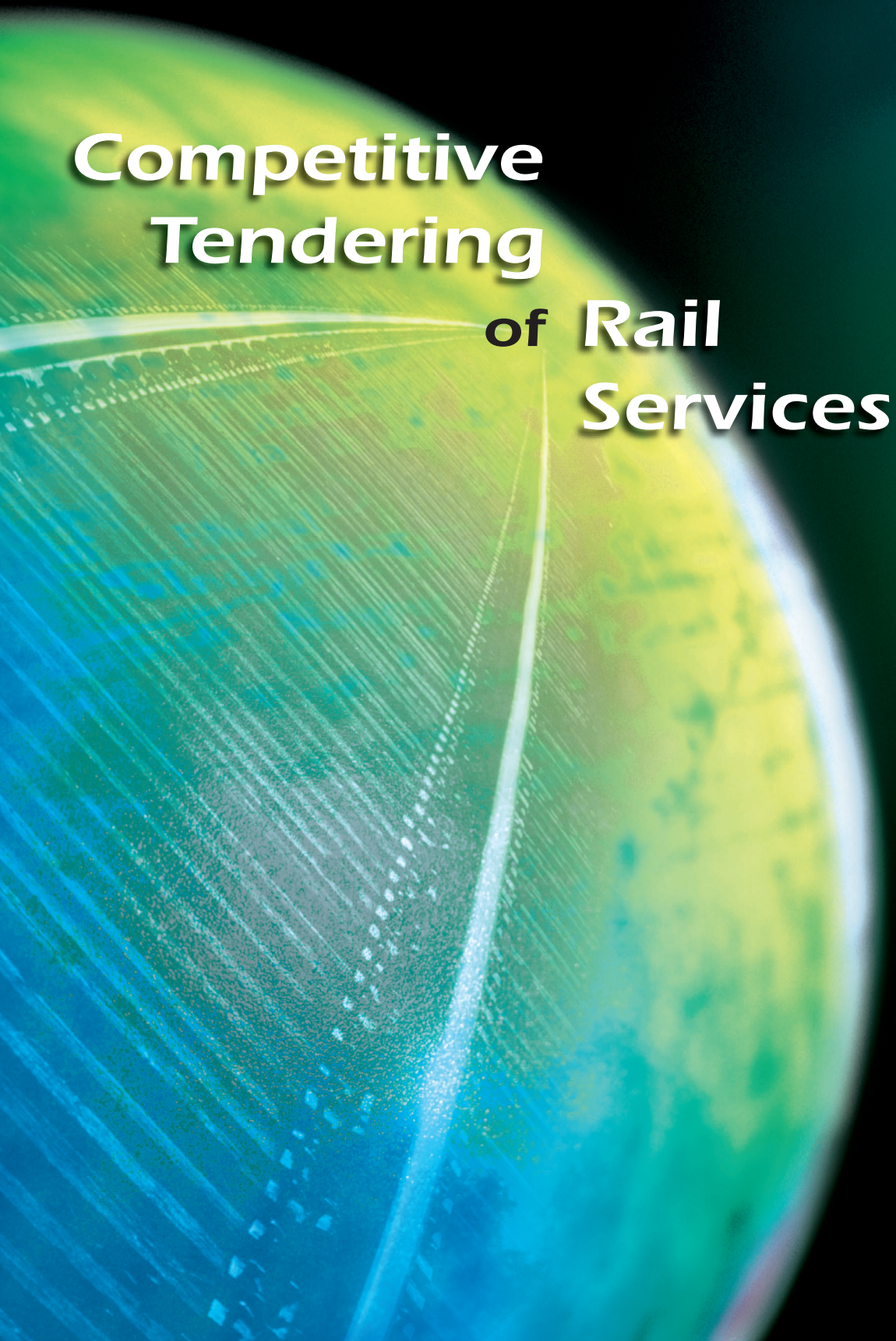
EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT

ECMT

Competitive Tendering of Rail Services



OECD

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT

Competitive Tendering of Rail Services

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Also available in French under the title:
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FOREWORD AND ACKNOWLEDGEMENTS

Competitive tendering has been used successfully for procurement of a wide range of services by governments. It holds particular attractions as a way of organising rail services because it can be used introduce competition whilst preserving network integrity and avoiding the difficulties of open access competition when passenger services are subsidized. There have been some very successful cases of competitive tendering, especially with freight railways in Latin America. There have also been some notable failures of some passenger franchises in some OECD countries. Getting the regulatory and contractual frameworks right is a far from trivial task. The purpose of this report is to identify the key factors for successful tendering and examine the risks revealed by experience to date with franchises in the countries that have made the greatest use of competitive tendering for railways.

The ECMT is indebted to the experts that prepared the papers for this report (see table of contents) and to the participants (see annex) at the workshop organised at the beginning of the project to review early versions of the papers. The workshop presentations can be consulted on the web at www.cemt.org/topics/rail/Paris06/index.htm. The discussions, chaired by Fabio Croccolo of the Italian Ministry of Transport, provided invaluable input and stimulation for deepening analysis of the key issues. Special thanks go to a core group of the experts – Peter Kain, Chris Nash and Lou Thompson – that devoted much time and energy to designing the project and ensuring that the concluding paper is consistent with the experience reviewed.

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ABBREVIATIONS

AFI	Annual Financial Improvement
BOT	Build, Own and Transfer
BR	British Rail
CEO	Chief Executive Officer
CER	Community of European Railway and Infrastructure Companies
CN	Canadian National Railway Company
CPTA	County Public Transport Authorities
CUP	Capacity Utilisation Policy
DB AG	Deutsche Bahn AG (German Railways)
DfT	Department for Transports
DOI	Department of Infrastructure
DSB	Danish State Railways
EWS	English Welsh and Scottish Railway (freight operating company)
GDP	Gross Domestic Product
GNER	Great North Eastern Railway
GOVIA	Partnership of Go-Ahead and Keolis (train operator)
ITC	Independent Television Commission
MBO	Management Buy Out
MTL	Rail subsidiary of MTL Holding (operator of Merseyrail services)
NAO	National Audit Office
NEG	National Express Group
NERA	National Economic Research Associates
NPV	Net Present Value
NR	Network Rail
NS	Dutch National Carrier
OPRAF	Office of Passenger Rail Franchising
PSR	Passenger Service Requirement
PTC	Public Transport Commission
PTE	Passenger Transport Executive
RBI	Rail Business Intelligence
ROSCO	Rolling Stock Leasing Companies
RRPS	Regional Rail Passenger Services
SJ	Swedish State Railways
SRA	Strategic Rail Authority
TOC	Train Operating Company
WAGN	West Anglia Great Northern

1. PASSENGER RAIL FRANCHISING – BRITISH EXPERIENCE

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* We have greatly benefited from comments on an earlier draft by a number of people including, Mary Bonar, Richard Davies, Jeremy Drew, Peter Kain, John Glover, Lou Thompson and Stephen Perkins. Responsibility for the final version is however solely our own.

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Abstract

Given that virtually all British passenger train services were franchised out over the period 1995-7, and many have now been franchised for a second time, Britain should provide an excellent opportunity to study the impact of franchising passenger rail services. Moreover, since several different franchising models have been tried, there should also be some useful evidence on how best to go about franchising. In practice, however, the turbulent history of the British rail industry over this period makes drawing firm conclusions difficult. At the start, it appeared that franchising was very successful with strong competition for franchises, rapidly rising traffic, rising productivity and falling subsidies. Whilst most of the increase in traffic was due to external factors, the growth appears somewhat faster than would be explained by these factors alone. Despite this, a number of train operating companies got into financial difficulties, particularly in the Regional sector, where franchisees were relying on reduced costs rather than increased revenues to achieve subsidy reductions, and in the short term franchises were renegotiated or replaced with cost-plus contracts pending refranchising. After the bankruptcy of Railtrack not only have the costs and performance of the infrastructure manager severely deteriorated, but there has also been a large rise in the costs of train operating companies. Without a better understanding of the causes of this rise it is hard to form firm conclusions on the success of franchising. One argument is that one of the reasons franchisees found it difficult to achieve the anticipated cost reductions was the degree to which costs had already been driven down in the 1980s. However costs did start to rise again in the early 1990s and in the early years of franchising substantial savings in costs per train kilometre were achieved, with cost increases only following later. A second suggested explanation for the cost increase is the temporary placing of many Train Operating Companies on management contracts or renegotiation of franchises around 2001. We have found some support for this hypothesis, with our analysis showing that the affected TOCs experienced higher cost growth than other TOCs. A third argument is that the increase in costs in the last few years may have been driven by factors unrelated to the franchising process, and in particular, other aspects of policy such as health and safety legislation, disability discrimination legislation and a general requirement for higher standards. It is hard to be definitive on which of these three effects dominates, but we do have evidence which suggests that the way in which problem franchises were managed may have contributed substantially to the rise in costs after 1999-2000. Our overall conclusion is that passenger rail franchising in Britain may be regarded as a moderate success on the demand side, but that it has failed to achieve its objectives on the cost side. However, it should be noted that the rise in train operating costs in recent years has occurred at a time of considerable disruption, during which many other factors unrelated to franchising policy were changing at the same time. It remains to be seen what the re-franchising process will achieve in terms of cost reduction in a more stable environment.

Introduction

The principle argument for franchising rail passenger services via a competitive tendering is that it permits the preservation of an integrated network of services, subsidised where necessary, whilst introducing competitive pressures, leading to incentives to reduce costs and (depending on who bears the revenue risk and what other incentives are in place) improve quality of service. Compared with the alternative of open access competition as a way of introducing competitive pressures into the rail passenger industry, competitive tendering is especially useful in cases in which competition in the market is not feasible because of the need for subsidies or a lack of capacity.

If it is decided to franchise passenger services, there are many issues about the best way to do it. Key questions are:

- What pattern of franchise length, control of services and fares and responsibility for investment is best?
- How large a network should each franchise cover?
- How may appropriate incentives be built in to the contract?

A number of different approaches to these issues have been tried in Great Britain. This, plus the fact that in Great Britain virtually all rail passenger services are subject to franchising makes the British experience very relevant. In the next section we discuss the first round of competitive tendering in Great Britain which took place from 1994-7. We then consider the initial approach to franchising under the Strategic Rail Authority. We discuss the collapse of Railtrack and subsequent approaches to franchising before assessing the success of franchising in Britain and drawing some final conclusions.

The First Round of Franchising

The rail industry in Great Britain has by far the most experience of competitive tendering in Europe, having moved to a situation where virtually all rail passenger services are competitively tendered over the period 1994-7. Separation of infrastructure from operations in 1994 was followed by outright privatisation of the infrastructure manager and the freight operators and by franchising of virtually all passenger services, whether short or long distance, profitable or not. Initially franchises were typically let for 7 years, on a net cost basis, with a requirement to provide at least a minimum level of service but opportunities to run more services than that. Some fares (most season tickets, and either the ordinary or for longer distances the off peak saver) were capped. Franchisees lease rolling stock from separate rolling stock leasing companies, so the level of investment required is very low, thus reducing barriers to entry. Nevertheless, a few franchises notably that for the West Coast Main Line were let for periods of up to 15 years, on the basis that major investment was involved which would require longer track access agreements and rolling stock leases to achieve value for money.

The initial round of franchises is described in Table 1. As will be seen the majority of franchises were won by existing transport companies, particularly from the bus industry but also airlines and a shipping company. This leads to speculation as to what would have happened at this stage had the bus industry not already been privatised.

There were some characteristics of the way franchising was undertaken in Britain which are very different from other countries. For each set of services to be franchised a company was formed. Whoever won the franchise took over that company including its staff and assets for the period of the franchise. This may have made entry easier than in a country where the bidder would have to recruit staff from scratch, although it may also have imposed less pressure on labour costs. Certainly franchising in Britain has attracted a high level of competition, with typically at least 6-8 serious bidders for each franchise. Bids were generally awarded on the basis of minimum subsidy (or exceptionally highest premium for profitable franchises) and the subsidy profile generally declined sharply over the course of the franchise as a result of assumed cost savings and/or revenue growth.

Until the Hatfield accident in October 2000, which set off a chain of events culminating in the bankruptcy of the infrastructure manager, Railtrack, the franchising process had been largely successful. Traffic had grown substantially (Figure 1). There has been much debate in Britain concerning how much of the growth can be attributed to privatisation (through franchising) as opposed to other factors, such as the very strong performance of the economy over the post-privatisation period. In the section "An Assessment", we present some evidence to inform this debate.

Table 1. **Rail Franchises – First Round**

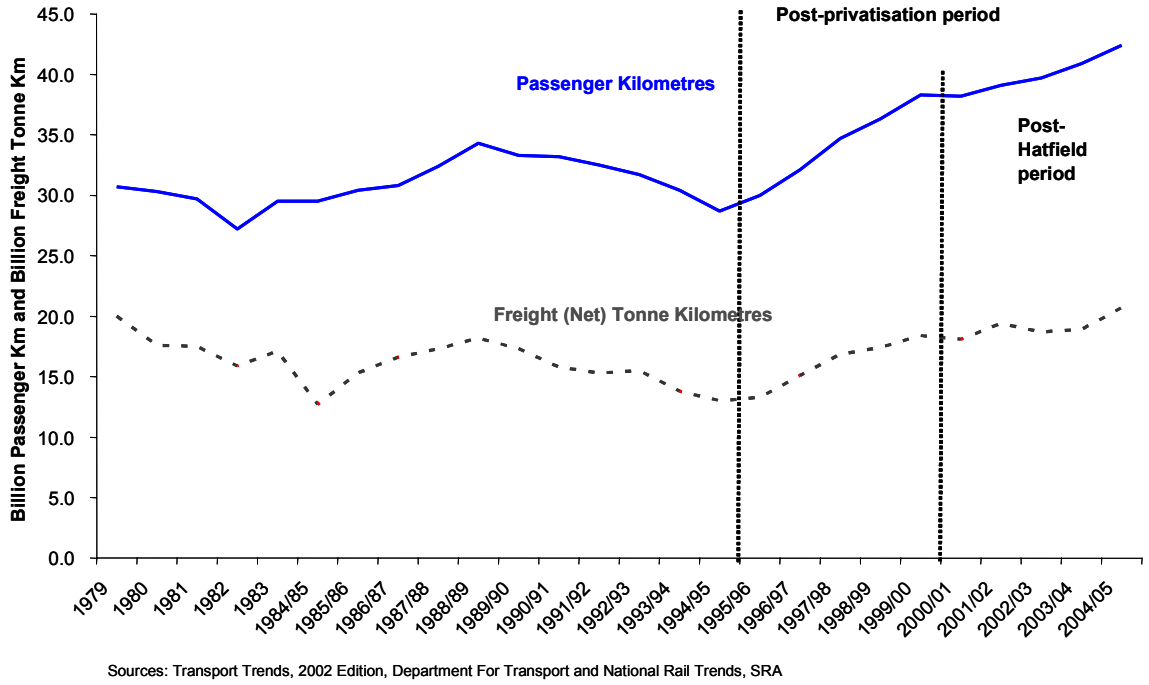
Franchise	Owner	Length of Franchise (yrs)	Subsidy (£m Feb 1997 prices)	
			1996/7 (actual)	2002/3 (projected)
Great Western	MBO/Firstbus	10	61.9	36.9
South West Trains	Stagecoach	7	63.3	35.7
Great North Eastern	Sea Containers	7	67.3	.1
Midland Main Line	National Express Group	10	17.6	-4.4
Gatwick Express	National Express Group	15	-4.1	-12.0
LTS Rail	Prism	15	31.1	19.3
Connex South Central	Connex	7	92.8	35.9
Chiltern Railways	MBO/Laing	7	17.4	3.3
Connex South Eastern	Connex	15	136.1	32.6
South Wales & West	Prism	7½	84.6	44.0
Cardiff Railways	Prism	7½	22.5	14.3
Thames Trains	MBO/Go Ahead	7½	43.7	3.8
Island Line	Stagecoach	5	2.3	1.0*
North Western	Great Western Holdings	10	192.9	129.7
Regional Railways North East	MTL Trust	7	231.1	150.6
North London Railways	National Express Group	7½	55.0	20.0
Thameslink	Goahead/Via	7 yrs 1 mth	18.5	-27.0
West Coast Trains	Virgin	15	94.4	-3.9
Scotrail	National Express Group	7	297.1	209.3
Central Trains	National Express Group	7	204.4	136.6
Cross Country	Virgin	15	130.0	50.5
Anglia	GB Railways	7 yrs 3 mths	41.0	6.3
Great Eastern	First Bus	7 yrs 3 mths	29.0	-9.5
West Anglia Great Northern	Prism	7 yrs 3 mths	72.6	-14.6
Merseyrail Electrics	MTL Trust	7	87.6	61.8
Total subsidy			**2 090.1**	**919.3**

Negative Subsidies indicate payment of a premium; MBO stands for Management Buy Out; * assumes constant subsidy after year 5.

Source: OPRAF Annual Report 1996-7.

Whilst initially privatisation raised the level of subsidy, since all the assets were sold and had to be leased back at commercial rates by 1999-2000 subsidies were falling substantially (Table 2). In that year the overall level of subsidy had been reduced to some 3.4p per passenger km, with a number of inter city and London and South east franchises paying a premium (money paid by the franchisee to the government).

Figure 1. **Rail Passenger and Freight Volumes (1979 to 2004/05)**



Sources: Transport Trends, 2002 Edition, Department For Transport and National Rail Trends, SRA

Table 2. **Government Support to the Rail Industry (million pounds, 2003/04 prices)**

Year	Central Government grants	PTE grants	Direct rail support (grants to the infrastructure manager)	Other elements of Government support	Freight grants	Total Govt. support
1985-86	1 607	148	0	115	13	1 883
1986-87	1 375	127	0	40	11	1 553
1987-88	1 402	120	0	-442	4	1 083
1988-89	901	114	0	-286	3	733
1989-90	727	127	0	352	2	1 208
1990-91	889	161	0	614	6	1 670
1991-92	1 210	161	0	754	1	2 126
1992-93	1 573	141	0	1 146	3	2 863
1993-94	1 191	214	0	688	5	2 099
1994-95	2 259	431	0	-577	4	2 115
1995-96	2 073	438	0	-1 989	5	527
1996-97	2 133	343	0	-1 231	18	1 263
1997-98	1 629	428	0	29	33	2 119
1998-99	1 334	376	0	59	32	1 802
1999-00	1 124	340	0	85	25	1 572
2000-01	901	301	0	89	38	1 329
2001-02	768	321	719	110	60	1 978
2002-03	958	312	1 195	188	50	2 703
2003-04	1 359	414	1 670	179	32	3 654

Source: National Rail Trends Yearbook 2004-2005, SRA, p. 47. Note The negative entries in the figure for other elements of government support are receipts from sale of assets. Positive elements are loans for investment. Whether either of these really constitutes elements of government support may be open to doubt.

Refranchising – The First Approach

When the Labour party took office in 1997, it wished to see a major expansion in the rail market. Its 10 year plan for transport showed investment in the rail industry of £49bn, with £11bn of public money leveraging in £34bn of private. Of course, any private money injected ultimately has to be paid for, plus a private sector rate of return, either through the farebox, or through increased government subsidies in the future.

Its strategy for achieving this was as follows (SRA, 2001). Firstly, a new strategic body was to be established, the Strategic Rail Authority (SRA), which took over the role of franchising but also had responsibility for strategic planning and for the planning of major investment projects requiring co-ordination between different parts of the industry. The SRA was initially established in shadow form by bringing together the Office of Passenger Rail Franchising, the remaining functions of the British Railways Board and some Department of Transport Environment and the Regions staff. But it had to wait for the passage of the 1999 Transport Act to be fully constituted as the SRA in February 2001.

The second part of the strategy concerned refranchising. The majority of the first round of franchises were for around 7 years and would soon start to fall due for refranchising. The SRA saw refranchising as an opportunity to agree a smaller number of longer (20 year) franchises, conditional on performance and on implementation of much more ambitious investment plans. It saw longer franchises as encouraging greater investment, although some commentators observed that short franchises might lead to companies eager to retain the franchises investing even towards the end of the franchises (Steer, 2001).

It might be questioned why longer franchises were necessary given that, as stated above, train operating companies were themselves responsible for little investment. One issue was the question of who would bear the risk of the unexpired value of rolling stock at the end of the franchises. Initially the rolling stock leasing companies were unwilling to bear this, so longer franchises paving the way to longer leases were seen as necessary to achieve significant rolling stock investment. As time passed so they become more willing to invest without a long term, or even any, lease, although arguably the risks involved still led to high leasing charges. SRA had the powers to underwrite longer leases to remove this risk but at this stage was reluctant to use them, except in exceptional circumstances, such as the requirement to build new suburban stock in advance of refranchising to meet requirements imposed by the Health and Safety Executive for the phasing out of Mark 1 stock.

But the main reason for longer franchises was to involve train operating companies in infrastructure investment. In the original structure of the industry, this investment would be financed by Railtrack, remunerated by the train operating company and where necessary subsidies under the franchise agreement would reflect the non commercial element of the costs. SRA from its formation as a ‘shadow’ authority doubted the ability of Railtrack to finance and manage investment on the scale necessary, and sought another way forward – the so-called ‘Special Purpose Vehicle’. Rail infrastructure has the problem that, even where commercially justified, time horizons are long and risks high, and that makes it relatively unattractive to the private sector. By selectively intervening to provide longer term funding SRA believed it could lever in substantial private funding.

The idea was that major infrastructure improvements would be financed from a variety of sources, including train operating companies, private financiers, and the SRA in the form of grants or loans, but the latter being ‘patient capital’. At completion, Railtrack would buy the assets and recover the costs through its normal process of access charges, thus releasing capital for further projects. The first example of funding of this sort was indeed the Channel Tunnel high speed rail link. Initially,

Railtrack opposed this approach, claiming that it could finance and manage all the investment itself provided that the Regulator permitted it to make appropriate profits to keep its share price reasonably high. However, following the financial crisis resulting from the Hatfield accident referred to above, Railtrack's share price fell precipitously and it accepted that it could no longer fund or manage all these projects itself.

SRA opened negotiations on a number of franchises earlier than was necessary, on the basis that the incumbent might be persuaded to relinquish the franchise early in return for the opportunity to bid for a long term more attractive franchise. It sought a wide range of proposals rather than being prescriptive on what new investment and improvements in service the offer should contain. The result was a difficult process in which SRA had to weigh up such issues as realism and past delivery of performance against ambitious plans for the future; a much more difficult task than simply comparing the subsidy bids for a stipulated set of services. The process therefore took a lot more time than was originally expected; only a small number of franchises were surrendered early, and only one of the new long term franchises (for Chiltern Railways) was actually signed before the policy changed again.

In the meantime, it was already clear that whilst those franchisees that relied on growth in revenue to meet their financial targets were achieving profits, those where farebox revenue was small relative to costs, and where therefore cost reduction was the key to success, were in difficulties (Table 3). This problem particularly impacted on regional TOCs and, even though regional passenger growth has been comparable with that achieved by long-distance and London and South East TOCs, the fact that passenger revenue makes up a smaller proportion of total revenue means that these TOCs are more reliant on cost savings in order to maintain profitability in the face of falling subsidies.

In particular two operators – MTL and PRISM – were by 2000 believed to be close to bankruptcy. The SRA was faced with a choice of either taking over operation itself pending refranchising or renegotiating the franchises. In both cases, a deal was negotiated whereby the operator was taken over by another operator (MTL by Arriva, PRISM by National Express (NE)), and a 'cost plus' contract negotiated for the loss making services until refranchising took place (strictly this was a contract under which the level of payment was negotiated annually on the basis of projected costs; the TOC therefore retained some cost risks). Renegotiation followed on other regional TOCs, without a change of control, either to renegotiate the terms of the original franchise to provide more subsidy (Central Trains and Scotrail) or to move other regional TOCs (First North Western) on to cost plus contracts pending refranchising in due course. All these renegotiations were associated with redrawing of the boundaries of adjacent companies to achieve what was seen as more appropriate groupings of services, and this also delayed refranchising until the boundary changes could be completed.

Table 3. **Rail Industry Profitability**

Operating Profit, 1998/9 (losses in brackets)

	£m	Percent of turnover
Inter City Operators	90.8	5.5
Network South East Operators	93.7	4.7
Regional Operators:	(6.2)	(0.4)
North West Trains	(5.1)	(2.1)
Wales and West	(12.6)	(9.6)
Cardiff Railways	(4.9)	(18.8)

Source: TAS Rail Monitor, 2000.

Of course, the problem faced by the regional TOCs was not inevitable and could have been averted at the franchise bidding stage by a more successful elimination of unrealistic bids. However, franchises that were let later in the process, which included many of the regional TOCs, tended to see more aggressive subsidy reduction profiles than for those let at the beginning of the process (see Kain, 1998). This observation has led to the conclusion that many of the later bids were over-optimistic; and, to the further concern that the winning bidders may have intentionally bid strategically, with the aim of re-negotiating the agreements at a later date. In the section "An Assessment", we consider this point in further detail and ask, if this was the case, whether it turned out to be a profitable strategy for the TOCs concerned.

Two other franchises were the subject of early replacement; the two London commuter area franchises won by Connex. In the case of South Central, it was agreed that Connex would surrender the franchise early in order to get the opportunity of bidding for a longer franchise which was won by Go Via. In practice, before final negotiations were concluded franchising policy had changed again (see below) and only a 7 year contract was agreed. Whilst this process was going on, Go Via ran the services under a cost plus contract. After this, Connex also lost its other franchise, South East Trains. Connex having once negotiated a higher subsidy, and then gone back for more, the Strategic Rail Authority terminated its franchise and took its operation in house pending refranchising on completion of the Channel Tunnel Rail Link, when the two would be franchised together.

The Collapse of Railtrack

In October 2000, a fatal accident at Hatfield was attributed to the state of the track. Following this, severe speed restrictions were put in place across the network, and track renewals greatly accelerated. The effect of this was a major increase in costs, leading to a big increase in the level of government support for the industry. Support more than doubled between 2000/01 and 2002/03 mainly because of the introduction of substantial direct grants from the Strategic Rail Authority to Network Rail, and continued rising (although it should be noted that the decision to introduce direct grants to Railtrack was taken during the 2000 Periodic Review, prior to the Hatfield accident). At the same time, Railtrack was in great trouble with its biggest project the West Coast Main Line upgrading, the cost of which had more than quadrupled whilst it was running many years late. It also had to pay substantial compensation to TOCs for poor performance.

The result of all this was the placing of Railtrack in administration and its replacement by a ‘not-for-profit’ company, Network Rail. Network Rail is legally a company limited by guarantee. It has no shareholders, but rather ‘members’, who are said to take the place of shareholders in terms of powers such as removing the Board of Directors but have no financial stake in the company. These members are of three types – representatives of the rail industry (including the government), representatives of other stakeholder organisations (such as the Rail Passenger Council and Transport 2000) and individuals.

Network Rail finances itself by means of loans, and ultimately these loans have been underwritten by the government. The government also provides Network Rail with substantial direct funding for its operations as well as contributing indirectly by subsidies to Train Operating Companies. Thus whilst the government insists that Network Rail is a private company, it seems more appropriate to regard Network Rail as an experiment in a new form of public ownership of the infrastructure.

The big problems that emerged after the Hatfield accident in 2000 mostly concerned the infrastructure manager. To the extent the Train Operating Companies were compensated for delays and unreliability, their finances should not have been affected. However, there was also a problem

concerning some of the train operators. This particularly affected the two Virgin franchises, whose revenue projections were always ambitious but in the light of the failure of Railtrack to provide infrastructure for the speed and reliability of services planned became clearly impossible. In the case of Cross Country, an ambitious new timetable had to be cut back to improve reliability, and failed to restore a seriously loss making operation to profitability. West Coast Trains was due to move from receipt of subsidy to payment of a premium, upon completion of the West Coast upgrade, but this was both scaled down and running late. Therefore these two inter city franchises followed the regional ones in being placed on a cost plus contract basis pending either renegotiation or refranchising.

Thus a situation was reached where a substantial proportion of franchises were either re-negotiated with higher subsidy, or subject to annual negotiation on a cost plus basis, again with higher subsidy (Table 4). It should be stressed however that this situation came about and persisted for as long as it did in times of exceptional uncertainty, where refranchising had been temporarily halted because post Hatfield the money was simply not available for the sort of long run high investment franchises that had been foreseen in the early days of the SRA, and where there were other delays due to redrawing the franchise map. It was never the intention in the majority of cases to renegotiate long term franchises without refranchising and indeed many of the TOCs that were for a period on cost plus or renegotiated franchises have now been refranchised. Whether or not this is seen as a reasonable short run expedient in the circumstances, there must be concern that this reduced pressure on costs, and we return to this question again in the section "An Assessment".

Table 4. **TOCs Subject to Re-negotiated Franchise Agreements or Cost-Plus Contracts**

Cardiff Railways	Sept 2000 – Dec 2003 (cost-plus contract)
Central Trains	2001-2004 (re-negotiated)
South Central	2001 – 2003 (cost-plus contract)
South Eastern	2002 – 2003 (re-negotiated)
Virgin Cross country	From 2002 (cost-plus contract)
C2C	2001-2011 (re-negotiated)
Merseyrail	2001 – 2003 (cost-plus contract)
Northern Spirit	2001 – 2004 (cost-plus contract)
North Western	2001 – 2004 (cost-plus contract)
Scotrail	2001 – 2004 (re-negotiated)
WAGN	From 2001 (cost-plus contract)
Wales & West	From 2001 (cost-plus contract)
Virgin West Coast	From 2002 (cost-plus contract)

Source: Author's compilation based on SRA annual reports and TAS rail monitors.

The Current Position on Franchising

After a period following the problems caused by the Hatfield accident, when refranchising was halted and short extensions to existing franchises negotiated, the SRA's policy under new chairman Richard Bowker saw a return to 7 years as the typical franchise period, with extensions of up to 3 years possible if justified by performance. Where new rolling stock was required SRA generally used its powers to underwrite a longer lease. Funding for the major upgrades envisaged in the 10 year plan was no longer available since it was needed for maintaining and renewing the existing system, and only one SPV – as part of a 20 year franchise for the Chiltern line was ever concluded. One other long run franchise, for 25 years was concluded for Merseyrail, but responsibility for that had been devolved to the Passenger Transport Executive.

The aim of the new policy was to restore confidence in the industry, and in the franchising model, after a period of turmoil. Efforts were therefore made to simplify the model through much more tightly defined franchise agreements, specifying in much more detail the services to be provided (it being considered that under the previous more flexible arrangements additional train kilometres had often been introduced which were damaging overall in terms of their impact on other services and on reliability) and lay down much stricter conditions regarding a whole range of quality of service indicators, and share revenue risk – previously this was borne entirely by the franchisee.

The current situation in terms of franchises is shown in Table 5. After some initial reductions in the early years, subsidies to train operators are again rising and are now considerably higher than envisaged at privatisation; indeed they are almost back to the level at the start of the process. The rise in subsidies is driven predominantly by a sharp rise in train operator costs (including the cost of leasing rolling stock), as will be discussed in the next section. It should be noted that the 2000 Periodic Review of Railtrack's finances led to a fall in rail access charges of about £200m, in 2001/02, which means that subsidy payments to TOCs were reduced by the same amount in that year. The comparison between actual and projected subsidy levels is therefore even less favourable than that shown in Table 5[1]. Given the proposed increase in track access charges following the 2003 review of Network Rail's cost levels, further subsidy rises should be foreseen in the future (although the way in which these are being phased over time means that access charges for TOCs, and therefore subsidies to the TOC sector, actually fell substantially in 2004/05 but will rise sharply in future years).

Throughout the period since privatisation substantial concentration has taken place in the TOC sector, with National Express holding no fewer than 11 of the franchises. However, almost all franchise invitations have been followed by strong competition between several players and only on one occasion (that of Central Trains, where only two bidders prequalified) has a franchise contest been halted because of lack of adequate competition.

The complete history of each franchise is summarised in the Appendix. One curious thing is apparent. It was expected that a typical problem with franchising would occur – that the incumbent would start with a major advantage in terms of knowledge of costs and markets. In fact of the twelve franchises to be refranchised so far, only three have gone to the main incumbent (although the alterations to franchise boundaries mean that in many cases a transfer of some services was inevitable). Yet many of the incumbents then went on to win new franchises in different parts of the country. Moreover, whilst some companies have left the industry, new entrants have arrived, including SERCO and Nedrail, with other new competitors not so far successful including other railways such as DSB and freight operator English Welsh and Scottish Railway (EWS). It is clear that competition for franchises remains healthy in terms of the number of competitors, although the recent cost and subsidy increases might lead us to conclude that all is not well with the passenger rail franchising model in Britain.

Table 5. **Subsidies to Passenger Train Operators (including performance incentive payments)**

(£m, 2003/04 prices)

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Anglia	41	30	26	20	-2	-1	4
Cardiff/Wales and Borders	24	19	20	18	57	92	123
Central trains	198	180	159	140	130	97	140
Chiltern	16	14	11	10	14	19	24
Connex South Central	87	65	55	44	14	-2	78
Connex South Eastern	131	96	70	47	42	38	128
Cross Country	132	113	95	85	125	211	246
Gatwick Express	-7	-9	-11	-12	-7	-5	-13
Great Eastern	33	16	10	-5	-26	-41	-33
GNER	63	42	19	7	-30	-28	-25
Great Western	67	59	53	45	29	9	30
Island Line	2	2	2	2	2	3	3
LTS/C2C	32	29	27	26	15	21	20
Merseyrail	75	67	60	57	82	65	21
Midland Mainline	9	3	1	0	-7	-15	-4
North Western	210	191	176	156	182	180	190
Northern Spirit	250	221	197	180	212	201	240
Scotrail	281	264	246	216	174	189	266
Silverlink	56	40	33	27	45	47	52
South West	71	67	63	51	19	25	106
Thameslink	3	-8	-19	-29	-40	-55	-44
Thames Trains	38	26	17	12	-4	-14	-9
WAGN	62	40	29	9	16	-8	8
Wales and West/Wessex	84	71	68	55	73	52	76
West Coast	87	78	64	62	201	194	332
Transpennine Express	0	0	0	0	0	0	30
Total	**2 046**	**1 717**	**1 470**	**1 223**	**1 315**	**1 273**	**1 990**
Projected subsidy from initial bids	**1 994**	**1 758**	**1 499**	**1 323**	**1 192**	**984**	

Note: Projected subsidy levels exclude performance bonuses and penalties and any changes to track access resulting from the 2000 Periodic Review.

Source: SRA Annual Reports and Statistical Yearbooks.

An Assessment

It will be seen therefore that the process of franchising in Britain has been a mixed experience. Whilst initially it worked as foreseen in reducing costs and increasing in traffic, the latter was at least temporarily slowed down by the aftermath of the Hatfield accident, whilst the reduction in costs has given way to strong growth in costs.

Table 6 shows the extent of the cost shock experienced by Britain's rail industry since the Hatfield accident. Whilst the infrastructure cost explosion is well known, Table 6 shows that the annual cash cost of passenger train operations, including rolling stock capital investment, has risen very sharply as well over the same period. This increase cannot be explained simply by new services, since costs per passenger train-km have increased by nearly half in real terms since 1999-2000, the last financial year before Hatfield, whilst passenger kilometres grew more slowly than train kilometres over this period.

Nor can the increase be explained simply in terms of the high levels of investment in rolling stock that we have seen in recent years. Table 7 focuses on operating costs only and, in addition, attempts to identify the element of TOC operating costs that are internal to the operators – that is, TOC costs, excluding payments for access to the infrastructure and train lease payments (paid by TOCs to the rolling stock companies). Table 7 shows that the TOC's own operating costs have also increased by nearly 50% since Hatfield. Furthermore, whilst increased staff numbers and higher wage rates explains part of the growth, the majority of it remains unexplained, within the "other costs" category.

The difference between the experience of franchising in rail and bus de-regulation in Britain, in terms of the impact on staff rates of pay, is striking, with wage rates falling sharply in the bus industry, but rising sharply in the passenger rail sector. This difference may be explained in part by the fact that in Britain when a rail service changes operator, the new operator takes over the existing company including its staff, whereas in the bus industry, where a new operator would come in with its own staff, the threat to existing staff is much greater. It has also been suggested that pressure on wages is reduced by the stronger commitment by government to the maintenance of rail services compared with bus, and also by the relative ease with which new bus drivers can be trained, relative to train drivers (see Glaister, 2004). Glaister (2004) argues that over-optimism about the ability to cut staff wages and costs amongst bus companies bidding for the passenger rail franchises was one of the reasons for the financial problems experienced by many of the TOCs post-privatisation.

Possible explanations for the rise in other costs might include rising fuel costs over this period (though data is not available for the majority of TOCs, power costs per train-km for Virgin Cross Country services increased by 55% between 1999/00 and 2003/04, driven by sharply rising diesel prices) and increased commission on ticket sales paid to other TOCs as passenger kilometres have increased.

It should also be noted that in attempting to isolate TOC own non-staff costs from payments to third parties for rolling stock leasing and maintenance and access to the infrastructure, we have used the corresponding income data from the company accounts of the three ROSCOs as well as Network Rail (and formerly Railtrack)[2]. It is possible that the income reported in those companies' accounts differs in detail from that reported in the TOC accounts (although our discussions with the industry do not indicate any reason to expect major discrepancies), which means that we may have underestimated third party payments, therefore resulting in an overestimate of TOC own non-staff costs (of course, it is also possible that any error might go the other way, therefore implying that we have underestimated TOC own costs). Furthermore, the recent trend towards TOCs taking direct responsibility for rolling stock maintenance, or paying manufacturers direct for heavy maintenance (as in the case of the Virgin TOCs) might distort the comparison for similar reasons.

Table 6. **Total Rail Industry Cash Costs: 1999-1991 to 2003-2004**

	Pre-privatisation				Post-privatisation period							
					Pre-Hatfield				Post-Hatfield period			
Costs (2003/01 prices)	**1992/93**	**1993/94**	**1994/95**	**1995/96**	**1996/97**	**1997/98**	**1998/99**	**1999/00**	**2000/01**	**2001/02**	**2002/03**	**2003/04**
Infrastructure												
Maintenance					864	804	775	723	761	995	1 214	1 245
Renewals and enhancements					1 201	1 430	1 614	1 837	2 598	2 969	3 246	3 974
Other operating costs					779	764	785	788	813	1 157	1 233	1 309
					2 845	**2 998**	**3 174**	**3 348**	**4 172**	**5 121**	**5 693**	**1 309**
Passenger train operations (including rolling stock costs). Note 1					2 556	2 514	2 840	2 744	3 391	3 925	4 151	4 357
Freight costs					452	552	543	491	510	620	564	579
Total industry cash costs	**6 279**	**5 493**	**5 473**	**5 691**	**5 852**	**6 064**	**6 557**	**6 582**	**8 073**	**9 665**	**10 408**	**11 464**
Unit cost measures												
Total cash cost per train-km	16.0	14.1	14.3	14.3	14.5	14.8	14.9	14.5	17.5	20.4	21.7	23.8
Infrastructure cash cost per train-km					7.0	7.3	7.2	7.4	9.0	10.8	11.9	13.5
Passenger train operating costs per pass. train-km					6.8	6.7	7.0	6.6	7.9	9.0	9.4	9.8

Note 1: Includes operating and capital expenditure costs.

Sources: See Smith (2006).

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Table 7. **Drivers of TOC Cost Rises**

Drivers of TOC Cost Rises (2003/04 prices)	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	Post-HF % growth
TOC own costs	2 149	2 076	2 090	2 099	2 473	2 681	2 981	3 097	47.5%
• Of which, staff costs	1 063	1 021	1 030	1 037	1 086	1 180	1 297	1 376	32.7%
• Of which, other costs	1 086	1 055	1 060	1 062	1 387	1 501	1 684	1 720	62.0%
Average salary	24 352	25 333	26 254	26 556	27 008	27 793	28 837	30 426	14.6%
Headcount	43 638	40 290	39 231	39 049	40 196	42 470	44 968	45 236	15.8%
Passenger train km–million	374	376	405	418	427	436	443	446	6.6%
Passenger km-billion	32.1	34.7	36.3	38.5	38.2	39.1	39.7	40.9	6.2%

Source: Own analysis based on TOC Company Accounts (relevant years) and National Rail Trends (relevant years).

Of course, whatever the true picture of TOC non-staff costs, the increase in staff costs is very clear, and there remains the question as to whether the staff costs rise is reasonable. There is anecdotal evidence that part of the increase in staff costs represents the impact of neighbouring TOCs seeking to recruit trained staff (especially drivers) from each other, in which case it is possible that the franchising process has actually driven costs up in this respect. It is also argued that new rolling stock (with improvements such as sliding doors, air conditioning, retention toilets and on-board information systems) will have raised maintenance costs, and also led to training costs during the period of introduction; the initial poor reliability of much of the new stock will also have raised costs. In addition, TOCs have invested in revenue protection and improved on board and at station services, in an attempt to improve profitability rather than simply to hold down costs. Tighter specification of quality, in terms of factors such as cleaning and provision of information may also have raised costs. Further research is clearly required in this key area, in order to obtain a totally reliable picture of TOC own costs, separate from payments to third parties, and to provide a clearer explanation of the reasons for the rises in costs We are continuing our research on these issues.

As noted earlier, the SRA's decision to re-negotiate contracts, and put TOCs onto temporary cost-plus contracts might have been expected to weaken incentives for cost control amongst the affected TOCs. Indeed, one of the classic problems of franchising is that the initial bids may tend to be too optimistic, leading to a subsequent re-negotiation with the franchising authority. Over-optimistic bids might be the result of poor information, leading to the "winner's curse", or of strategic bidding, where operators bid strategically with a view to re-negotiating the contract at a later date.

Table 8 shows the profitability (measured as a percentage of total revenue) of the TOC sector, and each individual TOC, over the period since privatisation. A number of points are worth noting. First of all, the profitability of the TOC sector as a whole improved in the first few years after privatisation, took a fall in 2000/01, the year of the Hatfield accident, and has since rebounded sharply, far exceeding the levels seen before the Hatfield accident. So whilst passenger have endured poor punctuality performance during the post-Hatfield period, costs have risen, and the government has increased subsidy levels substantially, the train operators have enjoyed rising profitability. There is a question as to what the appropriate rate of profit should be for a franchised passenger rail operating company given the unusual nature of the business, with little investment directly undertaken by the TOC itself. But it appears that the increase in TOC profits in total comes mainly as a result of eliminating losses in loss making TOCs and bringing them up to something closer to the industry

norm, rather than increasing profits in profitable ones. In other words, the process did succeed in overcoming the financial problems of certain TOCs referred to earlier.

Table 8. **TOC Profitability as a Percentage of Turnover**

TOCs on Re-negotiated or Cost-Plus Contracts (excluding Virgin TOCs)	**AFI***	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**	**03/04**
Cardiffmales and Borders	20.0%	-6.9%	-18.8%	-21.9%	-12.6%	4.3%	7.3%	7.3%
Central trains	13.0%	0.7%	0.6%	-2.3%	-8.4%	-14.3%	-3.1%	-3.1%
Connex South Central	5.0%	-1.3%	0.6%	2.9%	2.5%	-3.0%	2.7%	6.6%
Connex South Eastern	7.0%	1.5%	0.6%	1.4%	1.1%	-0.2%	-2.0%	-4.1%
C2C	4.0%	7.4%	8.6%	18.5%	-5.8%	-1.3%	-2.9%	0.6%
Merseyrail	17.0%	5.7%	3.2%	-0.7%	-4.1%	2.3%	8.8%	9.3%
North Western	19.0%	-0.3%	-4.1%	-6.0%	-27.3%	4.1%	1.4%	1.4%
Northern Spirit	16.0%	2.3%	0.5%	-6.4%	-8.5%	3.3%	5.9%	6.9%
Scotrail	10.0%	-0.7%	0.4%	0.4%	-3.2%	-12.8%	-2.5%	-3.2%
WAGN	7.0%	5.7%	4.9%	3.9%	0.1%	4.4%	7.3%	6.8%
Wales and West/Wessex	14.0%	-3.2%	-9.9%	-9.7%	-10.1%	2.1%	6.9%	6.2%
Average	**12.0%**	**-1.2%**	**-1.2%**	**-1.8%**	**-6.9%**	**-1.0%**	**2.7%**	**3.1%**
Virgin TOCs	**AFI***	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**	**03/04**
Cross Country	11.0%	0.7%	-3.3%	-8.0%	-16.1%	-11.2%	-9.9%	8.4%
West Coast	7.0%	2.8%	9.3%	11.8%	9.2%	12.2%	10.2%	3.8%
Average	*9.0%*	*1.7%*	*3.0%*	*1.9%*	*-3.4%*	*0.5%*	*0.2%*	*6.1%*
Other TOCs	**AFI***	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**	**03/04**
Anglia	13.0%	3.3%	2.2%	-1.8%	-0.9%	-1.7%	-0.2%	1.9%
Great Western	2.0%	8.6%	7.6%	11.5%	11.6%	8.5%	7.4%	7.2%
GNER	4.0%	3.4%	3.0%	3.2%	6.9%	10.2%	14.1%	11.1%
Midland Mainline	4.0%	4.2%	3.7%	2.4%	7.7%	6.8%	8.0%	7.6%
Chiltern	8.0%	4.0%	2.5%	2.6%	0.7%	5.6%	7.9%	8.1%
Great Eastern	5.0%	4.3%	6.6%	7.1%	19.3%	14.9%	12.9%	8.3%
Silverlink 3	9.0%'	0.8%	2.8%	2.9%	2.8%	1.8%	0.4%	2.5%
Thameslink	8.0%	6.2%	7.6%	9.2%	11.5%	11.1%	9.1%	8.9%
Thames Trains	10.0%	5.3%	4.6%	3.4%	3.5%	1.3%	-1.2%	-1.2%
Island Line	7.0%	-21.1%	6.4%	5.1%	1.4%	8.0%	9.6%	9.6%
Gatwick Express	4.0%	10.0%	10.6%	10.6%	13.7%	14.3%	5.4%	-12.1%
Average excluding Gatwick Express**	**7.0%**	**1.9%**	**4.7%**	**4.6%**	**6.4%**	**6.6%**	**6.8%**	**6.4%**
All TOC profitability (weighted average)		**2.5%**	**2.8%**	**2.9%**	**1.1%**	**2.8%**	**4.4%**	**4.6%1**

* Average annual improvement required to match subsidy reductions over the period to 2002/03.
Source: Kain (1998).

** The losses in 2003/04 distort the comparison so are excluded.

Since the circumstances surrounding the Virgin TOCs being placed onto cost-plus contracts are somewhat different from those of the other TOCs, the former have been separately identified in the table. It can be clearly seen that the TOCs which have run into trouble are those that were based on the most aggressive subsidy profiles, as measured by the implied Annual Financial Improvement (AFI) required to match the proposed subsidy reductions.

However, if strategic bidding is the explanation for poor performance and re-negotiation in respect of the "problem" TOCs, it does not appear that this was a particularly profitable strategy. The problem TOCs made substantial losses for four of the years after privatisation and, even after re-negotiation, profitability levels remain below those of the rest of the TOC sector (though the averages do hide substantial variations by TOC). The Virgin story is very complex, although we note that by the end of the period Virgin does appear to have done well relative to the sector as a whole, and its profitability is broadly in line with other long distance operators.

Turning to the question of whether the SRA's decision to re-negotiate contracts weakened incentives for cost control, Table 9 below compares the unit cost (per train kilometre) growth between those TOCs on cost-plus or renegotiated contracts and the remaining TOCs. The analysis is based on TOC costs including rolling stock costs, since it was not possible satisfactorily to separately identify payments for rolling stock in the TOC accounts. Likewise, not all TOCs report payments for track access in their accounts fully (or at all in some cases). This problem was addressed by using a detailed dataset provided by Network Rail which shows Railtrack/Network Rail passenger access charge revenue by TOC for the period 1998/99 to 2003/04. Owing to the particular circumstances surrounding the re-negotiation of the Virgin TOC franchises, these are shown separately.

The data in Table 9 shows that those TOCs on cost-plus or re-negotiated contracts (with the exception of the Virgin TOCs) had a much higher growth in costs than the other operators over this period. This finding provides support for the hypothesis that the SRA's decision to re-negotiate contracts, and put TOCs onto cost-plus contracts**,** weakened incentives for cost control amongst the affected TOCs as compared with the rest of the sector. An alternative hypothesis is that it is those TOCs with the largest cost increases which ran into trouble, although the cost increases reported here occurred mainly after the companies had got into trouble and entered negotiations **regarding** their franchise agreements.

Table 9. **TOC cost growth by TOC-type**

TOC-type	**Growth in TOC costs per train-km (excluding access charge payments, but including payments to ROSCOs): 1999/00 to 2003/04**
TOCs on cost-plus or re-negotiated contracts	33%
Virgin TOCs	5%
Balance of TOC sector	17%

Source: Own analysis based on TOC Company Accounts (relevant years), access charge data provided by Network Rail, and National Rail Trends (relevant years).

It should be noted that in the previous version of this paper – presented at the January 2006 workshop – we found no evidence to support the claim that TOCs on cost-plus or re–negotiated contracts had seen higher cost growth. The difference is that the previous analysis was based on more limited data and a smaller sample size of "problem" companies. Further analysis is required to understand the differences between the two analyses more fully, particularly as it may be sensitive to whether one or two TOCs are included in the "problem" TOC companies. However, we are more confident in the most recent findings as they are based on a larger sample of problem TOCs.

On the demand side it is clear that passenger demand has risen very sharply after privatisation. What is less clear is whether this is due to the introduction of private sector skills, combined with the

strong incentives provided by the franchise contracts, or due to external factors. Figures 2 to 4 show the growth in demand in its historical context. The aim is to compare the upturn in demand in 1990s with the boom in the 1980s. If we take the trough of demand in 1994/95 as the starting point for privatisation, the post-privatisation growth does look unusually strong, indicating a major privatisation effect on demand.

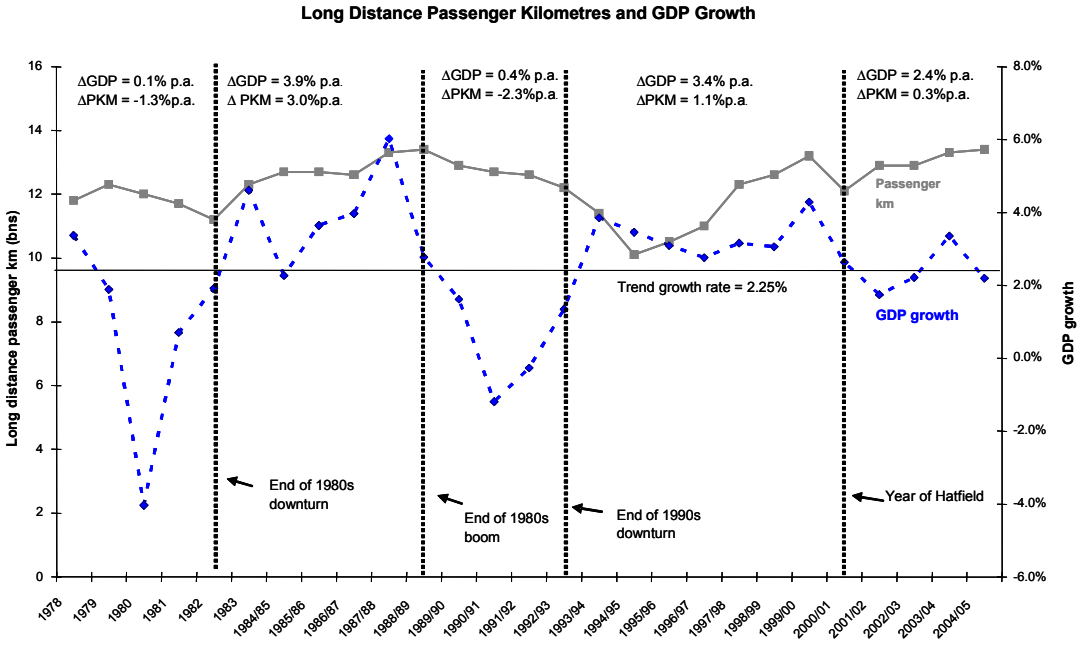
However, if we use the economic cycle to define our start and end points, the upturn in the economy began two years earlier in 1992-1993, and the growth in demand from that point looks less impressive and more closely in line with the 1980s boom, except perhaps for London and the South East. This result comes, of course, because demand continued to fall in the early 1990s even after the economy had started to recover, which itself could be attributed to privatisation (in the sense that managers were focused on restructuring, rather than on running the business).

Nevertheless, as already noted, there are a number of factors, other than GDP, that need to be taken into account in analysing passenger rail demand, and we can therefore not rely on the simple analysis shown in Figures 2 to 4. Table 10 shows the results of some recent work carried out by Professor Mark Wardman at the Institute for Transport Studies aimed at disentangling these effects. For a large sample of flows (but excluding season tickets), the table shows the level of traffic growth that would have been predicted had rail fares and services remained unchanged for the period, and the degree to which this may be explained by population, GDP, car ownership and car journey time and costs. A distinct change in trend post privatisation (post-1995) is found, accounting for some 20% of the growth for London and South East, although somewhat lower for non-London flows, but other factors dominate, and in particular GDP effects. It is this 20% which may be due to improved marketing or other unmeasured factors following privatisation. It should be noted that the study only goes up to 1998, so it represents very much the first period of the new structure, with the last of the franchises only being let in 1997. Unpublished work on the post Hatfield period, 2002-2004, identifies no ongoing impact on demand, with the trend being fully explained by other explanatory variables.

Finally, having considered trends in costs and demand, we might also ask what has happened to quality over this period. The big picture is that prior to Hatfield punctuality was improving, though largely due to the efforts of Railtrack, rather than the operators (see Figure 5), but that post-Hatfield punctuality deteriorated very sharply. The latter deterioration was mainly due to problems on the infrastructure side, but delays attributed to TOCs also increased substantially after Hatfield, and are recovering only slowly.

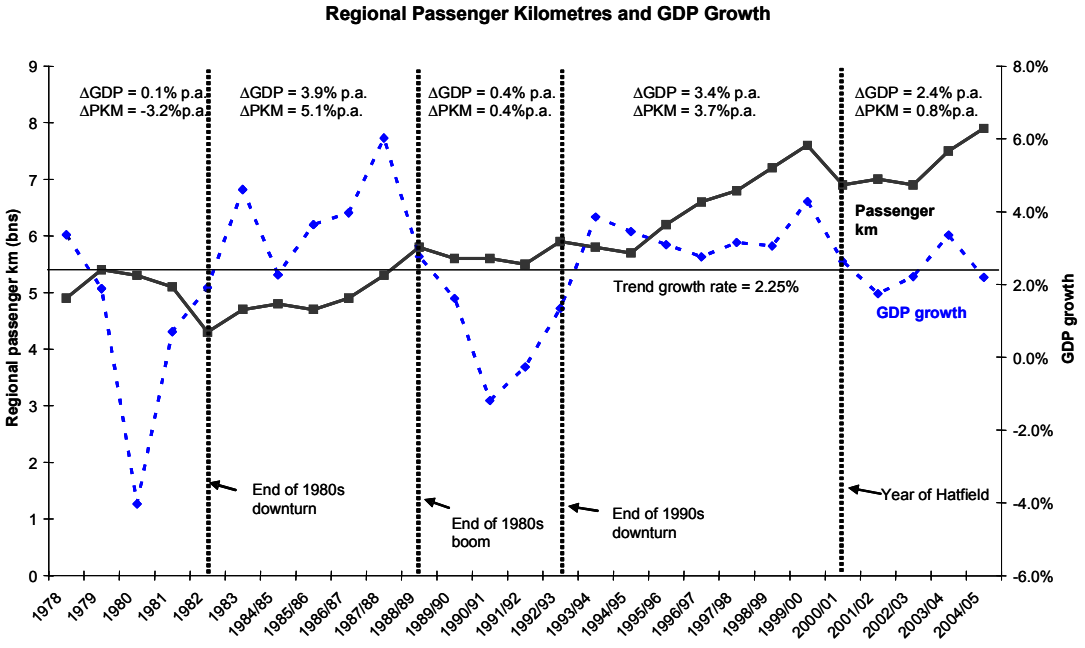
However, there are other measures of quality that are important. Passengers presumably benefit from newer rolling stock for a variety of reasons (for example, improved ambience and the introduction of air conditioning on new trains). The average age of rolling stock has fallen sharply from 20.7 years in 2000 to 14.7 in 2005, even though the benefits of this change in terms of punctuality are not yet apparent. At the same time, rail complaints are falling, and customer satisfaction levels are rising (in terms of the overall opinion of journey); although customer satisfaction in terms of the key measure of value for money is falling. Meanwhile, safety has continued to improve and, according to Evans (2004) at a faster rate than before privatisation. On the negative side, overcrowding on services continues to get worse. Overall then, there are signs of improved quality in a number of areas in recent years; there is a question as to whether the benefits of these quality improvements are as high as the cost increases with which they are associated, but many of the forces driving them were independent of the franchising process.

Figure 2. **Long Distance Passenger Demand and GDP Growth 1978 to 2004/05**



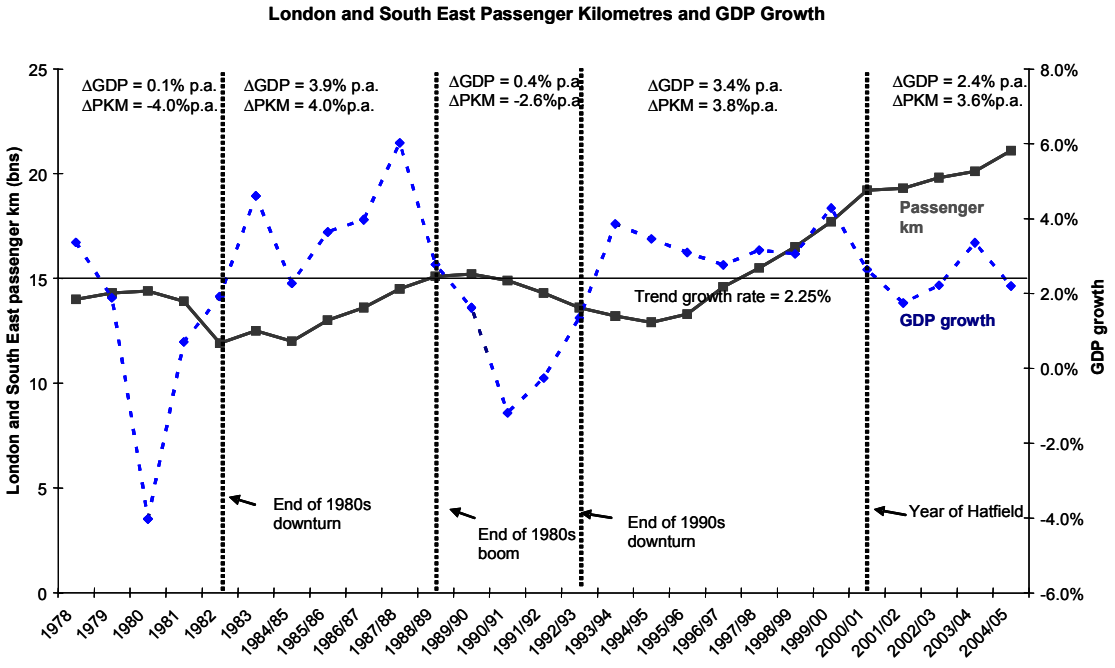
Source: Own analysis based on passenger volumes data from National Rail Trends (relevant years) and GDP data from the Office of National Statistics.

Figure 3. **Regional Passenger Demand and GDP Growth 1978 to 2004/05**



Source: Own analysis based on passenger volumes data from National Rail Trends (relevant years) and GDP data from the Office of National Statistics.

Figure 4. **London and South East Passenger Demand and GDP Growth 1978 to 2004/05**



Source: Own analysis based on passenger volumes data from National Rail Trends (relevant years) and GDP data from the Office of National Statistics.

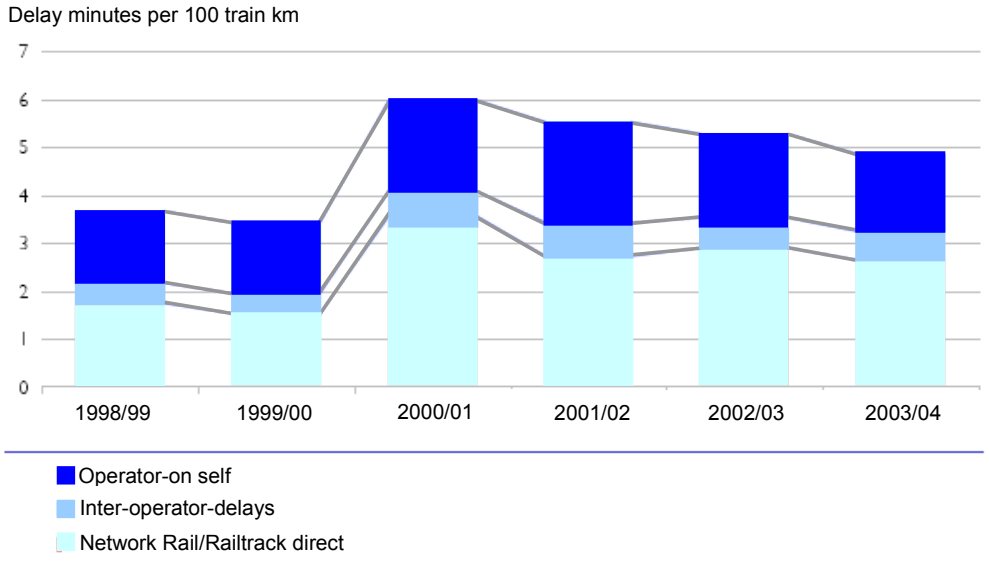
Table 10. **Rail Demand Growth 1990-1998: Separating the Impact of External Variables from the Post-Privatisation Trend**

	London	Non London	South East
External variables			
GDP	1.301 (1)	1.196 (1)	1.149 (1)
Car Time	1.043 (4)	1.031 (4)	1.067 (3)
Car fuel Cost	1.045 (3)	1.056 (2)	1.049 (5)
Population	1.038 (5)	1.022 (6)	1.055 (4)
Car Ownership	0.975 (6)	0.951 (3)	0.972 (6)
Product of the above	**1.435**	**1.266**	**1.319**
Post- privatisation trend	**1.119 (2)**	**1.033 (5)**	**1.092 (2)**
Total	**1.606**	**1.307**	**1.440**

Note: Figures denote the proportionate change in demand in the period attributable to this variable. Rankings of the magnitudes of each effect are given in parentheses. The overall growth is what it is estimated would have happened for the group of services concerned in the absence of specific rail management decisions, in terms of changes in services and fares.

Source: Wardman (2005).

Figure 5. **Delay Minutes on Britain's Rail Network**



Source: Network Rail 2004 Technical Plan, Section 10.

Conclusions

The events befalling the British rail network in recent years make for a confusing picture and therefore it is not easy to draw conclusions from the British experience. However, several points stand out.

Firstly, there has almost invariably been a high level of competition for franchises in Britain, with four or five bidders shortlisted out of a wider field. In many countries we understand that the number of bidders is often only one or two. We can only speculate on the reasons for this more favourable outcome in Britain, but the absence of a dominant incumbent, such as exists in many countries, and the fact that a winner takes over an existing company rather than having to put together staff and assets from scratch, are likely to be factors. The presence of a number of large privately owned bus companies who were interested in entering the rail market is another. It is interesting that, even though National Express has built up a fairly dominant position in the market, and at refranchising obviously there is an incumbent who would be expected to have better knowledge than other competitors, these factors seem to have done nothing to reduce competition, and most TOCs have changed hands at refranchising.

Secondly despite the temporary setback of the collapse of service quality after Hatfield, there has been an extremely healthy growth of traffic and revenue. The evidence that exists suggests that most of this growth has resulted from external factors, particularly the state of the economy but also trends in car journey times and costs. However, on the best evidence we have nearly 20% of the growth in the early years remains unexplained by such factors. Of course this does not prove that the faster growth had anything to do with franchising, but our guess is that a number of factors linked with franchising are at work here, more attention to preventing fares evasion and more sophisticated fares differentiation. It could be argued, however, that none of these factors are more than a continuation of developments under British Rail so it is possible that they would have happened anyway (although the counterfactual is hard to prove), and indeed it may be that the poorer performance in the early 1990s was partly due to the distractions of the privatisation process. Nevertheless, it should be noted that the

policy on fare regulation in the post-privatisation environment has also played a role in driving growth and, although this policy cannot be linked directly to franchising per se, real terms reductions in fares does represent a significant break from previous policy under British Rail.

Moreover there would clearly have been more substantial financial problems for the TOCs had there been an economic recession in this period. Thus the agreements in the latest franchise agreements to share revenue risk may be more sensible than the original approach of placing this entirely in the hands of the operator. Were revenue risk to be taken completely from the operator, then the franchising authority would need to completely take charge of pricing, whilst an alternative mechanism would be needed to incentivise TOCs to grow traffic and revenue. Whilst this may make sense for urban or regional services with simple fares structures, we do not think it would be an appropriate way of handling more commercially oriented services where sophisticated pricing structures aimed at yield management are needed.

Thirdly, franchising does not seem to have succeeded in driving down train operating company costs. In the early years of franchising there was a significant reduction in costs per train kilometre as service levels expanded, thus indicating substantial efficiency improvements; but more recently train operating company costs have grown substantially. This cost increase is after removing any effects of changes in track access charges and rolling stock leasing charges, although we understand that in some cases new leases have left more responsibility for train maintenance with the train operating company, so the comparison may not be totally valid. Other factors may have been extra maintenance costs associated higher specification and with poor reliability of new rolling stock and increased fuel prices, whilst it has been argued that the leasing of rolling stock from private companies has been a very expensive way of providing rolling stock (Shaoul, 2005). However a major increase in staffing levels as well as salaries has occurred. The staffing increase may be associated with more tight quality specifications, whilst there is anecdotal evidence that salaries may actually have been raised by competition between franchisees to recruit trained staff. Nevertheless, given the scale of the cost increases, this is an area which needs further investigation.

Finally there has been a substantial problem in dealing with franchisees who have been unable to achieve their projected financial performance. The franchise agreements permit franchisees to surrender their franchise early, although they will then forfeit some or all of their performance bond, or to call for a viability review, as a result of which they may be granted more subsidy. The franchising body in Britain has been reluctant to see a train operating company become bankrupt or simply surrender the franchise, because of the difficulty and cost of keeping services running in those circumstances (NAO, 2005). They have therefore generally preferred either to renegotiate the terms of the franchise agreement or to enter into a short term cost plus type contract pending refranchising. For a number of reasons, including the change in approach to franchising in the financial crisis post Hatfield and the wish to postpone refranchising until neighbouring franchises expired to permit changes in boundaries or new investments came on line, these cost plus arrangements have lasted longer than would be desirable. This indeed indicates another problem with franchising in that it does cause some difficulties in responding to changed circumstances or changes in government policy.

Furthermore, based on our analysis, the evidence suggests that TOCs which re-negotiated their contracts saw higher cost growth than other TOCs, thus providing support for the hypothesis that the SRA's decision to re-negotiate contracts, and put TOCs onto cost-plus contracts**,** weakened incentives for cost control amongst the affected TOCs as compared with the rest of the sector. An alternative hypothesis is that it is those TOCs with the largest cost increases which ran into trouble, although the cost increases reported here occurred mainly after the companies had got into trouble and entered negotiations of their franchise agreements. Nevertheless, given the heavy losses incurred by operators prior to re-negotiation, and the relatively modest returns that appeared afterwards, it does not appear

that bidders should conclude that they could make money by acting strategically to win franchises by unrealistic bids, although the reduction in downside risk will, other things being equal lead to higher bids presumably from all competitors.

What is clear from the British example is that there are many problems to be faced when franchising rail passenger services, and in Britain the benefits from this process appear to have been rather limited. Costs and subsidies have not fallen as expected and, although demand growth has been very strong, the majority of this growth can be attributed to factors other than the franchising method. However, at present we consider that there is insufficient evidence to draw firm conclusions about why the British example failed to deliver the expected benefits, particularly on the cost side; and that it is therefore too early to draw wider policy lessons for other contexts. The critical issue here is to be able to explain the V-shaped TOC cost profile over the period since privatisation. This paper has gone part of the way, but our understanding of cost trends remains incomplete.

One possible explanation is that the TOCs inherited an already efficient operation following the substantial productivity gains achieved by British Rail as a result of sectorisation in the 1980s. However the fact that costs started to rise again in the early 1990s, and that significant savings in cost per train kilometre were made in the early post privatisation period suggests at least that this is not a total explanation. A second hypothesis is that the cost increases were caused by the short term placing of many Train Operating Companies on negotiated contracts in the period around 2001, which weakened incentives for efficiency. Whilst we have provided some evidence in support of this, further econometric work is necessary to improve the robustness of this finding. The third hypothesis is that the increase was caused by factors which had nothing to do with the franchising process, truly exogenous factors such as fuel prices, and other aspects of policy such as health and safety legislation, disability discrimination legislation and a general requirement for higher standards. It seems that many of these policy decisions were taken without a clear understanding of the cost implications and the final result may be a smaller network with fewer services.

It is hard to be definitive on which of these three effects dominates, but we do have evidence which suggests that the way in which problem franchises were managed may have contributed substantially to the rise in costs after 1999/00. Our overall conclusion then is that passenger rail franchising in Britain may be regarded as a moderate success on the demand side, but that it has failed to achieve its objectives on the cost side. However, it should be noted that the rise in train operating costs in recent years has occurred at a time of considerable disruption, during which many other factors unrelated to franchising policy were changing at the same time. It remains to be seen what the re-franchising process will achieve in terms of cost reduction in a more stable environment.

NOTES

1. Although the impact of lower access charges on TOC subsidies reduces in 2002/03 and 2003/04 as access charges increased by 5% in real terms in both of those years compared with their 2001/02 levels.
2. Since TOCs do not always report access charge and rolling stock payments in their company accounts.

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APPENDIX

Original franchises	What happened and when	New name
1. Anglia	Originally won by GB Railways 31 March 2004: franchise expired Transferred into new Great Anglia Franchise together with Great Eastern and most of WAGN NEG won the franchise for the new Great Anglia Franchise	One
2. Cardiff	Originally won by Prism September 2000: NEG took over from Prism (Interim Franchise agreement reached) Refranchising delayed to incorporate in new Wales and Borders franchise 14th October 2001: franchise expanded to include parts of Wales and West and Central Trains Name changed to Wales and Borders from that date 2001: Management cost plus contract until franchise agreement completed September 2003: part of North Western transferred in 8 December 2003 became Arriva Trains Wales after they won the franchise bid.. New franchise for 15 years	Arriva Trains Wales (previously Wales and Borders)
3. Central Trains	14 October 2001: part transferred to Wales and Borders 31 December 2001: during this financial year franchise renegotiated. NEG paid £23m in return for higher subsidies of £44.6m over the rest of the franchise Attempt at refranchising abandoned because of lack of competition 1 April 2004: two year franchise extension signed with NEG Intention now is to split it between neighbouring TOCs	Central Trains
4. Chiltern	Owned by M40 Trains (John Laing) March 2002: won refranchising competition – new 20 year franchise signed with SRA	Chiltern
5. South Central	Originally Connex 1999 agreement for refranchising to start early for a 20 year contract 26 August 2001: GOVIA took over from Connex having won competition for a 20 year franchise, but then renegotiated to 7 years. Cost plus contract pending completion of negotiations May 2003: new franchise signed with GOVIA (until 2009) 27 May 2004: name changed to New Southern Railway	New Southern Railway

6. Southern Eastern	Originally Connex 10 December 2002: company signed agreement with SRA which would give an extra £58.9m in the year to December 2003 but shorten the franchise November 2003: SRA terminated contract when Connex asked for another increase in subsidy South Eastern Trains (state owned) took over as a temporary measure until CTRL was open when the two would be franchised together Refranchising won by Go Via	South Eastern Trains
7. Cross Country	Originally and still is Virgin Cross Country July 2002: franchise renegotiated to provide increased subsidy and to establish the basis for renegotiations regarding uncertainty over the WCRM. Revenue sharing agreements also entered into Annual negotiation of subsidy Re-franchising currently in progress; will take over many routes from Central	Virgin Cross Country
8. Gatwick Express	Originally and still is owned by NEG Franchise not due to expire until 2011	Gatwick Express
9. Great Eastern	Originally First Great Eastern. 31 March 2004: transferred to Greater Anglia Franchise along with Anglia and most of WAGN; National Express won the franchise competition	One
10. GNER	Following abandonment of refranchising on a 20 year contract, in 2003 the franchise was extended by two years to 2005 1 May 2005: GNER won refranchising competition. New franchise agreement (7 year deal+3 years subject to performance) signed with incumbent	GNER
11. Great Western	Originally First Great Western Franchise due to expire 2006 Refranchising competition won by First.	Great Western
12. Island Line	Original franchise was 5 years 2001: extended to by 2 years to 2003 10 December 2003: Stagecoach signed a 3 year deal to February 2007 Extended to be coterminous with South West franchise (also Stagecoach)	Island Line
13. c2c	Originally franchise was to run until 2011 (subject to delivery) One of the Prism TOCs 2001: December 2001 accounts, record a franchise amendment payment of £3.5m paid to SRA in return for a revised franchise agreement involving more subsidy. NEG took over from that point	c2c

14. Merseyrail	MTL won original franchise but in financial difficulties Arriva took over pending refranchising. Became Arriva Trains Merseyside 2001: put on to cost plus contract 20 July 2003: new franchise agreement signed with Serco NedRailways (expires 2028) following refranchising No longer under the control of the SRA (looked after by PTE)	Merseyrail
15. Midland Mainline	National Express won original franchise Original franchise to run until 2006 (subject to delivery) August 2000: deal agreed to extend franchise by two years to 2008 The franchise premia that would have been paid between 2001 and 2006 now to be invested directly in Midland Mainline And NEG agreed to accelerate investment in the franchise	Midland Mainline
16. North Western	First won original franchise March 2001: company re-negotiated deal with SRA Paid franchise amendment costs of £38m Put onto cost plus contract September 2003: part transferred to Wales and Borders February 2004: part transferred to Transpennine Express. Balance to Northern Franchise Refranchised TPe won by First; Northern by Serco/Nedrail	None. Doesn't exist post February 2004
17. Northern Spirit	MTL won original franchise MTL in financial difficulties; deal done for Arriva to take over in 2000 In 2001: put onto a cost plus management contract February 2004: part transferred to Transpennine Express October 2004: balance to become Northern Franchise together with North Western New franchise won by Serco/Ned Railways (8 years 9 months)	Northern Rail (formerly Arriva Trains Northern)
18. Scotrail	Was National Express Group 2001: deal done to increase subsidies over the remainder of the franchise (due to end in 2003/04). Scotrail paid £36m for this, to get £70m higher subsidies October 2004: new franchise awarded to First (7 years +3) after refranchising competition No longer under the control of SRA (looked after by Scottish Executive)	Scotrail
19. Silverlink	Originally won by NEG September 2004: two year extension agreed to go to 2006 Press release from NEG states that level of subsidy not materially affected (£120m per year over two years: c.f. £50m in year end December 2003)	Silverlink
20. South West	Original franchise to end in 2002/03; Stagecoach owned November 2002: one year extension agreed to 2004 further extension to February 2007 (same end as Island Line)	South West Trains

21. Thameslink	Original franchise to end in 2003/04 Owned by GOVIA 2004: two year extension agreed (with revenue share mechanism) New franchise from 2006: to merge with Great Northern (part of WAGN) Won by First	Thameslink
22. Thames Trains	Original franchise to run to 2003/04 Was owned by Go Ahead Group Two year franchise (to run to 2006) awarded to First after inviting bids from Go Ahead and First, to bring the end date up to that of Great Western, in the light of the future: proposal to merge with Great Western and Wessex (post 2006)	Thames Trains
23. WAGN	September 2000: bought by NEG from Prism (along with Cardiff and Wales and West) March 2001: deal done with SRA on subsidy levels for Great Northern part of the franchise: cost plus arrangement March 2004: services split, with West Anglia parts going to the new Greater Anglia Franchise March 2004: two year extension agreed to Great Northern franchise (the balance). Results in subsidy falling by £6m to c. £19m a year. Great Northern to be merged with Thameslink in 2006. New franchise won by First.	One and Great Northern
24. Wales and West	September 2000: acquired by NEG from Prism January 2001: NEG negotiated higher subsidies (cost plus arrangement) 14th October 2001: parts transferred to Wales and Borders Renamed Wessex Trains from October 2001 2004: franchise extended until 2006 To be merged with Great Western and Thames Trains	Wessex Trains
25. West Coast	Originally and still is Virgin July 2002: franchise renegotiated to provide increased subsidy and to establish the basis for renegotiations regarding uncertainty over the WCRM. Revenue sharing agreements also entered into Annual negotiation of subsidy	Virgin West Coast
26. Transpennine Express	February 2004: new franchise created from North Western and Northern Awarded to First Group and Keolis (8 years + 5 year extension)	Transpennine Express

Sources: TOC accounts; SRA Strategic Plan 2002; General web searches; Associated Society of Locomotive Engineers and Firemen (ASLEF) web site lists current status of all franchises; TAS Rail Monitor.
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2. BRITISH RAIL FRANCHISING: AN EXPERIENCE IN CHOPPY SEAS

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SUMMARY

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The Regulatory and Political Framework

My 5 year-term as the Rail Regulator in Great Britain from 1999 to 2004 coincided with the most turbulent times the British railway industry has ever experienced in peacetime. It was a great honour and privilege to do that job, yielding as it did valuable lessons for rail regulation in the most testing of circumstances.

The jurisdiction of the British Rail Regulator is probably the greatest of all the regulatory authorities in Europe, and perhaps anywhere in the world. It should be borne in mind that the Rail Regulator, which was independent of government, did not carry out passenger rail franchising. Franchising was carried out by a politically controlled agency of central government. As Chris Nash and Andrew Smith's paper describes, this agency – called the Strategic Rail Authority – has since been abolished and the functions taken back to the Ministry of Transport. I agree with Chris Nash's observation that, with this development, today we have the highest degree of control that the Ministry of Transport in Britain has ever had over the railway; we will see whether they can make a success of it.

The Rail Regulator is independent of government. The single person rail regulator model – where all the power is vested in the hands of a single individual office-holder – was abolished immediately after I left office in July 2004. This change was in line with reforms to the regulatory model for all the UK economic regulators; rail was the last industry-specific regulatory authority to undergo this change. The single person regulatory model has been replaced with a seven member board. The main motive was to change the dynamics of decision making, and this has indeed happened, in ways beneficial to politicians which perhaps they could not have foreseen.

With this background, the themes that I will deal with are as follows:

- The expectations of franchising of passenger services in 1994.
- High degrees of prescription in original contracts.
- Faults in the foundations of the franchising system.
- Degrees of political intolerance which the industry has had to endure.
- The need for realism.

First though, a "health warning": I do not advocate that any country copies the British system. Instead my position is that it would be wise to take the benefit of the lessons that have been learned in Britain through the very tough experience of the last 13 years in the design of franchising and regulation, the implementation of railway re-organisation, and in the radical reform of the institutional and matrix structure that we were compelled to carry out in the years 1999-2004. We have now got it right but we went through the fires of hell to get there.

Performance of the Railway since Privatisation

The privatisation of British Rail is not an unmitigated disaster or an institutional shambles despite the very different agendas of different political forces at work. Ministers, quasi-ministers and other politically motivated agencies sought, on occasion, to direct the railways as if they were still a state owned monolith. We had to deal with the media who love trouble on the railways, especially severe and open disagreements on policy, and major rail accidents. For example, after the Paddington railway crash in 1999, when 31 people died and many more were injured, a senior policeman told me at the

scene that in 25 years of police experience, he had never come across more discreditable behaviour by the British media when all they wanted to know at the daily press conferences was when the death toll would reach 100. They were very disappointed when it didn't.

We have had major successes in the growth of passenger and freight traffic on the railways, significant rolling stock replacement, huge investment in infrastructure, some of the best measures of track quality that we have ever had, and generally putting right the accumulated policies and problems of the years of nationalization. Our model has been, to paraphrase Captain Kirk in Star Trek: "free enterprise, but not as we know it, Jim"!

Some statistics: in passenger-kilometres, traffic grew between 1994-1995 and 2004-2005 by 46.4%, from 28.7 million to 42.4 million, and we forecast further growth over the next 10 years of 28%. In train-kilometres, traffic grew between 1997-1998 and 2004-2005 from 376 million to 456 million, an increase of 21%. Since privatization a fleet of 4 500 railway vehicles has been replaced with an investment of 7.8 billion euros. We now have amongst the world's biggest train fleet modernization and replacement program and one of the youngest passenger rolling stock fleets in Europe, with an average age of 14 years in 2005. In terms of passenger satisfaction, between 2001 and 2005 the index we use for measuring satisfaction rose from 73% to 82% for long distance services, for London & the Southeast it rose from 66% to 73%, and on regional railways it improved from 77% to 83%. This does not suggest that people are deserting the railways because they are a disaster; these are people who want to travel on the railways because they are a success, meeting the needs of users at a fair and affordable price.

Prerequisites for Reform

When governments decide to restructure, reorganize, corporatise, regulate, de-regulate competitively tender or franchise their railways – there are many approaches and the terminology is wide – they have to do some things that we did not do in Great Britain in 1994. They need to be clear about what they want to achieve. They need to be honest about what can be achieved.

Governments should grant the necessary resources to do the job properly, in time, expertise and money. They should establish sound and sustainable relationships in this new matrix which they create, whatever model they choose. If there is vertical separation between the infrastructure provider and the train operator, that structural decision should be respected, not assaulted. If there is a separation of responsibilities between government agencies that are politically controlled and any that are supposed to operate independently, that too should be respected and made to work. Government should respect and facilitate the roles of the public and private sector organisations. They should respect and sustain the matrix which has been established. None of these thing happened in Great Britain, and the results were both severe and adverse. On the positive side, I can say that we have now reversed these adverse effects and put right the shortcomings of the original design and implementation decisions.

Evolution of Reform in Great Britain

At the beginning of franchising in Great Britain in 1994, here were several expectations and assumptions: the railway would decline; there would be no appreciable new capacity apart from the channel tunnel rail link; we would have a competent and efficient network provider Railtrack; we would have empowered, efficient and competent passenger train operators; and we would have a declining need for public subsidy. Some of the franchise bids were ludicrously ambitious, but the infrastructure manager (Railtrack) had no proper appreciation of the condition, capacity or capability of its network assets, the track and signalling system on which so much depended. We were assuming

that on-rail competition would thrive. We have had one open access passenger train operator (Hull Trains) and we have one more open access passenger train operator (Grand Central Railway) that is struggling to get on to the network ten years after the policy was devised. That is mainly because the government is trying to kill open access. The politicians will not let go.

We have had two governments in the period of privatization with completely different philosophies. The Conservative government of 1992 to 1997 was elected against everyone's expectations (including their own). They decided to restructure the railway and privatise it at breakneck speed. In 1993-95, I was seconded to the first Rail Regulator as his chief legal adviser. In that period, I saw corners being cut, shortcuts being taken, weaknesses built into the system – some of them deliberately, some of them negligently, some simply because there was no time to design a proper system. The Government was absolutely determined to sell the whole industry in five years, and they succeeded. But what they did not do – as politicians are politicians – was think of what would happen afterwards. Some of us seeing the difficulties that were being established for the system, built mechanisms for change into the system, so that after privatization, after the private sector had been brought in, the matrix of financial, contractual and public accountability could be altered without the need for unanimous agreement of the parties concerned. Because I was working for the regulator at the time, I drafted most of these powers for change. I put the change powers in the hands of the regulator. I did not in any way expect to be the regulator who would come to use them in later years. In the event, I used all of them.

The Labour government was elected in 1997 and is still in power. The Labour Party opposed rail privatization. It lacked the will to reverse privatization when it took office (although when it took Railtrack into administration it claimed that it had reversed the privatisation of that company).

In much of what it does, the present Labour government has taken to itself a high degree of specification and control over the railway, so much so that it is sometimes said they want to snuff out any power or freedom of commercial development on the part of train operators. They also failed to work with the established matrix of contracts and licences, the financial regime and the economic architecture of the system. Many members of the Government failed to understand how the system had been improved and strengthened by the reform programme that had reversed the mistakes of privatization in these respects. Instead they blundered into interference which almost always did harm.

The Essentials for Success

In establishing a restructured railway industry, there are several essential measures of success – you need a sound and sustainable framework of regulatory, economic and legal rights and obligations to create:

- Stability.
- Predictability.
- Sound incentives.
- Sound, clear and sustainable risk allocation.
- Protections from the abuse of monopoly power and unwarranted political intervention.
- Fair processes and fair treatment.
- Clarity of responsibilities.

That is the shopping list for any country anywhere in the world which is contemplating reorganizing any industry. Railways are complex. Trains are not like electrons – passengers care where they get on and off the system and how the journey was. Electrons don't vote; people do. Railways are very much more complex than energy or telecommunications or water systems, but they are still networks This is a shopping list of essential requirements for all network industries. In the case of the British railway industry, these essential requirements were neither properly understood at the time of privatisation nor fully achieved until much later, after major reforms had been retrofitted to the system.

The major flaws were in the key financial regime – the access charges regime. During my time in office, I carried out two major reforms of the economic architecture of the financial regime: in October 2000, just days before the Hatfield accident, and in December 2003. I increased the money available for the operation, maintenance and renewal of the network by Railtrack and then Network Rail – an increase of 33.4 billion euros over five years. (This did not make me any friends in political circles, and it was explained to me rather discreetly what would happen to me if I did make these decisions. I made the decisions, and the things that were explained to me did happen; government kept its promise that time!) These financial increases were not because of privatization. Privatization exposed the failures, the shortcomings, the neglect of the years of nationalization and the six years of neglect of the Railtrack stewardship of the network. It did not cause these increases; these increases would have happened anyway.

In these financial reforms, we also moved from enforcement regulation to incentive regulation, and completely revised the performance regime. Let us remember that in Directive 2001/14/EC there is a mandatory obligation to have a performance regime – it is not an optional extra.

The privatisation licensing regime was unduly weak. And so I retro-fitted it into the infrastructure manager's network license nine new conditions. I will just mention one: an asset register – how about knowing what the condition is of the network assets, would that not be a good idea? My fellow economic regulators in energy, water and telecommunications could not believe that we had to put into the license of the network provider a requirement to have such a register. If you are in asset-intensive industries like these, the first thing that you do is figure out the condition and the performance of your assets, but regrettably Railtrack did not do that.

The track-train interface was significantly flawed. We have now reformed the system into a true joint venture with an intensity of interdependence between track and train which is recognised, facilitated and supported. That reform has been particularly successful since it was made.

We rewrote the contractual matrix with new model access contracts for passenger and freight train operators. We reformed the industry-wide network code – the common rules for operating on the network – in significant respects. And I predict that in ten years time we will have a single network code for the single European railway area.

The Franchises

Passenger rail franchising is another area in which the politicians just simply can not let go. The new generation of franchises – introduced in the period 2004-2006 – are amongst the most restrictive contracts imaginable. I did not have anything to do with designing them, I just objected to what was being done. The new model franchise stifles the most innovative flair that the train operators might have had. There is a great debate about how much scope for innovation that there might be, and Peter Kain takes up this story in his paper, but the franchisees would have some scope for innovation if the life had not been squeezed out of them. British passenger rail franchises are now little more than complex management contracts, and I think that is a big mistake. It is not necessary to tell the private

sector operator in 400 pages that he needs government approval as to whether he is to breathe in, and that he may or may not get consent to breathe out. It is just too constrained.

Effects

The results of the flaws identified above, coupled with the paralyzing incompetence of Railtrack – with its very poor asset knowledge, fundamentally flawed asset management and maintenance policies and practices, and their attitude that running on their network was a privilege for the train operators and not a right – led to disaster. Railtrack neglected its core assets and concentrated on big projects, and did all of them badly. They had a visceral hostility toward their customers. The train operators were further down the food chain, they had contracts which were uncertain, they were un–empowered and unprotected by a weak regulatory regime pre-1999. Then there was the Hatfield crash in October 2000: a broken rail, 4 people killed, 76 injured. The aftermath of Hatfield saw very severe disruption, a 92% fall in performance and 215% increase in costs over the next year, with huge financial pain for the passenger and freight train operators. That is why most of the passenger train operators were put on cost-plus management contracts. Although it is a complex story, most franchises converted to cost-plus contracts for a time because the remedies available to them under those contracts with Railtrack simply were not calibrated to deal with disruption on that scale.

The explosion in costs and the severe fall in performance have since been reversed. The government bail-outs were mainly a result of the severity of the network problem, the lack of empowerment and the flaws in the design of the track-train interface. We also had a fire storm of political pressure, unwarranted intervention from a number of sources including ministers, and a year later Railtrack was forced into a special class of insolvency in the most controversial circumstances possible. The key weakness was the design of the interface between train and the track.

Conclusions

In conclusion, franchising in Great Britain has been a success, but not an unalloyed success. We have had severe problems, but we have been successful in franchising, with the growth in passenger kilometres, in train miles, in rolling stock improvements and many other respects *despite* the major shocks and the major flaws in the design of the system. Who knows what we could have achieved if the design decisions in 1994, 1995, 1996 had been better?

Government must take its share of responsibility for all this. It is government that is principally responsible for the major increases in costs, not just because they forced Railtrack into administration – although they simply could not come to terms with the fact that that was the direct cause of some of the most severe financial consequences – but because of the years of neglect of the national network. The state corporation British Rail did very well in the days of nationalisation in making-do and mending a system which had significant underinvestment for a long, long time. I was full of admiration at just how good a railway these people could run with so little money. With privatization, and the decisions I took in October 2000 to increase the access charges, and therefore the income for the network, by 50% and then to increase them by 50% again in 2003, we recognised it was necessary to correct for those years of neglect. It was severely painful for the government to have to find so much money to fix the railways, but it must be recognised that it was government decisions over the years which had allowed the railways to deteriorate so far.

The matrix reforms that I mentioned – financial, contractual and public accountability – were not initiated by politicians. I struggled to get the politicians even to understand them, let alone to embrace them, and they never supported them. Interestingly, if you read last year's government White Paper on railways, published 10 days after I left office, you will see all of my reforms promoted by Ministers as

their ideas! That is very flattering and recalls a favourite saying of US President Ronald Reagan (it wasn't his): "There is nothing a man cannot achieve in his life, if the does not mind who takes the credit".

The politicians, however, will not leave the system alone. They have fiddled and legislated, and they will fiddle and legislate in perpetuity. It is said in Great Britain that every piece of railway legislation ensures the next one. I believe that to be true. When I left office I was asked what I expected to being doing in 10 years time. I said that I expect to be reading the latest government White Paper on the reform of the railways.

We have seen major improvements in track quality, in efficiency, in cost control, in performance, in the interface design and in virtual integration of our railway. I repeat that these things have been brought about despite and not because of direct government action. Our British railway industry has gone from storm clouds to a bright new dawn. It is not perfect, but it is a great deal better than you will read in the pessimistic and often ill-informed assessment of some of the industry's critics. Britain now has a reorganised railway system – institutional, contractual, legal, economic and operational – worth learning from. Having proper regard to Britain's experience since 1994, other countries are better able to achieve their own railway reform objectives with considerably less pain that ours.

3. THE PITFALLS IN COMPETITIVE TENDERING: ADDRESSING THE RISKS REVEALED BY EXPERIENCE IN AUSTRALIA AND BRITAIN

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* I greatly appreciate the comments received from Lyn Martin, Chris Nash, Stephen Perkins, Carlo Santangelo, David Starkie and Lou Thompson in preparing this paper but responsibility for errors remains with the author. Any opinions expressed in this report reflect my personal views and not those of my employer.

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Introduction

The objective of this paper is to analyse policy and experience with competitive tendering. The context of this review is the European Commission's proposal to revise Regulation 1191/69, which sets out the terms for public service provision. The proposal would require compulsory competitive tendering wherever public transport receives subsidy or has exclusive operating rights (ECMT 2005, p. 54). This paper seeks to provide insight into competitive tendering and to highlight tendering designs that undermine the tendering objectives. My focus is on passenger rail franchising models and experiences in Britain and Australia.

I look at the British Government's tendering of British Rail (BR) passenger services from the mid-1990s and the equivalent tendering of Public Transport Commission (PTC) services by Australia's Victorian State Government in the late-1990s. In both cases, services are loss-making and their continued operation relies on public-funding. While there are well-known rationales for that support, "...proving a case for government intervention [in service provision] does not imply that there should be government production". (Kain 1981, p. 81) Government production is argued to be inefficient due to "principal–agent" problems. BR and PTC, as government agents, did not face the commercial pressures to be "efficient".

Competitive tendering may provide a way of providing the services at less net cost to the public. Here, a private agent provides passenger train services on behalf of the government and, crucially, bears commercial risk for so doing. The competitive pressures arising during auctioning of the rights for private agents to provide these services then commits the winning bidder to find cost reductions to seek additional revenue.

Because the British and Australian competitive tendering contracts transfer a significant degree of revenue risk the contracts are described as "franchises". The principles of franchising contrast with commercial (or management) contracting, where an agent accepts the cost risk but takes little or no revenue risk; it also contrasts with regulated monopoly provision.[1] Because revenue risk is transferred, the franchisee has stronger incentives to deliver appropriate service quality thereby reducing the franchising agency's need to monitor standards and devise revenue protection mechanisms.

First impressions of train franchising in Britain seem encouraging. Since train franchising commenced in 1996, revenue has exceeded bid projections, passenger traffic has reached a post-war record high, train service levels have increased significantly and large numbers of new rolling stock have been introduced.

Nonetheless, despite these apparent achievements, the British franchisor has acknowledged that surveys of passengers pointed to growing passenger disenchantment reflecting that "...service quality and overall reliability has worsened" (SRA 2002). Further, from the late 1990s, around one-half of the franchises have had to be financially rescued. Rather than offer a defence for undertaking such rescues, one franchising director instead attacked the franchising model that was originally applied, saying that the type of franchising model that was originally used "...is now not suitable"; the franchises were not as financially stable as they should have been because "...the model was flawed" (Bowker in *Hansard*, 26 Nov. 2002, para. 45).

However, I note the comment of the director-general of the franchisees' umbrella organisation (Association of Train Operating Companies, ATOC), implies that there is a fundamental fault with applying franchising principles to train operations because risk cannot be permanently shifted to the agent: "It's a realisation of the fundamental truth...the underlying risk always comes back to the person who wants it–the outsourcer".[2]

So, what are the pitfalls in franchising passenger rail services–are the problems rooted in applying franchising principles to passenger train operations or are the problems related to the specifics of the model applied?

This paper reviews the experience and policy evolution of franchising in Britain and then in Australia. I then identify the shortcomings of rail franchising, identify lessons about where and how to franchise and consider the merits of the emerging franchising model relative to alternatives. An appendix is attached that includes a review of the principles of franchising, with some reference to rail franchising.

Principles of Franchising

This section considers why and how franchising is undertaken and how franchises are designed. Practical examples are given, notably from passenger train franchises, to place the issues in context.

Why franchise?

We distinguish between two types of franchise: the Chadwick-Demsetz "natural monopoly" franchise and the "brand" franchise. Both franchising types provide incentives that are intended to remove principal-agent problems.[3] For brand franchising–like global cola drinks, internationally-branded fast food operations and (for instance) Scottish Islands airline services (franchised by British Airways to local airlines)–the key aspect of the franchise is to tightly specify the product and often the price. That is, in essence, the entrepreneurial skill and innovation lies with the franchisor. The franchisee's role is to provide a product that matches that specification, such that its quality is indistinguishable from other franchises and the franchisor's in-house product. Thus, in Britain, the British Franchise Association describes the operation of (non-rail) franchises thus:

> *Each business outlet is owned and operated by the franchisee. However, the franchisor retains control over the way products and services are marketed and sold, and controls the overall quality and standards of the business.* (British Franchise Association, web site).

Brand franchisees therefore deal with the local and day-to-day issues. However, they have an incentive to do it in an efficient way because they have the freedom for "initiative and autonomy" (according to a survey of franchising participants conducted by Lewin-Solomons). The brand franchisor's role involves looking at (inter)national aspects of the business and determining the brand, marketing, pricing and strategic development of the product. Commercial risk is shared: The franchisee relies upon this imposed business plan to ensure that consumers buy the product; equally, the franchisor relies on consistent product quality (for brand protection) across franchisees.

For natural monopolies, a single firm can usually meet demand at a lower cost than multiple firms. Passenger train provision displays characteristics associated with a natural monopoly product. At the prevailing level of demand, average costs are typically still declining, with short-run marginal costs below average costs. Further, it is usually impractical or not commercially viable for multiple train operators to provide competing services due to limited prevailing passenger traffic levels, economies of density[4] in train operation and finite track capacity. Pricing at efficient short-run marginal costs would therefore result in the firm incurring losses. This has usually led to the services being publicly-funded–but also publicly-provided.

Single-firm provision can lack the necessary commercial pressures to ensure that the service is provided efficiently. Whether the services are publicly- or privately-provided, financial underwriting by the State and the absence of competitive forces is likely to lead to x-inefficiencies in provision.

This arises because of principal–agent behaviour. The service provider's activities could be scrutinised and regulated by an independent government agency. For effective regulation, that regulating agency would need detailed cost and demand data. In general for monopoly operations where supernormal profits can be earned, RPI-x or rate-of-return caps may be applied, albeit with the attendant drawbacks of such regulatory tools.

An alternative solution is to use franchising competitions to introduce competitive pressures that should drive down monopoly rents and provide incentives to reduce costs and optimise quality and revenue.

The principles of franchising goods or services that have natural monopoly characteristics were developed originally in the 1850s by Chadwick and later by Demsetz in the 1960s. Chadwick stated that "...where competition on the ground is impossible, an auction allows competition for the ground" (Chadwick 1895). It is important to stress that franchising is advocated here as a *substitute* for regulation. Williamson observes that the advocates see the process as "...a market solution that avoids many of the disabilities of regulation" (Williamson 1976, p. 77). By contrast with regulation, Chadwick's approach requires less information because, in principle, franchise bidding by itself can provide all the necessary impetus to achieving production efficiency.

In the late 1970s Crain and Ekelund reviewed Chadwick's principles and found that Chadwick and Demsetz differ in one important respect. Chadwick does see a powerful regulatory role *for the franchisor*, over "a wide array of activities" akin to "that of the modern U.S. regulatory commission" (Crain and Ekelund 1976, pp. 159-160). Chadwick was specifically considering the supply of railway services as an explicit application of his principles (Ekelund and Price, p. 218). It would be a government franchisor that would "...determine optimal investment and the introduction of innovations in railways and let out these activities to private entrepreneurs (Ekelund and Price 1979, p. 222). As Ekelund and Price note, however, such franchising does not improve incentives:

> The civil servants would be in the same position as the hired manager; neither is able to reap the rewards of successful innovation but both are responsible for failure. (Ekelund and Price, p. 229).

By contrast, Crain and Ekelund observe that Demsetz "...seems to imply that commission regulation is rendered unnecessary with the institution of competition for the field". Crain and Ekelund themselves argue (as we observe in practice) that reliance on franchising does *not* remove the necessity of regulation (*Op. Cit*, p. 160). Thus, we should note that Chadwick–Demsetz franchising is not a clear-cut approach; that some form of franchisor oversight is required; and that this can come to strongly resemble a regulatory function. At the same time, however, the greater the oversight the less will be the potential entrepreneurial gains.

In the 1990s, Britain and Australia (amongst a number of countries) applied the principle of franchising to the supply of passenger rail services. Welsby and Nichols[5] interpreted the British Government's rationale for private production of railway services as arising because:

> "... private sector entrepreneurialism would yield a far more innovative approach to development of the railways than public sector management, who were seen as being insulated from the demands of the market place." (Welsby and Nichols 1999, p. 68).

The second-half of the sentence is important, as it implies that the Demsetz (no regulation) approach is intended rather than the Chadwick (central planning) approach. As we discuss further below, Welsby and Nichols observed that the franchising had actually led to tightening of service

specification (and this trend has continued in the years since their paper was written). While the authors accept (as Crain and Ekelund do) that some form of intervention is necessary to ensure that government gets value for its subsidy, nonetheless they see a "...substantial risk that potential efficiency gains will be suppressed" (Welsby and Nichols 1999, p. 69).

Competition design

Demsetz (1968) developed a franchise bidding framework that is intended to provide competition that will drive out excessive profits arising from monopoly provision and identify efficient providers. Demsetz saw franchising as an alternative to the need to regulate–he was specifically concerned with providing a viable alternative to the regulation of utilities.

The franchising framework involves auctioning. Demsetz concluded that:

> If the number of bidders is large or if, for other reasons, collusion among them is impractical, the contracted price can be very close to per-unit production cost. (Demsetz 1968, p. 57).

Competition is based on inviting interested firms to submit bids. This usually involves submitting multiple bids, for a range of service and quality options. Multiple bidding is intended to expose cost and efficiency profiles. At an advanced stage in the process, bidding is likely to involve cross-table negotiation between franchisor and short-listed bidders (and, ultimately, the preferred bidder) over specific details.

While these principles provide an idealised solution to service provision, the success of this process depends on a number of practical factors:

- The specific approach adopted in auctioning.
- Establishing a robust set of criteria to assess the bids.
- Attracting and retaining the competitive market "for the ground" for future competitions.
- Ensuring that bidding transaction (competition) costs are not so large as to offset the anticipated franchising benefits.
- Being able to specify the required output and to monitor and enforce adherence to the committed output.
- Structuring the franchise contract to handle risk and unanticipated events (that is, uncertainty).

Each of these factors is now considered.

Bidding process

Although Demsetz set out the principle for auctioning, there are different approaches to holding an auction. At a practical level, a key decision is to decide whether the bidding will occur through the *open-bid* or the *sealed-bid* approach. In the normal open-bid system that most people associate with auctioning, the bidding for, say, a painting, is an interactive process between bidders, with rivals knowing each others' offer price. At the outset, the auctioneer sets a price that interested parties are invited to offer. If a bidder is prepared to pay that price, the auctioneer then invites higher offer prices.[6] Bids are made sequentially. The price is increased until there are no further, higher, counter-bids. The winning bidder ends up paying their final bid price, (which is the equivalent of the second-highest bidder's price plus an increment that guarantees victory).

However, rail franchising uses a sealed-bid auctioning approach. This is because the complexities of franchise contracting makes open-bidding impractical–while the franchisor is selling monopoly rights for train service the franchisor is also buying a stream of services and commitments, and not just simply selling a good. Under sealed bidding, the bid price and details are not disclosed to other bidders and interested parties bid simultaneously. We should note that here the winning bidder pays their own final bid price–the "first-price sealed bid" level. Because the level of the bids is not revealed, the winning bidder's price is not the equivalent of the open-bid price (the second-highest bidder's price plus a margin). If the firm is keen to win the competition, however, the winning bid is more likely to be over the odds just in order not to be trumped by other bidders.

This first-price sealed bid may result in the winning bidder paying more than the goods are worth or, in the case of rail franchising, making heroic assumptions about revenue growth or cost cutting so as to win the bid. An alternative auctioning design, which attempts to eliminate this outcome, involves the winning bidder paying the second-highest bidder's price, which may be argued to be akin to the open-bid outcome.[7] Thus the winning bidder pays the "second-price sealed bid" level, and is also known as a "Vickrey" auction. Of course, if the second price is *also* unduly optimistic, even this approach will not (without active franchisor scrutiny) prevent a winning bidder "winning" a franchise with financial terms that are unsustainable. Vickrey auctioning does not really help here because the approach is still a sealed-bid–open bidding allows bidders to observe other bidders dropping out, which can be useful information.

Thus, in open bidding, the insights into the business gained through rivals' bidding *may* convey information about the "true" value or potential of goods or service being auctioned. Such insights reduce the likelihood of contract default. The new market for rail franchises from the 1990s was relatively ignorant or naive about the potential for efficiency gains, cost reductions and revenue improvements in service provision. Inevitably, then, sealed-bid designs convey less information to bidders, heightening the likelihood that the winning bidder will be over-optimistic. Vickrey auctioning can reduce the likelihood of this outcome. However, Vickrey auctioning (applied to selling goods rather than purchasing services) is difficult with rail franchising as bidders are often proposing different packages of services that cannot be directly compared. As a consequence, the second price does not necessarily establish an appropriate level for the winning bidder.

Thus the choice of auctioning design influences the information that the bidder receives about the service they are bidding for. This information, in turn, can determine the success of the auction. In the case of sales of goods, the auctioneer will quickly learn if a winning bidder has over-extended their credit. In essence, the bid can be taken at face-value because, if the credit-line is there and the reserve-price has been met, the auctioneer will be content. However, in the case of bidding to provide future service commitments, such as rail franchising, the consequences of over-optimistic bidding are not apparent to the auctioneer (the franchisor) *or* to the franchisee until well into the service contract. It means that the auctioneer needs to establish much more than simply the ability of the winning bidder to pay for the goods.

So the rail franchising auction involves assessing the services offered by each bidder and whether the bidder can deliver on the promises. In general, if franchise evaluations choose the winning bid simply on the basis of the highest bid price or the lowest subsidy then the firm offering the lowest quality would be awarded the franchise. Evaluations will include assessing the proposed service quality, investment proposals and optional extra features, as well as the risk of defaulting.

These issues generate problems for the auction design because, to varying degrees, the bid proposal attributes can be qualitative rather than quantitative. As a result, unless *quantitative* weights of importance of different qualitative attributes can be applied, the choice of the winning bid may be

highly-subjective. It is not always straightforward to numerate or, indeed, to apply weights to that numeration. At an extreme, a bid can be entirely subjective, for instance with an architectural design competition. In such cases, the bidding competition is called a "Beauty Contest" rather than an auction with price being either not relevant to the decision or is only one part of the subjective decision-making. (Janssen 2004, p. 10) Unless based entirely on cost-minimisation/premium maximisation, it is inevitable that rail franchising will contain elements of the Beauty Contest.

Qualitative assessment

Selection criteria need to be transparent when the bidder is chosen for reasons other than simply highest premium/lowest subsidy. Rail franchises inevitably have service quality attributes that have to be assessed in the wider quantitative analysis; this includes an incumbent franchisee's past performance. In such circumstances, it is fundamental to the success of auctioning that the franchisor advises bidders of the weights (value) that is attached to different attributes of a bid.

Unless the selection criteria are made transparent, there is the potential for adverse outcomes:

- The wrong bidder is chosen.
- There is the potential for selection through favouritism and corruption.

The winning firm may be the bidder that most accurately second-guesses the franchisor's weighting, thereby offering a price–service quality package that maximises that weighting. Where bidders have to guess what the franchisor values most, the competition does not necessarily lead to the most efficient bidder being chosen. Gómez-Ibáñez also notes that for the franchising of Argentina's railways, the government "...announced clear selection criteria in advance for both stages so as to increase the transparency of the process and reduce opportunities for favoritism and corruption". (Gómez-Ibáñez 2003, p. 93).

Choice of bid "price" parameter

The bid price parameter is likely to be the pivotal factor in choosing the successful bidder. As noted above, some areas of business latitude, such as prices, are specified closely at the outset. Nonetheless, "price" can take a number of forms, influencing franchisee behaviour in different ways. For instance, the parameter can be:

- *Profit-sharing*. This approach can encourage the franchisee to adopt strategies or accounting reporting that can minimise its reported profit.

- *Revenue-sharing.* Bids are assessed on the basis of the revenue that would be shared between franchisee and franchisor. The franchisee pays an initial fee and a periodic "royalty"–a percentage of the gross revenue. Given the value of such a bid to the franchisor depends on both the level of revenue as well as the share of that revenue, the successful bidder may be required to pursue that stated strategy that would deliver the revenue generation. An alternative risk strategy might be for the royalty (or revenue support) to cut-in when revenue rises above (or below) a given level. In the past, the selection criteria for British ITV (Channel 3) broadcasting licences has included offers for given advertising revenue (the expected value of which depends on each bidder's projection of advertising revenue). Most brand franchising is based on revenue sharing. (See Lewin-Solomons 1998, p. 2.).

- *Fixed price*. Here, the bidder sets out the price(s) for supplying a product. An example is cable television supply in the USA. By contrast with the other pricing parameters, this approach leaves the risk entirely with the franchisee. As a result, with this criterion, firms should have an incentive to submit relatively bearish bids.

As Williamson notes,

> "... awarding an exclusive franchise to the noncollusive bidder who will pay the largest lump-sum fee to secure the business effectively capitalizes the monopoly profits which accrue... To avoid this outcome, the franchise award criterion of lowest per unit price is favored." (Williamson 1976, p. 76).

In the case of rail franchising in Britain and Australia, however, fixed price was the approach, though the Australian model incorporated a significant variable element of subsidy that was paid to the franchisee once the firm reached a given (agreed) revenue target (reflecting government aspirations to increase use of public transport).

Competitive Market

Successful auctions depend on the seller's ability to attract a sufficient number of serious, eligible, bidders. For Chadwick–Demsetz franchising it is crucial both to attract and to *maintain* that competitive market of bidders. Maintaining the competitive element is essential for ensuring the incumbent faces real competition and deterring "opportunistic hold-up" behaviour.

While there is no clear evidence on how many bidders constitutes such a market, it might be assumed that there is less competition with fewer bidders as well as greater likelihood of collusion. The generation and maintenance of a competitive market can be impeded by barriers to entry and exit. These barriers include the scale of business being franchised, the availability of appropriate expertise and staffing, the need for ancillary infrastructure and other capital equipment, and the duration of the contract. These aspects are now considered.

Scale of business

One important factor that determines the level of bidder interest in the sale of a good or the rights to supply a service is the likely price of the goods or the size of the service undertaking. Thus, a small number of bidders may result if the scale of operation being offered exceeds the resources of most would-be bidders. To attract a sufficient number of bidders, a business may need to be repackaged into bundles of a size that would not place financial, operational or management strain on the typical bidding firm.

For this reason, a single business may be franchised in smaller pieces. The size of the pieces is an issue as is how the business is split up. For instance, British Rail was offered as 25 separate franchise businesses. In some cases the split was geographically-based so, for instance, Anglia Railways operated London commuter services as well as InterCity long-distance services. For some other franchises, however, the split was business-based, such as with InterCity services into London Paddington being operated by a Great Western InterCity franchise and local commuter services into the same terminal being operated by a Thames franchise. In this case, then, the size and nature of the split focused on operational benefits (with a geographical split) or marketing benefits (with a franchise being framed around a particular service type, such as InterCity trains). A pragmatic compromise may be necessary.

However, we should note that splitting an organisation to broaden the bidder market can lead to important compromises in efficiency. For instance, there can be strong network benefits from a unified, single management (with lower transaction and co-ordination costs between individual parts of the operation). There can also be economies of scale that may only be optimised at a larger scale of operations.

Management expertise and staffing

Bidding might be subdued if there is a scarcity of the required human resources–particularly where the activity is not a traditional private-sector business. In his landmark paper on franchising, Demsetz stated that an important assumption was that the

> "*... inputs required to enter production must be available to many potential bidders at prices determined in open markets. This lends credibility to numerous rival bids*." (Demsetz 1968, p. 58).[8]

The issue was particularly relevant to BR's passenger train operations, which were newly offered to outside management in 1995-97; and in the 1999 rail franchising in Australia. It is important to note that in both of these competitions the winning firms did not need to recruit operational staff because the winning bidder effectively took over a public company, and so took on the labour force from the previous business manager.[9]

But the bidders must have relevant expertise in order for the auction to be efficiently undertaken in the first place. Such expertise may come from in-house management teams, equivalent businesses from other countries, and other related businesses. For instance, initial British passenger train franchise competitions attracted local bus and coach operators (see Kain 1998, pp. 254-56), offering some of the public transport skills needed for assessing the potential of rail businesses, and subsequent management of those businesses. Subsequent competitions have attracted foreign railway bidders. The later Australian competition drew on the pool of firms developed in the United Kingdom market for establishing a competitive market.

If senior management skills and firms of sufficient size/financial muscle are scarce, it might encourage the formation of consortia of companies with complementary skills and funding. The blending of such skills can enhance the consortium's bid but the development of a consortium itself can undermine the objective of fostering competition from a deep pool of potential bidders. If the market then coalesces into a few, large, consortia, it could be argued that collusion between rival bidders will be more likely.

Capital equipment

As in any area of the market, the need for large capital investments can impede market entry. This affects market competition and contestability. Barriers are relatively low where assets can be readily leased–and where there are easy lease-breaks. This is the case, for instance, with passenger train assets when there is a strong rolling stock leasing market, which can reduce barriers to market entry and exit. But this does mean that the success of franchising can depend strongly on the efficacy of that external leasing market.

Contract length

Franchising generally does not involve an open-ended contract–fixed terms are set. The rationale for periodic re-franchising is that, while bidding introduces incentives for bidders to consider cost

savings and quality improvements, such focus can decline over time. Periodic re-franchising is intended to ensure that competitive pressures are maintained.

However, there is a balance to be drawn in the franchise length. Factors that encourage longer contracts include:

- **Franchise efficiency.** It is desirable that the incumbent firm gains insight into the operation by experience and deepening the skills base.

- **Investment incentives.** Longer terms may encourage investment as they provide more time for the payback on investments.

- **Competition costs.** There is more time to recoup bidding costs, including management time, that the franchisee (and franchisor) incurs during the franchise competition.

Factors that encourage shorter contracts include:

- **Incumbent advantage.** The longer the firm has a contract, the more that business insight gives the incumbent an inherent advantage in future franchise competitions. This is particularly the case where rival firms perceive that the incumbent has performed reasonably well, thereby dampening interest in the competition.[10]

- **Incumbent performance**. To the extent that the incumbent is never too far from a re-franchising competition, a short contract can encourage contract compliance. Indeed, Affuso and Newbury argue that short-term contracts actually encourage franchisees to invest relative to longer contracts, in order to demonstrate commitment. They also note, however, that franchisees also use such financial commitments to raise potential rivals' barriers to entry, thereby muting re-franchising competition–see page 75).

- **Franchisor and bidder uncertainty**. Setting long-term contract commitments can be undesirable for both franchisor and bidder. Unforeseen circumstances alter the franchisor's preferred service delivery while the franchisee may face adverse outturns relative to cost/revenue assumptions. These circumstances are more likely, the longer is the contract.

As a consequence, setting a franchise term that retains a competitive market involves a range of trade-offs and, also, a degree of conflicting evidence on how the different terms impact on franchisee incentives.

Bid Assessment

In considering bid assessment issues, we can draw upon literature that assesses the use of franchising principles in the award of cable television licenses. Here, the bids are essentially assessed in terms of an assumed product quality, with a minimum price for a specified cable package. The specified "quality" may include the technical standard of the signal, its reliability and the type and number of television channels on offer to households. There are some similarities between this process and rail franchising.

In the USA, the cable television contract is typically awarded on the basis of supplying a cable television package (physical cable and basic television channels) to the consumer for the lowest unit price. Similarly, the *key* parameter used in awarding a rail franchise is the firm offering to supply services to government for the lowest subsidy. However, by contrast with cable contracts, because

government (rather than the consumer) is the primary rail service customer, it has a strong vested interest in close oversight of rail service supply and this influences both the degree to which franchise terms are specified and the bid assessment task.

Thus, before the franchise competition begins, the operating environment (including the degree of franchisee latitude) needs to be established. An important parameter is the supply price; to the extent this parameter is set, it establishes a common business relationship within which all interested parties will set their bidding terms; this common environment then influences the ease with which bids can be assessed. For instance, long-term cable franchises are likely to include a provision for adjusting the agreed supply price over time, to reflect changes in costs and demand conditions (Viscusi, *et al*., 2000, p. 423). Thus, as Prager notes, laying out this price-setting process can improve bid assessment to the extent that

> "*... regulation of rates will tend to reduce the extent of opportunistic behaviour exhibited by firms by both limiting the prices they can charge ex post and limiting the promises firms are willing to make ex ante*." (Prager 1990, p. 217).

In principle, a similar approach can be adopted for rail service supply and for bid assessment. Thus (arguably), the ability to undertake opportunistic behaviour in rail services in Britain is limited, because around 40-45%[11] of rail fares are regulated and unregulated prices are generally regarded as price-elastic.[12] This means that the range of plausible revenue projections that the franchisor would need to consider would be somewhat constrained.

For rail franchising in Britain, having set the operating environment, franchise task and business latitude, the franchisor invites sealed bids for the annual subsidy level[13] that would-be operators will require for a range of service levels and standards. The range is intended to identify firms with the lowest average costs and (in this case) effectiveness in generating revenue. The lowest subsidy level is likely to be the principal criteria for choosing the winning bidder. To account for the opportunity cost of annual subsidy payments that vary over the franchise term, one basis for assessing the bids is to consider the Net Present Value (NPV) of the future subsidy/premium profile. Thus, even though bidders will inevitably submit different subsidy (or premium) profiles, the NPV can "standardise" the financial stream.

There are two other important assessment parameters:

- Quality.
- Risk transfer/business plan risk.

Unless the service quality is adequately defined, there is a strong likelihood that competition will drive down the quality as well as the price.[14] Thus rail franchisees in Britain and Australia are required to supply a minimum service level. Franchisees are also required to meet other service attributes (such as train cleanliness and punctuality), that can be measured and monitored to varying degrees of precision. Specific investments may also be required.

Arguably, the service level and "measurable" quality specifications can form a common basis to compare bids, to avoid the competition turning into a Beauty Contest. The bidder may offer a higher standard of service or investment beyond the base specification; such factors will form a separate stage in the bid assessment. Thus, other qualitative factors may include:

- Promised additional service levels or higher quality services.
- Optional commitments to invest (especially in taking out long-term train leases).

Assessments also need to consider the business plan risk. As discussed earlier, unlike traditional auctions, franchises for service provision need to consider, in particular, franchisee default.

An important issue in such assessments is that the bidder and the public franchisor will differ in their risk-averseness to business failure–their willingness to take on the risk, which for the public entity is the risk of service disruption if the franchisee becomes bankrupt. Even if the risk is completely transferred to the franchisee, if the franchisor places great value in service continuity, it will face additional costs from the financial failure of the franchise. Such costs would include installing an alternative operator to fill the service gap; there would also be additional refranchising costs.

The knowledge that the franchisor is risk-averse in this way can lead to moral hazard behaviour.[15] This likelihood can be (or at least should be) a challenge for bid assessments. Knowing the franchisor has this aversion, the bidder has an incentive to submit a "bid-winning" business plan that is, very optimistic and so has a strong chance of being unsustainable. The franchisee would subsequently then seek additional funding knowing that the franchisor is likely to underwrite the firm in order to avoid service disruption. In this context, then, it is essential to test the bid proposal for its robustness.

To assess the risk of financial failure, franchisors will need to be assured of each bidder's:

- Financial resources.
- Track record and relevant skills and experiences.
- Plausibility of (ability to fulfil) the financial and other commitments and projections.

This list is not exhaustive. Nonetheless, it is such "quality" and risk items (rather than service level–subsidy options) that move the choice of winning bidder away from relatively unambiguous quantitative "minimum subsidy" criteria, and towards normative judgement.

Benchmarking criteria can be useful to both franchisor and bidder alike. NERA note that this approach was used by the Independent Television Commission (ITC) in its auctioning of commercial television licences. The ITC was concerned that some bidders were willing to accept a level of risk (of financial failure) that was higher than the ITC was willing to accept. ITC identified a "low revenue scenario"; a bid was considered financially sound if the firm could survive that scenario. While this approach has theoretical appeal, NERA note that it has less practicality as an assessment tool where there is high demand uncertainty: in such circumstances it will be difficult to establish just what the likely worst-case revenue level is. (NERA 1995, p. 6).

The low scenario tool can be of benefit to the bidder, who gains an insight into the degree of financial soundness that the franchisor requires. However, as discussed earlier, it is important that the franchisor should communicate its attitude to risk-taking to bidders, to ensure that they appreciate what business attributes are being sought. Failure to communicate such assessment criteria will unnecessarily disqualify bidders, reducing the competition and potentially eliminating the most efficient firms. NERA note that this deficiency arose with ITC's competition and they concluded that as a consequence ITC probably lost money because the level of competition was reduced. (*Ibid.)*

Competition Transaction Costs

Bidding transaction costs are important in determining the success of the franchising competition and in treating contract non-compliance. Other things being equal, if the transaction costs are "high",

they can compromise the success of the competition and the subsequent execution and enforceability of the contract.

At the highest level, we can say that high transaction costs of holding the competition reduce the net benefits of franchising. Further, if those competition costs are substantial, it compromises the development of a healthy bidding market as it discourages bidding–firms are more likely to conclude that the costs are too high relative to the probability of winning.

High transaction costs also influence the way the bidding competition is conducted. There may be a temptation to discourage bidding or to move to a short-list at too early a stage. This moderates transaction costs but this can undermine the efficacy of the competition.

Where there are sufficient serious bidders, a short-list of bidders can be established from an initial assessment. In the case of rail franchising in Britain, the list has been between three and five bidders. Narrowing the competitive field at this stage is essential to reduce evaluation complexity, time and administrative costs. After further analysis and negotiation, a preferred bidder is chosen and a Head of Terms agreement is reached. Nonetheless, to maintain competitive pressure (to discourage the preferred bidder from squeezing out last-minute concessions), the franchisor is likely to retain a fall-back bidder.

High transaction costs impact on franchising objectives even when the franchise is operational. This can happen in two important ways:

- **Weaker sanctions and contractual arrangements**. The franchisor may decide to retain a financially- or operationally-non-performing operator to avoid the refranchising costs. As a result of this inhibition, the franchisor's ability to levy effective sanctions is weakened. If the franchise is financially non-performing, it encourages the franchisor to ease operational requirements, to reduce premium payments or to increase subsidy payments. To the extent that firms recognise that this consideration gives them leverage to renegotiate the franchise terms, it provides them with a further incentive to bid with overoptimistic business plans.[16]

- **High costs can compromise franchise design**. High costs encourage longer-than-desirable franchise periods by franchisor and franchisee seeking a long stream of financial benefits to recoup the large, up-front transaction costs. As discussed above, lengthening the franchise period raises incumbent advantage in re-franchising, thereby discouraging competition.

Thus transaction costs can be pivotal in the operational and financial success of franchising.

Specifying, Monitoring and Enforcing Outcomes

As with all other contracts, it is important that franchise contracts are robust. The following three elements are critical to the successful implementation of the contract:

- **Franchise specification**. It must be possible to specify the winning bid contract so that, in particular, cost and revenue risk lie where it is intended.

- **Service delivery** The franchisor must be able to develop a *practical* process for franchise monitoring, to ensure that the franchisee delivers what is promised.

- **Viable sanctions** There must be viable sanctions for non-compliance. Performance regimes (carrot-and-stick bonuses and penalties for delivery/non-delivery) encourage compliance as

> does setting a relatively short franchise period. Ultimately, it must be practical to revoke the contract for persistent non-compliance.

Specification is a pivotal issue and at its heart lies defining just what a "franchise" is and whether setting a high degree of franchise specification turns the operation into a conventional regulated entity. In most of the foregoing literature (notably, that of Demsetz), franchising was intended to replace a regulated private supplier with a competition for the exclusive provision of a product or service; in the case of rail services, the franchising was seen as an efficient alternative to government operation. But commercial freedom is central to bidding strategy, delivering efficiencies and marketing plans. It is inevitable that franchising such as cable television, terrestrial television licensing and rail service franchising will be subject to regulatory scrutiny to ensure that the promised services and quality standards are delivered. Nonetheless, there is an issue as to how far such specification and monitoring goes before the franchise resembles conventional regulation.

Arguably, the defining attribute that distinguishes simple, regulated (and subsidised) monopolies from brand franchises and from gross-cost contracts[17], is the franchisee's commercial freedom (albeit that such freedom is not part of Chadwick's original principles). However, the franchisor can impose stringent financial and operational criteria. This can result in a degree of consistency in behaviour (and thus in risk-taking), making bid assessments relatively easy, but such constraints and the close oversight that tends to come with it curbs the operator's financial freedom. This has implications for the original objectives of franchising:

> "Extensive supervision is costly both in terms of the out-of-pocket costs of monitoring and in terms of the sacrifice of the benefits of the provider's presumed expertise…" (Goldberg 1976, p. 444).

We should also note that because the specification is centrally-determined, by default the revenue risk largely remains with the franchises (through the bidding process), or drifts back to the franchisor. In this way it becomes difficult to distinguish franchise oversight from direct regulation or gross cost-based contracting. In this way, persistent and detailed intervention diminishes the net benefits of franchising.

Risk and Uncertainty

The key parameter of franchise design is risk allocation, for it is from the risk transfer that the principal–agent problem is to be overcome. So in designing a service contract we need to consider the extent of risk transfer, the type of contract that will deal with unanticipated or non-quantifiable (uncertain) risks, and whether risk can be successfully transferred to the contracting party.

If a competitive tender is let out as a "gross cost" contract, the contracting agent transfers the cost risk but retains the revenue risk. (As discussed in the Introduction, this is not classed as a "franchise".) More often–and usually with the rail franchising–a "net subsidy" contract is signed; the franchisor transfers the revenue risk to the winning bidder. Relative to costs, revenue is very unpredictable. This is particularly the case with passenger rail services–where exogenous factors may adversely affect patronage or whether franchisee initiatives will generate the predicted traffic growth.

Clearly, the less initiative the franchisee takes, the lower will be the risk. Put another way, when the franchisor sets a high degree of specification, it reduces the bidders' own risk-taking. This makes the business more attractive to would-be bidders. Thus, as Toner notes, the more precisely the contract is specified (e.g., service frequencies and fares), the greater the bidding and the lower the price. But this comes at its own price:

> "*... the more fixed things are, the less the opportunity for market-led innovation and the less flexibility to respond to changing market conditions*." (Toner, 2001, p. 7).

Those uncertain market conditions need to be considered when establishing the contract design because changing circumstances can be as undesirable for the franchisor as for the franchisee. Thus, as Goldberg notes:

> "*Entering into a contract will generally entail placing restrictions on the contracting parties' future options. Freedom of contract is the freedom to impose restrictions on one's future behaviour*." (Goldberg 1976, p. 428).

Gómez-Ibáñez provides the example where urban passenger services in Buenos Aires were franchised. Traffic growth was considerably greater than had been projected, while the government faced unanticipated fiscal difficulties. The contract was deficient as the franchised railways now required more investment than had been committed to, while the government was unable to fulfil its subsidy commitments. The government defaulted on its payments to the franchisees. (Gómez-Ibáñez 2003, pp. 105-06)

Williamson (1976, p. 79) identifies three ways in which franchise contracts are designed to cope with unanticipated (uncertain) events:

- "Once-for-all" contracts, where mechanisms are put in place at the outset, to deal with future events.
- "Incomplete, long-term" contracts, where unanticipated events are accounted for by re-negotiation, subject to penalties.
- "Recurrent, short-term" contracts, where the unanticipated events are accounted for at the refranchising stage.

The once-for-all specification locks both parties in to the contract. To the extent the contract terms seek to cover all likely events, they will be relatively difficult to write and may lock either franchisor or franchisee in to undesirable outcomes. Conversely, the recurrent shorter-term contracts incur bid competition costs more regularly and may reduce franchisee commitment (including less investment) in the business.[18]

More generally, however, and irrespective of the length of franchise that is adopted, it is plausible that at some stage the franchisor will desire to make changes to the contract, to reflect unforeseen events such as (in the case of train services) the emergence of demand that differs significantly from those embodied in the contract terms. Similarly, the franchisee may find that owing to events beyond its control, it is unable to achieve the cost savings (or efficiency gains) and revenue growth that underpin its business plan.

Given that such "unanticipated" events are, by their very definition, random, the longer the franchise term, the more likely it is that franchisor or franchisee will seek to renegotiate the contract terms. It is important that such events could not have been expected. If other firms (especially firms that bid to provide the services) perceive the apparent unanticipated event as having arisen from the incumbent's intended or unintended underbidding, it may encourage other franchises (or would-be bidders) to bid recklessly or accept unsustainable terms, in the expectation that their contract could be renegotiated–the moral hazard behaviour discussed earlier. Demsetz suggests that penalties can be included when renegotiations are sought, to discourage this behaviour. (Demsetz 1968, p. 64)[19]

It may be preferable, given firms' risk-averseness to unanticipated events, that not all contingencies are written into the contract–the "incomplete, long-term" contract. If it is preferred (or perceived, for various reasons, necessary) to have long franchise lengths, there are several approaches to handling the uncertainty at the outset, or during the franchise term):

- ***Break points***. Contracting parties may agree in advance to build in contract break points. This permits either party to opt out of further commitments, at a relatively low level of compensation.

- ***Negotiated contract revision***. Again, there is the possibility that such open-ended contracting will encourage a successful bidder to seek renegotiation (a strategy sometimes called "lowballing"), knowing the franchisor will wish to avoid the cost and disruption of a fresh contest. The franchisor's retaliatory mechanisms for such blackmail may include penalty clauses and threats to award that franchise (or of other franchises) to other firms when they fall due for re-franchising.

- ***Profit-sharing***. A form of contract might be drawn up to profit-share the financial gains that would arise from the revised conditions (e.g., the revenue from running additional train services).

- ***Cost-plus contracts***. Where contracts are subject to considerable uncertainty, remuneration may be based on a "cost plus" formula rather than a fixed charge. Williamson notes, however, that this approach faces severe problems of auditing costs and builds in "defective incentives". (Demsetz 1968, p. 82).

Williamson argues, further, that contracts such as the "cost plus" begin to closely resemble those associated with monopoly regulation. Inevitably, whichever approach is taken, the greater is the degree of uncertainty, the more likely it is that the contracts will be gravitating towards regulatory characteristics. Indeed, for incomplete long-term contracts (which are more likely with relatively high levels of uncertainty), Viscusi, et. al., argue that

> "*... franchise bidding differs from regulation as a matter of degree and not of kind... as we introduce product quality and uncertainty, franchise bidding begins to look more and more like regulation. The apparent advantages to franchise bidding become less outstanding." (Viscusi et. al. 2000, p. 409)*.

But even with a contract resembling regulatory prescription, will the contract guarantee that the franchisee does bear the risk? Williamson argues that, because of refranchising costs and possible litigation costs, the franchisor is disinclined to allow franchisees to fail and inclined to undertake intense monitoring. This "then joins the winning bidder and the franchising agency in a quasi-regulatory relationship". (Williamson 1976, p. 83) More to the point, though, such a relationship undermines the original objective of transferring the risk. Because risk is not transferred, bidding strategies are biased and incentives to behave efficiently are undermined. Kain (2002) examined this strategy with Britain's awarding of the Private Finance Initiative (PFI) contract for the Channel Tunnel Rail Link, noting that the government faced heavy sunk transaction costs (from the auction costs) and had essentially underwritten the contractor's commercial risks. This generated tactical bidding. Thus, having set up an Agreement that did not transfer risk,

> "*... the private partner knew it could cry "pauper" with impunity due to the financial penalty of accumulated debts [of the private partner that the government would incur] and heavy*

> *PFI transaction costs of rebidding. The private partner could seek renegotiation after becoming entrenched*." (Kain 2002, pp. 57-58).

So a general issue of franchise design and application is what risk can be transferred, the process by which it is transferred, and whether it can, in fact, be successfully transferred. As the PFI example here illustrates, the government may seek to avoid high auction costs (including time/delay costs) through renegotiation. Another factor that can undermine successful risk transfer is "public interest": government may rescue a franchise if the firm's failure would lead to supply disruption: this is pertinent to rail franchising and is discussed further, below.

Experiences with Rail Franchising in Britain

In this section, I consider the experiences of passenger rail franchising in Great Britain. The franchising followed a period of restructuring of British Rail (BR). During the 1980s, BR was divided into three passenger businesses, or "sectors": *InterCity* [high-speed main line operations], *Network SouthEast* [NSE, London and Home Counties services, dominated by commuting] and *Regional Railways* [provincial and rural services]. In the early 1990s, this split was formalised, with the three sectors forming three vertically-integrated (train and track) businesses under the BR umbrella. This structure was barely established when the government decided to vertically-separate the business, with Railtrack (now Network Rail) being responsible for infrastructure management and selling track access to ("above-rail") passenger and freight operators.[20] The passenger operations were divided into 25 "shadow" government-owned Train Operating Company (TOC) businesses, based around 19 BR profit centres (which were essentially sub-sets of the three passenger sectors).

The TOCs were transferred to the private sector as franchises. Auctioning of the TOC businesses commenced in 1995, with bids sought *only* from private firms–the Franchising Director did not permit BR to bid. The first franchised TOC commenced operation in February 1996. By April 1997, all the BR services had been franchised.

The first part of this section sets the scene for the analysis of the franchising policy and implementation by assessing whether the franchising has achieved its objectives. Subsequent sections consider how franchising policies have evolved, reviews the competition design, bid assessment, the franchise market, the competition's transaction costs, the degree of franchisee latitude with services and the extent to which risk and uncertainty are transferred.

Has rail franchising achieved its aims?

In considering the primary objective of franchising–delivery of the passenger railway at a lower cost to the exchequer–it seems that the cost (including infrastructure provision) has risen. For the entire railway that was "BR", the crude estimate made in the late 1990s was that the cost had doubled, although it is unclear if this accounts for the expansion in passenger rail services (with 17.7% more train miles in 2002-03 than 1996-97). While not challenging the estimate, however, Welsby and Nichols argue that:

> *Privatisation has fundamentally changed the financial flows within the system, so that in many ways they are now a closer approximation to long-term economic costs, in that subsidies should now be providing for the opportunity cost of capital in a way that was previously absent*. (Welsby and Nichols, 1999, p. 75).

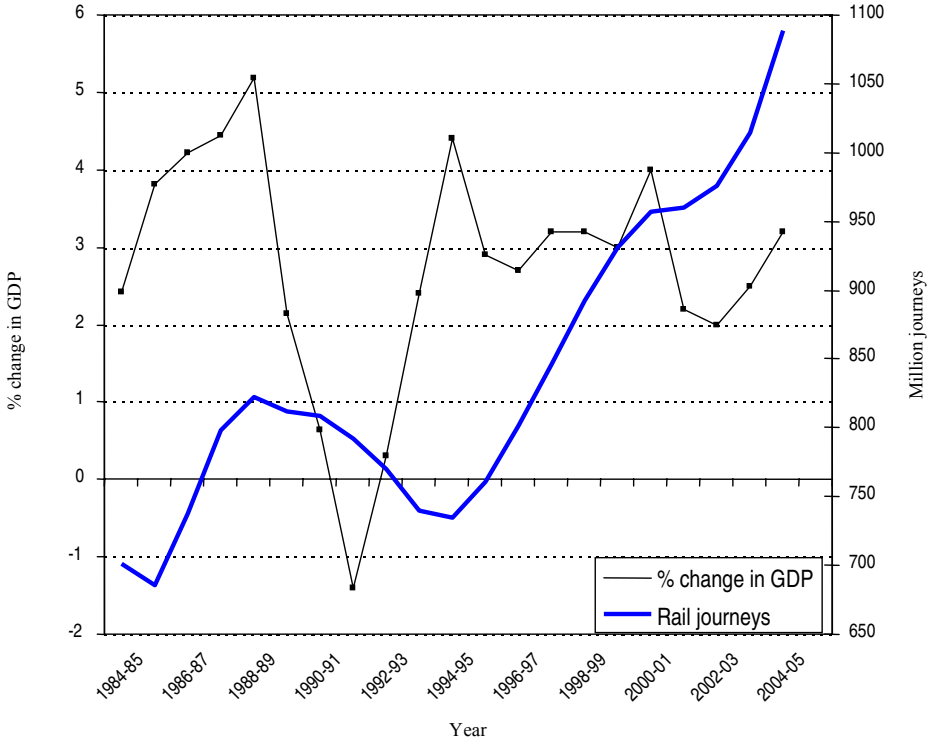
What of the promised gains from franchising passenger train services? The decline in (nominal) net subsidy to franchisees was from £2.0 billion in 1996-97, to £0.9 billion in 2002-03 (Kain 1998, p. 257). Because the franchises' service delivery has increased, in concert with growing demand, with

new rolling stock and against a background of rising costs of infrastructure provision, there is no definitive answer.

We can still make some clear observations and conclusions, however. The passenger rail industry has been buoyant since franchising. The SRA reported that:

> "*In the period since 1994-95, rising economic prosperity has delivered the longest and most sustained growth in rail passenger usage in the last 50 years-36% in the seven years from 1994-95 to 2001-02. ... Strong growth in employment in London (up 17% since 1994), increased road congestion, a fares policy that has led to regulated fares decreasing in real terms and the increase in fuel prices in the late 1990s have all played a key part. Although poor performance has affected some rail markets recently, overall growth has continued, albeit at a slower pace.*"[21] (SRA 2003, p. 24).

Figure 1. **Franchised Rail Passenger Journeys and Change in GDP**



Source: Department for Transport, *Transport statistics Great Britain* (various issues).

The long-run growth in passenger journeys and changes in economic growth (GDP) are illustrated in Figure 1; the dependence of patronage growth on changing economic activity is clearly evident.

The attributions of the traffic growth here are interesting–the franchisor attributes the growth to *exogenous* factors rather than to the managerial and entrepreneurial flair of the franchisees. Undoubtedly, the franchisor's interpretation is not the full story, though, with service quality being improved in two important ways–increased service frequency and new rolling stock. As column 9 of Table 3 shows, there were 17.7% more train kilometres run in 2002-03 than 1996-97. Further, by June 2003, new passenger rolling stock totalling 4 385 vehicles, had been ordered or delivered, mostly

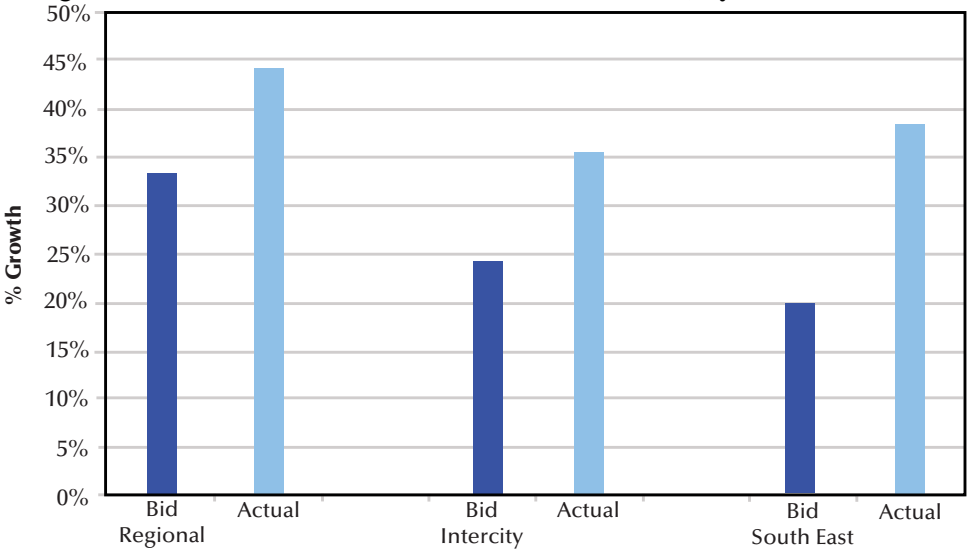
through the leasing companies; this represented 38% of the stock in existence in the last year of full BR operation (11 483 vehicles). (Rail Business Intelligence 2003, Issue 200 supplement p. 4; Department for Transport 2005, p. 107) But, *to varying degrees*, these service enhancements were requirements of the franchise contract, which therefore received higher subsidy reflecting such a commitment. (See endnote 46 for an illustration of the impact of such commitments on subsidy payments.) That is, to the extent that endogenous–service improvement–factors underlie traffic growth, it has much to do with the Treasury loosening its purse strings in the subsidy payments.

However, to the extent that the increased service frequency was a unilateral decision of the franchisee, it was by no means costless. Comparing the buoyant traffic and revenue trends with the cost trends shows that franchising *has* failed to deliver its promised business improvements. It may be that the TOCs chased revenue by supplementing train services that drew in more resources, i.e., their marginal costs were high. The financial performance of the franchises is summarised in Table 4. Thus:

- At face value, the record on delivering revenue growth has been exceptional. Taking into account the exceptional (and unanticipated) exogenous traffic growth, the aggregated revenue for the TOCs rose by 25.8% between 1997-98 and 2001-02 (SRA 2003d, p. 10). Indeed, aggregate revenue growth for all three business sectors (InterCity, London & South East, Regional) *exceeded* the revenue growth projections set out in the bid projections–see Figure 2.[22]

- However, as the SRA highlighted in 2003 (SRA 2003, pp. 48-49) the cost side of the ledger has shown a similar upwards trend. There was a 24.5% *growth* in "staff costs" and "other costs" for the same period.[23] However, simply matching cost growth rates with revenue growth rates was often insufficient for business stability, if only because, for a number of the TOCs, the bestowed level of operating costs was considerably greater than the revenue. For instance, Scotrail's passenger revenue in 1996/97 was £118 million but costs were £363 million so, for instance, a 10% rise in revenue would be £11.8 million but a 10% rise in costs would be £36.3 million. So, other things being equal, the financial performance of some TOCs' would have worsened considerably.

Figure 2. **Actual and Bid-Assumed Revenue Growth, by Business Sector**



Source: SRA 2002, p. 6.

But other things are not equal with rising costs and declining subsidy forming a pincer movement on the firms' viability. A large number of the winning bidders had undertaken to operate in later years with considerably less subsidy–the winning bidders had undertaken to work with 41% less subsidy for the 1997-98 and 2001-02 period–see rows 8b and 9 of Table 4.[24] So, for the TOCs in aggregate, the operating ratio (costs relative to revenue, row 11) deteriorated.

Some franchisees had committed to relatively conservative reductions in subsidy while others committed themselves to subsidy reductions that were considerably greater than 41% average. Table 2 sets out the very challenging improvements in performance that many of the franchises had committed to achieve. These improvements were not met because, despite the exogenous-sourced revenue growth, there was considerable cost inflation. Thus, by January 2003, the franchisor was reporting that the expected financial gains from franchising were not being realised and that a significant degree of the TOCs had negotiated terms that departed from the agreed franchise contracts:

> "Over a third of the TOCs are now operated under management contracts or other special arrangements under which franchises are provided with higher levels of support and bear considerably less risk than under the original agreements. The result is that the benefit that the public purse initially received after privatisation is being outweighed by the need to increase support levels." (SRA 2003, p. 47).

The financial status of the initial franchise contracts is listed in Table 2. It is against that background that we now review Britain's franchising policy, design and application.

Overview of Franchising Policy

Following its re-election in 1992, John Major's Government set about privatising British Rail (BR), which was the last significant business remaining in public ownership. Track infrastructure ownership was transferred to a new entity, Railtrack, though the company was placed in administration in 2001. In 2002, the assets were transferred to Network Rail (NR), a government-owned and guaranteed, 'not-for-dividend' company. Passenger train rolling stock was transferred to three new Rolling Stock Leasing Companies ("ROSCOs") that were then privatised.

The above-rail passenger train services were franchised in Britain. The government's franchising agent was the Office of Passenger Rail Franchising (OPRAF). It was primarily responsible for running the franchise auctions and monitoring the subsequent compliance with the terms of the contract. After the Labour government was elected, OPRAF morphed into the Shadow Strategic Rail Authority (with the "shadow" label being dropped after enabling legislation was passed in 2000). The SRA was more than just a name change for OPRAF. As is discussed below, the SRA's establishment reflected the greater "strategic" role. This included ensuring that franchise investments occurred, that use of track capacity was optimised and greater service and rolling stock specification–akin to a regulatory role. In 2005, SRA's role was subsumed within the Department for Transport.

The government's decision to use franchising to supply services was not unusual. Franchising of natural monopolies has been adopted in various industries, such as Britain's National Lottery, the 3G mobile telecom and television broadcasting licenses and, since the early 1970s in the USA, cable television provision.

There were two features of the rail franchising competition that feature in these other government franchises to varying degrees. Government franchises tend to have an element of "public interest" that finds its way into franchise specification. For instance, television licenses often have a qualitative aspect in the service provision, with given types and "qualities" of programme being specified. For

passenger trains, there is arguably a strong political need for the Government to ensure that franchisees will deliver certain minimum service standards. Thus, although the franchisees are expected to provide services with entrepreneurial flair, the contracts nonetheless require TOCs to provide specified minimum service levels. On average, these Passenger Service Requirement (PSR) services approximated between 75% and 90% of the BR timetable.

The second, related, feature of the rail franchising, which sets it apart from most other government franchising, is that, at current traffic and revenue levels, most operations have insufficient revenue to cover their costs, especially as the costs are based on "commercial" track access and rolling stock leasing charges. Thus, in most cases, the *predominant* criteria for choosing the winning firm was not based on the *highest bidder* but, rather, identifying the firm that offered to operate a given business for the lowest subsidy.

The franchising competition has the following core features:

- To foster interest in bidding, to lower potential barriers to entry, to discourage incumbent advantage and to facilitate the transfer of physical assets at the refranchising stage, physical assets were sold to other entities, who then offer the use or lease of those assets. Thus one consequence is that, while the total industry turnover is around £4 billion–£5 billion, the level of equity and financial debt of the franchisees is less than £200 million. (NERA 2004, p. 19). Thus, with minimal asset ownership, franchisees:
  - Pay a track access charge to NR.
  - Lease stations, which are owned by NR (except in London, although NR still manages most of the terminals).
  - Lease rolling stock from ROSCOs.[25]

Take over the TOC business from government/previous incumbent for a peppercorn amount–and, crucially, this acquisition includes staff from the previous operator.

- Most initial franchises were let for a period of 7 years although TOCs that would have to commit to leases in large numbers of new rolling stock were given terms up to 15 years.
- The franchise would tend to be awarded to the bidder seeking the lowest aggregate subsidy (measured in Net Present Value, NPV) over the franchise term, although a bidder offering additional service benefits might influence the outcome.
- In exchange for the subsidies, the franchisee takes on the revenue risks.

While government franchising for the provision of other services provided design principles for rail franchising, passenger railways nonetheless have their own unique balance of public interest, risk-taking and incentives. Because there were few comparable examples of passenger rail franchising elsewhere, Britain's rail franchising design started in uncharted waters. We can identify three Phases in how franchising policy and design evolved from the initial franchising period.

Phase I–Short contracts, low specification, high risk transfer (1995-1998)

A feature of the first contracts was the prevailing assumption that operators could significantly reduce reliance on subsidies over time. This bullish outlook pervaded the awarding of contracts and was based on a perception that strong efficiency gains and traffic and revenue growth could be

achieved. As a consequence, firms signed up to provide the PSR (and other) services, generally on a declining annual subsidy profile or rising premium.

Franchised operations were given protection from direct competition by other new, third-party operators that might otherwise "cherry-pick" the franchises' most lucrative operations. This "moderation" of competition was intended to be phased out during 1998-2002. The moderation was intended to give TOCs breathing space to achieve efficiency gains and revenue growth. Moderating competition also reduced franchisees' revenue risk: they had greater certainty about their revenue stream which would result in a lower risk premium being built into the franchise subsidy.

Phase II–Long contracts, higher quality specification, high risk transfer (1998-2002)

Until elected in 1997, the Labour Opposition was hostile to railway privatisation, including franchising. However, all 25 franchise contracts had commenced by the time Labour came to power in May 1997. In due course, the Labour Government embraced franchising; it became a cornerstone of the Labour Government's transport policy, as heralded in the 1998 Transport White Paper.[26]

This White Paper led to (what I call) "Phase II" franchising policy. The Paper identified faults in the franchising design, with specific concerns about the service specification, about investment incentives and about the service bundling:

- **Varying service standards** The franchise contracts did not have mechanisms that would enable the franchisor to raise service standards. The government considered service quality to be deficient. However there was nothing in the contracts that would force TOCs to raise their standards.

- **Investment incentives** *At the time* of the White Paper there was little evidence that franchisees were committing themselves to signing up for leasing new rolling stock. The unanticipated economic growth added urgency to developing a transport policy that would be seen to be delivering new investment: investment in rail was needed to illustrate that government was providing a viable alternative to road congestion (exacerbated by the economic growth). The Government's view was that short-term franchise lengths were inhibiting long-term planning and investment by operators". (para. 6.7, cited in House of Commons Select Committee on Transport, Local Government and the Regions 2002, para. 12) The policy was therefore to establish longer franchise terms. The longer terms were intended to encourage franchisees to commit to long-term leases in new rolling stock to encourage investment by extending the payback period on other long-term investments. As a related issue, because SRA believed that larger firms had greater capacity to fund investment it indicated that it would bias its bidder choice towards large bidders.

- **Franchise bundling** Because the quality and investment objectives required terminating franchise contracts early, the opportunity was to be taken to rethink a number of the bundles of services forming each TOC. One aspect of this was to strengthen service geographical cohesion. For example, this phase led to the Welsh and Borders franchise and the Wessex franchise. Not entirely consistent with this focus, however, was the establishment of a franchise based on a service corridor, the TransPennine Express.[27]

However, unless the variations could be negotiated into the existing franchises, the new policy would only have effect after a considerable time lag because the franchises still had a number of years to run. Rather than seek to renegotiate the franchise terms, the franchisor was instructed to refranchise all the contracts, starting with the contracts that were due to expire in the 2001-2004 period.

We should note that another major policy issue emerged for the government. Due to the over-optimistic nature of many of the TOCs' business plans, financial crises developed in a number of the TOCs as the declining subsidy profile began to hit the franchisees' finances. Refranchising would give those TOCs an opportunity to walk away from their ruinous contracts and give the franchisor a way to avoid either bailing out or terminating the franchise. Indeed, while there were stated investment and quality objectives for refranchising, Affuso and Newbery refer to the refranchising objective as "...a phase of contract 'replacement' (basically renegotiation with a more neutral name) with the aim of changing some contractual conditions". (Affuso and Newbery 2004, p. 393).

Despite considerable efforts during the period 1998-2002, only one franchise (Chiltern Railways) was ever renegotiated. Indeed, the Commons Select Committee responsible for transport reported that by the end of December 2001, none of the 18 short-term TOCs had been refranchised and "...the franchise replacement programme floundered". (*Ibid.,* para. 18).

There were other major problems that made refranchising difficult:

- Railtrack was put in administration one year after the October 2000 Hatfield accident that generated significant on-track turmoil, spotlighting the poor quality of Railtrack's infrastructure management. The consequent uncertainty would have made it difficult to establish new, long-term franchises embodying infrastructure enhancements.

- The government, through the Department of Transport, was reluctant to sanction the awarding of the new 20-year InterCity East Coast franchise. This, the then-CEO of the SRA concluded, was "a major source of difficulty" (House of Commons Select Committee on Transport, Local Government and the Regions 2002).

Phase III–Short, renewable contracts, high specification, low risk transfer (2002 onwards)

By July 2001 the government changed tack, seeking instead two-year extensions to franchises, with the Secretary of State declaring that early replacement of the franchises should be the "...exception rather than the rule". (*Ibid.*, para. 21) By this time it was evident that there was another rethink on franchising policy.

The new policy was set out in SRA's "Strategic Plan 2003". This again sought to specify higher and rising performance levels and service standards; contracted risk transfer was reduced, franchise lengths reverted to short terms (with extensions for good performance) and, again, service bundling has been reconsidered. The policy has increased the extent to which the franchises have been "micro-managed", notably in service specification and financial oversight.

Phase III policy was a response to franchises' deteriorating financial performance. While the Hatfield derailment in October 2000 led to widespread service disruption and loss of revenue for TOCs, it merely deepened and hastened the existing financial crisis faced by a large number of the TOCs.[28] This arose because of poor financial management (as discussed earlier). SRA's Strategic Plan for 2003 highlighted the ongoing shortfall in TOC performance and service quality and the rising costs of providing passenger services (and rail infrastructure). (SRA 2003, p. 10) The new policy has sought to correct what SRA's CEO believed was "...a fundamentally flawed franchise agreement" (*Hansard*, 26 Feb. 2003, para. 642). Thus the key changes were:

- **Revenue (and profit) sharing.** An important distinction between Phase III and earlier policies is that revenue risk now being shared by the franchisor; profit can also be shared.[29] The franchisor makes up a proportion of any "revenue shortfall" and takes a proportion of

any "excess revenue". In a sense, this policy formalises the way that that the franchisor had already been filling the breach when TOCs incurred losses.[30]

- **Business oversight.** To justify topping up TOCs' income when shortfalls arise, the franchisor closely monitors TOCs' costs. In so doing, however, the franchisor has reverted to a to a revenue- or profit-regulatory arrangement, or to the principal–agent relationship that underlay British Rail's supply contract with government–with which franchising was intended to dispense.

- **Service specification.** Crucially, Phase III policy saw the franchisor's role as being "...the strategic specifier of the railway" (SRA 2003, p. 12). This is a return to central (government) planning, in lieu of, for example, "...unplanned growth of services [that] has led to train path congestion in critical locations.[31] (*Ibid.,* p. 62) Thus, while SRA said it did not "...wish to stifle private sector flair by 'micro managing'" (SRA Nov. 2002), its strategy implies just that. The SRA, and the successor, DfT, benchmark TOCs' efficiency, specify the service levels, timetables, equipment and standards, set and monitor financial models and intervene in the business if costs drift significantly.[32]

- **Franchise length.** Phase III policy back-flips on franchise length. With new rolling stock being delivered (despite the apparent impediment of "short-term" franchises remaining), it is perhaps not surprising that "short" franchises were not seen as impediments to long-term commitments. Thus, franchise policy reverted to short (around seven-year) franchise terms, but with possible extended terms being flagged at the outset.

- **Franchise bundling.** Franchise bundling continues to be reviewed and restructured. ECMT (2005, p. 54) argues that a primary argument in favour of competitive tendering is that it "...permits the preservation of an integrated network of services". Nonetheless, in Britain, this "integration" has been somewhat strained and Phase III franchising once again seeks to recast the service bundling. The policy rethink again seeks to overcome inefficient use of track capacity and difficulty in resolving TOC differences at their operational interfaces. For instance, where services into a London terminus are managed by only one TOC, it is believed that the operator will find it easier to resolve conflicts within the organisation. Thus, reconfiguring the franchise bundling could enhance capacity utilisation. As a result, some franchises (notably, Central Trains) are being absorbed into neighbouring franchises and to a new West Midlands franchise while other franchises have being restructured or merged so that each London terminal has only one TOC. For instance, the "Greater Western" franchise is being formed by merging the former "Thames", "Great Western" and "Wessex" TOCs operating from London Paddington station.

Conclusions

The design parameters of the franchising system during its first decade have changed, largely *reacting* to the emerging issues in franchise service provision. Foster, an advisor to the Transport Secretary during BR's privatisation, commented in 2004 that:

> "To date, the Government's initiatives and ad hoc interventions have generally added further confusion to the contractual and incentive framework for the industry, increased costs, and have moved the industry towards re-nationalisation by shifting the risks in the industry away from industry operators and their customers and back to the taxpayer." (Foster and Castles 2004, p. 7).

When we remember these reactive responses and then consider (below) how rail franchising bears only a vague resemblance to franchising principles, it is clear that *rail* franchising is less of a "model" than a "fumble in the dark". We identified, for instance, that policy has evolved (though in a direction *away* from franchising principles) and that some design specifications have vacillated. These policy changes were generally responses to apparent design failures embedded in the original–and subsequent–franchise designs. The consequence of these changes has been repeated franchise competitions, or new interim contracts. This should not have occurred had the auctioning design *and application* been appropriate.

Consistently over this first decade the government has sought to strengthen service standards and performance. Following franchise cost escalations, network congestion and financial failures of a number of franchises, there is now greater service specification and greater financial oversight–micro-management–and so less opportunity for firms to pursue their entrepreneurial flair. There has been considerable vacillation over the length of franchises, to the extent that "short" terms were first adopted (with exceptions), then "long" terms were thought to be most appropriate, and have now reverted to "short" terms (with optional extension where performance meets certain criteria).

Finally, there has been considerable uncertainty over the appropriate bundling of franchise services or their appropriate size, with BR profit centres, marketing products, regional and London-terminals all forming the basis for TOC service bundles to coalesce; franchising competitions and yet more franchising competitions has been the consequence. If the franchisor has thought it necessary to repeatedly review TOC re-bundling–to optimise capacity and ease capacity allocation problems–it implies that it is more difficult than perceived to introduce franchising while still preserving an integrated network of services.

Competition Design

Franchising is based on an auctioning system for the exclusive right to operate given services. Most TOC businesses that were on offer involved subsidy payments to the franchisee rather than premiums to the government–see Table 3. At the outset, the following principles were adopted:

- Revenue and cost risk was borne by franchises.
- Moderation of third-party (non-franchised) competition.
- While track access charges are regulated by the Rail Regulator, increases in charges are essentially compensated by supplementary (or "flow-through") payments from the franchisor.
- Agreements on standards of performance by train operators, ROSCOs and the infrastructure manager are set in "performance regimes". These regimes formalise the physical and financial interdependence between segments of the railway industry as well as with the franchisor. The regimes seek to compensate–reduce the risk of heavy loss–arising from under-performance by other industry players.
- Train operators were to accept industrial disputation risks.
- Government accepts service level risks–the risk that contracted (PSR) service level will be required for the terms of the franchise. Government would face heavy penalties for varying the specification.

- Franchisees accept the risk of defaulting on their service contract–in the event of such a default, they would lose the contract bond, initially set at around 15% of the first-year turnover (and subsequently raised).

Most Phase I franchises excluded break-points; they were complete contracts, although some franchises had optional extensions to the franchise term if the franchisee undertook specified investments. It was originally intended that Phase I franchising would include "profit-sharing"–"excessive" profits or losses would be shared between the contracting parties.[33] While the relevant ministers at the time ruled this out, it has been introduced to Phase III franchising–along with revenue sharing.

Bidding process

In Section 2, I considered the options for franchise bidding, noting that first-price sealed bidding, in particular, can lead to over-bidding. Unless firms are bidding aggressively, Vickrey (second-price sealed bid) auctioning can temper the effects of the knowledge vacuum of sealed bidding. Affuso and Newbury report that, for the rail franchising,

> "…the original idea was to allocate rail service operation by a second-price sealed-bid Vickrey auction where each operator would submit a timetable. All the bids would then be combined and the timetable with the highest overall value would be chosen. The winners would then pay the second highest price. This option however was regarded as too complex and it was therefore rejected in favour of a simpler competitive system." (Affuso and Newbury 2004, p. 392).

We should note, therefore, that the auctioning was undertaken in an environment where firms were making bids "blind" to the values of other firms and, therefore, without the moderating effect of observing those firms' behaviour.

Qualitative assessment

As discussed in Section 2, I noted that auctioning can take the form of formal lowest/highest bid auctions, where qualitative elements of the bid are quantified; or the process can be essentially a "Beauty Contest", where qualitative elements dominate. However, the subjective aspects of judgement required in Beauty Contests can make the assessment difficult.

Leaving aside the issues of how well the Phase I assessments were undertaken (notably, the plausibility/sustainability of the business plans), the process was relatively straightforward: Phase I competition had largely ignored "quality" issues, focussing "...primarily on lowest costs and the maximum amount of risk which a bidder is prepared to take" (SRA Nov. 2002). In principle, given quality was largely overlooked, this should have made the task easier.

Phase II franchising embodied the stronger "strategic" focus on franchising service provision, sought to raise service delivery standards, to increase investments and to refranchise the numerous franchises that were encountering financial difficulties. The latter concern in itself would have been an assessment challenge in itself, in seeking to put right the assessment failures of Phase I. But Phase II also had the ambitious–but unspecified–objectives in investment and performance and the competitions resembled Beauty Contests. The transport Select Committee noted that the SRA failed:

> "… to state clearly what it wanted from bidders. The Authority produced its first guide to franchise replacement only after bidders had pre-qualified for the first replacement franchise

> round. That was followed by a revised version of the guide only a few months later. … According to Great North Eastern Railway, bidders were invited to embark on "a costly journey without knowing the conditions of carriage and unclear of the final destination". … The [transport] Department considered that the Strategic Rail Authority's approach of, by and large, leaving train operators to make proposals on matters such as rolling stock replacement had resulted in a range of incomparable bids that were difficult for the Authority to evaluate. (House of Commons Select Committee on Transport, Local Government and the Regions 2002, para. 19)."

In this context, it is easy to appreciate why the Phase II re-franchising got bogged down. The SRA sought to address "quality" but not giving guidance on the relative ranking of different attributes or understanding itself how to compare bids with high qualitative assessments.

Transparency and clarity in selection criteria is important for both franchisor and bidders. If it was the case that the weightings attached to the Beauty Contest characteristics of the franchise competition became clearer to the *franchisor* after Phase II franchising, it was still apparent one year later that the *bidders* were not necessarily any clearer on those values. In 2003, the rail franchisee, First Group, failed to be short-listed for the Greater Anglia rail franchise, a new franchise bundling that was subsuming its apparently well-run "Great Eastern" franchise. First Group considered appealing to the High Court over its exclusion. The SRA responded by indicating that its franchising process had changed. *The Guardian* paraphrased the SRA as saying that "The company had lost out in a fair competition, in which applications were graded on criteria ranging from reliability to rolling stock, investment and ambition" (The Guardian 2003) First Group subsequently acknowledged that it had not appreciated the new selection criteria. But, contrary to the principles of franchise competitions, the selection criteria weightings are not provided to bidders:

> "Nicola Shaw, the SRA's operations director, insists there is still more to it [bidder selection] than price. A panel of experts assesses each proposal for "deliverability", she says, considering whether the train operator can do what it promises. They give each bid a set of scores, usually out of 100, in a "complex matrix" taking in everything from rolling stock to train frequency, staffing and risk." (The Guardian 2004).

However, "...the scoring system is confidential [and] applicants are therefore bidding blind". (Modern Railways 2003) As I noted earlier (page 50), given that the success of the auctioning depends on bidders knowing the weights applied to the different attributes of an auction, we cannot have any confidence that the auctioning process was choosing the most efficient firm. It should also be noted that the success of the franchising depends on the winning bidders delivering what they promise. But, as noted later in this paper, franchisees do not always deliver specified service standards. Consequently, one qualitative selection criteria should include an assessment of the incumbent's track record.[34]

By contrast with the Beauty Contest characteristics of Phase II, the Phase III bidding process sets a high degree of specification, making bids easier to compare. For example, bidders are required to submit a core proposal, which would make the bids directly comparable; bidders may also provide separately-costed optional extras. Of course, this high specification restricts entrepreneurial activities because it leaves the business planning with the franchisor. However, the specification makes it easier to compare bids and to establish their robustness and plausibility. In this maturing environment, with most participants now having considerable franchising experience, we might expect more realistic bids.[35]

I note that the franchisor has promised that Phase III bid evaluations and contract negotiations will be "...conducted more expeditiously" (SRA Nov. 2002). This might mean lower bidder costs, thereby increasing interest in bidding. Further, unlike Phase I, the franchisor intends to disperse future competitions so as to reduce participants' fatigue (thereby increasing competition) and smoothing franchisor resource needs. (SRA 2003, p. 65).

Competitive Market

Scale of business

To facilitate the market for rail franchises, it was necessary to horizontally separate the BR business. By splitting the business, the TOCs offered for franchising would be of a scale that would not be beyond the financial or operational managerial capabilities of bidding groups.[36] It might also be argued that having small TOCs limits the impact of franchise failure.

I have noted already that the policy on service bundling has prevaricated, being based on BR profit centres, business markets (e.g., InterCity routes), single-terminals and, now, on matching below-rail (Network Rail) regional mapping. I have also noted that ECMT (2005, p. 54) considers a virtue of franchising is that it "...permits the preservation of an integrated network of services". Perhaps because Britain's network is complex, this principle is less easy to apply in practice.

There are two related issues here, which have become manifested in operational experiences of the franchised railway:

- The size of network that captures economies of scale.
- The effect of network economics.

Economies of scale

Preston (1996, p. 10) notes that operators such as BR exhibited decreasing returns to scale but increasing economies of density. He then concludes that the optimum break-up of BR would be around three to four network operators, so based on that research we could conclude that the carve-up into 25 franchises is excessive. SRA acknowledged the "...view within the industry that the creation of so many privatised entities has exhausted the supply of high quality managers that the industry needs to be successful". (SRA 2002, p. 7) Nonetheless, carrying out the SRA's rationalisation plan would still leave 19 TOCs. Apart from this insight here, the economies that can be captured from having just a handful of operators arise due to "...better use of terminal facilities, vehicle and crew as more services are operated." (*Ibid*).

Network economics

While Preston is uncertain as to the change in the level of transaction costs that arises with the split into 25 TOCs (*Ibid*, p. 5)–it seems logical to assume that different TOCs will have profit self-interest that will be stronger than the internal transaction activities they replace. Thus the "excessive" horizontal separation of the above-rail activities increases transaction costs at the point of physical interface between the TOCs.

It is also the case that each firm seeks to optimise its operation rather than optimise network usage and this has an impact on transaction costs and on competing network capacity demands (which could result in protracted negotiations to try to resolve). This behaviour has been exacerbated by track access charges that encourage network usage. From 1995-96 to 2004-05, loaded train kilometres on

the track rose by over 22%. (DfT 2005). Access charges are largely invariant with usage; the low marginal access charge has encouraged operators to operate "marginal" trains. Because firms then optimise their own track usage and operate marginal trains, the network has become very congested in key areas such as London terminals.

Recognising these problems, one role identified for SRA, which took it beyond a mere franchise awarder and monitor, was to ensure that railways were planned and operated as "...a coherent network, not merely a collection of different franchises". (House of Commons Select Committee on Transport, Local Government and the Regions 2002, para. 6). Two consequences of the capacity problems have been for the franchisor to adopt a more interventionist approach to capacity utilisation, by increasingly specifying each TOC's service levels on key routes. This network-based approach to allocation and use of track capacity is formalised in the franchisor's Capacity Utilisation Policy (CUP) and Route Utilisation Strategies. The CUP is driven by the franchisor and it aims to optimise the use of existing rail capacity. The SRA described it as:

> "… a return to joined-up planning, route by route, in place of the first-come, first-served philosophy that led to the network being over-stretched." (SRA 2003b, p. 62).

The other policy action on capacity utilisation has been to move to single TOCs for each London terminal, notably at Liverpool Street and Paddington. The SRA believed that this would enhance network utilisation by "...facilitating optimum use of capacity, provide a simplified, more understandable and impartial day-to-day interface with the passenger and improve recovery from service disruption" (SRA 2002). For similar reasons, there has been re-bundling of other franchise services, to establish more single-usage of infrastructure, thereby reducing transaction costs and making capacity allocation easier.

This re-bundling task is not straightforward, however, and network synergies and market patterns may be damaged in order to streamline the horizontal and vertical interfaces between TOCs and Network Rail. Thus, at formation, Railtrack/Network Rail moved its structure from the business-based vertically-integrated InterCity, Network SouthEast [London] and Regional Railways, to geographical regions. *Modern Railways* notes that "DfT policy now is to align franchises with NR routes". (Modern Railways 2005) Thus, this specific franchise re-bundling will reduce the complexities at the interfaces but will take away the market-based focus underlying the origins of franchise bundling, with its roots in the sector-business focus of the 1980s.

Bidder interest

As in the case of any other auctioning, the success of the bidding comes from attracting sufficient interest in TOC businesses. An important consideration for attracting firms to consider bidding was whether or not to allow BR to bid for the businesses. Thus, we should note that, as a major departure from typical competitive tendering policy on continental Europe, the franchising director did not permit BR to bid.[37] Exclusion meant leaving BR–an experienced train operator–out of the competition (although ex. BR management teams did bid and were part of a few of the winning consortia). Further, exclusion reduced the potential number of bidders for any TOC. However, if BR was out of the competition, it might have encouraged firms to bid if they believed that an incumbent government operator would have unfair advantages arising, for instance, because of BR's better insights into the TOC operation or potential to cross-subsidisation of the franchise from elsewhere in BR. Whether it was a game of bluff or not, NERA notes that:

> "Several bidders prepared affidavits stating that they would have been severely discouraged from bidding or would not have bid if the ban had not been in force." (NERA 2004, p. 22).

In April 1997 the Phase I franchising process was completed. There were 4 or 5 groups interested in bidding for the first two franchises but interest rose as the franchising process proceeded and one of the last franchise auctions attracted 8 bidding groups. The initial hesitancy in bidding probably reflected the general uncertainty about the ability to influence business performance. This is particularly the case because franchising transfers revenue risk as well as cost risk–in general, it is presumed that operating costs can be influenced more easily than passenger train revenue. (See NERA 1993, p. 12).

The number of bidding groups in itself does not necessarily reflect the level of competition and, no matter how many firms initially bid, the short-list tended to be reduced to a manageable number of three to five bidding groups. However, for Phase I bidding it seems that as successive franchises were awarded, the keenness to win–at any cost it seems–rose significantly. The first Franchising Director noted:

> "In each case the level of subsidy was ultimately set by competition and after people saw the first franchises sold, saw the reception of those sales on the stock market, saw that serious companies were interested saw the comment of the press, they became keener to bid and put in keener bids to me. (Salmon, cited in Shaw 2000, p. 123)".

Thus early bids were won with relatively generous subsidy profiles (subsequently borne out by profit levels) although given the subsequent exogenous growth was unanticipated, this does not mean the early assessments were deficient (as shown in Table 1). In Table 3 (columns 6 and 7), I show that the average improvement committed to in the first franchises to be awarded was considerably less than the improvements for later franchises. On the basis of the improvement sought and the financial outcome (Table 2) resulting, a plausible interpretation of these later franchises is that they were subject to "winner's curse". This "curse" arises because, in focusing purely on winning the competition, the winning firm behaves irrationally, bidding beyond what it is financially and operationally capable of delivering. Of course, we should also note that this is not irrational behaviour if the firm responds to moral hazard, confident in its belief that having won the competition it will be able to renegotiate on better terms.

In 1997, a superficial examination of the TOC commitments might have led to a conclusion that if there was any fault in the competition, it lay in insufficient competition for these first few franchises–because the required improvements for these TOCs were considerably less than the committed improvements of later contracts. However, as was noted above, it was these latter contracts that were based on implausible assumptions. Indeed, the National Audit Office (NAO) found that committed improvements of the initial contracts were close to the subsidy levels that the franchisor had estimated before the competition commenced. That is, if the *a priori* estimates are plausible, then the bidding process *was* competitive and the business plans *were* achievable. See Table 1. Thus, it seems that there was sufficient competition generated. ECMT (2005) notes that there has been only one auction when the contest has been halted due to insufficient competition. (ECMT 2005, p. 59) Undoubtedly, competition was relatively strong because the development of separate infrastructure and rolling stock markets reduced the barriers to entry.

Interest in subsequent refranchising competitions appears to have remained strong although the franchise holding consolidated.[38] While some bidders disappeared from the market due to mergers of market participants, new continental Europe-based firms entered the market. Market interest has also been retained despite financial difficulties arising in a large number of the TOCs–though it may be more appropriate to argue that interest in rail franchises has been sustained or even buoyed because government rescued the failing franchises.

Table 1. **Comparison of Annual Subsidy Estimates to a Priori Estimates, First British Franchises Awarded (£m)**

TOC	A priori estimate	Agreed average annual payment for 7-year franchise
InterCity Great Western	40.8	43.3
LTS Rail	27.0	23.2
South West Trains	46.2	49.0

Source: Based on table in *Local Transport Today*, 7 November 1996, p. 11, from NAO 1996.

The holding of a number of concurrent competitions and closely-following competitions could well have led firms to restrict their involvement, given their limited management resources. As noted, Phase III franchising will see the adoption of a "rolling franchise replacement programme of two or three franchises a year" to ensure that bidder interest is not dampened due to bidder fatigue.

Contract length

A central tenet of optimising contract length is that the incumbent can build more effective barriers to entry the longer the firm holds the franchise; this undermines the efficacy of the refranchising competition. As a consequence, a short franchise is preferred and has been a feature of Phase I and III franchising.

However, there are downsides to short franchises. First, if the franchise competition is costly (for franchisor and bidders) then a "short" franchise term requires those costs to be recovered over a shorter time period. Rail franchising bidding costs are not minor: one firm estimated its bidder costs were between £2 million and £4 million (€2.9 million - €5.8 million), with another citing cost of £3 million (€4.4 million). (House of Commons Select Committee on Transport, Local Government and the Regions 2002, footnote 53; Modern Railways 2002, p. 4) For the smaller franchises, such a cost might represent as much as 10% of a TOC's annual revenue (see column 4 of Table 3).

A less clear-cut downside of short-term franchising has been that it dampens incentives to invest. This was the thinking behind the setting of franchise terms for some franchises (such as the InterCity West Coast TOC), where longer contract terms were awarded in return for rolling stock investments. The short terms of Phase I franchises was put forward as a reason for TOCs and ROSCOs reluctance to commit to new rolling stock. There was a fear that stock (with a commercial life of, perhaps, 30 years) would not be required after the initial (7 year) franchise. However, as Welsby and Nichols observed in 1998:

> "... the potential asset owners [ROSCOs] have begun to understand that the risk that the network might be seriously reduced is very small and therefore a continuing market [for the stock] is highly probable." (Welsby and Nichols 1999, p. 74).

Consistent with these authors' perspective, it is notable that subsequently, when the SRA ordered some new south-of-Thames trains from manufacturers, the Authority used its powers (Section 54 of the Transport Act) to guarantee to rolling stock financiers that new franchisees would use the stock. In this context, NERA (2004, pp. 21-22) outlines the transfer of management of TOCs, noting that processes are established to ensure that liabilities are not transferred to the new management but that the outgoing firm can realise the remaining value in any of its investments. To the extent that

"...generally handovers have worked well" (NERA 2004, p. 21), it might be argued that long-term investment commitments would not be impeded by short-term contracts.

Further, Affuso & Newbury made an assessment of the franchise commitments and concluded that the short-term franchises are *more likely* to make investment commitments than long-term franchises because of the ever-looming bidding-competition threat. They analysed rail franchise investment patterns and identified "...a pattern of investment which increases in response to competitive forces [such as occurs with shorter franchise terms]" (2002, p. 91). Moreover, the authors argue that because the investment inevitably comes on-stream towards the end of such a franchise term, the investment inevitably raises rivals' entry costs.

Nonetheless, the apparent investment problems in the late 1990s (because TOCs and ROSCOs appeared reluctant to commit to new rolling stock) became an important rationale for the long franchise lengths embodied in Phase II franchising policy. The longer terms would have enabled TOCs to sign contracts with ROSCOs that gave extra time for TOCs to commit to new stock and to be around for long enough (when the stock is eventually delivered) to earn a return.

However, Phase III policy reverts to the relatively short terms of 5 to 8 years, but *with* possible extensions. It is essentially a hybrid of Williamson's incomplete long-term contract and the recurrent, short-term contract. Thus, the de facto break points provide the franchisor with planning flexibility and a bargaining tool to encourage TOCs to maintain good service standards; and provide TOCs with an opt-out if financial returns are too low. However, while the short terms maintain bidder interest by capping incumbent advantage, it may encourage firms to overbid in the initial competition: the optional extensions can make the contract appear like a long-term contract. That is, if the firm does not win at the outset, it may lose the opportunity to bid in the foreseeable future.

But British experience shows problems with contract inflexibility even when short-term franchises are used. The Phase I franchises caused problems for TOCs as well as for the service specifier (the government) when the assumed economic environment developed differently from assumptions made at the bidding stage. As noted by Gómez-Ibáñez in Argentina commuter rail franchising, unanticipated events can arise early in a franchise, whether it is a short-term or long-term franchise. Thus, in Britain, the very surge in economy-driven patronage in the late 1990s–contrary to rail reformers' expectations of continued subdued traffic that had been evident from the late 1980s–provided an urgent need for a strategy (pricing, investment, service levels) that was at odds with the franchise "levers" that could be used on the TOCs.

Even ignoring this hindsight, given the uncertainty surrounding the franchising market–the lack of knowledge about financial and operational performance, the incentive structures and the monitoring systems to deliver the service–we could argue that the "short" seven year franchises were still too long.[39]

Bid Assessment

The initial rail franchises were usually awarded to the bidder seeking the lowest subsidy (in NPV terms): "...the broad principle was that the bidder requiring the least subsidy was regarded as offering the best value for money and therefore won the franchise". (SRA 2002).

But there was an equally important concern: just *how* deliverable were the promises made in the bids? Welsby[40] notes that:

> "As a result of pressure on the privatisation timetable the Franchising Director undertook no systematic benchmarking of the levels of improvement that a franchisee could reasonably be expected to deliver... This was the case whether one looked at the issue from the point of view of what was offered by the franchisee or what was required from the Franchise Director to enable the franchisee to deliver, e.g., is the necessary capacity available." (Welsby 1997, p. 5) "…To the best of my knowledge no-one has added up all the aspirations of the franchisees to determine if they are deliverable on the supply-side." (*Ibid*, p. 7).

The pace of the initial franchising process probably prevented lessons to be learned. Had the process been spread over several years, the experiences arising from the initial franchises could have informed both franchisor and potential bidders about the pitfalls of the auctioning design and reduced the uncertainty around the potential for improving revenue and efficiencies, thereby enhancing the auctioning competition by broadening the bidder market.

One implication of this failure to assess the soundness of winning bids was that the franchisor was left exposed to the risk of franchise failure. Such failure can result in service disruption, the need to install a transition operator to maintain the service, and the need to incur the time and financial expense of refranchising. Inevitably, franchisor and franchisee will have different levels of acceptance of risk. Firms will be more likely to submit high-risk bids if they believe that the franchisor will seek to avoid the consequences of failure through contract renegotiation. As we noted in the previous section, in its television franchising, ITC applied a "low revenue scenario" to their risk assessment: the bid was deemed to be sound if the business survived. Welsby's insights imply that in Phase I the assessments fell far short of this approach.

Amazingly, the franchisor has subsequently passed up the opportunity to learn from what is achievable in bids–to judge private-sector operations–when SRA took control of the South Eastern TOC (after control was taken from Connex). Public operation of this TOC might have provided the franchisor with robust benchmarks. Such insights should be more reliable in bid assessment than artificially-assembled "public sector comparators".

As Welsby reveals, the initial bids were not accurately assessed for what could realistically be achieved financially and operationally; the subsequent decision not to use South Eastern insights suggests the franchisor still gives insufficient attention paid to understanding TOCs. Critically, this superficiality has led to a number of problems:

- Many TOCs were awarded to bidders who had made financially unsustainable commitments.
- Operationally, service levels were set at levels that would undermine the integrity of the national timetable.
- Specification of service standards (or "quality") was seen to be too lenient to operators.

Each of these problems is now considered.

Financial sustainability

A significant number of the TOCs were franchised to companies that had implausible business plans *from the outset*. Richard Bowker, former Chairman of SRA, stated"

> "It is just possible that the original privatisation model got it wrong. There were some amazingly heroic assumptions made about the costs that could be taken out and the income that could be grown." (The Daily Telegraph 2003).

As is indicated in Table 3 (column 6), there were very diverse commitments to improve the TOC's finances. Given a historical post-war perspective of static or declining traffic and the tight finances of the Thatcher years (which arguably provided strong impetus for productivity gains), it might be assumed that there were only modest opportunities remaining for revenue and cost improvements. Indeed, we could argue that while the subsequent failure of one-half of the original franchises looks bad, the outcome would have been considerably worse had the unanticipated economic growth not generated a surge in traffic.

The average improvement required for the franchise's net finances to remain unchanged between the initial year and 2002/03 can be compared to the order in which the TOC was franchised (Table 3, columns 6 and 7). It is clear that the financial commitments of the early franchises were far more cautious than later franchises. The conservative aim of the early bidding–reflecting genuine uncertainty about the businesses–is clear when it is observed that while Stagecoach committed to a very modest improvement of 2% per annum for South West Trains (compared to later winning bids) the highest bidder sought to more than double Stagecoach's subsidy (*Local Transport Today*, 1996, p. 11). This, again, shows the type of outcome resulting from sealed bids. This aspect of the original rail franchising approach has proven to have a pervasive effect over the experiences with the process.

Apart from exogenous (chiefly economic growth) factors that were beyond TOCs' control, financial performance could, to varying degrees, be improved with revenue growth through marketing and enhanced service quality. As column (8) of Table 3 indicates, there has been varied success in increasing traffic (measured in terms of passenger kilometres). On average, InterCity traffic rose 2.3% per annum through to 2002/03; the equivalent figures in the London & South East, and Regional services, were 4.7% and 3.2%, respectively.

In principle, revenue *might* be increased by raising fares. However, to do this, TOCs must be free to vary their prices; and the demand must be price inelastic. TOCs do not necessarily face these parameters. First, SRA price-regulates some types of product (as is typical of monopoly-type franchising), covering around 40-45% of fares. Season tickets and "Saver" return tickets, in particular, were regulated. SRA applied an RPI-X fare cap between 1995 and 2003. Over that period, London & South East TOCs' regulated real fares were virtually unchanged, as too were regional 2nd class fares. However, of unregulated real prices, "long-distance" 1st class fares rose by 36% and 2nd class fares by 15.2%. "Regional" 1st class fares rose by 12%.

Where fares increases are permitted, revenue will rise if demand is price-inelastic. However, one implausibility with TOCs' business plans was that the businesses with the most bullish financial projections ("Regional" franchises) were also the businesses with the least potential for pricing up. Most InterCity and London commuter TOCs were franchised before the Regional TOCs and, at the earlier stage in the franchising, bids were characterised by more cautious projections. Two features of the InterCity and London commuter TOCs are important. First, London commuter and InterCity areas are strongly influenced by economic growth (and this has worked in the franchisees' favour as economic growth has been strong). Secondly, London commuting is largely protected from car competition by ever-increasing road congestion, expensive inner-city parking charges and the central London Congestion Charge; InterCity is predominantly high yield traffic, competing with car traffic over medium distances and with airlines over long distances, but (according to research undertaken by Owen & Philips in the 1980s) is price-inelastic on a number of flows. For TOCs in these geographical/market categories, then, there is some justification for reasonable bullishness in revenue growth from unregulated tickets.[41]

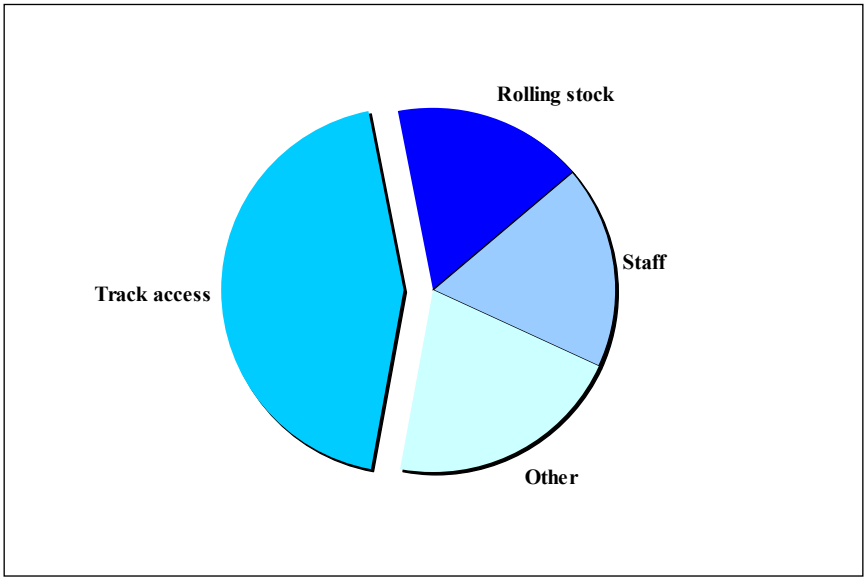
Regional TOCs do not enjoy the same GDP-based stimuli to demand or price insensitivity. It is counter-intuitive, therefore, to find that the most bullish financial commitments were made by firms

bidding for Regional TOCs. It is surprising that the franchisor accepted the bids. See Table 2. Regional operations are typified by cross-country, inter-regional flows, provincial city commuting and by rural branch line flows. The increasing dispersion of the labour market in cities, relatively subdued provincial economies, static rural movements and low rail service frequencies mean that the sector typically offers a significantly inferior product to the car and faces flat demand prospects. Volumes are low and yields–reflecting few business or full-fare ticket sales and increasing competition from the car–are also low. Given the relatively poor demand and pricing-up prospects, projections should be bearish. The relatively low levels of traffic mean that the cost recovery is low, as indicated in columns (4) and (5) of Table 3.

These prospects were not reflected in bidders' financial plans, which involved relatively high-risk business plans. For instance, the successful bidder for the Regional Railways North East TOC assumed it could make good a reduction of £77 million in its annual subsidy between 1996/97 and 2003/04 even though its total initial passenger revenue was only £76 million. In other words, short of a miraculous growth in revenue, the bidder placed a great reliance on a strategy based on achieving significant reductions in its initial £294 million costs per annum.

However, TOCs have relatively little room to adjust their costs–most of their costs are effectively fixed. In Figure 3, track access charges form around one-half of the TOCs' operating costs and (until 2001) around 90% of these charges were invariant with track usage.[42] Rolling stock leasing charges represent around one-quarter of their costs; they can be assumed to be fixed, although these costs are likely to rise significantly as new stock is introduced.[43] In effect, then, franchisees' variable costs were only around one-quarter of their total costs. Even here, there was only a limited degree to which staff numbers, salary levels and train maintenance costs could be varied–especially if many of the potential productivity gains from modern technology and work practices had already been exploited during BR operation. (For example, Monopolies & Mergers Commission (1987) provides comprehensive examples of the productivity enhancements achieved and in the pipeline in the late 1980s.) Even savings in rolling stock maintenance from new stock might be, at best, matched by increased leasing charges in the new stock.

Figure 3. **Average Franchise Operating Cost Profile (1996-97)**



Source: British franchise operating parameters. Data from Strategic Rail Authority, 2003, pp. 49-51.

Irrespective of the flaws in the assessment process, it might have been expected that a plausible benchmark of financial performance would have been that some modest reduction in costs would have been achieved. Thus, no assessment could have foreseen that the actual outcome was an *increase* in real total costs of 1.6% per annum between 1997/98 and 2001/02–see Table 4. There are two reasons for this:

- There has been an increase in real salaries (6.4%), itself probably a symptom of relatively strong economic growth.[44]

- There has been a significant increase in output (train-kilometres–see column 9 of Table 3). However, this has not been achieved simply by using existing resources more intensively. More resources have been brought in and this has increased costs. Thus, between 1997-98 and 2001-02, staff numbers actually rose by 8.3%, whereas the bid plans assumed a reduction in staff of 10.2%.[45] Consequently, by 2001/02, staffing was 28.9% higher than projected. To put these figures in context, this higher staffing level was far greater than the additional passenger kilometres (15.0%) or train kilometres (17.7%).[46]

While the cost drift might have been unexpected, it is nonetheless clear that the assessment process of Phase I business plans was deeply flawed and franchise failures were inevitable. Welsby notes that "...some [successful bidding] companies [were] offering over twenty-five times the subsidy improvement" made by another successful bidder despite the fact that Welsby believes that, if anything the conservative winning bidder had more potential to achieve improvement than the more optimistic bidders.

Nonetheless, the variance in the bids in an environment where there is limited scope to make dramatic improvements should make us suspicious as to whether the auctioning system achieves its aims of delivering a service of a specified standard while capturing excess profits from the winning bid. The answer hinges on whether bids should be judged on price alone, or whether "deliverability" should be part of the equation.

The National Audit Office indicates that the franchisor has learned from this lesson and incorporated the experience into how it assesses the bids:

> "The SRA learned from the experience of the earliest franchises, adopting a new policy of evaluating bids to take account of what was realistically deliverable..." (NAO 2005, p. 3).

However, as we illustrate below (p. 87) with the 2005 InterCity East Coast franchise, this lesson does not appear to have been learned. Further, in December 2005, Stagecoach conceded defeat in its bidding for two franchises, with its CEO describing the franchise replacement market as 'toppy', with Rail Business Intelligence (RBI) paraphrasing him as saying that "...bidders [are] prepared to submit aggressive bids to win business". (RBI 2005, No. 260, p. 8) It seems that a franchise can still be awarded on the basis of lowest cost/highest premium, but not "deliverability". Consistent with this, RBI (2005, No. 260, p. 8) reports that senior officials have stated that "...lowest cost is now the key determinant of success". NAO states that the franchisor is reconsidering its franchising policy, an aspect of which seems to give no protection at all for public assurance of deliverability, namely, the view of:

> "... the appropriateness of relying on civil servants and consultants to assess what is realistically deliverable, in terms of cost, revenue growth and service provision, rather than on bidders' own judgements based on their experience of running train and bus services." (NAO 2005, p. 54).

As noted above with ITC television licences (page 55), it is up to the *franchisor* to establish the deliverability and robustness of bids. It would seem that, on this issue alone, that if the franchisor does not have the wherewithal to judge the rigour of its bids, then rail franchising is fatally flawed.

Operational integrity

It is clear that Phase I franchising did not provide a process that ensured that the fragmented parts of the railways would come together as a network that operated in a coherent and complementary way. SRA's Franchising Policy Statement (November 2002) stated that:

> "... after an early improvement post-franchising, service performance and overall reliability has worsened. In part this is a reflection of the fact that the network is now operating at capacity on many strategic locations and routes."

Clearly, one consequence of having multiple TOCs at individual London termini meant that, *in the absence of access charges that were responsive to congestion*[47], track capacity would be unlikely to be optimally used. Nonetheless, there seemed to be a more immediate concern, with the bid assessment seemingly unaware of the future conflict. Again, Welsby commented in 1997 that:

> "To the best of my knowledge no-one has added up all the aspirations of the franchisees to determine if they are deliverable on the supply-side." (Welsby, p. 7).

Such aspirations, and subsequent unilateral service expansions, impacted on the way that the network performed so, to repeat the earlier observation, while ECMT (2005, p. 54) argues that the "...principle [sic] argument for competitive tendering is that it permits the preservation of an integrated network of services" while still introducing competitive services, nonetheless the franchising design needs to incorporate mechanisms to ensure that that constituent parts of the system can still coalesce into an efficient network.

Thus, one of the more notable examples to emerge was the conflict between TOCs on the West Coast Main Line, where Virgin's aspirations for increased train frequency clashed with other TOCs' service frequencies. Even where additional services could be squeezed in, this had its impact on service reliability. The SRA's CEO commented that "...the problem is that over the past five or six years a very significant number of additional services have been put on this network and it does not function correctly" (*Hansard*, 26 Feb 2003, para. 564).

Growth of patronage underpins the franchise business plans: some of that traffic must be accommodated on existing trains. This is especially relevant for London, where a significant number of commuter trains and lines might be assumed to have been close to (or at) capacity *prior to* the commencement of the franchise and the "winning" bullish traffic projections.

Service standards

Passenger satisfaction surveys conducted throughout the post-franchising period have pointed to increasing passengers' dissatisfaction with the quality of service. When products or services cannot be standardised, it is inevitable that bids will be assessed as if each bid's service is homogenous. Consequently, subsidy bids may vary because of differing standards.

Because Phase I franchise standards were neither assessed nor set substantively into the contract, it proved difficult to manage the contracts. Standards on punctuality, reliability, train length–backed to an extent by a "performance regime" of bonuses and penalties for exceeding or failing given

benchmarks–proved insufficient.[48] As Welsby and Nichols observed, "Significant problems arose in trying to ensure that franchisees faced incentives that would lead them to manage their operations in an appropriate manner" (p. 65).

Phase II re-franchising aimed for "more demanding performance standards". Bidders were not required to submit (what is now called) a "core proposal" and bids incorporated very diverse qualitative features. Consequently, the franchisor faced "...a range of incomparable bids that were difficult for the Authority to evaluate" (Select Committee on Transport, Local Government and the Regions, para. 19) and it became impossible to realistically rank the proposals. Phase II (re)franchising faltered. The franchisor has since acknowledged that it has not been able to achieve "...a universal improvement in quality of service". (SRA 2002).

Competition Transaction Costs

It is clear from the numerous refranchising auctions that have been undertaken since the late 1990s that the time (including crucial management time) and financial transaction costs involved in franchising are considerable. This has important consequences for the efficacy of franchising. Where competition costs are significant, it will temper the franchisor's resolve to levy the ultimate sanction of terminating a non-performing franchise contract and will have been a consideration in the franchisor's rescue of franchises from the late 1990s. The rescues gave it breathing space to consider other strategies, postponed or saved on the considerable time, management and legal resources of refranchising.

Arguably, the initial competition was undertaken in too short a time, with the first franchise commencing in February 1996 and the last in April 1997. Nonetheless, the National Audit Office found that the directly attributable cost of external advisers to support the franchisor in awarding the initial three franchises was £6.6 million, a not insignificant amount considering that in-house franchisor staff costs should be added to that amount (NAO 1996a).

However, as the first efforts to refranchise began in 1998, a year after the last Phase I franchise had been awarded, the time and, therefore, the cost involved in the franchising competition began to rise. As noted earlier (p.74), one spot estimate of a bidder's financial refranchising costs was in the order of £3 million. Another source reports costs of £1 million. (Jupe and Crompton 2006) The bidder must set such costs against the likelihood of winning–if the odds are long, such costs will diminish the bidder market.

At the start of Phase III policy, the SRA acknowledged that "...the costs of transactions, with teams of lawyers and accountants on all sides, have become far too high". (SRA 2003b, p. 60) The Phase III policy shift to greater franchise specification should reduce these costs by reducing Beauty Contest aspects of the bids. Greater consistency of bids should enable easier comparisons of bidders' proposals, reducing the interaction needed between bidders and franchisor. Nonetheless, the trade-off in this increased specification is less business latitude and, so, less net benefits of franchising.

Specifying, Monitoring and Enforcing Outcomes

A characteristic of the passenger rail service, which has a pervasive effect on the freedom with which business latitude is given, is that many of the TOCs are loss-making. Welsby and Nichols argue that this results, in the first instance, in greater specification; we can see that monitoring and enforcement then follow naturally from that:

> "Transferring a loss-making activity to the private sector meant that the specification of the service to be provided had to be much more tightly defined in order to prevent the new operator improving his financial performance simply by reducing output or reducing quality." (Welsby and Nichols 1999, p. 61).

Service specification

At the outset, franchisees were given considerable latitude in what and how they delivered train services, albeit that the core (PSR) service level was defined. Thus we can see a model that simply "...sought to create a set of business opportunities, subject to regulation, with obligations not to let services fall below specified base levels" (SRA 2002, p. 11). Operators might have committed in their bid proposals to provide additional services–at least for a trial period. Certain trains were required to be at least a specified capacity; TOCs were penalised for running shorter-than-specified trains. TOCs were also expected to add capacity to overcrowded trains (where and when feasible). The irony of the high degree of specification was not, however, lost on BR's Chairman who observed of the Phase I franchising that:

> "… it was plain that the specification of the outputs from the passenger railway would be much tighter in the private sector than in public ownership. This outcome was a remarkable contradiction in the light of the instruction that the Franchising Director has also been given to develop criteria for the allocation of subsidy, implying that the service patterns to be supported would be derived from objective criteria rather than a roll forward of the existing timetable." (Welsby and Nichols 1999, p. 66).

The consequence of TOC performance failing to meet specifications or to respond adequately to incentives has been that the franchisor has increased its service specifications. This was sought in the largely-aborted Phase II franchising. Thus, as part of Phase III franchising policy, the franchisor indicated that it

> "… will be more prescriptive than in the original model about the services that TOCs must operate. This covers both the timetable and train formations. New specifications will allow services to be enhanced where there is a sound business case for doing so, and reduced where they are crowding the network or are ineffective in cost–benefit terms." (SRA 2003, p. 64).

Thus, if we return to Welsby and Nichols' observation that the first franchising contracts involved greater specification than the previous BR operation, then the irony is even greater that such specification has increased yet further.

Performance

Despite this relatively high specification, it was apparent from an early stage that the mechanisms that encouraged compliance with the standards were proving to be either ineffective or deficient in delivering the contracted standard:

> "Significant problems arose in trying to ensure that franchisees faced incentives that would lead them to manage their operations in an appropriate manner." (Welsby and Nichols 1999, p. 65).

Where passengers are largely captive to the train service, franchisees do not face the consequences of poor service delivery, that is, where demand is price-inelastic. In any case, where

revenue is low relative to operating costs, the TOC may have more incentive to attempt to cut costs than to chase revenue. This is particularly the issue when the cost savings can be made on a feature of the service where performance is largely subjective, or where there are no performance measures or where the penalties for non-delivery on performance are less than the cost savings that can be made.

Nonetheless, the SRA concluded in 2003 that due, in part, to "poor management" and to "...deficiencies in the original franchise agreements", problems with poor standards persisted (SRA 2003, p. 26). Phase II refranchising had sought to issue new contracts with higher standards and specifications. However, Phase II also sought to lengthen franchise terms which, arguably, would have reduced the incentives to comply because incumbents would not face near-term loss of franchise in a forthcoming refranchise competition.

SRA argued that the original franchise agreements "...had set performance levels too low and lacked service quality standards" (House of Commons Transport Committee 2004, p. 39). As a consequence, Phase III policy sets graded levels of performance for punctuality, cancellations and train capacity.

This latest policy also links performance to franchise term, by offering an automatic three-year extension if the TOC *consistently* maintains the target level of performance; this may have a similar inducement to compliance as including past performance in the assessment of the incumbent's bid in any re-franchising (as discussed earlier). Ironically, however, Phase III revenue risk sharing between franchisee and government may blunt TOCs' performance incentives: at the point where the government takes on the bulk of the downside revenue risk, the TOC may find it more profitable to deliver a sub-standard (lower-cost) service than to further encourage revenue growth.

Business monitoring

There has been a trend towards closer financial oversight of franchises, reflecting, first, the onset of "management contracts" and "cost-plus" contracts that introduced subsidy to rescue the failing franchises; and, secondly, reflecting the introduction of revenue and risk sharing arrangements between franchisor and franchisee in the refranchised contracts. Thus, although the franchisor states the principle that TOCs are best able to control and manage cost risk, nonetheless their business performance is now closely monitored, with TOCs being required to supply cost data to the franchisor. Ultimately, the franchisor now has intervention rights if it observes a trend in costs moving in a way that would threaten the viability of the business.

This principle has already been applied as an enforcement mechanism. The South Eastern franchise that was managed by Connex is an example of plausible enforcement resulting from the business monitoring. In 2002, the company sought and received approval for additional subsidy of £58 million in return for an early ending of the franchise (2006 instead of 2011) and proof that the company was effectively financially managing the franchise. However, in June 2003 the SRA announced it would take the franchise back by the end of that year. SRA's reason for this was that it saw the franchise as having "botched management", citing a loss of confidence in the company's ability to manage its day-to-day cashflow, budgets and forecasts. An audit of the company had also identified non-compliance with the conditions that came with the additional subsidy funding. (Crompton and Jupe 2004, p. 12).

It is clear, then, that supplementing TOCs' subsidies and sharing risk means that the franchisor is now effectively buying into the business–and should therefore have reasonable claims for closer scrutiny of the business. However, this scrutiny nevertheless implies that the subsidy top-ups and risk sharing take the business performance incentives out of alignment with traditional "efficient", profit-

maximising strategies–the public sector partner does not trust the private partner. This oversight is therefore illustrates a further important departure of franchising principles from the original concept of private-sector flair and superior management.

Risk and uncertainty

The key parameter of franchise design is risk allocation. Franchising is intended to generate efficiency and revenue gains, and this relies on overcoming principal–agent problems. To achieve this, it is essential that the risk that has been ear-marked for transfer to the successful bidder is actually successfully transferred to the franchisee. In this context, it may not be appropriate to transfer *all* risk categories. In the Phase I franchises, revenue and cost risk was transferred to franchises, though not for all events:

- Not surprisingly, government regulatory and policy risk remained with the government.
- The franchisor retained the cost risk associated with track access charges–any increase in the charges not incorporated in a franchise agreement would be fully compensated by the franchisor.
- Franchisees retained the risk of revenue loss arising from industrial disputes.
- Franchisees retained the risk arising from *force majeure* events, though could claim dispensation from resulting performance breaches resulting from such events.

The introduction of "Performance Regimes" into the industry was one important area where, in principle, it was possible to "neutralise" the risk to the balance sheet arising from the actions of other industry players (other TOCs, Railtrack/NR or its contractors). For instance, TOCs relied upon Railtrack to provide the infrastructure for safe and reliable operation and so were compensated for the loss of revenue that arose out of the widespread disruption following the Hatfield accident. As with any other insurance compensation, there is inevitably debate over whether the compensation is adequate to completely neutralise the underlying risk to the balance sheet. There was evidence from an early stage that the Regimes were not correctly calibrated in order to prevent perverse behavioural incentives arising, such as one party preferring to accept or pay compensation rather than take even modest efforts to avoid a disruption. (Kain 1998, p. 260).

Should the franchisor seek to maximise risk transfer? Where bidders perceive that there are significant risks, it will be expected that the franchisees will build in heavy premiums for accepting those risks. In trying to transfer risk in some instances–notably, in the case an unproven new transport market–the degree of ignorance about the likely out-turn is so great that we are talking about *uncertainty* rather than risk. That is, the probabilities are unknown and we are essentially talking about an uninsurable level of risk. Here, a prudent private bidder (with limited means to avoid such risk) for such a business would set what could well be a prohibitively high risk premium. This might lead the government to base its planning on retaining the risk *or* by abandoning the activity entirely. In the case of the Channel Tunnel Rail Link construction public–private partnership, the revenue risk was transferred to the private partner but when the private partner could not fulfil its Agreement with the government as a result of the adverse (low) revenue outcome, the risk largely reverted to government, which had strong public interest considerations in ensuring the project was completed. (See Kain 2002).

However, where a track record of traffic and revenue performance can be identified–and here we can include passenger train franchising–it should be possible to transfer revenue risk to the successful

bidder. This is particularly the case where the traffic and revenue performs in a consistent and predictable manner with road and airline competition being primary factors influencing travel trends and economic growth being the primary driver of short-term fluctuations in travel.

Nonetheless, understandably, when the TOCs were franchised in 1996-97, there was *initially* caution over the likely success of franchising. Because risk transfer was embodied in the level of subsidies that would-be franchisees required, government realised that it could influence the perceived risk and, therefore, the risk premium sought. Phase I franchising policy incorporated three primary ways to reduce the level of risk:

- The policy of "moderation of competition"–restricting and postponing the onset of on-track competition by open-access TOCs–reduced the threat to TOCs' revenue from non-franchised, "open access" competing services.

- Relatively modest franchise length (7 years) reduced risk arising from the increasing uncertainty of the passenger train market as the time scale moves further into the future.

- TOCs bear little risk of stranded assets at the end of a franchise because they own so little capital (accessing Railtrack/Network Rail track and leasing rolling stock).[49]

Despite the attempt to ensure that risk was transferred, the evidence is that ultimately the risk has remained with the public sector–so we should stress that the government has paid a premium for franchises to take on risk that they ultimately did not shoulder. Although the risk categories remain essentially with the party stipulated in the original franchising, it is apparent that policy evolution has led to greater "sharing" of those risks to further moderate the risk-taking borne by the franchisee.

Experiences with risk transfer

As discussed earlier, around one-half of the original franchises subsequently received additional subsidy, reduced premiums or ended up with cost-based management contracts, in lieu of taking the revenue risk. The franchise rescues have included additional subsidy, with either "stabilisation" funding or the "cost-plus" provision of services. This, Glaister argues, is "...a method of procurement that has long been recognised as unsatisfactory in other areas of public service provision" (Glaister 2005, p. Ev 326). Indeed, Glaister argues that the onset of the cost-plus contracts has reduced TOCs' incentives to undertake their business at the lowest cost and may therefore be a reason why costs in the industry have risen–see Table 4. Glaister then concludes that either TOC operations need to revert to public production or the government needs to:

> "... try to recover the incentive structure which existed before, which is harder now that the private sector has learned that the public sector is rather reluctant to enforce contracts." (House of Commons Transport Committee 2005, p. Ev 49-50).

The most fundamental change from the risk-allocation conceived in Phase I therefore has been that franchises have *not* been allowed to fail–they have not been subject to the discipline of market forces. This issue is core to the success of franchising:

> "A fundamental principle was, and remains, that both infrastructure providers and train operators would be given incentives to be efficient–and thus reduce the call on the taxpayer–by being made to suffer the financial consequences of their inefficiencies. ... The question must now be posed as to whether this philosophy can be effective, given the manifest

> inability or unwillingness of government to enforce risk transfer..." (Glaister 2005, pp. Ev 326-27).

The ramifications of the government's failure to impose the risk transfer include that:

- Because the overly-bullish firm is not penalised for gambling in its business model, firms will have incentives to continue to adopt moral hazard strategies–to submit optimistic bids at subsequent franchise auctions, merely in order to win the franchise, and to be bailed out subsequently.[50]

- The firm will not face the necessary incentives to pursue efficiency and revenue gains.

- The public's financial gains expected from franchising have been reduced.

In understanding whether the franchising model is a practical way of ensuring the provision of government-specified rail passenger services, it is essential that we should understand the impediments that might prevent the franchisor from enforcing the terms of the contract. We could surmise a few reasons:

- **To retain the bidder market.** As most of the existing players in the franchising market were guilty of overbidding, a harsh penalty on their TOCs might also have undermined ("soured") the market for franchising. Nonetheless, rescuing these businesses increases the likelihood of tactical bidding and penalises the firms that did put forward realistic bids.

- **To ensure that franchising is maintained as a credible policy tool.** Widespread franchise failures would have undermined the credibility of government's use of franchising to provide rail services–even if rescuing a franchise in itself undermines franchising principles.

- **To avoid competition transaction costs.** The refranchising transaction costs may be so high as to discourage the franchisor from refranchising.

- **To avoid disruptions to TOC services.** The franchisor may have preferred to minimise the disruption that arises with franchise failure and subsequent refranchising. Through the political process and subsidy outlays, government has an *active* public interest (or "stewardship" duty) in ensuring that rail continues to provide a level and standard of passenger service.[51]

The rescuing of the franchises appears to be occurring because the franchisor seeks to protect "public interest". Language used by the franchisor gives credence to this factor. Thus, for example, SRA's Chairman explained that rather than replace failed operators, they actually sought to have the franchisee "locked in" to the franchise (*Hansard* 2002, para. 24), even where, in the specific instance of Virgin Trains, additional subsidy was being given "...to protect both passengers and the taxpayer" (*Hansard* 2002, para. 69).

As we noted in the Introduction, the most pessimistic view on the ability to transfer risk to the franchisee comes from an industry insider. Following the announcement that ScotRail and Central Trains would be bailed out, George Muir, ATOC's director-general, concluded that the limits of privatisation were now clearer:

> "It's a realisation of the fundamental truth...the underlying risk always comes back to the person who wants it–the outsourcer." (*The Financial Times*, 7 March 2002).

We need to be very clear as to why the franchisor found it essential to rescue failing franchises if, as Glaister warns, tactical bidding is not to undermine the auctioning process: the most brazen bid wins over the most efficient bid.

Developments in risk policy

Apart from this tendency to bail out franchises, there have been some important changes in franchise design in relation to risk. While, in 2002, SRA's CEO assured the Transport Select Committee that Phase III policy would mean that "...the risks of cost and the risks of revenue are properly taken by the franchise operating companies" (*Hansard* 2002, para. 177), the policy had changed by 2004:

> "Train company contracts will also ensure that the balance of risks between the train companies and Government is sensible. Train companies will continue to take revenue risk, but there will be arrangements to share this with the Government. This will help to make franchises more stable. Where an operator does start to fail financially, they should expect to have to surrender that franchise, rather than receive any additional Government support." (SRA 2004, p. 6).

The key developments in franchise design concern two aspects of risk:

- Risk-sharing: this has been adopted in Phase III "franchise templates" for awarding contracts, and can take the form of both profit-sharing[52] and revenue-sharing risk.
- Risk-apportionment: there has been a drift towards the franchisor accepting the financial consequences for events such as industrial disputes.

Risk Sharing

Can the franchise competition and subsequent franchisee behaviour be structured in a way that does not generate tactical bidding while still ensuring that risk is transferred? Recent franchise awards illustrate that the new franchise template *still* embodies a risk-sharing structure that encourages tactical bidding for subsidies or for premium payments. The specific franchise award also ensures that the weight of the risk associated with bid-winning optimistic projections is left with government.

The necessary tactical approach is evident from the way the risk is shared. The franchise template introduces an element of revenue risk sharing after the fourth year of the franchise. After that time, if the franchisee's revenue falls below 94% of the franchisee's projected level, then the deficit is shared 20% to the franchisee and 80% to the government. Between 94% and 98% of the projection, the shortfall is shared equally. If revenue is between 102% and 106% of the projection, the franchisee keeps 60% of the "excess" revenue above the projection and keeps 40% of the "excess" when the revenue is above 106% of the projection.

There is evidence that bidders have responded to this "cap-and-collar" approach to risk-sharing through tactical bidding. The InterCity East Coast franchise was awarded to the incumbent operator, Great North Eastern Railway (GNER), in March 2005. This is one franchise where the operator pays a premium to the government so the choice of the winning bidder will be strongly influenced by the NPV of the premium payments. Although GNER won the bid by a large margin, it heavily "back-loaded" its premium payments (i.e. premium payments start low and rise sharply in the later years of the franchise).[53] After year 4, the government rather than GNER faces most of the risk of revenue shortfall.

> "These factors are reflected in the premium profile which is heavily backloaded. In the first four years, when GNER takes all the risk, the premium is conservative, falling in 2006-07 before starting to rise. But with cap-and-collar in place from the fifth year, annual premia increase in a straight line, reflecting GNER's forecast 8.7% annual compound revenue growth." (Rail Business Intelligence 2005, 5 May, p. 7).[54]

Thus, even though the franchisor has had a decade of accumulated experience and understanding of franchise bidding, the current franchising award design nonetheless retains a strong tactical basis for financial game play: in the past, the tactic involved simply maximising the NPV of the TOC's premium payments or minimising the NPV of the franchisor's subsidy stream.

While the franchise framework differs between the Phase I and Phase III systems, the outcome is the same: the bid-winning tactics bring about a moral hazard strategy (back-loading the revenue when government exposure to revenue shortfall is maximised) that leads the government to take a higher exposure to risk than could be expected from a non-tactical bid. As noted in Rail Business Intelligence:

> While unsuccessful bidders pointed out that GNER won on the basis of NPV by a margin of around £500m, the premium profile means that the commercial risk [for GNER] is significantly less than this base number implies. (*Ibid*, p. 7).

Reflecting again the difficulties with sealed bidding (discussed in Section 2), even if we assumed there was no tactics involved in the revenue profile, the franchisor should have queried a bid of £1.3 billion NPV premium payments, which was apparently around £500 million more than the nearest bidder–how robust could this be? (Rail Business Intelligence 2005, 5 May, p. 7).

Inevitably, of course, bidders would be fast to recognise the strategy and would copy GNER's approach for other franchise competitions–and Rail Business Intelligence promptly reported that bidders were pondering the use of such back-loading tactics for other franchise bids. (Ibid, p. 7) To the extent that all bidders adopted the tactic, it would neutralise one bidder relative to another but would inevitably leave the franchisor/Treasury with less premium (more subsidy payment) than the competition would signal. Further, the tactics would blur the ability of the franchisor to separate strategic projections from well-thought-out business plans.

A TOC's Attitude to Risk

"A FirstGroup spokeswoman said it had not taken any serious risks with the new [Greater Western, Thameslink/Great Northern] franchises. 'The risk profile has changed. The upside and the downside are shared with the government, so the new franchises are substantially de-risked'."

"Railing against FirstGroup's £1bn franchises", Scotland on Sunday, 18 Dec 2005.

With the new franchise template the "cap and collar" risk-sharing ensures that TOCs faces relatively little revenue risk.[55] Moral hazard behaviour (entrenched by franchise rescues and, now, risk sharing) almost inevitably leads bidders to submit (and win) on the basis of tactics that are odds-on to require more generous terms for the TOC.

Thus, even if we can assume that bid appraisal has matured and so bids have become more realistic, bidders' moral hazard behaviour will lead government to incur disproportionately more risk than a competition that does not encourage tactical bidding. If service specification is largely determined by government, and government is the primary holder of downside revenue risk, is this simply a cost-based contract?

Risk Apportionment

The other area where risk apportionment has changed lies in the revenue consequences of industrial disputes. Originally the risk was apportioned to the franchisee. Implicitly, if we take the premise that risk should be apportioned to the party that is best placed to manage that risk, then it might (arguably) imply that the franchisee should bear the risk.

Nonetheless, in recent years there is evidence that the franchisor has, on occasion, taken the risk.[56] For instance, in March 2002, the SRA met the lost revenue arising out of a strike that affected nine TOCs in 2003 (RBI 195, p. 2). In another case in 2002, the SRA met ScotRail's lost revenue (RBI 194, p. 1). With SRA having been abolished, industry is concerned that the new franchising agency will alter its approach to accepting disputation risk. (RBI 239, p. 10).

Experiences with Rail Franchising in Australia

This section considers the rail franchising experience in the State of Victoria, in south-eastern Australia. Three areas of passenger rail operation were franchised: a regional Victorian franchise (V/Line passenger), the light-rail (tram) operation in Melbourne and the heavy-rail operation in Melbourne. In this paper, I focus on the heavy-rail franchising in Melbourne albeit that much of the data do not split heavy-rail from light-rail franchising.

Melbourne is a city with a population of 3.4 million people. Three electrified railways radiate from the city centre, with 17 separate main line or branch line termini from these spokes–see Figure 6 (p. 115), which is a schematic map (not to scale) of the network. From 1989, the Public Transport Commission (PTC) managed the urban bus, tram and train services and V/Line regional trains. However, during the 1990s the bus operations were privatised, railway stations were de-staffed and tram conductors were withdrawn. Staffing dropped from 18 000 in 1992 to 8 400 in 1997. (Department of Infrastructure 2005, p. 5) In late 1997, the Government of Victoria announced it would privatise the railway operations. In mid-1998, the PTC operations were split into five businesses, with the V/Line operations, two tram operations and two urban heavy-rail operations. The urban heavy rail businesses were Bayside Trains (the operations serving central Melbourne from the south and west–the lines closest to Port Phillip Bay) and Hillside Trains (the operations serving central Melbourne from the hills to the north-east).

A Transport Reform Unit was established in 1998 from within the State's Treasury department to undertake the franchising. In June 1999, the five successful bidders were announced and the franchises commenced management at the end of August 1999.

As with the British review, subsequent sections consider whether the franchising has met its objectives, the evolving franchising policies, the franchise competition, design and costs.

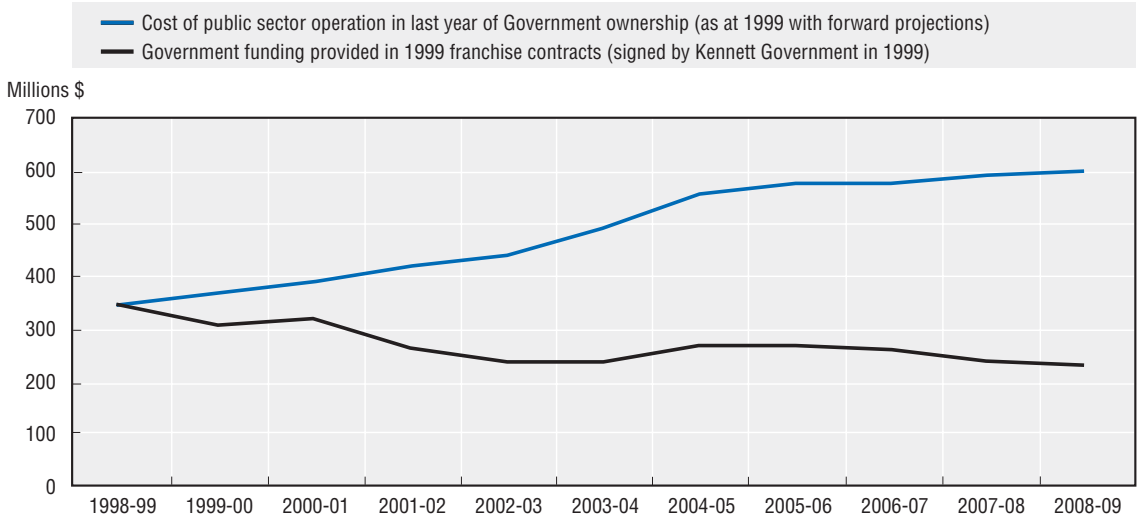
Has rail franchising achieved its aims?

The government's franchising objectives included "...to minimise the long term costs of public transport to the taxpayer", "...to transfer risk to the private sector", to improve service quality and "...to secure a substantial and sustained increase" in patronage. (Department of Infrastructure (DOI) 2005, p. 6). When the franchising process was completed, it would have seemed, from the promises made by the winning firms, that these objectives would be realised.

While there is some argument over the estimation of cost savings that would be achieved (see, in particular, Mees 2005, pp. 442-44), the savings to the taxpayer *relative to a "public sector*

comparator" over the (10-15 year) life of the five franchises was between $A1.1 billion and $A1.8 billion. The latter value is illustrated in Figure 4 as the gap between the government funding of the franchises and the franchisor's public sector comparator estimate.

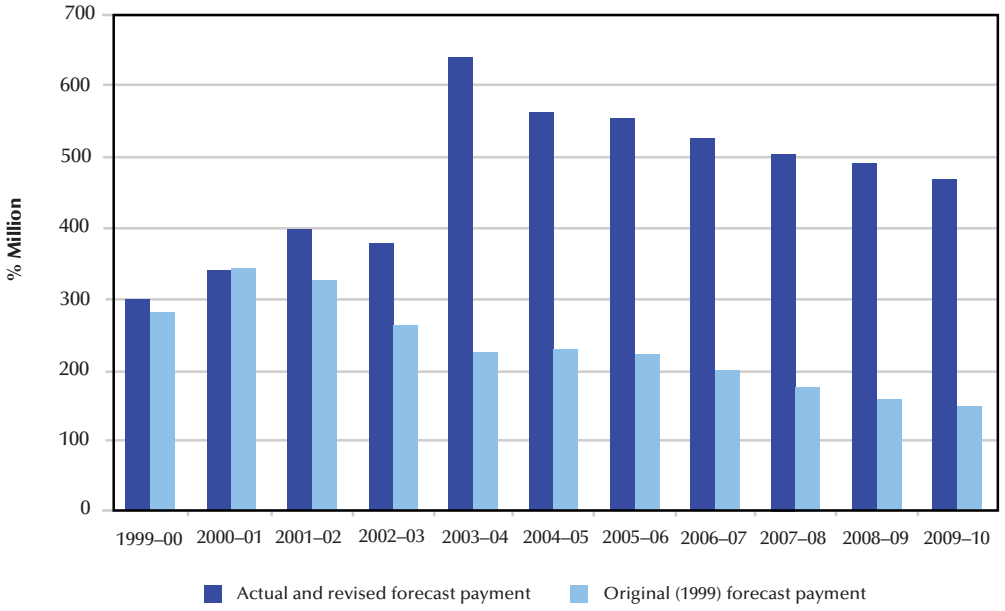
Figure 4. **Projected Public Savings from Victorian Franchising (Millions AUD per year)**



Source: Slide, as presented in Betts 2005.

However, these were the promises and the reality was somewhat different. Less than two years after the franchises had commenced, "...franchisees began to raise serious concerns with the Government about their financial viability" (DOI 2005, p. 12). Supplementary short-term funding was provided by government but the government's new "Franchise Review Task Force subsequently concluded that the franchises "...were financially unsustainable and could not be rescued by marginal contractual changes or short-term financial fixes". (DOI 2005, p. 13) The Task Force arranged "Interim Operating Agreements" with two of the franchisees but the third franchisee, National Express (managing the Bayside Trains, Swanston Trams and V/Line Passenger) could not come to agreement and withdrew from its Victorian rail operations, forfeiting its Performance Bonds. New agreements were then negotiated with the two remaining operators. Connex, the Hillside Trains operator, absorbed the Bayside Trains operations and the new agreement commenced in April 2004.

Figure 5. **Melbourne's Train and Tram Subsidy Profile–Payments to Private Operators (2004-05, AUD)**



Source: Auditor-General Victoria 2005, p. 25.

As is evident in Figure 5, the new agreements have resulted in much greater payments to franchisees than the original franchising. There is also much less risk transferred. We may assume that the 10-month 1999-00 and 2000-01 payments to franchisees are roughly similar to the equivalent funding for the public sector. If this assumption is correct, though, it means that the new payment stream from 2003-04 is considerably higher than public-sector funding would have been. That is, the new agreements are costing the taxpayer more than public sector operation. It is certainly evident that the new agreements will not achieve cost reductions (Figure 7).

As is clear from this experience, although the franchises were implicitly paid a premium to accept risk, in practice it was not transferred. Patronage growth was stronger than the immediate period before franchising and service quality did improve after franchising. However, we should note that the immediate pre-franchising period was subject to disruption caused by the splitting of the operations and management of the train and tram systems that was required for franchising.

The overall conclusion is that the initial franchising in Victoria did not achieve its objectives nor do the new agreements offer obvious gains.

Overview of franchising policy

In the previous section I noted the objectives of the 1999 franchising competition. The lessons apparently learned from that franchising led to a redirection for policy in the 2004 agreements. Government was concerned about achieving managerial stability, following the division of the businesses and corporatisation in 1998-99 and the subsequent franchising difficulties. Market-testing in 2002-03 concluded that the "market" had lost interest in bidding for the franchises due to the difficulties evident in Victoria and emerging in Britain around that time. The government also concluded that the competitive tendering market would be weakened by incumbent advantage: "... potential bidders were acutely conscious that they would be bidding against incumbents who were

performing well and who had strong local knowledge" and commercial and legal uncertainty was greater for new entrants than incumbents. (DOI 2005, p. 15) Indeed, the government seemed to want to stay with the incumbents as they

> "... were already familiar with the environment of the Victorian rail industry. Normal commercial practice would be to deal with incumbent suppliers, tapping into their knowledge base, and not seek a change of supplier at a sensitive stage in the development of the public transport system." (DOI 2005, p. 16).

As a consequence, the government decided to negotiate with the surviving incumbents–"single source negotiation"–with the two train franchises being absorbed into a new, larger Connex train operation. The heavy-rail contract awarded in 2004 was for a term of 5 years (with an 18 month optional extension and a negotiated extension beyond then), by contrast with the 15 year term for the 1999 franchises. Further, with the new contract, government shares revenue risk and profit sharing and has taken back some risks (such as insurance).

Clearly, the outcome of the restructured process here ("single source negotiation") cannot be called "franchising"–there is no competitive tendering process. However, as discussed below, some of the reasons the government put forward for not proceeding with the competition here (incumbent advantage and continuity of supplier) are actually clear rationales for never undertaking franchising. Because the promised gains from the 1999 competition were not delivered, and there was not a competitive market for the subsequent re-contracting, then there is a strong argument for saying that competitive tendering policy in Victoria has failed.

Competition design

As with the British model (on which the Victorian franchising was based), the competition held in 1998-99 was an auctioning system for the exclusive rights to operate given services. In a departure from its parent, however, the franchise was also responsible for the infrastructure and the rolling stock, albeit that the stock was to be bought by the franchisees then sold to leasing companies and then leased back (Greig 2002, p. 242). A vertically-separated model had been considered, but rejected due to "...complaints emerging in countries where the model had been adopted" (Greig 2002, p. 241). It was argued that the integration can "...avoid some unproductive monopoly problems" such as negotiating access charges, and that giving the franchisee control of the track "...allows it to optimise its operating environment". (Government of Victoria 1998, p. 7).

Undoubtedly, the transfer of infrastructure and stock would make it harder to refranchise due to the risk attached to the condition of the assets; this issue was noted when the 2002-04 contract negotiations were underway and was given as a reason for not holding another competitive tender. As a director within the franchising agency, Greig notes that the potential for the franchisee to run the assets down was recognised. The agency's response was to "...have a belt-and-braces regime: annual asset management plans, an asset condition survey... key performance indicators..." and a franchisee account from which money would be released to the operator when the government was satisfied with the maintenance standards.

The design attempted to capture lessons learned from British franchising. Thus, at that time there was a move to longer franchises in Britain (Phase II) so it is no surprise that Victoria's heavy rail franchises were for 15-year terms. Like the British counterparts, the revenue and cost risks were transferred to franchisees as was "industrial relations risk"; fares were largely regulated; subsidy was provided in exchange for exclusive rights to operate passenger services on given lines, subject to minimum service specifications (which was generally the service level existing before franchising).

Unlike the British model, however, the subsidy consisted of two main components. First, as in Britain, there was the agreed subsidy level and bidders invariably had this on a declining level to reflect the impact of their initiatives. The second element, however, was a variable patronage-growth incentive payment.[57] The consequence of this latter conditional payment was that instead of dampening a train operator's financial failure to meet revenue targets, it amplified it. Thus, while the fixed subsidy declined over time, the failure of traffic to materialise (measured by revenue growth) would suppress the variable payment.

As in Britain, the bidding competition was based on first-price sealed bidding. The data presented in Table 5 illustrate how this form of bidding can result in very different outcomes, for arguably two very similar urban passenger operations (similar size, patrons and exogenous environment). We can compare the winning National Express and Connex bids for Bayside Trains and Hillside Trains, respectively. We can observe how much more aggressive the National Express bid was than the Connex bid (which, in itself, was highly optimistic). In Section 2, I noted that open bids have the feature that seeing other bidders dropping out of an auction might moderate the remaining bidders' behaviour. But in every respect the National Express was substantially more optimistic than the Connex bid–notably, in the small fixed subsidy relative to the volume-based subsidy, the rate of decline in subsidy, the assumed revenue growth in the first five years and the assumed 15-year revenue growth.

This contrast suggests that "plausibility" of bid was not one of the selection criteria and, arguably, nor does default risk appear to have been adequately considered. There is no information available on the extent to which the franchising was conducted as a lowest-cost auction or whether it contained Beauty Contest problems. That said, we can speculate that there was very modest interest in the competition and that the choice of franchise was clearly based on the lowest-cost bid. Thus, Greig says that "...most of the bidding interest was from consortia associated with train or tram services in the UK or northern Europe" but the fact that three of the five franchises went to National Express suggests that the market may have been thin.[58] We note, in any case, that only the Yarra Trams franchise had any Australian interests (Transfield, holding 50% of the consortium interest). Of course, this may have simply been because National Express was consistently the most aggressive bidder–as illustrated in Table 5.

Competitive market

As in Britain, the franchise bundling has been problematic. In preparation for franchising, the single PTC heavy rail operation was split into two geographic areas: the area around Port Phillip Bay (hence Bayside Trains) and the railways to the north-east of Melbourne (Hillside Trains). The objective of this split was to introduce "competition by comparison", where the heavy (and two light rail) operations would act as a performance comparator.[59] (DOI 2005, p. 7). The Transport Reform Unit commissioned a study into economies of scale of train and tram operations and concluded that those economies "...flattened out well below the size of the divided businesses" (Greig 2002, p. 240).

However, this conclusion seems to overlook the core issue of network economies and the inter-relationship between different parts of the same network. It is one question to ask if a large rail operation has scale economies relative to a small rail operation; it is another question as to whether two rail entities are as efficient as one entity. Intuitively, two rail entities on a network generate considerable transaction and co-ordination costs. Thus it is unsurprising that, after the franchisees failed, it was concluded that "...the benefits of two train and two tram companies never really materialised" (DOI 2005, p. 18). The split had increased the number of interfaces, making decision-making more difficult, duplicated management resources and required duplicate spare equipment and rolling stock. In any case, the heavy-rail franchises turned their backs on network economies. For

instance, they each overhauled identical "Comeng" trains in different ways, making them incompatible. They also purchased trains from different manufacturers (Siemens and Alstom) that could not be operated together.

There is a more general issue: how competitive was the auction market? Greig notes that British franchising had created a bidder market so it is notable that most of the bidding interest was from European-based consortia.[60] (Greig 2002, p. 245). But, the DOI notes, these foreign consortia "...had little local knowledge" and were basing their forecasts on experiences from south-east England (DOI 2005, p. 9). So we should ask whether a sufficiently strong base of *suitable* bidding groups had ever existed in order for auctioning to succeed.

According to the DOI, the Victorian experiences took the gloss off the market as did the growing financial problems with British franchises–albeit, we know that the British refranchising market remained buoyant. But in justifying single source negotiation, the DOI actually presents a further strong case for why competitive tendering was probably never a viable option in Victoria, because a competitive market could not be sustained. They suggest that incumbent advantage (such as knowledge of the market and asset condition) was so strong that it was dampening market interest:

> "...potential bidders were acutely conscious that they would be bidding against incumbents who were performing well and who had strong local knowledge. As such, it looked unlikely that the Government would be able to attract a strong field of bidders in a retender" (DOI 2005, p. 15).

If such an assessment were accurate and applicable for rail franchises in other cities and countries, it would bode badly for competition-for-the-market. Incumbent advantage sets in as the franchisee becomes more familiar with the business–and this is an important reason for keeping franchise terms short. However it seems that, in just three years, the Victorian franchisees went from having "little local knowledge" to such an apparently-unassailable "strong local knowledge" that there was no longer a sufficiently competitive market to undertake competitive tendering.

Bid assessment

There is little information on how the bids were assessed. Table 5 sets out the basic parameters of the winning bids. As Greig (a director in the franchising agency, the Transport Reform Unit) wrote in 2002 before National Express's withdrawal, if the traffic forecasts were achieved "...this would bring patronage to above its highest historic level of the early 1950s, before there was widespread car ownership". Nonetheless, the "...case for optimism was bolstered by the experience of large patronage increases following privatisation elsewhere (for example, UK, Argentina". (Greig 2002, p. 245) Thus, here we can see that the *perception* of British patronage growth is filtering into probably *both* the bidder's financially-suicidal bids and the bid assessors' acceptance of the extremely bullish projections. Indeed, if we compare the figures in Table 5 with the outcome in Britain shown in Figure 2, the Victorian traffic growth was even stronger than the British projections (where already by 1999 the finances of bullish projections were causing difficulties).

Ironically, while the aura surrounding international companies bidding for the Victorian franchises may have led the assessors to accept wildly-optimistic forecasts (particularly with growth spurts in the early years of the franchises, mirrored by precipitous declines in subsidies), the DOI subsequently concluded that the forecasts had been:

> "...made by foreign bidders who had little local knowledge and who were basing their forecasts on experience of conditions in south-east England, where very high patronage

> growth was occurring at the time. ... It simply wasn't possible to replicate the British conditions in Victoria and reap huge cost reductions and patronage increases through changes to work practices and marketing." (DOI 2005, p. 9).

This recent interpretation suggests that a fault with the franchising lay with the bidders and (I could argue) the bid assessment (by not questioning these "foreign bidders"). However, *earlier* papers suggest that at the time of the franchising, the DOI itself took a bullish view (and this would have made it more likely that bid assessors would not reject the bullish bids):

> "DOI investigated the feasibility of achieving a 40 to 50% growth in rail patronage over the next 15 years. ... the results suggested developing a series of measures [such as new rolling stock, more frequent and faster services, better public transport interchanges...] would enable patronage growth to increase by around 50% over the next 15 years." (Government of Victoria 1998, p. 10).

Even on these precepts, however, the patronage growth for the winning bids was optimistic and, crucially, most of the growth was due to occur in the immediate few years after the commencement of the franchises–see Table 5. But more to the point, as I note in the British section of this paper, it is highly debatable that the patronage and revenue increases in Britain (which, incidentally, was greatest in the regions and not in the south-east) were endogenous, that is, due to the virtues of private sector management. For the SRA, that growth in Britain was due to exogenous factors, particularly the impact of economic growth, road congestion and fuel price rises and the level and timing of the Victorian patronage growth were considerably more bullish than those projections made by winning bidders in Britain.

Even on the cost side, the evidence was there that the bids were not being assessed in an informed way. As Mees notes, the Victorian Auditor General had concluded in 1998 that "...after years of cost-cutting and rationalisation of operations, there appears to be limited scope for further large savings" (Mees 2005, p. 442). Similarly, the DOI now acknowledge that it was "...an industry that was already relatively efficient after five years of down-sizing and offered only limited scope for further cost reductions". (DOI 2005, p. 9) whereas at the time it was argued that franchising could bring a range of opportunities to reduce a substantial cost base. (Government of Victoria 1998, p. 9)

Thus, given that franchises were let to firms who did not understand the market (hence their large patronage and revenue growth projections) and given there was little scope for cost reductions, it remains unclear how the bids could have been assessed robustly and just whether there was any business rationale for franchising.

Competition transaction costs

One indicator of the level of transaction costs in the franchising is that, in 2002, the government decided to increase its subsidy to the franchisees. *The Age* newspaper reported the Transport Minister saying that "...it was cheaper to bail them out rather than re-tender the contracts" (27 February, p. 1). Arguably, if these competition costs were this "high"–leading to bailing out rather than refranchising–then the transaction costs were *too* high.

Risk and uncertainty

As in Britain, these Australian franchises involved the transfer of cost and revenue risk to the franchisee. One divergence from the British model was that *force majeure* risk was retained by the government, being "...allocated to the party best placed to *bear* it". (Greig 2002, p. 244).

However, as is evident by the franchise failures, the public funding went to private companies who then did not accept the commercial consequences of their mismanagement. The government officials' own contorted logic is apparent in the decision to rescue the franchises:

> "The Kennett Government's aim had been a public transport system in which all key commercial risks were transferred to the private sector. Clearly this was no longer feasible in circumstances in which the operators' very viability was under threat." (DOI 2005, p. 12).

The risk to the franchises is financial losses and as stressed by Glaister (quoted above, p. 86), a fundamental principle of successful franchising is that the train operators need to "...be made to suffer the financial consequences of their inefficiencies". In particular, this principle should be adhered to when government intends to persevere with franchising. However, as Gómez-Ibáñez notes:

> "Most governments choose renegotiation... The immediate pain of inadequate service, or of one's contract being flagrantly violated, usually trumps more distant considerations of precedent." (Gómez-Ibáñez 2003, p. 107).

Ironically, in the light of the government's adoption of "single source negotiation", the earlier decision to assist the franchisees was made because the "...government feared that a messy end to a franchise would send a bad signal to other potential private partners, further reducing bidding interest". (Ehrhardt and Irwin 2004, p. 19) Again, the case for franchising is undermined when the ability to transfer risk is tempered by a need to protect rail services from disruption: "The government was concerned that, if a franchisee became insolvent or walked away from its contract, there could be serious disruption for passengers" although Greig notes that provisions were made to cover such events. (DOI 2005, p. 12; Greig 2002, p. 245) Given current pronouncements, though, it seems that it is impossible to transfer risk given such heightened public interest concerns.

Putting aside the fact that the new contract with Connex was not achieved through competitive tendering, it is notable that a shorter contract length has been adopted, recognising that "...long term contracts may also present high risks for private sector operators". (DOI 2005, p. 19) Williams, Greig and Wallis (2005, p. 47) also point to the "...difficulty that long concession periods pose for assessing likely revenue". We should note, however, that even if the 1999 franchises had been for five years rather than fifteen, the financial crisis would have arisen as the fault with the bids was their suicidal revenue/traffic growth projections (and cost saving) for the first few years, hence their financial crises within two years of the commencement of the franchises (Table 3). In this context, the decision to share the revenue risk (described in DOI 2005, pp. 59-61) seems to be more of an insurance for the private company against its own contractual optimism than against traffic and revenue uncertainty.

Pitfalls in Franchising

The verdict on franchising to date

We commenced this review of rail franchising by asking whether it had achieved its aims–gains in efficiency and revenue through the transfer of risk from government to franchisee. Despite the high potential cost of disruption of services, franchisors have agreed contracts where the likelihood of service delivery has been very uncertain. In Britain, the franchisor had a stroke of luck, however, because franchisees benefited from unanticipated strong economic growth. This contributed significantly to TOCs' strong growth in traffic and revenue. On average, this growth exceeded even their aggressive revenue projections. However, despite this, the promised drastically-reduced reliance on subsidy did not eventuate, principally because of severe cost escalation.

If the terms of the contract had been enforced, the risk transfer embodied in the British franchising should have led to severe financial distress or failure of at least 12 of the 25 franchises. In the event, the risk transfer was more illusory than real, with additional subsidies forthcoming to keep the franchises afloat. In most cases in Britain, these franchises became cost-based management contracts. In Victoria, the taxpayers were required to rescue the heavy-rail franchises (despite which one operator subsequently surrendered its contract even though it was offered substantial additional subsidy). A fresh contract was awarded to the remaining heavy-rail incumbent, without recourse to competitive tendering through "single-source negotiation".

Three conclusions can be drawn from this:

- Generally, we seem incapable of undertaking bid assessments that distinguish the unrealistic from the robust.
- Commercial risk was not successfully transferred to private operators.
- The financial deterioration (cost inflation) of most of the British TOCs suggests that the private operators did not materially enhance the financial operation of the businesses. With few achievable efficiency gains to capture but considerable franchising, transaction and co-ordination costs, we must conclude the outcome has been detrimental in both countries.

Some industry observers in Britain nonetheless suggest that franchising, *per se*, is at least responsible for delivering strong growth in passenger travel, with passenger kilometres rising by 3.7% per annum through to 2002-03.[61] TOC service enhancements, notably the new rolling stock and improved service frequencies (with a 17.7% increase in train kilometres), has undoubtedly stimulated traffic. However, it must be recognised that much of this is underpinned by publicly-funded franchise commitments to make such improvements. This is in stark contrast to BR, whose funding was heavily constrained by the Treasury.

Perhaps the major flaw in this popular attribution of growth to the introduction of franchising is that the analysis often ignores exogenous factors. For instance, SRA attributed the surge in passenger travel since the mid-1990s to employment growth, lower (regulated) rail fares, increased road congestion and higher fuel prices. For Melbourne, Mees concludes that franchising had no effect on patronage, though concedes that the outcome depends on the time series used and that patronage will be stimulated through the introduction of air-conditioned rolling stock (again a requirement of the franchise contracts).[62]

Either way, the widespread illusion that the additional patronage is due to the franchising sometimes distorts authorities' view of the perceived merits of franchising and, consequently, on how achievable their bidding promises are. That is, the aura of private management creates a blind faith in the superiority of franchising generally, and can even pervade the way that bids are assessed.

Even if British and Australian franchising had delivered on their financial promises, there are still costs beyond the competition costs to consider. First, franchising is *not* a riskless strategy for provision of services, with significant potential for disruption caused by financial failure (and the Victorian government was happy to undermine franchising efficiency in order to prevent disruption). Secondly, as Mees notes, because the government–private contracts are sometimes classed as "commercial-in-confidence", this commonly removes transparency in public funding and democratic accountability (Mees 2005, p. 445).[63] Finally, franchising can have significant adverse effects on the way the services operate (such as impacting negatively on network efficiency) and the Victorian government acknowledged this, quickly reintegrating the two rail operations.

Can we learn from the experiences?

The application of franchising principles inevitably involves trading off objectives–such as awarding longer franchises to encourage greater investment which then weakens competition-for-the-market. One result of this has been extensive policy fiddling, with three significantly different franchising frameworks in Britain and two in Australia. It has been the negative experiences of franchising that have driven these changes.

Nonetheless, the franchising frameworks have shown an amazing propensity to ignore the practical principles and the experiences of franchising. Thus, although below I list key issues in deciding if and how to franchise, these are more honoured in the breach, further undermining the case for pursuing franchise contracts.

The Australian franchising and Phase II and III franchising in Britain could draw on experience from the initial British franchising–but still did not learn their lessons. For instance:

- Phase II franchising was an attempt to address Phase I problems but, amongst other things, it failed to consider basic beauty contest issues in how the auctioning was structured–how to assess the relative merits of disparate bids that lacked common objectively-measurable elements.

- Phase III franchising adopts a system of risk-sharing, which bidders have already shown can be manipulated to their own advantage in the same way as the core subsidy/premium levels were in the initial franchising.

- There is still a wide dispersion in Phase III franchise bids–this should set alarm bells off because operators have a very limited ability to enhance the financial outcome so a wide dispersion in bids should be alerting assessors to excessively risky and/or tactical bidding.

- Australian franchise designers claimed to have learned from British experiences (Mees 2005, p. 446) but managed to produce a competition with few bidders (and, therefore, arguably little chance of reaping the hypothetic gains from competition in terms of minimising subsidy) and an outcome that was a spectacular failure due to implausible bidding and deficient bid assessment (a fault that had long been recognised in Britain).

- The current Victorian contracting uses "single source negotiation" under the guise of being "franchising". This abuses the very principles of franchising, notably using competition-for-the-market as the keystone for minimising subsidy requirements.

Perhaps one reason for the failure to take on the experiences is that government completely underestimates the skills required to design, implement and monitor such franchising systems. The experiences reviewed here give much credence to Mees' argument that rail franchising "...appears to require greater skill than is needed actually to operate a public transport system, either directly or using sub-contracting". (Mees 2005, p. 447) So if we are failing to manage the train operations ourselves, what hope have we of implementing a more complicated system?

The government franchisor will need to establish a competition that anticipates the inevitable tactical behaviour and draw up a contract that sets out appropriate incentives that successfully redress principal–agent problems. However, it may be argued that private negotiators have greater experience and stronger incentives than the government franchisor to draw up contracts to the franchisee's relative advantage. In particular, private sector negotiators will have strong corporate profit drive

and/or individual aspirations within the firm to ensure that contracts are drawn up to the firm's advantage. In this context, I argue there is validity in Mees' argument that the negotiating balance in Victoria was likely to favour the bidders, who were experienced, international firms. (Mees 2005, p. 446).

Where and how to franchise

Do the poor outcomes invalidate franchising as a cost-effective form of service delivery? Put another way, can franchising be structured to avoid adverse outcomes while still delivering the benefits? There are a number of issues to consider in deciding if, and how, the franchising can result in a successful outcome:

Performance of the public operator

If the incumbent public company is relatively well-managed, franchising would capture only modest improvements at best. In such circumstances, the chances of recouping the large fixed costs of setting up and managing the franchises would be small. Arguably, BR was already relatively efficient so the ledger of incremental efficiency gains relative to significant network and auction transaction costs makes franchising less attractive. Similar arguments are relevant to the Melbourne franchises: a reason given for the franchise failures is that the bidders assumed implausible cost reductions (Figure 7) so if the efficiency improvements are negligible, it severely weakens the case for franchising.

How competition for the market is introduced

Britain has introduced three major forms of franchising policy in less than a decade. The initial franchising competition was undertaken with considerable uncertainty, for franchisor and potential bidders alike. In response to emerging issues, there have been major changes in policies on contract length, service specification, risk transfer and performance. The initial high degree of uncertainty in the bidding competition and subsequent franchise performance could have been managed through a more cautious (gradual) awarding of franchises. This would have allowed policy and franchise design to evolve with successive franchises, in response to emerging issues, would have reduced the impact of design flaws and generated more realistic (efficient and sustainable) bids. In modern parlance, this is referred to as "real options analysis".

The franchisor's ability to assess bid deliverability

After a decade of franchising in Britain, the franchisor is considering whether it is appropriate for the deliverability of bid promises on costs, revenue growth and service provision to be made by civil servants and consulting advisors or, instead, rely upon bidders' own judgements. However, if the franchisor does not have the wherewithal to judge the rigour of the bids then, on this issue alone, rail franchising is fatally flawed. It is a basic principle that, in any contract signed for any purpose, both parties must be certain that the terms of the contract can be delivered and that it is the "best" contract– the franchisor should not sign a contract in blind faith.

The potential business latitude in franchise operation

"Public interest", risk, and network management concerns are significant. This reduces business latitude to innovate–even though innovation is a key franchising objective. Over the last decade, British franchises have been subject to greater controls in terms of service quality, level and performance specification and monitoring to guarantee public interests and (now) putting a brake on

risk levels. Further, to the extent that optimal capacity utilisation requires central co-ordination (especially evident when railways are highly-utilised), central network management and the high network utilisation itself may be major inhibitors to individual TOC management flair. Australian franchises were similarly highly specified.

Government risk averseness in train service provision

If government is shown to be not prepared to incur the service disruption or refranchising costs arising from a franchise collapse, then bidders are encouraged to be overoptimistic (in order to win the auction and "get the foot in the door"), knowing that they can subsequently renegotiate their contract. In such circumstances, risk transfer is less than what the government "bought" when it paid out the subsidies; it is also likely that the government has not chosen the most efficient operator. British franchising has shown a high propensity to rescue TOCs and this undermines the objectives of franchising because commercial disciplines for poor management are not penalised. Similarly, government risk-averseness in Victoria ensured that all efforts were made to rescue the franchises. No transfer of risk takes place if the government cannot tolerate the service collapsing.

Perverse outcomes in rail franchising

The key objective underlying franchising is to ensure the contracts are awarded to the most efficient operators. Under the systems employed to date, it is the willingness to gamble rather than to operate efficiently that is rewarded.

Bidders recognise that they do not win auctions by basing their bids on conservative forecasts (as shown in Britain and Australia). So, bidders take a gamble that financially-distressed operation will be rescued because government will not wish to face the political consequences of service disruption arising from franchise failure. Thus, the Victorian and initial British franchising competitions are characterised by bid assessments that may have acknowledged bid optimism but did not seek to seriously challenge the projections nor consider the consequences of the projections not being realised. Given the fantasy nature of some of the projections, it is difficult to believe that those negotiating on the government side genuinely believed that risk would be transferred successfully.

In subsequent franchising, to try to minimise bidders' chances of adopting such strategies, the British franchisor has tightened evaluations and business oversight and downgraded the extent to which they expect to transfer risk. It is an entirely appropriate to query how realistic or enforceable it is to achieve the complete transfer of revenue risk (especially over the more uncertain longer term) and when moral hazard behaviour shows government as being more risk-averse than the firm. To this end, revenue- or profit-sharing may be built into contracts for later years of a contract. However, this sharing also has the potential of blunting TOCs' incentives to be efficient.[64] Further, recent British experience with the "franchise template" shows that bidders may use the risk sharing structure for tactical bidding (incorporating revenue optimism) that can result in skewed bidder choice and (again) transferring the incidence of burden of the near-inevitable revenue shortfall back onto the government. So, again, revenue optimism is encouraged and incidence of any subsequent revenue shortfall again returns to government. So risk-sharing may simply change bidder tactics and may not be a panacea for desirable franchise outcomes.

Finally, it needs to be recognised that firms have only very limited control over patronage and hence will have difficulties working with inherent traffic forecasting uncertainties. Bidders might then be expected to heed caution in their revenue projections. However, it is also undoubtedly the case that winning bids are those where caution is thrown to the wind. In such circumstances it is not clear that

British "revenue-sharing" is anything more than taxpayer-funded insurance for tactically-aggressive, winning bidders–insurance for gambling.

Alternative forms of provision

The British and Australian experiences suggest there are very significant pitfalls in franchising that can limit the value in pursuing the model. Competitive tendering has been side-lined in Melbourne. In Britain, the response to each problem has skewed or muted the incentives that are pivotal to the success of franchising.

There are risks attached to the increasing prescription of rail franchises. Welsby and Nichols argue that:

> "…additional restrictions on the freedom of the operator inevitably carry the risk that the costs imposed–or cost savings foregone–in preventing change, outweigh the benefits to consumers. In the absence of clear criteria against which regulations can be evaluated, there is a substantial risk that potential efficiency gains will be suppressed." (Welsby and Nichols 1999, p. 69).

However, this risk to TOC "flair" needs to be balanced against the need for specification, for "public interest" (e.g., PSR service levels) and network economics reasons.

Such concerns notwithstanding, the increasing extent to which British franchise operations are being specified, and their risk-taking environment being tempered by cap-and-collar risk-sharing, means that the contractual relationship is increasingly a regulatory relationship–as predicted by Williamson and as Crain and Ekelund observe on Chadwick's original franchising ideas:

> "The principle (as stated by Chadwick) and the discussion of specific cases brings into question Demsetz's conclusion that the use of the principles would make government "regulation" unnecessary. Chadwick anticipated (correctly we believe) an elaborate "contract enforcement" body, composed of civil servants, as a necessary accoutrement to this scheme. … [and] In any practical example, contract design, specification and enforcement could easily create more subtle and complex difficulties for commissions than cost-plus pricing." (Crain and Ekelund 1976, p. 160).

Thus, as franchising has evolved it has begun to lose its distinguishing characteristics–the characteristics that made it superior to alternative forms of provision. In this circumstance, the main alternatives to franchising are, obviously, the retention of public sector production or undertaking gross–cost contracting (where only cost risk is transferred).

To the extent that so much of the revenue risk has reverted to government–by default or, now, risk-sharing contracts–there is a stronger case for making a clean break with net–cost contracts and shifting to gross–cost contracts. Of course, bids for gross-cost contracts still need rigorous reviewing for plausibility, remembering that it was unrealistic *cost* savings (as well as subsequent cost inflation) that was the main problem with the British franchises.

On one hand, purists will argue that gross-cost contracts do not give adequate incentives for operators to encourage patronage. However, modest incentive payments could be added to encourage such behaviour. In any case, even net-cost contracts often need supplementary incentive mechanisms to encourage compliance.[65] On the other hand, a sober analysis of the current franchising track record reveals extremely poor performance in getting all the other incentives right in a franchise–incentives

not to undertake tactical bidding, incentives to deliver a service to the standard expected by the franchisor and contract incentives that ensure that the franchisee takes on the risk it has committed to. In this context, the simpler, less ambitious gross cost contract looks a more realistic alternative to public provision than franchising.

Concluding comment

The flawed initial franchise competitions in Britain and Australia have undermined the application of the model. As a consequence, it may still be that there is merit in franchising–where it has been applied with *realistic* business plans and where risk has been successfully transferred. Nonetheless, it is unlikely that the risk can be successfully transferred–there *are* strong public interest concerns and network considerations in passenger rail service provision, which encourage government intervention in franchise rescues, network planning and service standard setting. Franchising policy has evolved to accommodate these factors but in doing so it undermines the principles, objectives and implicit superiority of competition *for* the market.

Avoiding the Major Pitfalls

Earlier in this paper, I considered the principles of competitive tendering in the awarding of contracts, with specific reference to rail franchising contracts. The tendering competition intends to deliver an outcome of rail services provided at lower net cost to the public. This requires that:

- Franchising design does not undermine underlying network economics.
- Winning firms are those that are capable of delivering the services most efficiently.
- The anticipated gains from the competition have a high probability of being realised.

Experience to date has not been encouraging, despite extensive ongoing adaptation of the "model" to deal with problems as they arose. However, it is possible that the approach has more merit when the incumbent public operator is perceived to be inefficient, simply because there is a greater chance of the potential gains outweighing the costs associated with franchising–including the risks involved.

Regardless of whether there are net gains to be captured, nonetheless a revision to EU Regulation 1191/69 may oblige authorities in Europe to undertake competitive tendering. So it is critical that authorities appreciate the lessons from past franchising and that they adopt competition designs and practices that will maximise the benefits of competition-for-the-market. Using British and Australian experiences, I set out what should be done–and what *must* be avoided.

What authorities should do

In the first instance, the authority should seek to adopt gross-cost contracting (as recommended in ECMT 2005, p. 64). There is considerable evidence that gross-cost contracting can deliver significant cost savings without the inherent revenue-based uncertainty pervading net-cost contracting and with less likelihood of contract default (See, for instance, NERA & TIS.PT 2001). Furthermore, this form of tendering can minimise loss of network economies. This is a significant factor.

However, if *net-cost* contracting (franchising) must be pursued, certain golden rules must be followed. The State contractor is risk-averse to service disruption. However, rescuing a failing franchise to prevent service disruption will undermine franchise incentives and this attracts firms to

submit bid-winning, but financially-unsustainable commitments. To avoid such a trade-off, winning bidders should be competent and their plans should be achievable: this requires franchisors to adopt a risk-averse strategy by *setting priority of security of service delivery over unknown quantities of supplier flair and innovation*. Thus, the franchisor must secure contracts that reflect government's risk-aversion, not bidders' objectives of winning the competition–tinged in irrational bid-fever and the moral hazard gamble that they will be bailed out. Thus, the following are preferred practices:

1. To avoid the loss of network economics

Set large service bundles. As much as possible, the network should be bundled into TOCs that capture economies of scale and maintain network efficiencies for operator and customer alike. This is likely to result in "large" service bundles. There is no definitive guide as to whether such bundles should be reflective of underlying infrastructure manager bundling, area bundling, route bundling or based on market coherence. But it is clear that they should avoid arbitrary network splits (as in Melbourne) that simply add interfaces for operators and customers alike.

Tightly define service specification. High service specification is required to protect "public interest" in service standards and to ensure network economics are not undermined by incompatible unilateral services. High specification is also needed to enable bids to be compared on a consistent basis (and so avoid beauty contest problems).

2. To ensure that the tendering process does identify the most efficient service provider

Make bid assessment criteria explicit. There are three key reasons for making bid criterion explicit:

- To be an efficient competition, assessment criterion must be explicit. Firms should not be bidding "blind". It is not an efficient outcome when the winning bidder is the firm that provides the best guess of what the franchisor wants rather than the firm offering the most efficient rail service package.

- *Making the criteria explicit facilitates transparency in the contracts awarding process.* Competition should not only be fair, but should also be seen to be fair. Thus, if there are "Beauty Contest" aspects of the competition, the qualitative elements should be quantified explicitly. Transparency is essential for ensuring that the competition has been conducted fairly. Revealing the bid assessment criterion ensures that no single firm has more insights than any other on what the franchisor values most in a bid. This can be particularly important if bidders perceive that the incumbent (particularly a state-owned entity) has better understanding of what the franchisor wants. In the same context, if post-auction debriefs with the franchisor are held, failed bidders will be able to appreciate how they rated relative to the winning bidder.

- *Revealing the weights can encourage incumbents to comply with their contract when they see how past performance is treated.* There is a tension between recognising past TOC performance in bid assessments and the desire to avoid "incumbent advantage". Including past performance will encourage good service delivery. However, this can undermine the efficacy of the competition because awarding bonus points for good behaviour gives the incumbent an additional head-start in the competition and so may discourage other bidders. A number of approaches could be considered that protect contestability while recognising performance. Good behaviour could be rewarded with (say) a berth in the bidder short-list.

Alternatively, the franchisor could restrict the weighting to "demerit points" for poor performances.

Ensure that barriers to entry are set low. British and Australian markets provided low barriers to entry, with low levels of capital and human resources needed for the winning bidder to commence operation. Both franchising systems incorporated different systems for leasing of rolling stock; neither proved to be undue impediments to contestability in the bidding competitions. We should note, however, that the Australian model incorporated the transfer of infrastructure to the franchise: this should be avoided as it adds unnecessary uncertainty on asset condition at the time of refranchising, and may conflict with other policy objectives, such as pursuing mandated access. Also, both markets incorporated incumbent staff transfer (apart from the winning bidding firm's own senior management). This feature enhances the bidding market by lowering barriers to entry relative to where the winning bidder has to draw in/recruit its own staff. Also, if the franchise fails, the low capital and human assets tied to the parent firm should minimise the disruption involved in the re-mobilisation of the resources to a successor operator.

Focus on keeping competition transaction costs low. Clearly, it is desirable to keep competition costs down, especially when short-term franchises are chosen. If the franchisor specifies exogenous patronage or revenue growth, this will reduce competition costs, with less need for franchisor-bidder dialogue.

Permit state-owned TOCs to bid. State-owned TOCs should be allowed to bid even though it gives bid assessors a more difficult task in ensuring propriety is maintained and cross-subsidisation does not occur. It may also depress bidder interest if the state entity is seen to have a strong incumbent advantage. Nonetheless, bid assessors should expect to find the incumbent's bid has a strong degree of consistency with its current operation: this will provide useful benchmarks for assessing deliverability of other bids. The state-owned TOC should also be the default operator if the bid market is not strong enough for a successful competition.

Set "short" contracts. Contract terms should be kept short. It is not possible to write all the (unknown) terms of partnership into a contract. Of course, this will reduce the time available to recoup the bidding costs but if most aspects of the bid are clear then those costs should be lower than when Beauty Contest-like competitions are held (as with Phase II British franchising). Optional extensions for good behaviour should be avoided if the re-franchising market is not to be undermined through incumbent advantage. Short contracts are favoured as they exclude the high degree of uncertainty of long terms though, as demonstrated with Australian franchises, an undeliverable bid will collapse whatever the contract length.

Aim for complete contracts. A closed (complete) contract should be preferred over an incomplete (open) contract–to avoid cost drift on "optional extras", incomplete contracts should be avoided. This is more practicable with short franchises.

3. To realise the anticipated gains from tendering

Set "high" performance bonds. The franchisor needs to hold a significant performance bond (notwithstanding that it sets a barrier to entry), to ensure franchisee compliance and as a mechanism to recover costs incurred in the event that the franchisee defaults (as arose with National Express in Melbourne). The bond raises the entry barriers but, as those barriers are relatively low and the costs of service disruption are high, a substantial bond is essential. A substantial bond is also a necessary complement to refusing bailouts: the failed TOC pays for the cost of poorly-considered and tactical bidding through the loss of the bond.

Do not undertake business monitoring. Phase III franchising has brought revenue- and profit-sharing to franchising, making the government a "sleeping partner" in the business and leading to considerable business monitoring. There is no need for extensive business monitoring if government is not a "business partner", if exogenous revenue risk is transferred to the franchisee and if the bid assessors focus more on whether the winning bidder's plans are deliverable.

Adopt a risk-averse, sceptical approach to bid assessments. Unless there is strong evidence to the contrary, the presumption should be that the bidders have relatively little leeway to affect costs and revenues. This presumption should have been more important in Britain and Melbourne, where substantial passenger rail reforms and rationalisations had already occurred and opportunities for cost savings were therefore limited. On this basis, the onus should be on *both* franchisor and bidders to demonstrate the rationale for variance from this interpretation. In this way, the collective bid fever may be minimised. *But a golden rule from auctioning theory is that if there is wide variation across the bids offered, something is wrong unless the discrepancy can be rationally explained. Further, if there is a wide variation of the bids from existing performance (or predicted outcomes), assume that optimism bias (poor management) or bid-winning behaviour is at work... until disproved.*

On this basis, a high degree of analysis and skill is a key requirement–astute bid assessors are essential and the following steps required:

- **Predict outcomes.** The franchisor should identify anticipated subsidy payments for all TOCs in advance (as illustrated in Table 1) This may prevent the franchisor being drawn into bidding fever optimism, though (as illustrated in Melbourne, with government's own prediction of patronage growth of up to 50% over 15 years) this is still no guarantee of franchisor rationality.

- **Use industry specialists to review costs**. Operating cost estimates and projections should be assessed at a detailed level by relevant ex-railway managers, not accountants.

- **Pre-determine exogenous patronage/revenue levels and calculate benchmarks for endogenous growth.** Bid assessment should be limited to assessing endogenous revenue growth; exogenous changes in traffic would be pre-determined by the franchisor for each TOC area. The franchisor would take the exogenous economic growth risk although, in practice, some (beneficial or adverse) risk would remain with the TOC to the extent that the estimated patronage–economic growth relationship differed from "reality". (In undertaking due diligence, a bidder could adopt a more pessimistic perspective but a winning bidder would have no recourse to government if it subsequently concluded the relationship was not to its advantage.) Revenue growth assessment would then be limited to assessment of endogenous growth projections. These should be assessed against benchmarks, such as those centrally-agreed parameters developed by British Rail, and presented in its Passenger Demand Forecasting Handbook.

- **Check bids for vulnerability to adverse outcomes.** Bids should be rejected where an assessment reveals that a firm becomes financially unsustainable when using endogenous growth projections that lie outside the implicit range of the centrally-set parameters. Bids should also be rejected if the business is shown to be unsustainable if the delivery time of improvements is delayed. This includes assessing whether the timing of cost cuts and revenue improvements is reasonable. The unrealistic timing of improvements was a major fault in all the winning bids in Australia. To enable this timing to be checked on a comparable basis, bids need to be normalised. (In the absence of evidence to the contrary,

assessors should presume that bidders are unlikely to have such control over costs and revenues that one bidder should have a markedly different time trend from another.) Undertaking this standardisation of timing would make direct comparisons easier and minimise bidders varying their timings to manipulate the NPV calculation.

- **Ensure that service proposals can be fitted onto the network.** Bidders' optional bid features should be checked against operational capability and consistency with network plans.

Ensure that cost risk and endogenous revenue risks are completely transferred. Cost risk should be transferred to the TOC (including the costs of industrial disputes, otherwise moral hazard behaviour would encourage the TOC to pursue disputes).

There is no evidence that exogenous (notably, economic growth) risk has been problematic for TOCs in Britain or Australia. That said, that growth has not been beneficial to the public purse. In particular, to the extent the British franchises were awarded on the presumption of low economic growth, the initial three TOCs (see Table 1) received windfall gains. If we take the view that risk should reside with the party best able to manage it, exogenous revenue risk should reside with government.

Various ways might be contrived to adopt competitive tendering with government still retaining the exogenous revenue risk. As noted above, centrally-determined economic growth risk would lie with government, with annual core subsidy and premium raised or lowered, depending on whether economic growth was above or below a pre-determined rate of growth. As a first approximation, it would be assumed that fuel price and road congestion levels would be "neutral" factors that would not be explicitly considered (although fuel prices could be factored into exogenous revenue risk indexing).

Bidders' revenue projections would therefore be identical prior to endogenous growth estimation. Endogenous growth risk is borne by the party that has greatest control over the risk. Franchisees would take on endogenous revenue risk themselves, including service quality improvements and unregulated fare variations. The revenue projections and subsequent assessments would then be limited to assessing entrepreneurial flair. This would result in the endogenous factors being more obvious and would enable greater scrutiny.

What authorities should <u>not</u> do

Scrutiny of the British and Australian rail franchising reveals that authorities have only superficially applied franchising principles to competition design and operation. Further, there has been patchy and retrospective recognition of important network economies: it *is* possible to design contracted servicing without surrendering those economies. However, this does require relegating franchisees' business latitude (such as service specification) where conflict between network economics and a TOC's entrepreneurial flair arises.

The list of key actions that franchisors should *not* do when adopting franchising is short, but crucial; the list is derived from the British and Australian experiences:

- Do not sign contracts that those with experience in the industry judge to be unrealistic.
- Contracts should be grounded in deliverability, not on wishful thinking.
- Avoid clustering franchise competitions, so as to learn from experiences, and to prevent franchisor and bidder exhaustion (undermining market interest).

- Avoid giving franchises too much leeway in influencing network interactions as this undermines network integrity.
- Avoid "cosy" relationships with the franchisee–this is regulatory capture in another guise.
- Avoid contracts that encourage moral hazard behaviour–especially risk-sharing contracts.
- Do not take back risks that have been contracted to the franchisee.
- Do not rescue franchises.

If authorities wish to ensure that the benefits of competitive tendering are realised then this list is "non-negotiable". Current British re-franchising is repeating earlier mistakes by ignoring franchising principles. Successful franchising relies upon the conduct of a fair competition. The fairness of that competition extends to the fair execution of the contract: rescuing franchises undermines the fairness and, probably, the integrity of the original competition. If authorities are required to adopt franchising but will not tolerate franchises failing due to the resultant service disruptions, they will need to have back-up processes that can quickly restore services should a franchise fail. *A key tenet of franchising is that failing franchises must be allowed to fail.*

ANNEXES

Table 2. **Average Required Annual TOC Financial Improvement[a], implied from Bids**

Train operating company	Average required improvement to 2002	Phase I: financial variance from contract
InterCity		
Great Western	2%	
Gatwick Express	4%	
East Coast (*Great North Eastern Railway)*	4%	
Midland Main Line	4%	
West Coast (*Virgin Trains)*	6%	Management contract
InterCity sub-total	**4%**	
London Commuting (Network SouthEast)		
South West Trains	2%	
LTS Rail (c2c)	3%	
South Central *(Southern)*	5%	
Chiltern Railways	8%	
South Eastern	7%	Management contract
Thames Trains *(FGW Link)*	10%	
Anglia Railways	12%	Management contract
Great Eastern	5%	
West Anglia/Great Northern	11%	Great Northern sub-franchise under management contract
North London Railways (Silverlink)	10%	
Thameslink	8%	
London sub-total	**6%**	
Regional: Non-South-Eastern Conurbation and Rural		
Cardiff	19%	Management contract
South Wales & West *(*Wessex)	14%	Management contract
Island Line	na	
Cross-Country *(*Virgin Cross Country)	11%	Management contract
MerseyRail	17%	Management contract
RR North East [Northern Spirit] Arriva Northern	16%	Management contract
North Western	19%	Management contract
Central Trains	13%	Extra subsidy
ScotRail	10%	Extra subsidy
Regional sub-total	**13%**	
Total: all franchises	**7%**	

Note: [a] The average improvement is defined as the change in subsidy over the period to 2002-03, divided by the number of years, relative to the 1996-97 turnover.

Table 3. **Franchise Profiles, Great Britain**

Train Operating Company (*Brand name*)	(*Previous*) Operators	Original franchise periods (*revised end-year*)	1996/97 Revenue	1996/97 Costs	Average annual improvement to 2002*	Order of franchising	Average change in pass. km *pa*, 1996/7 to 2002/3	Change in train-km, 1996/7 to 2002/3‡	Notes
InterCity									
Great Western	First Group	(a) 1996-2006	197	270	2%	=1	3.9%	22.0%	To Greater Western (2006)
Gatwick Express	National Express	(a) 1996-2011	34	31	4%	=2	3.1%	1.0%	
East Coast (*Great North Eastern Railway)*	Sea Containers	(a) 1996-2003 *(05)* *(b) 2005-15*	277	352	4%	=2	1.9%	16.8%	
Midland Main Line	National Express	(a) 1996-2006 *(08)*	83	110	4%	=2	7.8%	118.6%	Subsidy profile renegotiated; To East Midlands franchise
West Coast (*Virgin Trains)*	Virgin Trains	(a) 1997-2012 *(04?)*	249	364	6%	9	0.0%	4.4%	Renegotiating contract
InterCity sub-total					**4%**		**2.3%**	**23.4%**	
London Commuting (Network SouthEast)									
South West Trains	Stagecoach	(a) 1996-03 (04) (b) 2004-07	274	347	2%	=1	4.3%	22.1%	
LTS Rail (c2c)	(Prism to 2000) National Express	(a) 1996-11	54	85	3%	=3	7.6%	14.0%	
South Central *(Southern)*	(Connex to 2001) Go-Ahead/Keolis	(a) 1996-03 (b) 2003-09	179	281	5%	=3	4.2%	23.7%	

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Chiltern Railways	Laing	(a) 1996-03 (b) 2003-21	29	45	8%	4	10.5%	35.7%	Refranchised early
South Eastern	*(Connex to 2003)* SRA Govia (from 2006)	(a) 1996-11 *(06)(03)* (b) 2004-06 (c) 2006-12/14	256	382	7%	=5	3.1%	-2.6%	Franchise revoked, 2003. To Integrated Kent franchise
Thames Trains *(FGW Link)*	(Go-Ahead to 2004) First Group	(a) 1996-04 (b) 2004-06	64	104	10%	=5	5.2%	2.5%	To Greater Western
Anglia Railways	First (formerly GB Railways)	(a) 1997-04	42	84	12%	=6	8.3%	46.4%	To Greater Anglia
Great Eastern	First Group	(a) 1997-04	129	164	5%	=6	3.7%	29.0%	To Greater Anglia
West Anglia/Great Northern	*(Prism to 2000)* National Express	(a) 1997-04 *(/Great Northern 06)*	131	195	11%	=6	6.1%	14.1%	West Anglia to Greater Anglia; Great Northern to go to new (FirstGroup) Thameslink franchise
Greater Anglia *('One')*	National Express	2004-11							From Anglia, Great Eastern and West Anglia
North London Railways **(Silverlink)**	National Express	(a) 1997-04 *(07)*	61	114	10%	=8	5.1%	13.4%	Inner London (metro) services to new franchise managed by Transport *for* London; others to West Midland franchise
Thameslink	Go-Ahead/Keolis	(a) 1997-04 *(06)*	88	100	8%	=8	7.1%	14.9%	To FirstGroup Thameslink franchise (06)
London sub-total					**6%**		**4.7%**	**16.2%**	

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Regional: Non-South-Eastern Conurbation and Rural Railways

Cardiff	(Prism to 2000; National Express)	(a) 1996-04	7	29	19%	=5	-		Dovetailed into Wales & Borders franchise by NE
Wales & Borders *(Arriva Trains Wales)*	*Arriva*	2003-2018							Services from Cardiff, North Western, Central Trains franchises
South Wales & West *(*Wessex)	*(Prism to 2000)* National Express	(a) 1996-04 *(06)*	48	135	14%	=5	-		To Greater Western
Island Line	Stagecoach	(a) 1996-01 (03) (b) 2004-07	1	3	na	=5	na	9.2%	To South Western
Cross-Country *(*Virgin Cross Country)	Virgin Trains	(a) 1997-12 *(07)*	122	242	11%	=6	5%	75.3%	Renegotiating contract
MerseyRail	*(MTL to 2000; Arriva to 2003)* Serco/NedRailways	(a) 1997-03 (b) 2003-28	23	82	17%	7	1.7%	-3.6%	Management contract until refranchised in 2003
RR North East **[Northern Spirit] Arriva Northern**	*(MTL to 2000; Arriva to 2004)*	(a) 1997-04	76	294	16%	=8	1.5%	5.7%	To TransPennine and Northern Rail franchises
North Western	First Group	(a) 1997-04	53	251	19%	=8	1.4%	5.9%	To TransPennine, Northern, Wales & Borders franchises
Northern Rail	Serco/NedRailways	2004–2011/13							
Central Trains	National Express	(a) 1997-04 *(06)*	78	259	13%	=8	3.0%	13.1%	To West Midlands, East Midlands, Cross-Country franchises

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ScotRail	(National Express) First Group	(a) 1997-04 (b) 2004-11/14	118	363	10%	10	2.6%	9.3%	
TransPennine	First/Keolis	2004-12/17				na	-		New franchise
Regional sub-total					**13%**		**3.2%**	**17.2%**	
Total: all franchises					**7%**		**3.7%**	**17.7%**	

* The average improvement is defined as the change in subsidy over the period to 2002/03, divided by the number of years, relative to the 1996/97 turnover.

‡ Where train-km are low, the estimate of change is especially subject to the degree of precision with which the mileage is reported in each year.

Sources: Kain 1998, Rail Business Intelligence (Issues 162, "£1m/week failed to deliver" p. 5; 166, "Refranchising will eliminate losses" "Cost plus piles up problems" p. 10; 172, "Anglia latest for intensive care" p. 5; 179, "SRA rescues Virgin franchises" p. 1; 183, "GB rebuffs bid" "NEG hit by subsidy profiles" "Regional woes threaten SRA budget" pp. 7-8; 195, "Savings elusive in fixed-cost franchises" p. 5; 201,"SRA clears the way for integrated Kent franchise", p. 1; 240, "Why the franchise was terminated" p. 1).

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Table 4. **British Franchise Operating Parameters (£m, nominal)**

	1997/98	1998/99	1999/00	2000/01	2001/02	% change, 1997/98 to 2001/02
1. Staff costs	869	876	934	1 026	1 110	27.7
2. Other costs	995	1 070	1 068	1 181	1 210	21.6
3. Rolling stock charges	811	794	782	798	927	14.3
4. Sub-total of costs	**2 675**	**2 740**	**2 784**	**3 005**	**3 247**	**21.4**
5. Access charges	2 107	2 135	2 133	2 096	2 135	1.3
6. Total operating costs	4 782	4 876	4 917	5 101	5 382	12.5
7. Passenger revenue	2 821	3 089	3 368	3 413	3 548	25.8
8a. Revenue support grants* (contract)	1 843	1 557	1 350	1 193	1 086	-41.0
8b. Revenue support grants* (actual)	1 804	1 533	1 343	1 130	1 037	-42.5
9. Total operating revenue (tickets plus subsidy) (7+8b)	4 625	4 622	4 711	4 543	4 585	-0.6
10. Net operating revenue (9-6)	-157	-254	-206	-558	-797	507.6
11. Operating ratio (6/9)	103.4	105.5	104.4	112.3	117.4	13.5
12. Staff numbers (Bid)	37 466	37 538	33 514	32 750	33 376	-10.9
13. Staff numbers (Actual average)	39 721	39 397	39 187	40 151	43 027	+8.3

* Central Government and PTE grants.

Source: Derived from data in SRA 2003, pp. 49-51.

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Table 5. **Victorian Franchise Parameters (1999 terms)**

Franchise	Franchisee	Operation	Franchise term	Patronage growth by 2014*	Revenue growth			Subsidy ($A m)		Net Present Value (NPV) of subsidies (A$ m)		
					2000-1	2000-5	2005-14	2000-1	2014	Fixed subsidies	Volume-based subsidies	Total
Bayside Trains †	National Express	Melbourne	15 years	+84%	15.5%	+64% (10.4%pa)	+29% (2.9%pa)	83	-19	354	353	707
Hillside Trains ‡	Connex	Melbourne	15 years	+64%	15.8%	+45% (7.7%pa)	+20% (2.0%pa)	91	25	612	259	880
V/Line Passenger	National Express	regional Victoria	10 years	+74%	na	na	na	78	46	476	98	574

* Patronage growth during the 1990s was between 1% and 2% per annum.

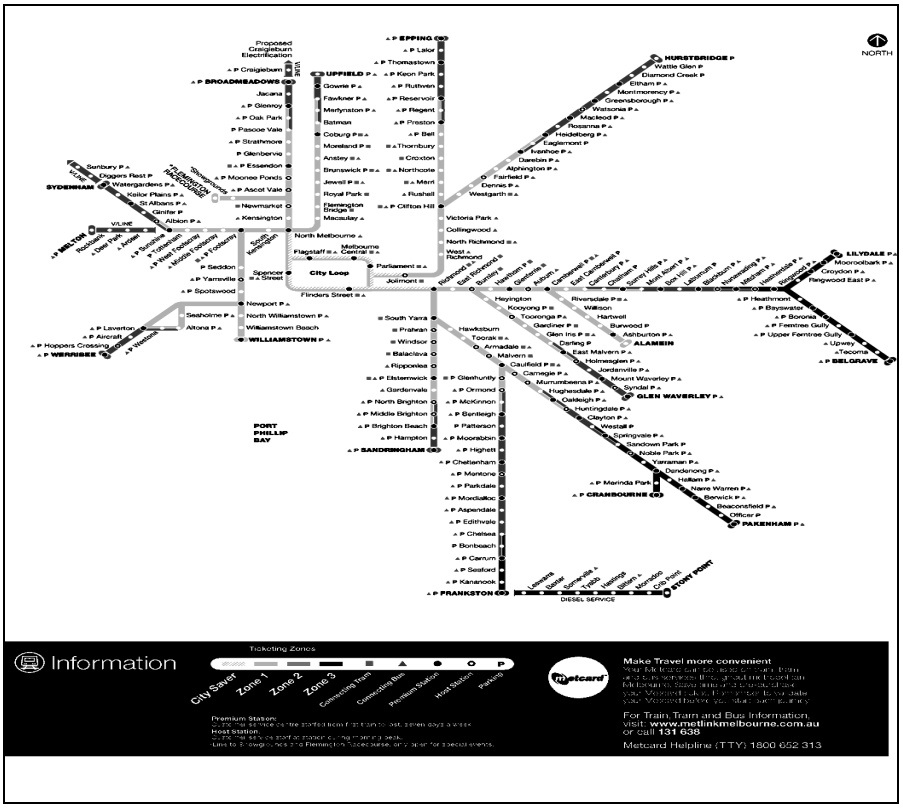
† In addition, the franchisee committed to $A400 million in new rolling stock; $A70 million in stock refurbishments; $A260 million in track upgrading (including extensions of electrification); and $A27 million miscellaneous investment.

‡ In addition, the franchisee committed to $A314 million in new rolling stock and $A75 million in stock refurbishments.

Sources: Mees (2005, p. 438, 448); Department of Infrastructure (2005, p. 9); Ehrhardt and Irwin (2004, p. 16); Productivity Commission (2001, p. 46); International Railway Journal (1999).

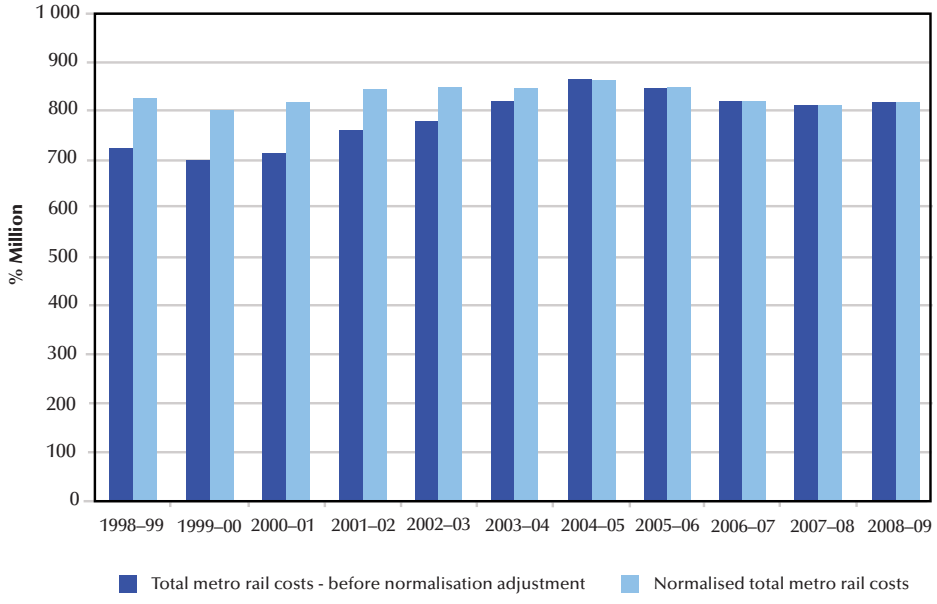
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Figure 6. **Melbourne Urban Passenger Railways**



Source: *Metlink*, www.metlinkmelbourne.com.au/images/maps/metro_train_map_fullscale.gif.

Figure 7. **Total Cost of Operating Melbourne's Trains and Trams (AUD million per year)**



Source: Auditor General Victoria 2005, p. 24.

NOTES

1. NERA 1993, (p. 3) discusses this distinction further.

2. The director-general made this comment in March 2002 following the announcement that government would bail out two franchises. (*The Financial Times*, 7 March 2002).

3. Principal–agent problems can arise when one party (the agent) undertakes work on behalf of another (the principal). The agent may have no incentive to maximise efficiency if poor productivity cannot be substantiated or can only be proven at high cost. Where the potential for this problem is significant, an important discipline is to make the agent bear the risk.

4. This same product attribute–rather than economies of scale–underlies cable television monopolies. See Viscusi, et. al. 2000, p. 414. The same non-scale economy characteristics enable cable and train operations to be apportioned between firms along geographical lines without losing efficiencies.

5. At the time, Welsby was Chairman and Chief Executive of the British Railways Board while Nichols was its Director of Policy.

6. This "English" auctioning is based on bidding up the price; in "Dutch" auctioning, a standing price is announced, the price is then lowered and the winning bidder is the first person to bid a price.

7. ...but without the winning increment, unless the franchisor adds such a margin as part of the design.

8. For completeness, I note that Demsetz also states an (to him, important) assumption that the bidders do not collude, being discouraged by prohibitively high costs of so doing. This appears not to be an issue for train franchises so I do not place emphasis on it. (Demsetz 1968, p. 58).

9. For Britain, in any case, employees have employment protection regulations that ensure that employees are transferred across successor organisations, under TUPE–the Transfer of Undertaking (Protection of Employment) Regulations 1981.

10. Of course, incumbency can work against the firm, when the firm has performed poorly.

11. Bowker (Hansard 26 Nov 2002, para. 143) says that 40% of the fares are regulated with the formula RPI-1 (or, more generally, RPI-x, where x may be a positive or negative number).

12. The demand for some journey purposes and locations–notably, "saver" tickets and London commuting–are regarded as price-inelastic. The tickets for these flows are therefore subject to a regulatory price cap. Other journeys are regarded as discretionary and therefore price-elastic.

13. Or, in some cases, premium back to the government. For instance, the Gatwick Express franchise contract involved a premium from the outset.

14. As NERA & TIS.PT (2001, p. 235) note, the nature of public transport demand is that certain groups of passengers are captive to the service as they have no feasible alternative transport modes. Thus, a poor service can be provided but patronage/revenue will not decline significantly as the cost savings.

15. Moral hazard behaviour arises when the presence of a contract between two parties leads one party to alter its behaviour. For instance, where a person is insured against a given incident, the person may respond by

taking more risks, e.g., when the person insures themselves against theft, they may be less inclined to lock up their house.

16. The costs arising from businesses reverting to the government after failing to agree to a contract can be considerable and, depending on the contract, can far exceed just re-contracting costs. For instance, the British government was forced to restructure its PFI contract with London & Continental Railways (LCR) when LCR announced it could not fulfil the terms of its contract with the government. Had the contract been rescinded, government would also have acquired LCR's very substantial accumulated business losses and financing costs. See Kain 2002, pp. 56-57.

17. Such as have been adopted in some bus service tenders, such as London Buses and TransAdelaide services in Adelaide. Here, the cost risk is transferred to operators; the revenue risk is retained by London Buses (albeit that an operator may be given financial incentives to try to encourage patronage). See Toner 2001, p. 7.

18. Although we noted earlier Affuso and Newbury's research, suggesting that the shorter-term can also encourage investment by encouraging compliance and desire to show commitment to the business.

19. By way of example, when in 2002 Connex renegotiated the financial terms of its South Eastern franchise, the penalty was a much-shortened franchise term.

20. The framework for the restructuring and privatisation of BR operations was outlined in the 1992 White Paper, "New opportunities for the railways" (Cm 2012).

21. We should note, however, that rail fares overall (regulated plus unregulated) rose faster than inflation between January 1997 and January 2003 (SRA 2003d, p. 23).

22. That said, in the light of the prevailing economic conditions at the time of the bidding, we should not then assume that the revenue projections had been conservative. It is also relevant to note here that "The architects of rail privatisation did not anticipate the continuing growth in traffic from 1996" (SRA 2003, p. 56).

23. Access charges are excluded here as these are mostly invariant with traffic, and so are difficult for the TOCs to reduce. Similarly, rolling stock costs are largely outside of the TOCs' ability to vary much–though we observe in Table 4 that these stock costs rose significantly during this period. The increase in the staff, "other" and rolling stock charges for all TOCs was 21.4%–not far below the revenue growth rate but well below the decline in subsidy (rows 4 and 8b of Table 4).

24. We should also note that franchise revenue performance was also challenged by fare regulation. The price of 46% of rail tickets was capped at the rate of inflation for the first three years of franchising and then at one percentage point below the rate of inflation for the next four years.

25. Having the rolling stock leased reduces the capital requirements needed for entry into franchising; incumbent ownership of stock would also result in the incumbent having an advantage over rival bidders. However, we should note that TOCs have purchased their own stock in recent years.

26. See DETR 1998; also see the measures contained in the Transport Bill submitted to the House of Commons on 1 December 1999.

27. By the time Phase III policy was introduced in 2002, the Chiltern franchise had already been awarded while the TransPennine Express and Wales & Border competitions were "sufficiently advanced that they will remain on their current path" (SRA, *The Strategic Plan 2003*, p. 65).

28. For instance, by that time staff numbers were already 23% higher than bid projections, that is, TOC financial performance was already seriously adrift of plans. NAO (2005, p. 23) states that between 2000 and 2003, four TOCs were given additional subsidy due to the "adverse impact" of the disruption following the Hatfield accident on passenger income. Given the financial improvements required for the TOCs shown in Table 2**Error! Reference source not found.**, it is assumed this means *further* supplementary income.

29. Contracts with profit sharing may have different cost and revenue incentives. For instance, with the 2004–07 South West Trains franchise has relatively strong incentives to make marginal cost savings but only small incentives for revenue growth: the TOC retains 50% of greater-than-forecast cost savings but retains only 12.5% of greater-than-forecast revenue growth.

30. On this, the November 2002 policy statement comments about the earlier franchising that "the extent to which risk, in relation to costs and revenue, has in reality transferred to the private sector, is therefore questionable".

31. This point fails to recognise that a properly congestion-responsive track access charge could have been set so as to avoid this congestion–rather than set capacity allocation by administrative fiat.

32. An example of SRA's involvement in financial oversight of TOCs was SRA's decision in 2003 to revoke Connex's South Eastern franchise due to failings in the company's financial systems and controls (after those systems were put in place in exchange for the TOC being given additional subsidy.

33. See *Local Transport Today*, 7 November 1996, p. 11.

34. In the current franchising process, the track record accounts for 66% of the marks in the pre-qualifying assessment. (Modern Railways 2006, p. 24).

35. While recognising this, we do note that the bid assessment of the InterCity East Coast competition in 2004–05 contains what can only be regarded as implausible revenue projections. With current train loadings averaging upwards of 50%, *Rail Business Intelligence* calculated that an equivalent load factor of 90% would be required for the winning bidder's revenue projections to be realised. (RBI 243, "Sea Containers wins on growth", p. 6) See also p. 87 for a discussion of risk sharing in this franchise. It should also be noted that the winning bidder won on a basis of an NPV premium margin of £500 million–which should have led assessors to consider its plausibility. (Rail Business Intelligence 2005, Issue 245, p. 7).

36. Jupe and Crompton (2006, forthcoming) cite Foster (advisor to the then-Transport Secretary) as saying that "the number of TOCs was determined 'fairly pragmatically', ... indicating that the standard size and cost was kept down in the interests of successful auctions".

37. Eventually, after political intervention, this bar was removed during the franchising process. By this time, however, BR management had decided not to pursue any bids.

38. In 1997, the largest franchise operators (by number of franchises) were National Express (with 5) and Prism (with 4); in 2003, the equivalent operators were National Express (with 8) and First (with 4). New operators since the original franchising include Arriva (taking over MTL operations) and Serco and Dutch railway operator, NedRailways (operating MerseyRail and Northern Rail).

39. Crompton and Jupe (2004, p. 8) report that in Phase I franchising The Treasury had favoured 3 to 5 year terms.

40. Welsby, being BR Chairman at the time of Phase I franchising, might be assumed to provide authoritative insight.

41. Of course, the very reliance on economic growth to drive up revenue is, in itself, a significant risk. For instance, in the recession of the early 1990s, South West Trains lost almost 20% of its ridership (*Modern Railways*, January 1996, p. 17).

42. ... and currently around 70% fixed.

43. In Table 4, it is evident that rolling stock costs rose belatedly. This reflects the slow ordering of new stock and the protracted construction and commissioning process. Leasing costs from 2002/03 forwards are considerably greater than those for earlier years. For instance, for its new 3-year, South West Trains refranchise, Stagecoach is receiving around three times its previous annual subsidy, a substantial part of which funds the new rolling stock that will replace much of the TOC's fleet of "slam-door" trains. (Modern Railways 2003, p. 19).

44. … and, some have suggested, skilled workers and unions playing off one TOC against another, to increase wages.

45. Staff numbers were reduced *prior* to franchising. For the period of the franchise awarding (February 1996 to April 1997) I assume that there was no significant change to staffing, although I note that a number of train drivers from first franchise to be awarded, SouthWest Trains, were offered and accepted voluntary retirement packages in early 1997. However, most TOCs were franchised during 1996-97 and so (as SRA 2003 implicitly assumes), I am content to assume that the 1997-97 staff levels are indicative of the levels assumed in the bid plans.

46. The relationship between a change in train-kms and patronage change is noteworthy. TOCs shared revenue of "inter-available" ticketing (tickets valid for use on multiple TOCs); a principal determinant of the revenue split for these tickets is the relative service frequency of each TOC serving the relevant station origin–destination pairs. Thus, a strategy for a TOC to increase its revenue share is to increase its service frequency; this strategy might be relatively inexpensive to the extent that the 1996-2001 access charges had very low costs for track access beyond PSR service levels. Thus, TOCs had strong incentives to operate additional services–see column (10) of Table 3 train capacity has been supplemented by *extra* trains rather than *longer* trains. However, given the increase in staff costs (Table 4), it may be the case that the non-access-charge costs were not low. This has had significant impacts on track congestion, leading SRA in 2003 to adopt a Capacity Utilisation Policy, with specified service levels. At around the same time, the Rail Regulator has restructured access charges to make them more responsive to increased congestion.

47. This was certainly a problem with the structure of access charges prior to the April 2001 charges restructuring.

48. Even if the concept of performance regimes was robust, its efficacy depended on the right benchmarks for bonus or penalty being set at the outset. In any case, it seems that the transaction costs of running the scheme (the costs of performance monitoring and attribution) are very significant. Another mechanism used to encourage service quality delivery was to use an RPI-X mechanism to set a higher "X" for TOCs that were not delivering punctual and reliable services.

49. Although ROSCOs sought long leasing agreements. Further, the subsequent greater appreciation of industry risks has even led franchises to purchase their own stock, e.g., First Group's purchase of "HST" train sets in 2004. (RBI 2004, 7 October).

50. In December 2005, Stagecoach (operator of the South West Trains and Island Line franchises) stated that it was unlikely to win the new Integrated Kent, Thameslink or Greater Western franchises, saying that "bidding was at such a "fever pitch" that prices had reached unreasonable levels" (The Guardian 2005).

51. This point was acknowledged by SRA. TOCs receive additional subsidy through "agreements to provide additional support to ensure continuity of train services" (SRA 2003, p. 47) This interest is arguably

stronger than other franchising, such as television licensing, as train service customers are more severely influenced by train service disruptions than television channel problems.

52. By way of example, the three-year South West Trains franchise, awarded in 2003, incorporates profit-sharing. This seeks to use the source of the additional profit as an incentive lever: "With SRA concerned to cut overcapacity and cut costs, the profit-sharing deal differentiates between revenue gains and cost savings. For additional revenue earned above the level in the franchise plan SRA will receive 87.5%, but cost savings are shared equally. (RBI 2003, No. 202, p. 1).

53. By way of example, the NPV of premium payments for the first four years is 19% of the total 10-year payments, while the NPV of the last three years represents 47% of the payments.

54. See, also, endnote 35, which provides an example of the implausibility of the revenue projections.

55. Where profit-sharing is applied, such as the current SWT franchise, there is also cost risk sharing.

56. In one instance, on 25 March 2003, it was reported that the SRA would compensate TOCs for the cost of a train guards' walk-out: "We will not let the train companies take a financial hit on this because it is not within their power to stop it"; SRA argued that the walkouts were not justified. (*Ananova*, http://www.ananova.com/news/story/sm_764521.html?menu=).

57. The "Passenger Growth Incentive Regime". The operator would receive the equivalent of 50% of the fare for all passengers carried above a specified level of patronage.

58. Stagecoach indicated its intention to bid for the franchises (*The Age* (Melbourne), 24 September 1997).

59. There is no public statement that the split was undertaken in order to have the train operation at a size that could be absorbed by a private company.

60. DOI (2005, p. 15) suggests that the UK had been "the main source of bidders in the original franchising".

61. Welsby and Nichols take a more benign view of the root causes of improvements arising from instituting franchising: "Greater entrepreneurialism does appear to accompany privatisation, but this would appear to have less to do with the respective qualities of management than the substitution of private for public shareholding", particularly (they say) by letting existing managers freedom that would not have been forthcoming under public ownership. (Welsby and Nichols 1999, p. 69).

62. Mees notes that if the Treasury pre-franchising patronage series is used, the pre-franchising growth is around 1% whereas the Auditor-General of Victoria's equivalent value is around 2%–and the latter value is equivalent to the post-franchising average growth rate. (Mees 2005, p. 437).

63. Mees notes that the details of the Victorian franchises were released only after a successful Freedom of Information challenge (Mees 2005, p. 436); a similar FOI challenge was required in 2005 to extract the details of the InterCity East Coast franchise (Rail Business Intelligence 2005, 5 May, p. 7).

64. ...such as the 2005 East Coast Main Line franchise contract.

65. As NERA & TIS.PT (2001, p. 235) note, franchisees are penalised for poor quality through the reduced patronage but to the extent the patrons have no alternative form of transport, revenue loss may well be less than the cost savings. As a consequence, even franchises require additional quality incentives.

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4. TENDERING AND DECENTRALIZATION OF REGIONAL RAIL PASSENGER SERVICES IN THE NETHERLANDS (1997 – 2005)

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Introduction

In the Netherlands, tendering of regional rail services has begun. In 1994, the government started tendering regional bus services as an experiment and in 2001, a law was established which gives a structural juridical basis for tendering public transport: The Law for passenger transport 2000.

In 1998, the government started, on an experimental basis, the process of decentralization and tendering of regional rail passenger services. On 1 January 2005, the Law for Passenger transport became valid for regional rail passenger transport. Since this time, there has been an official and juridical basis for tendering and decentralization of regional rail services.

This paper describes the experiences and insights of the Dutch central government on the tendering procedures which have taken place since 1997. Special thanks are given to the representatives of the Dutch regional authorities who have contributed their experiences in producing this paper.

The Dutch Situation/Context

The Dutch rail network covers 2 811 km; 2 064 km are electrified and 924 km are single track. There are 390 stations. Only a small part of this network is competitively tendered.

"ProRail" is responsible for building and maintaining rail infrastructure, allocating rail capacity and rail network management. Therefore, it is responsible for the operation and maintenance of the whole railway network, including the parts on which services are tendered.

"NS" – Netherlands Railways is the operator for passenger services on the main network. NS saw growth in passengers of 1.8% in 2004, with the number of passenger kilometres increasing from 13.8 billion to 14.1 billion. The increase in passengers in 2005 was 4%.

The responsibility for regional transport has been decentralized as far as possible in the Netherlands in the last decade. The responsible authorities are more often represented by regional authorities than by the central government. The central government determines the primary national goals in the transport sector and funds regional public transport through the regional authorities. The central government handed a concession for the operation and maintenance of the railway network to ProRail until 2015 and for passenger services on the main railway network a concession has been given to NS also until 2015.

The aim of decentralization and tendering procedures in the Dutch passenger transport policy is to have "better, more effective public transport". Achieving gains in efficiency is also a goal, but not the most important goal. In this respect, it is relevant to know that the Dutch government has decided to give the same level of subsidies to regional authorities as before the decentralization process started. This system gives the regional authorities an incentive to either improve the quality of service or cut the cost while maintaining the same quality or level of service in the tendering process. If they cut costs, the money can be spent on other public transport modes.

The regional authorities are responsible for the tendering procedures and determine the goals, specifications, service delivery and possible sanctions when companies do not live up to their contracts.

The Dutch Experience Up-to-Date

Since 1998, 13 regional rail passenger operations have been decentralized (approx. 8% of heavy rail transport) and 10 were competitively tendered. These were mainly northern and eastern services which have little interference with services on the main rail network. The Minister of Transport decided that 4 more regional rail services (2 in Limburg and 2 in Zuid-Holland) will be decentralized in 2006 and will be tendered by the regional authorities ('provinces') which will be responsible for them.

Seven of the tendering procedures focused mainly on the goal of minimum-subsidy (Groningen + Friesland + Zutphen-Apeldoorn) and 3 on improving the quality and quantity of supply.

Table 1.

Regional authority	Nr. of services	Year of decentralization	Year of tendering	Duration of current franchise (in years)
Friesland	2*	1999	2004	15
Groningen	3**	2000	1999+2004	15
Groningen-Leeuwarden	1*	2005	2004	15
Gelderland Winterswijk-Zuph/Doet	2	1999	2007	10
Gelderland Doet-Arnhem	1	2001	2007	7
Gelderland Zutphen-Apeldoorn	1*	2004	2003	5
Twente/ALMA	1**	1998	1997+2005	5
Twente/ZHO	1*	2003	2002	10
Gelderland Ede-Amersfoort	1*	2006	2005	15
Limburg	2	2006	2006	8+2
Zuid-Holland	2	2006	2006	10?
Gelderland Tiel-Arnhem	1	2006	2007	10?
Overijssel	2	2006/7	2006/7	2

* Service is tendered once. ** Service is tendered twice.

The Results

The results of this relatively new policy are quite good considering quality of services offered and the efficiency that has been gained in the operation: Either a regional authority has gained quality improvements such as extra supply, new rolling stock and/or a higher frequency of rail service, or the winning operator has subscribed for a substantially lower financial compensation (20-50%) while providing the same level of service.

Considering Dutch standards, a relatively large franchise of 6 regional rail services in Groningen and Friesland (2004/2005) received a very attractive winning offer, whereby, for 15 years approximately 50% less subsidy per year will be needed and the operator will be obliged to supply new rolling stock starting in the autumn of 2006. The operator will also have to implement the new national travel pass or "chipcard" without extra cost to the regional authorities. The national chipcard will enable people to use one debit card for different types of public transport.

Table 2.

Regional authority	Extra supply first time	Extra supply second time	New rolling stock first time	New rolling stock second time	Lower subsidy first time	Lower subsidy second time
Friesland**	+	+	N	Y	N	Y
Groningen**	0	+	N	Y	Y	Y
Groningen- Leeuwarden*	+		Y		0	
Gelderland Winterswijk-Zutphen/Doet.	+		Y		N	
Gelderland Doet.-Arnhem	+		Y		N	
Gelderland Zutphen-Apeldoorn*	0		N		Y	
Twente/ALMA**	0	+	N	Y	Y	Y
Twente/ZHO*	++		Y		N	
Gelderland Ede-Amersfoort*	++		Y		Y	
Limburg	?		?		?	
Gelderland Tiel-Arnhem	?		?		?	
Zuid-Holland	?		?		?	
Overijssel	?		?		?	

N = no **Y** = yes + small extension ++ large extension - small decline **0** = same as before
* once tendered ** twice tendered

Which rail transport companies operate in the Netherlands?

Thanks to the tendering (and decentralization) process, several new transport companies have entered the Dutch market for rail passenger transport. The companies currently operating are NS, Connexxion, Syntus (partly owned by NS and Connexxion), and Arriva (formerly Noordned). Other rail operators which have made bids in the tendering procedures are Connex and 'Stadsvervoer Nederland' (part of HTM).

Evaluation

On the basis of the two evaluation studies[1] on the process and content of the decentralization and tendering of regional public transport in the Netherlands, the following conclusions can be drawn:

Conclusions on decentralization

In Gelderland, Groningen and Friesland a better connection between regional policy and local needs has been established. The regional authorities have taken their responsibility for their policy in this field. So far, mainly organizational changes have been made. The decentralization also has accomplished efficiency gains. In the beginning, decentralization was accompanied by extra requests from local authorities for funding from central government. The Central government so far has been quite determined to decline these requests.

Of course, the regional authorities have had to learn a lot about these new responsibilities. The lessons learned from this experience are very valuable in this respect, not only for the regional authorities concerned but also for central government and the other regional authorities.

Conclusions on the introduction of tendering

The introduction of competition (comprising both competitive public tendering and direct award of contracts with the threat of public tendering) in regional public transport has led to a substantial increase in supply of public transport and a substantial improvement of efficiency (cost/revenue-ratio) in the rail part of regional transport. Tendering of regional rail services has led to a larger efficiency gain (20-50%) than directly awarding the contracts (0%-10%). The money gained by improving efficiency in regional train transport has in most cases been used to improve the level of service, most often by increasing supply (connections or higher frequencies of services). During the day and in more densely populated areas, this has led to an increase in the use of the services (especially in Gelderland and Twente on trains operated by Syntus). Services that where added in the night time or in thinly populated areas, have not created a corresponding increase in ridership. In these cases, the supply of public transport was mainly an attempt to improve the "social function" of public transport. There the gain in efficiency achieved by cutting the costs of the contract was not translated into an increase in the use of public transport or a better cost/revenue-ratio.

1. The policy goal of increasing the number of public transport passengers has not been achieved in most cases, Syntus being the most notable exception.

   The most important factors explaining this have been the continuing growth in ownership and use of cars plus the fact that public transport apparently still is not able to respond sufficiently to the demands of car-users.

2. The aimed improvement in cost/revenue-ratio has been realized in the regional rail sector.

   This can be explained by low operation costs compared to the former operator NS (instead of a conductor on every train, mobile teams inspect tickets and provide information; higher productivity of the personnel, lower operating costs of rolling stock and lower overhead costs). Operation of the national rail network is more complex thus a comparison with the national passenger operation by NS is difficult to make.

3. The transport companies focus very strongly on the demands of the regional public authorities and not so much on the demands of the passengers.

   The developments in passenger use seem to be related to the way the demands of the customers are being incorporated. When the regional authorities determine what has to be done, they quite often seem to aim especially at the improvement of the 'social function' of public transport in their service delivery specifications. The regional authorities do not place emphasis on the provision of services to maximize passenger numbers. When the TOC's can determine what new initiatives will be undertaken, they are seldom inclined to implement changes sought by the customers. Apparently the stimulus to do this is feeble. Customers do have the right to comment on the specifications for the bids, but apparently this has not yet led to widespread satisfaction with consumer organizations or growth of passenger use. Quite often political or policy-motives influence the tendering process.

4. There has been only a very small amount of public transport innovation in the period studied.

5. In a few cases (Gelderland, Twente) the regional authorities have succeeded in achieving a better integrated public transport system. In these cases, bus and rail transport is offered by one multimodal transport company.

6. The number of people employed in the whole public rail transport sector has not declined.

   The new operating companies need less employees but the remainder of the employees still works for NS. Labour conditions have not changed.

7. An important lesson to be learned is that supervision/monitoring by the regional authorities on the execution of the regional franchises has to improve. For instance, the regional authorities let the transport companies hand in figures of their own achievements/performance on the basis of figures and statistics from the operators and not on the basis of specific, external studies and checks. The experience gained in the northern part of the NL in 2000 and 2001 has shown that if the authority seriously checks the performance of the TOC, they can really get what they have contracted from the transport company.

8. There is a need for some flexibility in contracts. More freedom to propose modifications to services during the franchise period, modifying the original offer would be desirable, for example reduction of service on underused routes in return for increased services on busy routes. To prevent disagreements, it is important that during the tendering procedure it is clearly set out how proposals for changes in the original offer will be judged by the regional authority.

9. Until 2005 a deficiency of the subsidizing system in the Netherlands was that the subsidy from the central government to local authorities for year X was based on the revenues of the year before the current year (x-2); hence there was a long time lag. The subsidy also depended on the development of passenger use on a national scale. In the current financing system this has changed, a fixed lump sum will be allocated each year to regional authorities. The regional authority will only increase the subsidy if the TOC meets the targets agreed in advance (i.e. growth of passenger use) and will reduce the subsidy if the TOC does not meet the agreed targets.

Attempt to explain the results of the tendering procedures

A clear study result was that public tendering procedures lead to a larger gain in efficiency than the direct award of contracts. The threat of competition and the possible gain or loss of a franchise largely explains this. The example of the Achterhoek (Gelderland) shows that tendering also can be a way to achieve a better connection between rail and bus transport. The experiences in Groningen and Friesland and the experience with the public intermodal tendering procedure around the rail service Zutphen-Oldenzaal (2002) have proven that very positive results can be achieved with a public intermodal tendering procedure.

Experience as to whether it is better to assign responsibility for development of the transport offer to the regional government or the transport company, is not unequivocal. When the development function was allocated to the transport company, the result was less innovation than expected. When the development function was allocated to the regional authorities, this lead to more ideas and plans but also to more prescription. Moreover, the results expected were not all successfully achieved.

The franchises which have been evaluated in these studies are relatively small, even for the Dutch regional rail market. They contain in general 1 to 3 rail services per tendering procedure and only the most recent combined rail tendering in Groningen and Friesland (2004/2005) made up of about 6 rail services, the largest rail tendering to date in the Netherlands.

Small and medium size transport companies have proven to be very capable in offering passenger services for this scale of tendering. Every rail tendering procedure in the Netherlands has resulted in at least 3 offers.

The period of franchises without investment in new rolling stock is normally 5 or 6 years. Where there has been (or will be) a commitment by the TOC to invest in new rolling stock the period of the franchise has been extended to 10 or 15 years (Gelderland, Groningen + Friesland, Twente). It is laid down in the passenger law that 15 years is the maximum period for a franchise in the Netherlands. These periods have so far proven to be workable.

In the regional rail transport sector the regional authorities very often demand the introduction of new rolling stock. In practice, this rolling stock has to be bought or leased and large investments with financial risks are involved. To limit the risks for transport companies, the franchises only concern small and not very crowded services. To limit depreciation costs, the legal limits on the length of franchise periods are not too short.

Under the 2000 Law for passenger transport, the transfer of all the personnel involved in the current operation of public transport is obligatory. This is an important obligation, which in theory could lead to difficulties in the tendering procedures and a loss of efficiency. Up until now this obligation has not resulted in any real problems. TOC's are still capable of improving the efficiency of their operations and implementing changes they think are necessary. This is also caused by the fact

that NS operated all these services with one conductor on every train, whereas the new operators use mobile teams. NS still needs a part of the personnel concerned in the tendering procedures for their own operations, and it operates with a larger overhead than the new, smaller companies. Thus the cost savings achieved by the tendering procedures have not damaged overall employment, but the productivity of the personnel concerned with the new TOC is higher than before and they earn less supplements for extra work.

Thus far there has not been enough innovation in public transport, this is the general view in the Netherlands. One reason could be that the development function is allocated to the regional authorities instead of the TOC's. To improve innovation by the TOC's, they should be rewarded by keeping the possible gain in passenger revenue instead of obliging them to reinvest this gain in extra supply in slow areas. This way the TOC's might be stimulated to operate in a more customer-oriented manner. An adequate bonus/malus-regulation might prevent the TOC's from promising too much in advance, without hindering them from taking specific risks connected with customer oriented innovation.

Rolling stock

An important aspect in tendering is the demands on investments for rolling stock. Many regional authorities have made a large number of demands with regard to new rolling stock accessible to people with impaired mobility. These demands result from the regional authorities' desire for new rolling stock and the central governments policy to attain more accessibility in public transport. Since the international market for second hand rolling stock with good accessibility for the disabled is very limited, this means that this demand forces the transport companies to invest in or lease new rolling stock. This is especially a problem if the new rolling stock must be available right from the start of the franchise period and the time between the assignment of the franchise and the start of the franchise is too short. Recently some regional authorities in the Netherlands have realized that it is not possible to deliver new rolling stock if this preparation period is too short. Now they seem to be willing to accept the use of existing rolling stock for the first one or two years of the franchise and give the winning TOC the time to order new accessible rolling stock.

A couple of regional authorities (Limburg, Zuid-Holland, Gelderland and Overijssel) have realised that it is better and more efficient if they choose one new standard type of rolling stock for their regional rail services. They are discussing the possibilities to choose one standard type of rolling stock in order to improve offers from the TOC's and from the European rail industry.

SUMMARY

1. What was done the right way?

The results of the relatively new policy and legislation, which prescribe more use of competition/tendering for rail (and road transport services) in the regions are quite good as far as efficiency, supply and the kind of services that have been offered in the bidding procedures are concerned. The costs of rail services are reduced and the quality of service has improved. But the goal of increasing the number of passengers has not been reached.

All franchises have received a better offer than the status quo and the experience with Groningen and Friesland indicates that the larger the franchise, the better the offer.

No transport companies are excluded from the tendering procedures with the exception of those municipal transport companies whose services have still not been tendered.

The Dutch government has recently (December 2005) decided on the basis of the earlier mentioned evaluation studies that it will:

- Continue with the implementation of competition (tendering procedures) for public transport in the regions.
- Continue to give as much responsibility as possible to the regional authorities in this process. Custom-made public transport-systems are required given regional differences.

2. What problems were encountered?

The problems that were encountered in the tendering of regional rail transport are:

- Dependence on the incumbent NS (i.e. NS owns existing rolling stock; rail ticket-integration is only possible via renting ticket vending machines from NS; the revenue-settlements have to be made by NS).
- Very small licenses (only 1 route) make it difficult to get a good offer or to include new rolling stock (i.e. Valleiline/2005).
- The admission procedure for new light rolling stock laid down and executed by Prorail was not clear.

3. What adjustments were made or are being considered?

In general the system of tendering and decentralization of regional public transport works satisfactorily.

On the basis of the evaluation studies the following adjustments have been made:

- A limitation of the number of "non-core" personnel that has to be transferred when a franchise changes hands.
- Central government is promoting the introduction of a chipcard for ticketing in the entire public transport system by 1.1.2008. This gives operators a direct and clear view of the number of passengers they transport and the revenues they will make.
- Implementation (by ProRail) of a more flexible and transparent admission-procedure for new, lighter rolling stock; a lot of documentation on the existing procedures criteria for admission of new rolling stock have been published and disseminated among the regional authorities and the TOC's.

- Central government is promoting co-operation between the different regional authorities and stimulating the search for a new standard type of light rail rolling stock.

NOTE

1. The study on decentralization and tendering of regional public transport by Mu Consult (1999-2003). The evaluation of the Law on passenger transport 2000 by Twijnstra Gudde (2005).

5. EXPERIENCE WITH COMPETITIVE TENDERING IN GERMANY

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Introduction

The German railway sector was fundamentally reformed in 1994. The state-owned West German carrier, Deutsche Bundesbahn, was consolidated with the former East-German rail undertaking, restructured and re-established as a state-owned joint stock company. Aims of the reform were a more commercial orientation of the newly established Deutsche Bahn AG (DB) and the introduction of competition. In the rail freight market and the long-distance rail passenger market an open access regime was introduced.

Two years later, the regional and local rail passenger market was fundamentally changed. Responsibility for regional passenger rail transport and funds were transferred to the federal states. The intention was to use these funds for the creation of an attractive market segment, characterised by competitive tendering. Subsequently, the transport performance rose significantly, but competitive tendering played only a rather limited role in this development.

The focus of this paper is to provide background information on the German regional rail passenger market and the emergence and importance of competitive tendering. We try to shed some light on the hindrances to competition and on the parameters of successful tendering processes and contractual forms.

In the first chapter, we describe the German rail reform and the "regionalisation" as the background to the current situation. We also give an overview of the legal framework. In Chapter 2, the drivers and hindrances to competition for regional rail passenger services are described. Chapter 3 looks closer at the forms of competitively tendered contracts and their elements. Chapter 4 concludes.

1. Developments to 1996 and the Reform of Regional Rail Transport

From the middle of the 1960s until the late 1980s, the West-German national carrier Deutsche Bundesbahn lost a large part of its market share and suffered from a financial decline. Its market share (share of passenger-kilometres, p-km) decreased from 1960-1990 from 36% to 6.1% in passenger transport and from 56% in freight transport to 20.5% (share of tonne-kilometres) (BMVBW, 2003, Sections B5 and B6). Alongside these losses, the financial situation of the company became difficult. It had accumulated a deficit of approximately € 25.5 billon at the beginning of the 1990s, although the German federal government paid an amount of approximately € 7 billion per year for public service obligations and distortions of competition (Regierungskommission Bundesbahn, 1991, 10 et seq.). The situation exacerbated to a point that DB's revenues did not even suffice to cover its personnel costs.

Additionally, the necessary financial reorganisation of the former East-German carrier, Deutsche Reichsbahn, threatened the financial equilibrium further. The company was highly inefficient, its infrastructure and rolling stock was outdated and its personnel poorly trained for the requirements of a market economy.

Against this background, the federal German Government initiated a governmental commission on the railways in 1989. The aims which the RB had to pursue were defined as follows (Regierungskommission Bundesbahn, 1991, 4):

- Create a sustainable base for a positive development in respect of transport policy, regional policy, environmental policy, economy and public budget.
- Define relations and products, which can sustain competition in the long run.

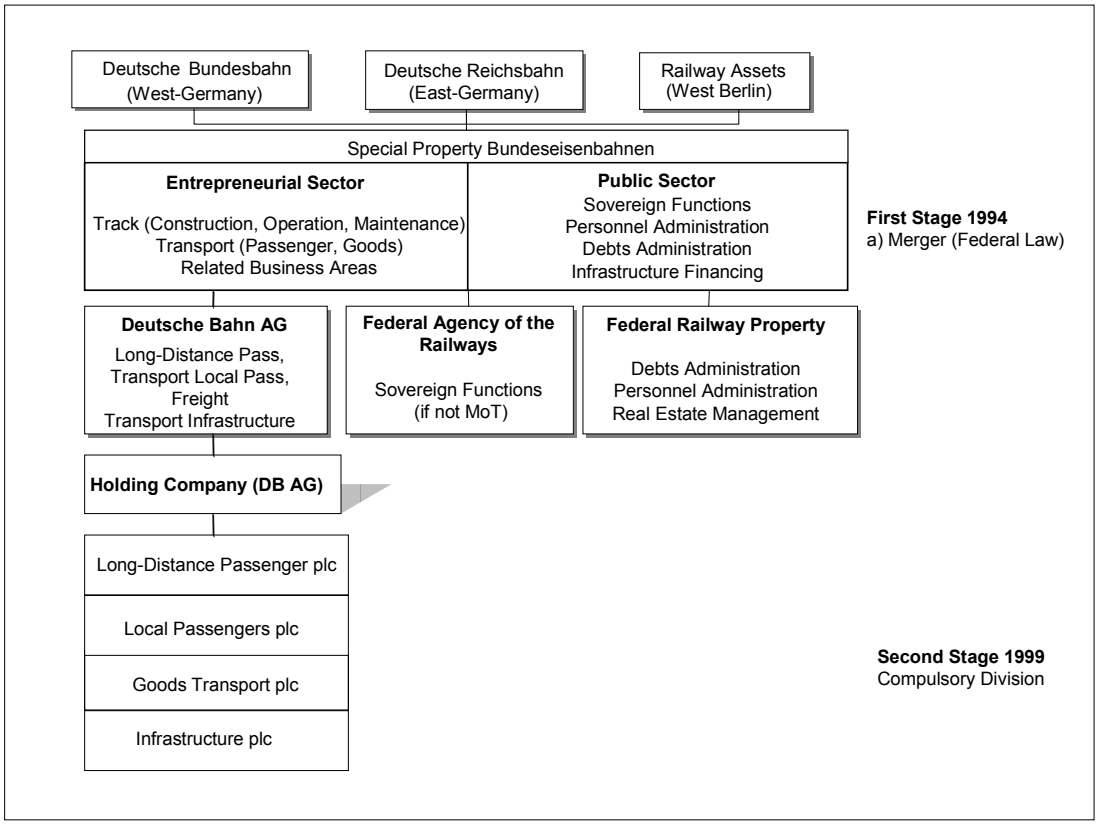
The commission issued its report in 1991. Under pressure because of the rising deficit of the Deutsche Bundesbahn and the tight public budgets, the first measures proposed by the RB were turned into draft laws in 1992. The reform itself came into force at the beginning of 1994. A couple of new laws were set up or amended as a basis for the radical change in the railway system: Above all, the German constitution had to be changed. This change required a qualified majority in the Lower House of German Parliament and an approval by the Federal Council of Germany. This opened up a lively negotiation process between the federal government and the states lasting from December 1991 to December 1993. The states demanded a compensation for giving up their influence on the Deutsche Bundesbahn. As a result, they received massive transfers to finance public passenger transport. Additionally, the states enforced the codification of public ownership of the rail infrastructure (at least 50.1%) in the constitution.

The corner stones of the reform were (Knorr, 2003, 39 and Aberle, 2000, 136ff):

- DB and Deutsche Reichsbahn (the railway operator of the former GDR) merged and were transformed into Deutsche Bahn AG (DB AG), a PLC in public ownership.

- The reform stipulated an enterprise restructuring in at least two steps (see Figure 1).
  - In the first step, DB AG was subdivided into four divisions for local and regional passenger transport, long distance passenger transport, freight transport, and infrastructure.
  - In the second step of the reform (taking place 01/01/1999), the four divisions were turned into five PLCs under the roof of DB AG, which is now working as a holding:
    - Local and regional passenger transport: DB Regio AG.
    - Long distance passenger transport: DB Reise und Touristik AG.
    - Freight transport: DB Cargo AG.
    - Infrastructure: DB Netz AG.
    - For passenger train stations, DB Station + Service AG were newly created in addition to the legal requirements.
  - The third step stipulated a privatisation of the holding. No agenda was set for it and it is being heavily discussed at the moment.
- In addition to the restructuring of the DB, three measures are of special importance for the whole railway sector:
  - Open access to the rail network is granted to third parties.
  - The Federal Railway Agency (Eisenbahnbundesamt) was founded as a regulatory institution. It was made responsible for the licensing of TOCs and safety issues. Alongside, the Federal Cartel Office supervised the access to the network. In 2006, this role was handed over to the new railway department at the Bundesnetzagentur, which is the federal regulation authority for network industries.
  - Moreover, on 01/01/1996, a regionalisation took place. The German states became responsible for the local and regional train services. To order these services from the train operating companies (TOCs), they get the above mentioned funds from the federal government (see Section 2.1 below.)

Figure 1. **Steps of the German Railway Transportation Act**



Source: www.bmvbw.de.

2. Development of the Market since 1996

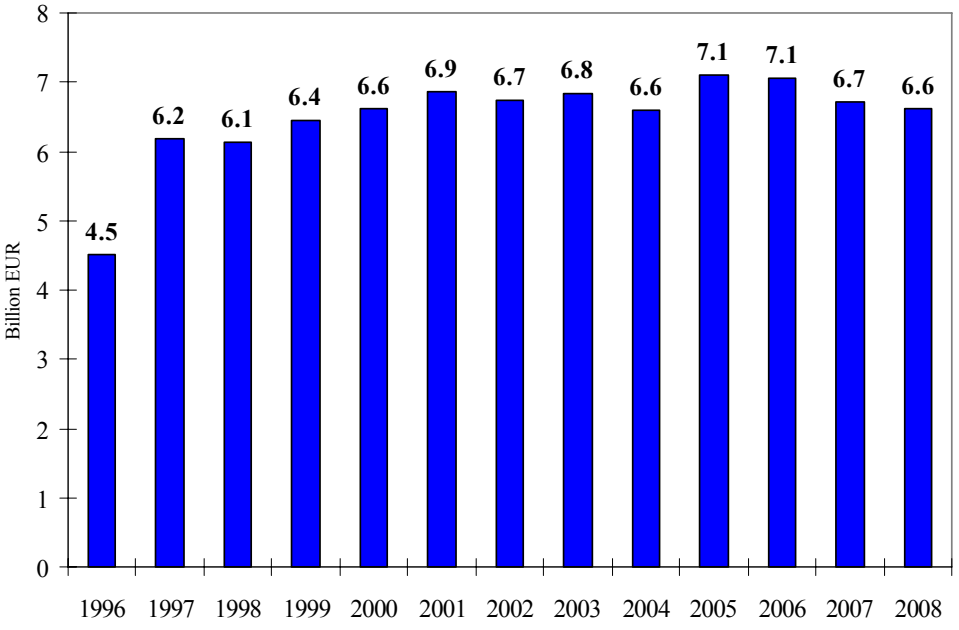
A major part of the Railway Reform was the shift of responsibility for the provision of Regional Rail Passenger Services (RRPS) from the federal government to the states ("regionalisation"). The states receive "regionalisation funds" for the RRPS from the federal government on a yearly basis derived from parts of the federal gasoline tax. The assessment for the actual amount of the regionalisation funds was based on estimated cost for an average train-km of the RRPS in 1993/94. Thus, in 1996 the federal government transferred € 4.45 bn of funds along with € 3.22 bn for the transport in local communities. In 1997 the federal subsidies were raised to around € 6 bn but at the same time the subsidies for the local communities were lowered to € 1.64 bn.

2.1 The current institutional and legal framework

Since 2002, regional passenger transport has been subsidised with about € 7 bn per year (see Figure 2). A major cut of the funds was decided in June 2006. Over the years 2006-2009, the federal government will probably spend € 2.1 bn less than originally expected for RRPS. The states which receive the highest funds will have to deal with around € 100 m less than anticipated in 2009. The regionalisation funds are earmarked for public transport and shall be used for the procurement of train services. But, a part of the subsidy is also used for public bus services and infrastructure investments, e.g. station rehabilitation. In 2005, 74% of the regionalisation funds were dedicated to rail operation (SCI, 2005, 66).

The states have established special regional authorities (*Aufgabentraeger*) which are responsible for planning, managing and procuring regional rail transport. In Germany, 33 of these authorities exist. They show a high diversity in terms of the area that they have to provide the services for. While some states have several *Aufgabentraeger*, e.g. nine in Northrhine-Westfalia, Berlin and Brandenburg have established one common responsible authority.

Figure 2. **Federal subsidies for regional passenger transport in Germany (billion EUR)**



Source: Deutsche Bahn AG (2003), Krummheuer/Hauschild (2004), Haushaltsbegleitgesetz 2006 [accompanying budget law], Art. 13.

The newly established system gives the states a considerable amount of freedom of choice. The states can choose between different contractual forms and service specifications. The RRPS can be specified either for networks or lines with varying contract duration, service descriptions are very detailed on the one hand and incentive contracts on the other hand.

The states are also free to directly contract with DB AG or its newly established competitors. Services can also be procured by tendering. The following different procurement procedures can be found across the states and sometimes within one state:

- Open tender: An unlimited number of transport operating companies (TOCs) are allowed to bid.
- Non-open tender: A limited number of TOCs are asked to submit a bid.
- Negotiation: a less formalised procedure in which the *Aufgabentraeger* directly negotiates with one or more TOCs.

All these procedures can be set off as a two-stage process.

Since 1996, at least 98 service contracts[1] have been concluded. 37 of them were directly awarded, mostly to a subsidiary of DB AG. Apart from that, there were 43 open tenders and 18 not–open tenders (on-line version of the Supplement to the Official Journal of the European Union and DB AG, 2004, 2005, 2006). These figures overstate the importance of competitive tendering, since the directly awarded contracts cover the overwhelming share of services. An example for the awarding of services without competitive tendering could be observed in the states of Thuringia and Saxony-Anhalt. In 2002, Thuringia signed an exclusive contract with DB AG. The contract comprises the whole regional passenger transport in Thuringia, 17 million train-km per year, has a duration of 10 years and is worth € 1.5 bn (total volume). Likewise Saxony-Anhalt signed a similar contract with the DB AG of a value of € 2 bn (see Table 1).

Table 1. **Contracts of the Federal States with DB AG**

State	Conclusion of contract	Train-km (m p.a.)	Value (bn €)	Duration of contract
Berlin/Brandenburg	December 2002	35.0	1.9	10 years
Lower Saxony	January 2003	27.8	2.5	10 years
Saxony-Anhalt	March 2003	16.2	2.5	12 years
Hesse (Rhine-Main-Area)[a)]	April 2003	33.0	4.4	11 years
Baden-Wuerttemberg[b)]	July 2003	49.0	4.6	13 years
Hamburg (S-Bahn-light rail)	July 2003	12.5	0.7	6 years
Rhineland-Palatinate	January 2003	29.5	2.4	11 years
Northrhine-Westfalia	July 2004	44.0	6.0	15 years
Saarland	July 2004	6.3	0.8*	14 years
Berlin (S-Bahn)	August 2004	32.4	3.0	15 years
Bavaria*	November 2004	98.1	ca 8.0	10 years[e)]
Lower Saxony*	January 2005	5.3[c)]	n.a.	12 years
Saxony**	April 2005	2.6	n.a.	10 years
Northrhine-Westfalia[d)]*	June 2005	12.7	1.1	11 years
Bremen**	November 2005	2.4	0.02*	10 years
Hesse**	November 2005	2.4	n.a.	5 years
Bavaria**	November 2005	0.5	n.a.	12 years

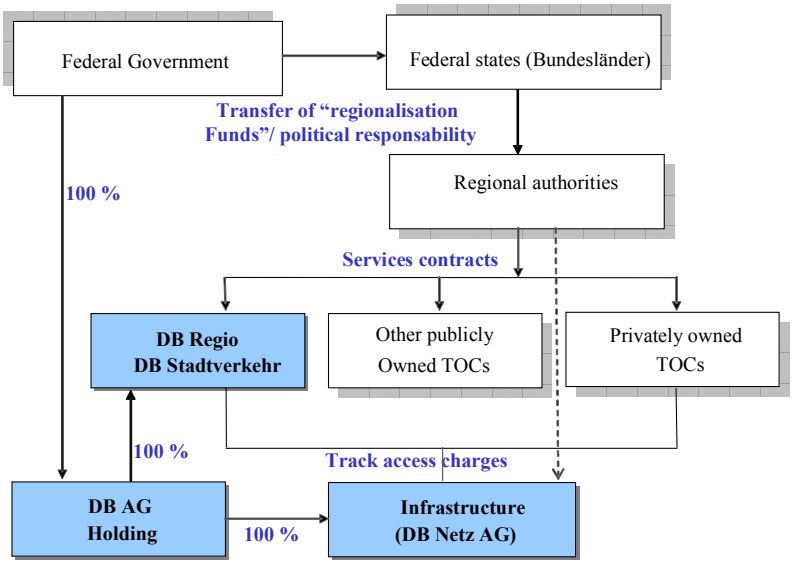
a) Rhein-Main-Verkehrsverbund; b) without region Stuttgart; c) Verkehrsverbund Rhein-Ruhr;
d) five contracts with different authorities.

Source: Tegner (2004), p. 4; * press release; ** Deutsche Bahn AG (2006), p. 19.

Understandably, competitors of the DB challenge direct awarding. Hence, two railway companies appealed against the contract between Saxony-Anhalt and the DB AG. In June 2002, the Chamber of Tenders in Madgeburg decided that all regional services have to be allocated by competitive tendering and that sub-networks have to be tendered in a size which leaves chances to all bidders.

After a period of political debate and lobbying by the DB AG, the federal government adopted a new regulation of tenders (*Vergabeverordnung*) in late 2002. The modified regulation was designed in order to provide legal certainty and a sound basis for an incremental change from monopoly to competition. It still allows the states to award contracts for RRPS-services directly (without tendering), but only if an essential part of the services (train-km) is awarded for a shorter period and tendered competitively subsequently. The contract duration shall not exceed twelve years.

Figure 3. **Funding of regional rail passenger transport in Germany**



Source: Author's figure.

Just before the enactment of the new regulation, the Connex-Group[2] took legal proceedings against the contract between the DB AG and the state of Brandenburg. In September 2003, the higher regional court of Brandenburg decided that RRPS-services do not have to be tendered because the German Railway Law regards tenders only as an option. The European legislation, which typically calls for tenders, has been regarded as inferior to German Railway Law. Anticipating this decision, the Connex-Group had already complained to the European Commission. Connex argued that the decision of the Brandenburg court directly contradicts the European public procurement law and the principles for state aid (Bremer/Wünschmann, 2004). According to their argumentation, all service contracts which are not tendered cause the danger of overcompensation and thus could be - according to the European Court of Justice - relevant for state aid control.

As a first reaction the DG Internal Market sent a request for detailed information to the German government. According to this letter the decision of the OLG Brandenburg is not consistent with European legislation. In October 2004, the EC started proceedings against Germany at the European Court of Justice for breach of contract. In June 2006, the German federal government alongside with the states committed themselves to change the procurement procedures of RRPS. Their intention is to set up more transparent, non-discriminating awarding procedures and to stop direct awarding. Consequently, the EC stopped the proceedings against Germany at the European Court of Justice and at the same time highlighted their close observation of the future procurement procedures in Germany.

2.2 Strategies of competitors and market entry barriers

The overall RRPS volume in 2005 was around 632 m train-km or almost 42 bn passenger-km. Regarding these numbers and considering the amount of public funds for RRPS, the RRPS market has developed not only to be a substantial source of revenue and turnover for the DB, but is also commercial attractive for other TOCs. Consequently, the number of the competitors has steadily increased. In 1993/1994, 25 mainly small or medium-sized companies operated alongside DB. Their market share added up to 3% (based on train-km) (Schinke/Hempe/Kolodzinski, 2002, 21 et seq.). Since then the number of competitors of the DB rose to 93 (BAG-SPNV, 2006, 1). However,

competitors like Arriva or Connex each own several of these TOCs. The vast majority of non-DB operators do not conduct any regular RRPS but work as contractors or as seasonal holiday operators. The remainder of the competitors can be subdivided in three strategic groups: (i) national publicly owned TOCs, (ii) national privately owned TOCs and (iii) international players. These competitors use two different business models:

- The first group are small and mid-sized firms with regional or railway-related skills. Their expertise and organisational flexibility allows them to offer cheap and high quality train-services. However it prevents them from taking part in larger, more complex tenders. The strategic focus of these operators is the deliverance of carrier-functions in minor networks or the co-operation with operators, which can compensate for the mentioned handicaps.

- The other group consists of management-orientated, often internationally focussed operators. The organisation of transport firms, transport services and a keen market-orientated approach are strengths of these companies. The appropriation of regional and special operational skills is their central inner-operational strength. This strategy is based on the transfer of international experiences or pursued by acquisition of regional TOCs. These operators are in the position to conduct complex train-services with an adjusted, cost-focussing approach.

The strategic orientation for the DB is different from its competitors. The DB focuses on delivering complex train-service solutions with a strong interconnection to more comprehensive services (mainly passenger transport, but ultimately offering their broad portfolio of logistic services).

Over 60% of train-services delivered by operators other than DB are performed by the public TOCs (see Figure 4). Consequently their development poses one of the most important questions. At least some of these public owned non-DB operators show some traits of the above mentioned second group. But their expansive strategies might be stopped in the future by their public owners.

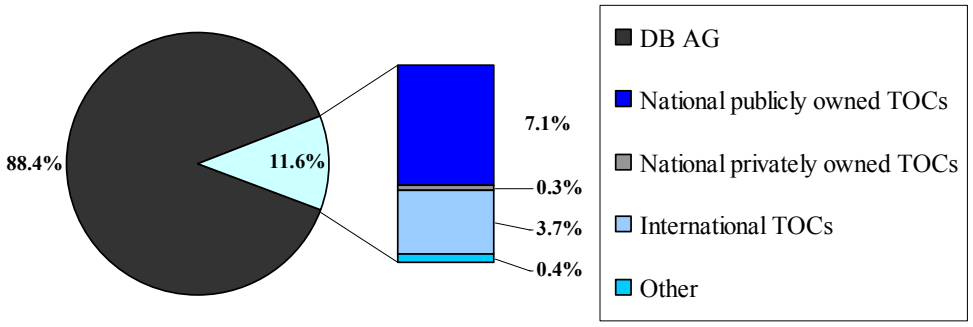
The vast majority of competitors consist of small or medium-sized operators. Besides the DB only Connex, Arriva, Hamburger Hochbahn and Hessische Landesbahn exhibit a mentionable share of the market. The first international player to enter the RRPS market in Germany was the Connex group. It won 17% of the competitively tendered services until 2005 (see Figure 5). According to a company's representative, their advantages over the DB are (Leister, 2004, 109ff).

- Small overheads (from scratch approach).
- Decentralised firm organisation, significant labour cost advantages.
- Substantial responsibility for regional branches and high flexibility.
- Usually local brands with co-branding to obtain customer loyalty.
- Specialised regional marketing activities.
- Customer orientation of the staff.

The Connex group is the largest of the competitors of DB. However, with only 2.5% of the RRPS volume (passengers) it has only a very small market share. The marginal role of the competitors is due to two interlinked reasons:

- The reluctance of the regional authorities to conduct competitive tenders.
- The reluctance of TOCs to enter the market or expand their activities.

Figure 4. **Market shares of strategic groups in 2004 (percentage of train-km)**



Source: Höhnscheid (2005).

The RRPS market is primarily organised as a market driven by the demand of the regional authorities. Their tender policy is of overwhelming importance for the market structure. At the beginning of the regionalisation, the *Aufgabentraeger* had to cope with the deployment of the necessary substructures, like the creation of network plans and staffing. Additional know-how had to be developed. In the face of this highly transitional period the continuation of the status quo by simply extending existing contracts with the DB was expected and understandable.

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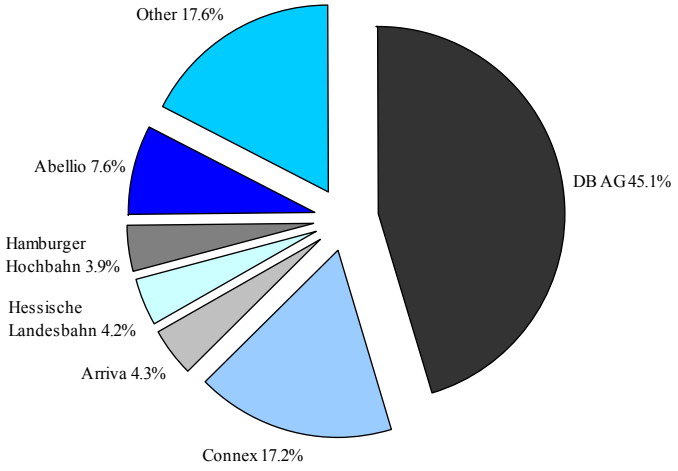
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Ten years later the responsible authorities now have overcome these initial problems and are able to deliver high quality transport planning and management. However, numerous large contracts are still directly awarded to the DB (see Table 1). Representatives of the regional authorities as well as competitors of the DB bemoan, that the company, in order to acquire RPPS-contracts, interlinks their

offers with services derived from their infrastructure ownership (e.g. Leister, 2004, 109ff). Critics claim that infrastructure measures such as electrification, dismantling and maintenance of tracks or the modification and maintenance of railway stations are directly interlinked with their contract proposals. Furthermore, some argue that DB links promises for job-creation and training positions with service contracts. These measures are even more critical since the funds for the infrastructure improvements are mainly federal funds.

Figure 5. **Percentage of train-km won by different TOCs (1995-2005)**



Source: Deutsche Bahn (2006).

Apart from this advantage of the DB (which holds only for the RRPS), actual and potential competitors worry about a number of discrimination possibilities by the DB:

- DB heavily influences the infrastructure investment decisions and the infrastructure pricing.
- The network operator has the opportunity to disrupt train services thus influencing directly operation costs for transport operators.
- TOCs interested in the tendering processes have to let DB Netz prove their concept for operability. Sometimes their maintenance concept also hinges on the co-operation with the DB.
- Rolling stock of the DB has been partly financed with public money.

A current concern on market entry barriers is the volume of services that are tendered. So far, the volume has been between 0.1 and 6 m train-km p.a. with an average of around 2 m train-km. It is obvious that new entrants in a certain region can only be expected if a service contract allows covering the minimum fixed costs for workshops, standby rolling stock etc. Laeger recommends 0.8 - 1.0 m train-km p.a. as a minimum volume (Laeger, 2004, 126).

A more serious concern is the maximum volume of service contracts. A number of *Aufgabentraeger* plan to tender great parts of the services they have assigned to the DB in the years 2002-2005. Some critics claim (e.g. Tegner 2004) that this might hamper competition. Most of the TOCs in the German market are rather small- or medium sized enterprises and not able to provide large scale services. So, the tender of large networks could result in a reduction of competition.

These concerns seem to be largely exaggerated. While offering large networks for tender would discourage small competitors, this could be more than compensated by the entry of international players not yet in the German market. Much more important are a commitment to offer operations for tender, a reliable schedule for the tendering and the prevention of discrimination.

There is only limited evidence to prove a relation between the volume of the contract and the number of bidders. The biggest contract in terms of train-km was the Rhine-Neckar light-rail system in the area of Stuttgart. Initially, there had been three bidders, but one withdrew rather quickly, and only one consortium with Connex and one with the DB Regio remained. The contract was eventually assigned to the DB Regio. Tenders with less volume did not see much more bidders. From what is published and preliminary results of an own questionnaire we know the number of bidders of ten tenders. In this sample, there is no correlation between the volume of services and the number of bidders. In any tender between two and four TOCs entered the bidding stage. There might even be more bidders once contracts with higher service volumes are tendered. We know from interviews that further international TOCs are ready to enter the German market if higher revenues can be earned.

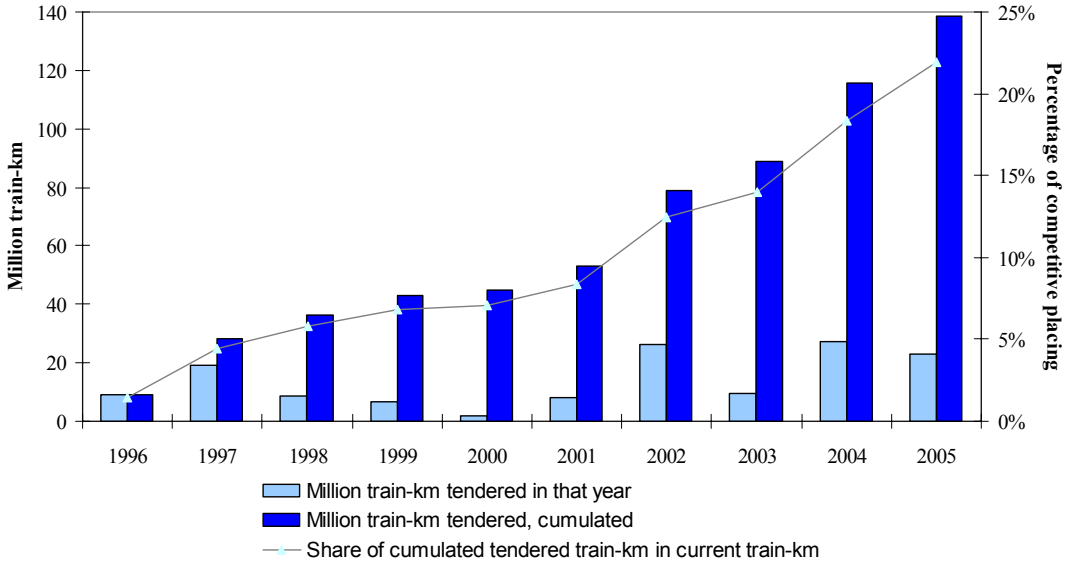
A further potential hindrance for TOCs to enter the market is the rolling stock. Around 50% of the tendering documents require the bidders to provide for new rolling stock (Beck, 2005, 114). Consequently, the cost of financing trains accrues to around 20% of the total costs (including track charges) (Gorka, 2005, 5). The lifetime of the rolling stock is longer than that of the franchises. This causes an investment risk for the TOCs. At the moment, there are limited possibilities to deploy used cars, although the attitude of the *Aufgabentraeger* seems to change in the face of tighter budgets. There are three ways which are chosen in order to mitigate this investment risk for the bidders:

- Some States (Lower Saxony, Baden-Wuerttemberg, Northrine-Westfalia, Bavaria, Schleswig-Holstein) have set up rolling stock pools for parts of their rail traffic. Normally, maintenance is a task of the train operating companies, but for one of Lower Saxonys pools maintenance activities have been contracted out. If car pools and maintenance contracts exist, their use is sometimes obligatory.

- An instrument which is more often found in service contracts are takeover-guarantees for the rolling stock. In this case, the contracts contain provisions to pass rolling stock on to the next service provider at the end of the franchise.

- Guarantees for the residual value of the rolling stock are a rather new instrument. In this case, the regional authorities offer to take over the rolling stock at the end of the franchise at an agreed price.

Figure 6. **Competitively tendered services 1996-2005**



Source: Own figure, based on Deutsche Bahn AG (2004, 2005, 2006), 2005: estimated by DB AG.

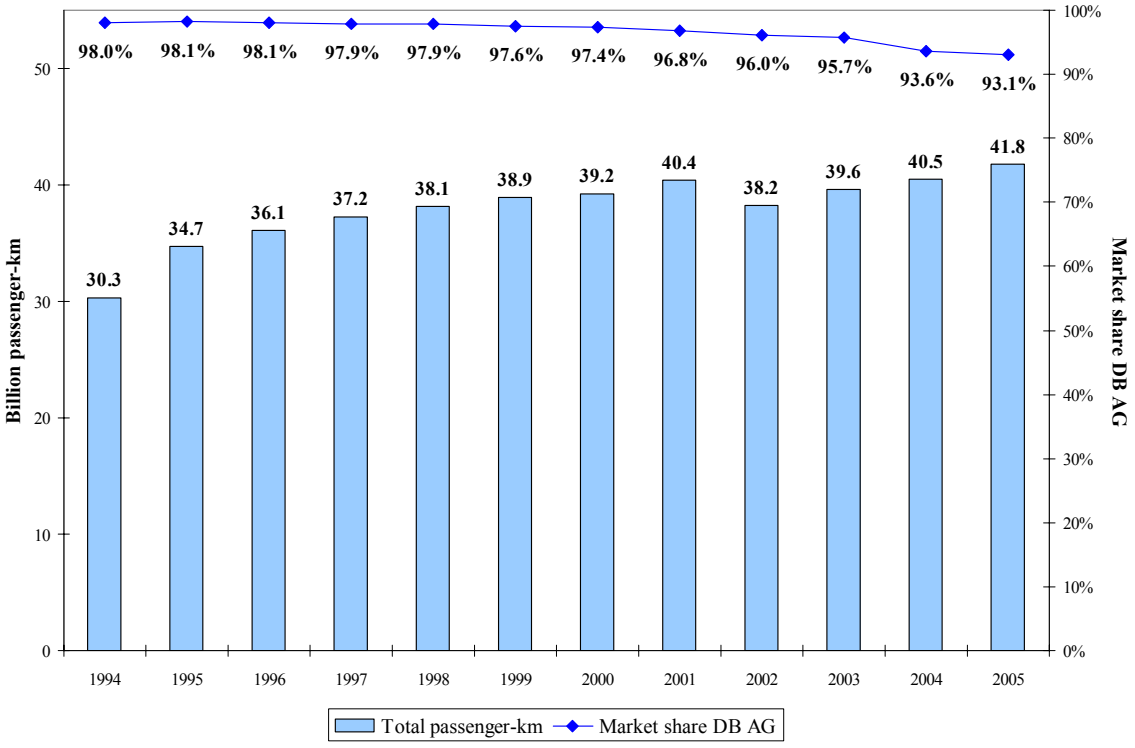
Some TOCs have raised concerns about obligatory public rolling stock pools. They argue that the characteristics of the trains are part of their own product strategy. Others claim comparative advantages in the financing of rolling stock. A further possibility for the TOCs to ease their investment risk is the growing activity of private train car pools in Germany. There is limited information about the influence of financing risks on the number of bidders. Beck e.g. finds no evidence for a positive relation between the number of bidders and the use of a car pool or residual value guarantees (Beck, 2005, 96). This finding is rather surprising given the importance of capital costs for a TOC in the RRPS. Residual value guarantees obviously help the companies to get a bank loan and public car pools even do more than that. If there is no financing problem it might reflect the fact that there are some big international companies in the German market and on the other hand a lot of smaller TOCs which are publicly owned and backed by states or local governments.

2.3 Effects of competition

Competition among the various railway operators only takes place for tenders issued by the *Aufgabentraeger*. Additional competition very rarely occurs. The direct award of contracts is still the dominate practice. This procedure usually means that the federal states have signed long-lasting contracts (between 12 and 18 years) for a large network with the DB (Table 1 lists some examples). Competitive tender procedures on the other hand have usually contained only single lines or smaller networks. In 2004, only 26.1 m train-km were awarded via tender procedures. This contrasts with 217.8 m train-km which were directly assigned to the DB (Deutsche Bahn AG, 2005, 15). Overall, approximately 130 m train-km were tendered between 1996 and 2005 in a competitive way (see Figure 6).

Figure 7 shows the development of market shares of the DB and its competitors (share of passenger km). While the market has been growing since 1996, the DB lost a part of its market share.

Figure 7. **Development of market shares and passenger-km 1996-2005**



Source: 1993-2002: Progtrans (2005); 2003-2005: DB AG (2006), 2005: estimated by DB AG.

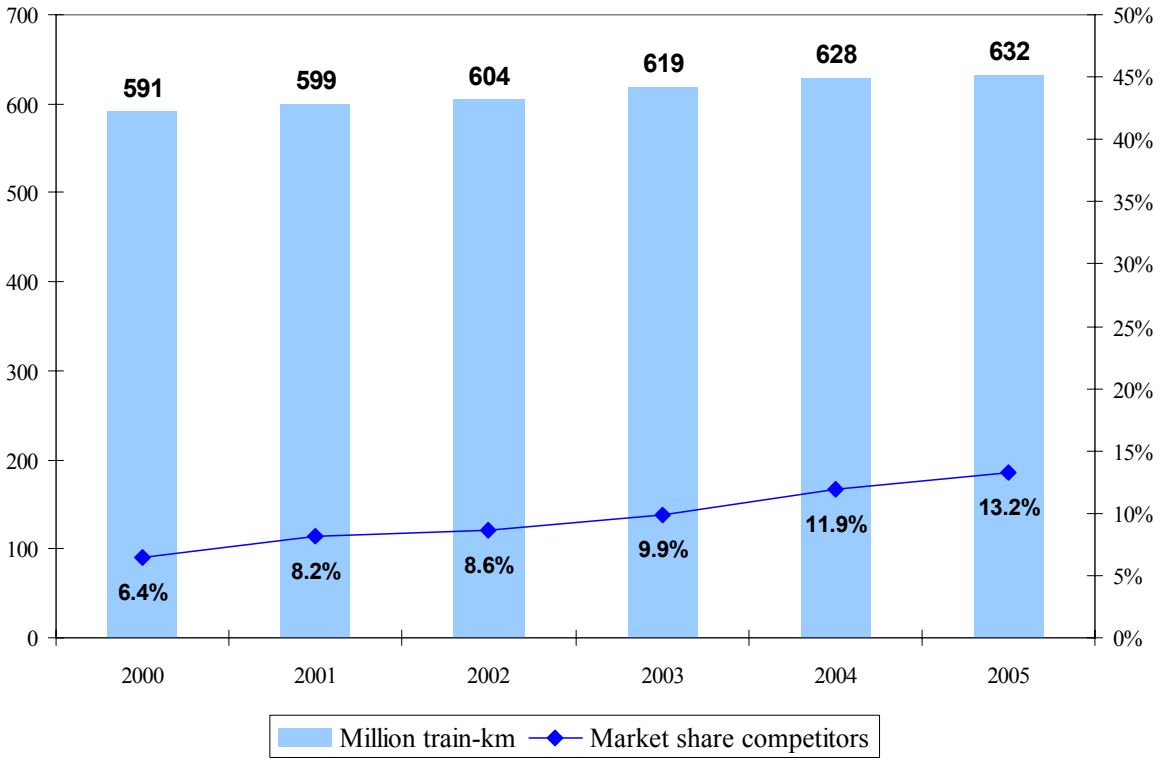
As already mentioned, the forces of the market are not the main drivers for the change over time. The most important parameter of the market structure is the awarding policy of the regional authorities. The DB has acquired "only" 45% market share in tendered train-km between 1995 and 2005. The growth in market share (train-km) of the other railway operators from 6.4% in 2000 up to 13.2% in 2005 can be mainly attributed to their success in winning tenders. The *Aufgabentraeger* only very rarely awarded contracts directly to DB's competitors. A few regional authorities pursue a long-term strategy to support competitors of the DB in order to have more alternatives in the future.

The overall transport performance in regional rail passenger transport rose from 29.9 bn passenger-km in 1993 to (estimated) 41.8 bn passenger-km in 2005. Thus, the RRPS grew by almost 40% within a decade. After a brief collapse in the year 2002 the transport volume of the RRPS has been growing consistently and reached a new peak in 2005. The generous endowment with federal funds and to a lesser degree the implemented competition is responsible for this very positive development. Additionally, the DB cancelled some interregional train services which helped the growth of the RRPS.

In 2004 (2005), the overall performance of DB's competitors was at around 2.6 (2.8) bn passenger-km (Deutsche Bahn AG, 2005 and 2006). Thus, the competitors had a market share of 6.3% (6.8%) (Deutsche Bahn AG, 2006, 18). In 2004, among the competitors of the DB, the three global players in the German market (Connex, Arriva, Keolis) had a cumulated market share of 40%. Consequently any one of them accounts nationwide only for a marginal part of the market (Höhnscheid, 2005, p. 22-23).

There is a substantial discrepancy between the share of train-km and the transport performance (see Figures 7 and 8). The reason for this discrepancy is the end user demand for rail transport in the past tendering processes. So far, the regional authorities have tendered only lines or networks of minor importance.

Figure 8. **Market share and train-km 2000-2005; 2005: Estimated by DB AG**
The train-km figure also includes occasional services



Source: Deutsche Bahn AG, 2006.

Reports about the experience made with competition for RRPS are few but can be summarised as follows (see e.g. Höhnscheid, 2005, and Leister, 2004):

- Tendering of lines and networks led to substantial savings for the states. A reduction of 20% of granted funds for RRPS-operators could be observed. An analysis of 37 tenders shows that the *Aufgabentraeger* realise savings of around 18% in competitive tenders of less attractive services. Some authors speculate that savings for high value RRPS could rise to around 38% (Mehrbahnen, 2004, 4).

- Meanwhile, the quality of services improved substantially. Among numerous measures taken by the states (buying/financing new rolling stock, introduction of integrated regular timetable services and pricing-systems) many point out that the customer-orientated approach by the new entrants led to their success.

- As a result of the quality improvements made by the competitors the overall transport performance rose substantially. A number of lines are reported to have increased the number of passengers by more than 100% (Leister, 2004, 110).

3. The Service Contracts

Regional as well as local rail passenger transport in Germany is almost completely undertaken through public service contracts. Despite its tremendous importance, a general standard for the contract of required public service obligations does not exist. The regional authorities responsible for awarding contracts have instead chosen to use solutions that they have adapted to their regional requirements, taking advantage of different contractual forms and the competitive environment - as they interpret it. This has resulted in a remarkable heterogeneity of contracts.

Before discussing this variety of contractual forms that are being used in more detail, some central aspects of public service contracts should be mentioned:

- Contract duration and network configuration

  Both aspects are crucial for the attractiveness of market entry. Additionally, contract duration can be decisive for the incentive system; short-term contracts can rely mainly on the threat of losing a contract, while long-term contracts need supplementary incentives like bonus-malus systems to ascertain a high quality performance from the provider. Network configuration describes first of all the volume of the service and in some cases additionally its complexity (e.g. the degree of integration in larger service networks). In Germany, there is an intense discussion first and foremost regarding the maximum service volume that should be tendered. This clearly reflects the concern for medium-sized competitors.

- Service definition

  What tasks have to be fulfilled and how "tight" is their specification? First of all, this aspect concerns service dimensions but also the means of production, e.g. whether the use of a car pool is mandatory. There is an ongoing debate in Germany about the appropriate level of TOCs autonomy to specify services, prices, marketing activities, and the rolling stock used. The trend towards a more intense integration of tendered RRPS into more comprehensive service networks (e.g. Federal States initiatives), associated with the creation of regional brands limits the range of independent initiatives by the operators. Additionally, a tight specification eases market entry especially for medium-sized competitors (reduction of risks, less planning capacity required, transferability of rolling stock). On the other hand, this reduces firms' ability to differentiate their offers, thus intensifies price competition, and shifts planning tasks back to public authorities.

- Risk allocation

  The allocation of risks hinges on several parameters. The most important aspects are to align risk taking and the ability to influence risk and the trade-off between risk taking and risk sharing. Authorities use a wide array of measures to deal with these questions and it is only partially possible to identify these measures. On the one hand, there are some clearly identifiable trends, e.g. almost all authorities share or bear the risk of infrastructure charge increases. In other cases, the measures are very specific for the concrete case (e.g. some authorities guarantee ticket prices if these are determined by regional public transport associations or they guarantee minimum revenues if demand estimations are highly uncertain due to a lack of data).

A relationship between risk allocation and market entry/intensity of competition must be expected. Theoretical models show a trade-off between risk bearing – and the consequential interest in cost reduction – and the intensity of initial competition for the contract (McAfee/McMillan, 1986).

- Additional incentive elements

  Service contracts often require additional measures, especially to assure compliance with quality targets. The necessary extent depends mainly on contract duration and risk allocation design. Particularly, the link between service quality and revenues is often weak, due to the impossibility e.g. to raise prices within a public transport association, to fully capture general demand increases (network externalities) and the limited importance of passenger revenues in general. To compensate for this, authorities can "correct" quality incentives by introducing a more fine-tuned system.

  While the conceptual design of these incentives is complicated, time and resource consuming, it can avoid the assignment of unmanageable risks and it has forced the authorities in Germany for the first time – to think systematically about quality measurement, quality targets and their willingness to pay for quality.

- Contract adjustment

  Like almost any contract, public service contracts are never fully specified. Of central concern is the question whether the possibility to re-negotiate contracts renders the incentive system and the tendering approach useless. In its most extreme form re-negotiations install a kind of cost plus contract, destroying incentive effects of fix-price arrangements and corrupting the tender process – tendering a cost plus contract does not assure the choice of the most efficient provider. On the other hand, in an ongoing relationship contractual flexibility – the other side of re-negotiations – is necessary to deal with changing circumstances, new information and new opportunities. Thus, efficiency depends on design. Design questions concern especially the use of automatic adjustment formulas and the efficiency enhancing specifications for renegotiations.

Contractual details are not regularly published in Germany. Consequently, the following information on contractual forms used is partly based on a survey conducted by Matthias Borrmann (2003) in 2001, comprising 22 contracts, and publicly available information (official press releases, articles, personnel information). There are also first results presented from an own survey.

3.1 Contract Duration and Network Configuration

The average length of the contracts awarded by open tenders is around ten years, with a minimum of three and a maximum of ten years. Service contracts which are a result of not-open tenders are shorter. They range from 2 to 15 years, with an average of 6.5 years. Sometimes there is an option to extend the contract for one or two years. Preparation time after the signing of the contract is given to the winner. The start of the operation usually takes place around two years later. This period is necessary if new rolling stock must be ordered.

The difference in the time horizons of the contracts is one explanation for the awarding procedure the authorities decide for. They have to spend € 250 000 to € 400 000 for a tender (Gorka, 2005, 6). This amount can be reduced with a smaller number of bidders.

Up to now, only minor, often not electrified, networks have been tendered. The average size is about 2 m train-km per year. A remarkable exception was the light rail system in the Rhine-Neckar area with 6 m train-km per year. The smallest service contract so far only entailed 0.16 m train-km per year and served a net of 13 km. Winners of larger contracts face network lengths of more than 300 km (Laeger, 2004, 125). In our sample we found no significant correlation between the length of the contract and the requested annual performance (train-km). The effect on the number of bidders remains unclear. A rather short contract with a high number of train-km should certainly create problems to the bidders if the rolling stock market is not fully developed.

3.2 Service Definition

There is no standard contract for RRPS in Germany. Even within one state there are sometimes different types of contract. This holds for the service definition as well. The majority of contracts display a tight specification:

- Concerning operational factors (relations, running time, frequency, first and last services, and so on), the majority of contracts leaves almost no decision-making authority to the TOCs. Often, the offer to exceed predetermined standards is not taken into account in the awarding process. A central reason is the introduction of synchronized timetables by several German states. The co-ordination of bus systems and intercity rail traffic with regional rail services restricts the possibility of individual decisions by train operating companies. Additionally, synchronized timetables also severely restrict available infrastructure capacity, complicating the introduction of additional trains, and finally, the scope for profitable additional services seems to be very limited.

- Pricing decisions of TOCs are also severely restricted. Public transport associations offer "one stop shops" to public transport users and have set up integrated regional passenger service offers. This has forced TOCs to adhere to the given price systems. Usually, the TOCs have to offer some classes of tickets which are also applicable for other local public transport modes. There is also the need to find an agreement with the DB on mutual ticket acceptance. This means a further limitation for the TOCs of their pricing possibilities by the tariffs for long-distance passenger transport of the DB.

- Marketing is also a task mainly performed by public transport associations. They define the umbrella brand characteristics. There are regional authorities that claim to have had bad experiences with TOCs, which did not make enough efforts to increase rail demand. Consequently, some service contracts specify annual amounts to be spent for marketing, a substantial amount of which has to be dedicated to the umbrella brand. In-train service and to a lower extent information campaigns are the main marketing instruments that can be used by the TOCs to increase their own ridership.

In addition to service specification, almost all of the contracts lay down the rolling stock to be used. The technical capabilities are indirectly defined by the required service programme and the infrastructure. The furniture of the trains is usually specified in detail (number of seats, toilets, ticket machines, and so on).

Data of 14 contracts exhibit a remarkable difference of the payments: they reach from € 5.2 to 10.6 per train-km. If you assume an average load factor of 70 p-km/train-km[3], the franchise payments are 7.4-15 Eurocent per p-km. The differences in the types of contract, service specifications, alongside with demand and infrastructure characteristics and charges, do not allow for this simple

comparison of the franchise payments. Further analyses have to be postponed, as knowledge about individual specifications of contracts is still limited.

For the future, representatives of regional authorities have announced the amplified use of so called functional tenders (Wewers, 2004). The tendering documents shall contain minimum standards. Offers that exceed these standards shall be considered in the awarding process. The TOCs will then compete with different timetable-offers, and get more decision-making authority concerning rolling stock and marketing.

3.3 Risk Allocation

The classical trade-off in contract theory concerns costs and benefits of risk sharing between contract partners, i.e. costs of risk bearing/the willingness to participate and the incentives to economize. The actual risk allocation depends on the form of remuneration. One can distinguish between revenue risk and cost risk. Two questions are decisive:

The first central question is, whether the TOCs receive realised revenues. In "net cost contracts" a railway company receives its revenues and the regional authority only pays the difference between revenues and costs. In this case, demand information plays a crucial role in the bidding process. This is usually perceived as an advantage for DB Regio. DB Regio possesses the most detailed information on demand and an area-wide ticket sales system. Moreover, the DB controls the long-distance passenger transport, which is a competitor for the RRPS on some relations. Due to limited information, the calculated revenues of the TOCs can differ significantly. In the tender for the *Marschbahn* (4.1 m train-km p.a.) in 2003, the DB claimed that the revenue forecast of the winning firm, Connex, had been highly exaggerated: according to the DB, Connex calculated with revenues of 8.2 Eurocent/p-km, which was 30% more than the other two bidders expected (Deutsche Bahn AG, 2004, 11).

In a "gross cost contract" revenues generated are passed to the regional authority and the operator receives a compensation for its emerging costs. Revenue risks are in these contracts entirely borne by the regional authority.

Between these extreme forms of remuneration several intermediate contractual provisions are possible: The railway companies receive only a share of their revenues or they receive some form of "shadow revenue", that is their remuneration is based on ridership but not on revenues. Payments per passenger-km can in this case reflect social costs or they can be the result of revenue allocation rules of public transport associations. In other contracts, the TOCs have guarantees for a tariff mix on certain lines. This reflects their limited possibilities to influence the tariffs.

It is often argued that net cost contracts, leaving revenue risks with the railway companies, are essential to create adequate incentives for the companies to raise ridership. But the costs of these incentives may be too high. Gross contracts on the other hand are said to establish incentives to minimise costs –- even by reducing quality. This argument is usually reinforced with the low demand elasticity in local public transport. Even if one neglects the effects/incentives of the tendering process this characterisation is only strictly true if the contracts are some kind of fixed-price contracts.

Secondly, the question is whether a fixed-price or a form of cost plus contract is chosen. In the first case, the payment is simply the firm's bid (usually required compensation per train-km). In the second case, the government assures a certain profit (as percentage of actual costs). Again, not only extreme forms are possible: In an incentive contract the government agrees to offset a given share of a firm's deficit/the firm can keep a given share of higher-than-agreed revenues. Additionally, the introduction of cost pass-through rules allows a combination of fixed-price and cost plus elements.

Again, the situation in Germany exhibits a wide variety: The sample of contracts analysed by Borrmann (2003) included:

- Net cost contracts (36%), gross cost contracts (41%) and some forms of incentive contracting, i.e. regional authorities and TOCs shared revenues, typically on a 50:50-rule (23%).

- Fixed-price contracts concerning costs (40%) and contracts with cost pass-through for "unavoidable" costs (60%). Cost pass-through is especially relevant for track and station access charges, but it sometimes applies to energy and personnel costs as well.

A much discussed example was the tender of the *Netz Nordharz* (2.8 m train-km p.a.) in 2003. It was stipulated to grant the operator 95% of the revenues and to burden him nearly all costs apart from around 40% of the track charges. The compensation for the remaining track charges was to increase by 1% each year. Likewise, the compensation for all other cost components had been set to rise by 1.5% each year. TOCs complained about the risk being unduly high (Quandt, 2003, 4). This tender has so far been the only one which to our knowledge did not generate any valid bid. Eventually, the contract was awarded to Connex in a negotiation process.

One particular problem in this tender concerned the infrastructure costs only being partly passed through to the regional authority. Usually, an *Aufgabentraeger* covers all track and station costs. They accrue to 40-60% of the TOCs´ total costs (e.g. Gorka, 2005, 5). Although these charges are regulated, some operators are afraid of discrimination by the DB. The same holds for energy costs (usually diesel), which accrues to 6% of the total cost (Laeger, 2004, 88).

Additionally, one has to keep in mind that revenues are often the allocated shares of public transport associations´ revenues (Borrmann, 2003, did not differentiate between real and shadow revenues). This may limit the incentives for a TOC to raise its revenues, as the tariff income allocation rules of public transport associations can usually hardly be influenced by the TOCs.

3.4 Additional Incentive Elements

Bonus-malus systems or contractual penalties are often used to assure compliance with agreed upon quality and to introduce an incentive - beside additional revenues - to raise quality. In Germany, almost all contracts entail contractual penalties for failing to achieve contracted quality. Formerly, punctuality was the only quality dimension considered. In the last years, the malus schemes have become more complex. Contracts may stipulate malus payments for number of seats, tidiness of cars and stations, number of personnel on the train etc. Less than 20% of all contracts in Borrmann's sample also included some kind of bonus system.

The more recent enquiry of Beck (2005, p. 105) found bonus-malus payments in 50% of the contracts and pure malus regimes in 47% of the contracts. Net cost contracts are more likely to be combined with a malus system, while gross cost contracts are more often amended by bonus-malus systems. This finding is intuitive, as TOCs which operate under a gross cost contract must not only be incentivised to prevent a decrease of their performance but also to raise the patronage.

The design of the malus system is a delicate issue. Low penalties will have no effect on the performance while high penalties can drive the operator into financial difficulties. We found several contracts which provide a cap of the malus payments of 15-16% of the total annual payments. Contractual penalties, e.g. for the delayed start of the operation, are treated separately from malus payments. They are often capped as well, e.g. 5% for the *Marschbahn*, 8% in some other contracts.

The operators thus face a total reduction of 20-24% of their annual payments at maximum, if they do not deliver the required services. Such a malus regime can threaten the viability of a business, as the margins in tendered services are - according to representatives of the TOCs - less than 10%. But there are significant differences in the caps of the malus payments, e.g. in Saxony-Anhalt caps for malus-payments were at 1.5% in 2003. As a result, the malus payments of the DB Regio were cut from € 7.7 m to € 3.8 m. In the same year, contractual penalties accrued to € 2.5 m (NN, 2005, 48).

While bonus-malus schemes can be useful to incentivise TOCs, their design poses significant informational requirements: Especially, restrictions like budget-constraints or costs of public funds require a planner to take account of the cost structure of the operators.[4] If this information is not known to the regional authorities when they prepare the tendering process, theory suggests e.g. offering a menu of bonus-malus schemes to the bidders.

In the case of the *Westerwaldnetz* the TOCs had to select one out of three combinations of maximum bonus-malus payments. The maximum malus payments were in any case four times higher than the maximum bonus-payments. If the bidder chooses category A, the annual malus payments are capped at € 2 m, the annual bonus-payments are capped at € 0.5 m. In category C, the cap is € 4.0 m for malus-payments and € 1 m for bonus-payments. It is not known how the regional authorities considered the choice of the bidders in the awarding process.

Again, one should keep in mind that the tendering process itself exhibits strong incentive effects. Moreover, the experience with a bidder and his reliability are important for the appraisal of an offer.

3.5 Contract Adjustment

Franchise contracts are usually long-term contracts. Changing conditions, e.g. changing factor prices or demand shifts, may require contractual adjustments to restore efficiency. But, these adjustments can also result in inefficiency. Especially renegotiations may e.g. actually transform a high-powered incentive contract into some form of a cost plus arrangement resulting in lower efforts and seriously damaging the selection efficiency of a tender.

First of all, franchise contracts in Germany usually contain dynamic adjustment formulas. More than 50% of all contracts entail price escalation clauses and all contracts (1996-2005) except two entail a cost pass-through rule for access charges (track and stations). The necessity to renegotiate contracts is drastically reduced by these automatic adjustment formulas.

Additionally, almost 50% of all contracts analysed by Borrmann (2003) entailed a specification of the renegotiation process. Usually these specifications clarify when a party has the right to call for a renegotiation, what information the parties have to provide, the rules that govern the decision-making board, and whether and when a party has the right to refer a matter to arbitration. Public information on the exact specifications entailed in the franchising contracts, the frequency of renegotiations and their results are hardly available.

Whether the possibility of renegotiations renders franchising systems inefficient is a matter of design. The institutional design decides whether a public authority can hold up a franchisee or whether the originally intended risk allocation will adhere. In August 2003, e.g., the first case of bankruptcy occurred. The train operating company FLEX AG, a subsidiary of the Norddeutsche Nahverkehrsgesellschaft (NNVG), which had received a franchise in Schleswig-Holstein one year before (1.1 m train-km per year with a term of 13 years) had to institute insolvency proceedings. Its parent company followed shortly. One central reason for the bankruptcy was the overestimation of revenues, as a net cost contract had been awarded. There was further a problem with revenue

allocation within the tariff association of Schleswig-Holstein. The regional authority denied any renegotiation but instead opened up a new award procedure (price request) immediately. Within two months a two year interim solution was established. A Connex subsidiary took over the business with more favourable conditions. Simultaneously, a new, regular award procedure was initiated.

4. Some Conclusions

The most striking characteristic of RRPS in Germany compared to the outstanding example of the UK is the variety of awarding procedures and contract designs. The heterogeneity is rooted in the fact that 33 regional authorities are responsible for the service contracts. Although the regionalisation of RRPS already took place in 1996, the process of convergence is progressing very slowly. The possibility of the *Aufgabentraeger* to learn from each others experience is severely limited by a lack of official information on the awarding procedures, contracts, and results of tenders.

A first glance at the performance of the RRPS and the intermodal competition since 1996 reveals a success story: service level and quality were noticeably raised and as a consequence traffic performance increased by more than 30%. At the same time, the authorities realised cost savings of around 20% with competitive tenders. The success of the regionalisation was partly triggered by growing intramodal competition: the share of DB Regio's competitors increased to 6.9% (p-km) in 2005 and international companies entered the German market. Some public companies, owned by local authorities or Federal States, have been present for a long time in the market and are now becoming serious competitors of the DB AG, partly with the help of venture capital. Unlike the development in UK and Sweden, no large bus operator entered the railway market, the main reason being that there is hardly any scheduled long-distance bus transport in Germany.

The flipside of the good results is the financing of the whole system. The increase in performance was paid for by the federal government with high subsidies for the RRPS. This allowed the Federal States to be rather slack in their procurement procedures. Not all of them strived to realise the cost savings reported above. They rather awarded long-term contracts to the DB AG without any element of competition, sometimes in exchange for additional infrastructure investments.

The service contracts differ markedly in terms of their length. They reach from two up to 15 years. There is not enough data to support the hypothesis that shorter franchises cause problems to the bidders. The life time of the rolling stock might no longer be of decisive importance. Half of the franchises do not claim new rolling stock to be deployed. Moreover, the second-hand market for rolling stock is developing. And lastly, some *Aufgabentraeger* provide the TOCs with resale guarantees for their trains or provided car pools. This part of the service contracts deserves more investigation but it certainly can decrease the financial risk for the bidders.

The freedom of the operators to specify their transport programme is quite restricted. Usually, there are tight service specifications, e.g. in terms of service frequency, rolling stock etc. For other supply side characteristics, call for tenders contain minimum requirements. The main possibility of TOCs of winning the franchise is to cut costs. But most of the costs can not be influenced by the operators. There are differences for the cost of personnel, mainly between the DB and its competitors. The DB is frequently said to have personnel costs of 20% above its competitors. Among most of the competitors, the cost structure and level is not likely to differ significantly due to the tight service specifications.

Gross cost contracts dominate in Germany with a share of around 40%. One reason for this is the integration of RRPS in public transport associations. This sharply limits the possibilities for the TOCs to influence their fares. A further limitation is imposed by the long-distance passenger tariffs of DB,

which usually have to be accepted by the RRPS operators for the through-ticketing. Moreover, the service providers are not totally free in their marketing activities. Given this environment, it might be efficient to not burden the revenue risk to the operators. But the whole system of tariff setting has to be questioned, as it often leaves no influence to the TOCs on what is usually one of the most important instruments of a commercial company.

As the remuneration itself exerts rather low incentives, bonus-malus schemes are additionally used. Mainly penalties are stipulated for a failure to meet performance targets. In the absence of strong remuneration incentives it seems to be straightforward to counterbalance this with a reward or a penalty for changes in the ridership. But there are usually more possible facts causing penalties for the operator. We know of contracts which define seven different reasons for penalties. Some of those are likely to be unnecessary, if the TOCs could influence their revenues more freely, e.g. the number of seats. An additional possible drawback for the efficiency of the incentive schemes is the lack of detailed cost and demand information that the authorities have. This can lead to inefficient and ineffective incentives.

On the cost side, cost pass through-arrangements are usually used, at least for infrastructure charges. Some contracts additionally provide automatic adjustment of franchise payments in case of rising energy or labour costs. But most of the contracts exhibit some fix-price components, so that *Aufgabentraeger* can expect to benefit from possible productivity growth of the operator and reap these benefits in the tender stage.

The cost pass through-rules reduce the need to renegotiate contracts. Usually there are further clauses which stipulate possibilities and procedures for changes, in particular in terms of train-km and payments. Despite the differences between the contracts in Germany, these provisions have so far facilitated a stable system of RRPS services, with only one bankruptcy and no withdrawal of franchise occurring. This may not least be based on the fact that the regional authorities and the service providers are bound to develop a good working relationship during a long-term contract.

For the future, the regional authorities have expressed their will to advance the contract design. They intend to put more emphasis on functional service specifications. We also expect an increase in the size of the tendered networks. A further development will be prompted by the cut of regionalisation funds which took place in 2006. One possible reaction of the regional authorities is to think about reducing costs, probably by giving more room to tenders instead of the direct awarding of services.

NOTES

1. Not all concluded contracts are published.

2. In May 2006, the Connex Verkehr GmbH changed its name and became the Veolia Verkehr GmbH.

3. This is roughly the load factor of DB Regio. It is likely above the average, as the DB Regio serves a great part of the high-demand-relations.

4. An ideal incentive scheme - intended to urge the operators towards socially optimal services - shall confront the TOC with the social consequences of its performance. E.g. if low performance results in lower ridership, only revenue effects are directly relevant to the TOC (in net cost contracts), while e.g. additional congestion costs on roads are not taken into account; thus, the planner has to correct revenue effects. Without the restrictions mentioned, a performance-based contract could be based "only" on demand information (consumer surplus, externalities and so on) since the transfer of rents would be irrelevant. For a comparable problem see Hensher/Houghton, 2004.

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6. COMPETITIVE TENDERING OF REGIONAL AND INTERREGIONAL RAIL SERVICES IN SWEDEN*

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* The financial support from Banverket and ECMT is gratefully acknowledged.

SUMMARY

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Abstract

The Transport Policy Act of 1988, with its ground-breaking split of railway infrastructure from operations, is commonly considered the starting point for the transformation of the Swedish railway system – from a vertically and horizontally integrated monopoly to a market characterised by decentralisation and intra-modal competition. In this paper, we focus on the reforms and experiences related to the introduction and development of competitive tendering of passenger rail services in Sweden. Competitive tendering was first introduced in 1989 on some regional lines, but since then this practice has become more and more widespread, and now encompasses the majority of both regional and interregional lines. The different types of tendered contracts for these services are described in some detail in the paper. Despite a general lack of bidders participating in most tenders, some important new entries have taken place, from national as well as international firms. For the procuring authorities, it has been a rather long period of learning over time how to improve the tendering process, also affected by Sweden's entry to the European Union in 1995. Although there are several positive effects to highlight, such as innovation and reduced subsidies, there is also reason to consider problems like unfulfilled bids, the predatory behaviour of some bidders, and sometimes worsened possibilities for passengers to find connecting journeys involving several operators. Moreover, SJ's (the state-owned operator) remaining monopoly on its so-called profitable lines affects the general competitive situation and prospects for sector development. The paper also includes some general statistical data reflecting the development of the Swedish railways in recent years.

Introduction

This paper describes the introduction of competitive tenders in the Swedish railway passenger market and analyses the resulting effects. As will be shown, competitive tenders initially became possible as a consequence of the passing of regulatory reforms that per se weren't designed to introduce tenders. Later on, when tenders had become regarded as a successful mechanism to lower costs and increase efficiency in the railway sector, additional legislation and regulation supporting increased tendering was introduced.

The paper starts with a condensed description of the evolution of Swedish railway reforms, followed by a description of the resulting railway system as it appears in 2005-2006. The next section of the paper deals with the introduction of competitive tenders and presents information on different kinds of contracts, how tendering procedures have developed over time, and their effects in terms of market structure, costs and innovations, but also presents a number of related problems. This is followed by a section with some additional information on the general development of the Swedish railway sector. In a final section we summarise our observations and findings and draw some conclusions.

The Process of Swedish Railway Reforms[1]

Regulatory changes in the Swedish railway sector have often emanated from a wish to come to terms with the recurrent financial difficulties of Swedish State Railways (SJ). There is an important pre-history of reforms beginning already in the 1960's, but the Transport Policy Act of 1988, with its ground-breaking split of railway infrastructure from operations, is commonly considered the starting point for the transformation of the Swedish railway system – from a vertically and horizontally integrated monopoly to a market characterised by decentralisation and intra-modal competition.

The Transport Policy Act of 1988 had the objective to make the conditions for the railways more similar to those for the roads. The state took the full responsibility for railway infrastructure investments and maintenance by means of a new authority – Banverket, while SJ would be

transformed into a train operating company, paying charges for using the tracks (based upon marginal costs for maintenance). Infrastructure investments were to be evaluated by means of socio-economic calculations. Among its several other components, the Act also marked a general policy step in the direction of extending the responsibility of the County Public Transport Authorities (CPTAs) – established in 1979 to co-ordinate regional public bus services – into the unprofitable regional railway services, inspired by some early cases where this had been tried. In return, the CPTAs were compensated by state subsidies equalling SJ's operating deficits on these lines, and the rolling stock was also transferred to the CPTAs.

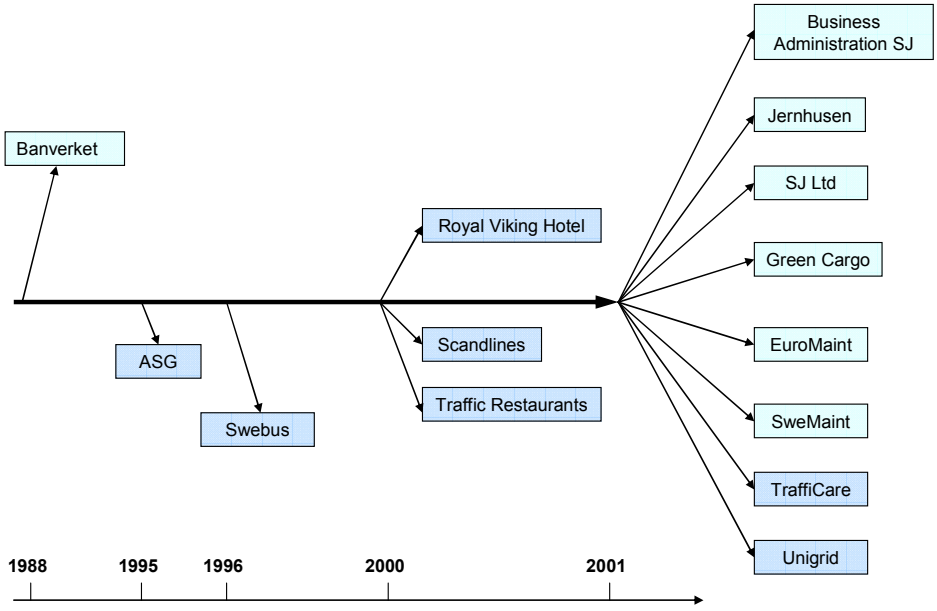
A deregulation of the railways in terms of increased intra-modal competition was not explicitly mentioned in the Act. Nevertheless, the vertical separation of infrastructure from operations, combined with the decentralised responsibility for regional railway services to regional authorities (along with the necessary money and rolling stock), made public procurement by competitive tendering of these lines possible. Some CPTAs had already tried tendering procedures for their bus services, as a result of previous reforms in that sector.[2] This made it natural to use competitive tendering also of regional railway lines. The outcome was the first new entrant for more than 40 years, *BK Tåg*, in 1990.

In the beginning of 1991, the Ministry of Transport expressed the view that more operators would stimulate the railway industry to make use of its resources in a more efficient way. At the time, there was a perceived fear among many politicians that SJ's power on the transportation market could become too strong, especially since SJ's management had been unwilling to concentrate on the railway services, keeping SJ a highly diversified transportation conglomerate. After a shift in power in Parliament in September the same year, a new centre-right-wing government declared its objective to open the railways to more competition. The first step was to subject more railway traffic to tendering. When SJ got rid of the responsibility for track infrastructure, it had been directed only to perform *profitable* train services under its own account. While large parts of the *unprofitable* services were run on the regional lines and therefore under the responsibility of the CPTAs, many services of the inter-regional main line network were also unprofitable. Since 1988, the state had been procuring these services by means of annual negotiations with SJ, instead of simply transferring subsidies to SJ every year to cover the deficits. In 1992, following the experiences of tendering of regional services, a regulatory change made it possible also for the state's negotiator to use competitive tendering when procuring services on the inter-regional lines.

In 1993-94 several reports looking into the feasibility of deregulating the whole network followed, coupled with a fierce political debate. In May 1994, a bill on a far-reaching deregulation was passed in Parliament, despite heavy opposition from the Social Democrats, the left-wing party and the railway unions. Consequently, when the Social Democrats regained power in Parliament through the election in September the same year, the deregulation of the railways was quickly postponed. Instead, a less radical reform was suggested, coming into effect in July 1996. The functions of allocation of track capacity and train traffic control were transferred from SJ to Banverket, while other common facilities were to be available for other train operators under commercial but non-discriminating terms. The CPTAs' rights were extended, making it easier for them to replace reductions in SJ's supply of inter-regional trains with regional CPTA-managed services. Consequently, the practice of competitive tendering became available for more parts of the railway network. For the freight services, open access on the whole network was introduced, based upon the belief that these services would stand better chances against other modes of transportation if they were forced to adapt to what the market wanted. Actual access to capacity was only limited by a "Grandfather's right" clause, giving an operator the right of precedence to a timetable position it had used before. In practice, this rule was rarely (if ever) enforced, and was eventually abandoned in 2004.

A new Transport Policy Bill was passed in 1998. In an effort to achieve more equal terms for competing modes of transportation, in particular concerning freight, the track access fees were lowered. In order to make entry easier for freight operators competing with SJ, some fringe railway lines that had remained in SJ's hands were transferred to Banverket. Moreover, a new national authority, Rikstrafiken, was established. The authority took over the tasks of the former state's negotiator, becoming responsible for competitive tendering of unprofitable inter-regional services (including all modes of public transportation), aiming also at better co-ordination with the CPTA-tendered services. Following the inflow of new operators in 2000, a new Bill had the objective to facilitate for SJ to compete under the new circumstances and to ensure equal access to functions and services for all operators. SJ's organisational structure as a business administration was therefore replaced in 2001 by several state-owned companies concentrating on specified parts of the railway businesses. The passenger division formed one company (SJ Ltd), the freight division another (Green Cargo), and so on for real estate (Jernhusen), maintenance (EuroMaint) and other businesses. Two divisions, TraffiCare (cleaning services) and Unigrid (computer information systems), were fully privatised a few months later. This is summarised in Figure 1, also including some of the previous divestments and separations from the business administration SJ. In the figure, firms and organisations presented in pale blue boxes are still state-owned, while the companies in blue boxes are now in the private sector.

Figure 1. **The Separation of the Business Administration SJ 1988-2001**



Source: SJ Annual Reports.

Since the Bill of 2000, the process of regulatory change in the Swedish railway sector has to some extent slowed down. On several occasions, it has been suggested that the remaining monopoly of SJ Ltd concerning the profitable inter-regional lines should be abolished, possibly opening up for open access or at least competitive tendering on these lines.[3] So far, the Social Democrat government has been unwilling to take this step, motivated by a perceived need for more time to evaluate the effects of the already implemented reforms. In 2003, the state had to intervene by means of transferring a large amount of money (1.8 billion SEK) to SJ Ltd from other state-owned companies in order to avoid

bankruptcy.[4] It had then become clear that the breaking-up of SJ into several separate companies had been an under-financed reform, but also that several of SJ's contracts for regional and inter-regional passenger services were highly unprofitable due to the fact that SJ had won the tendered contracts with too low bids.

The most recent reforms have focussed on modernising laws and regulations to achieve a regulatory framework in line with European Union directives. Following the European Commission's first railway package, a new railway law and railway regulation came into effect in July 2004, and a new Swedish Rail Agency was established.[5] Currently, a new transport policy bill is being prepared. One important issue is how Sweden should prepare for a future decision on the European Commission's third railway package, and the prospect of opening up international passenger railway services between member states from 2010.

The Swedish Railway System in 2005

The actors and their roles

The current framework of the Swedish railway market implies that the national authority *Banverket* owns and maintains the state's railway infrastructure. Since this amounts to about 80% of all railway lines, Banverket is the primary rail infrastructure holder.[6] Regional authorities own a couple of lines, mainly in the Stockholm region. In addition to this, several minor fringe lines are owned by factories and municipalities. Banverket gets its financial resources mostly from national grants, decided by Parliament for multiple-year-periods, but also handles the track access charges paid by operators for using the tracks. The main principle behind the track access charges is that they should amount only to the incurred marginal costs of Banverket in terms of track operation and maintenance. In 2004, the total income from track charges amounted to 426 million SEK, corresponding to 11% of Banverket's total funds directed to operation and maintenance.[7] The Government and Parliament have given Banverket the overall responsibility for the development of the railway sector. This sector responsibility comprises railway transportation as well as tram and underground transportation.

The *Train Traffic Control unit* within Banverket monitors all train movements on the Swedish railway network. The organisation is also responsible for offering the operators good opportunities to run their trains. All the wishes of the operators are co-ordinated with the objective to find solutions that meet these wishes in the best possible and non-discriminatory way. Due to track capacity constraints on a large part of the network, Banverket actually allocates planned delays compared to the shortest possible time needed for a particular transportation. The end result of this process is the granting of certain timetable positions ("slots") to each operator, and the production of a corresponding national timetable.

All in all, there are about 500 railway stations where trains stop for passengers. Many of these are very simple stops (controlled by Banverket), with no special buildings or facilities for passengers. Many stations (with or without passenger facilities) are owned and maintained by regional authorities, being used only for local and regional services. About 170 stations are equipped with station buildings on separate estates. 150 of these are owned by *Jernhusen*, the state-owned company formed out of SJ's old real estate division. In addition to this, there are a large number of terminals and facilities used primarily for freight services, owned by several different actors. Jernhusen is the primary owner of buildings used for maintenance of rolling stock.

One key authority is the newly established *Swedish Rail Agency*. Formed out of the old Railway Inspectorate, the authority has taken over the tasks concerning safety in the railway, underground and

tram systems. It has also been assigned new tasks, such as monitoring that the fees charged for the utilisation of the railway infrastructure are determined in a competition-neutral and non-discriminatory manner. The same goes for capacity allocation and provision of services. Any operator wishing to operate train services on the Swedish rail network needs to apply for a license from the Rail Agency.

The *CPTAs* are important players in the market, since they account for much of the procurement of railway services. Generally, they also provide their contracted operators with the necessary rolling stock for these services. Together, some of the CPTAs own a rolling stock company, *Transitio*, thereby managing a large part of the fleet of regional passenger trains. Firms competing for inter-regional services procured by *Rikstrafiken* may hire vehicles from the company *ASJ* (the remains of the business administration SJ), where the leasing contracts of the rolling stock are being handled. SJ Ltd and Green Cargo also hire leased vehicles from ASJ. Consequently, ASJ in several respects functions as a rolling stock company. Freight operators generally have to get their own rolling stock. Perhaps with the exception of locomotive power, the market for freight vehicles is comparably well developed. The vehicles are more standardised than the rolling stock for passenger trains and independent private owners have been active in the market for several decades.

Several other companies provide various supporting functions to the operators and other organisations. Some of these came out of the corporatisation of SJ, others were divested earlier and yet others are new entrants not originating from SJ. One of the most important companies of the first category is *EuroMaint*, the state's company for maintenance of railway vehicles. The company has a share of slightly less than 50% in this market. Important competitors are operators that combine their traffic operations with maintenance services, and train manufacturers like *Bombardier* and *Alstom*. Alstom is a new actor in Sweden that entered after winning tenders for new trains. Another actor in maintenance is state-owned *SweMaint*, primarily working with freight vehicles. Several foreign companies are preparing to offer maintenance services in the Swedish market. Among these one should mention Mantena (subsidiary to NSB), the technical division of DSB (primarily interested in strengthening its position in the Swedish part of the Öresund region, and DB, that have expressed strong intentions to establish itself in Sweden.

TraffiCare (owned by ISS) provides terminal services such as cleaning (previously also switching). The former *Unigrid* (now a part of Cap Gemini Ernst & Young and Norwegian EDB Teamco) is active in IT services. Both Trafficare and Unigrid originate from the corporatisation of SJ.

Currently, about 20 train operating companies use the state's rail infrastructure, most of them being very small. On the passenger side, the state-owned company *SJ Ltd* is still the dominant operator, but private firms like *Connex*, *Citypendeln* and *Tågkompaniet* are important competitors. *BK Tåg* was until recently another important competitor (the company went bankrupt in March 2005). *Arriva* has participated in some tenders, and very recently (February 2006) won the tender for a commuter network in southern Sweden, starting its operations in June 2007.[8] In terms of passenger kilometres, SJ Ltd had a 74% share of all railway services in 2004, with an 88% share of the long-distance (more than 100 kilometres) and a 54% share of the short-distance (less than 100 kilometres) railway services.[9]

Green Cargo, formed out of the former freight division of SJ, is the largest rail freight operator, with a 74% market share in rail freight transportation in 2004.[10] Like SJ, Green Cargo is fully state-owned. *Malmtrafik AB* is the second largest operator, carrying out the transportation of ore on the Iron Ore Line. Being a subsidiary to the mining company LKAB, it is state-owned too. *TGOJ* is another important freight operator, but this company is a subsidiary to Green Cargo. Although there are several minor private freight operators, only a few (like *BK Tåg*'s freight division that survived the

bankruptcy of the passenger division, and newly-established *Hector Rail*) actually compete with Green Cargo and TGOJ for the same contracts.

The *State* continues to be a very important actor in the Swedish railway sector and has a number of roles related to railway and transportation policy issues. The state is the owner of SJ Ltd, Green Cargo, Jernhusen, EuroMaint, SweMaint and other companies, with all the responsibilities following from ownership. The state is also responsible for investments and maintenance in railway infrastructure through Banverket and for auditing, safety and regulatory issues through the Rail Agency. The role as owner also has to be combined with the role as the entity responsible for setting up the basic conditions for competition and running firms in society, in this case the rules of the game in the railway market. In addition to this comes the role of shaping the long-term national transport policy. It's a delicate problem for the state to carry out all these potentially conflicting roles.

Competitive Tendering of Swedish Rail Services

General overview

As is evident from the historical process of reforms described above, public procurement by competitive tendering has come to dominate the passenger rail market, being applied on almost all the unprofitable lines, which now make up the majority of the all railway lines. The only part of the railway transportation market where SJ AB still holds a legal monopoly concerns the inter-regional passenger services that the company considers possible to run with a profit (i.e. in principle the important lines between Stockholm and some other major cities). (See Table 1).[11]

The basic model of competition in the market for passenger services is competition "for the tracks". Once a contract has been won in a tender, the winning firm becomes the sole provider of the specified services during the contract period. The current model of public procurement is a kind of hybrid between a beauty contest and a reverse closed auction in which the lowest bid wins. The bid price is always very important, but generally the bidder also has to meet other criteria, showing that it conforms to standards on competence and is prepared to work with quality-related issues. Within this framework, two main alternative types of contract design are in use, basically related to whether the services are tendered by the regional CPTAs or by the national authority Rikstrafiken.

Regional Services Procured by CPTAs

For the CPTA-managed services, *gross-cost contracts* are dominant. The operators bid for the lowest amount of subsidy needed to cover the costs (including a profit) of operating the services. The CPTAs are responsible for planning and marketing of the services and generally decide on the ticket prices and also take all the revenues from fares during the contract period. Sometimes, the operator receives a share of these revenues in order to stimulate performance. Otherwise, systems of penalties for delays etc are commonly used. Contract periods vary between 3-5 years, but there is often a clause making it possible to prolong the period 1-3 years if the relationship works satisfactorily.

Table 1. **Regulatory Structure of the Swedish Railway Sector in 1988 and 2005**

Part of market	1988	2005
Passenger services		
Regional (non-profitable)	SJ holds monopoly and receives subsidies	Procurement by competitive tendering (competition for the tracks)
Inter-regional (non-profitable)	SJ holds monopoly and receives subsidies	Procurement by competitive tendering (competition for the tracks)
Inter-regional (profitable)	SJ holds monopoly	SJ holds monopoly
Freight services	SJ holds monopoly	Open access on all lines (competition on the tracks)

In the early days (1989-90) of decentralised railway services managed by the CPTAs, only a few CPTAs actually used tenders to close contracts with a train operator. These tenders did also not follow any strict regulation on procurement, at least not compared to the later adopted directives of the European Community. Some CPTAs simply chose to negotiate a long-term contract with SJ, without any tendering process whatsoever. Although most of these early contracts have eventually been replaced by new contracts following a tender, some regional lines remain to be tendered for the first time.

The different approaches and contract lengths of different CPTAs has meant that during some years only a very limited number of tenders of regional passenger train services are carried out, limiting the market that is open for actual competition. Table 3 in a subsequent section gives an overview of when the CPTAs' lines have been tendered and re-tendered since the introduction of competitive tendering in 1989.

Interregional Services Procured by the State

The other type of contract is the *net-cost contract*, generally used by Rikstrafiken for the contracts of inter-regional services. The bidding firm has to project both the costs and the revenues from fares during the contract period (implying a higher degree of risk taking for the bidder compared to gross cost contracts), bidding for the minimum amount of subsidy needed to cover the deficit. During the contract period, the operator sells tickets and collects fares, and generally has more freedom to influence the services than under a gross-cost contract. Nevertheless, price levels, minimum supply, and quality requirements must be followed according to the contract. These parameters also play a role in the evaluation of bidders in the tender. When using multiple evaluation criteria, these criteria are now given pre-specified weights to enable a bidder to calculate the overall strength of its bid (something Rikstrafiken did not do in the past). Contract periods are currently 5 years.

Before the establishment of Rikstrafiken in 1999, the state's tenders were carried out by a special negotiator and later a so-called procuring delegation. These "authorities" consisted of a very limited number of people with rather limited powers at their disposal. Tenders were typically performed annually with contracts being as short as 1 year. This reflected the lack of long-term commitment from the state to keep these subsidized services. It was only possible to close longer deals (up to 5 years) if it would mean lower costs for the state or improved services for passengers. Initially placed bids were often followed by a rather long process of negotiations between the procurer and the bidders.

During the 1990's SJ was supposed to provide potential competitors with resources such as rolling stock and access to stations and terminal buildings, charging only the equivalent of its internal prices (between its divisions) for this. In reality, it was difficult for the procuring authority to reach agreements with SJ on these prices, making it difficult for competitors to place complete and competitive bids. As more and more functions and resources were handed over from SJ to Banverket and other organisations, transparency gradually improved.

Rikstrafiken as an authority was built up from scratch with limited staff experienced to tendering. This forced it to prolong several contracts without proper tendering and close some very short-term contracts before it was capable of performing tenders in the way it does today. While its predecessors basically only procured train services, the new authority has become increasingly involved in the procurement of domestic airline services. Some of the CPTA-managed lines have become incorporated in the tenders of Rikstrafiken in order to improve co-ordination between regional and interregional services. Table 3 in the subsequent section provides an overview of the railway lines procured by Rikstrafiken.

New Entry and the Number of Bidders over Time

The introduction of competitive tendering of regional passenger railway lines in 1989 immediately lead to the entry of BK Tåg in the county of Jönköping and its surroundings in 1990. For a couple of years this remained the only new entrant and true competitor to SJ. It was not until 1995 that another small operator entered this part of the market. In the market for inter-regional services, despite being tendered since 1992, the break-through for competing operators did not happen until the year 2000. As has been mentioned above, these tenders used to involve much negotiation and whenever competitors appeared, SJ commonly reduced its own bid during the process in order to keep other operators from entering the market. The break-through came after some of the railways' common functions had been removed from SJ and a proper price-list of vehicles had been established by the procuring authority and the government (see Table 2).

In addition to looking at the number of new entrants, we may get a better overview on actual competition in Swedish passenger rail tenders if we consider the number of active bidders over time. Although not entirely complete, Table 3 provides such an overview – comprising of 91 tenders performed between 1989 and 2005 – separated between the tenders performed by regional CPTAs and the tenders of inter-regional lines performed by the state. As a general observation, the number of bidders has (with some exceptions) been rather few; typically only 2-3 bidders have been active in each tender. On average, the CPTAs' tenders have attracted more bidders (2-3) than the state's tenders (1-2). Some years, the most common number of bidders is only 1 (in most cases SJ), indicating insufficient scope for competitive pressure. In six out of 37 CPTA-managed tenders there have been only one bid, while this has been the case in as many as 26 out of 54 tenders performed by the state. The data material of Table 3 is also presented in a frequency diagram (Figure 2).

Table 2. **Timeline of new entries through competitive tenders**

Year	Passenger Services Procured by CPTAs	Passenger Services Procured by the State
1990	BK Tåg[1]	
1995	Sydtåg[2]	
1998	Linjebuss/Connex	
	BSM Järnväg[3]	
1999		A-Train (Arlanda Express)[4]
2000	Citypendeln[5]	Sydvästen[6]
	Tågkompaniet	Tågkompaniet
		BSM Järnväg[3]
2003	Roslagståg[7]	Connex
		BK Tåg[1]
2006	Stockholmståg[8]	
2007	Arriva[9]	

1. Bankrupt in 2005. Passenger services taken over by Merresor and SJ.
2. Bankrupt in 1997. Passenger services taken over by BK Tåg.
3. BSM Järnväg was acquired by BK Tåg in 2000.
4. Entry through BOT tender (1993-94) of Arlanda Airport Link.
5. Joint venture of Via GTI (now Keolis), Go-Ahead (left May 2000) and BK Tåg (left Jan 2003). Exit expected in June 2006 after loss in tender.
6. Joint venture of BK Tåg, Via GTI and Go-Ahead. Sydvästen went bankrupt in April 2000. Services taken over by SJ (Linx).
7. Joint venture of Tågkompaniet and Danish State Railways (DSB).
8. Joint venture of SJ and Tågkompaniet. Entry expected in June 2006.
9. Entry expected in June 2007.

Subsidy Effects

Data on subsidy reductions caused by the tenders carried out by the CPTAs is somewhat scarce, partly due to difficulties when comparing subsidy levels under different conditions. Currently available examples are listed in Table 4. Typically, there have been subsidy reductions in the magnitude of 20% in the first round of tendering. For the services procured by the state, substantial reductions were accomplished during the first two years of tendering, despite the lack of actual new entry. After that a period of tenders implying stable subsidies followed. When several new firms finally were able to win these tenders in 1999, additional large subsidy reductions (28%) were achieved.

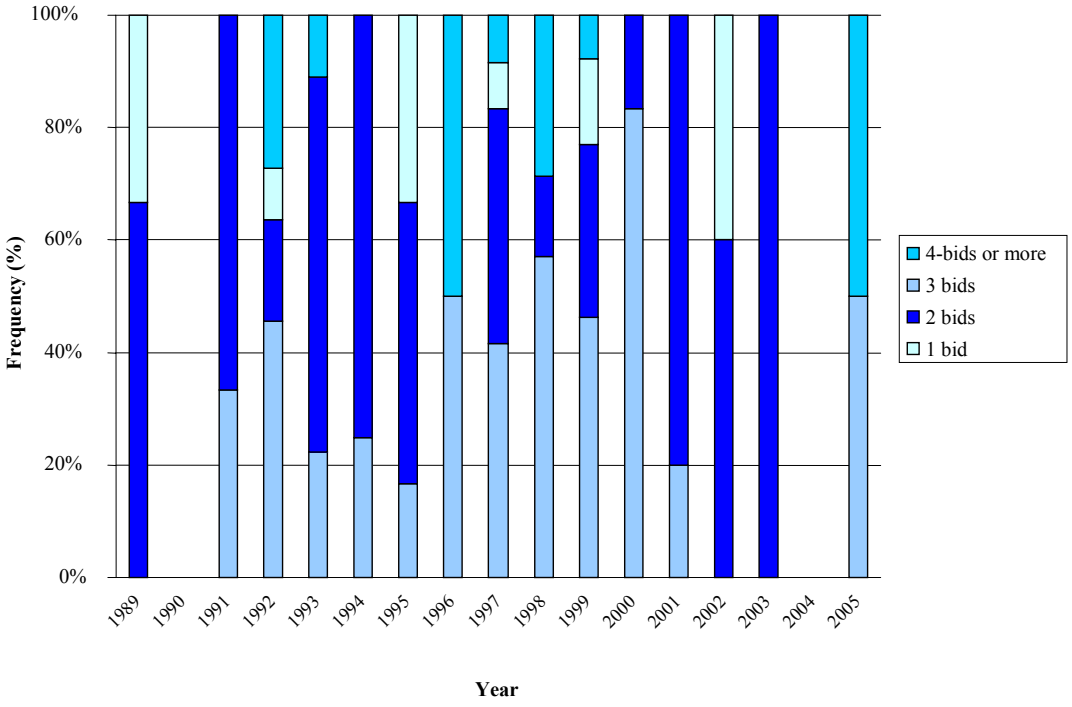
Innovations and Improved Practices

The regulatory reforms of the Swedish railway system have been accompanied by different types of innovations: new and/or improved trains, new ways of organising the work force and new ways of organising the train services. In some cases these innovations and improved practices have been directly linked to the introduction of competitive tendering and new entrants, while other innovations may have occurred anyway.

Table 3. **Timeline of Number of Bids in each Tender**

	Year of tender																
Line	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**00**	**01**	**02**	**03**	**04**	**05**
Lines procured by CPTAs																	
Lidingöbanan				4				1									
Saltsjöbanan				4													
Nockebybanan				4						5							
Roslagsbanan									4					2			
T-bana blå (Subway)					3												
T-bana röd (Subway)						2											
T-bana grön (Subway)							1										
Pendeltågen (Commuter trains)										4							6
Upptåget			1								4						3
Länstågen Småland	3				2				3				2				
Nässjö-Jönköping			2														
Nässjö-Tranås							2										
Österlenaren							2			1							
Malmö-Ystad	2																
Pågatågen (Commuter trains)																	5
Bohusbanan															2		
Viskadalsbanan	2																
Kinnekullebanan					2						2			3			
Västerdalsbanan			2			2		4									
Ludvika-Fagersta-Avesta									1								
Tåg i Bergslagen												1					3
X-tåget											3						
Number of tenders	3	0	3	3	3	2	3	2	3	3	3	1	1	2	1	0	4
Average number of bids	2.3		1.7	4.0	2.3	2.0	1.7	2.5	2.7	3.3	3.0	1.0	2.0	2.5	2.0		4.3
Lines procured by the state																	
Vättertåg				2	2				1		2	2					
Västtåg													2				
Kust-till-Kust				2	2				1		1	1	1				
Mora-Borlänge				3					2								
Bergslagen				1					2		1						
Västerås-Eskilstuna-K-holm				1	2						1						
Östersund-Storlien				1	2	1	3		2	1	1			2			
Norrlandstågen				1	1	2	2		1	1	2	1	2	2			
Mittlinjen							3		2	2	2	1	2				
Uddevalla-Herrrljunga-Västerås				1	1				1		1	1					
Karlstad-Göteborg									2	1	1						
Västkustbanan											3						
Stångådals-och Tjustbanan														3			
Number of tenders	0	0	0	8	6	2	3	0	9	4	10	5	4	3	0	0	0
Average number of bids				1.5	1.7	1.5	2.7		1.6	1.3	1.5	1.2	1.8	2.3			
Number of tenders (total)	3	0	3	11	9	4	6	2	12	7	13	6	5	5	1	0	4
Average number of bids (total)	2.3		1.7	2.2	1.9	1.8	2.2	2.5	1.8	2.1	1.9	1.2	1.8	2.4	2.0		4.3

Figure 2. **Relative Frequency of Different Number of Bidders over Time**



Source: Press releases and additional information from CPTAs, Rikstrafiken and train operators.

BK Tåg, following its entry in 1990, was very active in replacing the railway specific equipment of the rail cars with more standardised bus parts. Perhaps the most important thing was a switch to bus engines, which turned out to be better suited for the Swedish climate, more environmentally friendly and cheaper to use and maintain. New routines and working conditions were also introduced by BK Tåg, making the drivers responsible for fuel refilling and cleaning rather than just driving the trains. These changes may be regarded as minor, but they had nevertheless been considered impossible to implement under SJ's regime. The new working conditions were easier for BK Tåg to implement, partly because the company had a large degree of freedom when choosing its employees when it started up its business. SJ has later been able to replicate several of the good examples.

Tågkompaniet stands out as another innovator among the new entrants. When taking over the night trains to the Northern part of Sweden in 2000, the company implemented a limited overhead organisation, outsourcing everything that was not considered absolutely necessary to keep in-house. The company also innovated in ticket pricing and in developing its own booking system.

The decentralised responsibility of regional passenger rail lines, making them organised by the same authorities as are responsible for public bus services, appears to have brought about better co-ordination of regional train services with bus services. Combined with the high level of ambition among many CPTAs to develop the regional train services, this has probably played an important role in the positive development of travelling.

Table 4. **Examples of Subsidy Effects from Competitive Tenders**

Lines Procured by CPTAs (regional lines)	**Tender No.**	**Year**	**Subsidy Effect**
Network in county of Jönköping etc	1	1989	-21%
	2	1993	-25%
	3	1997	Minor increase
Ystad-Simrishamn	1	1995	-18%
	2	1998	-10%
Herrljunga-Hallsberg	1	1994	-10%
	2	1999	-3%
	3	2002	Minor increase
Borlänge-Malung	1	1991	n.a.
	2	1994	-20%
	3	1996	Minor
Uppsala-Tierp	1	1991	n.a.
	2	1999	-20%
Stockholm, commuter trains	1	1998	-32%
	2	2005	+10%
Lines Procured by the State (interregional lines)	**Tender No.**	**Year**	**Subsidy Effect**
All lines	1-2	1992-93	-21%
	3-6	1994-98	No increase
	7	1999	-28%
Northern trains	7	1999	-20%
	10	2002	-42%

In the past ten years, five new passenger train types have been introduced: the Öresund train, Regina, the Arlanda train, X40 and X60. The most important novelties in the trains for the Öresund Bridge were multiple onboard signalling equipment, capability to operate with the electric current in the Danish and the Swedish networks, and direct in-step in one coach per train-set. The most remarking feature with the regional train Regina is its five seats in-a-row. The new train for the Stockholm-Arlanda airport link (Arlanda Express) has a direct in-step in all coaches from a standard platform and a top speed of more than 200 km/h. This combination of features was completely new when the train was developed in the mid 1990s, following the BOT tender in 1994. X40 is a fast double-decker train for the Mälardalen region that commenced service in 2005. The novelty feature with this train is the two-level configuration. X60 is the new train for the Stockholm commuter services. Its most outstanding design features are the absence of dividing walls and doors between the coaches. Like Arlanda Express, it also has a direct in-step in all coaches.

In conjunction with the corporatisation of SJ and the creation of the separate maintenance company Euromaint, it became evident that maintenance and security check-ups of in particular the X2 trains had been lagging behind in the integrated firm. The new organisation with separate entities facilitated a rapid solution to these safety issues before any fatal accident had occurred.

Assorted Problems

Although the Swedish railway reforms and the introduced system of competitive tendering have had several positive effects, there are also a number of problems to consider, not least for future concern.

Scarcity of bids

We have already mentioned the rather limited number of companies actually competing for tendered contracts. At least three bidding competitors are probably needed to achieve a well-functioning tendering process and workable competition. In the past, only two bidders or even less has been a common situation in Swedish tenders. Moreover, companies like SJ and Tågkompaniet have started to join forces when bidding in some tenders (like the recent second tender of the commuter trains in Stockholm). In 2005, there was an increase in the average number of bidders. It remains uncertain if this marks the beginning of a new trend, especially in view of the fact that most of these tenders concerned large networks that are assumed to attract more international competitors than other tenders.

High and low bids and non-fulfilment of contracts

A recurrent problem has been the non-fulfilment of contracts. In all these cases the railway passengers have been put at a disadvantage by disruption of the services, fewer trains or trains being replaced by buses. Some disruptions occurred when Sydvästen went into bankruptcy in April 2000 following a zero-subsidy bid on the tendered West Coast Line. Citypendeln had enormous problems in early 2000 when taking over the commuter services in Stockholm from SJ. In January 2005, Connex aborted some trains in the railway services to northern Sweden after negotiations with Rikstrafiken. The origin of this reduction of trains was double. Connex made losses due to a too optimistic bid (implying a 42% reduction in subsidies) and Rikstrafiken needed to cut back on the subsidies after some very costly tenders for airline passenger services.[12] All in all one out of three daily trains were disbanded and a substantial part of the interior of Sweden lost a direct train to northern Sweden. Turmoil also occurred in the wake of BK Tåg's bankruptcy in March 2005. The interregional network in eastern Småland was revamped and one railway line was replaced by buses.

Both big and small firms have placed unreasonably low bids that have resulted in economic problems for the firms. The rationale for low and even predatory bids has been described in more detail in a previous paper.[13] We have also noted the occurrence of some inexplicable *high* bids that have been up to two or three times higher than the winning bid. An overview of the spread between different bids (in tenders with at least two bidders) is presented in Figure 3. Early findings indicate that large firms have been more likely than smaller firms to place either very low or very high bids in Swedish tenders.[14] From a socio-economic point of view a winning high bid would result in much greater economic losses than a winning low bid. If a high bid wins there is a direct transfer of economic resources to the winning firm. In case of a low bid the winning firm takes the greatest losses and passengers and society at large may lose if the contract is abandoned or badly managed. Even if a very high bid is less likely to actually win a tender, it may nevertheless influence the position of other bids, since they are typically evaluated by means of being compared to one another.[15] Firms may therefore start to make use of this strategically. Rikstrafiken has recognised this as a potential problem in future tenders.[16]

In principle, exit or bankruptcy are the only possible options for a firm from a loss-creating contract. This has clearly occurred on two occasions in Sweden – Sydvästen in the year 2000 and BK Tåg in 2005. SJ tried to abandon a loss making contract in Bergslagen but had to stick to it for the

whole contract period. After having placed several too optimistic bids SJ came close to bankruptcy in 2002-2003, and was saved mainly because the state stepped in with additional capital.

SJ's monopolistic behaviour

SJ was able to keep a market share of more than 90% in the passenger railway market during the first decade after competitive tendering was introduced in 1989. In the tenders of 1998-99 (taking effect in January 2000) the company lost two important contracts: the commuter trains in Stockholm and the night trains to northern Sweden. Repeatedly, SJ has tried to protect its market share with aggressive strategic behaviour. In the year 2000, SJ was sentenced to a fine and paid substantial damages to BK Tåg after losing a court case against the Swedish Competition Authority. The case concerned a tender in 1993 for regional railway services in the counties of Jönköping and Halland (in the southern part of Sweden) – a tender won by SJ in competition with the incumbent operator BK Tåg. The court found that SJ was guilty of abusing its dominant position by means of under-pricing its services.[17] The court focused on the intent behind the pricing practice and the relation between price and costs. SJ's behaviour was considered to entail such a risk of deterioration of future competition that SJ later would have been able to recoup the financial losses caused by the bid. Another example of strategic behaviour is the unwillingness of SJ to co-ordinate its ticket booking system with the timetables and tickets of other operators' services. This has produced a lot of problems for passengers wanting to buy through tickets from one destination to another destination when the railway service is divided between SJ and another operator. A third example is that SJ, after BK Tåg won the tender of Stångådalsbanan in 2002, changed its train plan in such a way that the interregional trains operated by BK Tåg got inferior connections to the rest of the interregional network compared to when SJ operated these trains. Finally, SJ has strategically used its exclusive right to influence what interregional lines that are tendered, by claiming that lines that previously had been said to need subsidies (and therefore should be tendered) were again possible to run commercially by SJ. This was one reason behind the exit of Sydvästen from the West Coast Line in the year 2000.

For several reasons, there is a risk that innovative development and efficient use of the rolling stock is hampered in today's passenger services. The remains of the business administration SJ, now called ASJ, controls most of the rolling stock of the interregional lines. This rolling stock is affected by old long-term leasing agreements. Rikstrafiken is currently forced to hire this rolling stock on the tendered interregional lines, even in the case that they are not used by the operating contractors.

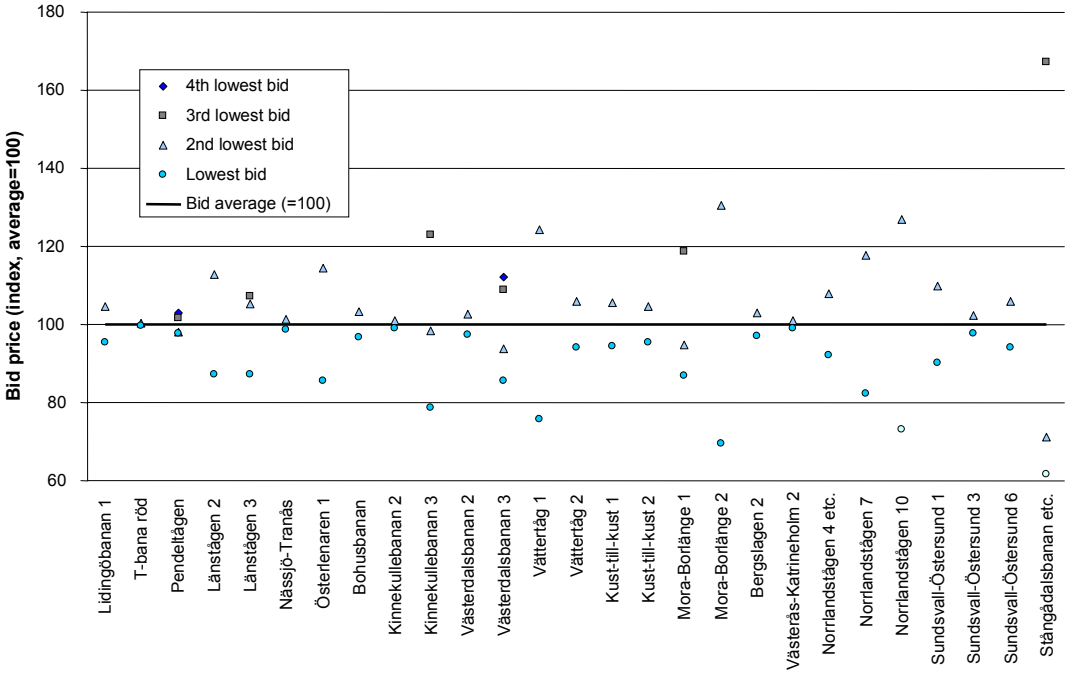
In recent years, the state has directed substantial grants to CPTAs that invest in new rolling stock. Although this is to some extent positive, it may also limit the resources spent on upgrading and modernising existing rolling stock that could be very useful for several years to come.

Commercial versus subsidised services

An important component of the process of regulatory reforms in the Swedish railway sector has been the expansion of the CPTAs' traffic rights, saving lines from closure and making new traffic solutions possible. However, the on-going trend to co-ordinate the services of several CPTAs and run subsidised public train services in larger and larger areas may ultimately be a hindrance to alternative commercial services and the implementation of a deregulated market as intended in the third railway package.

There is also a risk that recent investments in new lines only lead to a costly expansion of the subsidised network. Large-scale infrastructure projects like the new Botnia Link have been initiated without any guarantee that any passenger train operator will actually be able and willing to run commercial services on these new lines in the future.

Figure 3. **Spread of Bids (compared to bid average) in Swedish Passenger Rail Tenders 1992-2003**



Source: Press releases and additional information from CPTAs, Rikstrafiken and train operators.

Regardless if and when SJ's exclusive right to run commercial services is eliminated, we need to discuss the future interface between commercial and subsidised lines and which of these that should take precedence. A similar issue has become apparent in the domestic airline services. Rikstrafiken has performed several tenders to secure airlines services in the northern part of Sweden. In a recent case, one company that failed to win such a tender, decided to start a competing commercial line on the very same route. This line was then ruled to take precedence, hindering the company of the winning bid to start its services. After only six weeks, the commercial services were discontinued and Rikstrafiken had to perform a new tender at very short notice.[18]

Some Other Aspects of Swedish Railways Development

The regulatory reforms and the introduction of competitive tendering of passenger rail services in the Swedish rail sector coincide with some other important trends in the sector, which we will touch upon briefly here.

First and foremost, the past 15 years have seen an important shift towards major investments in new and renewed infrastructure in a way that seemed impossible before the vertical separation of operations from rail infrastructure. The state has gone from spending 1 billion SEK annually on infrastructure investments in 1990 to about 3 billion SEK annually during the recession of the early 1990s, and now seems set to invest approximately 10 billion SEK per year in the years to come.

Looking at the development of passenger train transportation since 1995, it is clear that no other mode has experienced a stronger growth in terms of passenger kilometres (Table 5). Behind this increase of 32%, we find that the growth in short-distance regional transportation has been particularly

strong (up more than 70%), while long-distance travelling (more than 100 km) increased by 15% (see also Figure 4).

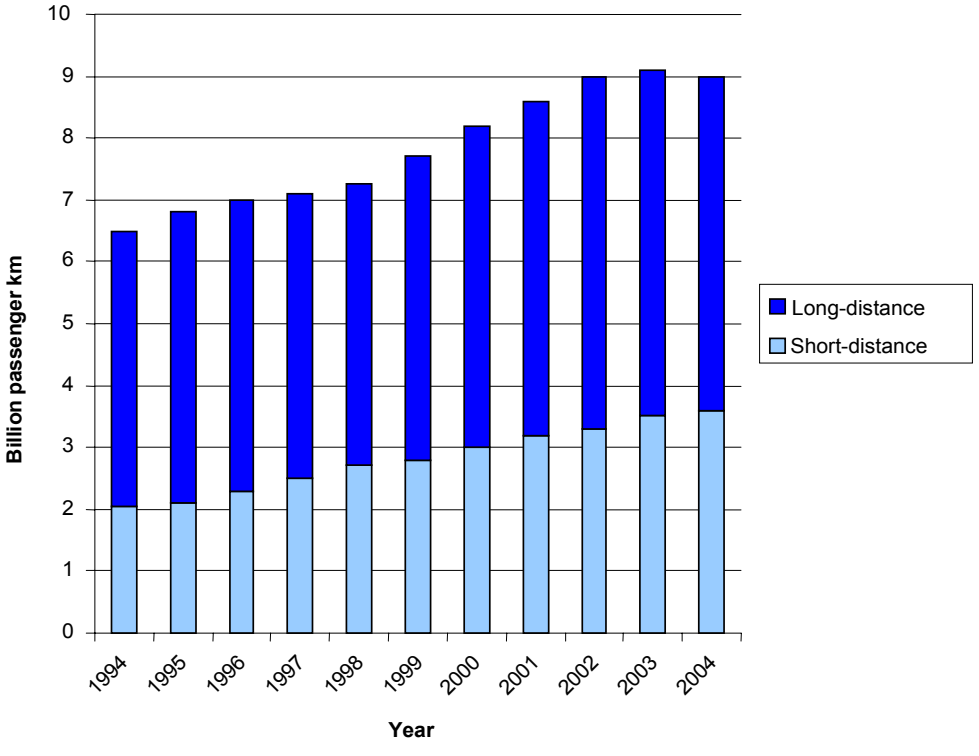
Table 5. **Development of different modes of transportation 1995-2004**

Mode of transportation	Passenger transportation in 2004 (billion passenger km)	Change since 1995	Shares in 2004	Change since 1995 (% age points)
Car	97	+11%	77%	+/-0
Train	9	+32%	7%	+1
Bus	8.9	-8%	7%	-1
Other *	10.4	+10%	9%	+/-0
All modes	**125.3**	**+10%**	**100%**	

* Other modes include subway, domestic airline, walking, bicycling etc.

Source: SIKA (2005)

Figure 4. **Development of Swedish Passenger Rail Transportation 1994-2004**



Source: Banverket (2005b).

Banverket has investigated the development of ticket prices during the period of 1988-2003 (Table 6).[19] From this table it is evident that prices have increased substantially more than the Consumer Price Index. Some of this increase may be explained by the introduction of VAT, but more important is the introduction of a more differentiated price structure as the X2000 high speed trains replaced many cheaper InterCity trains. For the regional services, it seems as if the CPTAs have rather increased ticket prices than the level of subsidisation through taxes. Although the prices have increased, it may also be argued that passengers are getting improved services. In view of how travelling by train has developed (as presented above), it appears as if people have actually been willing to pay for this. However, the relative cost of using other modes of transportation may also be an explaining factor.

Table 6. **Development of Ticket Prices 1988-2003**

	Change 1988-2003
Ticket prices (current prices)	+125%
Consumer Price Index	+57%
Ticket prices (adjusted for inflation)	+43%
Value Added Tax (VAT)*	+6%
Price excluding VAT (operator revenue)	+35%
Ticket price adj for inflation: *X2000*	+53%
Ticket price adj for inflation: *regional trains*	+59%
Ticket price adj for inflation: *InterCity/night trains*	+24%

* VAT on travelling changed several times during the period. Before 1991 it was 0%. In 1991 it was introduced at 25%, to be lowered to 18% in 1992 and 12% in 1993 (after a temporary rise to 21%). Since 1999 it has been stable at 6%.

Source: Banverket (2005b).

Conclusions

The Swedish rail reforms have been implemented in a step-wise incremental process, but they have hardly followed a rational strategic plan (as in the case of Great Britain's privatisation of British Rail). Rather, one reform has lead to another, sometimes in a path dependent pattern. The driving forces of the development have been SJ's recurrent problems, coupled with political objectives to save the railways, improve sector efficiency, increase travelling and transfer freight transportation from the roads to the railways.

Initially, the reforms were not motivated by any clear intentions to introduce competition or increasing the involvement of private actors, neither national nor international. However, vertical separation of infrastructure from operations, coupled with decentralisation of the responsibility for the regional passenger lines, led to early tests of competitive tendering. Since then, this practice has come to dominate the subsidised passenger services. The development of competitive tendering over time has been a learning process for both the procuring entities and the bidding operators. Especially in the case of the state's tenders, there has been a development from tenders characterised by post-bid negotiations to a more strict and transparent process where the evaluation of weighted multiple criteria is used to select the winning bids.

The very short-term contracts have been replaced by medium-term contracts. Both in Sweden and internationally, the optimal contract period has been a debated topic. The previous short-term contracts had obvious disadvantages, lacking attractiveness for entrants and impeding bidders to make costly commitments. Long-term contracts (ten years or more), is a way to solve this, but at the risk of costly renegotiations and difficulties to make adaptations towards the end of the contract. It is plausible that the use of medium-term contracts instead has allowed all the actors in the system to learn from earlier tenders and from former operators' experiences with running the services, while providing enough incentives for bidders to make commitments.

The competitive tenders have resulted in significant reductions in the public subsidies to the railway passenger services. In several cases the first round of tendering produced savings of 20-30%. We have also seen innovations in rolling stock, management, and ticket systems, some of which may be directly related to the introduction of tendering and new firms entering the market. Although the direct subsidies to cover operating deficits have decreased, it is important to note that the total subsidisation of the sector has increased, due to the ambitions and efforts to improve and renew the railway infrastructure.

A recurrent problem in the tenders has been that only a few firms have competed for the contracts. In the early days of the deregulation process the former monopolist SJ met competition from Swedish entrepreneurial firms. Later on, from 1998 and onwards, major international firms entered the Swedish market and won some important contracts. Over time, several different firms have participated in the competitive tenders, but not even the new entries have resulted in a general increase of bidders in the average tender (although the results of the tenders of 2005 may be promising). The CPTAs' tenders have attracted on average between two and three firms while the corresponding figures for the state's tenders is one to two firms.

A couple of problems and issues have disturbed the competitive tendering and the functioning of the market. Very low and even predatory bids have sometimes appeared. Unrealistic bids made by small firms have forced them into bankruptcy. Deep pockets or other types of financial resources are unevenly distributed in the market, giving an advantage to large firms in the case of unrealistic low bids. The fact that some companies have actually been forced (and allowed) to go into bankruptcy in Sweden, rather than reaching agreements on additional subsidies, may function as a signal to future bidders to be more careful with their bids.

The former monopolist SJ has on many occasions been given a preferential treatment by political Swedish entities, one recent example being the input of 1.8 billion SEK in 2003 in order to avoid bankruptcy. After more than fifteen years of deregulations SJ also continues to play a very important role. The company still dominates the interregional passenger train services and is able to influence other players through strategic actions – for example time tables, access to its ticketing system and its relations to the state. There seems to be a need for a developed regulatory structure that ensures that SJ's powers are not used to push its competitors out of the market and seeks to avoid unnecessary losses of network effects.

NOTES

1. This section draws from Alexandersson et al (2000), Alexandersson (2002), Nilsson (1995) and Van de Velde (1999).

2. See Alexandersson, Hultén & Fölster (1998).

3. See for example SOU 2003:104.

4. Proposition 2002/03:86.

5. SFS 2004:519 and SFS 2004:526.

6. Banverket (2004).

7. Banverket (2005a).

8. Trafik Forum (2006).

9. Banverket (2005b).

10. Banverket (2005b).

11. There is one exception to SJ's monopoly on profitable railway services: the Arlanda Airport Link is run by a private company (A-Train), in accordance with an agreement closed in a special BOT tender in 1994.

12. One reason behind Connex' problems was that demand had not developed as expected – instead of increasing it had dropped 15-20%, partly because of more intense competition from low-cost airline services.

13. See Alexandersson & Hultén (2006).

14. A more detailed discussion on this subject may be found in Alexandersson & Hultén (2004).

15. See for example Konkurrensverket (2004) for a more thorough discussion on this subject.

16. According to interview with Staffan Widlert (2005).

17. Marknadsdomstolen (2000).

18. Mora Tidning (2005), Rikstrafiken (2005).

19. The data on ticket prices used to compile this table was selected to reflect the typical prices paid by most consumers using a particular type of train.

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7. CENTRAL AND EASTERN EUROPE: A SPECIAL SITUATION

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SUMMARY

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CER brings together 49 railway and infrastructure companies from all EU states, Switzerland, Norway, the EU accession states, and states on a road-map towards EU membership. It provides advice on all issues relating to the EU and its laws.

The CER works on all political questions relevant to the railway business (in close co-operation on technical issues with the International Union of Railways (UIC) in Paris). It provides information and advice to political decision makers in Brussels.

Legal Framework for Public Service Transport in EU

The European Commission in the Third railway package proposes further liberalisation of the rail passenger market. Furthermore EC proposes to revise Regulation 1191/69, which was historically adopted with a view to secure proper compensation for public service obligations. CER demands in its position paper *'Public service Transport by rail and road: a new legal framework'*[1] special attention for:

- Scope of application of the proposed regulation i.e. synchronisation with third railway package, definition of regional and public service transport.
- Securing proper compensation of Public service obligations.
- Duration of Public Service Contracts.

On these issues the situations in the new EU Member States and EU-15 countries are significantly different.

Situation in Central and Eastern Europe

The Chief Executive Officers (CEOs) of the CER members in Central and Eastern Europe demanded urgent attention for their loss-making passenger services in November 2003. This led to a series of special CER activities on passenger rail services in this region:

- 28-30 April 2004: EC/UIC/CER/UN-ECE conference on regional passenger services, Paris.
- 25 June 2004: The problem of cross subsidisation of passenger services discussed in meeting with F. Lamoureux, Director General Transport & Energy.
- 27 January 2005: High level EC/CER Conference on public passenger rail transport services in an enlarged EU.
- November 2005: 'CER overview of Public Service Rail Transport in the EU'.[2]

The CER overview on the current situation as regards rail passenger services in the new EU Member States shows that in these countries payments by the state for compensation of losses on public service obligations are still paid in the form of annual subsidies. Moreover, not the level of services rendered, but the budgetary situation of the state is in most cases determining the level of payment. The latter is emphasised by the practice of negotiating payments under the annual Public Service Contract in the course of the ongoing contract year. This means effectively that the operators have hardly any possibility to adjust the service proposition to the level of payment received under the Public Service Contract.

Summary of '*CER Overview of Public Service Rail Transport in the EU*' on Current Situation in new EU Member States

CER Overview, November 2005	CZ	EE	HU	LV	LT	PL	SK	SI
Is there a PSC for passenger services?	√	√	√	√	?	√	√	√
Is proper compensation for public service obligations secured?	X	?	X	X	X	X	X	X
Is the PSC longer then 1 year?	X	X	X	X	X	X	X	X

The conclusion to be drawn from the CER overview is that cross subsidy of passenger services with revenues from freight operations prevails in Central and Eastern Europe. But these cross subsidies of passenger services with revenues from freight operations must stop, because:

- The freight sector will be fully liberalised in the entire EU 12 months. New entrant railway undertakings will compete with the incumbent national railway companies on freight operations. For obvious reasons the new entrants will not embark on loss making passenger operations, so that only the incumbent railway companies lose a significant share of their revenues from freight on obligatory passenger services. This undermines the competitive position of the incumbent railway companies.
- Regulation 1191/69 obliges EU Member States to compensate losses from public service obligations.
- Directive 91/440 (Article 9) obliges EU Member States to provide a sound financial basis to the rail sector.

What is needed in Central and Eastern Europe?

Public Service Contracts (whether negotiated through competitive tendering or not) require that service propositions are defined and that matching budgets are available, but:

- How much is the cost of a product/service proposition?
- How much budget is there for a product/service proposition?

Authorities when taking decisions on payments for public services and multi-year Public Service Contracts must also take decisions the features of the service propositions demanded from the transport operators. These decisions require that the authorities know which budget is available in the forthcoming years, which services are required by the inhabitants of their region, and what it costs approximately to produce these services (in a cost-effective) manner. Only with this knowledge can authorities be expected to decide on best-value-for-budget service propositions. Whilst not secure on the services needed, not certain on cost-effectiveness of services and not certain on availability of budgets, authorities are reluctant to negotiate multi-year contracts, which impose long term financial obligations.

On the other side the railway operators need to invest in their operations and in rolling stock, but will do so only with a long term expectation of sufficient revenues.

This means that authorities and railway operators are in a sort of vicious circle. Authorities will not negotiate multi-year contracts, because the product needed is not defined (or budget is inadequate). Railway undertakings will not invest in the product, as long as they do not have a viable multi-year Public Service Contract. *Meanwhile services are inefficient and unattractive, while rolling stock is at the end of its technical lifetime.*

In some new EU Member States it can be witnessed that authorities and railway undertakings are gradually reaching a balance in the service proposition and level of payments for public services. However, still the (less then) one year contract durations prohibit the railway companies to invest in their operations[3]. It is remarkable that Latvia is the first new EU Member State where for the first time a multi-year Public Service Contract has been successfully negotiated. In this case the Government allocated € 15 million from the European Fund for Regional Development for modernisation of rolling stock.

Authorities and railway undertakings need to negotiate multi-year Public Service Contracts with detailed service propositions and a matching level of payment. The uncertainties on budget availability, operational costs and customer demands, a history of cross-subsidisation and a vast investment backlog make these negotiations into major challenge.

CER Position

When negotiating Public Service Contracts and transferring responsibilities from the public to the private sector, it is required that the best value-for-public-budget is obtained and the appropriate private partner is selected. Competitive tenders could be instrumental in negotiating Public Service Contracts when:

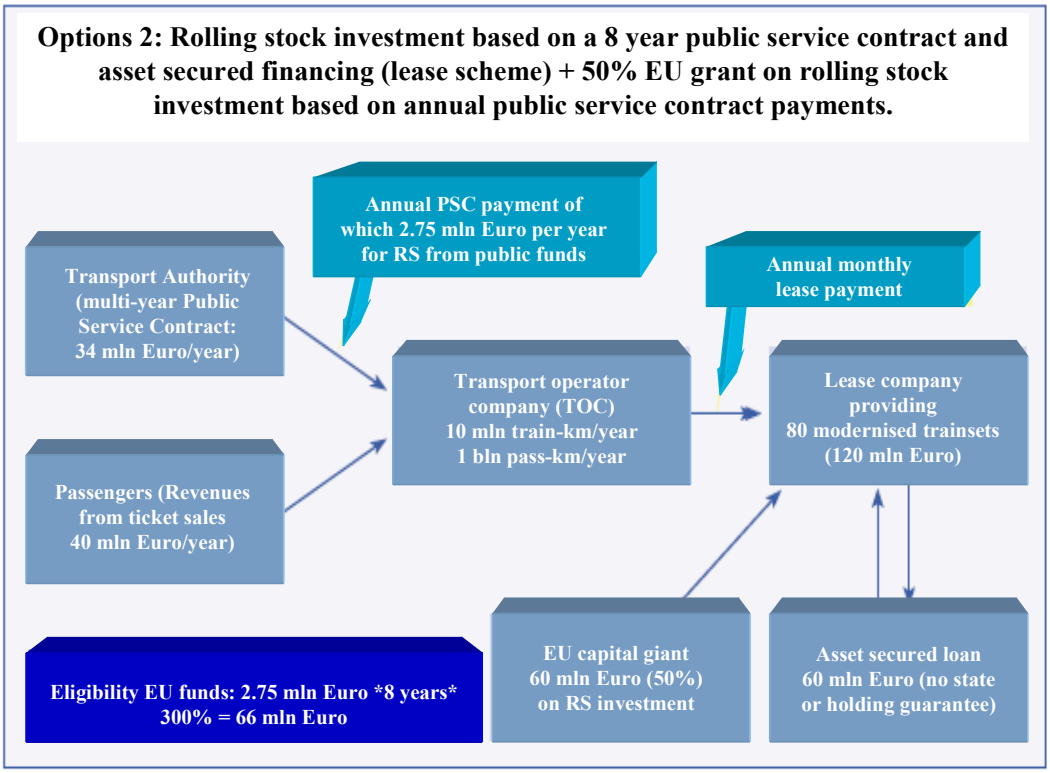
- Various potential bidders are able and interested to offer the services, but as yet in most new EU Member States there is only 1 national company obliged to provide services at the expense of freight operations.
- Authorities know what they want and what they can afford, but as yet costs, budgets and service levels are not clear in Central and Eastern Europe.
- A rolling stock market or financing scheme bridges the gap between the duration of the Public Service Contract and the technical lifetime of the rolling stock, *but as yet the poor condition of rolling stock is likely to cause collapse of the system.*

The above shows that as yet it is too early for competitive tendering in the new EU Member States. Therefore Public Service Contracts will in the next years need to be negotiated with the incumbent operators or possibly in some exceptional cases with pre-qualified new entrants.

Rolling stock investments play a crucial role in the negotiations on Public Service Contracts. For financing rolling stock without sovereign guarantees the cash flow expected from the Public Service Contract must provide sufficient security for the private investor. However, even when the states duly compensate public service obligations, the duration of Public Service Contracts will for the time being be too short to offer sufficient security[4]. Under these conditions asset-secured financing (or lease) schemes can offer additional security to private investors. Such schemes present a solution for bridging the gap between the duration of the Public Service Contract and the technical lifetime of the rolling stock and thus make it feasible to attract private funds to the rail sector of the new EU Member States.

For facilitating the negotiations between authorities and railway operators on Public Service Contracts and for breaking the vicious circle, which hinders investment in passenger services in the new EU Member States, CER recommends that the European Commission uses a *'stick- and-carrot'* approach. In this approach EU should support investments in passenger rolling stock in the new Member States under the condition of a viable multi year Public Service Contract. Meanwhile EC should continue to enforce and verify compliance with relevant EU legislation on (compensation for) public service obligations. The EU investment support should have a transitional character and promote the establishment of schemes for financing rolling stock with private funds.

The CER position paper *'Developing coherent rail services in Central and Eastern Europe; making use of the EU's Cohesion and Structural Funds'* presents an example of EU support for investment in rolling stock and the establishment of a lease scheme.



Source: CER.

NOTES

1. *'Public service Transport by rail and road: a new legal framework'* November 2005, see www.cer.be
2. *CER overview of Public Service Rail Transport in the EU,* November 2005, see www.cer.be
3. In such situation the railway companies would be able to invest in rolling stock with sovereign guarantees on the financing as was done traditionally. This implies that the public sector provides all the financing and bears all the risks, while it does not give maximum incentives to the operator for enhancing cost-effectiveness.
4. Even in fully liberalised markets (e.g. U.K.), the duration of the Public Service Contracts are usually shorter then the technical lifetime of the rolling stock.

8. CONCLUSIONS: COMPETITIVE TENDERING IN RAILWAYS – WHAT CAN WE LEARN FROM EXPERIENCE?

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SUMMARY

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The role of **ownership** in railways is highly contentious. Railways, just like any other mode in the transport sector, are simply a collection of assets, operated by a group of people, delivering a service that is itself a derived demand. The question of who **owns** and **manages** what, though, has found very different answers in different countries and circumstances: in fact, the answer in any single country has often been unstable, seesawing back and forth depending on circumstance and political fashion.

There are very few agreed "facts" in the field of railway ownership and structure. There is usually disagreement within a country on whether there really is a railway "problem" and what it might be. It is difficult to agree on what to do about a problem (if there is one) that has many diagnoses. The public's understanding and expectations are often influenced as much by political posture as by informed judgment. Most important, in assessing what will "work" (or has worked), is finding an answer to the question "**compared to what**?" If those involved can not agree on what the problem is, on what the appropriate solution might be, on what to expect, or on how to evaluate the outcome, it should come as no surprise that the field is a paradise for economists and politicians (not to speak of consultants).

The objective of this paper is to summarize a series of country-based papers dealing with experience gained, and lessons learned, with rail passenger franchising in Australia and the U.K. (Peter Kain), Germany (Andreas Brenck and Benedikt Peter), The Netherlands (Hans van Dijk), Sweden (Gunnar Alexandersson and Staffan Hultén) and the U.K. (Chris Nash and Andrew Smith). These interesting and unusually penetrating papers and discussions were presented at an ECMT workshop in Paris in January 2006. Where appropriate, the results of broader experience with rail concessioning worldwide have been added.

Because this is a summary paper, covering disparate (often conflicting) facts, ideas and opinions, it is inevitable that some of the nuances presented have been glossed over. Responsibility for errors in interpretation and opinion is, of course, mine. In any event, the focus of this paper is not to argue about individual opinions, but to draw common lessons even, or maybe especially, where differences of opinion remain.

1. Introduction

For a full century, from 1830 to 1930, railways were the dominant technology in passenger and freight transport. During this era, railways prospered partly from the emphasis in most economies on production of heavy tonnages of basic commodities, and partly from their effective monopoly position in most freight and long distance passenger transport and urban short distance passenger transport. Since the 1930s (though partly postponed by the impact of World War II), rail's dominant transport role has increasingly been eroded by autos, buses and airlines in the passenger market, and by trucks, pipelines and water transport in the freight market. The improvements in competing transport technologies have been amplified by the shift in developed economies toward more sophisticated products and toward services, all of which demand faster and higher quality transport.

To a degree that differs across countries or regions, the public policy response to the emergence of new transport technologies after WW II has not always been supportive of railways. Financial support to transport in some countries (the U.S. is a particularly clear example) has been biased in favour of highways, especially heavy trucks, and water transport.[1] Many countries, even if they broadly supported railways, used the railway system as a repository of unproductive labour and/or as a way of supporting specific shippers or areas through imposed cross-subsidies.

Regulation in the U.S. (the Interstate Commerce Commission (ICC) now the Surface Transportation Board (STB) was rooted in a 19th century image of railways as monopolists. The decisions of the ICC were often politically popular but economically perverse, frequently preventing railways from offering a package of tariffs, service quality and guaranteed shipment quantity that would permit them to compete more effectively with trucks. The ICC also forced rail tariffs up when they were seen to be "too competitive" with barges, and it hindered mergers among the larger (Class I) U.S. railways, preventing them from developing efficiencies in increased length of haul and single-line service to customers. The European experience, where national political pressures kept national boundary effects in place for railways far after they had abated for highways, is an equally damaging example of government interference.

While technology, public promotional policy and regulation do tend to intersect in the question of ownership, there is simply nothing about railways that necessarily mandates a particular outcome. The prevailing post-war European railway model was one of monolithic public ownership and operation,[2] and there have been a number of effectively operated railways. China and Russia operated very large and efficient, publicly owned and monolithic railways. This said, the most efficient **freight** railways in the world (the U.S. and Canada) are privately owned, though they are also hosts to two of the largest infrastructure-separated, but publicly owned, passenger rail companies, Amtrak (40 000 km – Amtrak actually owns only 700 km of line between Washington, DC and Boston, MA) and VIA (12 500 km). Similarly, three of the world's larger and more efficient **passenger** rail systems (East, Central and West Japan rail companies) are privately owned and operated but are hosts to a publicly owned rail freight company (Japan Rail Freight Company) on the meter gauge parts of their systems. Latin American railways were wholly publicly owned and operated at the outset of the 1990s: by the end of the decade private concessionaires operated most passenger and freight services.

Two important points deserve emphasis for this discussion. First, after a long period of fixation in place due to outdated policies and perceptions, the ice has broken. Structural change may be painful and offer an uncertain outcome, but the European Commission is rightly determined that change will at least be **possible**. The commitment to change by the Commission parallels experience in a number of other countries. Second, as discussed in detail in the conference papers, there are **alternatives**, both for structure and ownership. The choice of alternative, and the method for implementing it, is not simple, but it is not impossibly daunting, either. Rightly, then, the focus can shift from "whether" to "how."

1.1. The First Issue: "If it ain't broke, don't fix it."

The most important single issue to address in railway restructuring is to reach an acceptable definition of what the **objectives** for change are: that is, what is wrong with the current railway? There are a large number of reasons for change that governments have defined, as the conference papers show. For example:

- The railway has been under-funded for years and its operating losses are too high for the state budget to afford.[3] Something must be done or the railway will simply fade away (painfully). This was the basic premise of the European Commission's 1996 White Paper and was the explicit rationale for the government of Argentina's intervention when the old state railway collapsed. The old British Railways (BR) had been restructured a number of times, beginning in 1963, without lasting success (Thompson 2004 pp. 1-3). Alexandersson and Hultén (p. 167)[4] refer to "the recurrent financial difficulties of the Swedish State Railways (SJ)," a problem that was mirrored closely in Germany (Brenck and Peter p. 142).[5]

- Structural change, especially separation of infrastructure from operations, can make it possible to introduce competition **in** the market (freight) and **for** the market (passenger franchises). Competition **in** the market was, of course, the explicit objective of the Commission Directive 91-440. Interestingly, the significance of infrastructure separation in fostering competition for the markets was not fully recognized at the time of the issuance of Directive 91-440.

- Competition in and for the market will enhance railway efficiency and the efficiency of the overall transport sector, and was an explicit objective in all the countries examined (see, e.g. Alexandersson and Hultén p. 168, or Nash and Smith p. 9).

- Structural change, specifically introduction of private management, could reduce the call on the budget, and/or it could produce income for the budget. In practice, there is a wide spectrum of private involvement along the path from public ownership and operation to purely private ownership and management (see Box on The Spectrum of Private Sector Involvement). Joint public-private ventures are often called Public Private Partnerships (PPPs), a poorly defined term. (See the Box on "PPPs: What Does the Term Really Signify?").

- The private operator might do a better job of defining markets and serving customers, as discussed in Nash and Smith (p. 27).

- Structural change can also assist in decentralization from national to regional or local government. This was an explicit objective in Germany (Brenck and Peter p. 141), Sweden (Alexandersson and Hultén p. 167) and the Netherlands (van Dijk p. 129). This may be true even though the decentralized railway may have to sacrifice something in system benefits.

- If costs can be reduced and efficiency improved through better cost control and improved customer attention, then more social services can be produced for the same public expenditure. See, e.g., van Dijk p. 131.

- Governmental authorities often find it easier to regulate the private sector than the public sector, so environmental protection, for example, may well be better under a regulated private operator.

- Structural change, including introduction of a private role, can more clearly ring fence and target public funding to specific purposes (and keep it out of prohibited areas).

- Incorporating the private sector can (it is hoped) transfer "risks" from the government to the private sector.

The Spectrum of Private Sector Involvement

Though the conference was about "franchising," it will be useful both to define "franchising" and to put it into context. In fact, "franchising" lies somewhere in the middle of the range of private involvement possibilities:

- Public ownership and management in a government Ministry.
- Public ownership and management with policy and funding control in a Ministry, and the management provided by a government "enterprise." Commencing in the 1970s, the relationship between Ministry and enterprise was sometimes expressed in the form of a more or less explicit contract (often called a "Contract Plan").
- Contracting out of limited functions (e.g. cleaning or food).
- Management Contracts – private management takes the cost risk of a totally specified service in lieu of Government management.
- Gross-cost Franchises – the franchisee accepts the cost risk of a service while the franchiser specifies the services and takes pricing, demand and revenue risks.
- Net-cost Franchises (or concessions) – the franchisee takes a share of demand and revenue risk along with cost risks, and is compensated for net support needed. Government risk is limited to a specified share of demand risk along with risks (relationships with other actors in the sector, policy change, etc) that the franchisee is unable to assume. Government usually makes most pricing decisions and retains a significant role in service specification.
- "Commercial" Franchises (or concessions) – the franchisee assumes most demand, revenue and costs risks, and operates essentially as a private owner for the term of the agreement. The Franchisee (or concessionaire) acquires much more pricing authority.
- Partial Privatization" – asset ownership and most risks are transferred to the private owners, but Government retains an ownership share, thus keeping a voice in management and, in effect, retaining a share of risk.
- Full Privatization, but with significant regulation – Government retains a voice in decisions (such as pricing or entry) in significant areas of activity.
- Complete Privatization without regulation (except for health and safety).

"Franchise" and "Concession" do not have clear meanings. In some cases, such as a brand franchise (McDonalds), the usage of "franchise" is generally accepted. In other cases (the Argentine rail passenger concessions as compared with the rail passenger franchises in Sweden), the distinction may be arbitrary. To the extent that a difference exists, it probably hinges on the degree of revenue risk that the franchisee accepts. Kain argues, for example, that a "gross-cost franchise" is not a true franchise, but is rather a form of management contract (Kain p. 59). If so, then the terms "franchise" or "concession" should be limited to "net-cost" or commercial arrangements.

Franchising or concessioning are only used when full public ownership and provision is not tenable because of poor quality, inefficiency, or political interference under public control while, at the same time, privatization is not acceptable for political or economic reasons. Mere "corporatization" of a public agency – creating a publicly owned "corporation" and organizing it along lines of business – does not constitute management contracting, franchising or privatization: these only occur when a privately owned and managed company is involved.

PPPs: What does the Term Really Signify?

The term "Public Private Partnership" (PPP) can be ambiguous. In this paper, it will be taken to mean that the private role is something more than a mere supplier: that is, the private "partner" will be expected to make meaningful financial, marketing, operational and policy contributions to the success of the venture. By this definition, out-sourcing is not a PPP, and neither would be total or full privatization.

It is worth emphasizing the word "**partnership**," because the significance is often lost in academic or public sector discussions. In this context, a partner is a co-venturer to be respected and understood, not a party to be exploited in an attempt to cleverly shuffle off a burden. Respect and understanding can be improved by several observations:

- The private partner will be driven by **financial** objectives whereas the public partner will be (in principle, at least) driven by **economic** and **social** objectives. This means that, in general, the private partner will seek higher rates of return and will, as a result, be more focused on the short term. It also means that the private partner will not inherently be driven to reach admirable political and social objectives such as economic development, access for the poor, reduction of pollution and congestion, nor will the private partner be as comfortable with vague or conflicting objectives as the public partner is constrained to be. *In fact, the overarching challenge of PPPs is designing the relationship so that, through direct or bonus/malus incentives (shadow tolls, subsidies, taxes, penalties) the objectives of the two parties are reasonably defined and adequately aligned.*

- Neither party has a convincing claim to the high ground in intelligence or sincerity of motivation. At the operational level, this means that attempts by either partner to out maneuver the other by clever design or wording of contracts are likely to fail: at a deeper level, it means that partnerships work better when the partners can rely on each other, not resolve issues by conflict. In particular, it is helpful if the public authorities remember that wariness about public sector failure or abuse is as important for private partners as private failures are for the public partner: both have good reasons to be wary.

- The two points above come together in a particularly forceful way in the assessment of risks. The private partner will be wary of financial risks because a mistake can be painful and immediate: risks are only acceptable if they can be covered (through insurance) or if the expected benefits are much greater than the potential costs **and** the adverse risks are within the resources of the company to absorb. It is true that the public partner may be more willing or able to undertake certain risks than the private partner because the possible economic and social benefits may outweigh financial losses, or because the public partner has much larger resources to bear the risk. It also may be true that the private partner may simply be better at calculating the real risks than the public partner. True partners try hard to reach a fair balance in all things, including risk.

It is not necessary to argue that all of these potential objectives are valid in all situations: that should be a matter for careful analysis in each case. Unfortunately, countries have often neglected to comb through the list to define and prioritize and review the consistency of their objectives in advance. In part, this is a result of the complexity of the issue and a lack of detailed experience with defining and managing change (especially franchising and privatization) in the rail sector: the BR

privatization, in particular, was ahead of experience elsewhere in Europe (though there was experience from Japan and Argentina that was not fully appreciated at the time in the U.K.). Typically, though, the political process blurs the issues since railway reform is inherently a political challenge and it is difficult to form a coalition where all members agree on all objectives and priorities. Unfortunately, if the objectives are unclear, or (as is more common) at least partly inconsistent or even conflicting, it is much more difficult to formulate a "workable" plan of action *ex ante* or to agree, *a posteriori*, whether the plan was "successful".

I would like to emphasize this point again: if a government cannot decide **why** it is making a change, it is remarkably difficult to decide **how** to implement it, or to agree afterward whether the change was good or bad. The U.K. experience shows that many railway reform programs have been infected with this fatal virus, a problem also seen in Sweden (Alexandersson and Hultén p. 182 "The Swedish rail reforms …have hardly followed a rational strategic plan…"). It is probably significant, also, that the Strategic Rail Authority (SRA) in the U.K. was only created about five years **after** the franchising began (and subsequently abolished). Nothing is more important than having an agreed and consistent set of objectives at the outset.

Another typical problem of setting initial objectives is failure to define the outcome of the "do nothing" alternative. Absent a reasonable idea of what would have happened without change, the outcome tends to be compared with often unreasonable ideas of perfection rather than with what would probably have actually happened without reform. The Nash and Smith paper (p. 9 and p. 27) is one of the few to try to assess results in the context of what might have happened otherwise. Both in planning change and in evaluating the results, it would be helpful if the phrase **"compared to what?"** is prominently remembered. If, after many years of struggle, the existing railway has run out of steam, financially and managerially, as a result of a failure of public management, it would be helpful to keep this in mind later when the proposed reform program faces its own problems.

1.2. The Second Issue: Define the structural framework and shape the information

Though the point is obvious (with experience), it deserves emphasis that the potential role of the private sector is strongly dependent on the structural form that a country adopts. If the railway remains a monolith, with only accounting separation, then the only available bite is probably too large for the private sector to swallow: indeed, a common way for state-owned railway management to resist railway restructuring, especially private involvement, is to insist on keeping the railway as a monolith that is too large to be purchased or managed in a single piece by the private sector.[6] Put another way, the structural model can either hinder or facilitate the ability to involve the private sector when this is an objective: if the available pieces are too large, or if the information available is not sufficient for adequate financial analysis, then the government has, by default, elected not to involve the private sector. On the other hand, as the Brenck and Peter paper acknowledges, proposing a role for the private sector in pieces that are too small can create problems of inefficient scale (p. 151) and integration with the larger system (p. 160). In this regard, the separation of infrastructure from operations clearly facilitates the definition of operating services that will be more appropriate for franchises or concessions. Kain argues (p. 51), correctly, that separation of infrastructure from operations can sacrifice system economies and integrity: the question (as always) is whether there are offsetting benefits to be gained.

Information is also critical, as a separate ECMT paper (ECMT 2006) discusses in more detail. The paper's conclusion is that the information now being developed by the E.U. railways is not adequate for effective public oversight, especially in the analysis and determination of appropriate access charges or in ensuring that public support is spent for, and only for, the purposes allowed. Before the private sector can confidently be involved in a partnership with the public sector – and

management contracting, franchising, concessioning and partial privatizations inevitably are **partnerships** – the public information must be available in the right level of detail and it must be accurate. As discussed below, perhaps the single most important factor in defining and managing the risks of all management reforms (including franchising) is the simple question of the availability of accurate, timely and sufficient information about the past and likely future performance of the railway system at the level of the proposed change (each franchise or freight operating company, for example).[7] For the most part, such information is not available today. In the absence of such information, it is of course always possible to develop franchise or privatization agreements, but the likelihood of unpleasant surprises and the related uncertainty premium will be much higher.

2. The Spectrum of Approaches

Table 1 and the Box on the Spectrum of Private Sector Involvement outline an important fact – there is a range of approaches for rail structure within which franchising is a mid-point. In this context, the *status quo* for most of the larger E.U. rail systems (public ownership and operation) is the starting point for discussion. Fully private railways – the current position for the U.S. freight railroads, three of the Japanese passenger railways, and E.U. (U.K. and Estonia) railways – could be an eventual end point. The critical point is that not all of the services of any given railway must be treated the same way: "mix and match" can be a better approach.

Table 1.

Public and Private roles

	Traditional Public Roles		Franchising/Concessions		Privatization	
Type of Function	**Public Ownership and Mgt**	**Mgt Contracting**	**Gross Cost**	**Commercial Risk**	**Divestiture**	**New Private Entry**
Infrastructure	X	X	X		(Railtrack?)	
Freight	X			?	X	X
Passenger						
High Speed	X			X		
Conv. Intercity	X		X	X		
Rural/regional	X	X	X			
Suburban	X	X	X			

We are here today
Long-term option
Potential step or interim option

Source: Mr. L. Thompson, Thompson, Galenson and Associates.

It seems likely that most E.U. rail infrastructure (like E.U. highways and waterways) will remain publicly owned and operated. Involving the private sector, if at all, is likely to start with contracting-out or possibly management contracting. It seems also possible the infrastructure could be shaped into a gross-cost franchise; but, experience with Railtrack, and the emerging experience in Estonia, suggests that transfer of commercial risk or outright privatization for infrastructure should be viewed with caution because of the perceived criticality of the rail infrastructure to the national transport network, and because conflicts between system users can easily escalate to the political level.

The approach to private involvement in freight services could well be different from passenger services. Given that the objective in freight seems to be open access competition (competition **in** the

market on the same lines), the continued rationale for public ownership and operation of rail freight services in Europe seems questionable, certainly in the longer term. No matter how carefully the accounting separations are drawn, the competition between public and private freight operators on the same tracks will be inherently unbalanced. A public freight operator will always be burdened with bureaucratic requirements and social burdens of a public operator whereas the private freight operators will have more control over their costs, prices and services.[8] At the same time, the public freight operator will have access to (open or hidden) public sources of finance that are denied to a truly private operator, and public (freight or passenger) operators (supported by their unions) always have the ear of politicians, as Alexandersson and Hultén make clear in the Swedish case (p. 184). The logic suggests that freight operators will either remain wholly public or, when enough new competition arises, will be mostly private. In addition, the open access policy is inherently in conflict with the idea of franchising or concessioning of freight services because there is essentially no market to franchise. For freight, involving the private sector will eventually mean privatization.

Gross and Net Cost Contracts

When a competitive tender is let out as a "gross cost" contract, the contracting agent transfers the cost risk but retains the revenue risk. This is often not classed as a "franchise." When a "net subsidy" contract is signed the franchiser transfers the revenue risk to the winning bidder. Revenue is less predictable than cost, especially in the case of passenger rail services where exogenous factors will adversely affect the ability of franchisees to develop the expected patronage and traffic growth.

As Figure 1 also shows, passenger services may fall into two market-based groups, those with a mostly commercial rationale (high speed rail and conventional intercity passengers) and those with a mostly social orientation (generally suburban, but sometimes including lightly used regional services). The commercial group would be more suited to net-cost commercial franchising or concessioning because it can be market driven and (depending on the level and structure of access charges) might well be financially viable. By contrast, the social group is better adapted to gross-cost contracting because, with pricing and output determined by public authorities, commercial factors do not play a major role in designing and managing the franchise.

It is at least worth mentioning that there are other examples of entirely private passenger railways. About 30% of the line kilometres of the Japanese railway network have always been owned by a large number of smaller operators. These companies are parts of much larger conglomerates, in which the rail portion serves to promote the value of the other properties of the conglomerates (including hotels, housing development, baseball teams, resorts, etc). The Hong Kong Metro system is another example of bundling of the rail transport function with real estate development. Although real estate was only a minor part of the total costs of development of the systems, the Metros in Washington and San Francisco generated significant support from "value capture" in which at least part of the value created by the system was recaptured through ownership or control of the development of real estate properties near to the systems' stations.

2.1. What is franchising or concessioning?

Franchising or concessioning involves a series of steps:

- The government, as owner of the assets (this can involve both infrastructure and rolling stock, depending on the arrangement), defines the assets to be granted, along with the rights

and duties that will be transferred with the franchise. In some cases, a part of the assets is franchised while other parts are leased or even sold.

- The franchise or concession agreement details the objectives of both parties, and attempts to specify and allocate the risks involved.

- Normally the government retains underlying "ownership" of the assets, or it receives ownership (for example, in the case of a Build, Own and Transfer (BOT) concession) at the end of the specified term.

- The franchisee or concessionaire (operator) provides services, may provide some of the facilities, and assumes the specified risks.

- The agreement has a defined term (in effect, privatization has an unlimited term).

In the railway case, especially with infrastructure separation, mixed solutions are possible. For example, the infrastructure could remain under public control while the freight services are privatized; at the same time, commercial passenger services could be awarded under a contract that transfers commercial risks while the social passenger services could be awarded under gross-cost franchises. As Figure 1 shows, many combinations are possible, each of which might be handled somewhat differently.

2.2. The Dimensions of franchising or concessioning

No two franchise or concession agreements are exactly alike. In fact, each will have a specific set of dimensions.

The package size can vary widely. For example, one of the Argentine freight concessions included 5 000 km of line, and one of the Brazilian concessions carries nearly 100 million tonnes of freight annually. The 8 passenger concessions in Rio de Janeiro and Buenos Aires averaged 140 km of line, 63 million passengers and 1 235 million passenger-km annually. The U.K. passenger franchises range from 14 route km to 4 000 route km (average is about 1 000 km) and carry from about 1 million to nearly 150 million passengers annually (average is about 40 million)[9] whereas the passenger franchises in The Netherlands may each only accommodate a few million passengers and average about 38 km (communication from Van Dijk). In addition, responsibility can be divided in different ways: the Australian, Argentine and Brazilian passenger concessions received the control and exclusive use of the infrastructure (and the Brazilian concessionaire bought the rolling stock) while the U.K., German, Swedish and Dutch franchises only gained secured access to the infrastructure and leased most or all of their rolling stock.[10]

The agreement term can vary from 1 to 2 years (some early Swedish agreements on passenger franchises) to 50 years (the Mexican freight concessions). In general, the shorter terms have been used when government wants to retain a strong voice in the performance of the franchise while the longer terms were used when government felt that it had less interest in detailed control and involvement in the franchise decision-making. Accordingly, because they are socially and politically sensitive, passenger franchises have tended to have shorter terms (5 to 20 years, but averaging 5-6 years) as compared with freight concessions (25 to 50 years, with 30 years being typical). The U.K. privatization of freight services (similar to the privatization of the Canadian National Railroad and the three Japanese main[11] island passenger railways) and of passenger rolling stock (the ROSCOs) and infrastructure (Railtrack followed by Network Rail) is the extreme case of long term transfer of control.

The disposition of rights, assets and investments can vary. In the original UK case, Railtrack, the Freight Operating Company (EWS), and the ROSCOs received ownership of their assets, whereas the operating franchisees received control of a service territory and a labour force. Figure 2 gives an example of differing approaches to this distribution. Other countries (Japan or Brazil, for example, or other E.U. countries) would look somewhat different, depending on the national objectives involved. It would be useful for franchising authorities to identify where proposed franchises fit in this framework.

Figure 2

Example Location of Rights, Assets and Investments

	Public		Private	
	Argentina	**UK**	**Argentina**	**UK**
Infrastructure Assets	Ownership retained	Sold		Privatized
Infrastructure Use			Exclusive concession	Non-exclusive franchise
Freight Assets	Leased	Sold	New equipment purchased or leased	Privatized
Freight Services			Exclusive concession	Open access, no exclusivity
Passenger Assets	Leased	Sold to ROSCOs	Old leased, new purchased	Leased from ROSCOs or leased separately
Passenger Services			Exclusive concession	Non-exclusive franchise

Source: Mr. L. Thompson, Thompson, Galenson and Associates.

The degree to which service characteristics need to be specified must be decided (see Box "Specification of Services"). For freight, for example, the general practice in the Latin American concessions was to leave service frequency, on-time performance and tariffs almost totally to the concessionaire's judgment of the market with only limited regulatory oversight of maximum tariffs and safety. For the Argentine passenger concessions, a minimum service frequency and quality, and the maximum tariff, were specified, but the concessionaire was given freedom to exceed the minimum service levels, or to charge less than the maximum tariff. In the U.K. franchises, desired service quality and quantity were identified, and the basic tariffs (covering about 40-45% of the trips) were regulated. Railtrack's access charges were specified at the outset, with the regulator having authority to grant increases when justified, and with the franchisee held neutral to changes in access tariff increases. To the extent that the franchise is a social and subsidized operation, the degree of specification will be higher: where the concession is commercial (or the service is privatized), the degree of specification can clearly be lower.

A related question is the location and degree of authority over tariff setting. In a management contract (or, often, in a gross-cost franchise), the operator is in effect serving as a revenue collection agent, while charging tariffs specified by the franchiser. As the franchise becomes more commercial, the balance of authority could shift to the franchise, with government retaining some regulatory oversight. In the privatization case, the new operator should be in control, with only limited regulatory oversight to prevent abuse of monopoly power.

The special case of setting infrastructure access tariffs is particularly important because of the impact that access charges have on the performance of the operators. A significant problem in the U.K. franchising was that the access charges had not been fully specified before the franchises were awarded, forcing the government, in effect, to assume the risk of Railtrack's ultimate performance.[12] The issue of access charges has been discussed extensively in ECMT 2005. The critical point in this discussion is that the structure and level of access charges, and the degree to which they can be specified in advance, will necessarily affect the approach to franchising, and will have a strong impact on the competitive position of, and thus the value of, any freight services to be privatized.

Specification of Services

A critical question for franchisers is the degree to which the service to be provided should be **specified**, or whether it can simply be left to the discretion of the franchise operator reacting to market forces. In general, the degree of specification tends to increase with the level of support being paid (gross-cost franchises); operators of commercial franchises usually demand freedom to define the services to be provided.

Demand determinants. The primary determinants of demand are usually price, service frequency and trip time: specification of one (or all) will affect demand and costs, often significantly. If the franchiser wishes, for social reasons, to exercise the authority to determine price, frequency or trip times, it should be at the beginning of the franchise so that the full impacts on demand and costs (investment and operations) can be accommodated. Later changes should be subject to an agreed adjustment of the franchise compensation.

Measures of service quality. Franchisers often wish to specify aspects of the quality of service provided. Most franchising authorities have a version of a performance regime measuring on-time achievement, cleanliness, safety, overloading (the result of the demand and capacity interaction, sometimes aggravated by pricing) and passenger complaints (which can be a subjective combination of all measures). These can be connected to a bonus/malus compensation system (see, e.g. van Dijk, p. 135 or Brenck and Peter, p. 154 and 156). **If the franchiser specifies service quality, however, an oversight regime is unavoidable, with all that implies in data production and quasi-legal regulatory proceedings.** (van Dijk, p. 133 and Kain p. 82).

Investment requirements. The E.U. experiences demonstrate the importance to local authorities of improved rolling stock. In other cases (Argentina and Brazil), concessionaires have been required to commit to specified investments in either rolling stock or even infrastructure. Specifying investments poses two challenges: how to specify performance desired rather than specific hardware, and how to deal with the conundrum of specifying long-lived investment in a short-term franchise.

Other service characteristics. There are other potentially important service characteristics, including class of service (first versus tourist), reservations (important for inter-regional and intercity services), amenities (such as food), and interconnection with service provided by other franchises or with the national railway operator. The importance of these will depend on the type of service and on the role that the franchise plays within the larger rail (and passenger transport) sector.

The method of payment to (or, in the fortunate case, from) the franchisee poses a number of choices. In the case of **positive** payment streams (when the franchisee or concessionaire pays the government), franchisees or concessionaires have either been asked to capitalize the entire value of the franchise in advance in order to maximize the short-term inflow to the treasury,[13] or a mixture of up-front and payment streams over time has been chosen. Most of the **negative** franchises (when government pays the franchisee or concessionaire) are based on a predicted (or actual) stream of

support payments.[14] Any of these approaches can be chosen; but, there is a clear tradeoff between the degree to which predicted rather than actual results form the basis of payment and the uncertainty premium and discount rate that potential bidders will use.

This tradeoff is one of the key elements determining whether risk transfer is economically **feasible** (it is always **possible**, but at an ever increasing price).

Conditions for renegotiation are important. Very few concessions or franchises have survived totally unchanged because it is normally not possible to write an agreement that covers all contingencies, particularly in longer franchises or concessions. When the unexpected occurs, as it will, both parties need to know how to change the agreement. The options are voluntary renegotiation between the parties, arbitration, litigation or regulation, or some agreed combination.

3. Risks and the Sharing or Transfer thereof

"Risk," and how to deal with it in rail passenger franchise agreements, is a vital issue. In practice, there are a large number of different risks, each of which may require a distinct approach in sharing and mitigation. Risk transfer is always possible, but never without cost. There is no particular point to be served in arbitrarily retaining or transferring risks: the question in each case is to find the optimum mix of sharing and mitigation that minimizes the total cost of the franchise. Various types of risk will find different answers depending on a complex mix of circumstance and country conditions.

Demand, prices and revenues. The definition of demand (usually the number of passengers handled and passenger-km produced) to be used in franchise planning may not be simple. In practice, there are often multiple lines, multiple classes of service, and difficulties in identifying which demand represents a social commodity; simply to state the demand objective as the aggregate number of passengers and passenger-km may not suffice to highlight the needs of the franchiser. Specifying prices is also complex; in practice, taking all services into account, there can be an immense number of prices, for which simply stating an average will not actually specify what is desired. The U.K. example, in which only around 40-45% of prices were specified, tracked and regulated, is illustrative. In both cases, the public agency faces a risk that an unclear specification will yield an unexpected result. Revenue (the real objective of the private partner) is the product of demand and price, and is thus doubly difficult to predict. The main risk mitigating measure – careful analysis of historical demand and cautious extension thereof – is critical, but is often unavailable if the existing operator has not collected historical data or chooses to conceal it (Alexandersson and Hultén, p. 180). Lacking historical information (always the case for new services), the parties can choose to share the risk either by including a risk premium in the expected support or by adopting various forms of risk sharing when demand is above or under the expected targets. The importance of the tradeoff between information and risk premium cannot be overemphasized.

Operating costs. The expected level of demand and thus the required service level is one of the primary drivers of operating costs and, to the extent that demand is uncertain, then costs will also be at risk. It is common for the private partner to accept the operating cost risks for an agreed level of demand, but for the franchiser and franchisee to share operating cost risks when demand differs widely from the level expected. Again, past experience is a primary basis for decisions as to realism and risk and the primary method of mitigation is to acquire accurate information about past results to use as a point of departure.

Exogenous factors. Underlying determinants of demand and costs can dramatically change performance of a franchise, but are totally beyond the ability of either party to predict or fully control: GDP growth, exchange rates, inflation and technology can all matter, especially in the longer term. In

fact, the level and structure of access charges is exogenous from the point of view of the system operators. The mitigating approaches – demand risk sharing due to GDP changes, stating costs or support levels in Euros or U.S. dollars, stating amounts in constant currency values, benefit sharing for new technology and, most important, automatic adjustments such as price indexing or for changes in access charges – are well known (Kain p. 59 and Brenck and Peter p. 159). A parallel measure – limiting the length of the franchise so that the issues can be addressed in a reasonable time frame – is also useful.

Policy and government action change. Franchising inherently represents a commitment of government policy and resources over a period of time greater than any current government can really guarantee. In Brazil, for example, there was a legal opinion that the Constitution prevented the government from making multi-year commitments to fund a negative concession: only positive concessions were acceptable. The *de facto* take over of the privatized railway infrastructure by the Government of Estonia and its renationalization it is another example of unpredictable (at the outset) change in government policy. Other changes, for example in labour laws or environmental requirements, can act to negate a government commitment made under a franchise agreement. Nash and Smith find, for example (p. 28), that fuel prices, health and safety legislation, anti-discrimination legislation and a general tightening of standards may have outweighed the benefits the franchises received in unanticipated economic growth. Some of the risks, e.g. labour negotiations or fuel prices within a given band, are normally transferable. Mitigating measures for the others include various kinds of cost indexing and national or international arbitration agreements wherein both parties have protection against arbitrary actions.

Investment risks. The major investment risks involve the capacity risk of unanticipated demand (below or above expectations) and a disjunction between the long working life of assets (especially rolling stock) and the generally shorter life of the franchise. Capacity risk is usually shared: if demand is within agreed parameters, it is the responsibility of the private franchisee, but is shared with government if it is outside the parameters. Investment horizon risk can be mitigated either by increasing the life of the franchise (the approach in the U.K. Phase II franchising) or by in effect privatizing the responsibility for the long-lived assets. Leasing (the U.K. ROSCOs) is a good example of disconnecting the franchisee's risk of owning the rolling stock. Brenck and Peter (p. 150) discuss another approach: some of the German franchises involved a guaranteed re-purchase (or resale) value of rolling stock at the end of franchises, thus ensuring that the franchisee would face much lower risk of loss of value.[15] The creation of Railtrack (later Network Rail) accomplished the same objective (more or less) in the infrastructure area. In general, separating infrastructure from operations will have the effect of freeing the operators from the long-term investment horizon needed for infrastructure.

Access charges. Infrastructure access charges can be a major component (up to 40%) of the operating costs of a rail passenger franchise. Depending on the structure of fixed versus variable charges, access charges can pose a significant financial risk, especially to smaller franchises, if demand fluctuates beyond expected levels: they can lead to surplus traffic and capacity shortages. For subsidized franchises, the risk can be reduced by holding the franchise harmless for changes in access charges (as was done in the U.K., see endnote 11). For unsupported franchises (and freight operators) the risk can be mitigated by regulatory oversight of the access charge regime and by adopting the recommendation to set rail infrastructure access charges at marginal cost (as indeed European Union law requires). Where the infrastructure agency attempts to collect some of the difference between marginal cost and financial cost through access charges (also permitted under the EU law), relying primarily on variable rather than fixed charges can reduce the risk to the franchisee.

3.1. The special case of privatization

It is unfortunate that most of the attention devoted to the U.K. case seems to have been focused on passenger services, because the freight services are also important – and may be even more important in the continental context.[16] The U.K. freight transactions were actually **privatizations:** that is, the U.K. freight companies (and the ROSCOs and Railtrack) were formed from the BR operations, and the companies were sold as going concerns (existing business, employees and assets) to the highest bidder. The freight companies were sold with guaranteed access conditions, but with no exclusivity. Competitors could enter any and all markets and, in fact, competition among existing and new freight carriers has arisen.

I believe that the current status of the state-owned ECMT (especially E.U.) rail freight operators is unstable. The existing public operators will have increasing difficulty competing with private entrants, especially in niche markets where service quality demands and existing tariffs are high. Some private, niche operators such as Rail4Chem are already emerging. At the same time, so long as the state-owned operators remain, private entry will be constrained by the advantages that state-ownership inevitably confers. As discussed above, rail freight is probably not amenable to franchising because, with open access, no degree of exclusivity can be conferred. As a result, privatization of the rail freight operating companies (but, of course, not necessarily the infrastructure) is a clear option.

There are many cases of integral (infrastructure and operator) privatization of railways, both freight and passenger. The entire U.S. rail freight system is private, and the privatization of the Canadian National railway in 1996 created one of the larger freight systems in North America.[17] In financial terms, the sale of the stock in the three main island Japanese passenger railways (East Japan, Central Japan and West Japan) was one of the larger transactions to occur anywhere. The Northern railway in Chile was sold outright, as were the two largest Brazilian rail freight companies (EFVM and Carajas). The Estonian Railway was an integral privatization of freight with infrastructure, but with a requirement that access be granted to freight competitors as required by E.U. law.

Infrastructure separation (whether or not the infrastructure is privatized) creates the opportunity to privatize some of the operating pieces. For example, along with the freight privatization, the U.K. government privatized a large range of ancillary functions such as track maintenance, real estate, etc. A particular advantage of privatization of some of the operating functions, specifically freight, is that it creates the opportunity to erase the national boundary effect for the operator. Railion is an example that, if ever privatized, would create a truly international rail freight operator. The emergence of large international operators, though advantageous in the sense of seamless service, may simultaneously raise the issue of the competitive structure of Europe-wide rail freight, especially if some are government owned and some privately owned.

A question specific to privatization is whether to sell the freight company as a going concern (as was done with the U.K. freight operators and the Estonia Railway) or simply to sell the assets to the highest bidder. Going concern sales have the advantage that they can be designed in advance and make continued operation easier, but they carry with them all of the obligations of the existing operator. Asset sales permit the new operator maximum flexibility, especially vis-à-vis the labour force, but often leave the seller with residual obligations to deal with.

My overall conclusion for rail freight is that we should not focus just on franchising or concessioning because there will be cases in which privatization will be more appropriate. Put another way, the full answer to railway structural change involving the private sector may well be a mixture of approaches that may be different for every country, within a general model and set of limitations. The best mix for the overall railway may well involve public ownership and management, private

operation of public assets (management contracting, franchising or concessioning) and some outright privatization.

3.2. Options for awarding franchises or for privatizations

Assuming that all of the questions of package design and dimension have been settled, there are a series of issues on how to award the package.

Some countries have chosen to negotiate directly with potential operators. This turned out to be the predominant approach early in the Swedish, German and Dutch cases, partly for lack of experience and partly because of political pressures to protect the existing state operator. Negotiation without competition violates the normal approach to spending public money, and tends to reduce the potential savings available from franchising or privatization. Van Dijk (p. 133) found that savings from negotiated contracts were far below savings from contracts for which there was competition. However, there may well be cases in which the package size is too small, or the acquiring or managing authority is itself a public agency (for example, the U.S. Federal Government sold the Alaska Railroad by direct negotiation with the State of Alaska), for which direct negotiation will be appropriate. In addition, direct negotiation of short-term contracts may well be an excellent way of reducing risks in managing the transition from a fully public regime to an eventual regime of longer-term franchises.

Brazil furnishes an interesting case in that its agencies are required to sell companies or franchises through open public auction, and at least the railway concession auctions have been reasonably successful and competitive. It is not clear why the open auction approach has not been used for franchises elsewhere more widely given the advantages that open auctions have in reducing the effect of the "winner's curse".[18] Kain (p. 48) argues that the award of a franchise is complex and open bidding would have comparability problems. This said, with proper specification and bid review, the problem could be reduced (of course, there is also a problem with evaluating non-comparable closed bids as well).

The normal form of franchise or concession sale has been single stage, best offer[19], sealed bidding. In some cases, the bidding or auction has been subject to a minimum price (that was public in Brazil and secret in Mexico) in an attempt to overcome potential collusion among bidders when several franchises are to be awarded.[20]

There is also a choice between single stage competition, in which all bidders are welcome, and multi-stage bidding in which some bidders may be winnowed out at each stage. In the Argentine passenger concessions, for example, the first stage was based on demonstrated financial capability and professional competence: bidders received a pass/fail rating and unqualified bidders were eliminated. In the second stage, qualified bidders submitted their business plans showing expected demand and revenue levels (maximum fares were specified) along with their operating plans, including staffing and equipment: unrealistic bidders were given a warning about the questionable aspects of their plans which, if not rectified, caused disqualification. Finally, the remaining bidders submitted their best offers. The potential for manipulation of the bidding process is also a concern. There is no easy solution.

The danger in admitting all bidders – common in public procurements – is that an unqualified or unrealistic bidder may win, and often does. Kain argues that there is a clear pattern of bids for unrealistically low subsidies and high premium payments to government winning passenger franchises in the UK. Against this must be weighed the difficulty of making qualitative judgments about "qualifications" or "realism," especially when the bidders may know as much or more about the franchise than the franchiser does (for example when the existing railway staff are allowed to bid). In

Mexico, a particular rail freight franchise received three bids, the first two for around US$ 550 million and the third for US$ 1.4 billion. Despite skepticism, the "cursed" winner has survived reasonably well. It is also worth pointing out that passenger demand in the U.K. has in fact grown by 50% in the first 10 years of franchising – far, far above the expectations of the Government at the outset. Governments and their experts can be wrong, too.

A related choice is the use of qualitative, weighting formulae (sometimes called "beauty contests") versus stricter monetary evaluations. Award formulae have superficial appeal because it is in fact difficult to quantify everything. One obvious problem is that the weighting formulas adopted can seriously distort the result. For example, if a perfect bid might receive 100 points, of which only 20 are for the monetary value of the bid while the others are awarded to more qualitative factors such as degree of local participation or percentage of existing workers hired, the outcome can be subject to non-transparent manipulation. Weighting formulae can easily contain conflicting factors, which is exactly what happened in the Argentine freight concessions where points were awarded both for the money offered and the number of existing employees to be hired. The outcome of such conflicts is unpredictable and can be perverse. By contrast, a strictly monetary, best offer award is clearer but can also be subject to gaming when there are a number of elements to be combined in the final bid amount, for example when concession payments are combined with an investment flow.[21]

Many franchising situations involve a series of payments over time, including support that can be negative or positive, and required investment. If bidders have different views of the levels and timing of the payments, their bids can only be made comparable by using a Net Present Value (NPV) calculation, including a specified discount rate to be used by all. An NPV award approach was quite successfully used in the Argentine passenger concessions, where bids were awarded both on a series of support payments and a set of required investment projects that bidders were allowed to schedule in accord with their demand projections and operating plans. A similar approach was used in the award of the rail passenger concessions in Rio de Janeiro (suburban services and the Metro) where both support (or payment) and investment flows were involved. The U.K. franchise bids were also evaluated on an NPV basis.

Although NPV adjustments are the only valid way to equate values over time, they do create a potential "backloading" problem, especially at high discount rates. In these cases, the bidders have an incentive to distort their bids by shifting positive values (ridership forecasts) forward in time and shifting negative values (investments or costs) backward. Some partial countermeasures are available. In Buenos Aires, for example, where investment backloading was a potential problem, the Government placed a limit on the total percentage of the investment program that could be planned for any single year.

Another potential problem to be aware of in franchise bidding occurs when there is a bidding consortium in which the time pattern of one member's involvement is significantly different from that of the others. For example, if there is significant construction at the outset, followed by minimal maintenance, the construction company member of the consortium may want to complete its work and then abandon the consortium. It is important to review the membership of a consortium and the incentives of each member to ensure that all members will stay the course of the consortium. In some cases (arguably for urban metros, for example), where the franchise might break even on operations but require a large capital investment, the bidding criteria might assume no operating support and instead be based on minimum capital required from government.

Some observers argue that at least one reason for involving the private sector in railways is that the private sector can do certain things better than the public sector can. In principle, the private sector can be more flexible and market-responsive in its marketing and pricing, and can operate more

efficiently than public sector enterprises (especially in its relations with labour). This can be a particularly significant issue when the public sector enterprise is required to compete more or less directly with the private sector (rail freight versus trucking or intercity rail passenger versus airlines and autos).

Strictly following this logic, commercial franchises and privatizations should be awarded with a minimum of definition or specification by the government authority, with maximum flexibility for the new private managers to improve the commercial aspects of the operation, and with service specification limited to those parts where social objectives are paramount. By contrast, the **actual** process of public procurement places considerable weight on reaching clear and transparent decisions among fully comparable choices, which leads to detailed and rigid definitions and specification (see Box on Specification of Services). The dilemma is that the more the franchise conditions are defined or specified, the less the franchisee is able to generate any benefits from innovation. Total specification of everything to yield perfect transparency and comparability, would eliminate any "flair" at all, thus negating at least some of the reasons for franchising.[22]

A particularly serious illustration of this dilemma is with the existing labour force. Governments all too often wish, for political reasons, to require a franchisee to assume the entire labour force under the existing conditions. Indeed, some E.U. countries (The Netherlands – van Dijk, p. 134) have labour laws requiring this to be done. Since labour represents the largest single expense category of most passenger railways, such a requirement effectively ensures that critics of the process will later be able to show that franchising generated few economies. The alternative approach – allowing the labour force to be adjusted but paying to cushion the impact of change on labour – works better (Argentina, Brazil, Mexico, Poland and Estonia, for example), but also reduces the short-term financial benefits of restructuring.

There are further tradeoffs between control of tariffs and government payments (or receipts). For example, especially in passenger franchises, the government agency faces a direct tradeoff between setting a low tariff and the support payment it has to make: the lower the tariff, the higher the support. Gross-cost franchises make the issue transparent, because policy makers have to pay directly for their decisions, but have the effect of exposing governments to an unpredictable and possibly uncontrollable fiscal obligation (as the British Government discovered when the costs of Railtrack and some of the franchise costs ran out of control). In the freight case, controlling some of the tariffs (or setting other conditions such as a minimum labour force) reduces the price that purchasers are willing to pay for the business and/or raises other freight tariffs, thus defeating the overall objective of reducing overall transport costs or shifting freight traffic from road to rail.

3.3. The specific challenge of public procurement

Rail franchises are difficult and complex and the outcomes have been uncertain, as the conference papers demonstrate. It is worthwhile asking, however, whether at least part of the problem is attributable to a misfit between the normal roles of public procurement and the challenges of "procuring" a franchise rather than the inherent unsuitability of franchising to deliver rail passenger services.

Most public procurement is based on open, competitive bidding for the supply of clearly defined goods or services (or, at least, the public authorities would like it to be so). The public approach often leads to extra efforts in product or service definition because government specifications are usually much longer than private sector specifications for the same product or service and they lead to a drawn-out process; but, effective public procurement can yield the cheapest (if not the best) result when the product is simple or when the desired service can be more or less accurately designed and

specified (a highway or an airport runway) and when no other objectives are critically important. Public procurement is much more problematic, however, when the desired result has unclear or even conflicting objectives (social and budget objectives often conflict), or tries to set desirable but impossible performance objectives (a new air traffic control system), or involves a result that is critical to meeting a public need (defense, schooling or social services). Rail passenger service franchises are a challenge on all three grounds.

In practice, these problems are never satisfactorily resolvable, and there is no perfect model for public procurement. The nature of politics ensures that publicly funded rail passenger systems always must try to meet conflicting objectives – what service should be provided, to what ethnic neighborhood or social class, at what price and quality, with what conditions for labour, etc. Funding competition almost always guarantees that the outcome of a franchising program will be over promised (certainly U.S. experience argues that it is almost impossible to get the performance, schedule and budget of public projects right because all the incentives lead in the wrong direction). Moreover, the Brenck and Peter paper (p. 158) highlights another dilemma: if the money is being passed through directly from a national government to regional or local governments, then the local authorities may not feel the same pressures to save money or increase efficiency that their national sponsors might wish (a kind of public fiscal moral hazard). Finally, the Kain paper demonstrates with particular clarity that public authorities are so afraid of the repercussions of the loss of rail service that they go to great lengths to renegotiate with franchisees rather than take a chance of service disruption by withdrawing franchises from failing operators.

3.4. If these problems cannot be fully resolved, can they at least be reduced?

The short answer is yes, somewhat.

Conflicting or unclear objectives are best resolved at the outset though detailed analysis and open discussion. It is particularly important that all objectives be on the table before any proposals are sought. Even if there remain opaque or possibly conflicting points, they can at least be clearly identified and transparently incorporated within the proposal.

If, during the process of establishing a franchise, the objectives change significantly, then the process should be restarted. The risks attached to not revisiting the design of franchises, condemning them to fail under the new objectives, outweigh the costs and delays (and bidder irritation) involved in prolonging the consultation.

Undue optimism on the point of **public** authorities is inevitable. It is probably controlled (and disciplined) best when there is ample political debate about the process and the expected results. It is also best if final funding and policy commitments are not made until hard proposals, preferably actual bids, are in hand.

Over optimism by **private** bidders can be either due to bad judgment ("winner's curse"), often based on bad information, or to strategic bidding. Several approaches are available to counter it.

First, the essential basis for promoting realism is good information: generally speaking, ignorance of basic facts such as past demand and current costs is a guarantee of questionable bidding. Given that the existing public operators are using public funding, there is no excuse for not requiring that the information needed to support accurate franchise estimates be produced and published by the existing public operator/owner.[23] The invitation to bid should be accompanied by a government statement of recent past indicators and short-term future projections to provide a transparent baseline against which the reasonableness of bids can be assessed.

Second, the Argentine approach shows that holding the bidding in several stages can significantly promote the credibility of the bids received. In the first stage, only qualified bidders should be accepted in accord with a carefully developed list of professional and financial requirements as well as demonstrated track record (Kain, p. 69): bidders with incurable gaps in their qualifications should simply be excluded. In the second stage, business plan review can go a long way toward flushing out the differences in bids, especially if bidders are also required to furnish a specified matrix of quantitative measures of their proposal over the time of the franchise (km of line and track operated, trains run and train-km, seat-km, passenger trips, passenger-km, labour force, coaches, coach-km, locomotives and locomotive-km, individually powered equipment-km).[24] Professional assistance in bid evaluation at this stage can alert the franchiser to potential ambiguities in the specifications as well as identify the points at which the bids are showing wide variations in assumptions: bidders can be given a chance to review and correct their plans at this stage (or be rejected) without materially slowing the overall process. Having reached the final stage, there is less likelihood that the financial proposals will lack credibility. In some cases, bidders have been required at the third stage to provide a pre-signed contract as part of their bid, with no further negotiation allowed after award.

Third, incentives for strategic bidding can be diminished by reducing the criticality (political significance) of the project or by creating effective penalties for poor performance. The Japanese, for example, reduced the national criticality of the old JNR by breaking it into six pieces:[25] the Dutch and German experience clearly supports taking small steps and avoiding a "big bang" approach. For the same reasons, it is important to be careful with phasing, so that potential problems will emerge when they can be resolved rather than too late. Shifting potential problems from a national to a regional or even local scale (provided that the local authorities have full access to information and can benefit from experience elsewhere) can reduce criticality, at least for the national government.

Finally, performance bonds have proven to be a useful tool in ensuring that franchisees are not comfortably able to walk away from commitments, partly because of the size of the bond and partly because they value their ability to be able to receive bonds for future proposals.

4. Critical Issues and Lessons Learnt

The papers highlight, and experience elsewhere with rail franchising, concessioning and privatizations in a number of countries underline, that there is a typical set of critical issues that must be resolved as early in the process as possible, and in a consistent way, if the involvement of the private sector is to have a chance of success.

Consistent objectives and expectations

If at all possible, ensure that the actual objectives are consistent with public expectations. One of the most painful lessons of the BR privatization was that the public expectations of what would happen were unrealistic, leading the outcome to be compared (in some cases cynically) either with perfection, or with a deliberate, polemic exaggeration, rather than the simple question of whether the result was an improvement on what existed. Reasonable people can argue, of course, about the answer to this simple question, but we should not be arguing about what the real question should be.

Social versus commercial services

The government agency in charge must reach a clear consensus on which services are vital social functions, and which are basically commercial that can be left to the market.[26] From this decision will flow a lot of the choices as to tariff and service specification and thus determine where the contract should lie along the Public/Private spectrum. The decision will also determine the support roles (or

income to government) to be expected as the franchise is established, and it will have a significant impact on the need for regulation as opposed to contract oversight and enforcement.

System structure and access charges

The implications of the system structure need to be explicitly understood, as the system structure has to be consistent with the types or packages to be franchised or privatized. Moreover, the access charge regime (for infrastructure separated systems) will have a major impact on the ability to franchise and on the subsequent cost of the franchises (and the value of any freight operators sold).

Risk allocation

Risks need to be explicitly defined and put in the right place. As the papers have emphasized, it is increasingly clear that the demand and revenue risk for a social service should probably remain with the sponsoring agency, whereas at least some of the commercial risk might realistically be transferred to the franchise or private operator to the degree that the service is truly commercial and constrained by market competition. Other facets of risk are in the sheer size of the transaction and the time horizon involved. It is not possible to transfer a multi-billion Euro risk to a multi-million Euro company, no matter how tightly the agreement may be written. Smaller risks are more easily transferred. Similarly, risk transfer becomes less credible at longer time horizons because of the scope for unpredictable change.[27] An obvious example is the question of changes in policy as governments change: some governments feel bound by commitments of previous government, others do not.

Regulation consistent with objectives

The contract oversight and/or regulatory regime must be specified in advance, and it must be consistent with the government's franchising and competitive objectives. Van Dijk, for example, highlights the value of good supervision and monitoring (p. 133). This said, a particular danger comes when regulators, for a number of possible reasons, do not share the enthusiasm of the rest of the government for a reduction in the government's (i.e. their) role.[28] In these cases, hostile regulation can (often does) severely limit the ability of the private operator to manage the franchise or company: of course, inept or insufficient regulation could lead to a loss of public benefits as well. In addition, no agreement is ever permanent, and reasonable flexibility in dealing with change is critical. The process for managing these changes needs to be as clear and transparent as possible, whether it is negotiation, arbitration, regulation or litigation.

Social and environmental policies

Environmental and social issues should not be ignored. In the prior EU-15 context, the environmental issues and objectives are usually clear: by contrast, in a number of new EU member countries and in the former Soviet Union countries and Latin America, the State railway itself was a major polluter, a problem that is unacceptable with a franchised operator. Will the State pay to deal with pre-existing situations, or will it expect the new operator to assume responsibility? Much more important can be the issue of surplus labour, which was a particular problem in Latin America (and is a likely problem in many EU operators). Will the new operator be expected to assume the existing labour force and conditions, or will the labour conditions be subject to a clean slate relationship? If changes are to be made, who pays?

Length of concessions and investment

There is a direct interaction between the time frame of the agreement and the location of investment responsibility: the shorter the time frame, the larger the share of investment that must remain with government or that must be transferred to others (ROSCOs or lessors). For example, governments that want to keep the franchisee on a short time leash with frequent re-bidding cannot expect the franchisee to make long-term investments such as rolling stock unless there is a good market for leased equipment.

Competition in or for the market

What are the competition objectives for the new operator? Competition **for** the market (i.e. sale of a monopoly) can be consistent with detailed specification and extensive oversight. Competition **in** the market requires that a lot more flexibility and authority be transferred to the new operator. At the same time, if potential market power is transferred, then some provision for regulatory oversight is required.

Conflicting incentives

Sadly, behaviour tends to follow self-interest ("incentives"), not professed intentions, so a careful analysis of actual incentives is critical. This has several dimensions, including unclear and mis-defined objectives versus conflicting incentives. Unclear objectives (for example, saying that trains shall be clean and on-time, or that service shall be safe, without defining cleanliness, timeliness or safety) lead to requirements that are unenforceable later. Clearing up such conflicts **after** an agreement is already in place can be expensive for the awarding agency. Mis-defined requirements (e.g. requiring the franchisee to accept an oversized and unproductive labour force) directly increase costs or reduce service quality, and can reduce the authority of a new management. Conflicting incentives (setting or allowing a volume increase target on a congested line, or rewarding both a decrease in support and an increase in the labour force) create perverse and/or unpredictable behaviour. Given that social services in particular almost always involve a set of multiple objectives, some of which probably will conflict, the final set of incentives can never be perfect. This being said, time spent at the outset on understanding and refining the incentives that the various players face is never wasted.

Unrealistic bids

Failing to get realistic bids has been a problem that appears to have several causes, many of which may be mostly attributable to the inherent difficulties of public procurement (see discussion above). Probably the most important cause is simply poor design of the agreement in the first place. When the terms or dimensions of the agreement are not properly defined, it should come as no surprise that the ultimate result is sometimes worth less than the paper it is written on: the same is true of any contract, no matter who the parties are. It is of course true that the collection of issues involved in a rail passenger franchise agreement may be unusually complex by comparison with a simple commercial transaction. Accepting this, the question (for which there is more of an argument than a convincing answer) is whether there is something so uniquely difficult about developing a workable rail passenger franchise agreement that we should abandon the idea and by default continue to rely on the public sector to provide the service.

A second reason for unrealistic bids is alleged or actual irrational exuberance on the part of private bidders, leading them to make unrealistically high bids that ultimately cause franchise collapse and either renegotiation or re-bidding. To some extent, this is merely a proof that stupidity is a more common commodity than we would like to admit, and that it surely spans both private and public

sectors. One remedy – making those who commit mistakes pay for them – is well known (though perhaps not frequently enough enforced). Another possible remedy, employing more sophisticated bidding processes such as sealed-bid Vickrey auctioning, may work well in theory but has so far been found too complicated to apply in practice. Only Brazil employs (to my knowledge) open auctioning for rail.

Unfortunately, there are also cases in which the threat of sanctions or re-bidding is not credible because the full cost of imposing the potential sanctions would be higher for the franchiser than for the winning bidder. In these cases, the bidders can submit bids for low subsidies (or involving high payments to government) and then force the government to renegotiate later. Rail passenger franchises in the U.K. and Australia have often been treated this way.

Kain argues, with some evidence to support him that the more recent UK experience exhibits a worrisome trend toward increasing over bidding. Moreover, given the apparent willingness of the government to negotiate rather than rebid (and punish the winner) in cases where bids were too aggressive, Kain argues that what might legitimately have been simply irrational exuberance is now tending toward an entirely rational bidding strategy of "buying" the franchise at the outset and then recovering later through renegotiation of the terms. Once the expectations of bidders are shaped toward negotiation rather than performance, it can be difficult to bring the process back under control.

In one sense, this is a typical problem with public procurement, best known in defense contracting, where the desired weapon is considered to be so vital, and the specifications sufficiently vague, that the contractor has every incentive to over bid and count on renegotiating. The result, in terms of cost and schedule overruns, and performance shortfalls, is well known. Moreover, despite years of experience worldwide, there is little evidence that recent procurements are yielding better cost or performance results, nor are there many examples of effective punishment of strategic bidders.

One remedy for this kind of "strategic" bidding is to reduce the "criticality" of the procurement (in this case a rail franchise) by designing the package size and scope in a way that the threat of disruption or extra transaction costs is manageable in the event of franchise termination or rebidding. This may not always be feasible, but it should be a significant consideration in franchise design.

Another partial remedy is to require a performance bond that is sufficiently painful to surrender that would-be strategic bidders will think carefully before trying to force a renegotiation. Paradoxically, though, imposing a performance bond that is so large as to bankrupt the franchisee can often be as ineffective (because it is impossible to enforce due to the adverse impact on jobs and the franchisee's suppliers) as would be a bond that is so small as to be insufficiently painful to discipline bidder behaviour. From the franchisor's perspective, the bond should be at least large enough to compensate for the costs of franchise termination and rebidding, including interim operation if necessary. Bonds that are significantly above this level are not usually credible.

The three stage approach used in Argentina to evaluate the proposals for the suburban passenger and Buenos Aires Metro concessions suggests another approach to identifying and limiting unrealistic or strategic bidding. In the second stage, after the basic competence and capability of the bidder had been determined, experts were asked to assess the business plans of the bidders. The business plan contained the bidders' demand forecasts along with the unit costs and productivities used to develop the financial forecasts which the bidders used in developing their bids (the third stage contained the actual bids). The experts had the opportunity to disqualify a bidder if the demand forecasts were unduly optimistic, or could alert (warn) bidders that their forecasts appeared to be significantly out of line. This approach ensured that large deviations in demand forecasts (or in other significant cost

factors) were identified at the outset and that, at the least, all parties were on notice that a potential problem existed.

The issue of "unrealistic" demand forecasts has become especially contentious. In this regard, it is worth emphasizing that gross cost franchises and net cost franchises pose a different set of risks. Gross cost franchises generally put the demand forecasting risk on the franchisor, which takes away some of the ability for strategic behaviour from bidders (not all, though, since the cost forecast is based on the demand forecast, and demand overruns and/or shortfalls inevitably lead to cost changes and thus to renegotiation). Net cost, or commercial, franchises create the opportunity for strategic bidding to the same degree that they attempt to shift the demand risk to the franchisee because the demand forecast, as well as the cost forecast, is under the control of the bidder.

Expert evaluation of demand forecasts in a business plan carries its own risks, of course. Though it may reduce the perceived risk of unrealistic forecasts, it is done at the risk of substituting the judgment outside of "experts" for that of the party that should know the most about demand forecasting and that has the greatest incentive to get the forecast right. If, for example, the bidder's apparently optimistic demand forecasts are actually correct (because the bidder has better information or forecasting expertise than the outside "experts"), then action by the conceding party to lower the forecast will at best reduce the price paid (or increase the support projected) and might actually cause the bidder willing to pay the highest price or bid the lowest support to lose the franchise. As discussed above, demand forecasts by freight and passenger concessionaires in Mexico and Argentina turned out to be substantially higher than government expectations – and the bidders were much closer to the actual outcome.

It is also possible to constrain demand forecasts by, for example, requiring all bidders to make the same assumptions or projections about exogenous factors such as GDP or population growth. Since demand forecasts are a mixture of variables, partly exogenous (GDP) and partly endogenous (marketing flair), at least some of the opportunity for error (strategic or otherwise) can be limited by imposing a common approach to some of the driving variables. The obvious problem is that the record of public authorities in making ten year (or longer) GDP and population forecasts has not been any more impressive than that of private bidders: in addition, if the imposed GDP forecast (for example) turns out to be wrong, then the bidder would again have an argument for renegotiation as a result of errors by others that were beyond its control.

The fundamental answer, I believe, has two parts as discussed in the box in section 1.1 on the significance of the term Public Private Partnership. First, there is no possibility that either the public or the private partner knows enough or is smart enough to produce perfect forecasts, be it of demand, revenue or costs. Risks will always remain, and transferring them will only be done at a price: the issue is to clearly identify and manage the risks, and to keep the price of risk transfer reasonable. Second, the chief issue in risk transfer may not be in prediction, but rather in misalignment of incentives. If the two parties have the same fundamental objectives, then the assumptions underlying bidding will be generally reasonable, and the inevitable unpleasant surprises can be managed by agreement or negotiation. If the relationship is seen as a zero-sum game, however, then both sides have incentives to be unreasonable, both at the bidding stage and in later performance.

Conclusions

The central question of the discussion seems to be: "is there something so uniquely difficult about developing workable rail passenger franchise agreements, or rail freight privatization sale transactions, that we should abandon the idea and continue to rely on the public sector to provide the service because the benefits do not exceed the costs?" This is not to ask whether the experience with

franchising or privatization has been perfect or without problems: of course, it has not. It would also be fair to ask whether the British Government, knowing what it knows now, would repeat the details of the BR privatization experience: clearly they would not do so and, indeed, many costly mistakes have been corrected (though Kain would argue that some even more costly mistakes have been made in the process). Hard won lessons are available.

Freight

Taking the freight issue first, there is a strong argument that privatization of ECMT freight operators would be sensible given the reasonably successful experience worldwide. There is no valid[29] Latin American freight concession that has not done significantly better than the public operator before it in terms of productivity and market growth. Unfortunately, "better" did not necessarily ensure profits, and some concessions are not particularly strong. Moreover, the legal environment in most Latin American countries ensured that both parties violated various parts of the agreements essentially from the outset; so few experiences are dispositive. In Canada, privatization of CN has been a success both for the development of CN and (because of the competitive effect) for Canadian Pacific as well. The performance of the privatized rail freight operators in the U.K. deserves more analysis, but few would rate them as a failure, especially the shippers. The experience in Estonia has been much more problematic, but that is more because of changing and conflicting government policies than private performance.[30] The key question in privatizing ECMT freight operations will obviously be the level and structure of access charges, and the availability of reasonable access vis-à-vis passenger trains at times of commercial significance.

Social versus commercial passenger services

An interesting observation from Peter Kain's paper (Annexes Table 2, p. 108) is that the incidence of problems in the U.K. passenger franchise (measured by whether or not it had to be converted from a commercial risk franchise to a management contract) appears to be at least partly related to the type of service being franchised. Only one of the five intercity passenger franchises had to be converted, and that one (Virgin West Coast) was particularly affected by Railtrack's delays and extra costs in upgrading the West Coast Main Line (WCML). Only two (and a half) of the 11 London commuting services had to be converted, but 8 of the 9 regional/rural franchises either had to be converted or needed extra subsidy. Alexandersson and Hultén make a similar point (p. 172 and 173) in the distinction between the local franchises that were awarded on a gross-cost basis whereas Rikstrafiken awarded the interregional franchises on a net-cost basis.

Kain disagrees strongly with this conclusion, arguing that the primary determinant of problems with the U.K. franchises was the increasingly irrational exuberance that bidders were said to develop as the franchising proceeded: the later in the franchising process, the more likely that a bid was to be excessively optimistic. Moreover, he points out that the most difficult franchises – the regional ones – were generally awarded later, compounding the problem of excessive optimism.

While there is clearly merit to the argument that there may have been a "place in line" effect in the success of the U.K. franchises, especially as the Government did not act to reduce the apparent incentive to bid high and then negotiate if necessary, I believe it is likely that the type of franchise also had an impact. As a result, the U.K., Dutch, German and Swedish experience suggests that the social versus commercial dichotomy may have some validity, with the social services being more appropriate for management contracts or gross-cost franchises whereas the more commercial services may accept the transfer of more commercial risk to the franchisee.[31] If true, one implication for ECMT franchising is that it ought to start first with smaller gross-cost, urban/suburban systems (where, indeed, it has begun with some success in Germany, The Netherlands and Sweden).[32] These systems are sub-

national and smaller, so the threat/counter threat of strategic bidding and renegotiation at the national level may be avoidable or at least manageable through performance penalties. Indeed, such franchises have already been transferred or re-bid without unacceptable trauma. They are clearly social, so the choice of a management contract or a gross-cost franchise versus attempting a significant degree of commercial risk transfer is not terribly controversial.[33]

National responsibilities in relation to local franchises

All major ECMT members have the technical capability (sometimes with initial assistance) to design, award and oversee franchises in their jurisdictions, though in some cases new regional agencies may need to be formed if the franchise is larger than the existing urban governments can manage. Experience with using national financing assistance to cover part of the support costs is also widespread. Unfortunately, most railways either do not collect, or do not share, their cost and revenue information in a format consistent with the urban systems, so local authorities are forced to compare any bids they may receive with an uncertain estimate of what it would cost to leave the system under the control of the national passenger carrier.

Perhaps more important, as the van Dijk and Brenck and Peter papers discuss, is that each of the many local authorities has proceeded on franchising with essentially no ability to learn from the other's experience. While it is clearly true that the needs of each community can be different (heterogeneity in approach is not necessarily bad – Brenck and Peter p. 160), there may well be valuable lessons to be garnered from an analysis of their experience. Since the national governments are paying a significant share of the cost of operating these systems, there would be a clear role for the national governments in financing and disseminating such studies.

Commercial high speed rail concessions and privatisations

At the other end of the spectrum, the high-speed rail passenger systems with mostly exclusive infrastructure seem to be candidates for truly commercial franchising if the access charges are clear and stable, or if the system could be awarded (even privatized) as an integral franchise that pays only for access to the national network in lower-speed, urban areas. High-speed rail services face a full range of competition from autos, air and buses[34], and most high-speed operators claim (without necessarily providing auditable numbers) that they are financially "profitable." Given that most ECMT autos, buses and airlines are now private (more or less), it is not clear why the high-speed rail services could not be operated by private management and investors as well.[35]

Conventional inter-city and regional services

The most problematic area seems to be the conventional intercity and interregional rail passenger services. In the first place, it can be difficult to reach a precise definition of these services because the boundary between "intercity", "long distance suburban", and "regional" can be blurred. As a result, the social rationale for public support is harder to define, but commercial viability is also questionable. This is especially true if the intercity services are to be subjected to competition **in** the market (which was not usually the case with the U.K. intercity franchises). Moreover, a significant part of the ECMT members' intercity rail passenger services (5 to 25% of passenger-km)[36] is international, and the institutional framework for franchising multi-national operation would be complex unless, of course, the international operators can be privatized. We could at least speculate whether the European Commission should reconsider the determination to subject conventional intercity passenger services to open access competition (**in** the market). Governments want to provide at least some support to these services for social reasons. If they were free to package conventional intercity passenger services

for competition **for** the market, assuming they did so under rules that guaranteed fair competition, the feasibility of franchising might be significantly promoted.

Basic conditions for success

Is all of this worth the bother, transaction costs and potential loss of network benefits? It obviously depends on a number of factors. If the current national railway is believed to be efficient and customer responsive in all markets at all levels, then the potential return from franchising is less expansive. Certainly, the countries that undertook franchising did not see their railways as being in the highly efficient category. Are there countries in which the national railway would fit well into the "it ain't broke" category? If so, which country?

If the country has a well-developed private sector in the area of rail engineering and operations, then franchising or privatization has a better chance of success. In practice, private rail passenger operators have emerged rapidly wherever they have had the opportunity to do so, as all of the papers demonstrated. As a result, competition for franchises has generally been adequate, though it has been better in some countries than others, for reasons having to do with size of the franchise, access to the rest of the system, imposed capital requirements, existence of natural entrants such as large bus companies with mass transit passenger skills, experience on international operators in the local market, and the resistance of the existing national operator, among many others.

If the political system is not well suited to identifying clear public choices about objectives and tradeoffs (and the U.S. government is not necessarily in the "well-suited" category when it comes to rail passenger issues – and each reader can assess his or her own government), then neither franchising nor public operation is likely to work really well, but franchising may be harder to implement than otherwise because successful franchising is so directly based on transparency and stable policy.

If the legal system is not good at contract formulation and enforcement, especially in cases of government versus private parties, and especially across transitions in government, then franchising and privatization will always carry a high-risk penalty, as the decision of the Government to renationalize the infrastructure of the Estonian railway is proving. This may be a problem in some of the other new E.U. entrants if attempts to franchise or privatize go too far beyond a stable political consensus.

The appropriate boundary between public and private responsibility obviously depends on the social importance of the service delivered. Even where the service is of vital social significance, however, there still might remain a distinction between government's responsibilities for ensuring the availability of a service at an acceptable cost to the user, as opposed to the actual delivery of the service. This said, there does seem to be a relationship between social significance (or, at least, political visibility) and the potential role of franchises in rail services. The more important the service and the greater degree to which it is supported by the public, the more likely that the appropriate form for franchising (if any) will shift toward either management contracting or gross-cost franchising. The smaller the public role in supporting the service, the more likely that commercial risk can be transferred (or that the service can be privatized).

5. National Experience so Far

Are there any safe conclusions to be drawn so far? Perhaps

Kain (p. 91) rates the Australian commuter franchising experience as wholly negative. Williams, Greig and Wallis, in a 2005 study for the World Bank (p. ix), concluded that "[t]he urban and rural

passenger rail concessions in Victoria proved difficult: they suffered from some design flaws, including attempts to transfer too much risk to the private sector and over-optimistic bidding. As a result, the State government had to step in to re-design and re-negotiate concessions, although we would judge the outcomes to date on balance represent a qualified success." Certainly the experience reveals major mistakes to be avoided in any future attempts at franchising.

Interestingly, apropos the issue of rail freight privatization, Williams, *et al*, concluded that the freight privatizations (not concessions) in Australia had made "… the largely privatized rail freight industry markedly stronger today that at any time over the last few decades …". Equally interesting, they concluded that "[t]he relatively-simple **long-distance** passenger privatization [not franchising!] in Australia appears to have been successful, with improved marketing and profitability, although questions remain about its ability to fund renewal of capital".[37]

The U.K. experience so far is ambiguous. Kain rates it negatively (p. 60). Nash and Smith (p. 9 and p. 29) call franchising a "moderate success" but (like all good economists) call for further analysis. There is evidence in the U.K. case to suggest that gross-cost franchising worked better on the regional franchises whereas the original net-cost approach may have been suitable for the longer haul and more commercial franchises (and, yes, further research on this issue would be appropriate). Evidence from Argentina and Brazil is more positive for net-cost concessioning of urban passenger services when the bidding process and contracts were designed properly.

Brenck and Peter (p. 153) cite savings of 18 to 20% from franchising in Germany (most of which was either gross-cost or mixed contracts for short haul services)[38], Alexandersson and Hultén (p. 183) cite savings of 20 to 30% in Swedish franchising, and van Dijk (p. 132) cites savings of 20 to 50% on competed franchises in the Netherlands by comparison with savings of from 0 to 10% on negotiated franchises.[39]

It deserves mention that the explicit policy in Sweden of allowing the State operator (SJ) to keep the "profitable" services out of the franchising process (and the implicit policy in the Netherlands and Germany of doing the same) may be politically understandable, but is economically curious. In fact, the same benefits of enhanced revenues and reduced costs should be generated from competed franchises, no matter what the financial starting point. Either the government or the passengers (or both) should benefit from franchising, even when the initial service provided by the State operator is "profitable."

There have been relatively few failures in Germany, Sweden and the Netherlands, though there have been some bankruptcies and relinquishment of franchises. Van Dijk found that all of the Dutch franchisees did better than the status quo before franchising (p. 133), and Brenck and Peter (p. 153) found that the German franchisees demonstrated better customer focus than the previous operator. Competition for franchises was adequate in the U.K., Germany and the Netherlands. Competition was more limited in Sweden and in Australia. The reasons for the limited competition in the latter two countries are not clear, and deserve clarification.

Devolution

Taken together, the four E.U. cases raise an interesting issue of whether (or which) franchising should be done at the national rather than local level. The Dutch, German and Swedish cases were based on an explicit policy of devolution of planning and control (and some funding authority) to local governments. As a result these cases emphasized the role of local authorities and circumstances, and focused on the most socially driven rail services. Although the focus on local initiatives clearly limited the learning value because no attempt was made to study and summarize the experiences, it also

permitted a "heterogeneity" of approaches that maximized responsiveness to local needs. The U.K. approach, because it was driven at the national level, ensured a uniformity of approach that may well have been inappropriate for the regional, social services.

Rolling stock

Availability of rolling stock was a common problem in many cases. The basic issue – that short franchises cannot readily finance new rolling stock that has a life well beyond the life of the franchise – is inherent in shorter-term passenger franchises. This can create a problem of "stranded assets," if the franchise is not extended. There were several responses. In the U.K., leasing companies (ROSCOs) were deliberately created to take over the old BR rolling stock and lease it to the franchises. In addition, the ROSCOs have purchased new rolling stock when the demand from franchises increased (and the Strategic Rail Authority intervened to support purchase of some specific new rolling stock in cases where the franchise/ROSCO relationship did not seem to be working effectively). The approach in the Netherlands, Sweden and Germany initially relied on the existing national operator (or its subsidiary) to lease rolling stock from the existing fleet to the new operators. For several reasons (including resistance from the national operator), this did not work well: instead, leasing companies have arisen, some as individual companies, and some as pooled ventures among the local authorities (Alexandersson and Hultén p. 171, and Brenck and Peter, p. 150). The guaranteed residual value approach in Germany also appears to be a good idea. Given the size of the potential market for leasing of passenger equipment, there is clearly a potential for a set of E.U. wide leasing companies to emerge. There is also a valid concern that allowing local authorities to acquire their own rolling stock could lead to proliferation in types and designs and thus to extra costs, interoperability problems and reduced value for the residual asset: national government standards or E.U. wide leasing requirements might temper the problem.

Predatory behaviour

The Swedish (Alexandersson and Hultén p. 167 and 184) and German (Brenck and Peter p. 148 and 149) cases clearly highlight the damage done by predatory behaviour from the existing national carrier (SJ and DB) and Van Dijk (p. 136) suggests that the Dutch National Carrier (NS) was not particularly cooperative with the needs of the local authorities. The effects were felt in a number of ways, including lack of cooperation in leasing rolling stock, predatory competition for franchises (either by unduly low bids for subsidy or abuse of insider information), attempts to use the national carrier's preferential access to infrastructure to the disadvantage of new entries, creation of access charge regimes that would discriminate against new or smaller entries, refusal to provide a schedule of system operating information, attempts to cut linkages between the local systems and the national system and, possibly most damaging, refusal to develop or publish information needed to design franchises and conduct fair competition. To some extent, this was avoided in the U.K. by (in effect) abolishing the national carrier and prohibiting BR groups from bidding for the new franchises.[40] In this context, it is questionable whether the existing carrier should be permitted to compete for new franchises and it is likely that separation of infrastructure from operations will need to be reinforced in cases where, as in Germany, there remains a corporate relationship between the national operator and the infrastructure agency.[41]

NOTES

1. A series of Highway Cost Allocation studies in the U.S. have consistently shown that heavy trucks are paying in Federal use charges between 50 and 80% of the financial costs their use imposes on the Federal portion of the national highway network. Though these heavy trucks may be covering their marginal costs in rural areas, they are covering only a small percentage of their marginal costs in areas where congestion is significant. See, U.S. Department of Transportation, Federal Highway Administration, "1997 Highway Cost Allocation Study Final Report," and the Addendum dated May 2000 that estimated social marginal costs. In addition, of course, inland water navigation in the U.S. is effectively free, with operators paying nothing against the cost of construction and operation of navigable waterways. By comparison, freight railways in the U.S. receive essentially no assistance, either at the Federal or state level.

2. In fact, the British rail system, previously private, was nationalized shortly after the war (1948). Other E.U. railways *La Société Nationale des Chemins de Fer* (SNCF) had been brought under public control between WWI and WWII.

3. Unfortunately, under-funding always leads to poor performance, which actually undercuts the case for more funding (called the "cycle of doom") for railways. Under-funding of infrastructure can doom the operators and vice versa.

4. Because of the frequency with which the references will be used, the conference papers will be cited only by the authors' names and the page number.

5. One of the major themes of the conference, though not explicitly stated, is the relative "success" of public versus private management in railways. It deserves emphasis that the current problems of most of the E.U. railways (and elsewhere) are, without qualification, due to failures in **public** management. This point is often accepted at the beginning of rail reform, but is almost always forgotten later.

6. See for example, Kasai, 2003, in which the objective of breaking up the old unitary JNR, and its unions, into more manageable and less resistant pieces is quite explicit. One could argue that the Deutsche Bahn has followed the same resistance strategy over the past decade.

7. The decision by the British Government to create 25 franchises was influenced by the fact that the old BR internal accounts had been set up that way. Better and more flexible information (as emerged later when the franchises were created) might have led to a different franchise definition in the first place.

8. This burden can be lifted through explicit PSO-type payments for excess costs. This was done in the case of the DB restructuring in the 1990s where the Government took on the excess costs of the existing civil service conditions the old employees enjoyed. In general, though, governments rarely compensate fully for the various political and social burdens they oppose on public enterprises.

9. In 2003/2004, the U.K. regional franchises averaged 1 555 km in total length of lines, 26.4 million passengers, and 813 million passenger-kms. The U.K. Long distance franchises averaged 1 312 km, 15.3 million passengers and 2 539 million passenger-kms. The London franchises averaged 459 km, 68 million passengers and 1 929 million passenger-kms.

10. Some of the franchisees have subsequently purchased rolling stock.

11. More precisely, in the two part charging system employed in the UK, if the regulator increases the fixed charges franchisees pay for using the network the additional costs are passed through to the government but franchisees do bear the cost of any changes to the marginal charges in force themselves.

12. Not a totally unfair outcome since a significant part of Railtrack's failure can be traced to maintenance contracts awarded before Railtrack was privatized and in which Railtrack had no voice. In addition, the initial access charge regime – heavy on fixed charges and light on variable charges – was imposed on Railtrack and had a significant role in creating congestion (Kain p. 80 and p. 119, note 46).

13. It is interesting that governments often capitalize inflows but rarely capitalize outflows.

14. Whether positive or negative, of course, the standard method of comparing flows over time is through calculation of the Net Present Value (NPV).

15. But creating an incentive for the franchisee to overvalue the assets or to run down the assets toward the end of the franchise period.

16. At least half of the gross ton-km and usually more than 25% of the train-km on ECMT railways are freight traffic. See, ECMT 2005 p. 49, Fig. 3.1.

17. In fact, a few years later, the CN proposed to buy the largest U.S. rail freight carrier Burlington Northern Santa Fe Railway (BNSF). The application was deferred by the Surface Transportation Board because of market dominance concerns and subsequently dropped by the CN and BNSF.

18. The winners curse theory suggests that in bidding for a concession some parties will err on the side of underestimating the value of the concession and some err towards overestimating its value. The winning bid is most likely to be from one of the parties overestimating its value (as opposed to one party conceiving of a uniquely profitably way to manage the concession) and that party will find it impossible to manage the business at a profit.

19. More sophisticated approaches, such as Vickrey auctions, have not been employed in railway franchising or privatizations, though the award of the British franchises was apparently initially planned as a Vickrey auction (see Kain p. 69).

20. There were problems with the minimum prices. In Brazil, "cooperation" among some bidders resulted in the single winning bid being one Cruzeiro (about US$1.00) above the publicly stated minimum. In Mexico, the secret minimum was above the winning bid in one case, causing the concession to be re-competed (and ultimately awarded at the original winning price). In general, though they may have indicative use, minimum bids can cause more trouble than they save.

21. When consortia are bidding, the presence of both capital and operating support flows can lead to gaming **within** the consortium, especially when the construction or investment comes at the beginning of the franchise and the operating effort extends over the life of the franchise.

22. Perhaps "flair" and market development are not always critical: many franchisers would be happy with good service as specified for a good price (Kain p. 47). There is, to be fair, dispute about the value of the private sector "flair" or initiative. Kain in effect argues that the entire demand growth in the U.K. franchises was due to factors exogenous to private management. Nash and Smith conclude that there may have been at least some positive demand effect of private management, after correcting for strong economic growth. As acknowledged by these authors, it is always difficult to relate results to any factor within a set of complex and mixed causes.

23. Kain (p. 80) argues that franchising will inevitably be "fatally flawed" if the information and management ability needed to establish the rigor of bids is missing.

24. The purpose is to permit analysis of the basic demand performance parameters and identification of obvious over-exuberance in demand or productivity assumptions.

25. The loss of system benefits in Japan was reduced because the three island railways were not effectively connected to the remainder of the system, and because the borders of the three main-island companies were drawn so that only about 8% of passenger trips crossed a border.

26. It is a critical distinction that can cause subsequent problems. In the case of Railtrack, a commercial function that apparently could be privatized assuming success was soon seen to be a vital social function when it performed poorly.

27. As discussed above, to the extent that GDP growth is an exogenous demand risk, the franchise compensation could be adjusted in accord with GDP changes beyond the range specified in invitations to tender/requests for proposals.

28. This was a problem in Argentina and Brazil, and appears to have been a source of tension in Estonia.

29. The word "valid" excludes the case of the Belgrano Railway in Argentina. The Belgrano "concession" was actually a transfer of control to the labour union.

30. The current Estonian Government opposed the privatization of the Estonian Railway under the prior Government. The Government has recently announced plans to renationalize the railway.

31. The ultimate example of this spectrum would be the **privatization** of the Japanese **passenger** railways.

32. Another implication is that the national, "one size fits all" approach initially adopted in the U.K. was overly rigid. In hindsight, a better approach might have been to treat the regional franchises as gross-cost contracts and the long distance franchises as net-cost franchises. The London franchises probably would need to be analyzed as to which category they would fit, although most of them survived under a net-cost regime. Overall, as often happens, a mixture of approaches might have worked better.

33. Interestingly, also, the **level** of infrastructure access charges is not so important since the government will have to pay anyway, either to the operator or to the infrastructure provider. The **structure**, however, remains important since it determines the way in which the operator uses the system and it influences the financial risk that franchises face.

34. Some countries suppress bus competition for their rail passenger operators in order to promote their national rail passenger operator.

35. The privatization of the large JNR companies is instructive. It was clear that they all had an operating surplus, but also covering the full costs of their infrastructure appeared problematic, especially in relation to the Shinkansen lines. The government's solution was to value the assets at levels that the new owners could afford, leaving behind some of the excess costs with the JR Settlements Corporation, along with the non-rail assets of the old JNR. Even so, of the initial US$337 billion in liabilities of the old JNR, the three privatized JRs took on US$131 billion in obligations, none of which are currently in default. See Thompson 2003, p. 335.

36. ECMT 2005 op cit, p. 50, Figure 3.3.

37. The Australian experience involves infrastructure separations with competitive access, multiple gauges, State involvement as well as Commonwealth involvement, and deals with freight as well as suburban and intercity passenger services. In addition, extension of the system to Darwin was based on a large PPP project.

38. About 36% of the German services were net-cost, 41% were gross-cost and 23% were mixed approaches. All were for short haul or regional services: none were for interregional services. Likewise, none of the Dutch or Australian services analyzed were for interregional services.

39. The savings stated for the Netherlands may be somewhat high, partly because they are early in the process, and partly because there may have been added local costs to offset part of the national savings. In any event, the observation that savings are greater with competition than negotiation is significant.

40. The author's discussions with senior BR officials at the time of franchising indicated their intent to delay franchising and, if the structure adopted permitted it, to use their superior access to skills and information to make life difficult for competitors. Moreover, the experience with the ROSCOs, where insiders were permitted to bid, created at least the political impression (if not the provable fact) of unfairness (Thompson 2004, p. 13).

41. Kain's argument (p. 62), that the existing carrier should be allowed to compete for franchises, is open to challenge. It is possible that, in cases where the management of the existing national carrier is actively promoting the spin-off of some operations (Russia might be an example), there might be an advantage in permitting management teams to compete with outside bidders, so long as all charges are determined at arm's length, and so long as the spin-off is fully executed. On the other hand, in most cases where the national carrier wants to guide the spin-off, or actually opposes it, the potential for the national carrier to convey an unfair and non-transparent advantage to the in-house candidate is too great to permit effective competition.

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OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(75 2007 04 1 P) ISBN 978-92-821-0143-8 – No. 55791 2007

Competitive Tendering of Rail Services

Competitive tendering provides a way to introduce competition to railways whilst preserving an integrated network of services. It has been used for freight railways in some countries but is particularly attractive for passenger networks when subsidised services make competition between trains serving the same routes difficult or impossible to organise.

Governments promote competition in railways to reduce costs, not least to the tax payer, and to improve levels of service to customers. Concessions are also designed to bring much needed private capital into the rail industry. The success of competitive tendering in achieving these outcomes depends critically on the way risks are assigned between the government and private train operators. It also depends on the transparency and durability of the regulatory framework established to protect both the public interest and the interests of concession holders, and on the incentives created by franchise agreements.

This report examines experience to date from around the world in competitively tendering rail services. It seeks to draw lessons for effective design of concessions and regulation from both the successful and less successful cases examined. The work is based on detailed examinations by leading experts of the experience of passenger rail concessions in the United Kingdom, Australia, Germany, Sweden and the Netherlands. It also draws on examples of freight rail concessions in Latin America.

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(75 2007 04 1 P1) ISBN 978-92-821-0143-8

