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The New Zealand Transport Industry

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THE NEW ZEALAND TRANSPORT INDUSTRY

1 Introduction

Much has been achieved in moving towards a more flexible, competitive and efficient transport sector in the last two decades. Since the Wilbur Smith Report in the early 1970s, there have been comprehensive reforms to most parts of the industry.

Strong economic growth in general, and strong growth in forestry exports and tourism in particular, will test the industry in the coming decade - and increase the pressures for further reform in some important areas, particularly in relation to the road network.

The future reform programme should be driven by the same principles that have driven the reforms in the transport industry and many others to date. In essence they should see a continued reduction in the ownership and provider functions of central and local government, allowing decision makers to better focus on funding, regulation and policy.

2 Economic Framework

The underlying principles which have driven reforms in the transport sector stem from the fundamental proposition that the interests of the users of transport facilities, and society at large, are likely to be best served if transport providers are motivated to discover user needs and to meet them at least cost.

The degree to which providers are focused on meeting user needs rather than some other purpose depends greatly on the constraints imposed on them by institutional arrangements. Prior to the reforms, private transport providers were heavily constrained by regulation and licensing and by competition from major public sector providers with multiple and conflicting objectives. In the public sector, incentives to reduce costs and better identify consumer needs were weak. Mispricing of publicly-provided services can, and often did, distort private sector activity in significant ways.

Properly harnessed by exposure to open competition, the profit motive is the best tool societies have found for stimulating providers to deliver the greatest benefit to consumers from scarce resources. Profits, being the difference between revenues and costs, focus providers on trying to increase revenue by better discovering and meeting consumer wants while economising on costs.

As a general rule, government ownership, and regulations which prevent competitors from undercutting providers who are charging excessively in relation to achievable costs, weaken incentives and impair outcomes. This is why private, competitive provision dominates most industries in the best performing economies.

No perfect set of institutional arrangements is attainable. Economists acknowledge that private, competitive provision may produce imperfect outcomes where problems of monopoly, public goods or externalities arise. Another possibility is that societies may desire to modify outcomes in a market for equity reasons. Any policies for the transport system must give due consideration to these factors.

Monopoly

Monopoly problems are not significant in respect of transport operators moving people or goods using air, rail, land or sea transport facilities.

The provision of transport infrastructure is another matter. Monopoly is a potential issue in respect of the provision of harbour and airport facilities, but not to a prohibitive degree. Significant competition exists between ports. The provision of airport facilities has raised particular monopoly issues as illustrated by the use of optimised depreciation costs as a basis for pricing. In both cases the Commerce Act 1986 has been found to have force.

The rail system is clearly exposed to competition from road transport operators and air and sea transport. In air transport, competing airlines exist.

The most serious monopoly issues arise in the provision of road infrastructure facilities. In any case the absence of a commercial billing system currently means that a fully commercial structure cannot be put in place - taxes and levies on proxies for the use of infrastructure have to be relied on.

This constrains reform options. However, there is considerable scope for harnessing competitive forces in the construction, maintenance and operation of the road system and for progressing to more efficient billing systems.

Public Goods

Public good issues do not obviously arise in the transport sector, at least for motorised vehicles. For all practical purposes, those who do not pay can be denied access to the network as a whole. Further, no two vehicles can occupy the same space at the same time, just as no two cinema patrons can occupy the same seat at the same time. Therefore neither test of a public good applies.

Of course, excess capacity outside peak periods is a feature of private enterprise in general, and network systems in particular. In my view, we should not regard roads as presenting any special public policy problems in this respect.

In expressing this view, I am disagreeing with the view taken in the second report in the Land Transport Pricing Study (the Study) that state highways and urban and arterial routes "have the characteristics of pure public goods". In particular, car owners would find it very difficult to escape petrol tax and the police would not be doing their job if road users at large could escape paying registration fees and road user charges.

Externalities

Externalities undoubtedly exist in the transport sector, as in many other activities. The obvious example is where an extension to the infrastructure improves access to properties owned by unrelated parties. The improved access may increase land use opportunities and therefore property values. Other possible externalities include those associated with noise, pollution, safety and, some would argue, congestion.

Straight mispricing of a resource will cause a misallocation of resources, but it should not be confused with an externality. The essence of an externality is an unpriced third-party effect which causes the costs to society of a decision to deviate from the costs to the decision maker. Mispricing is different. It occurs when the buyer gets something from the seller at a price which does not reflect accurately the seller's costs. There is no third-party effect. The seller's costs can be identical to social costs.

The welfare losses from mispricing can be minimised by arrangements which give the best chance of ensuring that prices track private costs. Competitive markets typically encourage this outcome. Private sellers have a strong incentive not to sell below private cost. Open competition is likely to force prices down until any supernormal profits are eliminated. Therefore mispricing is not likely to be a problem in a competitive market.

Mispricing is much more likely to be a problem under government ownership when the incentive to identify costs accurately is reduced. Since opportunity cost is a subjective concept, it can be very difficult for any bureaucrat, regulator or independent expert to determine whether a good or service is accurately priced. For this reason, the sustainability of a price in open competition is often the best test of how accurately it reflects forward-looking costs.

As with monopoly, externalities cause a potential welfare loss because the price charged for the service may depart from marginal social cost. In the case of a positive externality, the service may be under-provided, from an unconstrained perspective, and vice versa for a negative externality.

In some circumstances a government may achieve better outcomes for society by finding some means of reducing transaction costs. For example, it might have superior information which it could publish, or it might be able to usefully redefine property rights. Alternatively, if it had enough information to be confident that it was doing more good than harm, it could impose a corrective tax or subsidy based on some estimate of the unit cost of that externality. Its ability to take such actions may or may not be affected by any institutional reforms.

Fuel, for example, may only be priced to recover the marginal cost associated with extraction, refining and processing, transport and distribution. The costs associated with pollution may be unpriced. This would not matter if those who incurred the costs of that pollution could readily negotiate with the polluter so as to achieve a more optimal level of pollution. Unfortunately, transaction costs may make these negotiations too difficult to consummate. If so, potentially welfare-enhancing transactions will not take place. Regardless of the existence of any reforms, a fuel tax could be imposed, if desired, in order to mitigate this problem.

Of course, petrol is already heavily taxed, as a proxy for road use. To the extent that petrol tax causes road users to use less petrol-intensive forms of transport, the case for adding an externality component to this tax is reduced.

Safety issues have been addressed by institutional reforms and external regulation. Institutional reforms in respect of ownership, pricing and competitive entry do not obviously preclude any options here.

The access-externality has no clear-cut solution. Imposing taxes on those whose property values have been increased by an enhancement to transport infrastructure might or might not be an efficient way to 'internalise' the externality. Real difficulties would arise in determining which properties had been increased in value and by how much. Nor are such externalities specific to transport. Gisborne residents, for example, are currently concerned about the external effects of the closure of a large employer's plant. Many small communities have faced similar situations.

A policy of taxing local ratepayers in order to subsidise investments of a scale which is likely to significantly increase local land values has severe drawbacks. One is its lack of symmetry - the same argument would call for large industries which close and cause property values to fall to be taxed. This is likely to be an impossible endeavour. Second, there are grave risks that the subsidy to attract new businesses will act as a tax on existing business activity. Third, lack of information will make the rate of subsidy very arbitrary and potentially welfare-reducing. The arbitrariness will attract rent seekers and political appointments.

Under any institutional arrangements, property owners will have an incentive to negotiate with an infrastructure provider for an expansion of the asset where they see that the private benefits to the provider are less than the private costs by a smaller amount than the collective third-party benefits. Under all options for institutional arrangements, information costs will make it difficult, but not always impossible, to negotiate a solution.

The fact that New Zealand has well-developed infrastructure in respect of harbours, airports and rail facilities makes these transaction cost issues less of a problem than would be the case in a start-up situation. To date they have not been a significant issue in the reform programme.

Income Distribution Issues

Income distribution issues are widely acknowledged to be best dealt with by social assistance policies rather than by industry-specific assistance. Cash benefits, rather than assistance in kind, offer the recipient greater flexibility. Nevertheless, market arrangements do not preclude the provision of transport-specific assistance as the experience with subsidies for urban passengers demonstrates.

Concluding Comment

The economic framework outlined favours the creation of an open and competitive transport sector subject to the need for any industry-specific responses to serious problems of market failure.

Any case for government regulation (safety and environmental issues aside), ownership or funding of the transport of freight or passengers seems to be weak. There appear to be no monopoly issues with the rail infrastructure and the Commerce Act 1986 offers reasonable protection against the abuse of monopoly powers in respect of harbours and airports.

The ownership of the road infrastructure presents a particular problem, the biggest current constraint on fundamental reform being the absence of a commercial billing system.

3 Evolution of Policy

Reflecting this economic framework, the reforms to date have focused on creating a more open and competitive transport system. Price signals have been improved through user charges for services provided by government entities. Trading activities have been separated out and corporatised or privatised. Regulatory responsibilities have been removed from operating responsibilities, levelling the playing field for the latter and removing the former's conflict of interest. Regulatory changes have focused on reducing entry barriers and establishing neutral competitive conditions in the interests of economic efficiency.

The transport-specific reforms should also be seen in the context of the wider microeconomic reform programme in which similar principles were applied to the reform of other sectors, while macroeconomic policy was directed at reducing inflation and restoring the Crown's finances.

The following paragraphs illustrate the degree to which the transport sector was reformed in terms of these principles.

(a) Reducing Barriers to Entry

International and domestic aviation were opened to competition from 1985 and 1987 respectively. From 1990, safety certification has been the only regulatory barrier to market entry.

The regulations preventing road freight transport operators from competing with rail over specified distances were phased out between 1983 and 1986. Quantitative licensing of road transport operators and taxis was replaced by open-ended qualitative licensing from 1989 based on the principle of permitting 'fit and proper' persons to enter.

Waterfront reform in 1989 saw the end of the government-managed labour pool system and the introduction of direct employment and enterprise bargaining. Foreign operators have been permitted to compete with coastal shipping from 1995.

Other reforms, such as the deregulation of financial markets and the Employment Contracts Act 1991, have greatly improved the ability of transport operators to provide efficient and flexible services.

(b) Improved Price Signals

A sophisticated system of road user charges for heavy commercial vehicles took effect from 1 April 1978. The basic approach is to recover properly allocated costs through user-pays charges. The sophistication arises from the formula used to allocate costs on the basis of gross axle weight, axle configuration, and tonne-kilometres travelled. This reform focused future pricing discussions on technical rather than political considerations.

Privatisation has transferred responsibility for price decisions from government-owned entities to the marketplace in shipping, rail and aviation.

A 'user-pays' policy has also been put in place. For example, from around the time of the 1989 reforms, the air transport division of the Ministry of Transport has aimed to recover the costs of its operations from aviation operators.

(c) *Reform of State-Owned Trading Operations*

The New Zealand Railways Corporation was established as a statutory corporation with a commercial mandate in 1982. It was made a state-owned enterprise in 1986 and privatised in 1994.

Air New Zealand was privatised in 1989. The Airways Corporation of New Zealand was established as a state-owned enterprise in 1987. Its role is to provide air traffic services on a user-pays basis. All three international airports and several regional airports have been corporatised.

Thirteen port companies were established in 1988. Four are partly-privatised.

(d) *Reform of Non-Contestable Activities*

In order to separate the regulator from the operator, a stand-alone Crown entity, the Civil Aviation Authority, was created in 1992. Its role is to regulate for aviation safety and security and to provide civil aviation policy advice. Operators are responsible for providing a safe service in accordance with safety and security regulations.

Another independent agency, the Transport Accident Investigation Commission, was established in 1990. It has no regulatory powers; its role is to investigate and report on selected aviation, rail and maritime accidents and incidents. A separate Maritime Safety Agency owns and maintains coastal navigational aids and deals with maritime accidents and incidents including ship-sourced pollution.

Transit New Zealand was created in 1989 to take over the responsibilities of the National Roads Board and the Urban Transport Council. Its principal objective has been to promote policies and allocate resources to achieve a safe and efficient land transport system that maximises national economic and social benefits. Its funding responsibilities are being separated from its network operator responsibilities in relation to state highways.

Since 1993, road safety has been under the control of the Land Transport Safety Authority. It is the government's chief adviser on land transport safety. The New Zealand Police took over responsibility for enforcing the road laws in 1992.

4 Forward Agenda

There is further scope for deregulation and privatisation. By far the largest outstanding issue, however, is reform of the road system.

(a) *Deregulation*

The so-called trans-Tasman maritime accord continues to protect Australian- and New Zealand-crewed ships from competition from foreign-crewed ships. Both the Australian and New Zealand governments are committed to achieving open

competition on these routes. This looks like happening in the near future, at an annual cost saving estimated at around \$40 million to the two countries.

The Australian and New Zealand governments can also be expected to make progress in opening up international aviation to greater competition, with 'beyond' rights in Australia being of particular interest from a New Zealand perspective.

De facto rate of return regulation of airport charges has occurred by the application, for pricing purposes, of an administratively-determined rate of return requirement to an administratively-determined optimised depreciated replacement cost value. It is widely recognised that rate-of-return regulation distorts investment decisions and creates a cost-plus mentality. The situation should be reviewed with the aim of finding more efficient arrangements.

(b) Further Privatisations

Further privatisations should include ports, airports, the Airways Corporation and local authority buses.

Privatisation of the ports should proceed forthwith. Currently they have relatively weak incentives to identify their core businesses and rationalise their activities. Investments in marinas are peripheral to their main cargo-related business. Arguably, customer-specific terminals such as those solely serving oil tankers and the rail ferries would be best sold to those customers for the same reason. Based on experience with other government-owned operations, it would also be surprising if a private sector operator did not find that some ports own land which is surplus to core requirements.

Privatisation of the airports should also proceed forthwith. The sale could involve Commerce Act proceedings should a major airline be a successful bidder. The outcome of such a challenge would be determined by due processes under that Act. More complex is the problem described above of the distortions introduced by the *de facto* rate of return regulation of airports. This form of regulation also applies at present to the electricity line companies. In both cases it is desirable that privatisations should proceed in the absence of any assurances that this form of regulation will continue, since a more light-handed regulatory regime would be likely to be less distortionary.

In Wellington, bus operations owned by the Wellington City Council have been sold to Stagecoach, a private, for-profit bus operator, with benefits to passengers and ratepayers. Passenger transport subsidies are available, but only for some routes. Bus and train operators can declare some routes during some periods to be commercial. No urban passenger transport subsidies are available to the bus operator in respect of those routes. The subsidy is available for non-commercial routes, but it is allocated by competitive tender.

Bus operators have an incentive to declare some routes to be commercial, because doing so frees them from the close council supervision which applies to subsidised scheduled trips. In particular, fares charged on commercial routes are not subject to council approval.

This system has successfully separated the provision of bus operator services from regulatory and funding activities. The regional council can focus on these activities without regard to the effect they might have on a council-owned bus operator.

(c) *The Road Network*

Considerable progress has been made towards separating responsibilities for policy advice, funding, regulatory tasks and network provision. However, many complex issues remain.

Future reforms have to address the problems arising from inadequate (marginal) cost information, concerns about the pricing of externalities, the apparent cost of direct billing technologies, weak commercial incentives and concerns about monopoly pricing.

Pricing Issues

Charging is a critical issue for inter-modal competition neutrality, resource allocation and economic efficiency. Under-charging road users for the costs which their decisions impose on society will lead to undue road congestion and/or over-provision of road infrastructure facilities. The first wastes time, fuel and other resources. The second wastes capital. Over-charging also causes inefficiencies.

Current charges are based on recovery of administratively-allocated costs and are levied on proxies for road infrastructure use. As economists have long noted, cost allocations are inherently arbitrary in common costs situations. Further, the proxies for road use would provide perverse incentives to a commercial owner of the network.

For all its drawbacks, there has arguably been no more efficient approach so far available for road pricing. This is now increasingly in doubt. Technological change is enabling us to anticipate the day when we will get monthly bills for our use of the road network based on the time and location of our travel, the type of vehicle, and our choice of billing option.

However, progress towards commercial billing systems is hampered by the costs of these technologies, the absence of commercial incentives to implement such a system in a timely manner, and concerns about monopoly problems and ownership issues should commercial incentives be put in place.

We therefore face two issues in respect of prices:

- determining the optimal charges given current arrangements; and
- adopting more efficient direct billing arrangements in a timely manner.

The importance the government is putting on trying to ensure that roads are priced correctly is reflected in the resources which the Ministry of Transport and the industry are putting into the Land Transport Pricing Study mentioned earlier. There is a clear tension between the first two reports in this Study. One promotes cost recovery considerations, the other efficient pricing principles.

Long-term contracts aside, efficient prices for access to the road infrastructure would be based on the degree to which decisions to use the network by current road users raise current and future costs. Since past costs are irrelevant to setting efficient prices, as a general rule, capital charges should not influence price. Instead the capital charge would be best interpreted as a management information tool.

Charges based on cost recovery are only likely to be compatible with economic efficiency if the road network is subject to constant returns to scale. If the road infrastructure industry is competitive there will be no supernormal profits under marginal cost pricing and prices will also equal average cost. In such circumstances marginal cost pricing will be consistent with full cost recovery.

Cost recovery might also be efficient if there are increasing returns to scale, *and* if it can be established that Ramsey pricing to recover any deficiency arising from marginal cost pricing could be approximated by average cost pricing, *and* if such pricing is more efficient than recovering the deficiency from rates or taxes. These would be heroic assumptions.

Conceivably, duties and charges based on average cost pricing may be more efficient than charges based on erroneous assessments of marginal cost. Even so, the efficiency case for average cost pricing is less credible where constant returns to scale do not apply, where rates and taxes are the most efficient way of covering funding deficiencies, and/or, depending on the constraints, if the road system is so over-built that marginal cost is well below average cost or so congested that marginal cost is well above average cost.

Current technologies do not allow charges to road users to be adjusted according to the time of travel or location. These are serious limitations given the variations in costs associated with time and location across the network. It means that duties and charges must be averaged, signalling the scope for efficiency gains from innovations which relax this constraint.

Charges must also be based on proxies for infrastructure use. There is scope for efficiency gains from innovations which allow use of the network to be charged for directly on a time and location basis. To illustrate this point, road improvements which reduce fuel usage will, other things being equal, reduce revenue from road users. Such a system would actually give a commercial infrastructure provider a perverse incentive. Direct billing does not suffer from this defect.

For all these reasons, there is much at stake in making progress towards more efficient pricing structures. These would involve less reliance on proxies and a greater ability to bill according to location and time of day. Such structures may variously be based on time-of-day and/or location-specific permits and direct tolling, either manual or electronic.

The report on environmental externalities in the Study provides some indicative dollar estimates on the costs imposed by road transport in terms of noise, air pollution, greenhouse gas emissions and adverse effects on water quality. These are issues which should be taken seriously. Balancing considerations, from a pricing perspective, include:

- the need to give consideration to the possibility of positive externalities - for example, enhancements to the road network may raise the values of properties owned by unrelated parties. This is an access externality;
- the fact that petrol is already heavily taxed as a proxy for road use;
- the possible efficiency of direct regulation of some of the harmful constituents of fuels; and
- the possibility that consumer welfare in colder regions will be enhanced rather than reduced by global warming of the scale currently envisaged.

Structural Reforms

The critical issue in structural reform is how best to align operator incentives with the national interest. Issues of shadow tolling, contracting-out (perhaps through franchising), commercialisation and privatisation subject to monopoly regulation, arise.

It seems highly likely that the road network will remain government-owned during the next decade. However, considerable progress will surely be made towards the introduction of direct billing systems and greater private sector involvement.

The 1993 New Zealand Business Roundtable (NZBR) report on the provision of network infrastructure recommended that road network services should be put on a commercial basis as soon as practicable in order to improve transparency and incentives. Until direct billing systems could be introduced, we suggested that shadow tolling should be investigated as an interim measure. The report also canvassed the options of separate ownership of state highways and local roads versus single ownership. We saw possible advantages in the latter option. We think these suggestions remain relevant.

The removal of the funding role from Transit New Zealand is a step in the right direction. Further steps need to be taken to put TNZ on a more commercial basis and improve its incentives to obtain better information about consumer needs, the costs of meeting those needs, and the optimal time to bring in direct billing.

Public Transport

Local government has responsibility for the provision of local roads. Section 23 of the Transit New Zealand Act 1989 requires regional councils to prepare a regional land transport strategy. Considerable confusion appears to surround public policy in relation to bus and rail passenger transport.

Funding of bus and rail passenger transport for social welfare reasons has not been clearly separated from the funding of efficient enhancements to the road network infrastructure. Nor has a convincing case been made showing that it is efficient to assist the 'transport disadvantaged' by subsidising particular transport operations which serve the general public. In addition, arguments for assistance for social welfare reasons have become entangled with arguments for assistance in order to ease congestion.

Better public policy outcomes would be likely if central and local governments:

- (i) withdrew from the ownership and provision of all passenger transport services;
- (ii) targeted financial assistance directly at individuals who were deemed to be in need of assistance rather than at particular transport providers;
- (iii) treated such financial assistance as a social welfare activity;
- (iv) treated the funding and provision of road network infrastructure which particularly relates to bus transport in a similar manner to the provision and funding of network infrastructure which particularly relates to cars and/or heavy vehicles; and
- (v) regulated for safety and environmental factors in a manner which was consistent with the regulation of other transport activities.

National guidance for the transport industry is provided in the Ministry of Transport's publication *Transport Directions 1994-1999*. This document is notable, relative to the 1991-1996 version, for its focus on promoting a 'level playing field' between transport modes and for its much less prescriptive approach to public transport. The latest publication does not mention public transport at all in its seven broad policy goals. Indeed, the only mention it makes of 'public transport' is in the context of the need to review the funding of public passenger transport and in the context of defining the "transport disadvantaged".

In contrast, the 1991-1996 version saw the development of public transport policies as a key policy issue. Another key policy issue was the need to favour public transport through disincentives to private vehicles where urban congestion was a problem.

The latest approach is clearly better on efficiency grounds. Provision of car-park buildings, buses, taxis, rail and cars etc. should all be a private sector responsibility. All are private goods; all can carry passengers. With private sector provision, even the term 'public transport' appears to be a misnomer. If it is to be interpreted as 'fare-paying passenger transport', taxis would clearly be included. Under a level playing field approach it is reasonable to ask why local government should have specific policies in relation to public transport. Issues of affordability and access are given prominence in the 1994-1999 publication, but not in a manner which limits their relevance to public passenger transport.

The dropping of the view expressed in the 1991-1996 document that a key policy should be to favour public transport through disincentives to the use of private vehicles is also commendable since the case for such a policy looked particularly weak. First, congestion is not yet a serious issue in most regions and so cannot be used in general to justify current subsidies for buses. Second, where congestion does exist, direct congestion charges should be considered in the first instance, perhaps through vehicle permits or licences. In time electronic direct billing technologies should be feasible.

Third, more road capacity should be built when the benefits from doing so exceed the costs. Any bus or train subsidies on account of congestion should be temporary and should be based on clear evidence that they did, in reality, reduce congestion.

Currently, any effects in Wellington at least would be very indirect since the bus subsidies are typically being paid for weekend and evening travel.

Some councils, such as the Auckland Regional Council, appear to have retained a fairly strong focus on efficiency in developing a regional land transport strategy. In particular, its 1995 Annual Report contains two policies, 1.3 and 4.7, for introducing efficient congestion charges. Unfortunately, it also comments that:

As there is no provision with the existing legislation to implement these measures only limited work is being done in this area.

Clearly this situation needs to be rectified.

The second volume in the Land Transport Pricing Study, 'Roothing as an Economic Good', canvassed direct charging options in congested urban areas. While noting the success of supplementary vehicle licensing in Singapore and the existence of such a scheme in Wellington (directed at residential parking), it was curiously diffident about the scope for such approaches in New Zealand in urban areas. Even so, it did acknowledge that electronic road pricing on "key corridors such as the Auckland Harbour Bridge and the Hutt motorway could offer sufficient efficiency gains to offset the additional costs".

Some councils, particularly the Wellington Regional Council, appear to be strongly committed to policies to enhance and expand bus and rail services while restraining the growth of commuter road traffic. The following extracts illustrate the strength of the anti-motorist sentiment underlying its regional strategy:

Public transport fares should be set at a lower rate than the perceived costs of car travel.

That the capacity of the roading system should only be extended to meet the needs of commercial road users and off-peak, rural and recreational travellers, rather than the needs of peak period car commuters.

The first of these policies clearly violates both cost recovery and efficient pricing principles. The second is simply ridiculous. It would be bizarre to encounter the argument in the electricity, telecommunications, water or any other network system that new capacity should never be built to accommodate peak demand. The implication would be that, in a growing economy, users should have to put up increasingly with brown-outs, chronic 'busy-signals' and/or loss of water pressure.

In reality, many users would be annoyed if these things happened by chance and livid if they happened by intent. Imagine the outcry if people went home from work on a cold winter day only to find that their electricity had been turned off because the supplier had a policy of never expanding capacity to meet peak demand. Yet this is just what the Wellington Regional Council proposes should occur in its region for roads. This monumental indifference towards customer requirements is staggering even for a government provider - and is obviously unsustainable.

To return to our broad framework, better policies would result if transport-specific policies were directed at achieving a more efficient transport system and if any social assistance policies were treated as a separate activity.

Local authorities should focus their regulatory policies in such a way as not to distort commuter choices and decisions about where to live.

As the provider of local roads, local authorities should focus on making efficient capital expenditure, maintenance and pricing decisions, to the extent that central government policies allow them to do so.

Regulation of Safety

In respect of safety, the 1993 NZBR report on roading argued that full responsibilities for the safety of the road network should be assigned to the network operator. The operator would be responsible for safety aspects of road design and maintenance, vehicle standards and driver certification and behaviour. Enforcing those standards would also be the responsibility of the operator. For example, there might be explicit contracting for this function between the network operator and the police, making the latter liable where they fail to provide the contracted-for enforcement services.

Regulation of safety standards would continue to be a separate government activity. That regulator would therefore have to monitor the degree of compliance with regulatory requirements.

Liability for the road network operator's performance in these respects would be affected by tort law and by any system of fines for breaches of regulations which were imposed by the government regulator.

5 Other Issues

Environmental, land use and coastal considerations come within the domain of the Resource Management Act 1991. Provision is made under this Act for a network utility operator to get designation status for necessary projects. One concern expressed about this legislation in our 1993 report on roading was that planning agencies might be reluctant to sanction, under the Act, the construction of duplicate routes by competitors. The Public Works Act 1981 provides for the taking of land. Again its application might inhibit potential competitors.

The optimality of specific taxes and subsidies in respect of environmental externalities will occasion much debate. The difficulty here lies in evaluating any specific proposals. First, the government does not have the information necessary to know, with any precision, the optimal level of any tax or subsidy. In some cases, it may not even know the sign of the externality.

Two examples illustrate the last point. Global warming is commonly regarded by policy advisers and environmentalists as a negative externality. However, some residents may regard it as a benefit rather than a cost if it leads initially to warmer winters and, for example, less winter flu. Second, noise is surely a negative externality, but improved access might be a positive externality. If improving an access road to a local airport, for example, raises traffic densities, average travelling speed and noise levels, it is not clear if adjacent property values will rise or fall. The benefits from improved access have to be balanced against the costs of increased noise.

Second, such uncertainties raise the likelihood that diverse groups will lobby governments to set such taxes and subsidies according to other criteria - such as general revenue gathering or the provision of a non-transparent subsidy for competing providers of some service. As with all government interventions, the costs have to be weighed up against the benefits.

Safety regulation of transport generally is a major subject in its own right. Experience in the United States has demonstrated that too prescriptive an approach can create nonsensical outcomes, as measured, for example, by the cost of each life saved.

Some experts who have studied New Zealand's ACC system have expressed concerns that the abolition of the right to sue has made New Zealand a riskier place. However, the right to sue appears to be returning. Richard Epstein suggested on a recent visit to New Zealand that a strict liability tort system may be the most efficient in the stranger-with-stranger accidents which are a feature of many transport system accidents. Where the situation arises between a passenger and the provider, a contract between the provider and the patrons could specify the liability. Obviously the terms of such a contract will be constrained by the legal and regulatory environment.

6 Conclusions

- Reforms in the near future should see the end of the trans-Tasman maritime accord and a more competitive Australian market for air travel.
- Privatisation of all operations which transport people and freight should occur. The main item here is bus transport. Ports, airports and the provision of air traffic control services should also be privatised.
- As confidence in the disciplines imposed by competitive markets grows, attention needs to be given to how best to move away from the rate-of-return regulation which has crept into airport regulation.
- Road reform is by far the biggest issue outstanding.
- The Land Transport Pricing Study seems unlikely to produce any clear consensus about optimal charges under current arrangements. Inadequate information and the lack of commercial incentives limit what can be achieved within the present institutional framework, although we should do what we can.
- The greatest hope for major efficiency gains may lie in moving more rapidly to put road network providers on a commercial basis and to remove the barriers which are impeding a more vigorous search for direct billing options.
- Greater recourse to franchising and contracting out can be expected during the next decade.
- The NZBR's 1993 report favoured SOE structures for road network providers and making those providers fully responsible for all aspects of road safety, including enforcement. A separate government agency would continue to be responsible for transport-sector wide safety policy and regulation enforcement.

- Local government objectives and instruments in relation to the funding of bus and train passenger transport services appear to be in need of fundamental review. Currently there does not appear to be a sound case for distorting commuter choices between these and other forms of conveyance. Rationales based on congestion and/or the need to assist the transport disadvantaged or people with disabilities seem to be very weak, given the availability of superior strategies.