RAIL REFORM: PRIVATISE, CORPORATISE, FRANCHISE OR CONTRACTS – THE AUSTRALIAN EXPERIENCE

Helen Owens
Commissioner
Productivity Commission
Australia

Introduction

Railways in many countries have undergone significant changes in aspects of their organisational structure, ownership and access arrangements during the 1990s. Widely differing approaches to rail reform are evident.

Reforms have included structural separation (both vertical and horizontal), the introduction of commercial disciplines (corporatisation and privatisation) and arrangements for third party access to track infrastructure.

The wide range of reforms being implemented raises the question of whether one approach is superior to another. This paper argues that because rail networks differ in terms of their economic characteristics and the challenges they face, it is important that individual reform packages be tailored to each network. It draws on work undertaken by the Australian Productivity Commission (PC) in 1999 (PC 1999).

International reforms[1]

Some countries, such as Great Britain (England, Wales and Scotland), adopted a national privatisation policy for their railways. In the UK, 25 passenger service operations were

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* The views expressed in this paper do not necessarily reflect those of the Productivity Commission.

1 Discussion of rail reform in Argentina, Australia, Great Britain, Germany, Sweden and other European countries can be found in World Bank (1996), PC (1999), Kain (1998), Bowers (1996), Jansson and Cardebring (1989) and ECMT (2001).

established under franchising arrangements and the track, signals and stations were sold to the private sector. Structural reform involved both vertical and horizontal separation (box 1).

Box 1 **Definitions relating to structural separation**

Structural separation: businesses are separated into discrete legal entities
Horizontal separation: occurs either by product (freight and passenger services) or by geographic area (interstate, regional and urban railways).
Vertical separation: functional levels are separated (track infrastructure and train operations).
Above track or **train operations:** the provision of rail freight and passenger transport services involving locomotives and other rollingstock.
Below track or **track infrastructure:** physically fixed rail facilities such as track, sleepers, signals, terminals and yards.

Railways in Argentina have been horizontally separated on a geographic basis and individually franchised as vertically integrated operations.

The New Zealand rail system has been privatised although it has remained horizontally and vertically integrated. The publicly-owned Netherlands railways was separated vertically into track infrastructure and train operations, with the latter divided into four commercial business units (passenger, freight, stations, real estate). Some new private entrants have also entered the Dutch market.

Table 1 provides an overview of the structure and ownership of the railways of selected countries[2].

Table 1 **Overview of structure and ownership of overseas railways**

Country	*Structure*	*Train operator*	*Track infrastructure*
Argentina	Horizontally separated and vertically integrated	Franchisees	Government
Canada	Horizontally separated (by function) and vertically integrated with access for passenger services	Various private	Various private
Germany	Horizontal and vertical separation of accounts	Governments and private	Government
Great Britain	Horizontally and vertically separated	Franchisees	Private
Japan	Horizontally separated (by function) and vertically integrated with access for freight services	Franchisees and government freight operator	Government with franchisees having control of track
Netherlands	Horizontally and vertically separated	Government and various private	Government
New Zealand	Horizontally and vertically integrated	Private	Government (leased for nominal rent)
Sweden	Horizontally and vertically separated	Government and various private	Government
United States	Horizontally separated (by function) and vertically integrated with access for passenger services	Various private	Various private

Many teething problems have been evident. A notable example has been Great Britain where major safety problems – as evident from the Hatfield rail crash in October 2000 and a subsequent deterioration in services – led to experts blaming the fragmentation of the system.

2 The PC report (1999) benchmarked Australia's railways with selected systems in Europe, America and Japan. Railways in other Asian countries were not examined.

Australian reforms[3]

The development of railways in Australia reflects the fact that Australia is a federation of states. There is a national (Commonwealth) government and eight State and Territory governments[4].

Historically, railways have been (and many are today) under the jurisdiction of state governments. At the start of the 1990s the Australian rail system was characterised by integrated (state-owned) railways providing passenger and freight services in their respective jurisdictions.

Australian National (AN) railways (owned by the Commonwealth government) provided long distance passenger services on the mainland, freight services across jurisdictions and intrastate freight services in South Australia and Tasmania.

One of the legacies of this historical pattern of development was a degree of parochialism with regard to railways, resulting in a lack of standardisation of rail gauges. Standardisation of the interstate network was only completed as recently as 1995 when the Melbourne to Adelaide broad gauge route was converted to standard gauge.

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[3] Rail reform in Australia is discussed further in PC (1999), Salerian (1999) and Scrafton (2001).

A number of factors drove reform in Australian railways in the 1990s. These included:

- increasing pressure on government budgets to finance railway deficits, subsidies and investment;
- pressure on railway freight rates arising from increasing intermodal competition (due to deregulation of the rail monopoly on the carriage of some commodities and improvements in road transport technology and infrastructure);
- pressure on railway freight rates from increasing competition in downstream markets for some commodities; and
- the introduction of a National Competition Policy[5].

A wide range of different structural, ownership and access arrangements were introduced by the states in the 1990s (table 2). Queensland has retained a single, government-owned corporatised railway that provides freight and passenger services and maintains rollingstock and track infrastructure. New South Wales (NSW), on the other hand, horizontally and vertically separated its State Rail Authority in 1996, initially into four government-owned businesses (with responsibility for urban and non urban passenger services, freight, track and maintenance), of which three were corporatised.

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4 New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania, Northern Territory and Australian Capital Territory.

5 In 1995 the Council of Australian Governments agreed to implement a package of measures to extend competition policies to previously exempt sectors of the economy. A Competition Principles Agreement established principles for structural reform of public monopolies, competitive neutrality between the public and private sectors, prices oversight of government business enterprises, regimes to provide access to essential facilities and reviews of legislation restricting competition.

Table 2 **Structure and ownership of Australian railways**

Jurisdiction	*Structure*	*Train operator*	*Track Infrastructure*
Commonwealth	Vertically separated	Government and various private	Government
NSW	Horizontally and vertically separated	Government and various private [a]	Government
Victoria	Horizontally separated and vertically integrated	Private	Government (lease urban and non urban)
Queensland	Horizontally and vertically integrated (with access for third parties)	Government	Government
Western Australia	Horizontally separated and vertically integrated (with access for third parties)	Government and private	Government (lease non urban)
South Australia	Horizontally separated and vertically integrated	Government and private [a]	Government (lease non urban)
Tasmania	Horizontally and vertically integrated	Private	Private

[a] NSW's FreightCorp has won a major coal haul contract in South Australia and NR is operating intrastate services in NSW.

In other states reforms have led to greater participation by the private sector through franchising of urban and non urban passenger rail services (Victoria) and privatisation of freight operations (Victoria, Western Australia). The Commonwealth government privatised parts of the Australian National (AN) railways and has plans to sell the National Rail Corporation (NRC), which assumed responsibility for AN's interstate freight operations in 1993. The interstate track was transferred to a new Federal authority, the Australian Rail Track Corporation (ARTC). On the East-West Corridor across Australia, new operators now compete directly with the government operator in

niche markets[6]. Overall the number of private railways rose from 6 in 1991 to 19 in 1999.

Similar problems to Great Britain arose in NSW where a series of rail accidents resulted in an inquiry into the safety of the network and, in 2001, the subsequent merging of the businesses responsible for track access and maintenance into a single entity, the Rail Infrastructure Corporation, subject to direction from the Transport Minister.

Until recently attempts to privatise NRC and the NSW freight business (FreightCorp) had stalled. The Commonwealth government has now agreed to link the two businesses before selling them later in 2001.[7] The merged entity would have two divisions – a bulk haulage arm (FreightCorp's business) and an intermodal arm for NRC's interstate freight services. However concerns have been expressed that the twin sale could substantially lessen competition, with the merged entity holding a high proportion of standard gauge rollingstock.

Performance of Australia's railways

Reforms in the 1990s transformed the structure and operations of Australia's railways. There is now greater competition between railways and more private sector participation in some corridors. The Productivity Commission found that there have been significant

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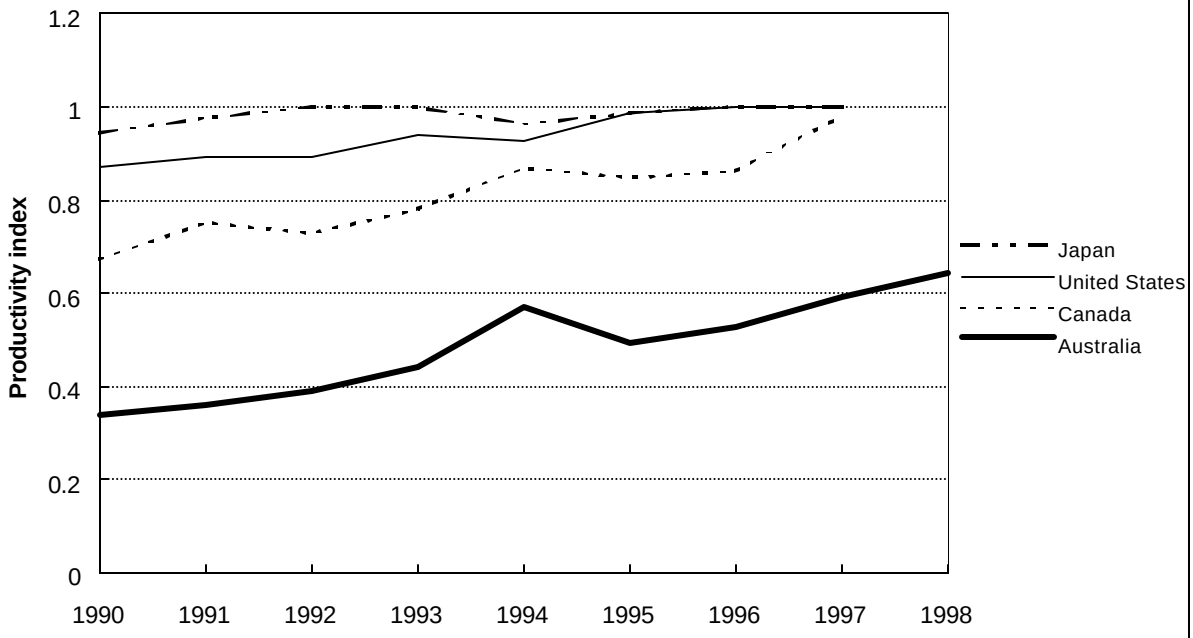
6 The former AN system now consists of two private operators (Australia Southern Railroad, Australian Transport Network), a corporatised government freight operator (NRC), a private passenger train operator (Great Southern Railway) and a government track authority (ARTC).

improvements in the productivity of (government-owned) railways providing freight and passenger services over the period 1989-90 to 1997-98.

Figure 1 indicates that the average annual growth in (total factor) productivity of around 8 per cent was greater than that of Canada, Japan and the United States.

Figure 1 **Productivity levels of freight and passenger systems**



Freight customers benefited from this improvement in productivity. Real freight rates fell 30 per cent between 1990 and 1998. This is comparable with decreases in Canada (33 per cent) and US (26 per cent) between 1990 and 1997.

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7 NRC is 70 per cent owned by the Commonwealth, with minority stakes held by NSW (20 per cent) and Victoria (10 per cent).

However, while Australia has narrowed the gap in productivity, there remains a significant difference. Australia's level of productivity in 1998 was about two thirds of the best performing countries (in 1997).

Some of the difference is due to factors which inherently disadvantage Australia, such as scale of operation. However, technical efficiency (productivity adjusted for the effect of scale) remains 30 per cent below the best performing countries.

In addition, Australia's railways have been a significant drain on the public purse. According to unpublished financial estimates, total public financial support for Australian railways in the period 1990 to 1999 was around $32 billion. Much of this outlay was on railways that had made significant losses. For example, operating losses in NSW and Victoria were almost $7 billion over this period (Scrafton 2001). Scrafton argued that "although early days, there is evidence that the reforms of the 1990s have potential to reduce this commitment from the public purse".

Future reforms

The PC Inquiry report considered that more needed to be done to ensure further productivity gains in Australia. It argued that a greater commercial focus and the harnessing of competitive forces were the keys to ensuring further productivity gains.

While steps were taken to corporatise the remaining government-owned railways, the ongoing problems for these railways reflect the way the corporatisation model has been

implemented. Governments still subject their rail operators to multiple, often conflicting objectives relating to social welfare, regional development and employment. Governments as shareholders face budget constraints and are often reluctant to provide equity funding or allow railways to borrow on their own behalf, even if justified commercially.

Limitations also apply to the corporatisation model itself. Governments are often reluctant to maintain an arm's length relationship with their railways boards because of political and community pressures. Public ownership also subjects governments and taxpayers to considerable commercial risks.

Thus private sector alternatives to government provision have an important role to play in overcoming these problems. Contracting out offers potential benefits if contracts are well specified and competitively tendered. Franchising can generate further gains because franchisees bear revenue risks, so strengthening their incentives to improve service quality and expand the size of the market.

Full privatisation results in firms applying a commercial approach to the provision of services. It provides opportunities to change the leadership and culture of rail enterprises and transfer risk fully to the private sector. The experience with rail privatisation in Australia is encouraging and supports privatising freight railways operating in competitive markets such as NRC and NSW's FreightCorp.[8] Scrafton (2001) has argued

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8 The PC Inquiry report recommended privatising all remaining government – owned freight operations, with special arrangements for the rollingstock on the main coal lines.

that "new entrants in both freight and urban passenger railways are showing signs of turning around formerly declining markets, with commitments to investment, new services and courageous targets". For example, since purchasing Tasrail in 1997, the private owners have increased traffic volumes significantly, winning major contracts to haul logs and containers. Tasrail's revenue increased, while costs fell, returning the business to profitability. The private owners have invested heavily in new sleepers, communications systems and replacing the ageing rollingstock.

Competition can also be relied on to improve peformance further. There are a number of forms competition can take – both 'in' the market and 'for' the market. Much of the rail network is already subject to intermodal competition from road, air or coastal shipping, and/or competition in downstream markets. The different forms of competition are summarised in Box 2.

Box 2 **Definitions relating to competition**

Intermodal competition: competition between rail and other modes of transport, such as road and coastal shipping.
Competition 'for' the market: competition between bidders tendering for the exclusive right to provide a specified service over a given period of time.
Competition 'in' the market: Competition between train operators for the same customers on a given network (rail-on-rail competition).
Competition for train schedules: competing demands by train operators for access to the track infrastructure. This can occur between train operators serving different markets (for example, freight and passenger services); between operators competing for the same customers; or between trains with different origins/destinations wishing to travel over common segments of the network.
Competition in downstream markets: competition in markets which railways serve.

Competition can be facilitated by structural reform and appropriate access arrangements. However no single structure or access regime is appropriate for all networks.

Decision making framework

So how do governments decide which approach is appropriate in reforming their rail networks?

Before embarking on further reform it is important that the objectives of reform are clearly defined by governments. Reform should not be implemented for its own sake. The overarching objective of reform is to have an efficient transport system meeting the freight and transport needs of a country. It is not to raise revenue from the private sector or to increase the aggregate level of service from railways. This implies that the degree of involvement of each transport mode in the transport system should depend on its economic merit. Railways simultaneously compete with, and complement, other modes in providing a seamless transport service.

To ensure railways play an optimal role in an efficient transport system they should operate as efficiently as possible. The sources of improved efficiency in railways – as in other industries – are static and dynamic efficiency gains. Static gains are achieved through one-off improvements to eliminate the sources of x-inefficiency. This can involve making better use of existing labour, equipment and infrastructure. Dynamic efficiency gains involve continual improvement through innovation and, in the case of rail, continually optimising its position in the transport logistics chain.

In most instances rail reform packages implemented across countries have delivered static efficiency gains. To some extent these are the 'easy' gains. But dynamic efficiency is

likely to be more important to rail in the long run. Achieving greater dynamic efficiency is more difficult as it is likely to involve fundamental changes to the culture and operations of railways.

It is also important to understand the differing economic characteristics of individual rail networks. In a few markets, such as the transportation of bulk commodities such as coal, railways are able to exercise market power and extract monopoly rents from users. For other freight operations, railways may generate just sufficient earnings to be commercially viable and support future investment. Urban passenger services tend to be loss making and rely on government subsidies for survival. Interface issues between networks can potentially impede the efficiency of train operations and influence the appropriateness of different policy options.

The forms of competition likely to be effective in each network should also be identified. Competition 'for' the market is typically suited to natural monopoly situations where it is most cost effective to have only one provider of the service (for example, urban passenger networks). In other markets, it may be possible to have multiple train operators competing for the same customers, that is competition 'in' the market (for example, long distance lines). This can encourage market segmentation and product diversity. In other markets, intermodal competition or competition in downstream markets may be sufficient to promote operational efficiency.

Finally, the emphasis in rail reform on promoting various types of competition is underpinned by appropriate structural reform. In essence structural reform involves

breaking up established railways into separate entities, with separation occurring on a geographic, functional (track, rollingstock, maintenance), and/or product (passenger or freight) basis.

Separating train operations from the track (vertical separation) is designed to facilitate competition between train operators for the same customers and competition for train schedules. But vertical separation may not be effective in markets where there is limited scope for more than one operator or there is already effective competition from other modes of transport and/or competition in downstream markets.

Separating railways by function or geography (horizontal separation) can improve the effectiveness of policies and regulatory regimes relating to different rail businesses. Contractual arrangements to meet non-commercial objectives (social, regional or environmental) can also be implemented more readily. It also enables services to be franchised in order to introduce competition 'for' the market through periodic competitive bidding.

The benefits of structural separation need to be balanced against the costs. Potentially these can include loss of economics of scope, interface problems between networks, loss of commercial sustainability, adverse effects on safety and adjustment costs.

Applying the decision making framework

The PC inquiry report applied this decision making framework to the Australian railway system. Based on their economic characteristics, four different types of rail networks can be identified in Australia – urban passenger, regional, main coal lines and the interstate network. For each network the problems to be addressed and the impediments to improved performance differ, requiring differing policy solutions.

Urban rail passenger networks

Urban rail passenger networks exist in the mainland state capital cities of Sydney, Melbourne, Brisbane, Perth and Adelaide. These networks are non-commercial and only exist in their current form because of continued government support. In the markets served by these networks there is strong intermodal competition from private motor vehicles and from alternative public transport modes in some instances. There is no rail on rail competition.

Urban rail passenger networks pose a variety of challenges to governments and their operators. These railways are often criticised for their deficiencies in productive efficiency, large financial deficits and poor service quality. These problems are further compounded by the fact that urban rail passenger services are highly visible to the public, often in need of capital investment and subject to industrial disputes.

Given the loss making nature of these networks, governments ultimately decide which services will be provided and the contribution users make towards the cost of provision. The performance of the urban transport system and these networks can be improved by

assessing the appropriate role of urban rail services in cities (improving allocative efficiency) and then ensuring that specified services are provided at least cost to taxpayers (improving operational efficiency).

Allocative efficiency can be improved through the rigorous application of the purchaser-provider framework. This involves governments considering and deciding on the choice and mix of transport services purchased to promote stated objectives, rather than leaving such decisions to railway management.

Greater operational efficiency can be encouraged by generating competition for the market through contracting or franchising. This approach is preferred to promoting competition between train operators. Urban rail passenger services require that trains run frequently and to a complex timetable. Coordination of services to meet the timetable is likely to be more effectively undertaken by one operator. In addition, the relatively small size of many urban passenger networks in Australia limits the scope for competition between train operators for the same customers.

To facilitate the franchising process and operational efficiency, urban passenger networks should be vertically integrated. Vertical separation is not warranted because there are no benefits to be obtained (through competition between train operators) to offset the costs of separation. In addition, accountability is also likely to be weakened in such a structure. If service standards are not achieved or if accidents occur, a regulator will be required to apportion responsibility and impose sanctions. As noted by Kain (1998), apportioning blame for poor performance may require considerable information and administration on the part of the regulator.

Horizontal separation of urban rail passenger networks from other rail networks can facilitate the application of the purchaser-provider framework by clearly delineating those services requiring government support from other commercial rail operations and networks. In addition, it may be worthwhile to further horizontally separate the networks into two or more geographically based franchises to promote 'yardstick' competition.[9,10]

The benefits of further horizontal separation need to be balanced against potential interface and coordination issues that may occur between operators over shared segments of the network. It has been argued that in some instances the horizontal separation of urban rail passenger networks from other rail networks is impracticable due to the interface issues between them. However, there are many examples both in Australia and overseas of contractual arrangements being used to overcome interface issues. The balance of evidence indicates that the benefits that can be obtained from horizontally separating urban rail passenger networks far outweigh the cost of such contractual arrangements.

Regional networks

Regional networks in Australia refer to those rail lines which extend from the ports and capital cities into the regional areas as well as lines from regional areas that connect into the interstate network. Within the regional networks of New South Wales and Queensland are the main coal lines which are discussed separately in section 3.3. The services provided by regional networks are dominated by the transport of general freight

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9 Yardstick competition involves comparing the performance of organisations with similar objectives operating in separate geographic markets.

and grains. The financial performance of these networks is mixed. Some networks have been able to generate sufficient revenues to earn a commercial return, while others are reliant on government support. In virtually all instances, the freight carried on regional networks is subject to strong intermodal competition, especially from road.

The poorly performing regional networks are confronted with the problems of declining market shares, increasing financial deficits and a running down of existing infrastructure. These problems have arisen primarily due to these railways' inability to meet new competitive challenges, especially from road transport. This stems mainly from government involvement. In many instances, governments have required railways to pursue a range of conflicting objectives, interfered with their day-to-day operations and restricted their access to capital. This has reduced the ability of these railways to meet customer needs at competitive prices, which is further compounded by the continual running down of the infrastructure base. At the same time, governments have deregulated freight carried by road, exposing rail to increasing competition.

Regional networks in Australia need to achieve both static and dynamic efficiency gains if they are to survive in the competitive transport markets in which they operate.

As the impediments to improved performance stem from government involvement, the most effective way of overcoming these impediments is to increase the commercial focus of regional networks. This requires that railway managers have the flexibility to make timely decisions, the ability to form strategic alliances, to access capital, and not face undue restrictions on input choice.

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10 An example of this situation is in Victoria where the Melbourne train system was horizontally separated into two franchises (Bayside Trains and Hillside Trains).

The commercial focus of government-owned railways can be improved through corporatisation. However, as noted earlier, there are often limitations on how well the corporatisation model is applied. In particular, governments are often unable to maintain an arm's length relationship from their railway boards because of political and community pressure.

The limitations of government ownership can be overcome through greater private sector participation by either franchising or full privatisation. Privatisation of rollingstock and a long-term lease on infrastructure are preferred to franchising in this case because it allows for greater commercial focus and increased flexibility.

Alternatively, the performance of regional railways could be improved by encouraging competition between train operators through vertical separation combined with appropriate access arrangements. However, the small volumes of freight carried on regional networks, and the resulting inability to achieve economies of scale, suggest that profitable entry by third party operators is likely to be limited in most instances. Importantly, there is already sufficient competition from other transport modes to encourage improved performance by the incumbent operator. The impediments to improved performance are not a lack of competition but rather an inability to meet existing competitive challenges.

Thus regional railways should be vertically integrated, since vertical separation makes little, if any, contribution to overcoming the main impediments to improved performance.

Regional networks are also particularly suited to horizontal separation. This would clearly delineate those markets where direct government involvement is not required.

Rail management would have the freedom to focus on developing new market opportunities and increase operational efficiency. Appropriate 'light handed' access arrangements can be tailored to ensure that non-competing trains from other networks can gain fair and reasonable access. However, it is expected that access would not be an issue because owners would have incentives to provide access to non-competing trains as the increased traffic flow can increase profits to the track owner or lessee.

Main coal lines

The main coal lines in Australia are defined as the Hunter Valley coal network in New South Wales and those lines centred on the Oakly Creek and South Blackwater regions in Queensland. These networks carry high volumes, are highly profitable and have a natural monopoly in the carriage of almost all coal in these regions (that is there is little competition from road or rail-on-rail competition).

Unlike other rail networks in Australia, the main coal lines have maintained their market share in the transport of coal and investment has been easily justified on a strictly commercial basis. In this instance, the problems associated with the main coal lines are those of market power and the extraction of monopoly rents from mining companies, as well inefficient operations.

There are two main reform packages the state governments could implement to control the existence of market power on the main coal lines. First, competition between train operators could be encouraged, with monopoly pricing of the track infrastructure addressed through access regulation. Alternatively, franchising of a vertically integrated

network may be used to promote competition 'for' the market by awarding contracts for the right to supply rail services (track and train). Tenders could be awarded on the basis of the lowest total cost of service provision over a relevant period. Track and rollingstock could be leased to the franchisee and access conditions incorporated into franchise agreements.

The appeal of the first approach is that competition between train operators can control monopoly pricing on the part of operators, while vertical separation can increase the transparency of access price regulation. However, there are some practical problems with this approach. In the first instance, sunk costs associated with investing in locomotives and wagons can act as a substantial barrier to entry to potential new entrants. This problem is compounded by the fact that the rollingstock used to haul coal is specific to the haulage of bulk commodities (especially the wagons), reducing its transferability to other rail markets.

In addition, even if effective competition between train operators could be achieved, the issue of monopoly pricing still exists in track infrastructure. The control of such monopoly power requires complex regulation.

Franchising has the advantages that the bidding process can be designed to facilitate the transfer of assets (especially the rollingstock), removing a substantial barrier to entry and making the market more contestable (OECD 1999). The franchisee has commercial incentives to obtain dynamic efficiencies and lower costs by improving the role of railways in the transport logistics chain between the mines and port(s). In addition, franchising reduces the need for prescriptive access regulation.

However, franchising is not a perfect or costless solution to controlling monopoly pricing. The OECD (1999) identified three potential difficulties with the franchising of rail services, including: the possibility of uncompetitive bidding when there are insufficient bidders; the difficulties of choosing between bids that offer different packages; and the specification and administration of contracts.

On balance, the economic characteristics of the main coal lines suggest that a process of franchising through competitive tendering is likely to be superior to facilitating rail on rail competition. Government involvement continues under both approaches through access regulation or the franchise process and agreements. However, it is less certain that vertical separation and access regulation will lead to new operators entering the market owing to the sunk costs associated with the rollingstock required.

The franchising process can be designed to overcome this problem, making the market more contestable to potential operators.

To facilitate the franchising process, the main coal lines could be horizontally separated from other networks. The isolation of the network, together with transparent information on the costs and revenues of the franchise would provide confidence to coal companies that monopoly pricing practices had been eliminated.

Interstate network

The interstate network can be broadly defined as the standard gauge track linking all mainland state capital cities. The markets served by the interstate network are varied, including freight (generally containerised) and interstate passenger services.

The interstate network has traditionally been unable to operate profitably, though it is generally accepted that there is scope for it to do so. The National Rail Corporation, which carries freight on the interstate network, has yet to post an operating profit.[11] There is strong intermodal competition (from road and coastal shipping) in almost all markets served by the interstate network. The key feature that differentiates the interstate network from regional networks is that for the former there are multiple network owners, responsible for allocating train schedules and undertaking investment.

Currently the ARTC's responsibilities for the interstate networks are limited to the track that it owns (that is in South Australia and parts of NSW, Western Australia and Northern Territory) or manages (Victoria). Operators face significant costs in negotiating access and train schedules with numerous owners.[12]

The interstate network initially lost considerable market share to road, in both the transport of non-bulk freight and interstate passengers[13]. The operating deficits of the network have discouraged investment, resulting in a deterioration of the infrastructure, further eroding the competitive position of railways. The underlying causes of these problems are two-fold. First, government ownership and incentive arrangements have impeded the ability of train operators to improve operational efficiency and achieve dynamic efficiency gains through market segmentation and better integration into the transport logistics chain. Second, the multiplicity of network managers imposes costs on

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11 NR's shareholders are the Commonwealth, New South Wales and Victorian Governments.

12 Currently four authorities are responsible for the administration of access, five authorities have a role in allocating train schedules and five authorities undertake investment in the network

13 Rail market share of freight traffic on the East-West Corridor has started to rise again (from 65.2% in 1995-96 to 77% in 1999-00), in part reflecting the recent growth in rail on rail competition from niche private operators (ARTC 2001).

train operators in negotiating train schedules and access charges. This impedes the efficient allocation of train schedules, overall use of the network and investment.

These impediments can in part be overcome through the proposed privatisation of NR and encouragement of more rail on rail competition from private niche operators. To overcome the problems associated with multiple owners of the track infrastructure, integrated management of the network is required. One approach is to adopt a single network manager which manages the operation of the interstate track on behalf of both train operators and track owners. An access regime could allow for train schedules to be allocated by auctioning or other market trading methods. This would maximise the economic value of the network by allocating train schedules to those operators that valued them the highest.

To implement the integrated management of the network successfully, train operations need to be vertically separated from the track infrastructure. This is to avoid any conflict of interest or difficulties that may arise from one party both owning one segment of the network and providing train services in competition with other operators.

Implications for existing arrangements

The differentiated approach described above has different implications in each Australian jurisdiction because of differences in the characteristics of their railways. The potential for further reform exists in them all.

The recommended reform packages have the greatest implications for Queensland. Currently a single, vertically integrated, government-owned railway, it has regional (including coal) freight networks, an urban passenger network and provides non-urban passenger services. The Queensland Government would need to consider whether its rail system would benefit from reforms to its structure and/or ownership arrangements. In the first instance, it could separate, and franchise, its two major coal hauling railways (centred on the Goonyella and Blackwater regions) from the rest of the network. In the next stage it could consider horizontally separating (and franchising) its urban network from the remainder of the network and also privatising Queensland Rail's remaining freight operations.

New South Wales could also adopt a similar approach for its Hunter Valley coal freight railways to ensure that progress in improving their performance continues. The privatisation of FreightCorp is long overdue.

Consideration could also be given to going further and reintegrate the track and operations. It could adopt the Victorian model under which the privatisation of FreightCorp would involve a long term lease over the non-metropolitan intrastate track (with appropriate access arrangements). All passenger services could be franchised. The franchisees would buy (or lease) the rollingstock and lease the track from the government.

Further reform of the interstate network has particular implications for the Commonwealth, New South Wales, and Western Australian Governments. They are

currently owners of parts of the network and have separate access regimes. The single network manager approach would be more effective if the interstate network is vertically separated and the manager did not own the track infrastructure.

This approach would allow coordinated management and promote competition over the entire interstate network, generating significant benefits and give rail an opportunity to strengthen its competitive position on this important transport corridor.

The PC's recommended approach could also have implications for some networks in Asian countries, with particular relevance to European railways, especially in Eastern Europe.

The European network traverses many countries in the same way as Australia's interstate network traverses a number of states. It is used heavily by both freight and passenger trains. This suggests that the approach suggested for Australia's interstate network – involving vertical separation and a single network manager – could be relevant in this context.

Like Australia's regional railways, Eastern Europe railways are often heavily involved in moving general and bulk freight to ports. Where there is already sufficient intermodal competition, consideration could be given to greater private sector participation in vertically integrated, horizontally separated railways.

Conclusion

The overarching objective of rail reform should be to improve the efficiency of a country's transport system. It should not be seen as a means of involving the private sector to compensate for inadequate government investment in loss making railways.

Implementation of a common reform package is unlikely to overcome the impediments to improved performance in all markets. Individualised approaches need to be developed on a case-by-case basis for each network type. In Australia the appropriate structural and ownership arrangements will differ for long distance (interstate), regional and urban passenger networks.

Each railway has different characteristics, depending on the strength of intermodal competition, the degree of market power, the degree of competition in downstream markets and traffic density.

Tradeoffs are inevitable. While vertical separation may assist in promoting competition and reducing monopoly rents, it may result in a lack of accountability, major coordination problems and significant safety concerns, as evidenced in Great Britain and New South Wales. The implementation of strong access regulation to promote competition may diminish incentives for business to invest in maintaining and upgrading the rail infrastructure. Horizontal separation of networks may promote viable businesses but interface issues between networks may arise.

Systematic analysis of structural reform and ownership options would involve assessing the relevance and likely magnitude of the associated costs and benefits.

There can be no ‘one size fits all’ approach to rail reform. Care must be taken to ensure that the reform strategy adopted is relevant to the network type and is only implemented when the gains exceed the costs.

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