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## 10 Competitive neutrality

**A lack of competitive neutrality can have adverse effects on the efficiency of the whole transport system, the performance of the rail industry, and private sector participation in the rail transport market. Corporatisation does not appear to have fully neutralised the competitive advantages and disadvantages between government and private railways. Achieving an efficient land transport system requires more than increasing the commercial focus of railways. It requires reform to road provision and pricing to address competitive neutrality between rail and road.**

The inquiry's terms of reference require the Commission to examine the implications for rail transport services and the economy generally of regulations, charges and arrangements affecting competing and complementary modes of transport.

In this chapter, competitive neutrality between government and private enterprises in the rail transport market is discussed (section 10.1). The key issues regarding competitive neutrality between rail and road transport are examined (section 10.2) and different approaches to planning and investment in land transport infrastructure are discussed (section 10.3).

### 10.1 Competitive neutrality between rail operators

Fostering competitive neutrality is a core element of the Competition Principles Agreement (CPA). It requires that government enterprises do not have any net competitive advantages over private sector rivals simply as a result of public ownership. As the National Competition Council (NCC) stated:

In essence, competitive neutrality involves the application to public enterprises of the taxes, incentives and regulations that private businesses face. This allows the two sectors to compete for resources on an equal footing and encourages efficient operation of public enterprises. The underlying aim is to ensure that the community's resources are used as efficiently as possible. (sub. 79, p. 12)

Governments agreed, under the CPA, to introduce competitive neutrality principles to their significant business activities which include railways. The CPA (clause 3)

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identified four areas of potential net competitive advantages possessed by government enterprises.<sup>1</sup>

Competitive neutrality has been pursued through corporatisation for most government-owned rail authorities. As discussed in chapter 7, this involves:

- levying the full range of taxes on a public enterprise;
- imposing a rate of return requirement and debt guarantee fees; and
- introducing pricing which better reflects costs of provision.

A number of participants considered that, despite corporatisation, government-owned railways do not compete for business on a competitively neutral basis with private operators. Participants' concerns focused on the alleged ability of government-owned railways to charge low, and possibly uncommercial, freight rates and to hoard physical assets such as rollingstock and terminals.

Government-owned railways have the potential to offer lower freight rates than their private sector counterparts where the requirement to make a commercial return is not binding. In contrast, private enterprises cannot continue to earn returns lower than that required by private owners and must price their services on a commercial basis — that is, full cost recovery including an appropriate return on capital.

The National Rail Corporation (NRC) and Rail Access Corporation (RAC) identified competitive neutrality risks in operations supported by community service obligations (CSOs). The RAC noted that, in the absence of a contestable process for CSO supported operations, the information gap between the rail operator and budget sector agencies could result in excess levels of CSO payments (sub. DR102). This may allow the CSO supported operator to win business from commercial operators by using the excess to cross-subsidise its other activities.

Although the following claims are untested, they indicate that the private sector perceives a lack of competitive neutrality.

Several participants have alleged that government-owned enterprises engage in uncommercial pricing of rail services. Capricorn Capital Limited and the Austrac Group (Austrac) contended that major government-owned rail enterprises are apparently operating without commercial discipline and possess an ability to price below economic cost (sub. 56).

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<sup>1</sup> These include exemption from taxation liability, access to capital at concessional rates, exemption from aspects of business regulation, and pricing policy which does not take into account all of the costs of production (Willett 1996).

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Similarly, Australia Southern Railroad (ASR) alleged that NRC:

... was allowed to bid for the contract to provide locomotives and drivers for the concurrently privatized Great Southern Railway. National Rail has never shown a profit, and at the rates bid for the Great Southern Railway business we doubt if there is a profit motive in the organization. (sub. 45, p. 1)<sup>2</sup>

Austrac contended that ‘sub-economic returns resulting from freight rates set by NRC undermine the capability of start-ups like Austrac to raise equity’ (sub. 56, p. 4).

Moreover, ASR has claimed that FreightCorp — an enterprise owned by the NSW Government — offered uncommercial freight rates to win a major coal haulage contract in South Australia. ASR previously held the contract with Flinders Power to freight coal from the Leigh Creek coal fields to its Port Augusta power station. In its bid for the new contract, ASR had apparently offered Flinders Power a freight rate less than half the rate charged by the former Australian National (*Australian Financial Review*, 11 December 1998, p. 20).

Another private operator, Great Northern Rail Services (GNRS), has alleged anti-competitive behaviour by a publicly-owned rival. GNRS stated that ‘anti-competitive actions by the present corporatised but government owned V/Line Freight have significantly impacted on GNR’s operations and opportunities’ (sub. 46, p. 5).<sup>3</sup>

Some participants expressed concerns about the retention of surplus assets by public rail operators. Austrac stated that government-owned railways have ‘control over unnecessary quantities of locomotives and rollingstock and essential supporting assets including terminals’ (sub. 56, p. 4).

In a recent survey of private rail operators, a significant proportion of the respondents considered that competing with government-owned operators was a major barrier to private investment (DTRS 1999). Respondents commented on a range of practices allegedly employed by government-owned competitors including predatory pricing, causing delays in obtaining access, and overinvestment in and hoarding of rollingstock.

As noted above, these claims about a lack of competitive neutrality are untested. However, it is worth considering the possible effects on private operators of

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<sup>2</sup> This claim has been disputed. NRC indicated that, according to Great Southern Railway, it had won the ‘hook and pull’ contract in November 1997 with a quoted price higher than that offered by one or more other tenderers on the basis of superior service quality (sub. DR117).

<sup>3</sup> The Victorian Government sold V/Line Freight to the private sector in February 1999.

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competition with government-owned railways which may possess advantages due to ownership. Where public enterprises operate in a competitive market but adopt uncommercial practices, this could have several important consequences. Such practices may:

- reduce the market share and viability of existing private operators;
- dampen confidence, create uncertainty and increase risks, combining to lower private sector investment; and
- deter the entry of new private operators.

A lack of competitive neutrality (or even the perception of unfair competition) would generally inhibit private sector participation in the rail industry. There is also a cost to the community where such uncommercial practices are supported by government subsidies or lower dividends. In these cases, achieving competitive neutrality would release or contribute to budgetary resources for application to more socially beneficial purposes.

Under the CPA, governments are required to establish mechanisms whereby businesses can lodge complaints that competitive neutrality is not being implemented appropriately by government-owned enterprises. Mechanisms for handling complaints now operate in all jurisdictions (NCC 1998a). A recent case is outlined in box 10.1. Use of these mechanisms by private operators with genuine complaints can maintain pressure on governments to pursue reforms in this area.

That said, the achievement of competitive neutrality hinges on the issues of governance, incentives and disciplines under public ownership. Most jurisdictions have corporatised their rail enterprises. However, the Commission questions the effectiveness of some of these arrangements (chapter 7). While not a requirement of the CPA, seeking private sector operation of government-owned assets — through competitive contracting out or franchising — or private ownership and operation are alternative solutions to competitive neutrality issues. Full privatisation would align objectives, incentives and disciplines between firms competing in the rail transport market.

***Reforms under corporatisation have the potential to place government-owned railways on a commercial footing, but in practice they appear insufficient to achieve competitive neutrality in the rail transport market.***

***Although not required by the Competition Principles Agreement, private sector provision of rail services — whether through competitive contracting out, franchising or privatisation — is a more effective means of aligning commercial practices between competing rail operators.***

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**Box 10.1 Competitive neutrality complaints — the Coachtrans case**

Coachtrans Australia (Coachtrans) lodged a complaint with the Queensland Competition Authority (QCA) against Queensland Rail (QR) alleging a breach of competitive neutrality, misuse of monopoly powers and severe market distortion.

In February 1996, QR introduced a rail passenger transport service from Brisbane to Helensvale. QR charged \$7.20 per single adult fare for this service. At the time QR introduced the service, Coachtrans provided a bus service from Brisbane to Helensvale charging \$11.00 per single adult fare.

Coachtrans alleged that the principle of competitive neutrality had been breached by the prices QR was charging for the Brisbane to Gold Coast passenger rail service and the procedural and regulatory advantages enjoyed by QR. Coachtrans advised the QCA that, as a result of these alleged advantages, its viability was diminished and that its parent company was underwriting losses pending resolution of the complaint.

The QCA found that QR has a competitive advantage over Coachtrans in respect of prices in the Brisbane to Gold Coast transport passenger market. It noted that QR is in receipt of substantial subsidies from the Queensland Government and is able to set prices which are below its operating costs and which make no return on its capital costs. It noted that Coachtrans does not receive subsidies or other assistance from the Queensland Government and is required to meet all its costs to remain viable over the longer term. The QCA also found that QR does not enjoy any procedural or regulatory advantage in respect of Brisbane to Gold Coast services.

While accepting the QCA's decision on procedural and regulatory matters, the Queensland Government rejected its decision that there has been a breach of the principle of competitive neutrality in relation to the fares charged by QR for its Brisbane to Gold Coast services. The Government considered that the information available to it was not sufficiently conclusive to support the QCA decision. This case is now the subject of legal action.

*Sources: QCA 1998; Queensland Government Gazette, August 1998, p. 1834.*

## **10.2 Competitive neutrality across rail and road transport**

Railways compete with road, sea and air transport for freight and passengers. Modal shares vary between market segments and over time (chapter 2). The potential for modal substitution depends largely on the responsiveness of transport customers to:

- prices (freight rates or passenger fares); and
- service characteristics (such as punctuality, reliability, frequency, transit time and the capacity to carry specific commodities).

In turn, prices and service characteristics are influenced by a number of factors including managerial decisions, technological developments, competitive pressures as well as government policies. There may also be interaction between these factors.

The concept of competitive neutrality can be applied more broadly to the market for transport services (encompassing rail, road, sea and air transport services). Competitive neutrality issues arise regarding government policies applying to different modes where they favour one mode over others. In this broader sense, a lack of competitive neutrality need not necessarily stem solely from government ownership of transport enterprises, but rather the policy framework and processes.

Participants accorded particular significance to the issue of competitive neutrality in the land transport market — that is, rail and road transport. Laird indicated that competitive neutrality with road is an issue demanding attention (sub. 4). Other participants concurred with this view. The NSW Government noted that:

... road/rail competitive neutrality is a fundamental land transport issue that needs to be addressed nationally especially as a critical area of cross modal competition is in interstate line haul. (sub. DR128, p. 39)

Key government policies and arrangements which could affect competitive neutrality in the land transport market include investment, taxes and charges, as well as access regimes, safety regulation and operating procedures and standards (table 10.1).

**Table 10.1 Government policies potentially affecting competitive neutrality between rail and road transport**

<i>Policy area</i>	<i>Specific policy or process</i>
Infrastructure investment	<ul style="list-style-type: none"> <li>• Planning framework</li> <li>• Investment appraisal</li> <li>• Budgetary processes</li> </ul>
Taxes and government charges	<ul style="list-style-type: none"> <li>• Diesel fuel excise</li> <li>• Road user charges</li> </ul>
Access, regulations and procedures	<ul style="list-style-type: none"> <li>• Access regimes</li> <li>• Safety regulation</li> <li>• Operating procedures and standards</li> </ul>

Participants pointed to differences and inconsistencies in access regimes, safety regulation and operating procedures facing railways operating across State borders. In contrast, there have been significant reforms creating consistency in charges and regulations applying to heavy vehicles in the road transport sector. (Access regimes

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are discussed in chapter 8 and issues regarding safety regulation and operating procedures and standards within the rail industry are examined in chapter 9.)

Railways and road transport operators could face greater competitive pressures from sea transport (especially in the long-haul freight market) if reforms to coastal shipping and the waterfront were further progressed. The Victorian Government commented on the ‘rent-collecting tradition’ in the maritime industry, pointing to the large number of small ports in Australia given its population and share in world trade as one area for future reform (trans., p. 944).

### **Investment in road and rail systems**

Governments have been primarily responsible for capital expenditure on rail and road infrastructure.<sup>4</sup> However, many participants (Australasian Railway Association (ARA), ASR, Campbelltown and Districts Commuter Association, FreightCorp, Laird and Healthy Cities Illawarra) expressed concerns over the comparative levels of government expenditure on the rail network and the road system. ASR claimed that:

... governments in Australia created and built the railroads as a publicly owned enterprise to produce an efficient transportation system. Since that start, however, the governments have invested heavily in the public highway system and almost ignored the railways. Now they cannot understand why the railways have trouble competing. (sub. 45, p. 2)

The Local Government and Shires Associations of New South Wales (NSWLGSA) stated that ‘the ability of the rail transport sector to be competitive has been constrained in recent times by lack of investment’ (sub. 71, p. 4).

The Campbelltown and Districts Commuter Association pointed to the Adelaide Hills as an example of relative investment in road and rail infrastructure:

The hundred or so million dollars being spent on a few kilometres of road to remove bends, make tunnels and fill in gorges to enable a reduction in road length by a kilometre and save a few minutes is by contrast a ‘gold plated project’ compared with the nearby rail line. I understand that freight trains take 3 hours to travel about 100 kilometres. A figure of \$80 million was suggested to realign the track to fast freight standard and remove 2 hours of transit time. (sub. 11, p. 10)

Although this subsection focuses on investment, overall public sector expenditure on these modes also includes spending on operations and maintenance. Further, for a range of reasons, these expenditures (or costs) may not be fully recovered from

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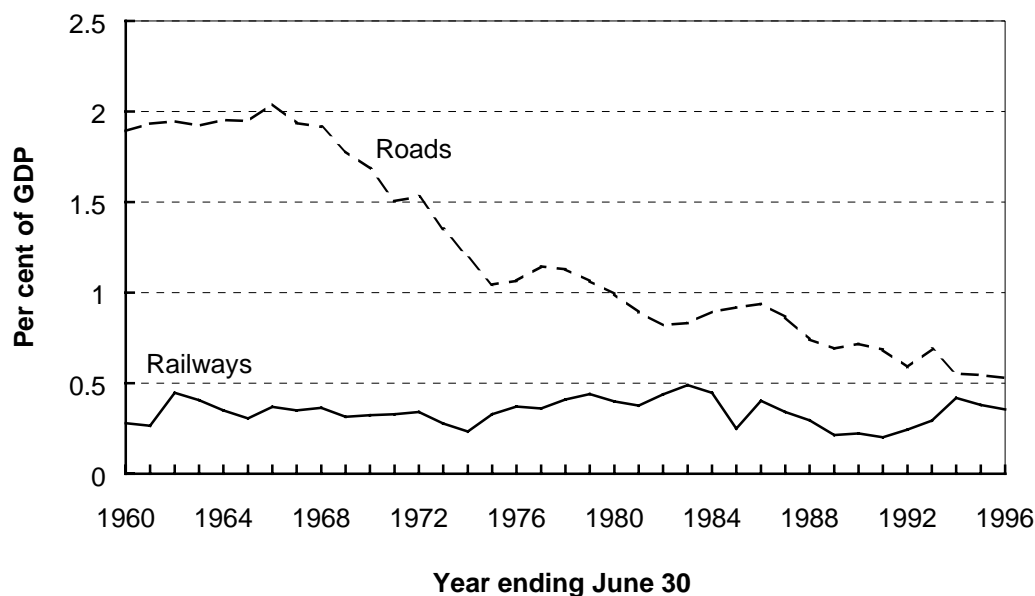
<sup>4</sup> As owners of public rail enterprises, governments have also had responsibility for investing in rollingstock.

users. In this regard, several participants (the Commonwealth Department of Transport and Regional Services (DTRS), the Victorian Government and the Road Transport Forum) noted the large subsidies provided to government-owned railways.

### *Capital expenditure and asset condition*

There has been a significant disparity in investment funds allocated by the public sector to rail and road systems in recent decades. The differential between the modes declined substantially in the late 1960s and 1970s (figure 10.1). It averaged about half a percentage point of gross domestic product (GDP) each year in the 1980s. The differential has further narrowed in the mid 1990s.

**Figure 10.1 Public sector investment in land transport infrastructure, Australia, per cent of GDP <sup>a,b,c</sup>, 1959-60 to 1995-96**



<sup>a</sup> Gross fixed capital expenditure as defined by the ABS. <sup>b</sup> The public sector comprises the general government sector and the public trading enterprise sector including government-owned railways. <sup>c</sup> The data include Commonwealth and State/local sector investment.

*Data source:* ABS (unpublished constant price estimates; *National Income, Expenditure and Product*, Cat. no. 5206.0).

According to the Commonwealth Department of Finance and Administration, Commonwealth funding of roads over the last 20 years has been about eight times the level of Commonwealth funding of railways. From 1977-78 to 1996-97, the Commonwealth spent \$3.9 billion (in 1996-97 prices) on Commonwealth rail



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entities and infrastructure. Over the same period, Commonwealth funding of roads was \$31.5 billion (sub. 65).

The large disparity in road and rail investment has coincided with road transport capturing an increasing share of the domestic freight and passenger markets (chapter 2). However, causation may run in two directions. Increased investment in roads may have encouraged modal substitution.<sup>5</sup> Alternatively, growing road use (due to factors such as inter-suburban travel and ‘just in time’ logistics requirements) may have led governments to invest more in their road systems.

The capacity and quality of the infrastructure network — be it road or rail — is a function of investment and maintenance spending. But, analysis of comparative levels of expenditure on rail and road systems is not sufficient to establish whether under or overinvestment has occurred in these transport modes. Investment may be driven by factors which differ in importance across modes and time, so investment levels need not be similar. DTRS noted that relative investment levels reflect factors such as the size and maturity of the respective networks:

The rail network was largely developed before the advent of heavy vehicles on roads. Consequently the rail network represents a mature network with the focus of works on maintenance and realignments, while the road network has until recently been under development to meet current demands ... (sub. DR125, p. 5)

Moreover, the Commonwealth Government’s funding of roads and railways reflects its responsibilities. Unlike the National Highway System where the Commonwealth Government is responsible for construction and maintenance, about half of the interstate rail track is currently owned by State Governments.

That said, the Commonwealth Government has directed significant funds towards the upgrading of the National Highway System since 1974-75.<sup>6</sup> Upgrading and augmentation of the system has included additional lanes, wider lanes, town bypasses, bridge strengthening and new roads. In an evaluation of the Sydney–Melbourne transport corridor, the Bureau of Transport and Communications Economics (BTCE) concluded that:

The ‘level of service’ provided by the Hume Highway, which describes such operational characteristics as travel time, comfort and convenience, safety, vehicle operation and community effects, is assessed to be relatively high for most of the highway. (BTCE 1993, p. 56)

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<sup>5</sup> The Allen Consulting Group (1993) found that investment in roads leads to a substitution away from other forms of transport — particularly rail — in favour of road transport (sub. 17).

<sup>6</sup> Laird (1996) estimated that grants for upgrading and maintaining the National Highway System amounted to about \$12.6 billion (1994 dollars) between 1974-75 and 1993-94 or around 40 per cent of Commonwealth road grants over this period.

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Improvements in the capacity and quality of the interstate road system in turn has raised the productivity of road transport operators. For example, with the completion of major town bypasses (Mittagong, Goulburn and Yass), gains in efficiency can be expected through the reductions in vehicle operating costs from shorter travel distance and less steep grades (BTCE 1993).

In the case of railways, many participants commented on the poor state of the infrastructure (box 10.2). Of particular concern was the condition and capacity of the interstate track. Another major problem was route congestion in the Sydney metropolitan area (box 10.3).

Recent parliamentary and commissioned reports have presented considerable evidence on the inadequacy of rail infrastructure.

- The House of Representatives Standing Committee on Communications, Transport and Microeconomic Reform (HORSCCTMR) noted that it had received evidence from rail operators, industry groups and private sector interests on the serious inadequacy of existing infrastructure in many areas of the interstate and intrastate rail networks (HORSCCTMR 1998b).
- In a report commissioned by the Australian Transport Council, Maunsell (1998) identified priority areas which require major capital expenditure including crossing loop and gradient improvements, areas with axle load and speed restrictions, extending double stack clearances throughout the interstate network, and improving capacity for high demand routes.
- In a report for the Commonwealth Department of Transport and Regional Development and the Australian Rail Track Corporation (ARTC), Booz-Allen & Hamilton (1998) identified a number of high priority projects on the interstate network. High benefit–cost ratios were estimated for projects which would reduce route congestion in the Sydney area and for passing loops throughout the network.

Importantly, low quality track has adverse consequences for rail costs and productivity. This is manifested in terms of slower train speeds, lighter axle loads, longer transit times, higher crew costs and higher fuel costs. Inadequate track capacity also impinges on rail performance. The lack of passing loops constrains traffic along a given line and short passing loops limit train length. Such deficiencies are likely to undermine the ability of railways to compete with road transport operators and contribute to modal substitution.

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### Box 10.2 **Participants' comments on deficiencies in rail infrastructure**

A significant number of submissions pointed to problems with the existing rail infrastructure. The Australian Shipping Federation stated that:

Many of the vital transport networks ... [including the standard gauge network], both interstate and intercity, are in dire need of considerable upgrading ... (sub. 18, p. 2)

The Australian Wheat Board contended that:

At an infrastructure level, the lack of investment on track and signals constitute one of the main factors which has resulted in slow track speeds and low axle load capacities. (sub. 32, p. 14)

According to the Campbelltown and Districts Commuter Association:

There are 63 places that have extreme grade and curvature occurring together between Brisbane and Melbourne ... This wastes fuel, increases wheel wear, rail wear, distance and time. (sub. 11, p. 7)

The CRT Group stated that:

The infrastructure is sub-standard and is still after several years subject to severe speed restrictions and passing loop and signalling inconsistencies. (sub. 20, p. 4)

Laird claimed that:

The Adelaide–Melbourne–Sydney–Brisbane corridors are currently poor. This is due to various factors including steep ruling grades and poor track alignment with many tight radius curves ... and leads to higher unit operating and maintenance costs. (sub. 4, p. 12)

The NRC commented that:

The poor quality of interstate rail infrastructure is a legacy of many decades of neglect by State governments, and has many aspects ... [including obsolete alignments, obsolete signalling and communications equipment, short crossing loops, inadequate height clearances, inadequate track strength and poor quality track structure]. (sub. 53, pp. 12-13)

Specialized Container Transport noted that:

Most operators have expressed their concerns regarding ... the poor track condition, the lack of long passing loops, inconsistent and prohibitive speed limits, the inability to double stack containers from Melbourne and the far from world's best practice maximum axle weights. (sub. 37, p. 1)

According to the Railway Technical Society of Australasia:

... the network has numerous speed-weight restrictions due to: wooden sleepers in Victoria; light weight rail on the Melbourne to Albury standard gauge track; a curve for every kilometre plus steep ruling grades from Albury to Sydney; poor alignment from Sydney to Brisbane ... (sub. DR93, p. 2)

The quality of the track between Melbourne and Adelaide raised concerns among participants including the ARA, Patrick, People for Public Transport and Wimmera-Mallee Rail Services. Patrick stated that:

... although now standard gauge, the track condition varies from poor to good through the corridor with some sections still under speed restrictions. This extends the transit time and adds cost to each journey. (sub. 63, attach. 1, p. 9)

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### Box 10.3    **Participants' comments on route congestion in Sydney**

Many participants expressed their concern about route congestion in Sydney and its detrimental impacts. The Victorian Government noted that 'moving freight in and out of Sydney by sea and rail is a big problem' (trans., p. 949) and more generally:

It [Sydney] is the crucible of Australia's transport disaster. There are many bad things happening outside Sydney, but they're all happening in spades in Sydney. (trans., p. 949)

It also argued that:

... if they [freight and passengers] can't get in and out of Sydney the whole nation pays for that. It's a national problem needing national leadership, and we're seeing precious little of it at the present time. (trans., p. 950)

The Association of Mine Related Councils stated that:

In the Sydney metropolitan area – a by-pass to the Chullora freight route is critical. The inadequacies of the present system were demonstrated during the period of the Royal Easter Show in 1998 at the Homebush facilities. (sub. 13, p. 2)

According to the ARTC:

The difficulty of rail congestion throughout the Sydney metropolitan area continues to be a major impediment to the efficient movement of freight on the North-South corridor (Brisbane-Sydney-Melbourne) ... (sub. 74, p. 6)

Similarly, John Hearsch Consulting noted that:

... freight service quality is also adversely affected by conflicting demands for scarce track capacity between passenger and freight trains. The problem is particularly severe in Sydney where there is a four hour curfew on freight trains in the suburban area morning and afternoon in order to ensure that peak commuter travel is not delayed. (sub. DR120, attach. 1. p. 20)

The NSW Department of Transport stated that:

The Sydney problem, as we see it, is basically a hole in the national network. As the Sydney area expands and as urban traffic grows ... the availability of the constrained infrastructure is going to get less and less. (trans., p. 248)

Westrail noted the wider effects of bottlenecks in Sydney:

... we get 16 interstate trains in a period of seven hours and otherwise don't use the track for the rest of the day, and that's causing major problems ... unless you resolve the urban issue, particularly in Sydney, you are not going to get anywhere and that's particularly important for the north-south corridor, which is the worst performing corridor ...

Until you get the horizontal separation you are going to have this continual ... problem with freight trying to go in and out of there and then at the end of the day the only solution in Sydney is to separate the two networks. (trans., pp. 757-758)

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The Rail Projects Taskforce (1999) recommended that the national track be upgraded to a standard where it could be a competitive and sustainable alternative to road transport. According to the Taskforce, the projects to be funded would remove temporary speed restrictions, provide additional and longer passing loops, alleviate congestion and strengthen the track.

***There has been inadequate investment in some parts of the rail network. The resulting problems for the rail industry are particularly acute in the Sydney area.***

### *Investment decision-making processes*

The relative levels of investment spending on road and rail networks together with specific evidence of deficiencies in rail infrastructure, raise questions about the processes which governments have used to allocate funds within and between different transport modes. Capital expenditure on rail and road systems in Australia is the result of several economic processes. These involve transport planning, applying techniques of investment appraisal, ranking projects in order of priority and the allocation of budgetary funds.

### *Transport planning*

The lack of an integrated planning framework is a possible factor behind modal investment outcomes in recent decades. Numerous participants (Bicycle Federation of Australia, Hames, NSWLGSA, People for Ecologically Sustainable Transport, QR and Rail 2000) claimed there was a need for an integrated approach to transport planning. The South Australian Local Government Association (SALGA) noted:

... the need for governments to develop a coordinated, comprehensive and holistic transport strategy which incorporates rail as a viable option in the transport network.  
(sub. 57, attach. 1, p. 3)

The National Transport Planning Taskforce found that transport investment decision-making in Australia was highly segmented by mode and level of administration (NTPT 1994). Because many different government authorities are involved in the provision of transport infrastructure, this may lead to coordination failures, inconsistencies in approaches, and has the potential to overlook network effects and interactions between modes. The NTPT recommended that a framework for national strategic transport planning be established. Under such a framework, national transport needs would be considered on a multi-modal corridor basis.

More recently, the HORSCCTMR has urged the Commonwealth Government to develop an integrated national transport plan (HORSCCTMR 1997 and 1998b). The Rail Projects Taskforce (1999) also supported a national transport plan,

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recommending that the Commonwealth Government take the lead in its development to ‘secure a seamless domestic transport system’.

Several approaches to planning (and investment) in land transport are discussed in section 10.3.

### *Investment appraisal*

Differential treatment of rail and road projects in investment evaluations has been suggested as a factor which could bias investment spending towards a particular mode. A number of participants contended that current investment appraisal procedures lack consistency. The ARA stated that ‘analysis of road projects has included wider social cost–benefit criteria, whereas rail projects have been assessed on a narrow, commercial basis’ (sub. 3, p. 13). The NSWLGSA contended that ‘there is not a consistent approach across the country to investment evaluation’ (sub. 71, p. 4).

An extensive survey of investment evaluation methods used by transport authorities was undertaken for the NTPT (Applied Economics 1994). The results indicated that cost–benefit analysis was applied quite widely for road infrastructure but was only occasionally used for investments in railways, seaports and airports.

According to the survey, financial evaluation was the most common form of investment appraisal used by railways. The technique was used mainly for internally funded projects and for small projects requiring outside funding. However, cost–benefit analysis was used for some large projects that required external funds. In the case of road infrastructure, cost–benefit analysis was both required and used to evaluate road investments in all States.

There are several practices in the cost–benefit analysis of road projects which can raise estimated social returns and potentially distort investment allocation between modes. Benefits to users such as travel time savings are included as benefits in road analyses but these are omitted from evaluations of rail investments. Environmental effects are often excluded from the calculation of benefit–cost ratios for road projects and analyses often fail to adequately consider alternative projects (Applied Economics 1994).

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Even if time savings benefits are included in both road and rail project evaluations, DTRS argued that these benefits do not occur to the same extent in rail projects. According to the department, this stems from the road transport industry sharing the asset with private motorists and railways competing in the less time sensitive segment of the transport market. It stated that:

Unless the assessment of rail projects is able to demonstrate similar social and time value benefits accruing from the investment, under consistent assessment criteria road improvement projects will almost always be favoured as a result of the superior BCRs [benefit–cost ratios] that are generated. (sub. DR125, p. 6)

Although most investment in rail and road infrastructure has been by government, the private sector has played an increasing role in recent years, for example, in road and rail build-own-operate-transfer projects. Under current infrastructure investment arrangements, proposals prepared by the private sector are submitted to the relevant government agency or committee for initial assessment. At this stage of the process, governments are able to identify whether cost–benefit analysis is required and, if so, the relevant considerations in measuring costs and benefits.

Cost–benefit analysis is especially relevant for large transport projects relating to both rail and road infrastructure which have significant network and/or external effects (whether positive or negative) and for projects requiring funding to meet social objectives. However, financial evaluation may be more appropriate for smaller projects where externalities or network effects do not figure prominently.

***Cost–benefit analysis is warranted where proposed major projects (whether predominantly publicly or privately financed) are expected to generate significant external effects.***

#### *Budgetary and political factors*

Aside from the iron ore railways and some coal railways, investment in rail infrastructure has been funded mainly by government grants and borrowing. Budgetary allocations have also funded capital expenditure on the road system. The amount of funding governments allocate to rail investment may be affected by:

- budgetary or borrowing constraints;
- the financial losses of government-owned railways; and
- competing political priorities.

For rail and road transport, budgetary pressures can halt or delay projects even though the projects are expected to generate high social returns. Funds for investment are generally scarcer within a contractionary fiscal environment. Since 1991, many State Governments have implemented measures to improve their fiscal

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positions, often to address high levels of public debt. More recently, the Commonwealth Government has progressively reduced its outlays relative to revenue and GDP.

This trend of fiscal consolidation may have constrained the amount of funds available for investment in infrastructure generally. The EPAC Private Infrastructure Task Force concluded that borrowing constraints have in the past impeded public investment (EPAC 1995a). There may also be a tendency for governments, when faced with budgetary constraints, to give priority to recurrent spending over capital expenditure.

In principle, corporatised railways should be able to obtain equity from their government owners or borrow funds to finance investment in commercially viable operations, that is, where financial returns are expected to at least meet the cost of capital. As Rio Tinto pointed out:

... there are parts of the system where investment could be justified, namely those where good returns are currently being earned and there is scope for increased traffic. It is important that those investments be undertaken. (sub. 58, p. 21)

However, the poor financial performance of government-owned railways in recent decades may have contributed to their greater difficulty in obtaining capital (compared with road agencies) through budgetary or borrowing processes. As governments already contribute significantly to cover the losses of railways, they may be reluctant to allocate additional funds (chapter 7). While conventional wisdom would advise against further investment in loss-making businesses, this fails to consider that much of the rail deficit is the result of governments' non-commercial objectives.<sup>7</sup> Currently, there is no equivalent way of assessing the financial performance of past investments in the road system.

The relative spending on rail and road infrastructure could also reflect the political priorities of governments. The Australian Wheat Board pointed to limited government funding and the 'relative political "unattractiveness" of rail freight compared to passenger and other funding portfolios' as possible reasons for the rail industry's slow take-up of new technology (sub. 32, p. 9). Similarly, Forsyth and Trace noted that rail authorities, subject to government pressures, may invest in high profile projects but such investments may be less rewarding in efficiency terms than more mundane investments in track improvements (sub. 88).

Due to budgetary constraints and political priorities, some rail projects may not proceed even though they are anticipated to generate commercial returns. This

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<sup>7</sup> The BTCE noted that urban passenger services account for the majority of the deficit (HORSCTMR 1998b).



would occur, for example, where the measured social returns of road projects are higher than rail projects and the budget constraint is reached before any rail projects are selected. Such investment opportunities would normally have been undertaken if rail enterprises were fully commercial or under private ownership.

*The budgetary and political environment under which government-owned railways operate may have hindered their ability to raise adequate funds for investment purposes.*

## Taxes and charges

A number of taxes and charges are levied on providers of transport services in Australia (table 10.2). To the extent that these distort relative freight rates between modes, they can influence the competitiveness of railways compared to road transport, and affect modal usage and investment patterns.

**Table 10.2 Main taxes and charges applying to rail and road transport <sup>a</sup>**

<i>Indirect taxes</i>	<i>Charges</i>	<i>Income taxes</i>
<ul style="list-style-type: none"> <li>• diesel fuel excise</li> <li>• payroll tax</li> <li>• import duty</li> </ul>	<ul style="list-style-type: none"> <li>• access/registration</li> <li>• safety</li> </ul>	<ul style="list-style-type: none"> <li>• company tax</li> </ul>

<sup>a</sup> Railways are currently exempt from wholesale sales tax on certain items.

Source: Based on BTCE 1997b.

According to some participants, railways are disadvantaged relative to road transport operators by high levels of taxes and charges. The ARA stated that:

In 1995, the NTPT estimated taxes and charges as comprising 16.6 per cent of road freight operating costs. At the time, no charges applied to rail operators, but taxes were estimated to comprise 16.5 per cent of rail operating costs of which 12 per cent was diesel fuel excise. Track access charges applying to rail operators have now increased rail's taxes and charges by 25 per cent – 30 per cent to over 40 per cent of operating costs, two and one half to three times that of road. (sub. 51, p. 15)

The central question is whether taxes and charges are being applied consistently across modes. Participants' concerns relate chiefly to the diesel fuel excise, the potential impact of taxation reform, and infrastructure charges.

### *Diesel fuel excise*

The diesel fuel excise was introduced in 1957 as a means of raising funds for road construction and maintenance. The excise was directed at road users so an

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exemption scheme was introduced for off-road users of diesel fuel including railways. However, in 1982, the *Diesel Fuel Taxes Legislation Amendment Act 1982* (Cwlth) replaced the exemption scheme with a rebate scheme and changed the definition of off-road users to exclude railways, coastal shipping and manufacturing. This meant that railways could not claim the rebate unless beneficiation was involved.<sup>8</sup> These amendments diminished the competitive position of railways relative to road transport, holding other factors constant.

In 1998, the Commonwealth Government released its plan for a new tax system (Costello 1998). As part of its proposed tax reforms, the Government intended to reduce the effective diesel fuel excise from 35 cents a litre to 18 cents a litre for rail transport operators, and from 43 cents a litre to 18 cents a litre for heavy road vehicles.<sup>9</sup> Studies estimated that the reforms would have delivered greater benefits to road transport than to railways (Costello 1998; MM Starrs Pty Ltd and Ian Wright & Associates 1999).

These tax reform proposals raised the issue of whether the same rate of excise should apply to both modes. The main rationales for imposing indirect taxes, such as the diesel fuel excise, are to raise revenue for either specific or general purposes and to address externalities (BTCE 1997b; Freebairn 1997a).

Numerous participants (ASR, Institution of Engineers, NSW Minerals Council and QR) viewed the diesel fuel excise as a measure which raises funds for the road system.<sup>10</sup> The Australian Peak Shippers Association stated that ‘a majority of diesel fuel taxes collected by the Federal Government from rail go to fund road infrastructure over which rail’s competitors operate’ (sub. 10, p. 2).

In determining annual registration fees for heavy road vehicles (over 4.5 tonnes gross vehicle mass), the National Road Transport Commission (NRTC) includes a portion of the diesel fuel excise as a road use charge. The charge has a legislative basis, being defined in the *Heavy Vehicles Agreement 1991* as:

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<sup>8</sup> A rebate is allowed for diesel fuel used in transporting minerals or ores from a mine to other locations for beneficiation. Beneficiation involves upgrading the concentration of ores or the removal of impurities but not final smelting or processing (BTCE 1997b).

<sup>9</sup> The difference between 43 cents a litre and 35 cents a litre reflects the excise collected by the Commonwealth on behalf of the States and Territories as compensation for the loss of business franchise fees following a 1997 High Court decision.

<sup>10</sup> On the other hand, the Commonwealth does not consider the diesel fuel excise to be a road user charge. It stated that fuel taxes and the revenue they generate have no correlation to the amount of funds provided by the Commonwealth for roads and that the fuel excise is a source of general revenue (Commonwealth Minister for Transport and Regional Services 1999). Further, the Commonwealth Department of Finance and Administration noted that ‘the fuel excise is principally a revenue raising measure and the tax receipts are paid into the Consolidated Revenue Fund’ (sub. 65, p. 12).

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... a charge equal to the part of the diesel fuel tax levied by the Commonwealth for the use of a Vehicle on a road being the part fixed by the National Commission from time to time, in accordance with this Agreement. (Schedule 1 of the *National Road Transport Commission Act 1991* (Cwlth))

The charge nominated by the NRTC is subject to approval by the Ministerial Council for Road Transport. Under the First Charges Determination, the notional charge was set at 18 cents a litre (NRTC 1992).<sup>11</sup>

In its inquiries into rail transport and petroleum products, the Industry Commission (IC) recommended that the rebate scheme be extended to include diesel fuel used in rail freight services (IC 1991b; IC 1994a). In the latter report, the IC argued that extending the rebate to railways, which often transport export commodities, was in keeping with the objectives of the rebate scheme.<sup>12</sup> The Rail Projects Taskforce (1999) recommended that rail operators be treated like other off-road diesel users for the purposes of fuel taxation.

Following recent negotiations, some elements of the Commonwealth Government's proposed tax reforms (Costello 1998) have been modified. There are two key changes to diesel fuel excise arrangements affecting road and rail transport:

- the effective excise will be reduced to 20 cents a litre by granting credits to qualifying road vehicles; and
- railways will be entitled to receive full credit for excise paid.

The *Customs and Excise Amendment (Diesel Fuel Rebate Scheme) Act 1999* (Cwlth) allows rail transport to claim the rebate. This change is likely to ameliorate some concerns about competitive neutrality. Whether competitive neutrality is actually improved — in an overall sense — depends on the magnitude of any remaining distortions in the road and rail transport sectors arising from government policies.

***Recent legislation will partly address competitive neutrality concerns between railways and road transport relating to taxes and charges.***

### *Infrastructure charges*

There are several different methods for pricing access to rail networks in Australia (chapter 8). In the case of heavy road vehicles (over 4.5 tonnes), the NRTC has

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<sup>11</sup> The NRTC (1998b) has proposed increasing the notional charge to 20 cents a litre.

<sup>12</sup> The scheme is a way of improving the competitiveness of Australian commodity exports by rebating most of the excise paid on the off-road use of diesel fuel by agricultural and mineral producers.

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developed a system of road use charges. There are two components to national heavy vehicle charges:

- part of the diesel fuel excise (which is nominated by the NRTC as a road use charge); and
- annual registration charges which vary between vehicle classes, vehicle use and the number of axles.

In rail transport, track access charges account for a substantial component of operating costs. However, road access costs are generally only a small proportion of heavy vehicle operating costs — generally less than 10 per cent and typically less than 5 per cent (Stanley 1993). This means that even large percentage changes in registration charges for heavy vehicles may not significantly change the price of road transport. Aside from changes in relative prices, the extent of any modal substitution would also depend on the size of cross-price elasticities and the importance of non-price factors such as service quality.

A number of participants (ARA, ASR, CRT Group, Laird, NRC and NSW Minerals Council) argued that differentials in access charges confer a significant competitive advantage to the road transport industry. Some participants also noted that, controlling for mass and distance, rail access charges greatly exceed heavy vehicle registration charges. The CRT Group estimated that the access charge on a normal-sized train from Sydney to Melbourne of 1000 net tonnes is \$5.50 a tonne. Registration charges would equate to about 55 cents a tonne for a similar journey by a B-double truck assuming a 40 tonne net payload (sub. 20). NRC has calculated similar disparities between access and registration charges (sub. 53).

Where government policies on charging (as well as taxation and investment) have the effect of materially assisting one mode over its competitors, such biases could act to deter private sector investment in the disadvantaged modes. The NSW Government stated that:

Less than optimal development of transport systems due to poor infrastructure charging signals has implications for the likelihood of private sector investment in transport and calls on Government funding, and would also have adverse community and environmental consequences. (sub. DR128, p. 38)

Although charges need not be equal across modes, these differences warrant a closer look at the current methods of charging for access in both rail and road networks. As the Commonwealth Department of Finance and Administration noted, ‘inconsistencies between access pricing for various modes of transport can result in sub-optimal allocation of transport tasks between modes’ (sub. 65, p. 12). Given that the Commission’s approach is to move towards efficient pricing in each mode, the issue is whether heavy vehicles are being charged appropriately for road usage.

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### *Heavy road vehicle charges*

Important reforms have occurred in the charging of heavy vehicles in recent years (chapter 3). Despite these initiatives, concerns remain about the schedule of charges. The Burnside City Council claimed that:

The damage to the national road network is absolutely out of proportion to the contribution which heavy vehicle operators make towards their upkeep. (sub. 5, p. 6)

QR also found strong reason to believe that there is significant underrecovery of direct costs for heavy articulated road vehicles that compete with railways (sub. 59).

The NRTC charging system, outlined in box 10.4, attempts to recover the share of road expenditure that can be reasonably allocated to heavy vehicles (NRTC 1998b). Registration charges for a particular vehicle class are based on the average distance travelled by that class and the average gross mass of that vehicle class, for example, all six axle trucks are levied the same charge.

However, the averaging process used to calculate registration charges by vehicle class is a weakness of the present charging system. This has been acknowledged by NRTC:

All the road use data in the charging process are averages for a vehicle class. These averages conceal differences in the use made of the road system by individual vehicles. (NRTC 1995, p. 20)

The averaging process assumes that all vehicles within a class are attributed the same road costs. This results in overrecovery of road costs from vehicles carrying lighter loads and travelling shorter distances, and cost underrecovery from vehicles carrying heavier loads and travelling longer distances.

According to NRTC (1998b), the charging structure tends to overcharge lighter vehicles and undercharge heavier vehicles. In the First Charges Determination, a minimum charge was introduced to ensure continuity between registration charges for the 'heaviest' light vehicles and the 'lightest' heavy vehicles. This resulted in overrecovery of road costs from the lightest heavy vehicles which was then redistributed across other vehicle classes. As a consequence, there was underrecovery of road costs from classes of heavier vehicles.

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#### Box 10.4 NRTC road charging approach

The *cost allocation model* uses road expenditure and road usage data as inputs, and attributes expenditure by vehicle class as an output. The process involves:

- assuming that the costs of road use are equal to the average level of road expenditure over a three year period;
- attributing those costs that can be associated with use of different vehicle types to those classes of vehicles; and
- allocating remaining costs on some broad measure of road use (vehicle kilometres of travel is used).

The *charging model* aims to recover the expenditures allocated to each vehicle class through a combination of a notional diesel fuel charge and annual registration charges.

- A diesel fuel charge and an 'access charge' are selected.
- Revenues from both these sources are deducted from the expenditure allocated to each vehicle class and 'mass distance charges' are derived from the remaining expenditures.
- The 'access charge' and 'mass distance charge' are then combined to form annual registration charges.

In the analysis for the First Charges Determination, this approach attributed around \$1020 million of road costs to heavy vehicles. It recovered about \$660 million from a road use charge set at 18 cents a litre of diesel and \$370 million from annual registration charges which varied by vehicle class.

*Sources:* NRTC 1998c; NRTC, Melbourne, pers. comm., 4 August 1999.

Since the First Charges Determination, there have been changes in the costs of road construction and maintenance, the level of road expenditure, patterns of vehicle use and revenue obtained from charges. As a result, road expenditures related to heavy vehicles have increased by about 25 per cent. To maintain recovery of direct costs, the NRTC has proposed increasing the notional diesel fuel charge from 18 cents a litre to 20 cents a litre and increasing registration charges for some vehicles. It has proposed that increases in registration charges should be limited to the heaviest vehicles where there is underrecovery of their share of the costs (NRTC 1998b).

While it is unclear whether the changes to heavy vehicle charges proposed by the NRTC will be sufficient to correct for previous undercharging, they will reduce the existing differential.

A road user charging system for heavy vehicles, based on variable weight and distance, would overcome the deficiencies of the averaging process. Consequently, weight-distance charges are aligned with each vehicle's road usage and associated pavement wear. Weight-distance charging has applied to heavy vehicles in

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New Zealand since 1978 (Bollard and Pickford 1998). In the United States, some states have adopted taxes based on an assessment of trucks according to their total weight and distance travelled (Winston 1991). Weight-distance taxes can approximate the damage charge quite closely, provided they are made specific to the type of vehicle (Newbery 1990).

Moving to a weight-distance system would involve the use of measurement devices. This may require evaluating different technologies such as electronic tolling (which will apply on CityLink in Melbourne) and Global Positioning Satellite (GPS) systems.<sup>13</sup> Further advances in technology are likely to increase the feasibility of introducing weight-distance road user charging. The additional benefits that may result from adopting a weight-distance system would need to be considered against the related administrative, compliance and enforcement costs.

***The existing road user charging system for heavy vehicles underrecovers road costs attributable to classes of vehicles which compete directly with railways. This confers a competitive advantage on long distance road transport operators.***

RECOMMENDATION 10.1

***The National Road Transport Commission should prepare — and recommend to the Ministerial Council for Road Transport for adoption — a revised schedule of heavy vehicle charges which ensures that each class of vehicle pays the full cost of its road use.***

#### *Indirect costs of road use*

The current system of heavy vehicle charges does not take into account the indirect external costs associated with road use.<sup>14</sup> Stanley (1993) noted that the NRTC brief on charging was solely to develop a uniform system of charging heavy vehicles for road expenditure attributable to their road use and excluded the indirect external costs of road use and light vehicle charging.

Many submissions (Bicycle Federation of Australia, Fleay, Healthy Cities Illawarra, People for Public Transport and SALGA) commented on the indirect external costs of road usage. Healthy Cities Illawarra was concerned that:

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<sup>13</sup> GPS systems have the potential to incorporate information on road damage, engine emission externalities and congestion. In 1998-99, the Tasmanian Department of Infrastructure, Energy and Resources commenced an Intelligent Vehicle Trial to examine the feasibility of using the GPS system as an aid to better management of road networks.

<sup>14</sup> Direct external costs include damage and wear caused to roads and bridges by motor vehicles whereas indirect external costs encompass pollution, congestion and accident costs. Insurance may cover the property costs and some medical costs of road accidents.

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Road vehicle use, particularly heavy trucks, is continuing to increase, despite the costs in air pollution, greenhouse gases, noise pollution, health impacts, and road congestion. (sub. 6, attach. 1, p. 1).

SALGA pointed to the ‘environmental impact of increased road usage, particularly through built up urban areas in terms of noise pollution and gas emissions’ (sub. 57, p. 2). Several participants also noted that rail transport was more energy-efficient than road transport and generates fewer emissions for an equivalent transport task.

A number of participants (ARA, Maddock, RAC and State Rail Authority of New South Wales (SRA)) agreed that road charges should include external effects. As Maddock stated:

The best outcome would be achieved if the price of road services were set in such a way that it takes full and appropriate account of road costs and any external benefits and costs. (sub. 40, p. 3)

And, the SRA noted that:

If correct pricing principles were applied to both rail and road, the price of externality effects would be part of the user charge applied to each mode of transport. (sub. 67, p. 5)

In New Zealand, road pricing reforms are being contemplated as part of broader reforms to the provision of roads. The *Land Transport Pricing Study* examined the cost of road infrastructure as well as environmental and safety externalities (New Zealand Ministry of Transport 1997a). The study presented a number of options for the funding, pricing and management of New Zealand’s roads. More recently, the *Better Transport Better Roads* proposal canvassed congestion pricing and road charges that reflect the environmental impact of road use (New Zealand Ministry of Transport 1998a).

In the Commission’s view, systems of road pricing that incorporate the full economic costs should be considered for future application in Australia.

***Current systems for charging road users do not take sufficient account of indirect external costs such as pollution costs, accident costs (that are not covered by insurance) and congestion costs.***

### **10.3 Planning and investment in land transport**

As noted earlier, some parts of the rail network (such as the interstate track) are in need of further investment. Participants also expressed concerns about a lack of transport planning. Given that these infrastructure deficiencies have arisen under



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current institutional arrangements, it is worth examining alternative approaches to planning and investment in land transport networks, including:

- the integrated approach;
- the Swedish approach; and
- the commercial approach.

### **The integrated approach**

This approach involves establishing a central public organisation (in the form of a committee, authority or commission) which would be responsible for preparing a plan for national road and rail networks — and possibly other modes (sea and air transport). This body could perform a range of planning and other functions including setting transport objectives, compiling an inventory of transport assets and gathering information on current and future transport demand.

The organisation's main function would be to identify transport projects for inclusion in the national plan. This would involve evaluating projects and ranking them in order of priority. A national planning body could rank rail and road projects on the basis of benefit–cost ratios. Such a body could also make recommendations to governments on which projects should receive funding.

The key potential benefit of the integrated approach is that, having one body performing the planning task, there would be greater consistency and coordination in developing road and rail networks. As proposed investments would be assessed and ranked on the same basis (using cost–benefit analysis), project selection is more likely to be neutral with respect to mode.

Investment in transport infrastructure has often been guided by political considerations. A further advantage of an organisation which compiles and publishes a list of projects ranked according to economic criteria is that it would limit, or at least highlight, ministerial discretion in selecting projects.

Integrated planning for national networks has conceptual appeal, but there are potential difficulties with such an approach.

A national planning body may rely primarily on further investment to resolve perceived infrastructure shortages. For example, to alleviate road congestion, it might recommend greater investment in roads or railways. However, measures aimed at managing the demand for road space (such as road pricing) may also be effective and may use less capital resources than a supply-based approach.

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Proponents of a national transport plan argue that the plan must be linked to funding to enable implementation. The HORSCCTMR (1997) recommended that the Commonwealth Government develop an integrated strategic plan for the national transport network and that it also provide an appropriate, guaranteed level of road funding to support the national outcomes as set out in the plan.

However, linking a national plan to funding can create undesirable incentives. If projects included in the plan automatically attract Commonwealth funding, it is likely that States and Territories will push to have projects in their jurisdictions added to the plan. Similarly, the private sector may promote large scale transport projects as being of national significance in order to gain government assistance. The plan could evolve into a wishlist containing ‘vision’ projects of doubtful value, while commercially viable projects do not proceed.

A related issue is the definition of the national transport network. While definition is easier for infrastructure which links jurisdictions, in other cases it may prove more difficult. For example, are transport projects required for major sporting or cultural events part of the national network? To avoid disputes with jurisdictions, the planning body may need to devise a set of criteria to determine which existing infrastructure and new projects form part of the national network.

Under an integrated approach governments, through the central body, would have primary responsibility for planning, project selection and funding, and possibly even provision. However, benefits are expected from further private sector involvement in railways (chapter 7). The private sector is normally better capable (than the public sector) of identifying and evaluating commercial opportunities. Private entities have a strong incentive to seek out all relevant information and assess the risks regarding potential investments.

Another drawback is that a central body might be too removed from the businesses and enterprises that actually invest in and operate transport systems. In evaluating and ranking projects, the body would be heavily dependent on the quality and detail of the information supplied by these agencies.

There are administration costs associated with establishing and running a central body. Implementing its recommendations on which projects should proceed will also have budgetary implications. Even if a national body were formed, States and Territories are likely to retain planning responsibilities for their own transport systems. Further, it may not be possible to divorce priority setting completely from political considerations. Ministers may be unwilling to relinquish responsibility for determining funding priorities.

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Although a centralised planning approach would improve some aspects of existing arrangements, it would continue the past practices of relying on governments to provide funds for transport infrastructure — and the past, as evidenced above, does not have a good record.

## **The Swedish approach**

Unlike the integrated approach, in Sweden separate government agencies are responsible for planning and investment in road and rail networks. The Swedish approach relies on subsidies to promote competitive neutrality between rail and road transport.

In the case of road investment, the road administration is required to:

- evaluate projects on economic (rather than commercial) criteria;
- prepare investment programs which prioritise projects according to the results of cost–benefit analyses; and
- submit investment programs to parliament for approval and decisions on funding allocations.

This is known in Sweden as the ‘road model’ (OECD 1999). Since the vertical separation of Swedish railways in 1988 (appendix E), the road model has been applied to assessing investment in rail infrastructure. Unlike Australian practice, cost–benefit analysis of track investment attempts to measure the benefits to users, such as the value of shorter travel times (Kopicki and Thompson 1995). The national track authority must also prepare and submit its investment program to parliament.

Many participants have suggested that investing in railways is a way of ameliorating the costs of road transport (including the indirect external costs of accidents, pollution and congestion) and attaining an optimal modal split between road and rail transport. This means that, where road infrastructure is subsidised by say imposing low road user charges or fuel taxes, railways would also require subsidies to lower the price of rail services and generate a substitution towards rail transport.

Such an approach has been adopted in Sweden. A Transport Bill presented to the Swedish parliament proposed reducing rail track charges to correct for distortions of intermodal competition caused by changes in road vehicle taxation since 1988 (Jones et al. 1998). The Swedish Government, which owns the national track authority, indicated that from 1 January 1999 many of the track access charges were to be removed (*Railway Gazette International*, August 1998). As a result, subsidies for track provision have increased.

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If the Swedish approach to the subsidisation of rail transport were to be implemented comprehensively, the data and analytical burden would be onerous. Governments would need to collect and analyse information to estimate, for instance, price deviations from social marginal costs in one mode (such as road transport) and then adjust prices appropriately in competing modes (such as rail transport).<sup>15</sup>

Moreover, the Swedish approach may not fully resolve the issue of investment priorities within rail transport. According to Thompson (1997), in Sweden, there have been coordination problems between the national track authority and the national operator. The operator wants to set investment priorities for track work whereas the authority follows politically-determined funding priorities. Following vertical separation, infrastructure spending increased significantly. However, ‘since that money was provided by the taxpayers, the politicians wanted full control over the spending’ (OECD 1999, p. 180). Indeed, as noted above, both rail and road investment programs must be approved by parliament.

The Swedish approach would involve costs in budgetary terms and could result in resource misallocation. Where prices are set below marginal costs, subsidies would be required to cover operating losses. There are also costs of administering such policies. Aside from the budgetary impacts, this approach could skew economic activity towards the transport sector and away from other sectors. Government must also be committed to making the funds available.

## **The commercial approach**

Planning and investment in land transport infrastructure can also be determined on a more commercial basis by enterprises and agencies within each mode. The commercial approach involves the following elements:

- a broad policy framework for the national transport system;
- the provision of rail and road infrastructure;
- use of the purchaser-provider model for non-commercial objectives; and
- a network manager for the interstate track.

To advance key transport goals, the Commonwealth Government could develop and introduce an overarching policy framework for the national transport system. The framework would set out the Government’s main objectives and directions for the

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<sup>15</sup> Such analysis would require estimates of substitution elasticities which vary across transport corridors and between studies. There is likely to be considerable debate over the magnitude of the estimated elasticities and differing estimates may leave scope for political lobbying.

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system regarding efficiency, safety, equity and the environment. The Commonwealth Government could prepare a draft framework for public comment before preparing a final version. Such a framework has been developed in New Zealand — initially in the form of a *National Land Transport Strategy Draft* and subsequently a *National Transport Statement* (New Zealand Ministry of Transport 1997b and 1998b).

Improving coordination and consistency within and between modes could be included as an efficiency goal in the framework. Transport agencies would be required to ensure that their objectives, policies and decisions are broadly consistent with the national framework. This requirement could be included in performance agreements between agencies and their parent departments.

Through this mechanism, the Commonwealth Government could influence the long term development of the transport system without needing to supplant or centralise the planning and investment functions of separate transport entities.

In the case of railways, this approach would then require that rail enterprises operate and invest only where services are viable. Existing operations would continue or new investment proceed if the rate of return at least meets the cost of capital. Private sector involvement would further strengthen the commercial orientation of rail enterprises. Investments proposed by the private sector would still be subject to the normal project approval processes required by governments.

A commercial emphasis does not preclude the provision of some non-commercial rail services. Governments may be willing to fund services for social or other reasons. Where governments wish to pursue non-commercial objectives (such as income redistribution or regional development goals), the purchaser-provider model should be applied (chapter 11). In these cases, governments would underpin planning and investment through their commitment to purchase services.

Moreover, the commercial approach does not prevent governments from addressing external or network effects arising from land transport activities. As discussed above, for major projects which are expected to have large external effects (positive or negative), cost-benefit analysis is required. Where projects will generate significant positive externalities and benefit the community but are not viable, governments may decide to provide ‘top-up’ funding to projects involving private financing or fund them completely.

Commercialising railways is likely to generate benefits in its own right. However, given that rail and road transport compete for business in many freight and passenger markets and are complementary in others, outcomes in commercialised

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railways will be conditional on developments in government policy regarding the road system and the road transport industry.

Aside from the issue of road pricing, there are broader issues concerning the institutional arrangements for delivering roads in Australia. Submissions to recent parliamentary committees of inquiry have argued that governments have not set clear objectives for road provision, investment patterns have not maximised the potential benefits to road users and political imperatives and funding uncertainty have impeded long term planning (HORSCCTMR 1997; HORSCTCI 1993).

These issues suggest scope for improving road provision. Abrams et al. (1998) examined a number of different institutional arrangements for road provision, including commercial approaches based on the effective road fund and public utility models.<sup>16</sup> A road fund currently operates in New Zealand where further road reforms are also being considered (box 10.5).

Achieving competitive neutrality between rail and road in Australia, within a more commercial framework, will require reforms to the provision of roads. A range of issues covering planning, investment, funding and institutional arrangements should be examined within the context of a broad public inquiry into road provision.

***A commercial approach to the provision of rail and road infrastructure would be a better way of promoting competitive neutrality between modes than introducing a government-driven integrated planning process or linking rail subsidies to those of the road sector.***

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<sup>16</sup> The effective road fund approach involves a devolution of responsibility for key road provision tasks to a representative board of management. The board decides both the aggregate level of expenditure on roads and where these funds will be invested. Funds are derived from earmarked taxes and charges. The public utility model involves a fully commercial treatment of road provision. The utility charges directly for road use and provides road services on the basis of achieving a reasonable rate of return on its investments.

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### Box 10.5 Road provision in New Zealand

Transfund's main objective is to allocate resources to achieve a safe and efficient road system. It purchases components (road outputs) which comprise the National Roothing Program from various road agencies, including Transit New Zealand and local authorities.

The board of Transfund has a high level of autonomy in deciding what road works will be undertaken to achieve assigned objectives. Its purchase of road outputs is financed through the National Road Fund (NRF). The NRF is largely funded by an identified portion of the fuel excise, road user charges and motor vehicle registration fees. Transfund also recommends to government the level of these charges.

Recently, the New Zealand Government proposed significant changes to the institutional arrangements for road provision — outlined in *Better Transport Better Roads* (New Zealand Ministry of Transport 1998a). Under these proposals, a small number of regionally-based local road companies would manage local roads. A Crown-owned company, Transit New Zealand Limited, would operate state highways and motorways. Another Crown-owned company, Transfund New Zealand Limited, would provide road funding.

*Source:* Abrams et al 1998; New Zealand Ministry of Transport 1998a.

### *Role of a network manager under the commercial approach*

To facilitate investment in the interstate rail system under a commercial approach, the Commonwealth Government could establish a network manager to coordinate planning, amongst other functions (chapter 6). These functions could be defined in a formal code of conduct. In regards to planning, the code would:

- require the network manager to collect and disseminate planning information to network participants and interested parties;
- request track providers and users to participate in the planning process; and
- set out consultation mechanisms through which interested parties could examine, and comment upon, investment plans.

This coordinating function is similar to that undertaken by the National Electricity Market Management Company (NEMMCO) — the network manager of the national electricity market (box 10.6). Its other functions are outlined in chapter 6 (box 6.3).

The proposed manager would administer the planning process to facilitate investment, but it would not actually undertake the investment — this would be done by participants in the rail industry (appendix H). To avoid conflicts of interest, the manager would not own any track or rollingstock. Importantly, establishing a

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network manager obviates the need to have a single network owner, that is, different parts of the network can have different owners — government or private.<sup>17</sup>

Being responsible for the day-to-day management of the network, the manager would be in a good position to collect information on the condition of the track, capacity constraints, track charges and current and future traffic flows. The manager would also be closer to the network and its users than a government committee or commission.

**Box 10.6 Planning of the national electricity network**

The National Electricity Market Management Company (NEMMCO) coordinates the planning of the national power system. The National Electricity Code sets out the procedures for network planning and development.

For planning within a region, the code requires service providers to conduct annual planning reviews. Where a need for network augmentation is identified, joint planning is undertaken by the relevant service providers. They must consult with affected code participants and interested parties on possible options to address the projected system limitations. The service providers then prepare a report which includes an assessment of identified options, the preferred proposal, a summary of submissions from consultations, and the recommended action. The report is made available to affected code participants and interested parties. Where any code participant disputes a recommendation, the service provider and the affected code participant must negotiate in good faith to reach agreement on the action to be taken.

For planning across regions, the code requires NEMMCO to establish an Interregional Planning Committee. The committee helps NEMMCO prepare the statement of opportunities, undertake an annual planning review of the power system and assess applications to establish new interconnectors between regions. The statement of opportunities contains information on the performance of the existing system and power transfer capabilities, as well as the adequacy of the system to meet forecast power transfers. As part of the annual planning review, the committee identifies and assesses options to address system constraints and must call for and receive submissions from service providers, code participants and interested parties.

In the case of new interconnectors across regions, the committee assesses applications and NEMMCO determines whether the proposed interconnector is justified. For example, TransGrid requested the committee and NEMMCO to review the economic and technical aspects of proposed interconnection between South Australia and New South Wales.

*Source:* National Grid Management Council 1996; Interconnections Options Working Group 1999.

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<sup>17</sup> Under the approach recommended by the Rail Projects Taskforce (1999), the Commonwealth Government — through a national rail authority — would acquire all national rail corridors and associated infrastructure.



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As part of its planning function, the manager would identify deficiencies within the interstate network and coordinate a response to these problems. In some cases, infrastructure deficiencies can have adverse effects throughout the network. As noted earlier, route congestion in the Sydney metropolitan area has been identified as a major national problem (box 10.3). The *NSW Rail Access Regime* establishes 'passenger priority' provisions for use of the State network (sub. DR128). Urban passenger trains in Sydney are given priority to use the track in the morning and afternoon peak periods, causing significant delays for other trains entering or exiting the Sydney area. It has led freight operators to divert trains onto other routes and reschedule services to avoid the morning and afternoon curfews. Furthermore, it results in many trains travelling within a narrow band of time, creating difficulties in other parts of the network. The NSW Government noted that:

In recognition of the importance of improving capacity through Sydney to rail freight movements throughout Australia, parties to the 1997 *National Rail Summit* agreed to develop a plan for the provision of dedicated freight track(s) through metropolitan Sydney. (sub. DR128, p. 36)

Although the infrastructure problem in Sydney could be resolved eventually under the commercial approach, there would be a time lag before its key elements are implemented. Given that private sector funding is unlikely to be forthcoming in the short term, there is a compelling case for Commonwealth Government funding to create additional freight paths through Sydney on externality grounds. While a portion of the Commonwealth's \$250 million Interstate Rail Infrastructure Investment Fund has been allocated to projects in Sydney<sup>18</sup>, this allocation falls short of the amount required to resolve the congestion problem fully. The Rail Projects Taskforce (1999) noted that a dedicated rail freight route through Sydney may cost in the range of \$300 million to \$500 million.<sup>19</sup> Detailed project evaluation should be undertaken to ascertain the level of funding required.

This investment would facilitate the efficient use of the interstate network and so enhance the ability of railways to compete with other modes, especially road transport. However, the full benefits for the network from such investment would only be realised through the establishment of a network manager to handle competitive access and facilitate planning. Thus, Commonwealth funding for rail infrastructure in Sydney should be made contingent on the adoption of a network manager for the interstate track.

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<sup>18</sup> Construction of the first project, at Flemington junction in Sydney, commenced in late 1998 (sub. DR128).

<sup>19</sup> The NSW Government prepared preliminary indicative costings for southern and northern access route projects between Macarthur and Cowan (NSW Minister for Transport 1997). In total, these projects were estimated to cost in the vicinity of \$450 million (1997 dollars).

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RECOMMENDATION 10.2

*Governments should adopt a more commercial approach to railways and road provision. This will involve:*

- *the Commonwealth Government introducing an overarching policy framework for national transport;*
- *applying competitive contracting out, franchising or full privatisation to railways;*
- *establishing a network manager for the interstate track to manage competitive access and facilitate planning;*
- *applying the purchaser-provider model rigorously where non-commercial objectives are being pursued; and*
- *evaluating major road and rail projects using cost–benefit analysis where the projects are expected to have significant external effects.*

RECOMMENDATION 10.3

*The Commonwealth Government should — as a matter of national priority — allocate additional funds to projects which would alleviate route congestion in the Sydney metropolitan area, subject to the adoption of a network manager for the interstate track.*

RECOMMENDATION 10.4

*The Commonwealth Government should establish a public inquiry into road provision in Australia. This inquiry should examine:*

- *road transport planning processes;*
- *methods of investment appraisal (including the evaluation and allocation of costs and benefits);*
- *funding arrangements (including taxation, charges and grants);*
- *the scope to improve road pricing; and*
- *current institutional arrangements and alternatives.*