

Land Transport Policy Directions in North America

address for the annual Australasian Transport Research Forum
Sept. 27-29, 2006
Surfers Paradise

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1 Introduction

The themes for this paper could fill a book, but space and time constraints allow only a cryptic summary of major issues and challenges in transportation and transport policies in North America. The focus is on Canada and the United States, with only brief mention of Mexico. Comparisons with or implications for Australia are mentioned where possible.

The paper begins with a background review of similarities and differences between Australia and Canada and the U.S.: this includes similarities and differences in history, culture, technology, economic structure, and political structure. And they share several global trends that affect the economy and transport system, including ideas about appropriate transport policies and governing instruments. The paper then reviews selected trends and developments for various transport modes, particularly land transport modes: motor transport, rail and urban transportation issues.

2 Background

The three countries are characterized by large land areas, particularly relative to Europe and the U.K. Australia and Canada have low populations relative to their land area. Nonetheless, they are also accurately described as highly urbanized, a majority of residents live and work in a few major centres. All three countries share a history of being 'new' lands, and transport technology and investments played a prominent role in their evolution and development. Shipping was the most important mode for distant Australia. Coastal and inland waterways were initially important in North America, but it was the railroad that became the defining technology until well into the 20th century. After that all the modes play important economic roles in all three countries.

Australia and Canada share a common political heritage: governments modeled on the British Parliamentary system, and a federation of a limited number of strong states/provinces relative to the national government. The U.S. has a much larger number of states, of varying sizes, but whose powers are more limited relative to the national government. The U.S. system of 'checks and balances' is deliberately designed to produce tensions between branches of government and can seem dysfunctional at times relative to the Parliamentary/Cabinet system.

The much larger size and economic power of the U.S. puts it in a class by itself, but all three countries share a similar economic system of a market economy with various government interventions – at three levels – and are subject to similar pressures from world events and economic trends.

3 Selected Recent Economic/Global Trends

The three countries are affected by the same trends and cycles in world economic activity, and international trade (as well as geopolitical issues). These cause similar economic pressures of inflations, recessions and even policy ideas (e.g., the deregulation movement of the 1970s and 1980s).

3.1 Economic Trends

The last decade has been a period of strong economic activity, employment levels up, government deficits reduced or eliminated, inflation largely under control. The economic performance has been stimulated by a growth in international trade and especially the strong economic growth of Asia particularly China. This is in contrast to a decade or two before that when inflation and government deficits and debt were a central concern. Economic performance was weaker then too. Concerns about limited productivity were among the factors that led to an emphasis on reducing government involvement in the economy, especially reductions in regulation.

An increased importance of international trade has characterized the world economy and its prospects. Australia and Canada have always been 'open' economies, trade representing a substantial fraction of the economy. This was not true of the U.S. but in the last decade or so the U.S. economy has also come to be more integrated with other economies through trade.

The most important trend in the world economy is the rising importance of Asian economies, including India, and especially China. Rapid economic growth in nations of very large populations results in extraordinary increases in wealth and demand for both finished goods and services and also natural resources. Australia, Canada and the U.S. are all both traders of natural resources but also high-value products and expertise. But present world trade patterns and trends may not be sustainable. Shifts in trade balances must come about although this will not necessarily alter the present trends, merely dampen them somewhat.

3.2 Demographics

A feature of all three countries is a similar demographic cycle, as the post World War II 'baby boomers' aged, dominating the work force over the years, influencing consumer trends, and now approaching retirement with new pressures on the economy of a shrinking workforce and pressures to come on health care requirements.

3.3 Energy

All three countries are transport-intensive economies. Dispersed production and consumption locations are linked by a transport system that is extensive and, increasingly stressing time-sensitivity more than cost. Transport performance is important both for domestic and international trade. Petroleum is a valuable and strategic resource for all three economies. There are both long-term and short-term concerns about oil dependency. The long term issues are the sustainability of current petroleum-using lifestyles especially as high population nations follow in our tracks. There is substantial debate over the size of oil reserves and projected rates

of consumption. The U.S. was well-endowed with oil stocks but they have been run down over the decades. Canada is well-endowed although the oil is costly to extract. Australia is more dependent on imported oil than North America.

The short-term issues are the risks of disruption of oil supplies due to Mid-East conflict. As is only too well-known, the strategic importance of oil is tangled up with the politics and unsettled Mid-eastern countries. The conflicts in this region threaten peace and the economy well beyond the regional boundaries.

3.4 Environmental Concerns and Climate Change

Environmental concerns are of two broad types: (1) the adverse consequences on the local environment due to congestion and pollution, closely related to our transport-intensive economy, population growth and lifestyle; and (2) the concern about greenhouse gases (GHGs) and possible climate change. The latter can be also linked with concerns about the long-term sustainability of current rates of energy consumption. Serious steps to reduce GHG emissions probably can only come about through dramatic changes in transport technology and/or fundamental changes in lifestyle and possibly standard of living.

There is no doubt that the environmental movement is influential in all three countries, although transport policies to deal with the environment are far less developed than policies in Europe. There the phrase “transport policy” is understood to refer to environmental policy, not economics. Environmental factors generally weigh heavily on investment decisions in Australia, Canada and U.S., and also in regulatory decisions such as vehicle emission regulations. But environmental factors by and large have not been manifested in Pigouvian taxes such as pricing for road congestion or noise externalities.

The three countries differ in their response to climate change issues, specifically the Kyoto Agreement. Australia was well-informed about the potential costs to the economy of meeting the Kyoto standards or equivalent, and hence bargained for exemptions and delays to meet the standards. Canada went into the negotiations with good intentions for the world and the environment but was not well-briefed on the costs of conforming to Kyoto. Canada ratified the treaty but it was recognized by many that Canada could not and would not live up to the treaty requirements. The U.S. Government has been skeptical from the beginning, and given the power of Congress and their concern for any negative impacts on the economy, has not been a party to the Kyoto agreement. But Kyoto or no, there is every indication that these issues are here to stay and pressures to undertake measures will build as evidence mounts about the likelihood and seriousness of climate change.

3.5 Security

Concerns about security and terrorist threats are recent developments with serious implications for the transport sector. Terrorist incidents, especially the events of September 11, 2001, have sent a chill through all three countries, but especially the U.S. Both Australia and the U.S. have been direct targets. Canada has not had a recent event although a plot was uncovered recently and the perpetrators arrested. The U.S. has made security its number one priority, overriding trade and economic impacts if need be. This has posed major problems for Canada because the two

economies are so intertwined, but Canada is only 10 percent of the size of the U.S. and the impact of U.S. policies on Canada can go almost unnoticed by the U.S.

The primary terrorist target has been air travel, because of the high visibility and catastrophic results. The necessity for stringent security is hampering travel, imposing substantial costs on the industry, the traveling public and the government.

Although all modes are potential targets for attack by terrorists, ones receiving special attention (besides air transport) in North America are ports of entry, both container ports and the long borders between U.S./Canada and U.S./Mexico. The Canada/U.S. border has hundreds of kilometers that essentially are unguarded, but this is being reconsidered by the U.S. New U.S. border passport requirements and tighter controls threaten to substantially reduce the tourism flows between the two countries. Trade flows have also been hampered but thus far there is substantial collaboration to develop special procedures and information technologies to enable rapid but now secure cross-border movements.

There is an issue concerning finance of security procedures. In Canada, air security screening is to be funded entirely from the air travel market, via air transport security fees. Although it is obvious that air travelers benefit directly from enhanced security, arguably it is also true that prevention of terrorist attacks benefits society at large, not just air passengers. In these circumstances there is a case for some public support for air security requirements.

4 Transport Policy Instruments

All countries utilize the same policy instruments, with different emphasis and details.

4.1 Infrastructure investment

One role of government is provision of infrastructure, and whether or not there is cost recovery from users. As economies have grown over the last few decades, an alleged inadequacy of infrastructure investments has been a common complaint. Traffic growth outstripped new investment in infrastructure. Even if infrastructure investments had been larger than necessary in earlier years, traffic catches up, utilization increases and congestion grows. An inadequacy of government support of transport infrastructure has been a familiar refrain for a couple of decades now. Fifteen years or so ago the lament was that large government deficits and fiscal restraint prevented governments from adequate levels of spending. More recently, governments have overcome deficits and a booming economy have helped fill the coffers of government. But complaints about inadequate transport infrastructure investments continue. Governments everywhere face increasing pressures for spending on social services. Hence an ability to finance new infrastructure hinges increasingly on innovative financing mechanisms and, probably, an emphasis on user pay.

Before discussing new financing structures, note that transport infrastructure investment takes place at all levels of government: federal, state/provincial, and local or municipalities. Here the three countries differ somewhat. The U.S. has a substantial role for the Federal government in funding highway infrastructure. This is from the highway trust fund, funded by the Federal fuel tax. Funds collected by the Federal government are returned to the states, but through Congressional

authorizations. Some funding can be used for transit projects (more below), and in some cases unspent funds might be borrowed to finance non-transport projects. The Federal funding of roads in the U.S. is about 40 percent of total investments, state spending is a similar percent and local spending accounts for the remaining 20 percent. In contrast, despite levying a fuel tax, Federal spending in Canada is almost inconsequential, primarily roads in national parks and occasional ad hoc grants for specific projects (a special case was participation in the funding of the Trans-Canada Highway in the 1950s-60s). Traditionally, provincial road investments exceeded that of municipalities but they are about the same today.

U.S. Federal spending on roads is carried out by state governments via allocations from the Highway Trust Fund. Municipalities finance roads from various sources notably tax-exempt bonds, i.e., financed from capital markets. Canadian municipalities do not have this finance option available, and fund from general revenues primarily property taxes at the local level, and sales and fuel taxes at the provincial level.

Other infrastructure investments are financed in various ways. Railway investments are virtually entirely private in both the U.S. and Canada. The railways are vertically integrated across the border and are profit-oriented private companies engaged in freight operations. Passenger services are very limited, almost token services underwritten by national governments, and a few high-dollar tourist train operations which are self-financed.

Airports and ports are provided at the local level in the U.S., with the assistance of tax-exempt bond financing and, in some cases, local taxation powers of the port/airport authority itself. In Canada, ports and airports were Federally funded but have been largely devolved to regional authorities or non-profit crown corporations. Air navigation services have essentially been privatized in Canada, and controlled by the airlines. In the U.S., air navigation is provided by the Federal government without full cost recovery.

The “buzz” regarding infrastructure finance are public private partnerships (P3’s), but the number of such projects in North America is still relatively rare compared to Australia and the U.K. Thus far there is more talk and discussion than action, but this is changing quickly. Reliance on toll facilities is also surprisingly rare, especially in Canada. There are several toll facilities in the U.S. including some recent and controversial franchises. Both Canada and the U.S. are proceeding cautiously in embracing P3s, which is fortunate because many are not convinced that their governments are adequately skilled at identifying and valuing risks. There is also the uneasy attraction to politicians who see them as a way to expand current levels of spending while shifting the repayment burden to future generations and future political administrations.

4.2 Direct government ownership and operation

Perhaps because of the limited size of the economy and the historical importance of developing relatively empty lands, both Canada and Australia have not hesitated to have government directly involved in the provision of transport facilities and services where commercial ventures were lacking. This was true both at the national and state/provincial level.

The U.S., in keeping with its stronger private enterprise culture (but also reflecting a larger economy able to support more services via the market place), saw governments much more reluctant to become enmeshed in direct provision of transport and related services. (There are exceptions, such as municipally-owned airports and AMTRAK the national rail passenger corporation).

But the extent of direct government involvement in transport provision has declined sharply in the last three decades in all three countries. This took place for various reasons including: (1) the general growth of the economy whereby the market supports a greater variety of services; (2) a philosophical preference to reduce the role of government in the economy; and (3) a means of reducing spending at a time when governments were struggling to get deficits under control. In Canada, airports and air navigation were devolved from the Federal level to local control and to be financed by users. Ports and marine facilities have undergone a similar transformation although there are still portions under subsidy (e.g., coast guard, ice breaking). Air Canada and Canadian National Railways were privatized. Australia has undergone similar changes in government involvement in the industry, although the structure of the rail industry is very different in Australia (more below).

4.3 Regulation

The deregulation of the transport industries is one of the major stories of North American transport. A legacy of the early 20th century was the heavy regulation of transport industries. The origins of rail regulation date from the turn of the previous century, when rail monopolies and/or destructive competition were the order of the day. Regulatory agencies tried to adjudicate disputes, limit price increases, and promote competition by discouraging mergers and allowing carriers to share traffic. New modes of transport, notably motor carriers, came under regulation in North America rather than be free to compete. Equitable sharing of traffic seemed to be the principle rather than what was most efficient. (And motor carrier growth was further stimulated by massive spending on public roads).

The Australian experience with road transport differed in that it was ruled that interstate movements could not be interfered with, thus becoming one of the ‘test beds’ to show that competitive forces could work in a transport industry. Long distance motor transport development in Canada lagged the U.S., partly because of the greater distances and fewer market centres, but also because – well before the U.S. – Canada allowed railways to compete with new modes rather than embrace them in a more comprehensive regulatory structure.

It might be noted that the movement to deregulation was largely something that emerged from Academia. Government officials, regulators and the industry by and large were suspicious of deregulation. It was taken for granted that transport industries were “affected with the public interest” and needed to be closely supervised by government. But the combination of growth of markets and income levels, advance of technology and productivity gains, made it plausible that market forces might work in these industries like they did in others. And here and there were transport markets that were beyond the reach of regulators: Australian trucking, U.S. intrastate airlines (Federal jurisdiction was limited to interstate carriage) to cite two examples. A growing body of academic literature and empirical studies built the case that regulation was causing high costs and holding back productivity gains.

I think the landmark policy document was the MacPherson Royal Commission of Transportation in Canada, 1959. Originally charged with solving rising subsidies associated with holding down regulated rail freight rates, the Commission argued that the goal of transportation policy should be to promote an efficient system. That would best foster an efficient and productive economy, and would come about most effectively through commercial market forces rather than government direction. Regulation would be necessary only in extreme cases, carriers should be free to function in a commercial manner otherwise. Canada's National Transportation Act of 1967 gave the railways pricing freedom. There were to be regulatory constraints but they proved so loose that for all practical purposes regulation disappeared. Over the next several years, the railways transformed themselves into marketing-oriented organizations. Perhaps the unexpected outcome, was that, *on average*, rail prices tended to fall rather than rise. Pricing freedom enabled railways to charge higher prices where they could, but it also meant they had freedom to reduce prices where it was necessary to attract the business. It so happened that much of the potential rail traffic was relatively low-valued and price-sensitive. A combination of excess capacity and price-sensitive traffic led to increased business and improved profitability. This experience was influential on U.S. policy changes, and is a trend which continued up until a couple of years ago. More on this shortly.

Keeping with railways, the U.S. rail industry was sinking financially by the 1970s, productivity was low, and prospects bleak. Congress was frightened at the prospect that Government might have to intervene to keep the industry going. They were ready for radical steps, and this corresponded with a time when there was growing international interest in deregulation generally. By 1980 the U.S. rail industry was deregulated, i.e., granted substantial pricing freedom as well as permission to rationalize track and investments, and even mergers. There was residual regulatory protection but only for what were deemed extreme circumstances of high mark-ups. Some shippers might see it as sort of a Faustian bargain: railroads would be free to price and make decisions, and this would result in sufficient profits that the industry would be self-financing and not be a burden on the government.

Pricing freedom does mean that some shippers – those who have the ability/willingness to pay – will pay higher prices. But expressed another way, carriers can offer discounted fares to price-sensitive markets to attract that business and make contributions to overheads; this reduces the revenues that need to be collected from the high value-of-service shippers. That is, pricing freedom is an important concept both on the upper and lower ends of the scale. It was expected (hoped?) that pricing freedom would enable the rail industry to recover and be self-financing. It did, and there was some regulatory protection for those shippers most vulnerable to rail market power. But this has been an ongoing controversy. In both Canada and the U.S., there have been changes and adjustments in regulation to try to find a balance between the interests of shippers and carriers.

The general outcome is clear: the North American rail industry significantly increased productivity, lowered costs, became financially viable and, on average, freight rates have fallen. There have been major structural changes in the industry, notably consolidation into a few large firms with extensive networks, and a number of small feeder railroads or 'short lines.'

The other big story of deregulation is the airline industry. All three countries promoted aviation in the early years, encouraging the development and spread of

this new technology. With their large land area and limited population, Australia and Canada included government-owned air carriers but opened to private carriers as well. The U.S. had private carriers but were closely regulated. But the logic of markets and efficiency, and the evidence of much lower costs in a few unregulated markets, led to a substantial literature documenting the failings of regulation and the prospects for competition. The U.S. led the way and deregulated the air industry in the mid 1970s.

The outcomes of air deregulation are well known. Competition was extensive, costs fell and air fares fell even faster. There were surprises. Most of the upstart airlines did not survive, whereas most of the 'legacy carriers' did, but by transforming themselves to exploit their full service networks and extensive and complex pricing and seat management systems. The air industry has continued to evolve, with low cost carriers (LCCs) setting the pace in lower costs and lower fares, but the network carriers have still survived, although many are in weak financial condition. The industry has been subject to a number of severe exogenous shocks over the years which have complicated or even prevented reaching an equilibrium: recessions, jumps in fuel prices, the world trade center destruction (9-11) and its aftermath. The industry is continuing to evolve, but there is no doubt about the substantial gains in efficiency and benefits to consumers that followed air deregulation.

The U.S. led the way in air deregulation, and has tried to foster a more competitive system internationally too, and most other countries (including Australia and Canada) have followed suit in relying primarily on market forces rather than government direction of carriers in their own country. The international regime is still evolving as there continues to be inertia and institutional arrangements that maintain a prominent role for government to government dealings for international aviation.

There is one more topic under regulation, this is the increased role for and importance of safety and environmental regulations. Safety has long been a concern of government; environmental regulations are a more recent concern. The interest in and emphasis on safety tended to increase with the decline of economic regulation. In part this was to reassure the public when deregulation was implemented, especially for air transportation.

Most countries have environmental legislation and policies separate from transportation, such as environmental impact assessments required for major infrastructure projects. There are sometimes specific regulations for transport to hasten environmental reviews. There are also environment-based regulations specific for transport. Examples would be exhaust and other emissions regulations on motor cars, and fuel economy regulations. It might be noted that North America took these environmental steps well before similar policies were implemented in Europe.

4.4 Pricing/taxation Policies

Governments can also use selective tax/subsidy policies to alter the allocation of resources in the market place to encourage or discourage production and consumption patterns. Non-transport examples include taxation of alcohol or tobacco products to discourage consumption without an outright ban, in contrast to subsidies for education and health to foster greater consumption than would take place in a private market.

In transport, discussions of taxation or subsidy have often been bound up with discussions of the level of cost recovery of infrastructure for various modes. This is a special case, but an important one, in the more general use of tax/subsidy policies. If government provides facilities or services for particular modes or users, and does not charge for use, this is a subsidy favouring that mode relative to others. But these circumstances are more complicated than might first appear. If infrastructure is subject to indivisibilities and/or economics of scale – as it is for much low-density infrastructure – then economically-efficient pricing at marginal costs will not yield cost recovery. Are the resulting financial shortfalls a subsidy or simply a reflection of efficient pricing? There are also the issues of optimal sharing of capital and maintenance costs among multiple users, such as cars and trucks using the same roads. All three countries have seen long-standing debates over user charges and cost recovery.

More recently, discussions of selective tax/subsidy policies have been raised for environmental or externality concerns. One approach to recognizing the importance of pollution, congestion or other environmental costs is to levy taxes on transport commensurate with those costs. This would be a way of ‘internalising’ otherwise external costs. These policies are widely discussed in the academic literature but have only found limited application in practice. This has stimulated research on measuring and monetizing environmental externalities in all developed countries of the world. There have been studies in Australia but less so in Canada and the U.S. European nations have done the most research on this theme. But monetizing environmental externalities is unavoidably imprecise and hence policy implementation is moving slowly.

The most researched and discussed example of pricing externalities is the possibility of road congestion pricing. Again, there is extensive academic and research literature relative to a paucity of actual implementations. The topic is increasingly discussed by government agencies, but thus far the political will to pursue these policies have been very limited.

5 Selected Current and Emerging Issues among Transport Modes

As with other topics raised in this paper, there are many themes or issues that could be addressed. This brief review can only raise a few of them.

5.1 Rail Transport

Although the underlying technology is similar, the structure of the rail industry is very different between Australia and North America. The performance of North American railroads under deregulation was noted above. There have been ongoing debates over the extent and type of regulation that should accompany a deregulated oligopoly

industry, with occasional amendments to national legislation and policy frameworks. Canada did a major policy review in 2000-2001, and new legislation has been introduced, but the details keep changing and passing the bill has not been a high priority during two minority governments.

A noticeable difference between Australia and North American rail is the irrelevance of passenger transport in North America. There are some urban commuter services, and a government-sponsored intercity rail service, but many regard the latter as largely token efforts to maintain a nostalgic service. The real business of railways in North America is freight.

While there have been ongoing debates and lobbying efforts by shipper groups and rail carriers, the shipper complaints have become stronger. There are long term trends that may have contributed to this. Looking back, one reason for the success of rail companies and general acceptance of deregulation was that modern rail management and pricing emerged with excess capacity, partly an historical legacy and partly the indivisibilities of major capacity expansions undertaken over the past three decades. In this environment, price-discriminating railways had the incentive to reduce prices and solicit any profitable business. It so happens that a lot of rail traffic is low valued and price sensitive. So although some shippers have seen prices rise, a large amount of bulk traffic would not be moving unless prices were low. In both Canada and the U.S., average rail prices have fallen steadily as substantial productivity gains were passed on to shippers, *on average*.

The last few years are revealing some changes in rail markets. Over the years, the railways have become more efficient at 'right-sizing' their track and yard capacity. At the same time, traffic growth has been higher than was anticipated, partly reflecting the booming Asian markets, especially China. The result has been growing congestion, delays and rail car shortages. Shippers complain that, increasingly, the railways are unwilling to service low-markup traffic. More bluntly, some allege that railways can make more money by not expanding capacity and instead rationing traffic by price. Further, some economists wonder if the railways are exercising some monopoly power and limiting output (via less investment) to increase prices and profits. If true, this would build a case for some regulatory intervention, possibly a need to oversee optimal investment decisions, or some other action, including possibly steps toward some form of an open access regime.

In fairness, there is an alternate explanation for the current situation. Rail traffic growth has been much faster than was expected, and it takes time for rail investments to be carried out. Further, in an indivisible capital intensive industry, it is not optimal to immediately launch large scale expansion at the first upward blip in traffic volumes. Rather, one has to be convinced that the traffic growth projections are real and sustainable. It is normal for revenues to rise in the short run when capacity is constrained, but then capacity is expanded and prices can decline and volumes rise. The growth projections for China and other Asian markets are striking. But many can remember that about 25 years ago similar forecasts were being made about the Japanese economy, but those massive traffic projections never came about.

In Australia and Europe, there has been extensive interest and experimentation with restructuring the rail industry to separate track ownership from train operations. While the topic is discussed and promoted by some shipper groups in North America,

thus far there has been much less consideration to fostering competition among rail carriers by some form of 'access.' Probably one of the reasons is the high level of performance and importance of the North American rail system. For the most part, the North American railroads have an impressive record of handling long distance high volume movements. Given the long distances involved, this is vital for the export and import performance of large sectors of both the U.S. and Canadian economies.

Nonetheless, it is safe to say that research and discussion about rail access regimes will receive increasing attention and debate in North America, hence the Australian experience will be watched with great interest.

5.2 Motor Transport

There is extensive use of motor freight in all three countries. This includes local urban delivery services as well as intercity freight movements. The scale of operations is especially important in the U.S. reflecting the large number of urban centres that are not too distant from one another.

An almost timeless issue is the debate over road damage charges for road use. Although there is quite a bit of consensus among researchers over road damage relationships, they have had limited impact on public policy. The motor carrier organisations are effective lobbyists. There is less debate in Canada because the consensus is that Canadian roads have to be built stronger to withstand the winters, hence there is less incremental damage associated with heavy vehicles. And motor vehicle weight limits are noticeably higher in Canada than in the U.S.

A complication in both countries are differences in vehicle size and weight limits in different state/provinces. The Federal government in both countries tries to foster commonalities among the states/provinces, but progress is slow.

An internal issue of growing importance is scarcity of drivers. Partly for demographic reasons, the trucking industry reports growing difficulty in recruiting drivers. Further, the occupation may not appeal to many generation X-ers. It requires a lot of time on the road and prospects for career advance are limited.

5.3 Corridors and Gateways

Australia, Canada and the U.S. differ considerably in frameworks and emphasis on the role of strategic gateways and transport corridors to foster the economy and trade. Auslink is a more systematic and focused framework than in Canada or the U.S. Canada has no explicit trade corridor network except for the Trans-Canada highway. There has been limited ad hoc funding for strategic highway investments and border infrastructure. Currently there are major initiatives in recognition of the importance of international trade gateways and related corridor investments. More in a moment.

The U.S. has a comprehensive program for major corridors (80 of them in the latest authorization bill SAFETEA-LU). The U.S. had a major Federal presence in the national road network via the Interstate Highway System carried out starting in the 1950s. The Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 officially identified priority road corridors for domestic and foreign trade. It is

important to note that this (and subsequent legislation every six years or so) are an authorization for spending the funds generated by the Highway Trust Fund. This bill also authorized some spending on transit and bike lanes, although it is predominately road funding. ISTEA was superceded by the Transportation Equity Act for the 21st Century in 1998 (TEA-21). The 'equity' refers to equity in spending allocations among states, largely reflecting revenues generated via the federal fuel tax. The latest spending authorization bill is the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), 2005. It authorizes about \$200 billion (thousand million) in spending over the next few years. The bill authorizes a limited number of toll-financed projects and road pricing demonstrations. Spending is also authorized for some transit projects and even hiking paths.

All these bills are more accurately characterized as spending bills rather than planning documents. Each of these bills include a number of specific projects funded reflecting the wishes of Members of Congress. Thus infrastructure investments are driven by the funding allocation constraints of the Highway Trust Fund, and specific projects favoured by Members of Congress from the various states.

Canada is just launching a major gateway initiative. The U.S. and Canada have substantial market centres located long distances inland from ports. Given the importance of trade in modern economies, the competitiveness of inland regions depend on performance of trade corridors including port performance. Both countries have recognized the strategic importance of these gateways and corridors. Further, there is competition between different routings to link eastern markets with Pacific trade. Containerships can call at Vancouver, Canada, Seattle-Tacoma Washington, San Francisco or Los Angeles California. There are major port and rail links at each of these ports. A further note is that while port cities appreciate the importance of port activity on their local economy, cities do not necessarily recognize the importance of their port and transport facilities to other parts of the country. That is, there is a potential rationale for a national perspective and even funding for such facilities.

5.3 Urban Transportation

Urban transportation problems are universal. Australia, Canada and the U.S. have auto-oriented life-styles. Public transit plays an important role in the largest cities, but the motor car is dominant. All cities have institutional and organizational obstacles to solving transport (or other) challenges. While urban regions are the location of much of societies' problems be it transport, health or other issues, typically they do not have the taxation powers to finance all the investments required. Taxation powers lie with senior governments and hence require jurisdictional cooperation and collaboration in addressing urban problems.

Second, there are inherent governance challenges in urban regions. Democratic elections produce representatives who must satisfy the demands of their constituency. To a considerable extent, cities are a zero sum game; if problems of congestion, pollution or crime are not in your neighbourhood, they have to be in someone else's. Each sub-region improves itself at the expense of others. This is a politically-charged atmosphere to try to achieve regionally-optimal outcomes. And even if successful, cities do not necessarily consider the implications of their decisions (such as on transport facilities) on the economic well-being of those who

live outside that urban area. That is, cities tend to be myopic regarding transport infrastructure, operations and the national interest.

Another complication about urban transport is that it probably is an increasing cost industry. That is, as cities grow, the transport challenge grows disproportionately greater, and economies of scale may be replaced by diseconomies as well as the rising externality cost of congestion as users impose delays on one another.

Still another complication in urban transport is the increasing complexity of travel patterns. The traditional influx of traffic from the suburbs to city centre has become less pronounced. There has been a dispersion of employment and shopping centres away from the central business district. This results in more diverse traffic flow patterns. But this reduces prospects for public transport.

In sum, in urban transport, we have a challenge that grows disproportionately with size, and urban governance structures that tend to be fragile and institutionally weak to deal with their problems. Not surprisingly, there are few, if any, examples of cities with smooth transport systems. Similar goals are found in most countries and cities in the world: a desire for mobility but with only moderate inconvenience. Most cities have broadly similar strategies of transport investment and policies, and attempts at land use coordination.

Regarding the role of the federal government, urban problems are clearly not under federal jurisdiction. For the past couple of decades the Canadian government had virtually no involvement with urban transport other than occasional ad hoc expenditures or consultations. More recently the Government has acknowledged the importance of how well its cities function. This sets the stage for greater involvement and funding. Note however, while the provinces are happy to accept federal money, the provinces jealously guard their territory and constitutional jurisdiction, and are always suspicious of federal overtures into areas of provincial responsibility.

The U.S. structure is similar, there is not much of an explicit role for the federal government regarding urban transport. Nonetheless, the U.S. federal government has been more active than Canada, providing funding for demonstration projects and experiments, and making technical expertise available to states and cities.

One characteristic that may or may not be important is that in Canada and the U.S. it is common for the state/provincial capital to not be located in the largest city. This might reduce the extent to which state/provincial government and political processes identify with the problems of its major urban centres.

In sum, cities in the three countries share similar urban transport challenges. Breakthroughs and policy triumphs are rare. The recommended policy directions tend to be similar. Public transport is praised and the motor car castigated, but majority behaviour runs counter to this. Land use controls and densification are recommended, but it has been difficult to achieve. Economists advocate road congestion pricing as a vital policy tool, but this has been an extremely unpopular idea. Prices seem to be immediately recognized and opposed by voters, whereas spending proposals are more readily accepted. Combine this with the availability of federal funding and there has been a bias toward large scale urban transit projects whether or not they were optimal for the city.

The rising concern for environmental impacts of present urban transport, and increased recognition of the importance of cities as engines of growth, are bringing a rejuvenated interest in urban transport by national governments. But in the past federal involvement tended to be ad hoc showcase projects. There is a need for new institutional arrangements to better coordinate planning and implementation across levels of government.

6 Conclusion

There are a number of similarities and differences among Australia, Canada and the U.S. regarding transport challenges and policy responses. Monitoring and comparing the experiences in these three countries should be a useful stimulus to rethinking and improving transport policy.