

Putting Australian Railways On the Right Track

Ken Ogden

The Australian railway industry has begun to take steps to contain its huge deficits. Ken Ogden, Associate Professor of Transport Engineering at Monash University, identifies the causes of the deficits and recommends further reforms that are needed to put the railways on a commercial basis.

THE operating deficits of Australia's government-owned railways are well in excess of \$1 billion per annum, and represent a significant component of State budgets. Governments and their railway managers have taken steps in recent years to contain these deficits, with mixed success. The railway industry is going through a period of fundamental change as attempts are made to place it on a more cost-effective, and even commercial footing.

This article reviews the present position of the Australian government-owned railway industry. (Private sector railways are not discussed, but it is worth noting in passing that these are generally highly efficient, especially the iron ore export railways in the Pilbara area of Western Australia.) The paper discusses historical and institutional factors, explores the financial state of the industry, and discusses the effects of this on the economy as a whole. Finally, some possible strategies for change in the industry are examined.

The Present Situation

A recent Discussion Paper prepared by the Industries Assistance Commission (1989) estimates the operating deficits and cost-recovery levels (operating revenue divided by operating expenditure including capital charges) for each of the government-owned railways. These estimates are reproduced in Table 1 (on the following page).

This Table requires some qualification. First, published railway accounts and annual reports are notorious for their obfuscation. It is very difficult to get a meaningful picture of the financial state of the industry from such sources. For example, some railways aggregate different market segments (e.g. urban passengers, country passengers, freight), depreciation treatment is inconsistent, some capital charges are met by State treasuries, government revenue supplements are sometimes treated as income, and so on. These difficulties have been examined in

the aforementioned IAC Discussion Paper.

Second, comparison between States is dangerous because of the different tasks that each railway performs. In particular, the Queensland position appears to be more favourable than it really is (on a comparative basis) because the Queensland government chose to extract a resource rent on coal extraction via railway charges rather than royalty.

Third, the IAC contends that these figures actually understate the true extent of the deficits, because no correction has been made for some aspects of depreciation and debt.

Fourth, it is important to note that most of the subsidy is absorbed by losses on passenger operations.

Notwithstanding these and other qualifications, the picture is one of substantial taxpayer subsidy and lack of commercial orientation over much of the rail industry. The IAC has calculated that the accumulated deficit since 1980-81 exceeds \$6.7 billion, but, once again, the figure would be substantially higher if commercial accounting procedures were used.

History

The Australian railway systems were laid down mainly in the latter part of the 19th century, and were built largely to allow the opening up of land for agricultural purposes. Many lines were constructed, often to a quite low standard, and the railways became major employers. Because of their developmental role, railways were never expected to show a profit; Australia's railways were state-owned almost from the start, and economic returns stemmed primarily from the sale of land near railway lines (especially in the cities [Cannon, 1966]) and the ability to get rural production to world markets.

Australia's railways have operated mainly as monopolies. In the early days, this was for technical reasons (river transport and coastal shipping were the only rivals for longer distance hauls), while from

the 1930s railways were substantially protected by regulation from competition from road-based modes of transport (although judicial interpretation of Section 92 of the Australian Constitution in the 1950s has meant that interstate freight and passenger services have been free of economic regulation). Even today, notwithstanding this non-regulation of interstate trade and the some relaxation of regulations on intrastate services, the IAC has estimated that about three-quarters of all rail freight (in terms of tonnage) is still subject to regulation limiting the use of road transport.

Under these circumstances, the influence of government was substantial. Railways were required to be common carriers, i.e. they had an obligation to carry any and all traffic that presented itself. Their rates were levied on an *ad valorem* basis, i.e. on the basis of the value of the product rather than the cost of transporting it. Freedom to withdraw services, or to make significant alterations to any aspect of railway operations, was very limited.

The effect of this was that rail could use 'good' traffics to cross-subsidise 'poor' traffics, but that rail management was not particularly cost-conscious. Rail management basically arranged things so that the railway more or less broke even on operating costs. (Governments still controlled capital expenditure; only recently has rail been expected to finance capital works.)

This was the situation until the early 1970s. From then on, a combination of events led to railways moving into deficit. The deficits mounted rapidly in the ensuing period, leading eventually to the situation summarised in the above Table.

Causes of the Deficit

This historical background helps us to understand why railways were unable to adjust rapidly to a deteriorating financial situation through the 1970s and 1980s. The main causes of the rapid growth in the deficit over this period are as follows:

Productivity. Labour costs account for about two-thirds of railway operating expenses (Industries Assistance Commission, 1989). While railways have been reducing their staff levels significantly in recent years, their level of labour productivity is quite low

by international standards. The passenger rail businesses are particularly labour-intensive, and account for much of the poor cost-recovery from this particular sector.

Work practices. Inefficient work practices, often carried over from earlier times, are endemic within the industry and are only slowly being removed. These include demarcation problems between different narrowly-defined trade and craft unions; high rates of absenteeism; many staff being assigned to 'light duties' (8 per cent of SRA-NSW staff were on 'select' duties in 1988 [NSW Commission of Audit, 1988]); staffing for peak periods; application of the 'darg' (prescribed shift output levels); restrictions on transfer or retraining of staff; and so on.

Markets. Railways were slow to adjust to a changing transport market, particularly one that would have seen them abandon traffic to which rail was no longer suited, and which other modes (road and air) could better accommodate. Prime examples are country passenger services, 'smalls' freight traffic, and freight movements on lightly-used branch lines. Even today, rail in many cases has a presence in markets, such as these, from which it could have withdrawn to the benefit of the customer as well as the railway itself. Railways have no tradition of marketing, in the modern commercial sense of the word, and rail organisations have little understanding of the markets they are supposed to serve.

Investment. As a consequence of the above, much rail investment has been misdirected. There has been insufficient investment in areas to which rail is well-suited (especially carriage of bulk commodities, heavy industrial products such as steel, and containers), partly because too much investment was directed elsewhere, especially into passenger services. The substantial recent investment by V/Line (Victoria) in grain transport, amounting to \$100 million since 1985 (State Transport Authority, 1989), is a case in point; the investment could and should have occurred during the 1970s. Similarly, there has been too little investment in efficiency improvements, with the result that Australian railways are way behind overseas counterparts in such performance measures as energy efficiency, and asset utilisation (e.g. wagon loadings, train length, etc.) (Anon, 1989a).

Rail authority	Estimated deficit (\$ million)	Cost recovery (%)
State Rail (NSW)	700.0	61.6
V/Line (Vic)	454.0	33.0
Queensland Railways	37.9	96.0
Australian National	68.7	80.5
Westrail (WA)	56.6	82.0
Total	1317.2	69.0

Pricing. As noted above, rail prices have not reflected the cost of transporting goods or passengers. All rail systems have recently made attempts to understand their cost structures so that they could move towards cost-based pricing. However, for political or commercial reasons prices often still do not reflect costs. For some goods, prices are effectively determined by competing road freight rates, while for others charges may well exceed costs, especially where rail is protected from competition. No system goes anywhere near full cost recovery for rail passenger transport, even though much of the non-urban part of this travel market could be served efficiently and without subsidy by road or air services. In New South Wales, country rail passenger services are subsidised to the extent of \$125 per trip (Anon, 1989a).

Competition. As already noted, many freight traffics are still regulated to rail, although the extent of regulated traffic varies. The effect of this has been that rail has not had to compete for much of its business, and has not been exposed to the disciplines of the market place. This has been identified by the Industries Assistance Commission (1989) and others as probably the main factor impeding the reduction of the rail deficit; when Queensland partially deregulated petroleum and sugar transport, Queensland Rail responded commercially, with the result that the quality of service was improved and freight rates were lowered (Kane & Fernandez, 1988). In some cases there may be significant external costs associated with road transport, e.g. bulk traffics for export through ports located in urban areas (although the recent Royal Commission on Grain Storage, Handling and Transport [1988] recommended that grain transport be deregulated and opened to road competition).

Corporate structure. Due to the historical development of the railways as outlined above, together with the close control exercised by governments, the corporate structure of many railways is poorly attuned to commercial ends. Examples include: poorly defined objectives; requirements to fulfil community service obligations which are not reimbursed; limitations on managerial autonomy; lack of accountability; constraints associated with government ownership (e.g. purchasing requirements, investment levels and projects); poor cost information; poor asset management; and poor investment appraisal.

Effects of Rail Subsidies

Before discussing how rail deficits may be reduced, it is worth pausing to ask whether it matters that rail does not operate commercially. This question was the main concern of the IAC Discussion Paper (1989). On the basis of estimates of the potential for productivity improvements identified in a Victorian study (State Transport Authority, 1988), the ORANI model of the Australian economy was used to analyse the

effects of passing on the resulting cost savings to users of transport services. The conclusions were that 'increases in competitiveness of a wide range of Australian industries could lead to an increase in real national output of approximately \$1.8 billion. Although the short term effects on employment could be adverse, in the long term an additional 3000 jobs would be created.'

The main industries to benefit would be mining and manufacturing, which would gain in international competitiveness either directly through cheaper freight from mines to ports or indirectly through lower domestic material and labour prices. In addition, manufacturing industries that supply investment goods would benefit substantially. There would be some benefit to rural industries from lower transport costs, constrained by limited availability of agricultural land.

It should be noted that the calculation of these benefits is not based on the assumption that railways eliminate their deficits, and operate as profitable concerns. In fact, there are two theoretical reasons why this may not be desirable. First, economic theory indicates that the optimum resource allocation occurs when price equals some measure of marginal cost. Since rail is a decreasing-cost industry (i.e. marginal costs are less than average costs), if prices are set at marginal cost a financial loss must result. However, Taplin (1982) has noted that 'I would not expect rates set at marginal costs to fall far short of covering total costs in a well utilised railway system'.

Second, economic theory also indicates that where a competitor does not price efficiently, a second-best solution is to reduce prices so that the price to marginal cost ratios for competitors is equal. In the context of railways, if a competing mode (e.g. road) is not meeting its full cost (including external costs, such as congestion, noise, emissions, etc.), then rail prices should also be held down. While the whole subject of road cost recovery is a vast and complex one (Ogden, 1988), it is generally agreed that urban peak hour road commuters do not meet their full costs (including external costs) and this is often used as an argument for subsidising urban public transport (Baxter and Starrs, 1989). Some people also argue (though it is by no means universally accepted) that long-distance road haulage does not pay its way either, and so rail should be subsidised here also.

However, in both cases, the best solution is to ensure that the competitor prices at its marginal cost, rather than introducing subsidies.

Of course, these theoretical niceties do not explain the rail deficits. The explanation is political. In Victoria, when the Labor government rewrote the Railways Act it stipulated the goals of 100 per cent cost recovery for freight and 50 per cent for passenger services. That it has not achieved these goals is due primarily to the influence of the rail unions. In New South Wales, the coalition government has

embarked upon a substantial reform of the rail system, and it will be interesting to see how far this can be taken in view of the threat they pose to National Party interests. It is significant that the most substantial and far-reaching railway reforms have been achieved with the Commonwealth-owned Australian National, which operates the rail systems in South Australia and Tasmania; fundamental and far-reaching change has been achieved where rail issues have been removed from parish-pump State politics.

What Can Be Done?

It should not be assumed from the above discussion that rail systems have not responded to the challenge of mounting deficits. Space does not permit a detailed discussion of the responses, but it can be said that each system has attempted to control its costs, to direct its investments more carefully, and to consider which markets it should be in.

Westrail and Australian National are well on the

In Victoria, when the Labor government rewrote the Railways Act it stipulated the goals of 100 per cent cost recovery for freight and 50 per cent for passenger services. That it has not achieved these goals is due primarily to the influence of the rail unions.

way to something close to commercial operation. The New South Wales government has embarked upon a massive restructuring of railway operations which is aimed at commercial ends (Anon, 1989b). Victoria has recently considered the future of its non-urban railways, and has made good progress in improving the efficiency of grain freight and interstate freight (State Transport Authority, 1988). Queensland is cushioned by the massive earnings from its coal traffic, but it seems inevitable that the new State government will have to look more closely at its overall rail system, much of which carries very little traffic. And the Australian Transport Advisory Council (a Council of State and Commonwealth Ministers of Transport) has established a Rail Indus-

try Council to consider the future of railways, especially interstate rail operations. This raises the possibility of increased Commonwealth investment in inter-system rail; significant sections of track linking Adelaide, Melbourne, Sydney and Brisbane suffer from steep grades, tight curves and deficient overhead clearances, and a higher level of investment is needed to remove these impediments to more efficient rail operations.

Not surprisingly, many of these initiatives have concentrated on solving the problems referred to above: poor productivity, poor labour practices, and so on. However, the possibility of further, quite radical changes to the Australian railway industry and the way it conducts business its must be considered. These include:

Efficiency improvements. These are at the core of the necessary reforms. Examples include progressive reduction in the size of the network by closure of lightly-trafficked lines, withdrawal from smalls traffic, replacing country and interstate passenger rail services with road coach services, reduction of over-staffing, improvements in workforce productivity, investment for cost reduction and to cater better for rail markets, and use of contract services for peripheral activities such as workshops, trading and catering, and track maintenance.

Pricing. Pricing of rail services needs to be based on efficiency principles. This need not necessarily mean withdrawal from uneconomic services, since if government wishes uneconomic services to continue it can pay the railway to operate such community service obligations, such payments being treated as part of the income for that service. However, some activities (especially passenger services) are significantly underpriced, requiring taxpayer subsidy. Others, where rail has a regulated monopoly, are overpriced, to the detriment of the industry served. To correct these distortions, the rail industry needs to be more exposed to competition, and needs a better understanding of its own cost structure so that it can make appropriate pricing and investment decisions.

Management. Rail management structures need to be further modified to reflect their more commercial stance. Although significant reforms have been made, management still needs to have a clearer and simpler specification of corporate goals; it also needs greater autonomy and accountability, and clear financial targets. Responsibility for introducing these changes lies with the different governments that own the rail systems, since they in effect involve a reduction of government interference in rail decision-making.

Competition. The inherent technological characteristics of rail mean that it should be able to dominate certain markets, particularly freight markets where there is substantial and regular bulk demand as with bulk mineral and grain traffic, container traffic, and certain industrial products. It is, conversely, unsuited to other traffics, especially

smalls freight and lightly-trafficked passenger services. Competition is probably the most effective way of ensuring that each mode of transport serves the markets to which it is best suited, always provided that prices reasonably reflect the costs involved (including external costs). Road freight and passenger transport should therefore be further deregulated, with regulations limited to 'quality' aspects such as safety and environmental effects, and rail management allowed more autonomy to compete for services or withdraw from them.

Amalgamation. Rail has certain advantages in long-haul transport that presently are frustrated by the fragmented ownership of the State systems. This involves not only the obvious problems related to track gauges, but institutional factors such as equipment, management philosophies, labour practices, technical standards, pricing structures, and so on. For example, it is only in very recent times that locomotives have ceased to be changed at State borders. Although there have been attempts to coordinate interstate activity, this has had only limited success. Various possibilities exist for making interstate operations more efficient, ranging from a single, nationwide, rail system to vesting control of the whole of a rail corridor in a single railway. The 1972-75 Labor government of Gough Whitlam took over the State railway systems in South Australia and Tasmania, and amalgamated them with the former Commonwealth Railways; it is possible that this Commonwealth-owned system may one day take over other State systems (Western Australia and Victoria are the most likely targets).

Privatisation. Although complete privatisation of a whole state railway system seems unlikely, certain parts of rail activity could readily be privatised, such as railway workshops and track maintenance. Currently, the major freight forwarding companies (e.g. TNT, Mayne Nickless) and oil companies have block train operations, in which the company's freight is hauled in company-owned rail wagons, the rail system providing only the locomotion and the track. This principle could readily be extended to what is sometimes called the aviation model: the rail system provides only the track, and sells timetable slots to the private companies for them to operate their own trains.

Conclusion

Australia's government-owned railway sector has undergone significant change in recent years, but further major reform is still necessary. Railway deficits are very high, and inefficient railways are inhib-

iting the productive potential of Australian industry. Railways are moving away from their traditional stance into a more commercial one, but this has a way to go. A key part of this re-orientation must be to identify those markets which rail can and should be in. It is suggested that rail should leave most non-urban passenger services to aviation and road coaches (and perhaps Very Fast Trains), and that it concentrates on freight services that it can operate commercially. Rail also has a role in urban passenger operations, but these should be divorced from commercial non-urban operations.

References

- Anon (1989a), 'NSW SRA Consultants Report: Full Details'. *Australian Transport* 39(9): 11-18.
- Anon (1989b), 'SRA Revamp will Shake Business, Politics', *Australian Transport* 40(3): 8-11.
- Baxter, B. & M. Starrs (1989), 'The Calculation and Delivery of Urban Transport Subsidies in New Zealand', *Proceedings of the 14th Australasian Transport Research Forum* 14(1): 11-28.
- Cannon, M. (1966), *The Land Boomers*, Sun Books, Melbourne.
- Industries Assistance Commission (1989), Inquiry into Government (non-tax) Charges: Public Rail Services, Information Paper No. 5, Canberra.
- Kane, B. & J. Fernandez (1988), 'Transport Deregulation: Some Impacts on Queensland Railways', *Proceedings of the 13th Australasian Transport Research Forum* 13(1): 60-182.
- New South Wales Commission of Audit (1988), *Focus on Reform: Report on the State's Finances*, (Curran Report), NSW Government Printer, Sydney.
- Ogden, K. (1988), 'Road Cost Recovery in Australia', *Transport Reviews* 8(2): 101-23.
- Royal Commission into Grain Storage, Handling and Transport (1988), *Final Report*, AGPS, Canberra.
- State Transport Authority (1988), *V/Line Towards 2002: State Transport Authority Plan. Draft Final Report*, Melbourne.
- State Transport Authority (1989), *V/Line Corporate Plan 1988-1992*, Melbourne.
- Taplin, J. (1982), 'A Pricing Framework for Cost Recovery', pp. 49-60 in D. Starkie et al. (eds), *Pricing and Cost Recovery in Long Distance Transport*, Martinus Nijhoff, The Hague.

Policy