



**UNIVERSITY OF LEEDS**

This is an author produced version of *Competition in Rail Transport: A New Opportunity for Railways?*.

White Rose Research Online URL for this paper:  
<http://eprints.whiterose.ac.uk/2178/>

---

**Monograph:**

Nash, C.A. and Preston, J.M. (1993) *Competition in Rail Transport: A New Opportunity for Railways?* Working Paper. Institute of Transport Studies, University of Leeds , Leeds, UK.

Working Paper 397

---



*promoting access to  
White Rose research papers*

[eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk)  
<http://eprints.whiterose.ac.uk/>



## White Rose Research Online

<http://eprints.whiterose.ac.uk/>

ITS

[Institute of Transport Studies](#)

**University of Leeds**

This is an ITS Working Paper produced and published by the University of Leeds. ITS Working Papers are intended to provide information and encourage discussion on a topic in advance of formal publication. They represent only the views of the authors, and do not necessarily reflect the views or approval of the sponsors.

White Rose Repository URL for this paper:

<http://eprints.whiterose.ac.uk/2178/>

---

### **Published paper**

Nash, C.A., Preston, J.M. (1993) *Competition in Rail Transport: A New Opportunity for Railways?* Institute of Transport Studies, University of Leeds. Working Paper 397

---

**UNIVERSITY OF LEEDS**  
**Institute for Transport Studies**

*ITS Working Paper 397*

ISSN 0142-8942

April 1993

## **COMPETITION IN RAIL TRANSPORT: A NEW OPPORTUNITY FOR RAILWAYS?**

**CA Nash**  
**JM Preston**

*ITS Working Papers are intended to provide information and encourage discussion on a topic in advance of formal publication. They represent only the views of the authors, and do not necessarily reflect the views or approval of the sponsors.*

*This work was submitted to the Rail Deregulation and Competition Workshop at the Third International Conference on Competition and Ownership in Surface Passenger Transport, Niagara-on-the-Lake, Ontario, Canada 26 to 29, 1993.*

# CONTENTS

	Page
ABSTRACT	
1.INTRODUCTION	1
2.BACKGROUND	1
3.PRIVATISATION PROPOSALS	5
4.THE RELATIONSHIP BETWEEN INFRASTRUCTURE AND OPERATIONS	6
5.COMPETITION VERSUS INTEGRATION IN RAIL OPERATORS	7
6.INVESTMENT	8
7.INSTITUTIONAL COMPLEXITY AND TRANSACTIONS COSTS	9
8.LACK OF COMPETITIVE BIDDING	10
9.CONCLUSION	11
10.REFERENCES	12

## **ABSTRACT**

NASH, C and PRESTON, J (1993). Competition in Rail Transport: A New Opportunity for Railways? *ITS Working Paper 397*. Submitted to the Rail Deregulation and Competition Workshop at the Third International Conference on Competition and Ownership in Surface Passenger Transport, Niagara-on-the-Lake, Ontario, Canada, September 26 to 29, 1993.

Throughout Europe, and in many other parts of the world, railways are suffering from declining market share and deteriorating financial performance; consequently there is renewed interest in deregulation and the introduction of competition into rail transport as a way of improving performance. An EC Directive now provides for access to rail infrastructure for third parties to run their own international trains in some circumstances. After a long debate, the British Government in July 1992 published a White Paper (New Opportunities for the Railways) which aimed to go much further. It would both open access to the infrastructure for any licensed operator and franchise out existing passenger services via a competitive bidding process; all freight services would be privatised outright. Draft legislation to implement these proposals, as well as a string of consultation documents on details have also been published, and an Interim Report from the Select Committee of Members of Parliament examining the proposals has appeared.

This paper review the debate that is currently raging over the British government proposals. It considers the potential for innovation and cost savings which they offer, as well as the problems of increased transactions costs, lack of competitive bidding and other potential inefficiencies of the new system. The key issue of the charging regime for access to the infrastructure is also addressed. It is concluded that competition in the provision of freight services is desirable, but that passenger services present many more problems, and that the proposals need modification if they are to meet their objectives.

Contact: C A Nash, Institute for Transport Studies (tel: 0532 335337).

# **COMPETITION IN RAIL TRANSPORT: A NEW OPPORTUNITY FOR RAILWAYS?**

## **1. INTRODUCTION**

In July 1992, the British government published a White Paper (New Opportunities for the Railways) outlining its proposals for the privatisation of and introduction of competition into British Rail. Since then, draft legislation has been published as well as a string of consultation documents on specific aspects of the proposals, whilst ministerial statements have also served to make the intentions a great deal clearer. This paper aims to provide a critique of these proposals. The next section provides some background on the situation of rail transport in Western Europe, before the proposals themselves are explained. The following five sections consider in turn issues surrounding the separation of infrastructure from operations, competition versus integration in the planning of rail services, whether the incentive to invest will be adequate, the problem of institutional complexity and transaction costs, and lack of competitive bidding before we reach our conclusions.

## **2. BACKGROUND**

In Europe, as elsewhere, railways have suffered a continued loss of market share in a buoyant transport market in recent decades (Tables 1 and 2). Whilst this may be partly explained by external circumstances (increased car ownership, changing industrial structure from heavy industry towards high value manufactures goods and services) the failure of rail companies even to perform well in those sectors in which they have a comparative advantage, such as long distance international passenger and freight traffic, and the perpetual complaints about the price, quality of service and inflexibility of rail transport leads to doubts as to whether railways are currently running efficiently. For instance, the rail share of international intra-community freight fell from 14% in 1975 to less than 10% in 1987 (COM(89) 564 FINAL paragraph b).

Although rail now only carries less than 10% of passenger and 20% of freight within the Community as a whole, it remains very important in certain markets. For commuting in large congested urban areas there is no realistic alternative (for instance over 70% of the million daily commuters into Central London arrive by rail.) For inter city business trips over distances of 200-300 km rail remains dominant, and with higher speeds the ability to compete with air over longer distances is growing. Rail is also important in the long distance leisure travel market. For freight, its ability to carry large volumes of traffic quickly and economically between the private sidings of major customers means that it has a major role in bulk traffics except where the even cheaper option of water transport (sea or canal) is available. For traffic in unit loads, the traditional approach of handling these in individual wagons requiring marshalling en route is looking less and less able to provide the cost or quality of service available from road haulage. However, growth of intermodal systems able to reduce the cost and delay problems of transferring goods between modes is making rail more able to compete for general merchandise over longer distances.

With growing concern about congestion and the environment, rail is widely seen as having an increasingly important role in the future in these sectors. Indeed, rail investment is now running at enormous levels. A recent study concluded that the railways of Western Europe plan to spend a total of some £120-150b including £20b on urban rapid transit by the turn of the century (Table 3). In the case of Britain, it has been estimated that investment of the order of £1b per annum is required through the

1990's even without major new projects such as a high speed line to the Channel Tunnel or new tunnels under London. Given both the opportunities and the level of investment now taking place in rail transport, it has become more important than ever to ensure that the arrangements for regulation and control of the sector are conducive to efficient marketing and operation.

Throughout Europe, rail has generally been seen as a natural monopoly, requiring both regulation and subsidy. Monopoly power was deemed to require regulation of prices charged for rail services, and 'common carrier' obligations to carry whatever traffic was offered at that price. Withdrawal of passenger services required government approval, which was frequently withheld, requiring cross-subsidy of loss making services by profitable ones. Competition was also regulated, with protection of rail traffic being a major factor in the regulation of the bus and road haulage industries. Nevertheless, railways throughout the community fell into deficit during the course of the 1960's and 1970's. At the same time, railways typically had social obligations towards staff in the form of pension rights inherited from the days of a much greater railway workforce, no redundancy agreements and so forth. To the extent that in some countries they were required to fund the deficit by borrowing, this simply led to the further accumulation of financial difficulties until in some cases (notably the Federal Republic of Germany) the accounts of the railway company lost all contact with reality.

Reactions to this emerging crisis varied. In some cases, protection from other modes of transport continued and subsidy was stepped up. In Britain, the mechanism of regulation of both rail and road transport has been largely dismantled. Rail is free to practice price discrimination and charge what the market will bear in both passenger and freight markets. Subsidy is given as a lump sum, the amount of which is strictly controlled, and management has been reformed to put commercial considerations foremost.

In 1982, five sectors (covering respectively Inter City, London Commuter and Regional passenger services, freight and parcels) were established, with responsibility for the costs and revenues of their own services. The sectors were defined to be relatively homogeneous both in the types of traffic they carry (and the objectives with respect to which they carry it) and in the equipment they used. As far as possible without wasteful duplication, staff and assets were made specific to a particular sector (or subsector), which had control over how they were used. However, the sectors themselves did not operate the railway. This was done under contract to them by the operating department, which still had a traditional organisation into regions and areas.

The main advantages of sector management have been twofold. In the first place, it has been possible to develop much clearer lines of managerial control, with identified sector and subsector managers responsible for each passenger service or flow of freight traffic, no matter where it goes in terms of regional boundaries. In the second place, these managers have had much tighter control over assets as a result of increased specificity of assets to sectors and subsectors and of the development of systems of costing and budgeting that make managers directly accountable for the costs they incur and the revenue they earn. The marketing advantages of being able to put a single manager in charge of an entire flow of traffic has been particularly pronounced in the case of freight traffic, which tended to flow across regional boundaries as the latter were set up with the more important flows of passenger traffic in mind.

Operation of the railway was governed by a host of contractual arrangements made between subsector managers and operating areas as to the required level and quality of service, and the price to be paid. In these relationships, the operator was of course an internal monopoly supplier who accounted for the majority of the business manager's costs. Such an arrangement now appears to be becoming the norm within European Railways. For instance, in the Netherlands, business managers buy services from supply sectors under a form of contract very similar to the RPI-x form of regulation widely used in

Britain; unit prices are stipulated for, for instance, supplying a train kilometre or maintaining a passenger car, and these prices reduce by 2% per annum in real terms. However, in Britain, discontent with the extent to which the business manager was able to control the costs and quality of the operations led to a decision to internalise these relationships by fully disaggregating the operating departments to the sectors. Thus each sector became an integrated marketing and operating organisation for a particular market segment.

The need for complicated internal contracts did not go away however. With the disaggregation of operations to the sectors came numerous cases where it was obviously sensible for one sector to provide services for another. This applied particularly in the case of infrastructure where for instance the East Coast Main Line might 'belong' to Inter City, but Regional Railways, Freight and Network Southeast would all want to use stretches of it. They would obviously want some form of contract specifying what they were to receive in terms of services at what price, and given the monopoly power enjoyed by the owner of the track this contract would be subject to regulation by the Board.

The operations of British Rail are now clearly divided into Commercial (Freight, Parcels and InterCity Passenger - European Passenger traffic will also form a commercial business) and subsidised (Network SouthEast, which operates commuter, inter urban and local services throughout the South East, and Regional Railways, which provides local and cross country services throughout the rest of the country). One reason for sectorisation was to create a transparent distinction between these sectors in which it was more difficult for subsidy to leak from subsidised to commercial sectors. Prior to the current recession, it had been intended that by 1992/93, Network SouthEast would operate without subsidy, and to move progressively to full commercial viability. This aim has now been abandoned, whilst it has always been accepted that Regional Railways will need ongoing subsidies. In the case of the commercial sectors, the aim has been to move towards earning a fully commercial rate of return (now defined as 8% in real terms), on all assets, including property, employed in the business although less demanding interim targets have been set. In the case of the subsidised sectors, the aim in recent years has been to reduce the amount of subsidy necessary, whilst broadly maintaining the quality of service. Again, demanding targets have been set, whilst at the same time, quality of service standards have been more clearly defined. Fare increases in real terms have been permitted, although the rate of increase in the case of commuter services into London has clearly been a politically sensitive issue. Thus there has been a move towards a contractual relationship between British Rail and Central Government for a given set of services, although since 1974 subsidy has always been given as a global sum.

How successful has this approach been? Table 4 gives some key indicators to help answer this question. Figures are shown for four years. The first is 1979, which is both the start of the recession which reduced the volume of rail traffic and severely hit BR's financial performance and the year in which the Conservative Party took office. 1983 is shown, which was the worst year in terms of financial performance (other than those affected by strikes in the railway industry or its customers) and also the first year in which clear targets for the reduction in subsidy were set by the Minister. Finally we show 1989/90, the final year before recession again really began to bite, and 1991/2, the most recent year. In the first place, it will be seen that from their peak, total grants paid to the railway were reduced by some 50% before starting to grow again in the current recession. This was accompanied by a very small pruning of the passenger network, but a substantial increase in both the volume of traffic and the amount of passenger train miles provided. There has also been an increase in the number of railway stations, mainly due to local authority initiatives to open new local rail stations. Fares have risen in real terms, but the other main factor leading to improved performance is clearly the rapid rise in labour productivity, measured here as train miles per member of staff, although there has been a small decrease in labour productivity in the most recent years.



Table 5 shows the financial performance of the sectors in 1991/2. A word is necessary on the way in which costs and revenues are measured in these figures. Costs are measured on a prime user basis, under which all the joint costs associated with any particular asset - such as a stretch of track or a station - are borne by the sector for which it is considered to be primarily provided. Other sectors only pay for any additional facilities they need, and for additional maintenance or renewal expenses on facilities they share. Freight and parcels are never deemed to be prime users of facilities they share with a passenger sector. In the case of revenue from through journeys involving more than one sector, revenue is allocated pro rata to the individual fares for the different segments of the journey.

It will be seen that both InterCity and Freight are in surplus, although neither is yet earning a fully commercial rate of return. Parcels has suffered increasing losses due to road competition and recession in recent years. Network SouthEast requires a modest degree of subsidy, and given the relative inelasticity of much of its traffic could undoubtedly return to profitability quickly by means of fares increases if this were seen as a desirable policy. Only Regional Railways is in a position in which making it profitable on anything like the current basis in terms of network of services and cost allocation conventions is clearly unthinkable, although even here, a further reduction in subsidy is intended.

Overall it may be thought that the performance of British Rail in the 1980's was commendable, even if achieved in the context of favourable external circumstances. However, the reemergence of increasing deficits and the slow down in labour productivity improvements in the last few years may have contributed to a determination by government to find another way forward which would increase the amount of competition in the rail market.

### **3. PRIVATISATION PROPOSALS**

A number of European countries is now looking at proposals for rail privatisation. Generally, these involve three elements:

- separation of infrastructure from operations, as proposed in Britain, Germany, the Netherlands, and already taken place in Sweden
- privatisation of rail operators, and possibly eventually also the infrastructure. This is being discussed in many countries, but only Britain so far has concrete proposals and a timetable to achieve it
- 'open access' arrangements for other private operators to enter the market and compete with the existing operator. This is the intention in both Britain and Sweden. Furthermore, in a policy statement issued in 1989, the EEC outlined details of a Community rail policy which includes proposals to separate infrastructure from operations and to allow access to the infrastructure to competing operators (Nash, 1991). The latter issue is now the subject of an EC Directive (91/440). Legal rights of access to railway infrastructure in EC countries have already been established for:
  - international groupings of railway undertakings - defined as two or more operations from different countries wishing to run international services between the Member States where the undertakings are based
  - to any railway undertaking wishing to run international combined transport good services between any Member States.

When alternatives for privatisation in Britain were considered, there was - as is commonly the case - a major conflict between minimising disruption through structural change and maximising the degree of competition. Any approach which maintained integration of infrastructure and operations - whether on a regional or a sectoral basis - would lead to little competition, because the infrastructure itself represents a natural monopoly. Whilst it would be possible to promote competition by granting rights of access to

the infrastructure to competing operators, it is always difficult to police such arrangements to ensure that the integrated operator is not using its monopoly power in the infrastructure market to gain advantage in operations.

Thus the government has decided to adopt an arrangement which replaces BR by an infrastructure company (Railtrack) and a set of operating companies. However, passenger operations will be franchised out to private companies in perhaps some 20 groups of services, basically at what is currently profit centre or subsector level, so that the franchise will cover a group of services such as the East Coast Main Line, the South Eastern services of Network SouthEast or the North Western services of Regional Railways. In the case of some InterCity services, franchisees will be expected to pay for the right to run the services, whereas in most other cases they will be bidding on the basis of the subsidy they require. Minimum standards may be set in terms of frequencies, reliability and overcrowding, and maximum fares stipulated. A new Franchising Authority will be set up to undertake the process; franchisees will be able to lease existing BR rolling stock and take over BR staff. Where no acceptable offer is made, BR will continue to operate the service, but BR will not be allowed to bid for franchises or to continue to operate on a route that has been franchised out. It is stated that the government wants to maintain the maximum flexibility to respond to whatever sort of arrangements the private sector proposes in terms of the details of the franchises, but the expectation is that the typical length of franchises will be around seven years.

Regarding the infrastructure, Railtrack will undertake the timetabling of all services across the network; it will allocate paths and levy charges to cover costs and make a normal rate of return on its assets, although it will be eligible for grant-aid where projects show external benefits. A new regulatory authority will be set up to ensure that Railtrack provides open access to all operators on fair terms and conditions. Railtrack will be required to subcontract activities such as track maintenance to the private sector wherever it is economic to do so. Stations may be sold to private sector developers, who would not necessarily be rail operators.

It is intended to sell the Freight and Parcels sectors in their entirety, as a number of separate companies. Again access to the network will be available for other operators who wish to enter the market. These sectors are not discussed in much of what follows, which concentrates on the passenger business.

It must be said at the outset that the proposals are ingenious. They separate out the aspect of rail operations, the infrastructure, which is clearly a natural monopoly with heavy sunk costs, in order to try to achieve competition in operations, where economies of scale are less great, and where - even if operations by a single company turn out to be the norm - sunk costs are less severe, so there may at least be a reasonable degree of contestability. Where subsidies are to continue, they achieve competition for the franchise. By making it possible for a new operator to lease existing rolling stock and - in the case of the franchisee - take over existing staff, they greatly reduce the barriers to entry posed by heavy capital requirements and the need for specialised staff. They offer the prospect of competing management teams trying to come up with new ways of operating and marketing services to reduce costs and increase revenue, and of private sector investment to meet at least some of the enormous investment needs outlined in the previous section.

However, there remain great concerns at many aspects of the proposals. We shall consider these concerns under five headings:

- the relationship between infrastructure and operations
- competition versus integration in rail operations
- investment
- institutional complexity and transactions costs
- lack of competitive bidding

#### **4.THE RELATIONSHIP BETWEEN INFRASTRUCTURE AND OPERATIONS**

As stated above, the proposal is to create a new company called Railtrack, which will own, maintain and operate the infrastructure. It will be responsible for planning the working timetable, and for signalling and real time control. It will essentially sell paths under a variety of contracts of different lengths to open access passenger and freight operators for the highest price it can achieve, subject to their at least covering avoidable cost. It will also enter into a contract with passenger franchisees for the provision of paths. One may assume that something like the existing 'prime user' cost conventions will remain, with the passenger franchisee being required to cover any prime user costs which cannot be covered by surpluses on other contracts. The reason for not adopting a simple published tariff as in Sweden (Table 6) is that, whereas in Sweden the infrastructure company is heavily subsidised, so that charges can be based on marginal social cost, in Britain it is intended that Railtrack will be largely unsubsidised and required to make a commercial return on its assets (although the possibility of grants towards the costs of socially desirable but unprofitable projects has already been mentioned, and in some cases freight customers will have their track costs paid by a new government grant, where this offers sufficient environmental advantages by diverting traffic from road). Without the ability to price discriminate, and in the presence of strong economies of scale, a single published tariff would be very inefficient, although in its absence the task of the regulator in making sure that Railtrack behaves fairly to all operators appears a difficult one.

The first obvious objection to this organisation is that Railtrack is in a position in which it is always negotiating at one remove from the market, be it the commercial market or the government in the form of the franchising authority. It appears to have relatively little incentive to act efficiently since it can always pass on any cost increases it incurs to the franchisee; the only limit on this is the size of the franchising authorities' budget and the consequent threat of service closures. No doubt the contracts will stipulate performance criteria to be achieved by railtrack in terms of delays due to work on the infrastructure; nevertheless this has been the source of considerable concern in Sweden, where the chairman of Swedish Railways believes the problem has become far more acute since the separation of infrastructure from operations. It is also the case that Railtrack will be a very small organisation, contracting out most of the actual construction and maintenance work to the private sector on the basis of competitive tendering. Nevertheless, as a consequence of this organisation, many potential franchisees have stated that they would be unwilling to bid on the basis of the current proposals; the prospect of Railtrack controlling some 50% of their costs and heavily determining the quality of service they could provide is not one that appeals to them.

A second objection concerns longer term planning. Many of the advances in terms of speed and cost effectiveness in rail transport in recent years come from a careful matching of rolling stock and infrastructure. For instance, track speeds, maintenance schedules and capacity requirements are intimately linked to the number of trains, schedules and types of rolling stock passing over it. It will be absolutely essential that a close planning relationship exists between Railtrack and the principal train service operators using any particular piece of infrastructure.

It has been widely suggested that the best solution to these problems would be for the principal operator, the franchisee, actually to lease the infrastructure. Railtrack would remain responsible for ownership, and would oversee investment decisions. But the day-to-day operations and maintenance would be under the management of the franchisee. Obviously the big disadvantage of this approach would be that open access operators would have to deal with a variety of franchisees if they wished to run passenger or freight services which crossed franchise boundaries, and in the case of passenger services these might include outright competitors. We return to this issue in the light of what we say about open access in the next section.

## **5.COMPETITION VERSUS INTEGRATION IN RAIL OPERATIONS**

The government has been concerned throughout to maintain the possibility of new entry by competing passenger operators. This is obviously most likely to occur in the case of profitable inter city operations, but may happen in almost any subsector, since most will have some services which could be commercially attractive, particularly if track only had to be paid for on an avoidable cost basis. In the first round of franchises, the franchising authority will be guaranteed the paths necessary to run the existing service, and this will obviously greatly limit the scope for competitive entry on busy parts of the network. However, in subsequent rounds, Railtrack is required to sell these paths to competing operators if they put in a higher bid than the franchisee, thus permitting a gradual switch of operations away from franchisees towards open access operators.

This again raises a number of issues. The first is whether it is actually economically efficient to split the operation of a particular set of rail passenger services between a variety of operators. There are two arguments here. One that there is a potential loss of economies of scale. For instance splitting services between a number of operators could mean poorer utilisation of staff and assets, as the likelihood of their being able to move straight from one working to the next without idle time reduces. Each operator would need to make arrangements for access to facilities for cleaning, fuelling and maintenance of rolling stock. Secondly there is an argument that the service will be less attractive to the customer than an integrated planned system (for instance because of the failure to achieve even headways, because of a lack of interchangeable ticketing or of through tickets, lack of an information and seat reservation system covering all operators). It might be argued that these issues could always be settled by sensible commercial arrangements between the companies, or if this failed ( as it has, by and large in the deregulated bus and coach sector in Britain), by a requirement to cooperate in such matters imposed by the Regulator.

The second issue is in some ways a more fundamental objection. Many potential franchisees have indicated that they would not be interested in bidding unless they received exclusive rights to run the service in question. It is easy to see why this is. When a franchisee bids, they undertake to provide certain services for a period of many years ahead, in return for receiving (or paying) a fixed sum of money. If they do not know what competition may arise during this period, and are greatly limited by the terms of the franchise regarding how they can react to such competition, that naturally greatly raises the degree of risk involved in their bid. Thus open access is bound to raise the cost to the franchising authority of securing the train services it wishes, and may even make it difficult to secure any bids at all for some subsectors.

In response to this situation the government has indicated its willingness to make many of the franchises exclusive, at least for the first round of franchising. It may be sensible to continue this practice. This in turn would make the objections to the franchisee leasing the infrastructure very much less significant.

## **6. INVESTMENT**

We indicated earlier in the paper that there are enormous requirements for investment just to keep the British Rail system operating at its current level, even without undertaking the many investments thought necessary for it to play its full part in meeting the severe transport problems facing the country. One key measure of the success of the governments proposals, then, will be the extent to which they succeed in attracting private investment into rail transport. On the infrastructure side, Railtrack will, for the foreseeable future remain a publicly owned company, although it will be able to enter into joint arrangements with the private sector for the provision of new infrastructure. It is in the rolling stock area that the new arrangements offer more potential for private investment.

However, if the typical length of franchise is only seven years, when railway rolling stock has a life of at least 30, it is difficult to see that providing much incentive for an operator to purchase new rolling stock, or for third parties to build it and lease it to the operator, unless there is some guarantee that the rolling stock will find a further use at the end of the franchise. There appear to be two ways of dealing with this problem. One is to greatly lengthen the typical franchise, to cover 15 years or more, or to provide for automatic renewal provided that performance was deemed satisfactory. That of course has the disadvantage of greatly reducing the competitive pressures on franchisees, although it does give the franchisee a greater interest in building up the long term potential of the service. The other alternative is to intervene more directly in the rolling stock market, either by the public sector building stock for lease or by it at least offering guarantees regarding the future deployment of suitable privately built stock.

## **7. INSTITUTIONAL COMPLEXITY AND TRANSACTIONS COSTS**

We have so far examined a number of objections to the proposals, and found ways of resolving them, albeit in general at the price of restrictions on the commercial freedom of rail operators and on the degree of competitive pressures they bear. This section raises a rather more fundamental objection to the proposals. This is the argument that, in order to bring about a degree of competition in rail transport the government has had to postulate such a complex institutional arrangement that each organisation will be involved in negotiating and monitoring a huge number of contracts, with the result that transactions costs will be prohibitive.

Consider the position of a new franchisee. The most important contracts for negotiation are of course with the Director of Franchising and with Railtrack, covering the terms of the franchise - what services are to be operated, what quality standards are required, and at what price in terms of payments from the Franchising Director to the Franchisee and from the Franchisee to Railtrack. Clearly all these conditions will need to be subject to variation in agreed circumstances given the length of the contract; circumstances may change requiring more or less services to be run at a higher or lower price per train. At the same time Railtrack will negotiate with the (possibly many different) owners of stations to secure access rights. Any disputes in this area will presumably require the franchisee to take them up with Railtrack who will in turn deal with the station owner.

The franchisee may also need to make a number of other contractual arrangements, for instance with other operators via the proposed Joint Industry Board regarding any through ticketing or revenue sharing agreements, with leasing companies regarding the provision of rolling stock, with maintenance companies regarding fuelling, cleaning and maintenance. It will need a licence from the Regulator, who will in turn examine whether it has fulfilled the safety standards laid down by the Health and Safety Executive, and whether it is acting in such a way as to unreasonably impede competition.

Suppose an incident occurs, as happens every day, whereby a problem occurs with a train of another operator, effecting this operators services. It will presumably need to monitor whether this gives cause for a complaint to Railtrack, who will have to take the issue up with the other operator if in turn it was failing to abide by the terms of its contract with Railtrack.

Will such a network of contractual arrangements prove more effective than what went before. It must be said that even within a unified British Rail there has been a marked tendency to put relationships between different parts of the organisation on to a quasi contractual basis in recent years. But there is a marked difference between that and what is proposed. In the past, the various sectors have been part of the same organisation, and the Chief Executive of BR has been well placed to obtain information and to resolve any disputes as to whether the terms of the contracts were fair, and whether they were being adhered to. In the new situation, any such disputes will be conducted through an external body, the Rail Regulator, who will find it much less easy to obtain reliable data on the costs and benefits of alternative courses of action, or very probably through courts of law. One clear indicator of the success of the reforms will be the extent to which operators are able to settle disputes amongst themselves on an amicable basis, as opposed to feeling the need to resort to litigation.

Again there would be ways to proceed with franchising without the degree of institutional complexity of the current proposals. For instance, suppose that a body called British Rail continued to exist, and fulfilled the role of both Railtrack and of the Franchising Authority. Suppose also that the franchisee leased from British Rail the infrastructure, rolling stock and stations on the services it operated. If franchises were exclusive, its relationship with other operators would be simplified, although there would still be many cases where other franchisees or freight operators needed the use of its tracks. Again this approach appears to offer a more workable alternative, but at the cost of reducing the degree of competition; it also has the significant advantage of reducing the degree of disruption in the transition from existing institutional arrangements.

## **8. LACK OF COMPETITIVE BIDDING**

So far there appear to be a number of organisations interested in taking on the role of franchisee for railway passenger services:

a) New companies formed by existing rail management:

These obviously have the experience of running railways, which is in short supply, big advantages regarding information about the economics of existing operations and a strong incentive in terms of their interest in keeping their jobs. What is less clear is whether they will be able to raise the amount of capital required. Whilst the ability to lease assets and take over existing staff substantially reduce capital requirements, there are still substantial legal costs and costs of preparing a safety plan which have to be incurred before a bid can be considered. Thus it may be that railway managers will most often bid as part of a consortium with other interested parties rather than as a separate company.

b) Bus operators:

A number of bus operators have shown an interest. Obviously they have relevant experience, and in a number of cases they have former railway managers on their staff. One of the attractions to them is the prospect of offering an integrated bus and rail public transport service throughout their area, although it currently appears unlikely that this will be permitted, in the interests of

preserving competition between bus and rail.

c) Firms from other parts of the travel business, including a shipping company and an airline.

d) Manufacturers of railway equipment might be expected to be interested where major new investment is needed as part of the contract, although there is no sign at present of this happening.

Overall it must be said that the degree of serious interest appears limited, and that many of those expressing an interest have reservations about the precise way in which franchising is to take place. We have suggested above measures to make the business more attractive to potential franchisees, in the interest of stimulating more competition and gaining more competitive prices. There is clearly a risk that the number of competitors may be so low that bids are not competitively priced or that collusion takes place, whilst an incumbent franchisee might feel that it faced relatively little threat to its future.

From the above description of the proposals we may conjecture that the franchising system will be based on near complete contracts (i.e. contracts that are specified in great detail by the franchiser), administered on a net subsidy basis. There will obviously have to be agreed circumstances in which both the level of service and the payment might vary over the - relatively long - life of the contract. The franchise will be essentially an operating contract in which the franchisee supplies the management and takes over the labour. The threat of franchises being won by new operators with a totally new set of staff, which was an important factor in achieving cost reductions in the bus industry, is not a realistic possibility here. The main areas where private sector managers will have the possibility of making improvement is in marketing the product and reducing labour costs. However, labour productivity on BR is relatively high compared to other western European railways and the scope for improvement may be modest. Unit cost reductions may be achieved by the reduction in real wages, especially outside London, that is likely to result from the break-up of the national pay bargaining system, but we would expect it to be difficult to achieve the 20-30% reductions achieved in the contracting out of other services. Privatisation will introduce a bankruptcy constraint which should act as a spur to efficiency but this will be blunted by the scope for contract re-negotiation in view of the difficulties that would be posed by the need to hand over quickly to another operator in the event that bankruptcy of a franchisee really did occur.

## **9. CONCLUSION**

We have seen how the combination of a continued decline in the market share of rail transport with a perception of a major role for rail in the future has led governments all over Europe to start examining new ways of providing rail services, on a more competitive basis and with more private sector involvement. We then examined in depth the proposals of the British government to separate rail operations from infrastructure and to make rail operations entirely a competitive private sector activity, with competitive bidding for franchises in the case of passenger services.

We consider that there are clear advantages of these proposals in terms of increasing the incentives to efficiency and innovation, and attracting private sector capital into the rail industry. However, we also see major problems. These concern the efficient planning and provision of the infrastructure, preservation of a well integrated network of services able to fully exploit the potential for economies of scale, provision of adequate incentives for private operators to invest in new rolling stock and avoidance of a heavy burden of transaction costs.

None of this argument appears particularly important in the freight sector, which is generally a minority user of the infrastructure in British conditions and where most services are operated on a contractual

basis for a single customer. Indeed in the freight sector there appear to be a number of potential operators wishing to enter the market and many freight customers eager to try them out. We thus support the opening of access to the infrastructure for new freight operators. But the problems do appear to warrant significant changes to the proposals in the case of passenger services. In particular, it would seem more appropriate for British Rail to continue in the role of the provider of the infrastructure and the planner of services, but to progressively subcontract out more of their operations, including maintenance of infrastructure. In this way competitive private concerns could play a major part in rail transport without the problems of disintegration of the network into a host of smaller operators presented by the current proposals.

## 10. REFERENCES

CAVES, D CHRISTENSON, L and SWANSON J (1981). Productivity Growth, Scale Economies and Capacity Utilisation in US Railroads 1955-1974 *American Economic Review* (5) 994-1002

COM (89) 564 FINAL (1990). Communication on a Community Railway Policy

FRIEDLANDER A and SPADY R (1981). Freight Transport Regulation. MIT Press

HARRIS R (1977). Economies of Traffic Density in the Rail Freight Industry. *Bell Journal of Economics* 8(2) pp. 556-634

JANSSON J O and CARDEBRING P (1989). Swedish Railways Policy 1979-88 *Journal of Transport Economics and Policy* 23

JARA-DIAZ S and WINSTON C (1981). Multiproduct Transportation Cost Functions: Scale and Scope in Railway Operations. In N. Blattner et al (Eds) *Eighth European Association for Research in Industrial Economics* Vol.1, Basel)

KEELER T E (1974). Railroad Costs, Returns to Scale and Excess Capacity *Review of Economic Statistics* (61) pp. 201-208

NASH C A (1981). Government Policy and Rail Transport in Western Europe *Transport Reviews* 1(3) pp. 225-250

NASH C A (1982). Economics of Public Transport. Longman.

NASH C A (1985). European Railway Comparisons - What Can We Learn? In K.J. Button and D. Pitfield. *International Railway Economics*. Gower.

STARKIE D (1984). BR - Privatisation without Tears. *Economic Affairs*.

WINSTON C (1985). Conceptual Developments in the Economics of Transportation: An Interpretive Survey. *Journal and Economic Literature* XXIII pp. 57-94



**Table 1: Rail Passenger Traffic Share (% of pass km) (excluding metros)**

	1980	1990
Great Britain	6.4	5.0
Belgium	9.0 <sup>1</sup>	7.1 <sup>1</sup>
Denmark	8.6	7.3
FR Germany	7.1	6.4
France	10.0	9.2
Italy	8.9	7.3
Netherlands	7.4	7.0
Spain	8.5	7.6

<sup>1</sup> excludes taxis

Source: Transport Statistics Great Britain (1992)

**Table 2: Rail Freight Traffic Share (% of tonne km by rail, road, water and pipeline)**

	1980	1990
Great Britain	10.6	7.1
Belgium	23.5	18.1
Denmark	9.5	12.1
FR Germany	27.3	27.7
France	30.6 <sup>2</sup>	26.1 <sup>2</sup>
Italy	10.2	9.5
Netherlands*	5.9	4.7
Spain	7.8	6.3

<sup>1</sup> excludes pipeline

<sup>2</sup> excludes sea-going freight

Source: Transport Statistics Great Britain (1992)

**Table 3: Investment Prospects to 2000 (£m, 1989)**

	National Rail Total 1989-2000	Rapid Transport Total 1989-2000
Austria	3430-4410	340-440
Belgium	4350	660-990
Denmark	1530-1650	180-270
Finland	2025	
France	18390	4090-5100
Germany	20700	3450
Greece	330+	44+
Ireland	46-230	
Italy	34400-49150	4950-7370
Luxembourg	140	
Netherlands	2600	150-460
Norway	1140-1615	170
Portugal	1460	90-130
Spain	9730	830-1110
Sweden	2730-2940	100-200
Switzerland	6260-6650	780-1180
UK	8250-11000	3850-4950
TOTAL	118000-137000	19700-25900

Source: Kennedy Henderson (1990)

**Table 4: BR Performance 1979-1991/2**  
(198x/8x prices)

	1979	1983	1989/90	1991/92
Total Grant (£m)	1237	1430	705	1035
Passenger route-miles	8955	8932	8897	8880
Passenger miles (m)	1900	1835	2090	1992
Fare per passenger mile (p)	0	0	8	0
Passenger stations	9.14	9.69	10.8	10.5
Passenger train miles (m)	2365	2363	1	1
Train miles per member of staff	196	203	2483	2473
	1421	1686	225	231.
			2043	3
				1996

Source: British Railways Board, Annual Reports and Accounts

**Table 5: British Rail - Financial Results (£m)**

	Revenue	Surplus
Inter City	896.7	2.0
Network South East	1044.3	(181.9)
Regional	312.9	(583.6)
Trainload Freight	505.3	67.5
Railfreight Distribution	174.9	(118.7)
Parcels	101.5	(34.7)
<b>TOTAL</b>	<b>3035.6</b>	<b>(849.4)</b>
Grant	766.9	(82.5)

Source: BRB Annual Report and Accounts 1991/92

**Table 6: Structure of Charges for Use of Rail Infrastructure in Sweden  
Variable fees for infrastructure use, ore/gross ton kilometre**

	Track Standard*	
	I	II
Locomotive trains		
Locomotives, train speed <105 km/h	0.47	1.20
Locomotives, train speed 105-135 km/h	0.57	1.42
Locomotives, train speed >135 km/h	0.66	-
Freight wagons on "Malmbanan" (iron ore)	0.68	-
Loaded	0.29	-
Empty	0.03	-
Other freight wagons		
Loaded	0.20	0.48
Empty	0.04	0.13
Passenger cars		
With radial steered bogies	0.19	0.32
Without radial steered bogies	0.27	0.68
Rail cars		
<10 ton/axle	0.06	0.16
>10 ton/axle	0.21	0.52
High speed trains (>160 km/h)	0.31	-
Addendum for vehicle in electrically powered trains	0.02	0.02

\* Track standard I is better than track standard II

Source: L. Hansson and J.E. Nilsson (1989) A New Swedish Railroad Policy: Separation of Infrastructure and Traffic Production (Fifth World Conference on Transport Research, Yokohama)

**Figure 1: Simplified Representation of Rail Industry Organisation Before and After the White Paper**

**Before**

Corporate Functions/  
Central Services

InterCityRegionalNetworkTrainLoadRailfreightParcels  
RailwaysSouthEastFreightDistribution

**After**

Rail  
Regulator

FranchisingRailtrack  
Authority

InterCityRegionalNetworkPrivatePrivate`Open Access'  
FranchiseesFranchiseesSouthEastFreightParcelsPassenger  
FranchiseesOperatorsOperatorsOperators