RESIDENTIAL AND
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Constructing Ontario's Future

Financing Public Transit and Transportation in the Greater Toronto Area and Hamilton:

Future Initiatives

Completed by: Harry Kitchen
Department of Economics
Trent University
Peterborough, Ontario

January 2008

The Residential and Civil Construction Alliance of Ontario is an alliance composed of management and labour groups that represent all facets of the construction industry. RCCAO's goal is to work in cooperation with governments and related stakeholders to offer realistic solutions to a variety of challenges. Encouraging more strategic infrastructure investment and seeking ways to fast-track priority infrastructure projects are primary objectives of this labour-management construction alliance.

An independent study funded by RCCAO on “Transportation Challenges in the Greater Toronto Area” by Richard Soberman, David Crowley, Harold Dalkie, Peter Dalton, Stephen Karakatsanis, Ed Levy, Thomas McCormack and Jack Vance was released in November 2006. In 2007, Professor Harry Kitchen was preparing a report for RCCAO on "Financing Water and Sewer Systems in the GTA: What Should be Done?" Prior to the release of this study, Professor Kitchen asked whether he could also prepare a report on Transportation Financing. RCCAO's Board of Directors agreed with this request.

It is our hope that these reports will stimulate debate on ways to increase investment in transportation infrastructure.

The RCCAO is an alliance of:

- The Heavy Construction Association of Toronto
- Metropolitan Toronto Apartment Builders Association
- Toronto Residential Construction Labour Bureau
- The Residential Low Rise Forming Contractors Association of Metropolitan Toronto & Vicinity
- Greater Toronto Sewer and Watermain Contractors Association
- Residential Carpentry Contractors Association - RCCA
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INFRASTRUCTURE INVESTMENT COALITION

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Executive Summary

The Greater Toronto Area including Hamilton (GTAH) has become a major driver in Ontario's ability to be competitive in the ever expanding and increasingly competitive global economy. Especially critical for the GTAH is the quality and availability of effective and efficient public transit and transportation (roads and highways) systems - these are essential if economic growth, productivity and international competitiveness are to be improved and enhanced. At the same time, concern over environmental degradation caused by air pollutants (such as particulate matter) and emissions of greenhouse gases (including carbon dioxide) from increasing traffic volumes is becoming more and more of a concern. Potential liability issues may very well emerge if bridges, highways, and public transit systems continue to deteriorate. Fortunately, these concerns are becoming more and more important as witnessed in a growing number of newspaper articles and editorials, pleas from professional associations for rehabilitation and renewal, challenges from public policy analysts, calls by concerned citizens, and results of public opinion polls. In short, something must be done!

Across the GTAH, responsibility for most highways, roads and public transit rests with municipalities, but they only have access to two revenue sources of any note – property taxes and user fees. Each of these plays an important role in municipal finance but their current use and application is not sufficient to fund ongoing operational and capital expenditures for public transit and roads. In particular, a more efficient and effective transportation system can only be achieved if users (businesses, individuals, and governments) pay for the infrastructure and operational costs of services it provides - building, maintenance and repairs, plus environmental damages. In the absence of prices, users have no idea how much the service actually costs and no incentive to make efficient decisions over how they use it; for example, where they should live and where they should work. Failure to set correct prices leads to serious problems – it causes over-use and over-investment where the service is under priced and under-use and under-investment where it is over-priced.

Correct pricing is important because it provides information to both consumers and producers that will lead to more efficient and optimal levels of service and the infrastructure that provides it. Currently, public transit and transportation systems in the GTAH fall short of correctly structured user fees or prices in at least two ways. First, their use should be expanded; for example, congestion or toll charges, motor vehicle registration fees, parking lot charges, and so on, should be implemented. A municipal fuel tax also has much to offer. Second, where public transit fares are currently used, they are often improperly designed and structured if efficiency goals are to be achieved; for example, with the exception of GO transit, municipal public transit fares are seldom based on distance traveled.

Vehicle registration fees and parking space charges are blunt instruments, at best, for tackling road congestion but they would be appropriate for municipalities who wish to control parking congestion. As well, their revenues could be used to subsidize local transit and streets. The local nature of these charges means that decisions on their implementation and administration could be made by local or regional councils that are currently in place. No new governing body would be required. On the other hand, they could also be the responsibility of a governing body like Metrolinx, with responsibility for transportation spending and funding issues across the entire GTAH.

As for GTAH-wide public transit and transportation systems, the best instrument for controlling congestion and handling gridlock would come from a congestion or toll charge implemented in the first instance, at least, on the major 400 series highways, the Queen Elizabeth Way, the Don Valley Parkway, the Gardiner Expressway, the Red Hill Creek and Lincoln Alexander Parkways. Other major arterial highways could also be included if they were deemed appropriate. This charge could not be implemented quickly, however. Decisions would be required on road coverage, electronic pricing systems, how the charge should be set and how it should vary, the administrative machinery for its operation, and so on. In the meantime, the use of high occupancy toll lanes could offer some assistance. A short-run downside of introducing either or both of these instruments is the length of time it would take to implement them. At the same time, strong arguments

exist for giving the GTAH access to a dedicated fuel tax with rates set locally and 'piggybacked' onto the provincial fuel tax. This could be implemented quickly with very little cost.

Decisions on financing instruments that should be implemented across the GTAH, how each should be structured and administered, should be made by a governing body that has real decision-making power. Of the possibilities at the moment, the most likely would be the use of a special purpose body for the GTAH for interregional transit and transportation. Along this line, it would probably make most sense to expand the legislated and decision making powers of Metrolinx because it already covers the GTAH and has an administrative structure that could be modified to take on added responsibilities. Details on such things as the size of the body, legislative powers, and specific responsibilities would, of course, have to be worked out by the province after consultation with relevant government officials, interest groups, and professionals in the field. One new feature that should be implemented, however, would be the switch to directly elected Board members, a change from the current situation where the vast majority of Board members are elected to municipal councils and then appointed to the Metrolinx Board.

Implementation of new taxes/charges will likely receive greater public receptivity if their revenues are earmarked for public transit and transportation initiatives. As well, the large infrastructure costs that will be required for future initiatives may call for greater private sector involvement; a direction that has been followed or is being considered in a number of countries. Claims that new road pricing taxes/charges will be regressive in their impact on users carry little substance because those who benefit from highways will be paying for them. Furthermore, if some of the road pricing revenues are used to subsidize public transit, the poor will benefit because they use public transit much more than the rich.

Assertions that road users already pay enough in provincial and federal taxes may or may not be true, but it holds little substance in the context of funding municipal highways and roads. Surely, the real issue is whether local governments should continue to fund roads

from property taxes or whether municipalities should be permitted to adopt new charges and taxes for road use and public transit. The problem with property taxes is that they do nothing to change people's behaviour when it comes to road use. Specific road prices/ charges, by comparison, can be designed to provide an incentive for people to change their behaviour and to use roads and public transit more efficiently. Road prices/charges are also superior to property taxes because they are more effective in encouraging 'smart growth' and they are likely to be less regressive in their impact on users.

Arguments that federal and provincial governments should provide grant funding for local transit and transportation are often questionable on analytical grounds. They are justified if the funded service generates spillovers that can be captured by the use of grants. Furthermore, if they are provided, they should come with the condition that recipient governments set efficient prices and charges for the use of local transit and roads. Grants often create problems, however. They can distort local decision-making leading to inefficient decisions and they can reduce accountability. Based on international experience, increased accountability, efficiency and effectiveness emerges when the level of government that is responsible for spending decisions is the same level of government that raises the money it spends.

Recommendations:

1. ***Since operating and capital cost of public transit systems vary with distance traveled, zone charges should be implemented for public transit.***

2. ***The governing body for the GTAH must be permitted to implement a municipal fuel tax across the entire region with the tax rate set by the governing body, with provincial approval, and piggybacked onto the provincial fuel tax. It would be practical and appropriate to give Metrolinx this responsibility because its purpose is to prioritize regional transportation and it has an administrative structure that could take on added responsibilities.***

3. ***Congestion/toll charges should be implemented for major highways in the GTAH. Initially, these could apply to the 400 series highways, the Queen Elizabeth Way, the Don Valley Parkway, the Gardiner Expressway, the Red Hill Creek and Lincoln Alexander Parkways, but other major roads may also be included. Establishing the roads that are to be covered, the pricing structure***

that is to be used, and a variety of administrative issues can only be determined after consultations with road pricing professionals, local decision-makers, affected parties, and public policy officials in GTAH.

4. ***Municipalities in the GTAH should be granted permission to levy a tax on non-residential parking spaces. Responsibility for implementing and levying this tax could be left with each municipality in the GTAH, or each of the two cities and four regions in the GTAH, or a governing body like Metrolinx for the entire GTAH. The choice of governing structure must be made by the province.***

5. ***Municipalities in the GTAH should be granted permission to implement a motor vehicle registration charge. Responsibility for implementing and levying this charge could be left with each municipality in the GTAH, or each of the two cities and four regions in the GTAH, or a governing body like Metrolinx for the entire GTAH. The choice of governing structure must be made by the province.***

6. ***In the absence of congestion or toll charges, consideration should be given to implementing high occupancy toll lanes on major highways in the GTAH.***

7. ***Consideration should be given to the use of value capture levies for partial funding of subway and rapid transit expansion in the GTAH.***

8. ***A special purpose governing body based on the current Metrolinx governing structure with directly elected councilors should be given responsibility for inter-regional public transit and transportation including the power to make spending decisions and the opportunity to implement taxes and charges.***

A. Introduction[1]

It is becoming increasingly important for The Greater Toronto and Hamilton Area (GTAH)[2] to be able to compete effectively in the ever-expanding competitive global economy. The GTAH is a major driver of economic activity in Ontario. Growing and expanding businesses engaged in national and international activities locate here because businesses have access to a highly qualified workforce (knowledge workers) as well as access to business services, transportation and communications networks. Local governments, in providing public services and in financing them, play an important role in attracting and retaining these businesses. Especially critical for the GTAH is the quality and availability of effective and efficient public transit and transportation (roads and highways) systems - these are essential if economic growth, productivity and international competitiveness are to be improved and enhanced (Transport Canada, 2006). At the same time, concern over environmental degradation caused by air pollutants (such as particulate matter) and emissions of greenhouse gases (including carbon dioxide) from increasing traffic volumes is becoming more and more of a concern. Potential liability issues could emerge if bridges, highways, and public transit systems continue to deteriorate. All of these concerns are now being recognized as witnessed in a growing number of newspaper articles and editorials, pleas from professional associations for rehabilitation and renewal, challenges from public policy analysts, calls by concerned citizens, and results of public opinion polls (Ipsos Reid, 2007). In short, something must be done! But this will cost lots of money; a more integrated transportation network will cost billions of dollars, perhaps tens of billions of dollars depending on the time frame. On June 15, 2007, the Provincial Premier outlined a $17.5 billion transit plan for the GTA (Move Ontario 2020). This will include 902 kilometres of new or improved rapid transit.

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1 This paper is intended to complement the excellent study funded by the Residential and Civil Construction Alliance of Ontario on "Transportation Challenges in the Greater Toronto Area" by Richard Soberman, David Crowley, Harold Dalkie, Peter Dalton, Stephen Karakatsanis, Ed Levy, Thomas McCormack, and Jack Vance (November 2006).
The author would also like to thank Andy Manahan for very useful and thoughtful comments on an earlier draft and for soliciting critical comments and insights from a number of professionals in the field. Any errors or omissions, however, remain the sole responsibility of the author.

2 Since the introduction of the Metrolinx name on December 4, 2007, this area is more recently referred to as the metropolitan area of Greater Toronto and Hamilton.

Across the GTAH, responsibility for most highways, roads and public transit is with municipalities, but this order of government has access to only two revenue sources of any significance – property taxes and user fees. Each of these plays an important role in municipal finance but their current use and application is not sufficient to fund ongoing operational and capital expenditures for public transit and roads; something needs to be done. In particular, the GTAH's transportation system could be improved if the current revenue stream were broadened so that businesses, individuals, and governments pay for the infrastructure and operational costs of transportation and transit services - building, maintenance and repairs, plus environmental damages. In the absence of prices, users have no idea how much the service actually costs and no incentive to make efficient decisions over how they use it; for example, where they should live and where they should work? Failure to set correct prices leads to serious problems – it causes over-investment where the service is under priced and under-investment where it is over-priced.

Correct pricing is important because it provides information to both consumers and suppliers that will lead to more efficient and optimal levels of service and the infrastructure that provides it. Currently, public transit and transportation systems in the GTAH fall short of correctly structured user fees or prices in at least two ways. First, their use should be expanded; for example, congestion or toll charges, motor vehicle registration fees, parking lot charges, and so on, should be implemented. Second, where public transit fares are currently used, they are often improperly designed and structured if efficiency goals are to be achieved; for example, with the exception of GO transit, municipal public transit fares are seldom based on distance traveled.

At the outset, it should be stated that this report makes recommendations on what ought to be done in the GTAH, but it does not address specific implementation details other than to provide broad guidelines where appropriate. Implementation, in many cases, will not be easy. Undoubtedly, there will be political opposition (resistance to change, 'turf' protection, and so on) and governance issues to contend with. There will be resistance on

the grounds that professional and technical capacity is not available to implement necessary capital structures and operational systems required for some of the options. Experience from other jurisdictions, however, is available – new financing instruments such as those recommended in this report have been implemented in other metropolitan areas, cities and countries around the world and could be applied in the GTAH.

This study is divided into a number of sections. Part B briefly summarizes recent trends in infrastructure funding in Ontario and ridership in the GTAH. Part C outlines the analytical framework used for evaluating current and new funding options. Part D summarizes current funding practices. Part E evaluates new and additional financing options. Part F examines some issues often raised with respect to financing and operational services. Part G discusses an extremely important issue for the GTAH and that is its governance – how decisions should be made and who should be responsible for implementing these decisions. Part H summarizes the report.

B. Recent Trends

The discussion of recent trends is brief and separated into two parts. The first part highlights recent spending trends on infrastructure in Ontario (comparable data are not available for the GTAH). The second part summarizes recent trends in ridership and usage of public transit and roads in the GTAH.

B.1 Infrastructure spending in Ontario

A recent report from Statistics Canada (Roy, 2007) reveals the following about infrastructure spending in Ontario:

- There are problems with much of the municipal infrastructure because a lot of it was built years ago and is nearing the end of its life span.
- Sixty-seven percent of government owned infrastructure in Ontario belonged to municipalities in 2005, compared to thirty-eight percent in 1961 (p. 3.4).
- From 1961 to 2005, Ontario's percentage increase in total infrastructure was

similar to the national average, but beginning in 2000, it accelerated at a faster pace at 2.8 percent per year on average (pp. 3.3 and 3.16).

- Ontario's spending on infrastructure rose in most areas, led by spending on roads over the period from 1961 to 2005 (p. 3.16).

B.2 Ridership and usage in the GTAH

A recent discussion paper for the GTAH (Toronto City Summit Alliance, 2007) noted the following for the period from 1986 to 2001 (pp. 2 to 4):

- Lane kilometres of new roads increased by 51% while vehicle-kilometres of automobile and truck travel increased by 78%; seat kilometers of public transit increased by 1% while transit passenger-kilometres increased by 25%. This suggests that transportation demand far exceeded supply over this period.
- The number of vehicle trips using roads increased by 45% while road supply increased by 51%; the number of transit riders increased by 0% while the supply increased by 1%. The increase in travel demand, however, was much higher because automobile and transit trips increased in length as a consequence of urban sprawl and people choosing to live in less densely populated areas.
- The number of trips on municipal transit systems declined, but this was offset by a large increase in GO transit trips, largely between low density suburban areas and the City of Toronto.
- Population grew by 34% while peak period transit ridership was static leading to a substantial growth in auto and truck traffic. This has increased congestion costs (more than $2 billion annually), longer commute times between work and home, and environmental costs that include air pollutants, greenhouse gas emissions, and respiratory problems from increased smog.

B.3 Transportation and transit funding in large Canadian metropolitan areas and selected Canadian cities

Coordinating and integrating major transportation and public transit in city-regions and metropolitan areas where these services transcend municipal boundaries may or may not

be an easy task. If there is an over-riding regional or metropolitan level of government over a number of municipalities, it is generally responsible for major inter-municipal transportation and transit, and trans-border problems are seldom an issue. If there is not an over-riding level of government, some other arrangement is required. This is where trans-border problems often surface. Trans-border problems are generally noted in the areas of planning and coordinating routes, financing services, and implementing initiatives to operate systems in a seamless manner. To overcome these problems, a variety of governing structures have been set up. Some have flexibility in decision-making power including the capacity to set fares/taxes and others have limited or no power to set fares/taxes. There are two different governing bodies in two large Metropolitan areas (Vancouver and Montreal) in Canada. These are described below along with an illustration of their financing sources. In addition, this section includes a brief comparison of the relative importance of the revenue sources in eight large cities across the country. For these cities, the governing structure is the city Council and hence, it is not described or evaluated.

Vancouver – TransLink (more formerly known as the Greater Vancouver Transportation Authority)

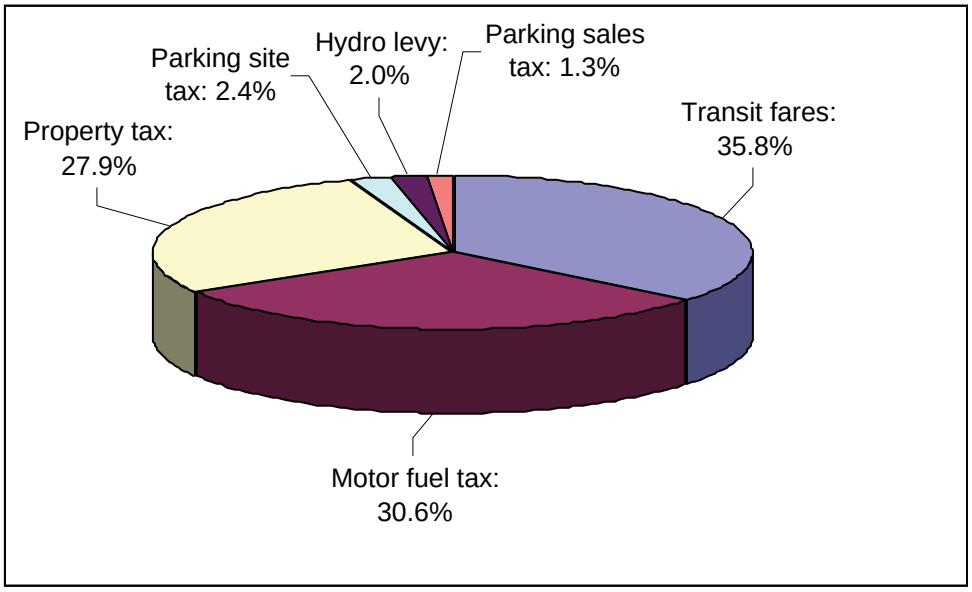
TransLink is responsible for transportation planning, management and funding of all forms of intermunicipal transportation and transit in the twenty-two municipalities that constitute the Greater Vancouver Regional District (GVRD). TransLink is governed by a fifteen member Board. Twelve of these members are appointed by the GVDR and they must be mayors or members of the GVRD board. The remaining three members are appointed by the Province and they must be Members of the Legislative Assembly representing a constituency that is located within the GVRD, or a minister responsible for Municipal Affairs, Transportation, or any other matter directly related to the purpose of TransLink.

TransLink makes recommendations to the GVRD for approval and implementation of strategic transportation plans, property taxes for funding transportation and transit, toll charges, parking taxes or vehicle levies as set out in the *Greater Vancouver*

Transportation Act.[3]

Figure 1 illustrates the relative importance of the available revenue sources for 2006. TransLink revenues come from a variety of sources. Transit fares account for 35.8% of all revenues. Motor fuel tax revenue (twelve cents per litre on gas sold within the GVRD) constituted the next most important source at 30.6%. Property taxes accounted for a further 27.9% of total revenue. The parking site tax was a new revenue source in 2006. It was on non-residential parking sites within the GVRD at a rate of $.78 per square meter. It amounted to 2.4% of all revenue. A hydro levy ($1.90 per month on everyone's British Columbia hydro bill) accounted for 2.0% of all revenue and the sales tax on parking fees (7% on the parking fee) accounted for the remaining 1.3% of total revenues in 2006 (TransLink, 2006).

Figure 1: Percent of Revenue, 2006



Source: TransLink, *Annual Report*, 2006

In 2007, the province released an independently commissioned report on a new governing structure and financing model for the GVTA (TransLink Governance Review Panel, 2007). At the moment, this report is under review and discussion and it remains to

[3] See TransLink website for more detail.

be seen if anything comes from it. Of interest here is the recommendation that the hydro levy and parking site tax should be replaced with an additional three cents on the gas tax if the governing body for the GVTA agrees to raise an equal amount of revenue from property taxes and fare revenue by the end of a ten year period.

Montreal – The Agence Métropolitaine de Transport

The Agence Métropolitaine de Transport (AMT) is responsible for planning, coordinating, integrating and promoting public transit services (bus, metro, taxi-bus, commuter trains and adapted transit), as well as improving the efficiency of roads of metropolitan importance across the metropolitan area. This area is made up of eighty-two municipalities grouped in five sectors: the agglomeration of Montreal; the agglomeration of Longueuil; City of Laval; the North Shore, and the South Shore. All of these municipalities constitute the Communauté Métropolitaine de Montreal (CMM).

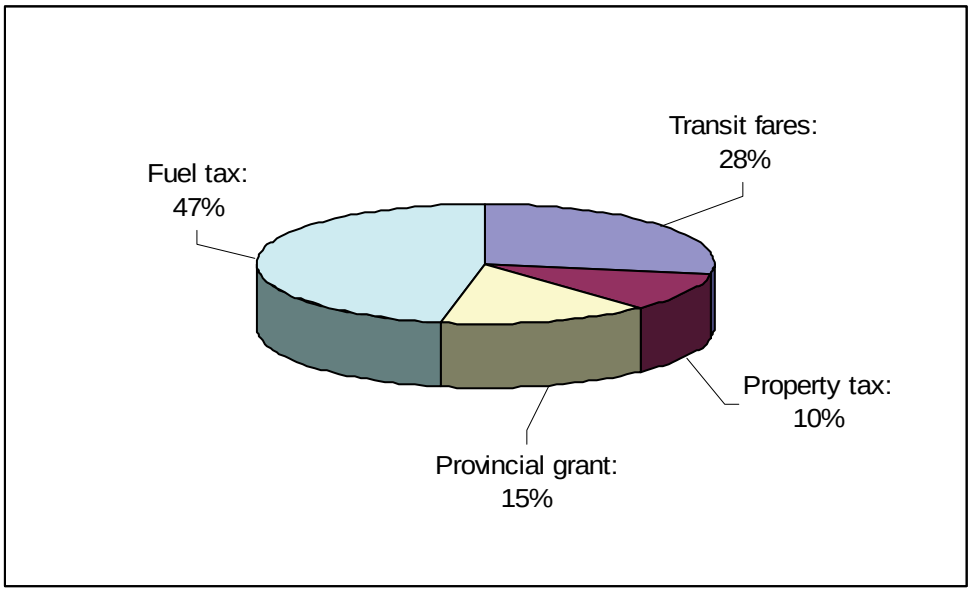
The AMT is governed by a seven member board – four are appointed by the Provincial government and the remaining three are appointed by the Communauté Métropolitaine de Montréal from its own members. The AMT does not have the power to implement policies with budgetary implications without prior budgetary approval by the CMM. In general, the AMT operates as a consensus-building and decision-making organization. It is permitted to do the following (Agence Métropolitaine de Transport, 2007):

- implement new metropolitan lanes for buses, taxis and carpooling;
- assume the costs of regional equipment such as reserved lanes, terminuses and park and ride lots;
- integrate fares and services across the municipalities that are serviced by the AMT;
- manage and develop the commuter train network in such a way as to improve services and ridership; and
- integrate adapted transit services.

As illustrated in Figure 2, the AMT finances its operation from four revenue sources –

transit fares make up 28% of the revenue; municipalities contribute about 10% which comes primarily from property taxes; the provincial government contributes (as a grant) around 15%; and the fuel tax generates in the order of 47%. The fuel tax revenue comes from a 1.5 cent per litre provincial fuel tax collected on motor fuel sold in the Greater Montreal Area (Agence Métropolitaine de Transport, 2007).

Figure 2: Percent of Revenue (annual)



Source: Agence Métropolitaine de Transport at www.amt.qc.ca

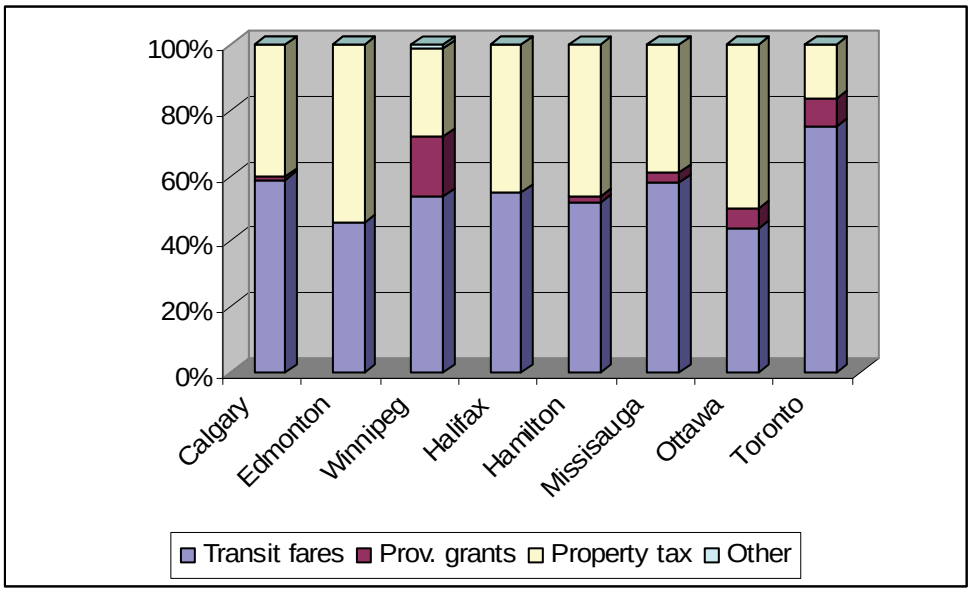
Other Canadian Cities

Figure 3 illustrates the relative importance of four sources of revenue for funding public transit in eight Canadian cities. These sources are transit fares, provincial contributions or grants, municipal contributions, primarily property taxes, and other which is a catch-all category for a miscellaneous group of revenues.

Fare box revenues range from almost 75% of revenues in Toronto (highest) to 44% in Ottawa (lowest). Provincial contributions (grants) are relatively most important in Winnipeg (almost 19% of operating revenue) and least important in Edmonton and

Halifax where they do not exist. Provincial governments contribute very little in Calgary, Hamilton and Mississauga. Municipal contributions (primarily property taxes) are highest in Edmonton at about 54% of operating revenue, Ottawa at almost 50% of operating revenue, and Halifax and Hamilton at about 45%. They are lowest in Toronto (about 16% of operating revenue) and Winnipeg (almost 27% of operating revenue). Other revenues are miniscule – about 1% in Winnipeg and nothing or almost nothing in the other cities.

Figure 3: Percent of Revenue in Selected Canadian Cities, 2006



Source: Estimated from data in Canadian Transit Fact Book, 2006

C. Framework for Evaluating Funding Options

It is generally conceded that the 'benefits-based' model of intergovernmental finance (Kitchen 2006) is the most appropriate framework for evaluating municipal finance options. The underlying principle of this model (Duff 2003) is straightforward: those who benefit from local infrastructure and the services it provides should pay for it. The benefits-based model is particularly important because it satisfies the following public

finance or taxation criteria or principles: efficiency, accountability, transparency, fairness, and ease of administration. Each of these is defined here.

- *Economic efficiency* is achieved when the user fee, price or local tax per unit of output equals the extra cost of the last unit consumed. This is the well-known price equals marginal cost pricing principle. Charges and taxes applied in this way are efficient for funding services where the beneficiaries can be clearly identified and the costs correctly derived.
- *Accountability* is best achieved where there is a close link between consumption or use of a service or product and the price or tax paid per unit of consumption or use.
- *Transparency* is achieved when citizens/taxpayers have access to information on the way in which local taxes and user fees are set and expenditures are made. It should also include information on trade restraint practices, impacts of monopoly conditions, collective agreement restrictions, and tender conditions unrelated to lowest cost and best quality. Increased transparency increases the efficiency with which services are delivered.
- *Fairness* is achieved when those who consume public services pay for them, just as someone who benefits from purchasing milk or a movie ticket pays for it. Concern about the burden on lower income individuals is important but it should not be addressed by altering or distorting the price or charge for a service because this almost always benefits the rich more than the poor. Instead, this concern should be addressed through income transfers from provincial or federal governments and social assistance programs targeted to individuals in need.
- *Consistent, sustainable revenue sources* are essential. Municipalities must have access to a range of revenue sources to meet their annual, on-going expenditure commitments.
- Finally, the *easiest financing system to administer* is one that is not confusing for taxpayers to understand and does not require an unnecessary amount of time and effort in administering it.

Municipal governments in Ontario provide and fund services that range from those that have ‘private goods’ characteristics (water, sewer, solid waste collection and disposal, for example) to those with ‘public goods’ characteristics (fire, police, local streets, neighbourhood parks). Private goods are those where specific beneficiaries can be identified, non-users can be excluded, income redistribution is not a goal, spillovers are few, and all operating and capital costs are measurable. Included in costs is the ability to calculate the “full cycle” cost of facilities and services over time. Furthermore, each user can be charged for the quantity consumed and it is appropriate to do so.

Local public goods are those that generate collective benefits to the entire community or neighbourhood, but where specific beneficiaries cannot be identified and income distribution may be more of a concern. In other words, benefits from local roads and streets, neighbourhood parks, fire and police protection, and so on, accrue to everyone in the neighbourhood or community as opposed to only specific people. These services, then, should not be funded by specific charges or user fees; rather, they should be funded by local taxes with grant support from the provincial or federal government (see section F.5 for a discussion of the role of grants) for the portion of the service that provides spillover benefits to neighbouring jurisdictions.

In between, are services that have a mix of private and public good characteristics. This includes major roads, highways, and public transit, to name those of interest for this report. Here, financing should be based on the theory of ‘second-best’ (Boadway, 1997). It works in the following way: in the current scenario, road and expressway users pay nothing to local governments for *each* trip taken (they do, however, pay costs incurred in operating their vehicles plus provincial and federal fuel and excise taxes, and registration fees) while transit users are charged for each trip. If public transit users are required to pay a fare that covers the full cost of public transit, this would be efficient and fair only if car and truck users pay a charge that reflects their full cost (capital and operating costs of roads plus congestion and environmental damage). Since the latter does not happen, full cost pricing for public transit is not efficient or fair. Here, efficiency can be pursued through the second best solution of subsidizing local public transit. This may be

achieved, partially at least, through the implementation of road charges that are designed to control road use. Revenues from these charges could be used for funding both roads and public transit systems. Critics of this approach, however, often argue that road charges hurt the poor. These charges are largely unfounded because poorer people use roads less than richer people. They rely more heavily on local public transit which could speed up if there were fewer cars on the road and they would benefit if road-pricing revenues were used to improve public transit (Lindsey, 2007).

D. Current Practice

As noted above, municipalities in the GTAH have a limited revenue base and are restricted by provincial legislation and constraints to a narrow range of operating and capital financing instruments. GO transit and municipal public transit systems are funded mainly by fare box revenue, municipal taxes and grants from senior governments. Additional funds are also generated from charter/rental services, advertising, and miscellaneous income.

Concern about operating deficits often generates discussion over the level of fares and fare structure that ought to be charged to transit users. Local decision-makers may consider a number of social, economic and political factors in setting fares. These include the availability of and access to substitute forms of transportation, the ability of local residents to pay for transit services, the attitudes of local decision-makers towards acceptable levels of fares, and the portion of operating costs to be recovered from fare box revenue, and so on (Kitchen, 2002, ch. 6). The tendency, in many communities, is to set different fares for adults, children, students and seniors, and to offer discounts for monthly passes. Where variation exists, the highest fare is for adults, with lower fares for seniors, students, and children. As well, in some municipalities, lower fares may be available for special groups such as the blind, the disabled and the unemployed.

Setting correct fares is often a tricky business. While it is generally conceded that some subsidization of public transit is prudent fiscal policy, determining the exact size of the

subsidy is not easy. It is usually a consequence of what is politically acceptable and, in all fairness, may have little to do with the actual cost of transit as long as the competitive form of transportation – roads – is not priced on a fee per use basis. If road usage was priced according to true cost, public transit might not require a subsidy to be competitive; certainly, it is unlikely that it would require the size of subsidy it often gets.

At the moment, if transit fares are too high, transit use may be discouraged and vehicle traffic increased. If transit fares are too low, over-use of the system and over-investment in capacity can ensue. Here, it is important to note that some subsidization is needed for public transit systems with the most efficient form of subsidy likely coming from revenues collected from users of alternative transportation modes – truck and auto use.

Current fare structures create economic problems through what they do and what they do not do. Failure to charge higher prices in peak-hours creates an incentive to over-invest in public transit infrastructure and to provide greater capacity than can be justified on efficiency grounds. Lack of peak-load charges is often complicated by the availability of quantity discounts. These are used primarily by rush-hour travellers, effectively lowering the per trip charge, and precisely at a time when higher fares make more economic sense. As well, lower fares for seniors, children, and students are difficult to justify especially at times when transit systems are over-used (peak hours). Subsidies supplied on the basis of age or status and completely unrelated to income are difficult to support on analytical grounds of any sort.

Further problems in the GTAH are created because public transit, other than GO Transit, is a local (city or region) responsibility rather than an area-wide responsibility. The consequence is that there are fewer incentives to achieve positive area-wide results, such as transit-system service integration, integrated seamless/boundary-less fare media and distance-based transit fares.

Because operating and capital costs of carrying a rider varies with distance travelled, failure to use zone charges (which are seldom used except for GO transit) within large

municipalities creates an incentive for travellers to live further from their work than they would in the absence of zone charges. Fixed fares mean that short distance travellers overpay while long distance travellers underpay. This is unfair based on the benefits received principle and it creates an incentive for urban sprawl which works against 'smart growth' objectives. Finally, it can lead to a less than efficient use of transportation services and is subject to the same criticism as is often directed at reduced fares for seniors, children and students.

Recommendation 1:

Since operating and capital cost of public transit systems vary with distance traveled, zone charges should be implemented for public transit.

Failure to charge by time of use and distance travelled is often defended as being necessary to prevent excessive road use and its ensuing congestion and environmental costs. Rather than distorting public transit fares in ways that were noted above, a more efficient, fair, effective, and direct financing instrument would be one that charged trucks and automobiles for their use of roads and highways. There are a number of financing instruments that could be used. These are discussed in the next section.

E. New Financing Instruments

There are a variety of additional instruments that should be implemented for financing a portion of transportation and public transit. Each of these has merit in that they either meet or come close to meeting the criteria for financing public transit and transportation in the GTAH. Each, however, would require provincial approval, undoubtedly a constraint, although one hopes not too serious a constraint. These constraints, however, are not treated as being restrictive or prohibitive in this paper. After all, if municipal tax policy can be improved, provincial tax policy is improved. Here, the province could act as a facilitator by creating an opportunity to improve local tax policy. Similarly, it is recognized that these recommendations may encounter opposition from politicians and

taxpayers alike. Neither should this opposition be seen to be restrictive in the interest of improved policy. The objective, in this paper, is to provide a range of financing instruments that could generate a more efficient, effective, fair, and sound set of financing instruments.

E.1 Dedicated municipal fuel tax

Many American cities levy fuel taxes, but municipalities in Canada, at the moment, do not. In a few Canadian cities and regions, however, provincial fuel tax revenues are shared between the province and the city or region. For example, in the Greater Vancouver Regional District (GVRD), the province remits twelve cents per litre of provincial fuel tax revenues to the Greater Vancouver Transit Authority (TransLink). This revenue is used for capital and operating costs of public transit and major roads within the GVRD. Similarly, two and one-half cents per litre of the provincial fuel tax revenue is remitted to the transit system in the Capital Region (around Victoria) for operating expenses and capital projects. Calgary and Edmonton receive provincial grants for transportation infrastructure that are estimated at five cents per litre from all provincial fuel tax revenue collected in the two cities. The Agence Métropolitaine de Transport provides transit services to Montreal and surrounding municipalities and receives one and one-half cents per litre of all provincial fuel taxes collected on motor fuel sold in the Greater Montreal Area. The Federal government recently provided grants to municipalities (based on population and public transit ridership) equal to five cents per litre of federal gas tax revenue.

Wherever fuel tax revenues are shared between the province and municipalities in Canada, it is a form of revenue sharing and not a municipal fuel tax. It is not a local tax because cities and city regions do not set local tax rates. In all cases, the province sets the rate, collects the revenue, and remits it to eligible cities/regions. Federal gas tax revenues are determined entirely by the federal government.

Where municipalities receive gas tax revenue from the province, it is generally earmarked for local roads and public transit and often replaces provincial grants for these purposes. Revenue from the federal gas tax goes into the general funds of the recipient municipality.

Municipally set fuel taxes[4] are a blunt instrument for targeting congestion and other traffic related costs that vary with location and time of use (Lindsey, 2007, p. 7), but they can be defended as a benefit-based tax as long as the revenues are earmarked (discussed in Section F.1) for funding local roads and public transit. Furthermore, they are relatively inexpensive and simple to administer as long as the rates are set locally and 'piggybacked' onto the provincial tax rate with provincial collection and remittance to the appropriate municipalities.

A municipal fuel tax would raise the cost of road usage to direct beneficiaries and lower the costs on others – an outcome that is consistent with the benefits based approach to municipal finance (Bird and Wilson, 2003, at 23). One estimate suggests that automobile taxes in North America cover about sixty percent of the costs to build, improve and repair roads with taxpayers covering the remaining costs through local taxes and grants (Nivola, 1999, at 17). Not only could the application of a municipal fuel tax raise the price paid by road users to a level that is more in line with the cost (production costs plus environmental costs) of providing roads, it would permit cities to have funds for improving and reconstructing their local roads and provide them with funds for public transit if they so desire. It would also lead to a more efficient use of local roads (Slack, 2002).

Arguments for this tax at the local level are strongest when municipalities are required to set their own tax rate that could be 'piggybacked' onto the provincial tax rate. This would provide municipalities with more autonomy and make them more accountable in their spending decisions. Moreover, local rate setting provides predictability for municipal

[4] A tax based on carbon emissions could be a useful instrument for internalizing environmental (global warming) costs but this tax should be imposed at the federal or provincial level and not the municipal level. Because the discussion in this paper is about municipal taxation, carbon taxes are not discussed.

governments and gives them flexibility to change rates in response to different circumstances.

Revenue sharing, which is an alternative to setting local tax rates, is far less desirable because municipalities are *not* required to set their own rates and hence, not required to be as accountable for their spending decisions. When the government making spending decisions differs from the government raising the revenue, local autonomy and flexibility are lost and local accountability is unlikely to be achieved (Kitchen and Slack, 2003).

While it is conceded that a municipal fuel tax is a blunter instrument for controlling individual behaviour when compared with congestion or toll charges, it is almost certain to have some impact as reported in a recent public opinion survey where a number of commuters said they would likely drive less if gas prices continued to rise (Ipsos Reid, 2007). This instrument is also much less expensive to implement and operate than congestion or toll charges. Finally, even though it is not a direct user charge because it does not vary by traffic volume or time of use, it is still broadly considered to be a reasonable benefits-based tax and one that would be appropriate for a large area such as the GTAH where cross-border shopping and relocation incentives would be minimized and transportation and public transit systems could benefit from a dedicated source of revenue (Bird, 2004, at 19).

With provincial approval, a municipal fuel tax could be adopted relatively quickly. It would require nothing more than the addition of a surcharge (one cent, two cents, or whatever was decided locally) onto the provincial tax. Decisions over the tax rate that should be implemented should be the responsibility of an area-wide governing body such as Metrolinx or its substitute.

Like other new taxes or charges, revenue estimates depend on the tax rate, litres of gasoline purchased, taxing jurisdiction, and so on. Estimates for the GTAH based on a charge of six cents per litre could generate new revenue of between $300 million (Toronto City Summit Alliance, 2007, p. 8) and $420 million per year (based on author's

calculation from Statistics Canada data and Acres, 2003, p. 43-44).This amounts to something between 4.7% and 6.6% of all general purpose property taxes levied in this area in 2005.[5] Another way of looking at this is to say that general purpose property taxes would have to increase by something between 4.7% and 6.6%, on average, across the GTAH to generate the same amount of revenue.

An earlier study (Kitchen and Slack, 2003, p. 2246) estimated that a tax of one cent per litre 'piggybacked' onto the provincial fuel tax could generate between $36 and $38 million for the City of Toronto and between $7 and $7.5 million for the City of Hamilton. For the City of Toronto, this represents about 2% of general property taxes collected in 2005 and for the City of Hamilton, about 1.6% of general property taxes.

Recommendation 2:

The governing body[6] for the GTAH must be permitted to implement a municipal fuel tax across the entire region with the tax rate set by the governing body, with provincial approval, and piggybacked onto the provincial fuel tax. It would be practical and appropriate to give Metrolinx this responsibility because its purpose is to prioritize regional transportation and it has an administrative structure that could take on added responsibilities.

E.2 Tolls and congestion charges

Traffic congestion and environmental pollution are serious problems in the GTAH and these problems and concerns seem to be increasing each year. One estimate puts the loss from congestion and shipment delays in the GTA at about $2 billion annually (Soberman et al., 2006). Another put it at $2.2 billion in 2001, rising to more than $4 billion by 2031 if something isn't done (Toronto City Summit Alliance, 2007, p. 10). Transport Canada recently estimated congestion costs for nine urban areas in Canada. Their conclusion was that Montreal and Toronto accounted for about 70% of the total of $3 billion annually

[5] 2006 data for all municipalities are not yet available. General purpose property tax data were taken from the Financial Information Returns (FIRs) for each municipality. FIRs are available on the Ontario Ministry of Municipal Affairs and Housing website.

[6] Issues around the governing body for the GTAH are discussed in part G of this report.

(Transport Canada, 2006). In per capita terms, Hamilton came out lowest at $17 and Toronto highest at $270. These figures, however, do not include all costs. They exclude the costs of "accidents, noise, local emissions, road damage, and behavioural adaptations to congestion" (Lindsey, 2007, p. 6). This suggests that the true cost may be much higher than reported in the Transport Canada study. Finally, congestion costs are much higher for those who travel by car and who travel extensively.

Concerns over congestion and environmental pollution have heightened our interest in tolls and congestion charges. These have been introduced recently in a handful of cities around the world and are being seriously considered for introduction in more cities (New York and San Francisco to name two in North America). Newspaper articles and commentaries extolling the virtues of road pricing schemes to combat congestion and reduce environmental damages are appearing more and more frequently. A number of authoritative surveys and policy papers about road pricing have recently appeared.[7] A recent Decima poll (covering the GTAH) conducted in November of 2006 indicated that 45% of respondents favour paying road tolls if the funds are dedicated to solving transportation gridlock (reported in Bedford, 2007).

a. Advantages and limitations

The best way of dealing with vehicular congestion and environmental problems is through the use of road prices that capture the marginal social cost (environmental, congestion, capital and operating) of vehicle use. Road prices, if properly designed, have much to offer. In particular, they can internalize the social costs that come from congestion and pollution. These include time delays while motor vehicles sit in traffic jams on clogged highways – remember, time is money. They also include costs created by vehicular emissions while traffic idles or moves slowly on crowded roads and highways – increased smog leads to increased health costs and absence from work.

[7] See Lindsey (2007, footnote 5) for a list of these studies.

Appropriately designed charges have many advantages. They can be higher for vehicles that cause relatively more road damage – large trucks, for example. They can be higher for vehicles traveling longer distances. They can be effective in reducing congestion if they are higher in peak demand hours and lower in off-peak hours. They can be higher for high-emission vehicles vis-à-vis lower emission vehicles. In short, charges can be effective in controlling people's behaviour if they vary by type of vehicle, distance traveled, time of day, vehicle occupancy, and so on. Furthermore, they can lead to increased use of public transit and they can affect both location and work decisions by providing a disincentive for urban sprawl and an incentive for 'smart growth' through greater intensification in property development. At the same time, they can be an important source of revenue for cash strapped municipalities but this is generally not the primary purpose of road pricing.

Road prices have their limitations, however. They can be expensive to implement (especially for existing roads) and operate (high collection costs) as has been experienced with London's congestion charge. They may be ineffective in controlling truck traffic where delivery schedules are fixed and alternative freight transportation systems are non-existent or unsatisfactory (Holguin-Veras, 2005). They may be ineffective in controlling traffic flows if good public transit alternatives are not available.

Claims that electronic pricing systems are not capable of capturing and tracking vehicles are less important now than they used to be because of substantial improvements in technology for tracking and monitoring traffic flows. The practice of charging vehicles as they enter a zone is one option and is often used for congestion charges. More innovative options include the use of onboard meters that communicate with a navigation enhanced satellite. This collects information on distance traveled, time of day, area visited, emissions profile of the vehicle if so desired, and so on (Hamilton, 2007). This information could be used to generate congestion charges.

b. Recent experience

In a few countries, road pricing has become accepted as both necessary and useful. In others, it is being considered. In still others, it is simply ignored. Tolls for roads and bridges exist in many countries and have for some time. Congestion charges, on the other hand, are fairly recent and only used in a few places. The following summarizes the more notable city experiments in road pricing in recent years.

Singapore has had a long experience with pricing access to roads, (Bird, 2004; Menon and Keong, 1998; and Lindsey, 2007). Their most recent change came in 1998 when an Electronic Road Pricing (ERP) system was introduced. Charges are levied on vehicles entering restricted zones around the central business district as well as on expressways and arterial roads. ERP is based on the 'pay-as-you-use' principle and is designed to be a fair system charging motorists for use of roads at peak hours. Traffic conditions on roads where ERP is in operation are reviewed regularly and the charges are generally varied every half hour. To minimize congestion, charges are set to maintain speeds of 45-65 kilometres per hour on expressways and 20-30 kilometres per hour on arterial roads. Charges are reviewed every three months.

Essentially, the system works by using a dedicated short-range radio system to deduct charges from CashCards purchased by motorists and installed in a so-called "In-vehicle Unit" or IU. The cards are available in various amounts from convenience stores, automatic teller machines, and petrol stations. IUs were issued free to all registered vehicles at the beginning of the program and installed (free) by approved workshops. IUs are different for different types of vehicles (since different types pay different prices) and are glued on windows of vehicles. There is a special type for motorcycles.

When a vehicle approaches a zone subject to ERP, its IU is electronically queried (in order to check its type and determine the applicable price), and the correct amount deducted from its CashCard, with the amount remaining being displayed to the driver. Violations – entry without paying (no IU, no CashCard, insufficient money to pay left on

card) – are detected electronically and photographs are taken of the rear license plate of the vehicle, and the owners fined accordingly. The reported rate of violations, however, is only 0.25 percent.

Revenue received from ERP is less than that under the earlier schemes, in part because charges are lower. More notably, however, Singapore views road pricing not as a way of raising revenues but primarily as a means of managing traffic and controlling congestion. Unlike road pricing schemes in other countries, revenues are not earmarked for specific purposes.

London. In 2003, London introduced congestion charges to control traffic within a twenty-one square kilometre area in the city centre between 7:00 am and 6:30 pm from Monday to Friday. The congestion charge was introduced after a number of buses had been purchased and traffic light sequences had been changed. The current charge is £8 (about $16 Canadian) per day and the zone has been expanded to encompass a larger area. Currently, some vehicle types are exempt (delivery trucks, for example) and residents in the charge area receive a 90% discount. There are approximately 203 entrances/exits in the area and about 700 video cameras that monitor use by reading licence plates (Hemson, 2007; and Lindsey, 2007). A sometimes mentioned downside of the London charge is the high cost of implementing and administering the levy. By some estimates, this has reached as much as 40% of gross revenues; perhaps this is why the current charge of eight pounds is so high.

London also plans to double the current very small geographic area and to make the charges more sophisticated with respect to vehicle type, ownership, time of use, and so on. It should also be noted that the charges can be imposed and changed by the Mayor (Ken Livingstone) on his own – no local Borough consensus, no Council approval, no senior government role, and no plebiscite (the apparent undoing of the Edinburgh plan and the near-miss on the Stockholm plan).

Various studies (Litman, 2005; Mackie, 2005; Prud'homme and Bocarejo, 2005; Santos and Fraser, 2006) that have evaluated the congestion charge have concluded that the main goals of

the charge continue to be met – traffic volume is down and public transit use is up. Revenues generated by this charge are allocated to London Transport (for public transit and transportation systems) and will continue to be earmarked for London Transport until 2017, at least. Pilot projects are scheduled to be tested in a number of other cities beginning in 2009.

Norway. Six cities in Norway use tolls to help finance road construction. In only one city (Stavenger) do tolls vary by time of day; elsewhere they are fixed. Revenues are generally used for road construction but in two cities (Oslo and Trondheim), they may also be used to fund infrastructure for public transit, cyclists and pedestrians (Andersen and Sprenger, 2000).

Stockholm's experiment with congestion charges nearly failed. As a major condition of introducing a congestion charge, a plebiscite was required after a period of time, to determine whether this charge was to be permanent. In 2006, the plebiscite was held and barely passed - the charge is now permanent. Conventional wisdom suggests that this plebiscite would have failed if it had been held sooner. In Edinburgh, where a plebiscite was held prior to the proposed implementation of a congestion charge, it lost. Those who would have been adversely affected voted in much larger numbers than those who would have benefited (inner city transit users). An important observation that can be drawn from this is that a plebiscite, if it is required for approving a permanent congestion charge, should probably be held after a couple of years' experience. It should not be used as a pre-implementation confirming tool.

In Stockholm, the charge is varied by time of day (three bands). It is imposed on vehicles entering and exiting the city centre during weekdays. During the experimentation phase, it produced some significant results - traffic into the centre fell by more than 20%; travel times during morning peak period fell by nearly 33%; injury accidents declined by between 5% and 10%; emissions fell by between 10% and 14%; and public transit use rose by 6% (Lindsey, 2007, p. 12). Money generated by this charge is earmarked for a ring road.

Canada. Toll charges for intercity highways and expressways are not common in Canada. In Ontario, Highway 407 is tolled – charges for light vehicles were 17.6 cents per km during peak hours and 16.8 cents per km in off-peak hours in 2007. Truck charges vary by size but their rates

can be much higher. Charges are recorded electronically and users are billed. They will be higher in 2008.

In B.C., the Coquihalla highway (186 km between Kamloops and Hope) charges $10 per car per trip. Tolls are collected at a toll plaza as they are in Nova Scotia on a 40 km section of Highway 104 (Cobequid Pass) where the cash fare is $4 per trip or $2 with an E-pass.

Tolls are more common for bridges, especially at international border crossings. Tolls are also used for one major interprovincial bridge - between Prince Edward Island and New Brunswick. In the past, tolls have been used to fund the cost of constructing large bridges in Ontario - the Hamilton Skyway and the St. Catharines Skyway on the Queen Elizabeth Highway to name two. These tolls were terminated, however, once the infrastructure had been paid for; an example of using tolls to finance infrastructure cost rather than as a means of controlling use (demand). Where tolls are used or have been used in Canada, the revenues finance or have financed maintenance, construction and rehabilitation costs of the tolled asset.

United States. In the U.S., road tolls for intra- and inter-state highways and freeways are fairly common and have been in place for some time. The widespread use of EZ passes has been a useful platform for expanding the use of tolls, as in New York City. Traditionally, charges have been collected at toll plazas and have been based strictly on distance traveled. While this still exists in many places, recent advancements in electronic pricing technology is leading the way towards greater use of congestion charges based on time of use and traffic volumes. At the same time, private sector funding and operation of toll roads is becoming more prevalent.

Rest of world. The use of tolls and privatization for the operation of toll roads has grown in importance in a number of countries in recent years. In India, reliance on public-private partnerships (P3s) is expanding and many of these roads will be tolled. In China, privatization is growing. In Italy, new construction will be mostly conducted through P3s and the roads will be tolled. Spain has a number of privately managed toll roads. About three-quarters of France’s motorway system is tolled and managed by various private and semi-private companies.

Germany does not toll cars but uses an electronic pricing system for tolling truck traffic, most of which is from other countries and just passing through (Transport Canada, 2006).

c. Congestion/toll charges for the GTAH?

There are solid economic and financial reasons for supporting the implementation of congestion or toll charges in the GTAH. These charges effectively satisfy the benefits received model for a solid local finance system. Charges should be designed so that they vary by type of vehicle, distance traveled, and time of use. They could include vehicle emissions if emissions by vehicle type can be profiled in the charging system. Charging and monitoring could be done electronically. Billing and payment might be handled in a number of ways - by mail or by using a type of 'smart card' such as is done in Singapore with a variety of payment possibilities.

On a more practical note, seeking approval for such a scheme may not be easy and implementation costs will not be cheap. Critics will surface, protest groups will form, and all kind of reasons will be offered as to why charging for highway use is a bad idea. This will require a careful selling scheme on the virtues of road pricing. Hopefully, this has already begun as witnessed by a growing number of newspaper articles/stories, professional publications, and a public opinion poll that shows considerable support for such charges. Furthermore, if the revenues are earmarked for public transit and roads within the GTAH, support may be easier to secure (see arguments in next section in support of earmarking).

As for the criticism that administrative costs will be high, they will be! One Highway 407 transponder tolling station reportedly costs about $450,000 (City of Hamilton, 2003). Multiplying this by the number of entry/exit points would cost millions of dollars. As well, millions of dollars would be required for fibre optic cables for cameras and electronic tolling equipment. On a positive note, however, these costs should be viewed as a necessary ingredient in achieving a rate of return on assets that are required for the enhancement and expansion of production and consumption activities for those who live

and work in the GTAH. This will come in the form of less congestion, reduced travel time, less environmental damage, better public transit, and improved productivity. Tolls on the 407, for example, generate a return, much of which is re-invested in capacity expansion and improvements. This has improved production and consumption possibilities for much of the GTA and beyond.

Additional costs would come from setting up a department to administer tolling operations, billings, accounts, customer service and so on. These costs, however, are not prohibitive and there is no evidence to suggest that they will be disproportionately higher than anywhere else where they have been adopted. Furthermore, if road pricing charges make economic and practical sense, amortized capital (so that future generations of users would pay) and annual administrative costs would end up being a fraction of annual revenues.

This report supports a congestion/toll charge scheme for major highways in the GTAH. As a starting point, congestion/toll charges should apply to the 400 series highways, the Queen Elizabeth Way, the Don Valley Parkway and the Gardiner Expressway in the Greater Toronto Area (Bedford, 2007a). As well, they should include the Red Hill Creek and Lincoln Alexander Parkways in Hamilton. These are the major arteries passing into and through the GTAH. This does not preclude, however, the inclusion of other roads and highways that local decision-makers approve.[8] This recommendation also stops short of designing a precise road-pricing scheme for the GTAH. This decision must be made locally after consultation with a variety of affected groups and professionals in the field. In particular, decisions must be made on what to toll, when to toll, how to toll, what rate structure to adopt, should exemptions or discounts apply to specific types of vehicles or people, what type of electronic tolling technology and payment methods should be used, and so on.[9] A decision will also have to be made about the effectiveness of the existing public transit system – does it offer an effective alternative at the moment? Should it be expanded and improved? If changes should be made, should these be done before a

[8] See section G for a discussion of the governing body.
[9] For a discussion of many of these issues, see Lindsey, 2007, pp. 12-14.

congestion/toll charge is implemented or at the same time? Indeed, other issues will emerge where decisions will have to be made. All of this will take time, probably a few years.

It is difficult to estimate the revenues that would be generated by a congestion/toll charge because it will depend ultimately on its design and what is included and excluded. One estimate for 400 series roads in the GTAH, however, has predicted that a charge of seven cents per kilometre would produce $700 million annually (Toronto City Summit Alliance, 2007, p. 8). This amounts to about 11% of all general purpose property taxes levied in this area in 2005. Another way of looking at this is to say that general purpose property taxes would have to increase by an average of 11% across the GTAH to generate the same amount of revenue.

A further estimate (Hemson, 2007, pp. 85-93) for the City of Toronto and from the application of tolls to the Don Valley Parkway and the Gardiner Expressway suggested that the revenue yield could be as high as $120 million (assuming no reduction in road usage) annually or as low as $74 million (assuming a reduction in usage of 40%). This estimate was based on a number of assumptions about traffic flows and it applied a rate of ten cents per km in peak weekday periods and 5 cents in non-peak weekday periods. This is similar to the rate structure for Highway 407 when it opened. For the City of Toronto, this would have amounted to between 4% and 2.5% of all general purpose property taxes collected in 2005.

One shortcoming of a congestion/toll charge is the length of time it would take for its implementation. It will not be done overnight or next year, but it should not take as long as in London, England, given that there have been substantial improvements in technology and experience over the past few years. Nevertheless, something as new and ‘out of the box’ as a toll or congestion charge for the GTAH will take a few years before it could actually be adopted. This does not negate its importance, however. It simply means that it should be implemented as soon as possible following whatever consultation and planning process is required to resolve a number of administrative and policy issues

as noted above. Meanwhile, congestion continues to increase. Public transit is not expanding and being updated as fast as most think it should be. Roads and highways are requiring more and more money for rehabilitation and maintenance if not expansion. This suggests that there is an important role for a municipal fuel tax (discussed above) as well.

Recommendation 3:

Congestion/toll charges should be implemented for major highways in the GTAH. Initially, these could apply to the 400 series highways, the Queen Elizabeth Way, the Don Valley Parkway, the Gardiner Expressway, the Red Hill Creek and Lincoln Alexander Parkways, but other major roads may also be included. Establishing the roads that are to be covered, the pricing structure that is to be used, and a variety of administrative issues can only be determined after consultations with road pricing professionals, local decision-makers, affected parties, and public policy officials in GTAH.

E.3 Tax on non-residential parking spaces

The only revenue that municipalities in Ontario currently collect from non-residential parking spaces is through the property tax. This is unlike many jurisdictions in the United States where local governments are able to levy a sales tax on parking fees in addition to the property tax. The new *City of Toronto Act* permits the City to levy a direct tax based on a fixed charge per square metre or parking space which can vary by area or zone. Such permission, however, has not been granted to other municipalities in the GTAH. The Greater Vancouver Regional District (GVRD), by comparison, has levied a non-residential parking tax within a specific transit zone since January of 2006 with revenues used for road and transit expansion. The current tax rate is 78 cents per square metre or almost $25 per parking space and is included in the property tax bill.

A tax on parking spaces is ideally suited to handling problems created by parking congestion. It is, at best, a crude instrument for handling traffic congestion because fees do not vary with time of use, traffic volume, distance travelled, and do not apply to through traffic. On the other hand, parking space charges may have some merit for

addressing congestion if, in a kind of second best way, they deter some traffic volume on highways into and out of the taxed area. A further advantage is that it could be a relatively cheap tax to administer and could be implemented fairly quickly because most of the information necessary for implementation is already available.

As for revenue yield, a recent estimate of revenue from an annual $25 to $250 parking space charge in the central district of downtown Toronto ranges from almost $1.8 million to almost $18 million annually after subtracting expected administration costs (Hemson, 2007, pp. 96-103). Another estimate for the GTAH suggests that a $25 tax per parking space (similar to the Vancouver rate) would generate $80 million annually (Toronto City Summit Alliance, 2007, p. 8). While the revenue yield is considerably less than from a dedicated municipal fuel tax or a congestion charge, it is not insignificant at the margin and could go part way to resolving some of the financial needs for transportation, parking, and public transit in municipalities in the GTAH. As well, to the extent that it deters some traffic volume and increases public transit use, this can only be seen as being positive.

This paper recommends that municipalities in the GTAH be granted permission to implement a tax on non-residential parking spaces. It does not, however, recommend the level of municipal government that should be responsible for this implementation including setting the tax rate. Ultimately, this responsibility must be determined by the province as the "constitutional" guardian of municipalities. There are three possible choices. One includes leaving this responsibility with each of the twenty-six municipalities[10] in the GTAH. A second includes leaving responsibility with each of the two cities and four regions in the GTAH or some mix of these. A third option includes assigning responsibility to a governing body like Metrolinx for the entire GTAH area. Regardless of the governing structure chosen, political acceptance of this tax would be greatly enhanced if the revenues were used for funding local roads and public transit.

[10] This includes the Cities of Toronto and Hamilton, eight municipalities in Durham Region, nine in York Region, three in Peel Region, and four in Halton Region.

Recommendation 4:

Municipalities in the GTAH should be granted permission to levy a tax on non-residential parking spaces. Responsibility for implementing and levying this tax could be left with each municipality in the GTAH, or each of the two cities and four regions in the GTAH, or a governing body like Metrolinx for the entire GTAH. The choice of governing structure must be made by the province.

E.4 Vehicle Registration Charge

Vehicle registration fee revenue currently goes to the province. In southern Ontario, passenger and commercial vehicles weighing less than 3000 kg. are charged a provincial fee of $74 per year; motorcycles are charged $42. Northern Ontario registrants pay 50% of the southern rates.

In Ontario, Toronto is the only municipality that can impose vehicle registration fees. City council recently (October of 2007) approved an annual personal municipal vehicle registration fee of $60 for each car or truck and $30 for each motorcycle or moped. Commercial vehicles are exempt from the municipal vehicle tax. This fee will be introduced in the fall of 2008 after the logistics of having the province administer it have been sorted out. This tax is expected to generate $20 million in the first half-year and considerably more in future years. Revenues are not earmarked for public transit or transportation – they simply become part of the City's general revenues.

Vancouver also has a commercial vehicle registration fee that is based on weight and ranges from $25 to $40 per year. Most large cities in Quebec levy a local registration fee of $30 which goes towards the funding of public transit systems. In Vancouver and Quebec, the fees are collected by the province and remitted to the municipalities.

Municipalities in many U.S. states get revenue from motor vehicle registration fees. Fees range from being very simple, such as flat rate charges, to being fairly complex with a layer of state and local charges. Most revenues are earmarked for highway projects but some cities also use the revenue to fund public transit (Goldman and Wachs, 2003).

Municipalities in Canada are generally prevented from imposing such a charge, although an argument can be made to permit them to impose their own vehicle registration fees on automobile owners. Furthermore, vehicle fees could be based on features such as age and engine size - older and larger vehicles generally contribute more to pollution - or emissions with lower emission vehicles charged less than higher emission vehicles. Location could also be a factor - cars in cities add more to pollution and to congestion - as could axle weight - heavier vehicles do substantially more damage to roads and require more costly roads to be built (Bird, 2004, at 19).

Similar to a tax on parking space, this is a crude instrument for handling traffic congestion because it does not vary with time of use, traffic volume, distance traveled, or area in which vehicles travel (central city versus long distance out of city travel). On the other hand, it is a charge on those who use roads, at least in some capacity. It is also likely to have a greater impact on the rich than the poor because the latter have a lower rate of car ownership. Administration costs would be relatively low if the charge were 'piggybacked' onto the provincial charge and revenues collected by the same agency (many of the current collection agencies are private sector and not government owned) that collects the provincial charge. The municipal portion of the revenue collected would be remitted to the levying municipalities. To minimize tax avoidance, provincial requirements would have to be in place to prevent owners from registering their vehicles in a jurisdiction (such as cottage country) other than their principal place of residence.

Estimates of potential yield depend on a number of things including the rate structure adopted, a precise determination of the number of vehicle owners within each municipality, and the response of owners to this new charge. One estimate for the City of Toronto only and using a range of charges from $10 to $80 per vehicle suggests that the revenue could range from almost $11 million to slightly less than $80 million annually after netting out estimated administration costs (Hemson, 2007, pp. 69-80). Estimates for an emission-based vehicle registration fee for the entire GTAH suggested that revenue could be expected to be in the order of $300 million per year assuming the emission rates ranged from a low of $50 for low emission vehicles to a high of $150 for high emission vehicles (Toronto City Summit Alliance, 2007, p. 8).

This paper recommends that municipalities in the GTAH be granted permission to implement a motor vehicle registration charge, but it does not recommend which level of municipal government should implement it. Ultimately, this choice has to be made by the province. It could be each municipality on its own, or the two cities and four regions on their own, or a GTAH wide body like Metrolinx. Regardless of the governing structure chosen, political acceptance of this charge would be greatly enhanced if the revenues were used for funding local roads and public transit.

Recommendation 5:

Municipalities in the GTAH should be granted permission to implement a motor vehicle registration charge. Responsibility for implementing and levying this charge could be left with each municipality in the GTAH, or each of the two cities and four regions in the GTAH, or a governing body like Metrolinx for the entire GTAH. The choice of governing structure must be made by the province.

E.5 Drivers' Licence Charge

The province currently imposes an annual drivers' licence fee on all individuals with a drivers' licence. The fee differs by type of licence – truck, auto, and so on. The question that has surfaced, on more than one occasion, is whether municipalities should be permitted to impose a municipal fee on top of the provincial drivers' license fee. At the very best, this fee could be defended only on the grounds of being a 'third-best or worse policy' option. A drivers' licence is not based on vehicle ownership (many people with a licence do not own a vehicle) nor is it correlated, in any serious way, with road usage and parking. It would not minimize traffic congestion because it does not vary with time of use, traffic volume, distance traveled, or area in which vehicles travel (central city versus long distance out of city travel). It is difficult to imagine how it would resolve parking congestion. For these reasons, a municipal drivers' licence fee piggybacked onto the provincial fee is not recommended.

E.6 High Occupancy Toll Lanes

A high occupancy toll (HOT) lane is a variant of a high occupancy vehicle lane (HOV). HOT lanes are rare in the U.S. (six facilities, at the moment) and non-existent in Canada. HOV lanes, on the other hand, are quite common in the U.S., but hardly ever used in Canada. In the GTAH, HOV lanes are located on a couple of highways. They exist along a portion of Highway 403 running through Mississauga and they run north and south along the section of Highway 404 running from Highway 401 in Toronto to York Region. As well, there are plans to introduce HOVs on other sections of the 400 series highways in the Greater Golden Horseshoe (see the website of the Ministry of Transportation in Ontario). HOVs also exist in the metropolitan area serviced by the the Agence Métropolitaine de Transport in Montreal.

HOV lanes run parallel to toll-free lanes. HOV lanes are intended to reduce the number of single occupant, or in some cases, two or three occupant[11] vehicles on the road and thus reduce congestion by encouraging people to car pool. Vehicles with more than a minimum number of occupants may use these lanes without charge while vehicles with fewer occupants are fined if they are caught driving in HOV lanes. In the US where HOV lanes have been used for some time, they have frequently been found wanting, mainly because people find carpooling relatively unattractive – too difficult to find compatible work schedules and large transaction costs are often incurred in trying to arrange passenger pickups and drop offs. As such, HOV lines generally fail to meet their intended objective and excess capacity often results.

To better utilize this excess capacity, some HOV lanes have been converted to HOT lanes. Here, vehicles with less than the minimum number of occupants can use HOV lanes if they pay a toll. Depending on the electronic pricing technology used, tolls may be fixed and time-invariant, or they may vary during the day according to the level of congestion on the adjacent toll-free lanes. One example of a HOT lane is in San Diego where two lanes of a 13 kilometre section of Interstate 15 have been designated as such. These lanes are separated from the adjacent toll-free lanes by a barrier except for a few entrance points and traffic flows in these lanes are reversed

[11] If a HOV lane is congested with single occupant vehicles, the government could easily increase the requirement to two occupant vehicles or even higher if necessary.

from morning rush hour to evening rush hour. Buses, carpools, motorcycles do not pay for use of the HOT lanes while solo motorists who wish to save time may use them for a fee. Fee payers are required to purchase a transponder that communicates with an overhead electronic gantry and quickly deducts the toll from the customer's prepaid account. Digital signs located well in advance of HOT lane entrances inform drivers of the current toll which can range from fifty cents to eight dollars depending on congestion. Revenues are used for improving transit services in the HOT lane corridor. In general, where HOT lanes are used in the U.S., revenues are earmarked for public transit and roads in the tolled area.

In the absence of congestion or toll charges, HOT lanes are one option that may be appropriate for major roads in the GTAH. These would require initial construction costs and on-gong administration costs. For example, where space permits, parallel lanes may be added to existing toll free lanes with a barrier to control entry at selected points. If used on roads where space does not permit expansion, an existing lane would have to be converted to a HOT lane after erecting a barrier with selected entry points. Barriers are likely needed to prevent vehicles from darting into and out of the tolled lane to avoid electronic detection. An administration system would have to be set up for billing, monitoring, and collection purposes, but this would not be unique in the GTAH because Highway 407 has an administrative system that is similar to the one that would be required for HOT lanes.

As for revenue generation, there is no way in which this can be estimated at this time. It would depend on the number of HOT lanes created, the type of tolling or fee structure adopted, and vehicle use following implementation. Similarly, it is not possible to estimate capital and operating cost because this would depend on the number of lanes, whether they were new lanes or converted lanes, the type of electronic billing equipment used, and so on. Even though there is a lack of information on projected revenues and costs, this should not negate the importance of setting up HOT lanes in selected areas as an experiment.

Finally, decisions around the use of HOT lanes should be region-wide and not left up to each municipality within the GTAH. HOT revenues should be earmarked for roads and public transit that falls within the responsibility of the GTAH.

Recommendation 6:

In the absence of congestion or toll charges, consideration should be given to implementing high occupancy toll lanes on major highways in the GTAH.

E.7 Value capture levies

Municipal spending on public infrastructure and subsequent zoning decisions can increase the commercial value of holdings of private landowners. Because of this, value capture levies are justified if the public investment creates windfall gains for the private developer. The levy permits the municipality to capture (some of) the economic rents accruing to the private sector that have been created by this local infrastructure spending.

The value may be captured in a variety of ways including a requirement that the developer provide various facilities and infrastructure or cash, in return for being permitted to undertake the development that the new municipal infrastructure facilitates and makes profitable. Value may also be captured through a tax on commercial revenues generated by property abutting the infrastructure. Alternatively and more likely, a special annual tax on property could be levied on value added (Tassonyi, 1997, 191-192**).** This would be relatively easy to implement and administer, although care would be required in estimating the value added to the property as a result of the public infrastructure.

Use of value capture levies is most suitable for mega-projects such as subway or rapid transit expansion. As well, large developers could also negotiate to provide transit construction improvements. Decisions around what should be done, how they should be structured and where they should be implemented should be left to the body responsible for decision-making body responsible for public transit.

Recommendation 7:

Consideration should be given to the use of value capture levies for partial funding of subway and rapid transit expansion in the GTAH.

E.8 Summary

Table 1 lists the major strengths, weaknesses, estimated revenue yield (where possible), and level of responsibility for a range of new taxes and charges that could be used as a supplement to, or a substitute for, existing revenues (mainly the property tax) for financing transportation and public transit in the GTAH. Some of these are better able to satisfy the criteria for a good local tax. Some are more appropriate if implemented across the entire GTAH, while others could be left to each municipality within the GTAH. A major advantage of implementing a range of new taxes and charges, as opposed to only one or two, is that some road and transit users who are able to avoid paying a specific charge or tax will have difficulty escaping all taxes or charges if there is a range of them in place.

The best instrument for controlling congestion and handling gridlock is through the implementation of a GTAH wide congestion or toll charge. This cannot be done quickly, however. Decisions will be required on road coverage, electronic pricing systems, how the charge should be set and how it should vary, the administrative machinery for its operation, the length of time it will take to construct and implement such a system, and so on. In the meantime, the use of HOT lanes could be explored. One short-run downside of these charges is the length of time it could take to construct and implement them. In the meantime and to help the GTAH with its revenue shortfall, strong arguments exist for giving the GTAH access to a local fuel tax with rates set locally and 'piggybacked' onto the provincial fuel tax. This could be implemented quickly with very little cost.

Vehicle registration fees and parking space charges are blunt instruments, at best, for tackling road congestion. As such, they are more appropriate as a local charge and decisions on their implementation should be left with local municipalities in the GTAH.

Table 1: Assessment of New Taxes or Charges for the GTAH

Funding Option	Strengths	Weaknesses	Revenue Potential	Responsibility*
Dedicated fuel tax	• satisfies most criteria for a good local tax; • broadly considered a benefit-based tax if revenues are earmarked for funding local roads, highways, and public transit; • relatively inexpensive and simple to implement and administer; • tax rates could be set locally and 'piggybacked' onto the provincial tax rate; • helps in meeting 'smart growth' objectives.	• blunt instrument for targeting congestion; • incentive to purchase outside taxing area, but this is not likely to be noticeable because of the geographic size of the taxing jurisdiction.	• $300 to $420 mill. annually for the GTAH from six cents per litre (about 4.7% of all prop taxes) • 36-$38 mill. for Toronto from one cent (2.0% of prop tax). • $7-$7.5 mill. for Hamilton (1.6% of prop tax).	• Metrolinx or a substitute decision-making board for the GTAH should set the tax rate and 'piggyback' it onto the provincial tax rate; province should collect and remit revenue to GTAH for transportation and transit.
Congestion/ toll charges	• strongly satisfies the criteria for a good local tax; • excellent instrument for targeting congestion as long as charges vary by time of day, type of vehicle, distance traveled, and vehicle emissions; • excellent source of funds for improving and expanding public transit and transportation systems; • helps in meeting 'smart growth' objectives.	• implementation and administration is expensive but not prohibitively so; • may be ineffective in controlling traffic flows if good public transit alternatives are not available; • may divert traffic to non-tolled roads; • will take a few years to implement.	• $700 mill. annually for the GTAH from seven cents per km. (about 11% of all prop. taxes) • $74 to $120 mill. for Toronto from five cents non-peak and 10 cents peak on DV Parkway and Gardiner (2.5% to 4% of all prop taxes)	• Charge should be implemented for the entire GTAH. Implementation and rate setting should be the responsibility of Metrolinx or a substitute decision-making board for the GTAH.
Parking space tax	• satisfies the minimum criteria for a good local tax for public transit and transportation; • ideally suited to handling problems created by parking congestion; • could be implemented fairly quickly; • relatively inexpensive to implement and administer.	• not good for handling road congestion because fees do not vary with time of use, traffic volume, distance traveled, and do not apply to through traffic.	• $25 tax per parking space would generate $80 million annually in the GTAH; • $25 to $250 tax per parking space would yield $1.8 to $18 mill annually for Toronto.	• Should be permitted as a local option in the GTAH. Province must determine which municipal level should have responsibility. Choices include: each municipality, or each region plus Toronto and Hamilton, or Metrolinx for the GTAH.

Vehicle registration charge	• satisfies the minimum criteria for a good local tax for public transit and transportation; • vehicle fees could be based on age, axle weight, engine size, location, and emissions with vehicles that create more road and environmental damage paying higher charges; • could be implemented fairly quickly; • relatively inexpensive to implement and administer.	• a crude instrument for handling congestion because fees do not vary with time of use, traffic volume, distance travelled, and do not apply to through traffic;	• emission based charge ranging from $50 for low emission to $150 for high emission would yield $300 mill annually for GTAH; • $10 to $80 vehicle charge would yield $11 to $80 mill annually for Toronto.	• Should be permitted as a local option in the GTAH. Province must determine which municipal level should have responsibility. Choices include: each municipality, or each region plus Toronto and Hamilton, or Metrolinx for the GTAH.
Drivers' licence charge	• could be implemented fairly quickly; • relatively inexpensive to implement and administer.	• it is not correlated with road usage and parking and therefore, not recommended.	• Not applicable.	• Not applicable.
High occupancy toll (HOT) lane	• strongly satisfies the criteria for a good local tax; • can be a useful instrument for targeting congestion; • excellent source of funds for local roads, highways, and public transit; • would not be appropriate if congestion/toll charges were used on roads with HOT lanes.	• could not be implemented quickly; • would require initial construction and annual on-going administration costs.	• no basis for estimating revenue.	• Should be Metrolinx or a substitute decision-making board for the entire GTAH.
Value capture levies	• satisfies the criteria for a tax to fund subways and rapid transit; • source of funds for public transit; • relatively inexpensive to implement and administer.	• Not appropriate for roads and highways. • Care would be required in estimating the value added from the public infrastructure.	• no basis for estimating revenue.	• Metrrolinx or a substitute decision-making board for the entire GTAH
* Responsibility refers to the power to set the tax rate or charge, and to implement the tax or charge if the province does not currently have the same tax or charge base in its inventory of taxes and charges.				

F. Financing Issues

For most of the transportation financing options suggested above, there are a few issues that often come up. These are discussed in this section.

F.1 Should revenues be earmarked?

Earmarking (Bird, 1997) municipal tax revenues or charges/fees for public transit and transportation offers a number of advantages. First, it provides a link between the cost of transportation and the tax rate/charge necessary to fund it.

Second, earmarking is likely to improve the motivation and efficiency of local decision makers. It may positively influence the behaviour of decision-makers to achieve economic, traffic, and environmental objectives. If funds are not earmarked, surplus revenues may be used for other purposes. This may discourage managerial efforts to improve efficiency and to reduce costs because excess revenues go elsewhere. It may also discourage the introduction of innovative techniques and future investment that could lead to cost savings and efficiencies.

Third, there is no solid economic reason why local taxpayers should be subsidized from revenues generated by selling a specific good or service or the users of a specific good or service subsidized by local taxpayers. Such cross-subsidization from user-supported services or vice-versa may lead to undesirable distortions and a departure from efficient and accountable pricing and investment practices.

Fourth, since raising user fees or public prices is often easier politically than raising local taxes, failure to earmark these fees provides an incentive for the governing body to generate excess revenues and to use them to fund services that ought to be funded from local taxes or grants.

There may be problems with earmarking, however. It can shield expenditure programs from the critical assessment that might otherwise be received from budgetary authorities. Although this criticism may be less serious in cases where proper expenditure controls and monitoring practices are in place, earmarking is often initiated to improve financial practices.

A frequently cited criticism of permitting municipalities to set their tax rates and prices or fees/charges for the new financing instruments discussed above is that this practice could lead to differentials across jurisdictions which, in turn, provide an incentive for individuals to buy in or relocate to lower taxed municipalities. Concern over differential tax rates and fees/charges may be no different, however, than the location decisions caused by differential property tax rates. Furthermore, this type of tax competition can create an environment in which municipalities are more efficient in their use of resources and more accountable to their taxpayers (Bird and Wilson, 2003). Drawing upon the European experience, it should be noted that the mobility of the tax base tends to lead to similar tax rates and fees/charges across neighbouring jurisdictions (Evers et al., 2004).

F.2 Should the private sector be involved in infrastructure and service delivery?

Controversy often swirls around whether the private sector should be involved in municipal infrastructure and service delivery. Some believe that the government sector should be responsible for all services that have historically and traditionally been in their domain. Not only is this view shortsighted because it can lead to inefficient, ineffective, and higher delivery costs for some services, it also dismisses an important role for government (municipal, provincial and federal) which is to ensure that “public” services and infrastructure are available for all citizens and on reasonable terms. This responsibility extends to situations where public services and infrastructure are unlikely to be provided in a timely manner and on a reasonable scale if left to standard government processes or direct delivery by government organizations. Hence, there could be a place for alternative financing and procurement (AFP) initiatives. In fact, interest in this area has been growing quite noticeably over the past few years.

AFP is an innovative way for the government to fund and deliver vital public infrastructure including roads and public transit. This involves the direct participation of the private sector in a venture controlled by the public sector. The public sector's role is to facilitate, regulate, and guarantee provision of an asset and the private sector's role is to do one or more of the following with the public sector picking up whatever the private sector does not do - design, finance, build and operate the infrastructure in a formalized partnership agreement. Traditionally, this has been referred to as a public-private partnership (P3) (Hrab 2003; Hrab 2003b; TD Bank Financial Group 2006; Vander Ploeg 2006) and this is what it is called in most provinces and countries. It is especially appropriate for services with substantial capital costs and where there is a revenue stream.

Although there may be wide variation in the structure of an AFP or P3, it generally includes one of the following features:

- The private sector operates the facility for a fee. The public sector retains responsibility for capital costs.
- The private sector leases or purchases the facility from the public sector, operates the facility, and charges user fees.
- The private sector builds or develops a new facility, or enlarges or renovates an existing facility, and operates it for a number of years before transferring ownership to the public sector.
- The private sector builds and operates the facility and is responsible for capital financing. The public sector regulates and controls the operation.

A critical issue in the design of an AFP or P3 is the sharing of risks. In general, this depends on the type of partnership. The greater the private sector's share, the greater will be its expected rate of return. In principle, the party best able to deal with each type of risk at least cost should bear that risk (TD Bank Financial Group 2006). This capacity to share risk is a major advantage. For example, the risk of cost over-runs, scheduling delays, and service demand should be borne by the private sector; whereas, the risks associated with changes in regulations and legislation, including changes in local taxation

and environmental standards – things that cannot be controlled by the private sector – should be assumed by the government (United Kingdom 1997; Nova Scotia 1997). Clearly, an effective and efficient public partnership agreement requires that both parties understand the risks that each is to assume because incorrect risk assignment can lead to increased costs for the private sector and higher risk premiums than should be the case, or higher costs associated with resolving disputes for the public sector (National Audit Office 2001).

AFPs and P3s provide a number of other advantages. They offer new sources of capital, freeing government revenues for other purposes. This is especially important when it is necessary to modernize crumbling infrastructure (Huang 2001). They let the public sector draw on private-sector expertise to minimize costs, an advantage especially important to small municipalities. Their contractual structure can encourage a "life-cycle" approach to planning and budgeting through the use of long-term contracts that include maintenance costs, asset replacement cost, and asset management plans (TD Bank Financial Group 2006). They are a way of bringing competition into the public sector (Vander Ploeg 2006). Because the private sector operates in a competitive environment, it is almost always more innovative in infrastructure design, construction and facility management when compared with the public sector. Where AFP and P3 contracts are properly structured and based on performance measures, they can lead to improved local governance including increased accountability, transparency and value for money.

Private sector involvement is not without its critics. Indeed, the strongest opponents are public-sector unions (and their supporters) who view these arrangements as creeping privatisations, and regard them, perhaps rightly, as a threat to union membership. The strongest criticism, however, is that they are too costly. This perception arises, partially at least, because it is argued that private sector borrowing is more expensive than public sector borrowing. This view, however, is short sighted. Lower interest rates for public sector borrowing exist because they are assumed to be risk free, which, of course they are not. Risks exist as long as there are potential problems with cost overruns, scheduling delays, and so on – problems, by the way, that are common with public sector projects

and lead to higher taxes in the future. The higher risks of private sector borrowing serve as protection against an unforeseen future cost on taxpayers. This higher rate of return protects the private sector just as “an extended warranty on a car or [an] insurance premium” protects an individual (TD Bank Financial Group 2006, at 13).

Other criticisms include a loss of accountability and the sacrifice of quality for profit. These concerns are important and cannot be understated. Their resolution, however, is not necessarily in retaining public sector provision, but rather in designing carefully negotiated contracts based on performance measures that reflect results and outcomes rather than inputs. As well, this concern is likely overstated because private sector providers operate in a competitive environment where poor quality, low standards and lack of accountability will lead to lost business and firm closures down the road.

Although there is little experience in Canada, evidence from the United Kingdom, where the use of P3s is fairly widespread, indicates that P3s delivered an average saving (ex post) of 17 to 20 percent compared to conventionally provided public infrastructure, even though private sector borrowing costs were higher (Partnerships UK 2003). Similar results have been noted in other countries (Hrab 2003 and 2003b; Grimsey and Lewis 2004). At the same time, P3s have led to improved efficiency, most notably in the presence of competition (Harris 2003; Hrab 2003; and Grimsey and Lewis 2004) and even where service provision has remained largely monopolistic, private participation has delivered better results than the public sector (Harris 2003), particularly where services have “private goods” characteristics.

There is no clear-cut recipe for projects that could be funded and delivered through an AFP or P3. The range can be large, but the complexity of contracts may put a floor under those that are practical. For example, the United Kingdom recently ruled out P3s for small projects costing less than 20 million pounds but deemed P3s to be valuable for major projects with high annual maintenance costs, or where private sector project management skills, innovative design and risk management expertise can provide

substantial benefits (HM Treasury 2003; and Commission on Public Private Partnerships 2001).

Based on existing experience, local infrastructure projects that are suitable for AFPs and P3s include transportation and public transit projects (Hrab 2003; and Hrab 2003b). An AFP or P3 may be most appropriate when outcomes can be clearly defined (Grimsey and Lewis 2004), proper incentives can be introduced for encouraging private partners to get better value, and if there is clear communication and accountability between the private and public partners.

Because public-private partnerships are monopolistic in nature, there is a role for government in monitoring their behaviour. Governments should set the terms and conditions for service delivery, funding, quality of service, and establish performance standards or measures. Government could even lay out the pricing structure to be used for services provided by the infrastructure (volumetric pricing for water and sewers; tolls and other charges for roads and public transit; user fees for solid waste disposal) or set up a price regulation or monitoring system (Kitchen 2006).

For an AFP or P3 to be successful, the most critical feature is the contract design and, within the contract, the sharing of risks. Structuring a contract is not an easy task. It requires a considerable amount of expertise and experience, something that individual municipalities are unlikely to have if left on their own. The Netherlands, United Kingdom, New Zealand, and Australia have considerable experience with successful P3s and this is largely because the central government took the initiative, early on, to put together the necessary ingredients for successful contracts. Canada, by comparison, lags behind although this appears to be changing. British Columbia is the furthest along in developing a robust P3 model and strategy. More recently, Ontario, Quebec, and Alberta have started to move forward with models of their own. All of this suggests that the basic ingredients, necessary expertise and experience for increased municipal participation in P3s are emerging. For a more detailed list of what other jurisdictions have done, see RCCAO, 2006.

F.3 Are road prices/charges and fuel taxes regressive?

Critics of road pricing charges often argue that prices or charges or taxes on the use of roads hurt the poor. In other words, they are regressive because they take a higher proportion of income from lower income individuals than higher income individuals. This, of course, is equally true about consumer purchases of all kinds of things including bread, milk, movie tickets, and so on. Any price, charge, and tax that is not based on income will always be regressive when calculated as a percent of income – it can't be any other way! Recognizing that regressivity exists, there is a question of how regressive these taxes/charges really are. In short, it is unlikely that road pricing charges/taxes are very regressive because poorer people use roads less than richer people. They rely more heavily on urban public transit which could speed up if there were fewer cars on the road and they would benefit if road-pricing revenues were used to improve public transit.

Concerns about the tax burden on low-income individuals should not be dismissed. It should, however, be addressed through income transfers from the provincial or federal government and social assistance programs targeted to individuals in need. It is far more equitable and efficient to handle income distribution issues through income transfers or targeting (Boadway and Kitchen, 1999) than to tamper with charging or taxing mechanisms to accommodate these concerns. Finally, failure to use charges or prices for road use produces an implicit redistribution of income from the rich to the poor (rich use roads more than the poor) which would almost certainly not be supported if it where made more explicit.

F.4 Should road users pay additional road prices/charges?

The possibility that governments might, sometime in the future, implement road tolls or congestion charges has already prompted criticism, generally from special interest groups who are opposed to any further taxes/charges on motor vehicle use. Their criticism has taken a variety of forms, but it generally involves the claim that road users already pay

enough provincial and federal fuel and sales taxes on petrol and shouldn't have to pay any more. This, however, misses the point. Federal and provincial taxes and charges are levied to fund federal and provincial services. At the moment, these funds are not earmarked for public transit and transportation; perhaps they should be, but they go into general revenues to fund federal and provincial services, at the moment. Alternatively, some of these revenues could be given as grants to local governments for public transit and transportation but there are problems with grants as section F.5 notes. A further option would exist if provincial and federal governments vacated some of their tax room and made it available to local governments. This vacated room could be filled by local taxes/charges but it is important that local governments accept responsibility for setting their own fuel tax rates and charges.

It seems to me that the real issue is whether local governments should continue to fund roads from property taxes or whether municipalities should be permitted to adopt new charges and taxes for road use and public transit. The problem with property tax funding is that it does nothing to change people's behaviour when it comes to road use. Specific road prices/charges, by comparison, can be designed to provide an incentive for people to change their behaviour and to use roads and public transit more efficiently. Road prices/ fees are also superior to property taxes because they can be more effective in encouraging 'smart growth' and they are likely to be less regressive in their impact on users.

F.5 Should the federal and provincial governments hand out more grant revenue for local public transit and roads/highways?

A recent meeting of mayors of Ontario's fifteen largest cities (held at GM headquarters in Oshawa in mid-November, 2007) is the latest unified call for more federal grant funding for local public transit, transportation, and other infrastructure. Calls such as this are not new, however. They have been around for some time, but their frequency and intensity has increased in recent months, partially in response to ongoing federal government budgetary surpluses, but also in response to increasing concern over insufficient public transit and increasing traffic gridlock. This raises an interesting question. What is the role for grants in funding local transit, roads and highways?

Grants to municipalities may be economically sound if they fund services or infrastructure that generate positive spillovers, or if they are of specific interest to donor governments. Here, the best type is a conditional grant that provides partial or full funding for a service or project with the funding rate set to match the proportion of benefits that go to people outside the funding area or the proportion of benefits going to the donor government. Rephrasing this for the GTAH and concentrating on public transit and roads, one might ask 'what is the value of benefits from the public transit and road system in the GTAH that go to those outside the GTAH?' Furthermore, are these spillover benefits best covered by using grants or should they be recovered from charges on those using the service? Grant revenue comes from taxes raised in the GTAH and elsewhere – why should someone in Moose Jaw or Halifax pay taxes to the federal government to have it passed onto the GTAH as a grant for local transit and transportation? This cross subsidization will be minimized if charges are imposed on those who use the service. Charges mean that those who live in the GTAH and those who live outside the GTAH face the same pricing structure when using public transit and transportation.

Grants create other problems, as well. First, they can distort local decision-making. Conditional transfers require municipalities to spend according to the guidelines of senior governments and often require matching funds on the part of the recipient municipality. This effectively lowers the price of municipal services and encourages municipalities to spend more on these services than might otherwise be efficient.

Second, funding from senior governments can also lead to inefficient local revenue decisions. In particular, grants that cover a large proportion of capital costs may reduce incentives to price services correctly (an important issue for public transit and roads), or to set up asset management and cost recovery programs.

Third, grants reduce accountability. When two or more levels of government fund the same service, accountability problems exist when users are not sure which level of

government is responsible for the project and problems that may arise. International experience tells us that governments are more likely to carry out their expenditure responsibilities in an efficient, transparent, and accountable manner if they are also responsible for raising their own revenues (Bird 2001).

Economic arguments in support of capital grants are not strong. If they are to be used for funding public transit and transportation in the GTAH, their use should be conditional on recipient governments setting efficient local taxes and charges. As well, recipients should have proper asset-management programs, along with requirements that asset replacement costs be included in the charge for services. The practice of fully expensing capital expenses in the year of acquisition and not depreciating the value of capital assets will often lead to under-pricing of services and over-investment in infrastructure.

G. Governance for the GTAH

Recommending new financing instruments is relatively easy. Getting them implemented and operational will be more complicated. Implementation will be possible only after each recommendation has been fully discussed, debated, and evaluated by a political body or governing jurisdiction that has the power to make policy decisions including coverage, structure, and implementation itself. The governance structure refers to the political body responsible for making policy decisions. It does not refer to the day-to-day management of local governments or special purpose bodies and it does not refer to service delivery because this may be handled in a variety of ways.

For new financial instruments that may be used implemented by local or regional councils, such as a parking space tax and/or vehicle registration charge, the decision making body is already in place. It is the elected council that has the power to make its own decisions about what should be done, how it should be done, and where it should be done, just as they do for other services for which they are currently responsible. Of

course, this assumes that the province will give local or regional councils the option of using new taxes or charges.

Decisions about what to do, how to do it, and where to do it, for newly recommended GTAH-wide taxes or charges will be much more difficult because there is no municipal decision-making body for the Greater Toronto Area and Hamilton that currently has the power to implement new taxes and charges, or any tax or charge for that matter. At the moment, there are four regional governments with a number of area municipalities within each region and two single tier municipalities (Toronto and Hamilton). The current structure of Metrolinx – formerly the Greater Toronto Transportation Authority (GTTA) including Hamilton - extends across the entire area but it does not yet have substantial decision-making power. It can make recommendations to the province which the province may or may not implement. Ultimately, Metrolinx will be responsible for GO Transit and as such, will be the primary provider of interregional transit services. This will provide it with a dedicated source of revenue and would place it in a decision-making capacity.

There is some question as to the effectiveness of the current governing arrangement as witnessed by the provincial government's announcement on June 15, 2007 to contribute $17.5 billon for rapid transit in the GTAH with one-third of this amount requested from the federal government. This significant announcement was made without prior input from the GTTA. Unfortunately, this is an example of how the current structure can be ignored or undermined in important funding decisions and how political (pre-election) interests can trump sound transportation policy decision-making. At the time of the announcement, however, the Province did remit the funding issue to the GTTA for review, prioritization, and implementation. Since there is no GTAH wide body that has any real decision making power at the moment, how should decisions be made about what should be done, what taxes or charges should be implemented, what rate or charging structure should be adopted, what administrative structure should be put in place, and so on, for the entire area?

There are a few noticeably different options and, undoubtedly, there are variations on each of then. For instance, the province could take the initiative and assume responsibility for all decisions around new taxes and/or charges. Another option could include the creation of a special purpose body with responsibility for all decisions around inter-municipal transit and transportation across the entire region. Still, another option, and one that would be highly controversial would involve restructuring the current governing structure across the entire area. For part of the GTAH (Toronto and Hamilton excluded), the current two tier structure of local government could be replaced by a number of single tiers – there might be one for each existing region or more than one in each of the regions. A new regional tier could then be added with responsibility for a number of area wide services including region-wide transit and transportation. Each of these options is examined briefly.

G.1 Provincial responsibility

If the province were to assume all spending responsibility for inter-municipal transit and transportation in the GTAH, then it should assume all funding responsibility including implementation of and administration of all new taxes or charges. The province would determine the taxes and charges it wanted to implement, establish the rate or charge structure, and decide where each should be implemented. If the province is unwilling to take on all spending responsibilities, reasons for provincial involvement in these decisions are less compelling.

G.2 Special purpose body

The current *GTTA Act* stipulates that its board (now the Metrolinx Board) is made up of eleven members – two appointed by the province and the others recommended by regional and municipal governments in the GTAH. Appointments are for a period of three years. The Board, however, does not have any real decision-making power on

policies directly affecting the financing of public transit and transportation.[12] It can and does, of course, advise the province on what should be done. To increase the decision making power of the current GTTA Board, one option would be to change the legislation to create a special purpose body and give it decision-making power, although this may be a second best solution (as noted below).

Special purpose bodies (SPB) are sometimes referred to as commissions, utilities, or service boards. They are not new or unique in Ontario. Commissions may be used for public transit and in the past, they have been used for police. Utility boards may be used for water, sewer, electricity, and public transit. Service boards are used for police and a few years ago, the Greater Toronto Services Board (GTSB) existed. It was established by the Province in the 1990s but abolished in the fall of 2001. Most special purpose bodies in Ontario are coterminous with municipal boundaries (GO Transit is an exception). Seldom does decision making power of a special purpose body transcend municipal boundaries. This is quite different than the United States where many local services are provided by a number of independent special purpose bodies and many of them transcend municipal boundaries. This has created a complex and confusing system of local government and is clearly a model that should not be followed or adopted in Ontario.

SPBs generally operate as a separate functioning business entity – sometimes independent of the locally elected council and sometimes under some kind of governing control or affiliation with the locally elected council. Each tends to be responsible for only one service (water and sewer, electricity, public transit, and so on). Each usually has its own independent or quasi-independent (from local council) governing body that is responsible for all policies affecting it. Each has its own accounting and financial system, frequently its own work force and capital equipment, and is responsible for monitoring and reporting on its own activities.

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[12] While the GTTA legislation does not give Metrolinx power to initiate funding decisions, it does allow Metrolinx to create subsidiary corporations for special purposes. It also empowers the Metrolinx Board to do a number things (which has been done on some challenging issues – see Strategic Plan on the Metrolinx web site and the two Early-Wins priority lists), on the condition that a consensus is reached among its Board members and that this consensus is approved by the Provincial Government and Minister to whom Metrolinx ultimately answers.

Setting up a decision-making body for interregional transit and transportation across the GTAH will require some decisions. First, should the board be governed by appointed or elected officials? Some would argue that the governing structure should be made up of appointed officials because, it is alleged, appointees could be technical experts in a particular field and therefore, more efficient in decision making when compared with local politicians. The case against appointed officials is fairly strong because it is undemocratic to have appointed officials making decisions on expenditures funded by tax dollars, special charges and fees. Accountability is likely to be missing if taxpayers do not have the opportunity to vote for individuals making policy decisions. Appointed officials may create an environment where the SPB becomes aloof and removed from the general taxpayer or people paying for the service.

In short, any SPB that is responsible for public sector spending and taxing/charging decisions that can impact an individual's working and living environment must be made up of "elected" officials. This is not to downplay the importance of professionals with expertise in the area. Quite the contrary! It is simply to assert that this expertise should be used in the following way: either through direct employment as a member of the bureaucracy that makes recommendations to the governing body or as direct advisor to the governing body itself. The latter option has been recommended in a recent report on the governing structure of TransLink in Vancouver (see Translink, 2007). This report calls for a decision-making body made up of mayors of the municipalities in the serviced area supported by an advisory body made up of appointed experts in transportation and public transit. Ultimately, as this report recognizes, taxpayers must have the opportunity to vote for those who make public-sector spending and taxing/charging decisions.

Second, if members are elected, should they be directly elected to the SPB or should they be elected to municipal or regional council initially, and by virtue of this, appointed to the SPB, as is done for the vast majority of members on the current GTTA Board? If the decision makers serve on municipal/regional councils and the SPB at the same time, it is suggested that this provides for strong communication between the SPB and the

municipalities/regions because the same individuals are on both governing bodies. In fact, this may be appropriate if the SPB is regarded as an agency or instrument of the area municipalities.

On the other hand, where elected officials serve on both bodies, accountability may become entangled because citizens/voters are unable to separate their vote for municipal/regional issues from their vote for SPB issues. For example, suppose a taxpayer is happy with a councillor at the municipal/regional level but not as a member of the SPB (or vice-versa), for whom is he or she voting at election time - is it the individual as a municipal/regional councillor or as a member of the SPB? A further criticism of officials serving on both bodies is that the SPB could become the instrument or agency of local councils. This electoral system has the potential for parochialism in decision making and may not be directly accountable to taxpayers/voters.

Directly elected members of a SPB are generally preferred because accountability is enhanced when each member represents only area-wide issues. Those charged with the responsibility for making GTAH-wide decisions will have an opportunity to present their ideas about GTAH transit and transportation issues directly to the public and to hear clearly their responses during election periods (or even during non-election periods), without confusing the issues with matters of concern for the local municipalities. Elected members on the SPB can be assessed by the electorate on the basis of their performance on the SPB and will be less likely to face conflict between GTAH and local interests. Members of the SPB will be able to focus their energies entirely on region-wide issues. The potential for parochialism should be reduced and the electoral process will be greatly simplified with separate slates of candidates for each governing unit.

The case against directly elected members on a SPB is that lines of communication between the SPB and municipalities/regions may be weaker if elected members only serve on one level of local government. This concern, however, may not be all that serious and may be alleviated through administrative arrangements between two or more governing bodies.

If a SPB were responsible for all inter-regional public transit, arterial roads and highways, it would follow that it should assume responsibility for both spending decisions and revenue raising options. On the spending side, this would mean that it should determine infrastructure needs and how they are to be financed including the possible use of public private partnerships. On the revenue side, it should assume power for determining how the capital and operating costs are to be financed. This might include the use of a GTAH wide property tax if some costs are to be financed from the property tax (public transit and arterial roads are currently funded, partially at least, from local and regional property taxes), but it should also include the power to implement an area-wide dedicated fuel tax, congestion or toll charges, and the use of high occupancy toll lanes. All of this could be done with further changes to the current GTTA Act (Metrolinx) including new sections on legislation and the enactment of new regulations.

Special purpose bodies are not without their problems, however (Kitchen, 2002, ch. 11; and Kitchen, 2006a). They are generally created by the SPBs decision-making independence from municipal/regional councils. For example, the existence of an independent SPB complicates local government to the point where citizens may not understand its structure or be able to determine who is responsible for what. The weakening of municipal council through removing some responsibilities, combined with the inability of citizens to understand government (who is responsible for what), may result in a loss of accountability, a lack of transparency and reduced public interest in local government. If municipal level organizations become more diffuse, they may become less accessible to political control.

Fragmentation of local government services into a number of governing units complicates the problems of administrative integration and co-ordination. Attempts by municipally elected politicians to provide services may be thwarted or made more difficult because of decisions made by an SPB over which municipal politicians have little, if any, control. For instance, actions taken by a public transit and transportation authority may conflict with a municipal and regional council's overall planning objective.

An important source of economies available to municipal and regional council run operations and often not available to single purpose SPBs comes from the opportunity to share certain personnel, facilities and capital equipment. Some of these economies can be identified. First, all council operated services share office space, whereas SPBs are generally established in separate buildings. Second, a municipal/regional service easily shares administrative and operational tasks with other departments (for example, accounting and legal services), whereas separate SPBs tend to set up their own administrative and operational facilities. In the latter structure, economies of scale and cost savings are less likely to be achieved than in the former structure. Third, opportunities exist for pooling capital equipment and labour in municipal/regional operations. This permits a reduction in idle hours for capital and labour through the opportunity to transfer personnel and equipment to different functions as need arises. SPBs, on the other hand, have a tendency to acquire a separate complement of labour and equipment with these inputs not being shared with other municipal/regional functions.

While arguments for a separate SPB for inter-regional transit and transportation across the GTAH are generally weak, a SPB may be necessary (often referred to as a second-best option) because there is no existing region-wide municipal decision-making body that can make spending and taxing/charging decisions on transportation and public transit. This SPB could be Metrolinx with broader legislation and expanded powers and a Board made up of directly elected members. Direct election is important because it provides an incentive for members to take a GTAH-wide perspective in decision making as opposed to the parochialism that is frequently observed by Board members who are on a city or regional council and by virtue of this, on the Board as a representative of their municipality.

G.3 Restructured municipal governance

At the moment, there are two single tier cities, four regional governments and twenty-four cities, towns, and townships in the regions. These regions and the municipalities

within them have served the people reasonably well over the past four decades, but times have changed. What was once an area where there was a series of somewhat distinct and independent regions (and municipalities within these regions) has now become an area where the regions are much more integrated and dependent on each other. Population growth, increasing density, and a tendency for people to live in one jurisdiction and work in a neighbouring jurisdiction has effectively removed inter-municipal differences attributed to local preferences and produced a levelling out of resident expectations for both the quantity and quality of public services provided across the entire area. Arguments that major urban centres should be excluded from smaller urban centres, or from rural and tourist areas in a governing structure may be unrealistic and impractical for a variety of reasons. Urban areas, especially major urban areas, are the focal point for most economic, business, recreational, and social activity across a large geographical area. Consequently, the governance of this area revolves around the need to maintain a coherent balance among policies for the entire area - transportation issues impact on the rural area as much as the urban area; provision of social services and social housing for the rural and urban areas alike must be shared across the entire region to prevent the migration of recipients to the urban centre leaving them with the burden of paying the entire bill (this is currently done for social services in the GTAH); and region-wide land use planning is important if both rural and tourist communities are to retain their identity and resist the temptation to urbanise and capture increased assessment. Rural areas around an urban centred jurisdiction generally have better arterial roads, more recreation programs, enhanced library services and better fire protection and safety standards, to name only a few, when compared with municipalities that are not part of an urban/rural governing structure.

Given that the GTAH has changed considerably in the past four decades, the time may have come for re-examining the governance structure of the entire area, not only for public transit and transportation, but for other local public services as well. This could take a variety of forms but one common ingredient seems to be the formation of a new layer of government across the GTAH, much like the regional level in the existing two tier regional structures. This layer could be responsible for major services including inter-

municipal public transit, arterial highways and roads, area-wide land use planning, solid waste disposal and other services deemed to be best handled at this level. Funding of social services is already shared across the entire area, although each of the cities and regions has no say in how it is done. This level of government should have its own directly elected council with the power to make policy decisions for services assigned to it.

To avoid an additional layer of government across the existing four regions (Halton, Peel, York, and Durham), the current two tier structures could be collapsed into a single tier. This might be achieved by merging each of the existing regions and its area municipalities into one governing structure. These four newly created local governments plus Hamilton and Toronto would make up six area municipalities in the newly proposed regional structure. Or it might be achieved by transferring all regional services to the existing area municipalities and having twenty-four local governments. When combined with Hamilton and Toronto, twenty-six municipalities would constitute the area municipalities in a new regional structure. A version of the latter option might include the merger of some of the twenty-six municipalities to create fewer area municipalities within the GTAH, but more than six. In short, each of these options creates a new regional governing structure.

Of these possibilities, probably the simplest (although none would be really simple and all would be resisted politically) and easiest would be the creation of a single tier in each of the four regions. Between 60% and 68% (depending on the region) of all revenue fund expenditures are currently at the regional level. Migration of the remaining responsibilities to the regional level would be considerably easier than carving up the existing regional services and apportioning them to the area municipalities. Indeed, the trend over the past two decades has been to migrate services from the area municipalities to the region rather than from the regions to the area municipalities. Another advantage of using the current region as a governing jurisdiction is that all regional services are currently provided in a seamless manner across each region, whereas this advantage

would be lost if regional services were transferred to the area municipalities. Finally, single tiers have already been created for Hamilton and Toronto.

The objective of achieving an effective, accountable and efficient local governing structure for all local public services is best meet if all local public sector decision-making powers are left with a democratically elected local council. A new GTAH-wide regional structure that is responsible for all area-wide services including public transit and transportation should avoid many of the shortfalls generally associated with a special purpose body. This would create an environment where it would be easier to coordinate all municipal services and functions and it would minimize instances where the policies and decisions of the SPB conflict with the policies and decisions of local council. In principle, a system where local council has responsibility for making decisions on the appropriate trade-offs to be made over all local expenditures reduces the possibilities of conflict between an SPB seeking to promote its own special interests and the local council attempting to hold the line on taxes, restricting expenditures or altering expenditure choices among those services over which it has substantial control. Finally, opportunities to benefit from economies of scale in administrative functions will be improved.

Putting all municipal decision-making powers under council control should improve local accountability and responsiveness to the tax-paying public. When one stops to think about it, an independent SPB in charge of a basic service such as public transit and transportation can set its own taxes and charges, determine its own policies, and formulate and approve its long range plans. Because of this, it can have considerable control over the impact on other municipal services and how the area is governed, and how and where it develops residentially, commercially, and industrially (Kitchen, 2006a).

This governing structure is considered as the best option, although it is unlikely to be considered in any serious manner in the current political environment. The provincial government in Ontario has shown no interest in municipal restructuring initiatives and restructuring will not happen if municipal governments are left to do it themselves.

Having noted this constraint, however, it does not mean that it should not be considered. Initiatives to change take time to percolate, some take more time than others. Nothing will be done quickly.

G.4 Summary

Of the options discussed here, and given that this paper has addressed public transit and transportation only, the use of a special purpose body for the GTAH governed by a directly elected body (a council) probably constitutes the best governing structure at this time. It could be implemented fairly quickly because Metrolinx (formerly the GTTA) already has an administrative structure that could be used. Further changes in legislation and regulations could be made to give this body added responsibilities including the power to make spending decisions and the power to set taxes and charges for region wide public transit and transportation infrastructure and services. One important change to the current Metrolinx governing structure should be the direct election of members to the governing body. Details on such things as the size of the body, additional and specific legislative powers and responsibilities would, of course, have to be worked out by the province after consultation with relevant government officials, interest groups, and professionals in the field.

Recommendation 8:

A special purpose governing body based on the current Metrolinx governing structure with directly elected councilors should be given responsibility for inter-regional public transit and transportation including the power to make spending decisions and the opportunity to implement taxes and charges.

H. Summary

The Greater Toronto Area including Hamilton (GTAH) has become a major driver in Ontario's ability to be competitive in the ever expanding and increasingly competitive global economy. Especially critical for the GTAH is the quality and availability of

effective and efficient public transit and transportation (roads and highways) systems - these are essential if economic growth, productivity and international competitiveness are to be improved and enhanced. At the same time, concern over environmental degradation caused by air pollutants (such as particulate matter) and emissions of greenhouse gases (including carbon dioxide) from increasing traffic volumes is becoming more and more of a concern. Potential liability issues may very well emerge if bridges, highways, and public transit systems continue to deteriorate. Fortunately, these concerns are becoming more and more important as witnessed in a growing number of newspaper articles and editorials, pleas from professional associations for rehabilitation and renewal, challenges from public policy analysts, calls by concerned citizens, and results of public opinion polls. In short, something must be done!

Across the GTAH, responsibility for most highways, roads and public transit rests with municipalities, but they only have access to two revenue sources of any note – property taxes and user fees. Each of these plays an important role in municipal finance but their current use and application is not sufficient to fund ongoing operational and capital expenditures for public transit and roads. In particular, a more efficient and effective transportation system can only be achieved if users (businesses, individuals, and governments) pay for the infrastructure and operational costs of services it provides - building, maintenance and repairs, plus environmental damages. In the absence of prices, users have no idea how much the service actually costs and no incentive to make efficient decisions over how they use it; for example, where they should live and where they should work. Failure to set correct prices leads to serious problems – it causes over-use and over-investment where the service is under priced and under-use and under-investment where it is over-priced.

Correct pricing is important because it provides information to both consumers and producers that will lead to more efficient and optimal levels of service and the infrastructure that provides it. Currently, public transit and transportation systems in the GTAH fall short of correctly structured user fees or prices in at least two ways. First, their use should be expanded; for example, congestion or toll charges, motor vehicle

registration fees, parking lot charges, and so on, should be implemented. A municipal fuel tax also has much to offer. Second, where public transit fares are currently used, they are often improperly designed and structured if efficiency goals are to be achieved; for example, with the exception of GO transit, municipal public transit fares are seldom based on distance traveled.

Vehicle registration fees and parking space charges are blunt instruments, at best, for tackling road congestion but they would be appropriate for municipalities who wish to control parking congestion. As well, their revenues could be used to subsidize local transit and streets. The local nature of these charges means that decisions on their implementation and administration could be made by local or regional councils that are currently in place. No new governing body would be required. On the other hand, they could also be the responsibility of a governing body like Metrolinx, with responsibility for transportation spending and funding issues across the entire GTAH.

As for GTAH-wide public transit and transportation systems, the best instrument for controlling congestion and handling gridlock would come from a congestion or toll charge implemented in the first instance, at least, on the major 400 series highways, the Queen Elizabeth Way, the Don Valley Parkway, the Gardiner Expressway, the Red Hill Creek and Lincoln Alexander Parkways. Other major arterial highways could also be included if they were deemed appropriate. This charge could not be implemented quickly, however. Decisions would be required on road coverage, electronic pricing systems, how the charge should be set and how it should vary, the administrative machinery for its operation, and so on. In the meantime, the use of high occupancy toll lanes could offer some assistance. A short-run downside of introducing either or both of these instruments is the length of time it would take to implement them. At the same time, strong arguments exist for giving the GTAH access to a dedicated fuel tax with rates set locally and ‘piggybacked’ onto the provincial fuel tax. This could be implemented quickly with very little cost.

Decisions on financing instruments that should be implemented across the GTAH, how each should be structured and administered, should be made by a governing body that has real decision-making power. Of the possibilities at the moment, the most likely would be the use of a special purpose body for the GTAH for interregional transit and transportation. Along this line, it would probably make most sense to expand the legislated and decision making powers of Metrolinx because it already covers the GTAH and has an administrative structure that could be modified to take on added responsibilities. Details on such things as the size of the body, legislative powers, and specific responsibilities would, of course, have to be worked out by the province after consultation with relevant government officials, interest groups, and professionals in the field. One new feature that should be implemented, however, would be the switch to directly elected Board members, a change from the current situation where the vast majority of Board members are elected to municipal councils and then appointed to the Metrolinx Board.

Implementation of new taxes/charges will likely receive greater public receptivity if their revenues are earmarked for public transit and transportation initiatives. As well, the large infrastructure costs that will be required for future initiatives may call for greater private sector involvement; a direction that has been followed or is being considered in a number of countries. Claims that new road pricing taxes/charges will be regressive in their impact on users carry little substance because those who benefit from highways will be paying for them. Furthermore, if some of the road pricing revenues are used to subsidize public transit, the poor will benefit because they use public transit much more than the rich.

Assertions that road users already pay enough in provincial and federal taxes may or may not be true, but it holds little substance in the context of funding municipal highways and roads. Surely, the real issue is whether local governments should continue to fund roads from property taxes or whether municipalities should be permitted to adopt new charges and taxes for road use and public transit. The problem with property taxes is that they do nothing to change people's behaviour when it comes to road use. Specific road prices/ charges, by comparison, can be designed to provide an incentive for people to change

their behaviour and to use roads and public transit more efficiently. Road prices/charges are also superior to property taxes because they are more effective in encouraging 'smart growth' and they are likely to be less regressive in their impact on users.

Arguments that federal and provincial government should provide grant funding for local transit and transportation are often questionable on analytical grounds. They are justified if the funded service generates spillovers that can be captured by the use of grants. Furthermore, if they are provided, they should come with the condition that recipient governments set efficient prices and charges for the use of local transit and roads. Grants often create problems, however. They can distort local decision-making leading to inefficient decisions and they can reduce accountability. Based on international experience, increased accountability, efficiency and effectiveness emerges when the level of government that is responsible for spending decisions is the same level of government that raises the money it spends.

Recommendations:

1. ***Since operating and capital cost of public transit systems vary with distance traveled, zone charges should be implemented for public transit.***

2. ***The governing body for the GTAH must be permitted to implement a municipal fuel tax across the entire region with the tax rate set by the governing body, with provincial approval, and piggybacked onto the provincial fuel tax. It would be practical and appropriate to give Metrolinx this responsibility because its purpose is to prioritize regional transportation and it has an administrative structure that could take on added responsibilities.***

3. ***Congestion/toll charges should be implemented for major highways in the GTAH. Initially, these could apply to the 400 series highways, the Queen Elizabeth Way, the Don Valley Parkway, the Gardiner Expressway, the Red Hill Creek and Lincoln Alexander Parkways, but other major roads may also be included. Establishing the roads that are to be covered, the pricing structure that is to be used, and a variety of administrative issues can only be determined after consultations with road pricing professionals, local decision-makers, affected parties, and public policy officials in GTAH.***

4. ***Municipalities in the GTAH should be granted permission to levy a tax on non-residential parking spaces. Responsibility for implementing and levying this tax could be left with each municipality in the GTAH, or each of the two cities and four regions in the GTAH, or a governing body like Metrolinx for the entire GTAH. The choice of governing structure must be made by the province.***

5. ***Municipalities in the GTAH should be granted permission to implement a motor vehicle registration charge. Responsibility for implementing and levying this charge could be left with each municipality in the GTAH, or each of the two cities and four regions in the GTAH, or a governing body like Metrolinx for the entire GTAH. The choice of governing structure must be made by the province.***

6. ***In the absence of congestion or toll charges, consideration should be given to implementing high occupancy toll lanes on major highways in the GTAH.***

7. ***Consideration should be given to the use of value capture levies for partial funding of subway and rapid transit expansion in the GTAH.***

8. ***A special purpose governing body based on the current Metrolinx governing structure with directly elected councilors should be given responsibility for inter-regional public transit and transportation including the power to make spending decisions and the opportunity to implement taxes and charges.***

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