

**ISSUES IN AUSTRALIAN TRANSPORT
WITH EMPHASIS ON ROAD TRANSPORT**

by

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INTRODUCTION

This paper will address some of the major issues in Australian transport but has an emphasis on road transport. I will cover both current issues and emerging issues, even though such differentiation is clouded and indistinct.

I have divided the issues as follows:

Current

- . micro-economic reform
- . cost recovery/cost allocation
- . safety/self regulation
- . uniformity/productivity

Emerging

- . freight integration
- . environment
- . growth

Before addressing these issues, however, I would like to briefly sketch some details of Australia and its transport systems.

AUSTRALIA AND ITS TRANSPORT SYSTEMS

Australia is both the world's largest island and the world's smallest continent. Comparisons of its surface area and population are as follows:

Area	7,682,000 sq kms	77% of Canada 82% of USA 31 times England
Population	16,300,000	61% of Canada 6% of USA 28% of England

The population of Australia is highly urbanised, with 40% living in its two largest cities (Sydney 3,500,000, Melbourne 3,000,000) and another 20% living in the other capital cities.

More than 75% of the total population lives in the south eastern corner of Australia, where the climate factors and to a lesser extent the topography have been more conducive to population support.

A Federal system of government operates, the national government dividing powers with six State and two Territory Governments, and supplemented by a large number of local governing authorities. Historically, State Governments have controlled road and rail transport and the Federal Government has controlled air transport, but interstate transport constitutionally belongs to the Federal Government.

In terms of ownership of transport resources, government generally owns the rail systems, one airline, coastal shipping and the road infrastructure. Private ownership extends to one airline and the majority of road vehicles. In particular, Australia differs from North America in that the rail systems are government owned.

Australia as a nation relies heavily on transport, but does not produce a great deal of the commercial equipment. Transport equipment is the second largest item imported into Australia, with recent acquisitions of aircraft being high on the list of equipment imported.

Internal transport

Road and rail are the preferred modes for inter-regional transport, while road is preferred for short hauls. Some general statistics are:

<i>mode</i>	<i>tonnes moved</i>	<i>tonne/km moved</i>	<i>average haul</i>
road	77%	27%	52 kms
rail	18%	29%	280 kms
sea	4%	43%	2,135 kms
air	1%	1%	1,000 kms

In terms of the total land freight task, urban goods movements dominates. For example, 77% of the freight task in my home state of Victoria is the movement of freight within Melbourne.

<i>freight task</i>	<i>percentage of total land freight task</i>
road	
within Melbourne	77.0
within Victoria	4.6
interstate	11.3
rail	
within Victoria	3.8
interstate	3.3

I turn now to the major transport issues. It is not possible to give more than a brief overview of each one but I would be happy to provide further information on any particular issue.

MICRO-ECONOMIC REFORM

Micro-economic reform covers a diverse range of changes taking place within Australia, and follows the macro-economic reforms such as reducing levels of protection and deregulation of the financial system in the first half of the eighties.

Waterfront reforms

The Inter-State Commission (ISC) has just completed an investigation into the efficiency of the handling, storage and movement of cargo through Australian ports, in the process formulating an integrated industry plan for waterfront reform. The investigation took more than 2 years of research and public hearings, and reports to date have covered 7 volumes.

The ISC recommended a seven point 3 year action plan to solve what they described as 'classic symptoms of an imperfect market', including lack of supply and demand balance, often reflected in congestion and queues or an under-utilisation of expensive facilities. Net benefits were estimated to be at least \$620 million per annum.

The general thrust of the report has been accepted, not without some disagreements of course, but there is still much to be done to improve this vital transport link.

De-regulation

In Australia, we have had a 'two airline' agreement for many years, with the major routes restricted to one government owned and one privately owned airline. This protection will cease next year. Of equal importance in this discussion is the future ownership of the government airline. Driven by the funding needs, privatisation is being canvassed again but is likely to be resisted by pressures within the ranks of the present Federal Government.

Four Australian States still regulate the movement of many bulk commodities, generally restricting them to rail. This regulation is gradually being phased out, and the Federal Government recently moved to de-regulate the movement of grain. Some reversing of the trend, however, is apparent as shown by the Victorian Government decision to increase the rail transport of petroleum. De-regulation of coal transport is a difficult area and it may be some years before action is taken in that area.

The prospect of opening the \$200 million per year Australian coastal shipping market to foreign flag carriers is a hot topic at the moment, and is likely to remain so for some time.

Federal legislation

The State Governments have control over land transport, except for interstate and international transport which is the province of the Federal Government. The Federal Government used their powers in road transport for the first time in 1986 to introduce the Federal Interstate Registration Scheme (FIRS), and recently legislated for mass limits so that vehicles registered under FIRS would, for the first time in history, have uniform mass limits.

Award re-structuring

Australia has a long history of centralised wage and conditions fixation, involving unions, employers and the Government appearing before independent tribunals. Efforts are proceeding to reduce the number of trade unions from about 250 to 20 and also restructure the awards issued by these tribunals. Such a change has long term implications for industrial relations in the transport industry.

COST RECOVERY/COST ALLOCATION

This is an extremely complex, important but highly political problem in Australia at this time, and an issue which is not well understood.

The major players in the discussions are:

Governments (Federal, State, local):	Interest:	funding
Road users:	Interest:	costs and market share
Railways:	Interest:	market share

Many studies on cost recovery/cost allocation have been undertaken over last 15 years, but I will not attempt to cover them. The conclusions have been many and varied, but the latest one to enquire into cost recovery at the same time and on the same basis was the Inter-State Commission, which in 1988 concluded recovery for interstate road transport was between 72% and 94% of costs (depending on the assumptions made) but only 66% for interstate rail.

Of the two basic approaches at the present time, either recovering costs (including capital) in any one year or considering road life cycle cost, the former seems to have found favour. Arguments centre on what are separable or avoidable costs, and what are joint costs or common costs.

The issue is complicated by the arguments about what is tax and what is a road user charge. There is little hypothecation of road taxes and charges, and competition for funding by Governments is intense.

The major fund raiser from road users is federal fuel excise, about 22 cents per litre, or close to \$1 per gallon. Only about a quarter of these funds are re-invested in road building, and these funds are the basis of a major campaign at the present time by motorist groups to increase the road funds available. Other taxes such as sales taxes on vehicles and parts, or even corporate taxes, are less clear, but it is relevant to note that rail systems, being publicly owned, do not pay many of these costs.

The Inter State Commission found that the level of taxation on heavy vehicles are almost four times greater than the average of all industries, and that transport input taxes are almost twice those of rail.

At the other end of the scale is a study which purports to show that trucks cause very high road wear on certain low standard roads, with present charges less than 10% of the road cost.

The Federal Government has now agreed that all excise on diesel fuel would be counted for cost recovery purposes. But the States only receive about a quarter of this Federal revenue for road funding, so this is all that they count towards cost recovery in their studies. Clearly, the assumptions used can alter the whole balance of the argument.

SAFETY/SELF REGULATION

Safety is one of the most important issues in the road transport industry at this time, particularly because it is a community rather than a narrow industry issue. Truck accidents get regular press coverage, and the community regularly comes into contact with large 'intimidating' trucks. Train and air accidents also get regular coverage, but they seem to be more removed from the everyday lives of commuters.

Self regulation

A 1985 road freight industry Inquiry recommendation for operator quality licencing has now been superceded by an industry code of safety conduct, covering such areas as:

- . trip times shall not be set so as the driver will need to break the law
- . speeding and overloading will not be practiced

Consider, however, the following statistics:

Australian trucks by Industry

Agriculture	36.5%
Hire and reward	26.1%
Wholesale and retail	12.1%
Building/construction	9.7%
Manufacturing	6.7%
Mining/Quarrying	2.3%
Other	6.6%

Fleet size by number of vehicles

1 vehicle fleet	72%
2 vehicles	17%
3 to 9 vehicles	10%
more than 10 vehicles	1%

The diversity of industries and owners will be a major challenge in this attempt at self regulation.

Speeding trucks have been the subject of recent media attention, and there have been calls for physical limits on maximum speed capability or the use of tachographs for greater control. Unless self regulation succeeds, these measures could well be implemented.

Fatigue

Recent amendments to hours of driving/hours of service regulations have again focussed on the issue of fatigue.

A major study on the affects of fatigue in accidents has recently been completed but have not been released. The study showed that fatigue was a contributing factor in between 9% and 19% of road accidents. Fatigue, both daily and chronic (long term) is not well understood, and there is a clear need for more work in this area.

Transport and storage of dangerous goods

Again, any accidents with dangerous or hazardous goods receives major publicity and becomes an emotional issue. In Australia, there is not complete uniformity nor full adoption of the hazardous goods national code, but major resources have been devoted in recent years to this issue.

UNIFORMITY/PRODUCTIVITY

Over the years, the powers of the States to regulate land transport has provided barriers to uniformity of regulations and arguably productivity. For example, only in the early 1960's was there finally a standard gauge rail link between the major States of New South Wales and

Victoria, and only in 1978 were the truck regulations in these States brought closer together. Only 12 months ago were Federal regulations introduced to enable trucks on interstate journeys to carry the same load throughout the country.

With this background, recent moves to increase uniformity and productivity in road transport have been:

- . recommendations by the Inter-State Commission to improve the harmonisation of road vehicle regulations
- . regulations to extend the uniformity of weight limits to all States
- . unification of the maximum speed limits for trucks at 100 km/h on the open road and 60 km/h in urban areas
- . modifications to the hours of driving/hours of service conditions
- . introduction of B-Doubles on selected routes in areas which do not allow road trains
- . introduction of vehicle design rules encompassing many design requirements previously non uniform, particularly vehicle lighting requirements

None of these initiatives have come without some pain, but the B-Double issue has created the most controversy and bitterness. In Victoria, the second most populous State, political factors have prevented the introduction of B-Doubles and led directly to the formation of a new industry Taskforce seeking to gain their acceptance. This Taskforce has recognised that image and productivity are closely entwined, and has embarked on a major series of discussions and publications to have the position of road transport better understood in the community.

Rail interests have not been idle in the productivity debate, and proposals are being examined for a Very Fast Train (VFT) to carry passengers between Melbourne and Sydney and a Fast Freight Train (FFT) between the same ports.

The significant difference between these two proposals is that the latter is a State government initiative while the former would, if successful, be the first time private interests owned and operated public rail in Australia.

That completes the listing of current issues I have chosen, and I now turn to the emerging issues.

FREIGHT INTEGRATION

Led by the need for better economic targetting and investment policy, the need for more closely integrating the different transport modes is beginning to emerge as an area worthy of study in its own right. Efficiency losses in the transfer between modes can no longer be tolerated in a community undergoing a restructure of its economy.

Two of the areas which will come under closer scrutiny in the future will be:

- . the tradeoff between private car use and road construction and the investment in public transport systems versus public passenger deficits
- . the location of ports and rail terminals in the older more central areas of cities and the need to move road freight to these terminals

ENVIRONMENT

The environmental issue could well have been placed in the list of current issues, but a recent event in Australia has prompted me to place it in the emerging list. This event was the election of 'green independents' to hold the balance of power in a State parliament, and the consequent rush to be seen to pursue more environmentally acceptable policies all over Australia.

The quality of life debates have intensified over the years, with the old problems of freeway noise, lights and pollution being joined recently by a bitter debate about the upgrading of the airport in central Sydney. This debate centred on the adding of a third runway versus the building of a new airport sixty kilometres away.

Local communities are becoming increasingly concerned about truck noise and intrusion, and have become more vociferous in their pursuit of improved quality of life.

Awareness of the Greenhouse effect continues to grow and one State Government recently announced adoption of the 'Toronto agreement' with the aim to reduce the overall emission level of CO₂ by 20% by the year 2005. This aim has obvious impacts as 25% of CO₂ is produced by road vehicles. The search for alternative fuels and more efficient transport modes will intensify.

GROWTH

This brings me to my last emerging issue - growth. Growth has been with us since time immemorial and while some people would not class it as an emerging issue, I believe it dwarfs all other issues in its importance for the

future. Growth encapsulates all other issues yet at the same time is an issue on its own to be addressed, studied and discussed.

When one considers the following disparate points:

- . an increasing population becoming more urbanised
- . an ageing population with less proportion in the workforce
- . the increasing awareness that there are limits on public funding for infrastructure extensions
- . more environmentally sensitive voters
- . an increasing internationalism, such as the freeing of trade barriers America and Canada and between the European countries in 3 years

From a transport perspective, freight has doubled since 1975 and is likely to double again by the year 2000. The density of freight is decreasing, leading to a greater demand for transport services. How are we to deal with this growth?

The obvious answer is greater productivity, but you are all aware of the pro's and con's of that debate. Larger or faster road vehicles have the safety debate (which does not appear with the same emotion in other modes), longer shifts have the industrial relations and quality of life arguments and better infrastructure the funding constraints.

In Australia, nearly three quarters of freight is moved by road vehicles in ever expanding urban areas, and major resources must be given to improving productivity with this freight. Improved terminal facilities and the removal of bottlenecks must be high on the agenda.

I do not pretend to have all or any of the answers, but I strongly believe that we, as part of the transport community, must participate in the debate. Researchers and practitioners such as yourselves have a major part to play in providing factual information to assist the resolution of our future problems and the grasping of our opportunities.

Bob Pearson
June 1989

SESSION 1 – PAVEMENTS 1

Chairman: E. Lund, Ministry of Transportation and Highways,
British Columbia

Speakers

1. **Impact of Heavy Vehicles on Saskatchewan's Low Strength Roads**
R. Barton, ADI Limited; B. Churko, E. Hopkin, E. Wilson, Saskatchewan
Highways and Transportation
2. **Transverse Cracking Distress and Vertical Dynamic Impact Load from
Heavy Truck Axles – A Feasibility Study**
G.J. Chong, W. Stephenson, Ministry of Transportation, Ontario
3. **Traffic Loading Data: Their Place in the SHRP Pavement Performance Studies**
N. Hawks, Strategic Highway Research Program, Washington
4. **Measurement and Analysis of the Dynamic Response of Flexible Pavements**
M.S.A. Hardy, D. Cebon, Cambridge University, England
5. **Characteristics of Radial Ply Tires and Their Interaction with Road Structures**
J. Bolegoh, Michelin Tires, Montreal

