COMPETITION IN BRITISH RAILWAYS – WHAT HAVE WE LEARNED?

Author: Dr John Preston, Transport Studies Unit, University of Oxford
Keywords - dansk: Jernbane, reform, privatisering, udlicitering, liberalisering
Keywords - engelsk: Rail way, reform, privatisation, liberalisation, tendering
Session: Introduction session.
Year: 1999.

To be presented to the Danish Transport Conference. Aalborg, 30th August 1999.

1. INTRODUCTION

In this paper I will try and draw some lessons for other countries from the experiences of railway reforms in Great Britain. In so doing, I will try and update the story in *Changing Trains* (Van de Velde, 1999, with a chapter on Great Britain by Root and Preston). I should start off with three important caveats. First, countries are different. In the project that led to the book *Changing Trains*, we tried to look at countries (or parts of countries) which were similar to The Netherlands. We concluded that there were no countries in the world similar to The Netherlands. We could equally have concluded that there are no countries similar to Great Britain. We could draw the same conclusion for Denmark. Secondly, what I am going to present is a personal, subjective view - some of which is backed up by empirical evidence, but some of which isn't. What I want to do then is draw, somewhat randomly, 20 lessons from the British experience. I have been asked by the conference organisers to particularly try and present information on the degree of passenger satisfaction, the extent of ticket system co-ordination and the levels of investment. Thirdly, much of what I wish to say I have already said at the International Conference on Regulatory Reforms in the Railway Sector in Stockholm in July 1999. Apologies if you have heard this before.

1. *The railway reform process is only at the half way stage.* The reforms of the railways were legislated for by the 1993 Railways Act. The state owned British Railways was restructured into one track authority (Railtrack), three rolling stock leasing companies (ROSCOs), 25 passenger train operating companies (TOCs), seven freight train operating units and some 70 ancillary businesses beginning to trade as free standing units on 1 April 1994. The first private passenger TOCs began operating in February 1996, with the franchising completed by March 1997. Railtrack was privatised through a stock market flotation in the spring of 1996. However, the TOCs have long leases with the ROSCOs which do not come up for renewal until around 2003. Similarly, Railtrack has long term contracts with the Infrastructure Supply Companies (ISCOs) that will be renewed around 2003. 2003 is also the year in which the first tranche of franchises will come up for renewal.

   Moreover, the reforms are ongoing (see, for example, DETR, 1998). In July 1999, the Shadow Strategic Rail Authority (SSRA) was established which brought together the residual British Railways Board (BRB), the rail freight functions of the Department of Environment, Transport and the Regions (DETR) and the customer protection role of the Office of the Rail Regulator (ORR) with the functions of the Office of

Passenger Rail Franchising (OPRAF). ORR and OPRAF had been creations of the 1993 Act. A new Railway Act is expected in the next session of parliament (1999/2000) which will give the SSRA its own legal powers (and allow the word Shadow to be dropped).

2. *On-the- track competition has been limited, but has been important where permitted.* Up until September 1999, competition was limited to services that competed prior to the reforms and services that constitute less than 0.2% of a TOCs revenue. In September 1999, these limits will be increased to 20%, whilst it is still provisionally planned to introduce full open access competition in 2002. Nonetheless, there has been some significant competition, most notably between Virgin West Coast and Chiltern between London and Birmingham; National Express's Gatwick Express, Connex South Central and GOVIA's Thameslink services between London and Gatwick; and GNER and WAGN between London and Peterborough. These competitive battles have involved product differentiation, service frequency increases and selective fares cuts.

3. *Substantial on-the-track competition is feasible but is unlikely to be desirable.* Our simulation work suggests that frequency enhancements in the peak are likely to be the most common competitive outcome (Preston et al., 1999). This outcome is referred to as cream skimming (also know as cherry picking). Although passengers benefit, operators lose out essentially as a result of providing too much service at too high a price - a classic outcome of oligopolistic competition, which has also been observed in the bus industry. The ability to price discriminate may also be much reduced. Overall, economic welfare reduces unless (i) competition stimulates productive efficiency gains or (ii) competition stimulates dynamic efficiency through improved productivity. It is possible that some forms of competition, particularly involving product differentiation, can lead to these two types of efficiency gain.

4. *Off-the-track competition was substantial.* Passenger railways were franchised to the private sector by OPRAF between February 1996 and March 1997. Franchising can be done quickly if the political will is there. In this first round, there was an average of 5 serious bids for each of the 25 TOCs, even with the constraint that the publicly owned incumbent (BRB) could only be a bidder of last resort. In the event, BRB was not permitted to bid. A key issue is whether this level of competitive activity may be maintained in the second round in 2003.

5. *Off-the-track competition intensified in later tranches*. The subsidy required for a franchise was £18m p.a. lower in the 10th tranche than in the first tranche. This represented a 27% subsidy reduction or put another way a 27% increase in the bid price. The converse of this is that companies that got in first (Stagecoach, GNER, First Great Western) are making substantial profits. There are parallels with the privatisation of the National Bus Company where the first subsidiaries to be sold were so at a price favourable to the purchaser. The policy of having a series of franchise tranches was vindicated in that reasonable prices were eventually achieved. A challenge for the future may be to avoid the bunching of renewals at seven year intervals and have a more regular spread of contract renewals.

6. *Off-the-track competition was dependent on the liberalised bus and coach markets.* Fifteen out of the 25 TOCs went to bus companies (who have subsequently gained 3 more). Each franchise had at least 2 bids from bus companies.

7. *Management Buy Outs (MBOs) were relatively unsuccessful*. They only won four franchises. All have subsequently been sold on suggesting that, in the British context at least, MBOs are an ephemeral organisational form. This phenomenon has also been observed in the bus industry (see, for example, Wright et al., 1992).

8. *Agglomeration occurred almost straight away*. Four groupings (National Express Group, Connex, Stagecoach/Virgin Trains and First Group) control 70% of revenue. Does this mean that British Rail was split into too many passenger train operating units? Not necessarily so. One lesson might be that if you are to horizontally separate a business it may be sensible to err on the side of too many, small units. The market can then put the units back together in the most optimal manner. The parallels with the bus industry should be obvious. Econometric work we have undertaken suggests that, in order to minimise operating costs, the optimal number of passenger and freight network operators in Great Britain is around six, although traffic density is about right (Shires and Preston, 1999). For Denmark, we also find that traffic density is about right, but the network size is insufficient to support one network operator (although there may be scope for many line operators, including the 13 private railways already in existence). In the (very) long run mergers with adjacent networks in Germany and Sweden might be considered.

9. *Off-track competition appears to be effective in that subsidy is forecast to reduce substantially*. Total subsidy is forecast to reduce from around £1.9b in the first year of franchising to £0.5b in the final year of the first round. However, we estimate that in 1998/99 the industry was off target by around £100m. Currently, two TOCs are operating without profit. Eventually 10 TOCs are forecast to do so, most spectacularly Virgin West Coast.

10. *The financial picture is difficult to assess.* In 1993/4 (the last financial year before the reforms) the passenger TOCs received £0.55b in direct revenue subsidy (BRB, 1994) but there were also :

    - Additional subsidies related to capital grants and grants towards the operation and maintenance of level crossings which could amount to as much as £0.54b per annum.
    - Change in accounting conventions from current replacement cost of renewed assets to modern equivalent asset valuation of all assets increased the railways capital costs by around 25%. This too may represent around £0.54b per annum.
    - If the receipts of the privatisation sales are amortised over, say, a 30 year period they represent a substantial sum (around £0.3b per annum).

    These points explain most of the difference between the pre and post privatisation subsidy levels, although it should be no surprise that different authors draw different conclusions. Harris and Godward (1997) conclude that privatisation has led to a worsening of the railway's financial situation, White (1998) concludes the opposite. An unresolved issue is the size of the transitional costs.

11. *A commercial open access network with a complementary social network may emerge.* The chief architect of the railway reforms, Sir Christopher Foster, saw a two tier railway network emerging (Foster, 1994). We seem to be on target for this occurring in 2003. The passenger rail industry will then be structured in a similar manner to the local bus and coach industry in Britain (outside London), but with much greater fare regulation.

12. *Franchises could have been better specified.* Modelling work we have undertaken suggests that 12 year, loosely regulated franchises could have reduced the subsidy bill by 20%. Removing exclusivity (i.e. protection from open access) is forecast to increase the subsidy bill by 10% (Whelan et al., 1998). Some TOCs run services in areas where a Passenger Transport Authority takes the revenue risk and in areas where the train operating company itself takes the risk. In all cases, revenue growth has been substantially higher in the latter cases. There has been a renewed interest in micro-franchises, particularly for rural branch lines. It is possible that a second round of franchises may involve the subcontracting of such lines.

13. *One of the aims of the privatisation was to raise money for the Exchequer.* The reforms were successful in this, raising £4.4b in revenue. Rail privatisation was the biggest of the UK transport privatisations. With a certain amount of ingenuity, the railway business can be re-structured so as to have profitable elements.

14. *The creation of the ROSCOs removed an important barrier to entry.* Due to the creation of the three ROSCOs, access to rolling stock has not been a major problem. According to the TOCs, the main problems with ROSCOs revolve around the high charges, the reluctance to provide new rolling stock and poor performance with respect to maintenance etc. The lack of incentivisation may have been an oversight as may the lack of claw-back provisions. The ROSCOs were initially sold for £1.7b, but were subsequently sold on for around £2.7b, leading to the National Audit Office concluding that this represented poor value for the taxpayer (NAO, 1998).

15. *The performance of Railtrack has been mixed.* I should state here, straightaway, that I am a vertical separation sceptic (see Preston, 1996). My main concern, although not the only one, regards investment. Railtrack as a private monopoly has strong incentives to increase prices and reduce output, and this has been reflected by its reluctance to invest in the network. The proposed solution is the new Railway Bill in which regulations will be tightened to specify investment levels as part of Railtrack's operating license conditions and penalties will be increased. The problem is that this may just force up Railtrack's price of capital and lead to less investment than would otherwise be the case. Britain's regulatory regime is also rather over dependent on individual personalities. The current regulator has made it clear that he will adopt a tough stance (Winsor 1999).

    We have at least avoided in Britain the alternative investment problem that might result from a vertically separated but publicly owned track authority, that of the gold plated railway. This may become a problem in Denmark. Incentives appeared to have worked well initially in encouraging Railtrack to improve its performance with respect to the operation of the network, but there is concern that the regime is working less well now. In addition, a profit sharing agreement has been established with Virgin with respect to the Passenger Upgrade II of the West Coast Main Line, but there are concerns that this investment incentive scheme may be potentially anti-competitive.

16. *The headline statistics seem encouraging.* One of the first casualties of a reform process is consistent statistics. Nonetheless, Table 1 shows that between 1993/4 and 1998/9, passenger kms went up by almost 16%. Real receipts per passenger km went up by 9%, although we estimate that one third of this increase is due to a shortening of mean journey lengths. Improved revenue yield techniques may be responsible for much of the latter. There has been a proliferation of new ticket types, particularly on competed routes (e.g. London – Birmingham). Ticketing co-ordination has been reduced but ORR ensures that some minimum standards are maintained (e.g. through tickets available on all routes, concessions to certain groups protected etc.). We estimate that train kms have increased by over 10% during this period. This demand increase is in line with what one might expect using conventional elasticities, assuming no secular time trend. The industry has traditionally assumed a negative time trend of around 1.5% per annum.

(It should be clear that my comments on rail refer to the passenger industry. Freight tonne kms have gone up by 22% between 1993/4 and 1997/8, despite continued restructuring of the UK economy. Privatisation for the freight industry is much less problematic - not least because the freight market is more perfectly competitive. This is not due to actual on-track competition (there is some but this is limited and declining) but due to inter-modal and end product market competition. For general merchandise (e.g. through the Channel Tunnel), road is a fierce competitor. For bulk goods, competition in the end-product market is fierce (e.g. UK power station coal replaced by foreign coal or by natural gas).

17. *Customer expectations concerning quality appear to have increased.* There has been a lot of concern about punctuality (the percentage of trains x minutes late) and reliability (the percentage of trains operated). The truth is that these are little changed. Indeed, they are slightly improved, despite some recent deteriorations (see Table 1). However, only one franchise (the Island Line) is deemed to have good performance in terms of both reliability and punctuality (OPRAF, 1999). Ironically, this is the only vertically integrated franchise. The problem is that the public expected dramatic improvements. Complaints to the Central Rail Users' Consultative Committee (a passenger rail watch dog body) have more than doubled since 1996. Complaints to operators are exceeding one million per annum, and have increased by 8% over the last year (ORR, 1999). However, there are also increased incentives to complain because of improved compensation, customer care phone lines and pre-printed forms have made it easier to complain and recording of complaints has improved.

18. *There have been some important entrepreneurial initiatives.* These are detailed in Van de Velde et al. (1998). The most important concern ticketing (particularly regarding group travel and bonus schemes) and distribution (especially telesales). Some have been stimulated by the Regulator (e.g. the National Rail Enquiry Service) and by OPRAF (Franchise Commitments). The main initiatives in the future will be related to new rolling stock, and particularly tilting trains which will be introduced some 20 years after the abandonment of the APT project. With new rolling stock, there is likely to be further increases in service levels. Passenger dividends, insisted on by OPRAF when TOCs change ownership, have emphasised new services (e.g. Oxford to Bristol) and bus-rail and bus-cycle integration.

    The up-shot in terms of investment is shown by Table 2, but note the footnotes and that rolling stock investment was affected by the large Networker orders in the early 1990s and total investment by investments related to the Channel Tunnel and Heathrow Express. It is though apparent that there was a virtual freeze on rolling stock investment at the time of franchising (1996/7) but a recovery appears to be underway. Investment will be given a slight boost by the Rail Passenger Partnership which will make available an additional £100 million over three years (1999/2000 to 2001/2).

19. *There have been substantial changes in staff levels and costs.* Rail staff numbers declined by 48% between 1994 and 1998 but some of this is due to the reclassification of staff from SIC 60.1. Cost savings seem likely for the industry as a whole but may be easier for Railtrack and the ROSCOs to achieve than the TOCs. We estimate that over the last year, although the TOCs have exceeded their forecasts for revenue growth, costs have increased slightly when reductions were being sought.

20. *A complex regime has been made to work.* This has been a considerable achievement in itself. With respect to the further changes that are planned, the Strategic Railway Authority may have advantages in that passenger and freight planning will integrated and the objectives of the second round of franchising better articulated. The main areas of concern are the possible duplication, with the Rail Regulator, in controlling Railtrack and conflicts between public interest, value for money and promoting competition objectives.

I wish to conclude with two final questions. First, could the British regime have been made better? This depends on the counterfactual. It does appear that in financial and economic terms the new regime in 1999 is better than the old regime in 1994. But would it be better than the old regime would have been in 1999? I have my doubts, and my doubts revolve around Railtrack. There may be a case for Railtrack being investigated by the Competition Commission. If Railtrack is found to be acting anti-competitively, one option would be to split it up into its ten or so zones (akin to the AT&T baby bells) which to some extent map onto the TOCs. A market test could then be established for vertical integration in the way that it has already been established for horizontal integration.

Secondly, what are the main implications for railway reforms in Denmark? Hylen (1999) summarises these as follows. First, a simple infrastructure access pricing system based (presumably) on short run average variable costs (as a proxy for short run marginal costs), but with special arrangements for the main line and Great Belt and Öresund crossings. In Britain, access pricing is based on long run average total costs. Nash (1995) found that infrastructure charges per train km were nearly seven times greater in Britain than in Sweden (whose charges are likely to be similar to those proposed in Denmark). The scope for determining the 'true' costs of infrastructure seems to have been missed. Secondly, open access for freight is to be introduced in 1999. The experience in Britain would seem to support this. Thirdly, open access for commercial passenger services is to be permitted from 2000. This is what Britain is working towards in 2002. However, given the huge difference in infrastructure charges between Britain and Denmark, one might expect the commercial sector to be proportionately bigger in Denmark. There may be a big risk of cream skimming competition which may not be in the public interest. It may have been more sensible to limit passenger open access to internatonal services. Fourthly, non commercial passenger services will eventually be tendered but the plans for this seem rather timid – only 15% by 2003. Experience from Britain suggests franchising works, although further liberalisation of the bus and coach markets may be required before it works as well in Denmark. My reading of the British experience would suggest that these tenders should be bigger than seem to be envisaged (maybe only 4 or 5 for the entire network and with a relatively permissive stance with respect to mergers). They should perhaps also be longer than the five years proposed and the scope for vertically integrated concessions considered (with the infrastructure leased from Banestyrelsen). It might be sensible to limit DSB to be the bidder of last resort, allowing the company to focus on freight and international passenger services. This though is to be over critical. Denmark is to be applauded for embracing rail reform. The proposed reforms should allow operating costs to be reduced and innovative services and related products to be introduced. The proposals, being less complex, should also avoid the substantial transitional costs that occurred in Britain. However, they do seem unnecessarily constrained by the spirit (rather than the letter) of European Union rail policy. They should not be seen as an end-state but as part of a process of policy evolution which permits railways to play a more beneficial role in the economy.

REFERENCES

British Railways Board (1994) *Annual Report and Accounts.* BRB, London.

Department of the Environment Transport and the Regions (1998) *Railway Policy: A Response to the Third Report of the Environment, Transport and Regional Affairs Committee on the Proposed Strategic Railway Authority and Railway Regulation.* Cm 4024, The Stationery Office, London.

Department of the Environment Transport and the Regions (1999) *Bulletin of Rail Statistics: Quarter 4 1998 Data.* Transport Statistics Report. DETR, London.

Foster, C. (1994) *The Economics of Rail Privatisation* Centre for the Study of Regulated Industries. Discussion Paper 7. CIPFA, London.

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

Hylen, B. (1999) *Tendering of Passenger Rail Traffic in Denmark. Summary of a Report to the Danish Ministry of Transport* Swedish National Road and Transport Research Institute, Linkoping.

Nash, C. (1995) *Rail Privatisation – The Experience So Far* Fourth International Conference on Competition and Ownership in Land Passenger Transport. Rotorua, New Zealand.

National Audit Office (1998) Privatisation of the Rolling Stock Leasing Companies *HC 576 Session 1997-8.* The Stationery Office, London.

Office of Passenger Rail Franchising (1999) *Quarterly Performance Bulletin 11. 13 December 1998 – 31 March 1999.* OPRAF, London.

Office of the Rail Regulator (1999) *Rail Complaints Bulletin Report No 3* ORR, London.

Preston, J., Whelan, G . and Wardman, M. (1999) An Analysis of the Potential for On-track Competition in the British Passenger Rail Industry *Journal of Transport Economics and Policy,* 33, 1, 77-94.

Preston, J. (1996) The Economics of British Rail Privatisation: An Assessment *Transport Reviews*, 16, 1, 1-21.

Shires, J. and Preston, J. (1999) *Getting Back On-Track or Going Off the Rails? An Assessment of Ownership and Organisational Reform of Railways in Western Europe* To be presented to the Sixth International Conference on Competition and Ownership in Land Passenger Transport. Cape Town, South Africa.

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

Van de Velde, D., Mizutani, F., Preston, J. and Hulten, S. (1998) Railway Reform and Entrepreneurship. *Proceedings of the European Transport Conference, Seminar G.* PTRC, London.

Whelan, G., Preston, J., Wardman, M. and Nash, C. (1998) The Privatisation of Passenger Rail Services in Great Britain: An Evaluation of Competition for the Market and Competition in the Market. *Proceedings of the 8th World Conference on Transport Research.*

White, P. (1998) Financial Outcomes of Rail Privatisation in Britain. *Proceedings of the European Transport Conference, Seminar G, Rail.* PTRC, London.

Winsor, T. (1999) *The New Regulatory Agenda* The Railway Forum Annual Conference 'Towards 2000'.

Wright, M., Dobson, P., Thompson, S. and Robbie, K. (1992) How Well Does Privatisation Achieve Government Objectives? The Case of Bus Buy-Outs *International Journal of Transport Economics*, 19, 3, 259-285.

Web Sites Consulted

http://www.opraf.gov.uk

http://www.rail-reg.gov.uk

Table 1: Trends in the National Passenger Rail Industry Since Privatisation

	1993/4	1998/9	% change
Passenger km (b)	30.4	35.1	+15.5
Passengers (m)	740	890	+20.3
Revenue (£m, 1997/8 prices)	2414	3028	+25.4
Receipts per passenger km (p)	7.9	8.6	+8.9
Punctuality (% on time)	89.6	91.6	+2.2
Reliability (% operated)	98.7	98.8	+1.0
Mean trip length (km)	41.1	39.4	-4.1

Source: DETR, 1999.

Table 2: Investment in National Railways since Privatisation (£ million, 1998/9 prices)

	Rolling Stock	Other	Total
1993/4	464	839	1303
1994/5	391	965	1356
1995/6	211	950	1161
1996/7	48	1208	1256
1997/8	114	1430	1544

Notes:
Excludes PTE investments.
Affected by definitional changes in 1994/5 and 1996/7.

Source: DETR, 1999.