importance in public services of business-like practices and economic efficiency over and above political participation.⁸⁷ Rather than an active and informed participant in a process of democratic governance (or perhaps more realistically a passive individual benefiting from a paternalistic and benign administration), the citizen becomes a consumer within a private market place. This represents a massive transformation in the normative values of citizenship and governance which arguably the public have not adjusted to and not found legitimate. Without this legitimacy no matter how well a privatised industry performs the public's expectations will be higher. British Rail might have been as badly managed as Railtrack, yet the latter did not have the same degree of legitimacy as BR and confronted a lack of public and political tolerance when things went wrong, resulting in, for example, the post Hatfield panic (Kay, 2002). In one sense if slow incremental performance improvements are the best that can be expected the government ought to focus on other means of establishing the legitimacy of the organisation of the industry. In another way this comes full circle back to the critique of the private ownership of the railways.

⁸⁶ Walker T (2003), Reducing Risks, Protecting People - Decision-Making on the Basis of Risk, CRI Occasional Lecture 8, 28 January, Centre for the study of Regulated Industries, University of Bath, Bath.

⁸⁷ Box R C (1999), Running Government like a Business - Implications for Public Administration Theory and Practice, *American Review of Public Administration*, 29:1, pp19-43.

6 CONCLUSION

This paper has discussed five possible causes of the crisis in the rail industry - private ownership, fragmentation, regulatory failure, bad management, and hasty reform - and a sixth possibility, that the reform was not as bad as perceived. In order to assess these causes in comparison to other sectors four aspects of the railways which appear to set the industry apart from the other regulated network utilities have been outlined - subsidy, complexity, land scarcity and network capacity constraints. The paper has a wide ranging focus thus it has not been possible to analyse all the arguments fully and a number of areas for further investigation have been identified.

Isolating the various possible causes and assessing their relative significance is a difficult task. Most of the arguments appear convincing to varying degrees:

- an effective way of managing a large public subsidy to a private business has not been established in practice;
- excessive fragmentation has been a distinctive problem in an industry with such a high degree of interface complexity;
- regulation has focused too much on contracts and not enough on the financial framework for investment and effective management and has been exacerbated by the difficulties of regulating an under performing industry;
- Railtrack's management was not focused sufficiently on network stewardship and network development;
- political imperatives drove a highly experimental privatisation at breakneck speed.

Two of the special features of the rail industry are closely connected to these arguments. The subsidy and interface complexity have particularly exacerbated the problems of excessive fragmentation, regulatory failure and bad management. Overall, two arguments appear especially compelling: the problem of effective management of the subsidy (irrespective of ownership), and excessive fragmentation of an industry with a high degree of interface complexity.

To a degree the problems of the pace of reform, regulatory failure and bad management are symptomatic of these two arguments. Without excessive fragmentation would the industry have been so badly managed? Would the reform within the 1992-1997 parliament have been so perilously tight? Would good economic regulation in the earlier years have been neglected as much as it was? Without the large public subsidy would the problems of financing the industry for the next five years experienced in the 2003 interim review have been so difficult and with a high public profile?

It must be stressed that the argument is against *excessive* fragmentation and not any level of fragmentation. Extensive fragmentation was predicated on the idea of on-rail competition which proved very limited in practice; it led to a severe loss of organisational knowledge; and it exacerbated the difficulties of coordination in an industry with highly complex interfaces. The implication is not that a return to a 'golden age' of monolithic organisation (which is mythical as BR was not monolithic) would solve the problems. The argument is that there are special interface problems in the railways which require effective management which have been made much more difficult by excessive fragmentation. Also fragmentation was undertaken much more rapidly in rail compared to some of the other privatised utility

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industries, such as gas and electricity, where the process was much more incremental and managed.

Although private ownership per se does not appear to be a primary cause of the ills in the industry many of the problems have resulted from the fact that privatisation has not solved the problem of the role of the government in the industry. Rather than the idea that the best place for the government is as far from the industry (and regulators) as possible, the legitimate role of the government should be recognised and much more clearly specified. The question of ownership is thus secondary to setting up good government-regulator-industry relations. Whether this can be achieved by the 'hard' model of independent regulation advocated by Winsor (2004) is unproven in practice. At least independent regulation requires to be supplemented by a more explicit and accepted system of iterative planning involving the government, regulators and industry.

Land scarcity is less obviously connected to the difficulties experienced in the management of current system as the demands for new land are low. There is nevertheless an indirect connection: land scarcity means network expansion (which would reduce interface problems) is extremely expensive (as evidenced for example by the channel tunnel rail link) which puts the onus on improvements and effective capacity management of the existing network with all its interface difficulties. This is linked to the fourth special feature of rail, that of network capacity constraints, which with traffic growth, has impacted considerably on performance and, while the problems can be mitigated by better congestion management, network expansion is required to make substantial improvements.

All of the above raises a number of issues for further investigation:

- First, the problem of setting and managing the subsidy within a fragmented policy and regulatory system is particularly acute. With such large sums of public money involved, two government departments and two regulatory organisations, more detailed investigation is required into the way the subsidy is managed in practice and whether improvements, such as a better iterative planning system, are possible. The subsidy problem is exacerbated by the big disparity in the fiscal frameworks between the three key modes of transport - rail, road and air - and the fiscal treatments of air travel (no tax on fuel) and roads (state funding of roads, though road users do pay additional taxes) are much less transparent;
- Second, further examination of the latest regulatory reforms is required in order to assess whether they have addressed some of the failings of the early years of rail privatisation and the problems of regulating an under-performing industry;
- Third, while it appears convincing that there is a particular interface complexity of the railways further investigation is required into whether the extent to which internal coordination and working practices in British Rail were lost, whether the complexity of the industry necessitates integrated operation or whether effective mechanisms can be set up to improve inter-organisational coordination. It is possible that effective coordination in a new structure could not be established quickly because of the speed of reform but will become established in time.

A preoccupation with the current model is necessary and inevitable as it is very unlikely there will be another major reform or return to an earlier industry model. Nevertheless a few thoughts about the three previous industry models outlined in section 2 in the context of the

conclusions of this paper are worthwhile. The first model (1830-1921) appears at first sight to be inappropriate because it was another case of excessive fragmentation and more suitable for 19th century railway evolution rather than 21st century maturity. Nevertheless it can provide some lessons for a modern railway such as how fragmentation could coexist with vertical integration. Also there are some parallels with the (more successful) modern German railway system which has a large number of small companies operating along side one large one (though there were four large ones in the 19th century British case). Both the regional (1922-1947) and the national (1948-1994) models did not have the problems of vertical separation, though inter-company coordination is necessary in the regional model. The regional model does, however, have the advantage that comparative benchmarking is possible enabling, in effect, a degree of indirect competition via the regulatory process.

The current situation

These issues and questions bear on the current situation and particularly whether the reforms of recent years have addressed the failings in the industry and whether any further reforms are required. It can be credibly argued that, despite the palpable problems and the need for incremental reform, the current basic industry organisation is sound (Nash, 2002a). It is also clear that industry leaders such as Tom Winsor and Richard Bowker believe that an effective industry organisation is now established. Yet few in the public, media and in the rail industry believe this, and apart from Winsor's case that regulation is now "*fit for purpose*" neither the regulators, nor government ministers have made a comprehensive and sustained case for the current industry structure. The transport secretary Alastair Darling has often stressed what the reforms of recent years are not (renationalisation and the recreation of BR), but he does not publicly articulate with any conviction that they might amount to a better organisation of the railway compared to the original privatised model.

The government's position and approach is particularly important and three possibilities can be outlined:

- First, the reforms are no more than a series of ad hoc and ill-thought out reactions to various events such as the major accidents in recent years which have led to demise of Railtrack and other changes. The government in essence believes the privatised structure is sound but it has not fully understood the problems in the industry and has reacted with a series of disjointed and ad hoc reforms;
- Second, the government is undertaking a process of 'renationalisation (or reintegration) by stealth'. The Labour government is convinced that the privatised structure and privatisation itself were flawed. In 1995 Tony Blair, for example, noted that the privatised railway is "*a hotchpotch of private companies linked together by a gigantic bureaucratic paper chase of contracts*" (Tony Blair, 23 March 1995). What is evident perhaps is a defining feature of New Labour which, despite its large majority in parliament, is frightened to challenge directly the economic orthodoxies established by the Conservatives for the fear of incurring the wrath of the City, 'middle England' and the right wing press;
- Third, the reforms are an evolution towards a much more effective and coherent industry and regulatory structure. The key reforms - better direction from the SRA, better regulation by the ORR, a better safety regime, some integration (eg, of maintenance in Network Rail) and better coordination (eg, of the wheel-rail interface) - taken together amount to an incremental but clear shift to a 'mark 2 privatisation'. This more

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evolutionary approach has the advantage of overcoming the problems of radical and hasty change. Also while the 'big bang' privatisation of the early 1990s cast asunder well established working practices and organisational relationships, slowly but surely they are being re-established and the incremental approach will enable the best practices to be preserved.

Governmental conviction and clarity as outlined in the third position above, not ad hoc reform by stealth as in the first two positions, is essential for the industry to move forward and make positive progress. However, it is the first two positions which appear to reflect reality more than the third. For example, governmental ambivalence and lack of conviction is one of the defining features of the initiation of the 2004 rail review. On the one hand the transport secretary Alastair Darling berated the 'fragmentation, excessive complication and dysfunctionality' of the privatised industry and stressed that he is open to new ideas "*I have very little sympathy with people who say we should have published our conclusions then consulted with them*".^{88 89} On the other hand soon after the announcement he ruled out any vertical integration of the industry and defended the independence of the rail regulator. His openness seems to be limited to the possibility of reordering the safety regime and trimming the powers and responsibilities of the SRA. In this sense the minister appears to believe the current structure only requires minor modifications; the extent to which the minister is open to new ideas thus appears unclear.

This ambivalence and lack of conviction contributes to the absence of one vital ingredient: legitimacy. Legitimacy is essential for stability, employee commitment, public support and investor confidence, and without it improving the industry will be all the more difficult. Bowker, for example, stresses that performance is the one and only factor in legitimising the industry organisation, yet improved performance, while necessary and desirable, would have to be dramatic to influence the perceptions of the public, media and the industry, particularly its employees and investors. It is also unclear that strong adherence to a 'hard' model of independent regulation without a broad acceptance of the overall industry structures and governmental-regulatory relations, is sufficient for the sought after legitimacy and stability. What seems to be missing is a clearly articulated governmental belief and conviction in the current structure and regulation (or any new structure) and how this should overcome many of the industry problems. Without this it seems that the necessary legitimacy will continue to be missing.

⁸⁸ Darling A (2004), Ministerial Statement, 19 January.

⁸⁹ Wright R (2004), Darling Attacks Railway Bureaucracy, Financial Times, p6, 12 February; Wright R (2004), Rail Review Leaves Managers Confused Over Policy, Financial Times, p6, 30 January.

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