

Rail Privatisation - The Experience So Far

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INTRODUCTION

1. Railways have long been seen as a major problem worldwide, combining declining market share with increasing financial difficulties (Tables 1 and 2). In the past few years, interest in privatisation as a solution to these problems has grown rapidly. Privatisation has been seen as promoting efficiency and innovation, by freeing the railway from government control and by removing the prop of subsidies. At the same time governments have been keen to relieve their budgets by transferring the financing of rail investment to the private sector.
2. New Zealand, of course, led the way, and certainly to an outsider the transformation of New Zealand Railways into a commercial organisation appears a remarkable success. However, New Zealand Railways, as a freight dominated organisation, was able to follow the North American model of a privately owned freight company owning its own infrastructure and disciplined by competition from road haulage, with a modest passenger service much of it run under contract to the government. For freight traffic, it may be considered that the strength of competition from road haulage removes any 'natural monopoly' problems, whilst in the case of passenger services, the minor role played by rail in the passenger market means that if the railway is not efficient, the government will simply cease to support it. Thus providing for competition within the rail sector has not been a major issue. A similar solution was found in Argentina, although on the basis of offering substantial regional railway companies on long (30 year) franchises.
3. The situation in Japan is rather more like that in Europe, in that railways are dominated by heavy passenger traffic, although the traffic density and market share make this much more a commercial operation than many European rail passenger services (Table 3). Japanese National Railways were divided into six regional companies integrating passenger services with infrastructure. Debt and excess staff were left in the hands of a separate 'resettlement corporation'. Whilst other companies still receive income from a government established fund designed to offset their losses, those companies operating in the more densely populated areas are now profitable. Freight operates as a separate company over the infrastructure of the passenger companies. Although it is often said that the railways were privatised in 1987, the process is better described as commercialisation. Sale of shares to the private sector has only taken place more recently and only for the more profitable companies.

4. Again in Japan, achieving competition within the rail sector was not seen as an issue, and Japanese railway management is adamantly opposed to any separation of infrastructure from operations. Presumably the financial arrangements are thought to guard adequately against any risk that the new railway companies might prove to be inefficient monopolies, and their performance to date has been impressive (Table 4).
5. European railways offer bigger problems than any of these when it comes to privatisation. Not only is passenger traffic important, but also much of it is very unprofitable. Rightly or wrongly, governments are unwilling to see the sort of rationalisation that would be needed to make it profitable; on the contrary high quality urban and inter urban rail services are seen as an essential element in policy to cope with congestion and environmental impact on roads. This leads governments to wish to have considerable influence over the passenger services provided and to be reluctant to see rail passenger services left to private sector monopolies. Consequently a unique European modal of rail privatisation has emerged. It varies in detail from country to country, but generally combines elements of:

Separation of infrastructure from operations

6. The intention here is to permit competing operators to run trains over the same infrastructure. It is argued that if one of them had control of the infrastructure this would put them in an unduly favourable position.

Franchising out of some or all passenger operations

7. If the government wishes to continue to control the level of passenger service operated and as a consequence to provide subsidy, then it is argued that competitive franchising offers the best way of using the forces of competition to ensure that operators are efficient.

A degree of open access for other operators to operate competing services over the same infrastructure

8. Where possible it is thought desirable to encourage direct 'on the rails' competition. This is probably most readily achieved in the freight sector, where there are generally no explicit subsidies to particular rail operators.
9. All these elements exist in the case of Great Britain, and in commenting on the proposals at the Toronto conference, we drew attention to a number of worries widely held in the industry (Nash and Preston, 1993).
 - a. That separation of infrastructure from operations would lead to inefficiency from a lack of coordinated planning and weak incentives for the monopoly provider of infrastructure.

- b. That it would be difficult to reconcile introduction of competition with maintenance of an integrated network offering seamless journeys between a wide variety of origins and destinations.
 - c. That private investment in the rail industry will be seen as risky, and it will be difficult to reach agreement on projects involving a number of operators. As a consequence investment will fall.
 - d. That all players in the new industrial structure will require complex contractual arrangements with each other which will limit flexibility and require time consuming and expensive negotiation and monitoring.
 - e. That in view of these and other problems there will be a lack of competition for the passenger franchises.
10. Although at the time of writing none of the main companies set up has actually transferred to the private sector, much of the new structure of the rail transport industry in Britain is now in place. The planning and operation of the infrastructure has been transferred to a separate company, Railtrack. The remainder of British Rail has been reformed into around a hundred companies, including passenger train operating companies, freight companies, passenger rolling stock leasing companies and infrastructure renewal and maintenance companies. A new Office of Passenger Rail Franchising has been set up to take responsibility for franchising out passenger services. A Rail Regulator has been appointed to promote competition and protect the consumer; in particular he is responsible for authorising access charges and agreements entered into by Railtrack. The plan is to sell the three freight companies specialising in bulk freight operations and the passenger rolling stock leasing companies by the end of this year, as well as letting the first passenger franchises. Within the next two years it is intended to sell the infrastructure company and to let franchises for at least 51% of passenger services.
11. In what follows we will consider to what extent the arrangements discussed so far serve to overcome the problems identified above. We will also draw some contrasts with arrangements existing or proposed in other European countries. A more detailed description of proposals in seven important countries is to be found in Shires et al (1994).

RELATIONSHIP BETWEEN INFRASTRUCTURE AND OPERATIONS

12. Separation of infrastructure and operations is generally intended to ensure that no operator is able to be in control over the monopoly infrastructure to their own competitive advantage. But there are very different models of how to carry this out. In many respects the two European countries so far to completely separate infrastructure and operations into different organisations - Sweden and Great Britain - represent polar opposites.
13. Firstly, there is a question of where exactly the separation should take place. In Sweden, whilst responsibility for planning, maintaining and investment in the

infrastructure rests with the infrastructure company (Banverket), actual operational control of train services remains with the major operator, SJ. This might be deemed to give SJ a competitive advantage if competition were permitted, which it currently in general is not. A recent change of government in Sweden meant that previous plans to remove SJ's monopoly of main line passenger and freight services were abandoned. Although regional authorities can put local passenger services out to tender, in the majority of cases SJ has won these too, although some freight operation by private companies occurs over lines which SJ has abandoned.

14. In Britain, even in the absence of new entry, there will be many more cases of different passenger and freight operators sharing the same infrastructure. This is because passenger services are to be tendered out in twenty seven blocks of services, which overlap each other in many places, and freight services will be in the hands of separate private operators. Accordingly operational control rests with Railtrack. Many operators are unhappy with the lack of control this gives them over their day to day operations, particularly in the case of dense passenger services.
15. Secondly, there are very different financial models. In Sweden, rail infrastructure is seen as a social asset, to be priced on a marginal social cost basis and to be invested according to social cost-benefit analysis criteria, on a comparable basis to roads. This results in low charges for use of the infrastructure, making many rail operations commercially viable. In Britain the policy is the opposite. Rail infrastructure is charged for on a commercial basis (though on a two-part tariff with a low variable element) and investment is to be commercially appraised. A comparison of the two sets of charges is given in Table 5; rail access charges are considered in more detail in Dodgson (1995). The result is that Railtrack can be privatised as a fully commercial organisation without subsidy but that virtually all passenger services will need subsidy. The British model does of course create a company which can be privatised and yield the government a substantial capital sum. The big disadvantage is that the major company that can survive without subsidies, Railtrack, is a network monopoly whilst the potentially competitive parts of the industry, the operating companies, need subsidy. It also distorts competition with roads, where investment is appraised on a cost-benefit analysis basis.
16. The main pressure forcing Railtrack to be efficient is the regulation of its passenger access charges by the Rail Regulator, who is requiring them to be reduced in real terms over the next four years on the basis of an RPI-x type formula. At the same time, the access agreements stipulate quality of service criteria that are to be met. The fact that Railtrack has no construction and maintenance capability of its own, all these functions being contracted out on a competitive basis, also serves to promote efficiency. Nevertheless, there remains concern that Railtrack has no incentive to improve upon the required minimum quality standards, and that its speed of response to problems may be reduced by its degree of insulation from the ultimate customer.
17. Elsewhere in Europe separation of infrastructure from operations has so far taken place either purely in accounting terms (this is the minimum degree of separation required by European Union legislation) or has separate divisions within the same organisation. German Railways (DBAG) has been set up as a publicly owned

company with separate divisions covering passenger services, freight services and infrastructure. Charges for the use of infrastructure in Germany lie somewhere between the two extremes in that they allow for maintenance and asset replacement but no depreciation or interest on existing assets. The fact that there are quantity discounts on track access charges will naturally disadvantage small new entrants. In the Netherlands and in Spain, where the infrastructure is currently wholly government financed, the rail operator gets the use of the infrastructure free of charge.

COMPETITION AND INTEGRATION

18. There is a clear trade-off here between having an integrated network with comprehensive information and tickets available on all services and allowing individual operators commercial freedom to decide what to provide. In Britain, the position is that the Franchise Director is laying down minimum requirements for levels of service, which are typically some 70-90% of what exists at present in terms of frequency, and which cover other issues such as journey times and times of first and last trains. Open access passenger operations will be strictly limited, at least for the first few years, and will not be able to attack the Franchisee's core business as they will only be allowed to enter on routes not currently served by through trains or which only account for a small proportion of the franchisee's revenue. Comprehensive information and through ticketing will be required and both season ticket and standard 'leisure travel' fares will be controlled. All this may sound like a very heavily controlled situation, and certainly some potential operators have expressed concern at the lack of commercial freedom it offers.
19. Nevertheless, passenger organisations do see cause for concern. The more decentralised planning of the time table may lead to a further deterioration of connections between services and a poorer spacing of trains on routes served by more than one operator. Already there has been a reduction in the willingness of one operator to hold connections with the trains of other operators and there is less comprehensive information, for instance on delays or change to timetables due to engineering work on other parts of the network. The actual operation of stations is generally leased to the major operator at that station which therefore becomes responsible for information and bookings on all services including those of its rivals. To some extent these developments are a continuation of trends that had already emerged with increased decentralisation of decision taking to sectors and profit centres under the previous organisation, but there is a fear that there may be some repeat of experience in the British bus industry, where deregulation and privatisation certainly achieved a dramatic reduction of costs and an increase in bus miles run but failed to prevent a further substantial loss of passengers. A deterioration in the integration of services and in information on them is widely blamed for this loss of traffic (Mackie, Preston and Nash, 1995).

INVESTMENT

20. In the new structure, it is expected that most investment will be carried out either by Railtrack (in the case of infrastructure) or the rolling stock leasing companies (ROSCOs) in the case of rolling stock. Existing train operating companies are being obliged to sign contracts to lease their existing rolling stock for 5-7 years, but it appears that either much longer contracts or guaranteed continued use of the rolling stock will be needed to encourage investment. In the short/run, rolling stock investment has virtually ceased.
21. Regarding infrastructure, one difficulty is the number of organisations that need to be involved in any decision. Some of the problems to be faced are illustrated by the current study of the West Coast Main Line. This route requires heavy investment just to renew life-expired assets. Options would be to upgrade for higher speed, replace lineside signals by cab signalling or to save money on infrastructure by converting from electric to diesel traction. Any of these would affect the many operating companies who use parts of this route not just in terms of their revenues and costs, but also by requiring investment in rolling stock on their part. For instance, the complete conversion to cab signalling would require all their trains to be so equipped.
22. Investment to achieve higher standards of service would alter access charges not just for the duration of the current franchise but possibly for up to thirty years into the future and would thus require the agreement of the Franchise Director to underwrite them beyond the life of the initial franchises, and of all the operators concerned. It seems clear that such agreement will be hard to reach.

TRANSACTIONS COSTS

23. The degree of disintegration proposed for the British Rail network is unparalleled anywhere in the world. Some 25 passenger train operating companies will be franchised separately. Each will require contracts with the Franchise Director, Railtrack and fellow train operating companies (for instance regarding through ticketing and facilities provided at stations leased by one train operating company but served by another). They will lease rolling stock from (initially) three rolling stock leasing companies, who may secure their maintenance from specialist maintenance companies. Railtrack will subcontract maintenance to infrastructure renewal and maintenance companies. The logic of this disintegration is that competition will be introduced in all those functions such as rolling stock provision and maintenance and infrastructure renewals and maintenance in which it is feasible, even though it is accepted that infrastructure and (initially at least) provision of a particular passenger service must remain a monopoly. But it does require an intricate web of contractual arrangements in which specifying and monitoring responsibility for quality of service will not be easy. In other Western European countries such as Germany and Sweden, it is proposed to maintain a single major operator of main line passenger services, integrated except for provision of infrastructure, although local authorities will be free to contract out local services to other operators. Of course it is likely that a degree of reintegration will occur in Britain - it appears likely that companies will seek to hold a portfolio of franchises covering a variety of sets of services and of varied franchise lengths.

Partly this would be to reduce the risk that a single failure at refranchising could put them out of business as well as to exploit potential economies of scale. However it may be that the regulator would regard a return to vertical integration as uncompetitive behaviour and not permit it. It also appears that monopoly operation of bus and local rail services in an area by a single operator will not be permitted, although this might offer considerable benefits in terms of integration of bus and rail services.

LACK OF COMPETITIVE BUILDING

24. Given our previous concerns as to how attractive the franchises would be, we were surprised that some 37 organisations have registered an interest in the first six train operating companies to be offered for franchise. Moreover most of these potential bidders are interested in several. Nevertheless, there is a lot of difference between expressing an interest in order to obtain more information and actually launching a bid. Bidding requires a significant effort in terms of legal and financial costs, establishing a safety case and other preparations. The winner is obliged to provide at least a minimum level of service for typically 7 years at fares the most important of which are determined by the regulator. A large proportion of costs are fixed by long term constraints with Railtrack and the Rolling Stock Leasing Companies. Even though new entry will be strictly limited for the first few years at least, there are many cases where fellow franchisees will compete between some points, and there is always competition from other modes of transport. Rail traffic is particularly sensitive to the state of the economy. A comparison paper arising from our current research reports on a survey to determine what makes for an attractive franchise (Preston, 1995). Suffice it to say that we stand by our view that operators will require substantial compensation in subsidies for bearing the commercial risks imposed on them.

CONCLUSION

25. Interest in privatising railways is here to stay. The problems with railways as they are constituted at present and the need for large amounts of capital investment mean that there is little doubt that future governments will continue to explore this option, even if the current rapid pace in Britain may be halted or even reversed by a future change of government, whilst other Western European governments are proceeding in this direction much more cautiously. In fact, interest is currently strongest in Eastern Europe, where the urgent need to tackle the severe problem caused by loss of traffic and inherited inefficiencies is leading a number of railways to look seriously at this option. There is no doubt that the British proposals are an ingenious attempt to introduce competition wherever possible, and that opening up areas such as track maintenance and renewals, and rolling stock provision and maintenance to competition may have significant benefits. Moreover, a number of recent decisions have reduced the worst fears of loss of benefits such as through ticketing, at least initially. Nevertheless, there remains great concern at the degree of disintegration involved in the British proposals. Nowhere else in Western Europe is such an extreme disintegration proposed, whilst outside Europe it remains

invariably the case that the main operator on a particular route controls the infrastructure. Whether the British proposals will in fact lead to a more cost effective railway remains to be seen, but we remain sceptical. An alternative model favoured by many rail operators would have seen infrastructure leased to and operated by the main franchisee using it despite the risk of them favouring their own services over those of other operators using it. Fears of loss of integration might have been overcome by retention of a stronger degree of central planning and timetabling of passenger services. The model might ultimately be the retention of an integrated network of national rail services but with a much greater degree of contracting out through competitive tendering of the actual operations.

REFERENCES

26. Dodgson, J.S. (1995) Separating Railway Infrastructure and Operations: the British Experience. Paper presented at the Fourth International Conference on Competition and Ownership in Land Transport, Rotorua New Zealand July 9-12 1995

Maeda, H. (1993) What can we learn from the Japanese experience? Unpublished MSc Dissertation, Institute for Transport Studies, University of Leeds.

Nash, C.A., and Preston, J.M. (1993) Competition in Rail Transport — A New Opportunity for Railways? Paper presented at the Third International Conference on Competition and Ownership in Surface Passenger Transport, Mississauga, Ontario, September 26-29, 1993.

Preston, J.M. (1995) The Franchising of Passenger Rail Services in Britain. Paper presented at the Fourth International Conference on Competition and Ownership in Land Transport, Rotorua New Zealand July 9-12 1995

Preston, J.M., Shires, J., Garlick, M., Hodgson, F. and Nash, C. (1994) European Railway Comparisons. Working Paper 418 Institute for Transport Studies, University of Leeds.

Shires, J.D., Preston, J.M., Nash, C.A., Wardman, M. (1994) Rail Privatisation: The Practice. An Analysis of Seven Case Studies. Working Paper 420 Institute for Transport Studies, University of Leeds.

TABLE 1 PASSENGER AND FREIGHT RAIL MARKET SHARE IN EUROPE

	Year	Passenger rail (thousand million passenger km) %		Rail freight (thousand million tonne-km) %	
Austria	1980	7.38	11.6	11.00	39.9
	1990	8.46	11.1	12.68	46.1
Belgium	1980	6.96	8.5	8.04	23.6
	1990	6.54	n.a.	8.35	17.8
Denmark	1980	4.31	8.7	1.62	17.1
	1990	4.86	7.1	1.79	16.0
Eire	1980	1.03	3.5	0.62	11.0
	1990	1.29	3.6	0.59	10.3
France	1980	54.66	10.0	66.37	31.6
	1990	63.74	9.2	51.53	26.7
Italy	1980	39.59	9.4	18.38	12.2
	1990	46.43	7.1	21.22	10.1
Netherlands	1980	6.08	11.1	3.40	5.7
	1990	5.66	7.0	3.07	4.6
Norway	1980	2.75	7.1	1.66	24.0
	1990	2.43	5.1	1.63	14.3
Portugal	1980	8.89	6.9	1.00	7.81
	1990	11.06	6.9	1.59	12.71
Spain	1980	14.83	8.5	11.30	10.9
	1990	16.73	7.6	11.61	7.0
Sweden	1980	7.00	8.6	16.65	43.8
	1990	6.17	6.1	19.61	42.5
Switzerland	1980	9.18	10.7	7.39	50.3
	1990	11.06	10.8	8.30	41.6
West Germany	1980	40.50	7.0	63.80	25.2
	1990	43.60	6.3	61.40	20.6
UK	1980	30.26	6.7	17.64	14.8
	1990	34.20	5.4	15.80	9.9
TOTAL (excl. Belgium for passenger)	1980	226.46	8.4	228.87	21.9
	1990	255.69	7.2	219.17	17.1

Source: ECMT

TABLE 2 EUROPEAN RAILWAY MEAN PASSENGER AND FREIGHT CHARGES, AND COST RECOVERY RATIOS (1990)

	Passenger charge pence per passenger km	Freight charge pence per tonne km	Revenue/operating costs (train business)	Train km per member of staff
Austria	2.92	3.70	0.39	1750
Belgium	2.88	2.52	0.31	3402
Denmark	3.97	5.29	0.63	3920
Eire	4.05	4.20	0.51	2693
France	n.a.	n.a.	0.64	2413
Italy	n.a.	n.a.	0.20	1568
Netherlands	3.52	2.08	0.59	4484
Norway	3.78	2.75	0.54	2504
Portugal	1.92	2.58	0.42	1857
Spain	2.79	2.93	n.a.	3459
Sweden	5.17	1.23	0.72	3501
Switzerland	3.72	n.a.	0.64	3033
West Germany	3.95	n.a.	0.52	2559
UK	6.21	4.15	0.87	3193

Source: Preston et al (1994)

n.a. = not available

TABLE 3 JAPANESE PASSENGER MARKET SHARE, 1991 (% OF PASSENGER KILOMETRES)

Cars, light vans & taxis	53
Buses & coaches	10
Rail excluding Metro	36
Total of above	100

Source: Department of Transport, Transport Statistics GB (HMSO, 1993)

TABLE 4 KEY FINANCIAL AND OPERATIONAL INDICES OF JAPANESE RAILWAYS

	Passenger		% change	Freight		% change
	1984	1991		1984	1991	
Revenue	2691	3946	46.6	202	195	-3.9
Costs	2988	2257	-24.4	386	191	-50.4
Traffic units	194180	247031	27.2	22485	26791	19.2
Train km	515522	684368	32.8	1017800	91329	-10.3
N° staff	253684	138901	-45.2	46600	10489	-77.5
Staff costs	1799	1206	-33.0	240	89	-63.0

Units: revenue, costs – billion yen
 traffic units – passenger km and tonne km in millions
 train kms – in thousands

Source: quoted in Maeda, 1993

TABLE 5 SWEDISH AND BRITISH RAIL INFRASTRUCTURE CHARGES COMPARED

	Total charge (£m)	Train km (m)	Charge per train km (£)
Sweden (1990)	69	99.634	0.69
Britain (1994/5) in 1990/91 prices [passenger only]	1725	365.119	4.72

Source: Banverket (Sweden) and Railtrack (Great Britain)