8th WCTR

OUTCOMES OF RAIL PRIVATISATION IN BRITAIN

PETER WHITE
Transport Studies Group
University of Westminster
35 Marylebone Road
LONDON NW1 5LS, UK

Abstract

Almost all elements of surface rail operation in Britain have now been privatised. This paper examines the financial impacts on the state, taking into account the large initial increase in grants paid for passenger services, the gains through selling off assets, the anticipated reduction in payments to franchisees, and tax revenues. The discounted future loss of profits from privatised businesses exceeds the gain due to 'one off' sales. However, when account is taken of the other reduced future claims by franchisees, a net gain to the state appears likely. Other factors likely to affect the outcome in practice are also examined.

INTRODUCTION

Many rail systems were originally developed by private companies, and in some cases have continued in private ownership throughout their lives. Major examples include the principal freight railroads in the USA, and large urban networks in Japan. In other cases, state ownership has been the normal pattern, either because lines were built with state funding from the start, or through later nationalisation of privately-owned companies.

As in other industrial sectors (such as power supply, or telecommunications), there is now a general shift toward private sector ownership. This may involve private funding for specific new projects (such as the London - Channel Tunnel high speed line), and/or transferring the existing state-owned networks to the private sector. Several examples of the latter now exist :
- Britain (the subject of this paper)
- Germany
- Japan
- Argentina

However, the term 'privatisation' is used very loosely. In the case of Germany and Japan it refers to a corporate structure for the railways, in which certain historic debts have been transferred, and operating efficiency improved, rather than complete private ownership. In the Japanese case, for example, even in the three major companies which have been 'floated' on the stock exchange, the state retains shareholdings.

It is also important to bear in mind that many changes associated with privatisation may also come about under state ownership - for example, closing uneconomic low-density routes, or improving labour productivity over the network as a whole. In Britain, much of this change took place under the state-owned British Rail system. Elsewhere, however, greater political involvement in the management of state-owned businesses may appear to make privatisation necessary as a means of separating management and political roles, to enable such changes to take place.

Even where complete privatisation (i.e. transfer of ownership) is proposed, this may take several forms

1. Transfer of the entire existing network, including infrastructure, rolling stock, services operated, etc. as a single business.

2. Separation by region, with integrated networks in each region sold separately. For example, in the Japanese case, the passenger networks were split into six areas, with freight and the Shinkansen (high speed) services as separate businesses.

3. Separation of infrastructure from operations, with each privatised separately. In the European Union, regulation 91/440 requires separate accounting for the infrastructure and operations, resulting in divided organisations in most member countries (such as Germany, France, Netherlands). However, in many cases the separation is fairly nominal (for example, in France), with both parts remaining in state ownership.

Linked with separation of infrastructure from operations is the concept of 'open access', i.e. permitting other rail companies to offer competing services over the same track, in the same fashion that different road or air operators share infrastructure. Due to the need to plan use of track, the scope for this approach is more limited in rail than other modes. As yet, there are few significant examples, and the main scope may lie in operators of different types of services (for example, international freight and local passenger) using the same track, rather than competing closely in the same market.

RAIL PRIVATISATION IN BRITAIN - THE OVERALL STRUCTURE

The British case offers a rather extreme and complex example, in which not only have infrastructure and operations of the British Railways Board (BRB) been separated, but also the provision of rolling stock, and

the passenger operation has been split into 25 franchises. In principle, there is also 'open access' operation, although this is very limited at present and its future rate of growth is uncertain.

In more detail, the main components are :
(a) Railtrack. Provides track, signalling and infrastructure to rail operators, and also electric traction supply. Privatised through public share floatation May 1996.
(b) The rolling stock leasing companies (ROSCOs). The existing passenger fleet was split between three companies, who lease stock to the train operating companies.
(c) Train Operating Companies (TOCs). The existing passenger network was split into 25 franchise areas, each now operated by private companies (many of whom have more than one franchise). One franchise (the 'Island Line', on the Isle of Wight off the south coast) is 'vertically integrated', i.e. the operator is also responsible for the infrastructure. However, it is very small indeed (some 14 route-km). The franchising process is handled by the Office of Passenger Rail Franchising (OPRAF), which also monitors service performance.

In addition to the franchising of the then existing British Rail services, European Passenger Services (EPS), responsible for the 'Eurostar' high-speed passenger services between London, Paris and Brussels, was transferred from BRB to central government ownership in 1994 (before operations began) 'for nil consideration' and subsequently to the London & Continental consortium. Apart from companies running only trunk inter-city routes (such as Great North Eastern Railway, GNER), or purely urban networks (such as Merseyrail) the ex-BR franchises cover a mixture of local and longer-distance services (for example, ScotRail, which provides almost all services within Scotland).

(d) Freight. Most operations have been sold to English, Welsh and Scottish Railways, a subsidiary of the Wisconsin Central company of the USA. It acquired the three bulk freight trainload companies; Rail Express Systems (whose main operation is the postal train network); and subsequently Railfreight Distribution (from November 1997), the company handling wagonload traffic, mainly through the Channel Tunnel.

Unlike passenger operators, EWS and the other significant freight operator (Freightliner) own their locomotives and rolling stock outright. Access charges are relatively modest, comprising only about 7% of Railtrack's total income, compared with about 87% from passenger operators.

Within the practicable length of this paper, other operational details, and the associated regulatory framework, are not considered in detail. Further information may be found in another paper by the author (White 1998), and in other authors such as Harris and Godward (1997).

THE FINANCIAL FRAMEWORK

The role of debt and interest charges

In most cases, a major aim and expectation of rail privatisation would be to reduce the net public expenditure involved, usually in the form of operating support, through improved productivity, and/or increased revenue. However, it is important to distinguish the effects on capital structures. Privatisation and restructuring is often accompanied by writing-off or transfer of previous capital debt. It is essential to identify this explicitly, since the state may still incur the charges associated with such debt, even through it is no longer directly attributed to rail operations. A notable example is Japan, where the majority of the debt was transferred to the Japan National Railways Settlement Corporation (JNRSC), for which the state is still responsible (equivalent to about £140,000 million currently). As Smith (1997, table 1) has shown, the inclusion of interest charges on such debt has a marked effect on the apparent changes in net public spending since the 'privatisation' of JNR in 1987.

In the British case, relatively little debt was carried by the railways prior to privatisation. This was a consequence of previous debt write-offs at various stages since nationalisation (notably under the Transport Act of 1968), and also lower investment levels (and hence borrowing) than most other rail systems of similar size over many years. By the late 1980s, debt levels were very low indeed. However, some increase then took place as a result of worsening operating financial performance due to the recession of the early 1990s, and increased investment, primarily that associated with the development of the Channel Tunnel rail services. Although public investment was precluded from the Tunnel as such (i.e. its own infrastructure, and 'Shuttle' operations), substantial rail investment (over £1,000m) was incurred in upgrading existing routes between London and the Tunnel, the British share of the 'Eurostar' passenger fleet (and its maintenance depot), Waterloo and Ashford International stations, and additional locomotives and rolling stock for Railfreight Distribution.

At the time of privatisation, therefore, somewhat greater debt was held by the British Railways Board (BRB) than had been typical of the previous 10-20 years. Between the years ending 31 March 1990 and 31 March 1994, 'interest and similar charges' rose from £23.8 million (equivalent to 0.7% of total operating expenditure) to £120.9 million (3.3% of total operating expenditure) (derived from BRB 1994, page 66). By 31 March 1994 'capital liabilities to the Secretary of State' had reached £2,445.6 million, (BRB 1994, page 58), compared with £202.8 million at 31 March 1990 (BRB 1990, page 37) . While these figures are not adjusted for inflation, it is clear that very rapid growth - approximately tenfold - had taken place in real, as well as money, terms.

Changes in costs

Under the Railways Act 1993, the structure of privatisation was set out. An unusual feature is that the rolling stock and infrastructure was privatised before most of the train operations. High charges are paid by the TOCs for leasing rolling stock, and use of track. Hence, large profits are made by Railtrack plc, and the rolling stock leasing companies (ROSCOs) which enabled the state to secure a fairly high price (about £4,000m) for them during the financial years 1995/96 and 1996/97. However, the operating costs of the TOCs were generally increased as a result, requiring substantially higher support from the state (approximately doubling from £1,000m to £2,000m per year).

The state thus gained a large capital income during the early stages of privatisation, at the expense of much higher operating support being required. The net gain obtained, however, is open to debate, insofar as substantial capital debt write-offs were required. Much of the debt held by BRB was transferred to Railtrack, but some £1,229 million of this was written-off immediately prior to the latter's floatation in May 1996 (Railtrack 1996, page 12). Given that substantial operating losses were being made on the Channel Tunnel rail operations (both freight and passenger), it was not practicable to transfer such debt to the companies taking over those operations. If one regards the debt as one which might have been repaid eventually under BRB control, as (or if) profitability of the Channel Tunnel operations was achieved, then the write-off could be set against the sale proceeds of Railtrack. Alternatively, the view I have taken here is that the chance of such debt being repaid was in any case low, and that it might have had to be written

off at some stage irrespective of public or private ownership. Likewise, a further a large share of BRB's debt was also written off, reducing the net total to £601m at 31 March 1997, but even this remaining sum is described as having no realistic prospect of being serviced by the Board (BRB 1998, pages 4 and 46).

Public Sector Cash Flows in Britain

The British government has traditionally exercised a strong control on year-by-year cash flows, notably through the Public Sector Borrowing Requirement (PSBR). However, this has not, at least until very recently, distinguished consistently between current and capital flows.

Table 1 shows the state support to the rail industry in Britain from 1990/91 to 2002/03 inclusive, in terms of actual outcomes to 1996/97 inclusive, and thereafter the expectations based on the bids accepted from franchisees.

The support to passenger services primarily comprises that direct from central government to the former British Railways Board operations, and now that paid (as a net total) to the private franchise operators. In addition to the central government element, the Passenger Transport Executives (PTEs) in seven major conurbations outside London were empowered under the Transport Act of 1968 to determine fares and service levels on their local networks, compensating BRB accordingly. This arrangement continues, with some modifications, under franchising, and the support has been added to that direct from the state to give the totals shown in table 1.

It can be seen that support to passenger services, at 1996/97 prices, rose from £919 million in 1990/91 to £1435 million in 1992/93 - this was associated mainly with the effects of the early 1990s recession on revenues and hence profitability. It dipped to £1170m in 1993/94, but then almost doubled to £2282m in 1994/95, the first year under the financial structure established under the Railways Act 1993. The support continued at around £2100m for 1995/96 and 1996/97, during the transition to private sector operation.

As part of the controls on public expenditure, financial support to state-owned industries is subject to an 'External Finance Limit' (EFL), including both current and capital contributions. In the case of the railways, there was a substantial element in addition to the passenger service support from 1990/91 to 1993/94, mainly to fund capital investment through loans. However, the EFL can also be negative - for example, where profits made have been returned to the state, or receipts gained from the sale of businesses such as Railtrack. Hence, from 1994/95, the 'other elements' of EFL are negative.

After 1996/97, the revenue support to passenger services is anticipated to fall by over 50% to 2002/03. This reflects commitments made by the franchisees at the time contracts were agreed with OPRAF. In most cases, this reflects a substantial fall in the annual support required. In one case, a surplus is expected over the entire life of the franchise (Gatwick Express), resulting in a premium being paid to the state. In some others, a payment now made to the operator will be replaced by a premium paid to the state as performance improves (notably Virgin West Coast, covering the London - West Midlands - North West - Glasgow intercity corridor). The figure shown in table 1 is the aggregate net support received from the state, after taking into account these changes. The level of EFL after 1996/97 is uncertain, but probably very small, reflecting the remaining proceeds of sales not completed by April 1997, and possibly some minor elements of public spending.

It can thus be seen from table 1 that revenue support to passenger services in 2002/03 is expected to return to a level almost identical to that in 1990/91 in real terms. However, the TOCs will be paying much higher costs for use of infrastructure and rolling stock than the corresponding costs within the integrated BRB structure in 1991. The state should also make savings through avoiding the need for loans to finance essential renewals, since the charges made by Railtrack include a more realistic depreciation element than previously, as well as the margin needed to produce a profit of about £300m per annum.

NET CASH FLOWS FROM THE PERSPECTIVE OF THE STATE

Under the initial stages of the privatisation process, the new structure was set up, but still under public sector ownership. BRB's infrastructure was transferred to Railtrack, and the passenger rolling stock to the three rolling stock leasing companies. The infrastructure maintenance and renewal business were set up as separate companies (British Rail Infrastructure Services, BRIS). The passenger network was restructured into the twenty-five train operating units (later transformed into companies), and freight operations likewise split into separate businesses. A number of other businesses were also set up as separate companies, such as telecommunications. The profits made by these businesses prior to privatisation were in effect, 'recycled' within the public sector. This effect was first identified by the Select Committee on Transport and its advisers in 1995 (House of Commons 1995). A fuller description of this 'circular cash flow' is given elsewhere by the author (White 1998).

In aggregate, profits of about £850-890 million per annum were produced, of which over £600m was represented by Railtrack and the three ROSCOs. The net outflow of cash from the state was thus much less than the passenger service support shown in table 1, even prior to any significant asset sales. Indeed, the peak net outflow is that in the 1997/98 financial year, as a result of passenger service payments remaining at a level of over £1800m per annum, while almost all profits from subsidiary businesses, and capital gains from sales, have ceased to flow, following the sale of the vast majority in the period 1995 - 1997.

As such sales were completed, then the state would lose the annual flow of profits, offset by 'one off' gains through sale of assets. Such a pattern may be treated as akin to a conventional transport investment appraisal. In the latter, an outflow occurs in which a public sector investment is made (such as a by-pass road, or new urban rail line), followed by an annual economic benefit (such as that through quantified and monetised time savings). Such flows are usually assessed over a period of about 25 years, appropriately discounted. The difference between benefit and cost may then be expressed as a ratio, or net present value (NPV).

Privatisation of a business could be seen as a similar process, but in reverse. A 'one-off' gain is made through sale, but the future profit stream is lost. Likewise, under private finance initiatives such as 'Design, Build, Finance, Operate' (DBFO) schemes, the state avoids the initial capital investment, but subsequently incurs additional annual costs (such as 'shadow toll' payments), which should also be discounted to compare overall cash flows with the option of direct state investment. The same principle applies to leasing of assets such as rolling stock instead of outright purchase - the aggregate total of leasing charges over the contacrt period must be compared with the cost of direct purchase in a consistent manner.

The role of the discount rate selected also differs : in a conventional appraisal, a lower discount rate will generally result in a better outcome (e.g. greater weight is attached to future benefits, giving a higher NPV). However, in the privatisation case, the lower discount rate has the opposite effect (since greater weight is being given to cash outflows).

In the rail privatisation case, the gain was made through sale of the profitable businesses, but in the case of Railtrack and the ROSCOs in particular, a large additional payment continues to be made via the TOC franchises, effectively to meet the charges from which their profits are derived. If no change occurred in revenue or costs of the franchised passenger operations, then the gain through selling the businesses would have been offset by an annual loss of previously recycled profits of up to £890m.

In this analysis, the outcome of freight operations is treated as neutral, since prior to privatisation operating losses on wagonload and container traffic were almost exactly offset by profits on bulk trainload services. The capital proceeds of selling rail freight businesses are also excluded, due to complications in analysing such sales where the state has made commitments toward future track access charges in certain cases.

A fifteen-year period is used for analysis, corresponding to the longest of the franchises awarded in the initial round (all are for at least seven years, except for the Isle of Wight). A 6% real discount rate has been used - this rate is now applied to public sector assets in Britain, and is also used by OPRAF in assessment of different service options.

In round terms, setting the gains through selling assets of about £4,000m (ignoring the debt write-off) against the future outward cash flow of £850 - 890m per annum over 15 years clearly results in a large net loss, approximately £4250 - 4650 million at a 6% discount rate. Note that the lost 'circular cash flow' assumed here is somewhat less than the initial increase in passenger service support payments (of about £1100m per annum) in 1994/95 since this also includes some transitional costs of rail privatisation, and the more realistic depreciation provision in Railtrack's costs.

It can be argued that the businesses were sold an at unduly low price, since if the future profits were reflected in the sale price, then one would expect the future discounted profit flow to be matched by the price. The price:earning ratios for both Railtrack and the ROSCOs were only around 6:1, well below private industry averages, and even lower in the case of BRIS companies. The Railtrack share price has subsequently increased by over 100%, and all three ROSCOs have been sold on by their initial purchasers, for about 50% more than paid to the state. While the sale price for Railtrack was influenced by the Rail Regulator's decision to reduce access charges (see below) and the need to reinvest in system renewal, no such obligations were placed on the ROSCOs. The low price gained for the ROSCOs has subsequently been the subject of a reports by the National Audit Office, and Parliament (Committee of Public Accounts 1998), confirming that no 'clawback' of subsequent re-sale profits was negotiated, and that the first-round purchasers based their valuations largely on the existing leases, with no residual value thereafter.

In practice, the state is likely to show a net gain over the fifteen-year period, as shown in table 2, for the following reasons:

1. The reduction in Railtrack's access charges to TOCs, imposed by the Regulator in 1995. This would produce a corresponding reduction in total operating costs, and hence the net support required by franchisees. At present, a 2% per annum reduction is imposed to 2001, after which the 2001 rate is assumed to remain constant for the rest of the period analysed. In practice, a further reduction is likely after the current consultation review is completed. In the absence of any other changes by Railtrack, these reductions would wipe out Railtrack's profits from 2001, and thus the 'recylced profits' element arising from Railtrack's business. To date, Railtrack has been able to maintain or even improve its profits, mainly through cost reductions.

2. Taxation of profits made by ROSCOs and other businesses, and also the 'windfall tax' on Railtrack's share value gain since privatisation.

3. The large reductions in net support required by the franchisees. Only the first seven-year period can be considered in detail. Although some franchisee's bids run up to 15 years, I have assumed that the savings in year 7 continue at the same rate thereafter. Some bids extending beyond that point (notably by Virgin) predict further rapid reductions in franchise payments (and/or growth in premia to the state), but it seems more appropriate to adopt a cautious approach until the realism of such bids can be tested in the light of several year's experience of franchising.

After taking into account the reduction in Railtrack access charges, the net outcome shows a loss to the state of about £2,000m. However, when allowance is made for the reduction in franchisees' bids vis a vis the previous support to BRB (net of savings due to lower access charges), and tax revenues, an overall net financial gain to the state is shown of about £4800m over the whole 15-year period. This should only be seen as an approximate figure, expecially in relation to tax revenues. It excludes the effect of the Railtrack debt-write off, and assumes that over the first seven years, all franchises will perform according to the bids made.

This gain to the state could be compared with a 'no change' situation under BR ownership, in which the same level of financial support continued to be provided. However, considerable gains were being made by BRB in efficiency, and it would not be reasonable to assume that no such further gains would be made. As an example, an assumption based on a reduction of 3,000 staff per annum at a cost of £20,000 each is shown, assuming such a cumulative reduction could be made over the first seven years, and thereafter held constant : total BRB staff in 1993/94 was 121,000 (BRB 1994, page 67). This produces a saving of £3385m over the whole period, of similar magnitude to the net gain from privatisation.

In addition, the extent to which revenue growth might be a result of overall economic growth, as distinct from initiatives by rail operators, should also be considered (see discussion of recent trends below), since such growth would apply under BRB as well as private ownership.

RECENT TRENDS IN RIDERSHIP AND PROFITABILITY

As indicated above, the overall financial support to rail passenger services in 1996/97 was very similar to that in the previous two years in real terms (see table 1). However, proposed rapid reductions in net franchise support payments will require large ridership growth and/or cost reductions. The TOCs control little more than one-third of their costs directly (e.g. train crew, rolling stock routine maintenance, diesel fuel), the majority being attributable to Railtrack and ROSCO charges.

Trends to date are encouraging, but suggest a fairly marginal profitability so far. Ridership has grown substantially. Passenger kilometres grew between 1995/6 and 1996/7 by 7.3%, and by 6.5% between 1996/7 and 1997/8 (DETR 1998, table 1). In some cases, growth of up to about 10% in one year (on parts of the London region commuter networks, and some inter-city routes) have been reported. Revenue at constant prices has grown at a similar rate to passenger-km (derived from DETR 1998, table 3).

It is likely that overall economic growth has been a major factor in these trends, closely matching the upturn in rail traffic during the boom of the mid to late 1980s (for example, of 5.8% between 1986/87 and 1987/88), and a slower rate of growth in the last reported quarter is consistent with some reduction in the rate of economic growth in Britain during that period. Thus, one cannot attribute the ridership growth directly to privatisation per se, although it is likely that some of the marketing initiatives by specific franchisees have played a part in stimulating traffic, especially at off-peak times. There is undoubtedly a marked contrast with the initial impacts of local bus deregulation in 1986/87, which displayed a ridership fall of about 5% greater than would have been expected due to external factors, real fare increases and service level changes at that time (White and Turner 1989). Despite concerns regarding the effects of fragmentation of passenger information and timetabling (of which there are undoubtedly some specific examples), much more effort than in the bus industry has been devoted to maintaining through ticketing and comprehensive information.

Profitability of franchise companies may be derived by comparing the total turnover (passenger revenue and associated income, plus franchise payments, or net of premium), with total cost (i.e. direct costs incurred by the TOCs, plus Railtrack and ROSCO charges). As yet, a profit margin of about 2 to 5% seems typical (before exceptional costs, which in many cases have been substantial). This is much less than in the local bus industry, where targets of about 15% have been set and achieved by the larger groups, but one could argue that a lower margin is quite acceptable in this case. Whereas bus companies have been purchased for increasingly high sums (on which a return would be expected), the purchase of TOCs from British Rail was for a purely nominal £1 per company. In addition, the profit margin set by bus operators has to cover the inadequacies of historic depreciation, to enable fleet replacement at a satisfactory rate.

In the case of TOCs, infrastructure depreciation is covered through the Railtrack access charge, and rolling stock is charged as a current operating cost, through leasing (it is likely that most or all new stock will be obtained in this manner also). Profit margins seem to vary with the stage at which a franchise bid was made. Early bids, notably those for South West Trains and Great Western, involved much lower rates of reduction in annual franchise payments, and their latest annual accounts indicate a profit margin of about 8%. Conversely, later bids such as those by Prism Rail and the National Express Scotrail

franchise, have margins of only about 1%. Clearly, if any economic downturn occurred, such franchises could be in a vulnerable position.

Some margin of profit to reflect the degree of risk being taken by the business would be expected. There is also a need to recover start-up costs and management time involved in the bidding processes. The margin produced to date has been based on support payments similar to those received by BR, and an encouraging level of ridership and revenue growth. Such high growth rates are unlikely to be sustained over the whole franchise period, and it is thus likely that cost reductions will have to play a much more important role from 1998/99 onward if franchisees' commitments are to be met.

A much higher level of profitability is found for the ROSCOs, approaching 50% of annual turnover.

OVERALL POLICY CONCLUSIONS

Although exceptionally complex, the approach to rail privatisation in Britain seems to have worked reasonably well so far. The severe instability found in the local bus industry at deregulation has been avoided, and greater emphasis has been placed on service quality (supported by incentive and penalty payments).

However, some aspects of the outcome still remain uncertain. The rapid reduction in support payments to which franchisees have committed themselves will depend upon further gains in revenue and efficiency. Revenue growth will depend not only on volume growth, but also real revenues per passenger-km. A number of major fare categories, notably for central London commuting, are subject to price controls, which currently limit their average rate of increase to the retail price index (RPI), i.e. zero in real terms, albeit with some exceptions where service quality has improved. From 1999, these fares are subject to 'RPI-1' control, i.e. falling by 1% per annum in real terms. While gains in staff productivity may be assumed (as I have also done here for a possible outcome under continued BR ownership), there is probably less scope for real wage reductions than in the deregulated bus industry, due to economic growth, and the concentration of rail activity in the South East region.

The analysis presented here concentrates on financial outcomes from the viewpoint of the state. This forms the most obvious starting point, since a clear framework exists within which to measure the cash flows, and most effects are readily quantifiable. In the longer term, other aspects may also be assessed, notably user costs and benefits. A net user benefit may be anticipated, due to impacts of price controls, and improvements in service levels. However, franchise operators are not necessarily given incentives to maximise overall economic benefits. For example, in the case of services in the London and South East region, additional short-distance peak commuting is most unlikely to be attractive to the operator, due to the very high costs of peak-only capacity (aggravated by the high charges for leasing from ROSCOs). Instead, additional long-distance commuting, and/or off-peak traffic, is likely to be sought as a means of improving profitability.

From the operator's point of view this is understandable, but from a wider transport policy perspective, in which the aim may be to seek 'sustainability' rather than growth in travel per se, diversion of peak-period car trips, which impose high social costs, might represent a greater benefit to society than stimulating more long-distance commuting or newly-generated (as distinct from diverted) off-peak leisure traffic. Inevitably, given the timescale in the first round of franchising, the existing train service pattern, with enhancements offered by bidders, formed the basis for comparing bids. Following consultation, OPRAF has now produced guidelines for assessing different service patterns, based largely on cost-benefit analysis. These incorporate substantial benefits per vehicle-km for traffic diverted from congested roads , of up to 40p per pcu-km (at 1992 prices) for central and inner London (OPRAF 1997, table 3). However, as total expenditure is constrained, and existing franchise agreements have about five years still to run, their effect on service patterns is likely to be marginal for the present.

The applicability of the privatisation concept to other countries still remains uncertain, partly because a fuller assessment is needed of privatisation effects in those countries in which it has been introduced, and partly because local conditions may be very different - for example, sophisticated financial markets

may be needed if control is not to pass outside a country when privatisation takes place.

ACKNOWLEDGMENTS

This paper arises from work over a two-year period, which has been successively updated in the light of additional evidence and further analysis. Comments received on earlier papers at the Universities' Transport Study Group conference in January 1997 and at the London School of Economics in April 1997 were helpful in this process. In particular, I would like to thank Stephen Bennett, an independent rail consultant (previously Business Analyst with the British Railways Board and subsequently Chief Management Accountant, Railtrack plc) for very extensive assistance in clarifying the complexities of cash flows before, during and after the privatisation process.

All responsibility for calculations produced, opinions expressed, and conclusions drawn is that of the author.

REFERENCES

British Railways Board (1990). Annual Report and Accounts for 1989/90.

British Railways Board (1994). Annual Report and Accounts for 1993/4.

British Railways Board (1998). Annual Reports and Accounts for 1996/97

Committee of Public Accounts (1998). Privatisation of the Rolling Stock Leasing Companies. Sixty-Fifth Report, Session 1997-98 (HC-782). The Stationery Office, London, July 1998

Department of the Environment, Transport and the Regions (1998). Bulletin of Rail Statistics, Quarter 2 1998/9, (SB 98) 12, November.

Harris, N.H. and Godward, E. (1997). **The Privatisation of British Rail** A & N Harris, London.

House of Commons Transport Committee (1995). Fourth Report, Session 1994-95 **Railway Finances** (HC-206). HMSO, London, July.

Smith, Ian (1997) '10 Years of JR Operation - The Explicit and Implicit Aims of JNR Privatisation' Japan Railway and Transport Review, No. 13 (September), pp 39-45.

Office of Passenger Rail Franchising (1997). **Appraisal of Support for Passenger Rail Services. Planning Criteria : an Interim Guide.** London, November.

Railtrack plc (1996). Share Offer mini prospectus. London, May.

White, P.R. and Turner, R.P. (1989). 'Effects of Bus and Coach Deregulation in Britain' **Selected Proceedings of the Fifth World Conference on Transport Research**, Yokohama, Volume I, pp A99-A114.

White, P.R. (1998) 'Impacts of Rail Privatisation in Britain' Transport Reviews, Vol 18, no 2.

Table 1 : State support to the rail industry in Great Britain, 1990/1 to 2002/3 inclusive

£ million (at 1996/97 prices)

Year	Revenue support to passenger services	Other elements of EFL
1990/91	919	538
1991/92	1174	646
1992/93	1435	959
1993/94	1170	573
1994/95	2282	-490
1995/96	2132	-1689
1996/97	2103 (a) 1924 (b)	-1043
1997/98	1862	
1998/99	1577	
1999/2000	1354	
2000/01	1205	
2001/02	1098	
2002/03	926	

Sources and notes:

1990/91 to 1996/97 inclusive : Table 6 from the Bulletin of Rail Statistics Quarter 2 1997 SB(97)14, Department of the Environment, Transport and the Regions, London, October 1997 (shown at 'current prices', adjusted here to 1996/97 prices using GDP deflator).

1997/98 to 2002/03 inclusive : Office of Rail Passenger Franchising Annual Report 1996/97, page 8.

(a) The actual out-turn figure, as reported by DETR. Operation was under a mix of British Rail and franchised private operators during this year.

(b) An estimate of the 1996/97 net state support that would have been required under continued BR operation, derived from summing totals quoted in OPRAF press releases as each franchise was awarded. This comprises a gross total of £2123 million, less an 'administered profit' of £199m, to give a net figure of £1924m.

The EFL is the 'External Finance Limit', i.e. all types of funding to the railways. The 'other elements' in addition to support for passenger services include any support toward losses on freight traffic, and other grants and loans made during the year in question. Where a cash inflow is received by the state (e.g. from sale of Railtrack), a negative EFL is recorded.

Note that the OPRAF figures from 1997/98 onward do not show revenue accruing directly to the PTEs where they have taken the revenue risk, and the franchise is based on costs only. If netted off against the public expenditure shown here, a further reduction in the public support (in the order of £100m) would be expected (the actual outcome in 1997/8 was about £1750m, for example).

Table 2 : The net effect on state cash flows of rail privatisation

£ million at 1996/97 prices (approximate), discounted at 6% per annum to a base year of 1995/96.

		Notes
Gains through asset sales:		
Railtrack	+1773	1
ROSCOs	+1878	2
Other businesses	+ 550	3
Total	+4201	
Privatisation costs:	- 600	4
Net gain	+3601	
'Recycled profits' lost	-8642	5
Net outcome	-5041	
Reduction in Railtrack access charges	(3060)	
Net outcome	-1981	
Saving through lower bids by franchisees than BR :	+6879	6
(or, allowing for lower access charges :	+5617)	
Tax revenues:		
(a) Railtrack 'windfall tax'	+140	7
(b) Tax on company profits	+1075	8
Overall net outcome	+4851	9
An alternative outcome:		
Retention of BR ownership structure as pre-1994, but with continued efficiency gains	+3385	10

NB : Exogenous revenue gains under continued BR ownership excluded.

Notes to table 2

1. Sale of Railtrack at the start of 1996/97 financial year, net of dividend paid to purchasers, discounted to 1995/96.

2. Sale of ROSCOs in 1995/96, undiscounted.

3. An assumed total for all other BR business sales, excluding rail freight companies, undiscounted.

4. Costs given in Parliamentary answers, undiscounted. Note that some of these may also be reflected in the increased support to BR from 1994/95 shown in table 1.

5. Based on £890m per annum for all BR businesses sold, 1996/7 to 2010/11 inclusive.

6. The figure of £6879m is based on the differences between equivalent BR support in 1996/97 of £2123m (including 'administered profits') and savings in each year vis a vis franchisees' aggregate total, using figures shown in table 1 up to 2002/3, thereafter assuming a constant £926m p.a. aggregate franchise payment to 2010/11. The £5617m figure allows for the savings that would have been made in any case due to lower access charges, whether under BR or franchised operation.

7. Tax arising from July 1997 budget, paid in two instalments, and discounted to 1995/96.

8. Based on tax revenues equal to one third of an annual company profit of £324m p.a. This corresponds approximately to profits of ROSCOs (Railtrack excluded due to effect of lower access charges on profits, if no other efficiency changes). This estimate is subject to liability of companies for taxation, and tax levels imposed.

9. Based on the £5617m saving for franchisees.

10. Assumes a reduction of 3,000 staff per annum @ £20,000 each for the first seven years, cumulative (i.e. £60m in first year, £120m in second, etc.), and a £420m p.a. constant saving from year 8 to 15 inclusive.