16

AN ANALYSIS OF THE CANADIAN INTERCITY SCHEDULED BUS INDUSTRY

Richard Lake,* L. Ross Jacobs and S.T. Byerley**
May 1991

1. INTRODUCTION

In the late 1980s an average of 20 million intercity passenger trips were taken each year on Canadian scheduled buses,[1] about 30 percent of all domestic trips which involved public transportation. The average distance travelled by these bus passengers was about 145 kilometres. They rode on a variety of vehicles, but mostly on standard, modern, 47-seat, air-conditioned vehicles manufactured in Canada by M.C.I. or Prévost. Bus operations vary widely. Greyhound has 400 buses serving an extensive route system stretching from Vancouver to southwestern Ontario, and north into Yukon and the Northwest Territories. At the other end of the spectrum, Dewdney Trails (until recently Sandy's Bus Lines) operates three times a day each way between Castlegar and Trail, British Columbia, a 30-minute trip. In a more remote setting, Atlin Coach Lines provides service between Whitehorse, Yukon and Atlin, British Columbia for 6 to 11 passengers and freight in a combination van. This report describes the service provided throughout the country, and most of the carriers providing it.

* The Research and Traffic Group.
** Research Division, Royal Commission on National Passenger Transportation.

Regulation of the industry is perhaps its most complicated and confusing characteristic. Originally all bus operations were regulated by the provinces, which owned and maintained the highways. Then, in the early 1950s, the courts determined that bus carriers which operated beyond the boundaries of a province were the responsibility of the federal government. So, the federal government passed a law to delegate its responsibility back to the provinces, and everything remained as it was, and still does. But not in Newfoundland, which is another tale.

This report describes the regulatory environment of the intercity bus industry, the evolution of the present system, the different methods and degrees of regulation in the provinces and the effects of these regulations on the various aspects of the industry — fare levels, competition, cross subsidization of routes and the scope of service. It even explains the special situation involving Newfoundland's primary bus carrier.[2] Also discussed are the incidence of subsidies from public funds and public ownership in the industry.

The high degree of regulation in some provinces and the existence of separate jurisdictions with their varied levels of regulation have prompted consideration of total or partial economic deregulation of the industry. This report suggests how the industry might look if it were deregulated and after a number of years have passed.

The coverage does not include all of the Canadian bus industry. It does not touch on municipal public transit nor on school bus operations. Neither does it discuss tour operations nor the charter bus business, except to the extent that they affect scheduled intercity operations. Most scheduled carriers also provide charter services. Conversely, some charter bus lines operate small scheduled services.

Scheduled bus carriers also operate a network of freight (parcels) services. In some areas, particularly in more remote regions and for carriers serving small communities, this is a very large and profitable segment of a carrier's business. In other parts of the country the freight operations are small or non-existent. This is true in the densely populated and highly urbanized southern Ontario–western Quebec region, where a variety of courier, messenger and package delivery services compete for this business. In the remote areas, the bus is the only parcel carrier, and other couriers often use the bus service to deliver their packages.

Although these other aspects of the total bus industry are not part of this report, some mention should be made of their somewhat symbiotic inter-relationships and their effect upon the intercity carriers.

Most small scheduled carriers and a significant number of midsize carriers achieve most of their revenues from the charter business and, to a lesser extent, from school bus contracts. Many operate one or two scheduled services as required to retain their profitable charter rights. There undoubtedly are a few smaller carriers which are exceptions to this. One is Big Rock Coach Lines, whose service south of Calgary will be described later. Big Rock reports that scheduled service is its major business, and the charter business is small.

Virtually all the larger carriers operate in the charter industry, but it is not their primary business. Both Greyhound and Voyageur Colonial have explained that charter service is marketed as a profitable use of idle bus capacity.[3]

The freight business has been a boon to many scheduled intercity bus carriers. There are carriers who operate on routes whose passenger revenues do not cover costs, but which are profitable because of the revenues from the carriage of parcels. There is discussion in this report of cross subsidization of unprofitable routes by profitable routes, but another important element of the cross subsidization questions involves the support that the passengers and parcels, as joint products, provide for each other.

As mentioned earlier, the extent of freight's importance varies. To Greyhound it provides a third of its transportation revenues,[4] and much of it moves in trucks out of separate terminals. Voyageur Colonial, on the other hand, has considered applying for withdrawal from this business because it is "too much trouble" for the amount of revenue it generates. The company is under the impression, however, that the provincial authorities wish the small town parcel networks to remain.

2. What the Bus Industry and Public Told Us[5]

During the course of its consultative process, the Royal Commission received submissions and heard from a number of groups and individuals who addressed issues related to the bus industry. These included bus companies,

associations representing bus carriers and groups representing users of the transportation system. The latter had relatively little to say about the bus mode. Continuing dialogue between Commission staff and interested persons provided additional information.

Four bus companies made presentations during the Royal Commission's public hearings: Acadian Lines Ltd. of Nova Scotia, SMT (Eastern) Ltd. of New Brunswick, Greyhound Lines of Canada Ltd. and Grey Goose Corporation Ltd.

Greyhound began its presentation by reviewing its recent strategy to reverse a declining ridership. Having proven by experience that product improvement resulted in increased ridership in the past two years, the company believes that further improvements would ensure the industry's future. Intermodal connections and coordination of scheduling between modes would greatly improve the overall efficiency of the transport system. Greyhound also recognized the importance of the relationship between the bus and the tourism industries. Greyhound felt that carriers would need to become more "customer driven" instead of "operations driven" to maintain a presence in tourism.

Greyhound suggested that further deregulation would be a mistake since existing regulations and policies have permitted the orderly expansion of sound, safe and efficient bus operations. If the regulatory environment were altered so that Greyhound lost exclusive operating rights on its more lucrative routes, it would be forced to reduce or eliminate many services it cross subsidizes on non-profitable routes.

Acadian Lines also argued that deregulation would result in a reduction of services. Cross subsidization between passenger revenues, parcel express and charter revenues, and between main routes and regional services ensures, Acadian contended, the presence of a bus service to many communities in Nova Scotia. In a regulated environment, the industry could remain viable without government subsidies.

As a company operating regional carriers in several provinces, Grey Goose was even more vocal in arguing the importance of cross subsidization to maintain rural and regional bus service. According to Grey Goose, scheduled bus services provided by regional carriers are not profitable in themselves,

and continued regulation is therefore essential to maintain bus service to the regions. Grey Goose also put emphasis on the development of an intermodal system. The company argued that there is a need for a universal reservation system to resolve scheduling issues and to offer various levels of regularly scheduled service. By integrating local and regional bus service to a national reservation system, any region would benefit from increased accessibility.

In its presentation, SMT Eastern underlined its problems in offering a bus service in a province that has limited air service and no international connections. This lack of air service has been costing SMT and the New Brunswick tourism industry much needed business. As an added frustration, SMT has been unable, because of provincial regulations, to obtain a permit to pick up tours visiting the Maritimes through Halifax International Airport. SMT's view was that although "there must be changes in government policy, we [SMT] also feel that it is up to the various modes of travel to do their part to secure their place in the transportation industry."

The Royal Commission also heard presentations from the Canadian Bus Association (CBA), Ontario Motor Coach Association (OMCA) and from the Association des propriétaires d'autobus du Québec. In their presentations and briefs, all three proceeded to bring the importance of the bus industry within the country's transportation system to the Commissioners' attention.

According to them, the bus industry plays an important role in intercity passenger transportation. More importantly, it could play an even greater role in the future as it is a form of travel that has not yet reached its full potential. There are indeed a number of factors that make bus transportation an attractive mode and alternative to both rail and the car. According to the OMCA, for instance, the bus is the most fuel-efficient mode of transportation. This means it is also the most environmentally friendly. By offering an attractive alternative to travel by car, the motor coach industry offers the consumer the opportunity to help protect the environment.

The bus is also the only public mode of transport linking hundreds of communities and rural areas. It generally offers greater frequency of service on short trips, flexibility in points of departures and arrival and, according to the OMCA, a better on-time performance than rail. The Association contended that the most attractive feature of the bus was its economic efficiency. With

minor exceptions, the bus industry is privately owned and generally operates without subsidy. In addition, of all the modes, buses have the lowest operating costs per passenger-kilometre according to the OMCA. (This industry contention is consistent with the Commission staff's costing study conclusions.)

The associations believe that the current uneven subsidy environment with respect to passenger travel results in unfair competition on many domestic routes. Unfair competition will continue to be a fact of life as long as other modes are subsidized, particularly VIA Rail. The CBA believes "this, in turn, ultimately harms the choice available to customers." Given the establishment of a true level playing field, the Association asserted, bus services could be broadened and a better choice of services offered to consumers.

The bus companies and associations cooperated actively with Commission staff in their analysis of the industry, generously providing confidential data and thorough responses to questions. From conversations during the course of this study (with only two marked exceptions), it was clear that the industry favoured the regulated *status quo*.

Many of the groups and individuals who expressed their views to the Royal Commission felt that the surface transport network, including bus, has been neglected and it was in a state of decline. Traveller advocacy groups were not always friendly to the bus mode, and asserted that it should not be assumed that travellers would shift to bus services intended to replace train services. It was stated that bus companies in Eastern Canada, for example, have not benefited greatly from the elimination of many VIA Rail services in the region. For students, seniors, people with disabilities and low-income families who may not have access to a car, mobility is severely reduced by the shrinking number of available transport options.

Representatives of persons with disabilities referred to the bus industry quite often in their presentations to Commissioners. Generally, it was felt that people with transportation relevant disabilities had poor access to bus services. Most terminals and buses have stairs and/or steps but no ramps, and there is usually no room for motorized wheelchairs on buses. It was suggested that funding from all levels of government was required to ensure that accessible intercity buses were provided. Persons with disabilities consider this a basic social requirement.[6]

Remote communities recommended that, where no other public transport is available, local and rural bus routes should be retained even through subsidies. Buses should be used to connect smaller centres with the main rail routes and to provide services to special or remote communities not served by rail.

3. Inherent Characteristics of Buses

With its high capacity and flexibility, the bus is the most economical public mode of transportation. This is the case if one considers only carrier costs, and it is also true if total costs including full charges for the provision of roads, an allowance for pollution and congestion charges are considered. Some bus capabilities are not present in modes other than the car, and some are quite different from those of any other mode.

Bus operations are very flexible. Any point served by road (even those to which the road is no more than a dirt track) is accessible by bus. Where other modes take at least a few minutes to pick up passengers, a bus can stop and regain cruising speed with little delay. There is almost infinite flexibility in scheduling and adjusting points and times of departure and arrival. Buses can be readily bought, sold and rented. They can be used in scheduled intercity service or as school buses and then chartered during otherwise idle periods. They can be maintained by their owner in a special garage or at the local service station.

An extremely broad range of management and ownership options is possible for a rural or intercity bus operation. An individual, even on a part-time basis, can operate a minivan in scheduled or other service — perhaps as an adjunct to a general store. There are such operators, and there are obvious market niches for them. Equally, there could be a role for the continental carrier.

Although lacking the service life of a rail car or (with maintenance) an aircraft, buses are far cheaper than other passenger vehicles, with the possible exception of the car. Seating density is typically high. As an illustration, for the price of one 37-seat de Havilland Dash 8 ($10 million), or for a substantially lower cost than one train, one could acquire 38 highway coaches with 47 seats each for a capacity of almost 1,800 passengers.

Buses have the lowest operating costs per passenger-kilometre of all the transportation modes. A single driver suffices, and fuel consumption is low. The roads are available on demand for a modest user-fee (fuel tax and licence fee). Consistent with the simplicity of bus operations, overheads are relatively modest. Moreover, on average, intercity buses pay their way in respect to road costs.

Its modest size and cost, and the capability of a bus to stop frequently and on demand, allows it to offer greater frequency of service on short trips and on trips between low-demand origin-destination pairs. The bus mode can also economically provide substantial reserves of capacity on demand. The ratio of peak capacity to average loads is greater for bus than for the other public modes. Bus system capacity can be readily rearranged across routes and types of services. At the seasonal peaks for shorter distance travel, bus continues to deliver long after air and rail are saturated. This is because the cost of intercity coaches is modest relative to aircraft and rail cars; operators can afford to own or rent the capacity to provide this peak service.

The potential performance of the bus is limited by the road. It must share this common-use infrastructure with trucks and cars, and operate at speeds compatible with the presence of these other vehicles.

Buses in normal service usually score relatively low in comfort (particularly space and ventilation) and in amenities provided, including the poor condition of some bus terminals. Higher-class bus services with spacious seats, refreshment service and other amenities are operated and, although there has been some success when the fares are slightly more than for conventional service, premium or luxury bus services have often failed to attract sufficient riders to be viable.

Under almost all circumstances, the bus is environmentally less polluting than the other passenger modes. Fuel consumption, and thus carbon dioxide emissions, are low. Smog inducing emissions are high relative to bus fuel consumption; however, lower-emission diesel engines would seem to lack only an incentive (that is, regulation) for their introduction. Buses are noisier than cars but not more so than the trucks with which they usually share the roads.

4. CANADA'S SCHEDULED BUS INDUSTRY

This section provides a description of the scheduled bus industry in Canada, as of 1990. An overview of the industry in Canada is followed by a summary of the regulatory environment in each province. The third subsection describes the structure of the industry and the service being provided. Organized by province as well, it begins in the West with the largest carrier in Canada, Greyhound Lines of Canada. This company serves more than half of the country and can be expected to play an important role in Canadian intercity bus transportation, regardless of any changes to the regulatory or competitive environment.

The treatment in this section, particularly with respect to the various provincial regulatory regimes (section 4.2) and the intercity scheduled bus carriers and their operations (section 4.3), is intended to be reasonably thorough. Thus, it is lengthy. The reader may prefer to scan this material.

4.1 THE INTERCITY SCHEDULED INDUSTRY

Operations

While the private car is by far the most used form of personal transportation, for individuals requiring public transportation services, the intercity bus is an important alternative which, until 1983, accounted for more than 50 percent of total travel (in number of trips) by public modes. Although this share declined steadily, bus was not surpassed until 1988 when air travel became the primary public mode of travel. Nonetheless, the bus mode remains an important, although declining, factor in passenger transportation. (In 1988, intercity bus carried 18.2 million passengers.)

Total employees in the bus industry fell steadily from 5,612 in 1980 to 4,700 in 1987. This represents an annual average rate of decline of 2.5 percent. The number of drivers, who comprise the largest portion of the bus work force (about 50 percent) have declined at a somewhat higher rate of 3.3 percent per year. Also, over this period the number of buses declined from 1,700 to 1,350 while the number of miles each bus averaged rose by 7.4 percent.

Intercity busing services are provided across Canada essentially by a network of provincially based carriers that interline at or near their jurisdictional frontiers. Only Greyhound Lines of Canada provides significant

multiprovincial service (from British Columbia to Ontario). Most carriers provide only intra-provincial intercity bus service. According to the *Official Canadian Bus Guide*,[7] the intercity bus industry currently provides service to approximately 3,000 points in the 10 provinces and the two territories (down from 3,400 in 1978). Ontario has the greatest number of points (763). Saskatchewan has the second largest number, with 524 points served.

Finances

From 1980 to 1987, bus company revenues rose 3.5 percent a year while expenses rose 3.16 percent annually. An annual return of 9 to 16 percent was usual. Aggregate data on the financial performance of scheduled service carriers, as opposed to school bus and predominantly charter service operators, are not available. In the years 1990 and 1991, however, results for major carriers appear substantially below returns of the mid-1980s.

In the more populous regions of Canada, most of the small scheduled carriers, and a significant number of the midsize carriers, achieve most of their revenues from the charter business, and to a lesser extent from school bus contracts. The larger carriers virtually all operate in the charter industry, but it is not their primary business. For Greyhound and Voyageur Colonial, charter service is a profitable use of idle bus capacity. In this regard, an efficient scheduled carrier has an advantage in the charter market.

Industry Concentration

The actual number of scheduled intercity bus carriers is difficult to determine since statistical sources do not agree. The number is between 25 and 45. While Statistics Canada's reporting does not cover all carriers, its reports do represent the vast majority of scheduled revenues generated.

The industry is highly concentrated and is dominated by Greyhound Bus Lines, the intercity passenger arm of Greyhound Lines of Canada Ltd. Although majority ownership is in the hands of a U.S. holding company (not related to Greyhound U.S.), Greyhound of Canada is a publicly held corporation whose shares are traded on the Toronto Stock Exchange. This company provides intercity passenger service from British Columbia through all provinces east to Ontario. In this respect it is the only intercity bus company that may be considered "national" in scope. Its importance may be gauged from the fact that, in 1988, Greyhound Lines of Canada earned $132.9 million from

scheduled, charter and courier express operations — 40 percent of the total industry revenues of $332.9 million reported by Statistics Canada for that year.

By 1987, the five largest carriers held nearly 90% of the value of the assets in the industry, earned 84% of the revenues and carried 81% of the passengers, up from 66% in 1980. Employee wages averaged $35,000 per annum at the five largest carriers. This was 27% higher than the next largest group of carriers. Since 1985 only the largest and very smallest firms have had positive rates of returns.

Regionalization

The industry is highly regionalized, all provinces having at least one major carrier with some, such as Ontario and (more recently) Quebec, having a number of regional carriers. Table 1 illustrates the provincial focus of activity of the major intercity bus operations.

Table 1
Major Carriers and Provinces Served

Carrier	Principal province(s) served
Greyhound Bus Lines	British Columbia Alberta Saskatchewan Manitoba Ontario
Saskatchewan Transportation Company	Saskatchewan
Grey Goose Lines	Manitoba (Ontario)
Canada Coach Lines Limited	Ontario
Gray Coach Lines, Limited	Ontario
Ontario Northland	Ontario
Voyageur Colonial Limited	Ontario (Quebec)
Autobus Auger Inc.	Quebec
Autocars Orléans Express, Inc.	Quebec
SMT (Eastern) Ltd.	New Brunswick Prince Edward Island
Acadian Lines Mackenzie Bus Line Ltd. Roadcruiser	Nova Scotia Nova Scotia Newfoundland

The geographic dominance of each of these carriers varies from province to province. Greyhound is pervasive in the West, particularly in Alberta (where, with the exception of Calgary–Red Deer–Edmonton and Edmonton–Fort McMurray routes where it competes with Red Arrow, it provides virtually all non-urban services) and British Columbia. However, the locally based "flag" carriers in Saskatchewan and Manitoba control about two thirds of the routes in their respective provinces. Ontario and Quebec are more regionalized. While most of these carriers are identified with one province or provincial region, they often offer some service in neighbouring provinces, and their charter operations may extend over much wider areas. The carriers interline at convenient points to provide a more or less continuous network of intercity services across the country.

Summary

There has been a steady decline in demand for the Canadian intercity bus since the 1950s, both in terms of total ridership and in terms of its share of the growing intercity travel market. In this context, and given the existing regulatory situation, there was only one way for a carrier to expand its operations — by taking over the route authority of another carrier. The result was greater concentration of the industry through mergers and takeovers. To a degree attributable to provincial regulation, however, this concentration tended to become regionalized, in contrast to the situation in the United States which saw the emergence of two national carriers (now merged).

With the partial exception of Greyhound Lines in western and central Canada, each province saw the rise of one (or perhaps two) large carriers from among a number of smaller operators. Ontario has been an exception to this rule with six larger intercity carriers, but each generally has its exclusive territory. It is noteworthy also that since 1977 Ontario has permitted a second service and thus some competition on certain routes.

The industry has remained viable in the face of declining ridership and increasing costs by cutting back service (route-kilometres) and raising fares. This was accomplished, however, at the penalty of increased unit operating costs (since route-kilometres fell at a slower rate than passengers). Furthermore, fixed costs were spread over a reduced output, making unit costs difficult to control. Finally, in some cases unionized labour may have succeeded in pushing the wage bill higher as prices went up.

4.2 REGULATORY ENVIRONMENT

Provincial Jurisdiction

Each province has jurisdiction over intra-provincial bus operations, scheduled and charter, and each has its own legislation in place to provide for their regulation. Operations of extra-provincial bus carriers — any carrier whose operations extend beyond the boundaries of a single province, including their operations within a province — are under federal jurisdiction. Effectively, any operator that wishes to so arrange its affairs may qualify as a carrier under federal jurisdiction. The *Motor Vehicle Transport Act, 1987* (MVTA, 1987), which replaced the previous MVTA of 1954, is the relevant federal legislation.[8] (The 1987 Act is, for bus, substantially unchanged from the 1954 Act.)

Part I, sections 5 and 6 of the 1987 MVTA delegates authority to provincial transport boards to issue licences and regulate tariffs and tolls for extra-provincial bus undertakings "on the like terms and conditions and in the like manner as if the extra-provincial bus undertaking were a local bus undertaking."

The MVTA, 1987 introduced changes with respect to trucking, most notably a "reverse onus" provision which requires an objector to a licence application to "establish to the satisfaction of the board that the operation . . . would likely be detrimental to the public interest," removing the onus of proof from the applicant. This change did not extend, however, to the passenger sector; no real changes were made with regard to busing.

Interprovincial carriers have through fares which involve transportation in more than one province. As well, interline agreements exist among virtually all scheduled bus lines, allowing carriers to set and quote interline fares between almost any two points. Each province has regulatory authority over the portions of these fares which represent movement over the route segment within its boundaries.

Federal Jurisdiction

The legislation provides for the federal government to exempt a bus undertaking from the MVTA, which brings it under the provisions of part IV of the *National Transportation Act* and under the jurisdiction of the National Transportation Agency. This provision has been invoked only once.

Canadian National Railways (CN) was authorized by the Canadian Transport Commission (predecessor to the National Transportation Agency) in 1968 to substitute buses for its rail passenger service. The bus service, CN Roadcruiser, applied to the Board of Commissioners of Public Utilities of Newfoundland (PUB) for operating authority under the federal MVTA, but the Commission determined that the operating authority should be under Newfoundland's *Motor Carrier Act*, and this was granted.

Following disallowance of a tariff in 1971, a series of court appeals culminated in a 1975 Supreme Court decision that the service was a part of the total Canadian passenger service operated by CN and therefore should be regulated under the federal legislation.

As powers under the federal legislation are delegated to the provinces, Roadcruiser applied to the PUB for a certificate of authority and approval of its tariff. After public hearings, the PUB issued the certificate, but Roadcruiser appealed tariff restrictions which accompanied it. During the appeal process, relations between Roadcruiser and the PUB deteriorated to the point where buses were ordered off the highways and service halted. At this point the Government of Canada issued an Order in Council exempting the service from the provisions of the MVTA. The Canadian Transport Commission gave Roadcruiser its operating authority and approval of its tariff in 1977.

British Columbia

Bus transportation is regulated by the British Columbia Motor Carrier Commission under the *Motor Carrier Act*. Regulations cover entry, exit and fares.

The *Motor Carrier Act* specifies that the duties of the Commission are to regulate motor carriers for the purposes of "promoting adequate and efficient service and reasonable and just charges . . . promoting safety on the public highways, and fostering sound economic conditions in the transportation business in the Province."

Operation of a scheduled service requires a public passenger vehicle licence. Charter service can be operated from the same points as the scheduled service or under a limited passenger vehicle licence. An applicant for a licence must make a case for public convenience and necessity.

In its July 18, 1991 project report to the Royal Commission, *Intercity Passenger Bus Regulation in Canada*,[9] Peat Marwick Stevenson & Kellogg made the following observation:

> In practice . . . conditions are much more rigorously applied . . . for regular route service than for . . . charter service. . . . The attitude of the Commission appears to be that the province is well served in regular route service by the existing carriers, notably Greyhound, and that the market is too thin to support competition on existing routes. (p. 21)

Any change in service, including discontinuance, also requires approval of the Commission, and rates must be filed with and approved by the Commission.

Alberta

Alberta's *Highway Traffic Act* provides for the regulation of motor transport by the Alberta Motor Transport Board, and its framework and authority are set out in the *Motor Transport Act*. A certificate to operate a charter service requires only proof of sufficient insurance and bus safety. Authority to operate a scheduled service, however, requires that a case be made of public convenience and necessity, and objection by an interested party will result in a public hearing.

Generally, there is no competition on routes in Alberta. There are, however, important routes with more than one carrier, but in these instances (Calgary–Edmonton–Fort McMurray) the second entrant made a satisfactory case that its proposed service was distinctive. (See subsection 4.3.)

Tariffs must be filed with the Board with 30 days notice and can be approved, varied or rejected. A hearing is not required but can be held. Maximum fares per mile are approved for a carrier on a system-wide basis, and fares below this level do not require approval.

Schedule changes, including discontinuance, requires 30 days public notice, 14 days advance notice to the Board and the Board's approval.

Saskatchewan

The Saskatchewan Highway Traffic Board regulates bus operations in the province under the authority of the *Highway Traffic Act*. An operating authority certificate is required from the Board to operate either a charter or a scheduled service. The Board is required to consider an application according to the fitness of the applicant, and whether, in the words of section 4(2) of the Act, the "public business will be promoted by the proposed undertaking." Peat Marwick observed:

> In practice, these conditions are interpreted in a manner which places the burden on the applicant to show the need for the proposed service and to demonstrate his fitness to provide it. It is also relatively easy for an opponent to show damage to an existing service — particularly in a rural province like Saskatchewan. In practice, the procedure amounts to a test of `public convenience and necessity.' (p. 22)

The province experimented with easier entry for charter operators, similar to the Alberta system, but after six months reinstated the regulations, reportedly because of a large number of frivolous applications.

Approval is required for schedule changes, and proposals to reduce or discontinue a service require a public hearing.

Regulation of fares is similar to that in Alberta, with approval of a standard maximum rate per mile, after consideration of applications of the carriers and their costs. There was no increase for four and a half years between 1983 and 1988, necessitating an increase in 1988 of 32 percent. Public reaction has prompted the Board to recommend automatic annual increases, beginning in 1991, based on a bus inflation model designed by the Board.

Manitoba

The Motor Transport Board is empowered under The *Highway Traffic Act* to regulate bus transportation in Manitoba. A certificate from the Board is required to operate a "public service vehicle for passengers," whether in scheduled or charter service. An applicant must satisfy the Board that, in the words of section 290(2) of the Act, "the existing facilities for transportation are insufficient, or that public convenience will be promoted by . . . the proposed transportation service." If there is objection to the application, a public hearing is held.

Changes in schedule require the approval of the Board, and application to discontinue service on a route usually results in the Board requiring the carrier first to reduce service for a trial period.

Fare levels are set somewhat as they are in Saskatchewan, with the Board approving a province-wide maximum rate per mile for scheduled and charter services, but with occasional exceptions permitted where conditions warrant. Increases are approved annually, based on financial and operating data provided by the carriers, and the provision in the *Public Utilities Board Act* for a rate of return. The process takes 60 to 90 days and includes public notice and hearings.

Ontario

There are two bodies in Ontario involved in the regulation of the bus industry. The Ministry of Transportation of Ontario (MTO) issues, cancels or suspends operating licences, and approves licence amendments and fares. The Ontario Highway Transport Board (OHTB) has responsibility to investigate applications and issue certificates or recommendations to MTO. The governing legislation is the *Public Vehicles Act.*

An application for authority to operate a bus service is made to MTO, and it is referred to the OHTB which holds a public hearing. If the OHTB is satisfied that the "public convenience and necessity" warrants the licence, it will issue a certificate with whatever terms and conditions it deems appropriate. Upon submission of the certificate, the Minister (MTO) may, or may not, issue a licence. Before operation begins, the applicant must file a tariff of fares with the MTO, and have it approved as "fair and reasonable." Operations are restricted to the points and the route or routes specified in the licence, and renewal is subject only to renewal of vehicle licence.

There are a number of bus carriers licensed to operate charter and tour service without providing scheduled service. A licence to operate a scheduled service, however, also entitles the carrier to operate charter service from any point on the route. A separate licence is not required.

A carrier is required to give notice to the MTO if it intends to discontinue a scheduled service. Permission usually is not denied where the licensee can show it incurs unreasonable losses; but the carrier automatically would give up at the same time the contingent rights to operate charter and tour services.

A licensee can apply to MTO to transfer a licence to another carrier; the transfer may or may not be allowed after a public hearing is conducted by the OHTB.

Only fares contained in tariffs filed with and approved by MTO can be charged for bus transportation in Ontario. Increases are automatically approved in the Carrier Licensing Office, where they are filed, if they are within "guidelines" (currently not more than 10 percent per year); a fare increase beyond these guidelines, or any decrease, requires justification and approval by the deputy minister.

A number of individuals interviewed, in the bus industry and elsewhere, alleged that Ontario did not strictly enforce compliance with the regulations pertaining to bus transportation. The two major areas of non-compliance appear to be changes in fares which are not filed with MTO (only fare reduction was noted) and route abandonments without notification to MTO. Initiation of charter and scheduled services without regulatory approval was also alleged.

Quebec

Regulation of bus transportation in Quebec is provided for by the *Loi sur les transports* (Transport Act), and is the responsibility of the *Commission des transports du Québec* (CTQ).

An applicant for authority to operate a bus service, either scheduled or chartered, must prove the company has the technical and financial ability to provide the service, as well as the inability of the existing carrier to do so. The regulations protect the monopoly positions of carriers on their present routes by making it virtually impossible for a competitor to enter the market.

The only practical way for a carrier to acquire operating rights is by transfer, as was done recently with almost all of Voyageur's Quebec operations. Of course such transfers require approval of the CTQ.

Approval is required to discontinue service, and is granted only after it has been proven that the service is losing money. Such applications are rare, however, given the potential risk of another carrier acquiring operating authority in the area.

There are eight different categories of operating authorities, two of which are for scheduled intercity service and for charter service. In addition, a holder of an intercity authority may operate charter service from within 100 miles of any point the holder is authorized to serve. This results in competition between scheduled and charter operators, as well as between scheduled carriers with contiguous routes, for short-distance charter business.

There have been attempts to relax the regulations in recent years but with no permanent results. (An attempt in 1985 apparently was successfully opposed by Voyageur Inc.[10]) Recently, a Ministère des transports special committee was appointed to study the system.

Carriers are required to get advance approval for their tariffs for scheduled services from the CTQ, which will hold public hearings if, after public notice, the application is deemed controversial; otherwise, the regulator will intervene only if the fares are unjustified. In the great majority of such interventions, however, the carriers have been able to satisfy the CTQ that their costs had increased sufficiently to justify the fare increases.

New Brunswick

Bus service in New Brunswick is regulated by the Motor Carrier Board (MCB). The *Motor Carrier Act, 1985*, which came into effect January 1, 1988, includes a "reverse onus" provision for bus licence applications. If a carrier applies to operate a scheduled or charter service, section 4(4) of the Act provides that any objection will be dismissed if it "does not establish a *prima facie* case that the granting of the application would likely be detrimental to the interests of the users of public transportation services, to provincial economic or social development, or to intraprovincial, interprovincial or international commerce."

Discontinuance of a service requires a public hearing and an order of the MCB. A carrier cannot "sell, lease, transfer, delegate or assign its motor carrier business or its licence or any right thereunder . . . or enter into a consolidation or merger" without approval.

Tariffs of fares for scheduled service require approval of the MCB after a public hearing; charter rates must only be filed with the MCB.

Prince Edward Island

Prince Edward Island has a regulatory environment for bus carriers similar to New Brunswick. Its *Motor Carrier Act, 1988*, also contains a "reverse onus" provision.

An objection against an application to the Public Utilities Commission for authority to operate a bus service must be made within 30 days, and the onus is on the objector to provide evidence that granting the authority "would be likely to be detrimental to the public interest."

There appears, however, to be a difference once a hearing is called. The Commission must then consider, in addition to "detrimental effect," whether there is "a likelihood that the proposed motor bus service will be conducive to public convenience." There has not been a case heard under this legislation, so the Commission Chairman was not able to speculate as to how it might be interpreted, except to suggest that a decision probably would be based on the balance of evidence, rather than there being an onus on one party.

Authority is not required to operate a service with vehicles of 16 seats or less.

An order of the Commission, after a public hearing, is required for a service to be discontinued or abandoned, but no transfer of an operating authority is permitted.

Fares must be filed with and approved by the Commission; applications for increases are approved if found to be "economically reasonable and viable."

Nova Scotia

The Board of Commissioners of Public Utilities regulates the bus industry in Nova Scotia under authority of the *Motor Carrier Act.* Market entry and exit and fare levels are strictly controlled.

Authority of the Commission is required to operate a scheduled or charter bus service, to discontinue or abandon service, to sell, transfer, assign or lease an operating authority or to increase fares. None of these authorities is granted without a public hearing.

In considering whether to grant a licence to operate a bus service, the Commission, according to the Act, may consider among other things, the objection of any person already providing transportation on the same route by any mode, on grounds that existing service is adequate or, if the licence is granted, will be in excess of requirements.

Newfoundland

As described earlier, the major intercity bus carrier is regulated by the federal government (National Transportation Agency). As well, there are several smaller carriers operating under provincial legislation.

The Newfoundland *Motor Carrier Act* requires the operator of any bus service, scheduled or charter, to apply to the Board of Commissioners of Public Utilities of Newfoundland (PUB) for a certificate of public convenience and necessity. The Act sets out what the PUB may consider in its determination of whether to grant a certificate, and the wording is almost identical to that contained in the Nova Scotia legislation.

PUB approval is required to discontinue a service, or to sell, transfer, assign or lease an operating authority.

Fares must be approved by the PUB, but changes to the legislation in 1987 stipulate only that fares not exceed an approved level. Thus, reductions — permanent or temporary — can be made without application to the Board.

Summary

Responsibility for extraprovincial carriers is delegated, under the MVTA, to the provinces. The sole exception is CN Roadcruiser, the major carrier in Newfoundland. Eight of the provinces will grant authority to operate a scheduled intercity bus service only if the applicant proves public convenience and necessity; a public hearing is held if there is any objection. New Brunswick and Prince Edward Island removed this requirement in 1987 and now have a "reverse onus" test: an application is denied only if it is proven it would be detrimental to the public interest. In every province, changes to or discontinuance of a service requires approval.

Fares must be filed with the regulatory authority in every province, and require approval in all but Quebec, where the CTQ intervenes only if the fares are "unjustified." In Alberta, Saskatchewan, Manitoba and Newfoundland,

only maximum fare levels are approved. In Ontario, public hearings are required before fare increases can be approved.

Charter services require separate licences in seven provinces. In British Columbia, Ontario and Quebec, a licence may authorize operation of a charter service only or authorize both scheduled and charter services. The "reverse onus" test applies in Alberta for charter service, as is the case in New Brunswick and Prince Edward Island.

4.3 CARRIERS OVERVIEW

This section describes the general structure of the industry and the service being provided. Major scheduled carriers and those of intermediate and smaller size whose services are advertised nationally are all included. Carriers operating only charter services are not included. A sample of the operations of smaller carriers is given to provide a flavour of local services; some small bus operations are not known beyond their local market.

A phenomenon which persists in many parts of the country is the smaller bus company which is essentially a charter (and tour) operator, but which also operates one or more small local scheduled services. This is a result of the requirement in most provinces to prove public convenience and necessity in order to acquire authority to operate any bus service. It is most often the charter and tour market which attracts an enterprise to seek such authorities. In a number of provinces, a licence to operate a scheduled service brings with it the right to operate charter services in the same county or region. (Normally, the charter service licence allows operation *from* the county or region, *to* anywhere in Canada and into the U.S.) It is easier to prove a need for a scheduled service on a route where there is none and where there is insufficient traffic to attract the large intercity carriers, than to prove that public convenience and necessity will be served with another charter bus operator. As a result, in such jurisdictions, a number of these small local services prevail. The extent of this phenomenon is a function of the size of the perceived charter market in the region, not the market or need for the scheduled service, nor its potential profitability.

British Columbia and Yukon

Greyhound Lines of Canada dominates the intercity bus mode in British Columbia, Yukon and Alberta, and operates the only really interprovincial

route in the country, from the west coast to southern Ontario along the Trans-Canada Highway system. Canada's largest carrier is the exception in an industry that is predominantly controlled by Canadian interests. Greyhound Lines of Canada Ltd., a public company, is 31 percent owned by Canadians and 69 percent by a United States holding company.

In British Columbia, Greyhound operates an extensive network of routes:

- east to Alberta, from Vancouver via the Trans-Canada and Coquihalla highway to Calgary, via the southern route through Princeton, Castlegar and Cranbrook to Fort Macleod, and from Prince Rupert via the Yellowhead to Edmonton;
- north-south routes through the Okanagan Valley, through the Kootenays between Cranbrook and Banff, the South Yellowhead north from Kamloops, and the Cariboo route between Cache Creek and Prince George;
- north on the Peace River highway to Dawson Creek, and on the Alaska Highway to Whitehorse in Yukon.

The *Official Canadian Bus Guide*[11] shows 13 other bus lines operating in British Columbia and one in Yukon. They are generally contiguous to Greyhound, rather than parallel, and serve as extensions, complements or feeders to its network, not competitors.

There are four lines serving Vancouver Island. The major service is provided by Vancouver Island Coach Lines (VICL). Orient Stage Lines operates a service from its connection with VICL at Port Alberni to Tofino on the west coast of the Island. Connections from Vancouver to the Island are provided by Pacific Coach Lines to Victoria, and Maverick Coach Lines to Nanaimo.

Maverick also provides services over two routes north from Vancouver to Powell River and Mount Currie. Cascade Charter Service Ltd. provides services out of Vancouver, operating along both sides of the Fraser Valley to Mission and Harrison Hot Springs.

The two major U.S. carriers, Greyhound Lines, Inc. and Trailways (Northwest), provide competing services between Seattle and Vancouver. Greyhound has six departures per day in each direction, Trailways two. Both of Trailways' departures appear to be scheduled to compete with Greyhound. (Since the

purchase of Trailways by Greyhound in 1988, such competition is probably only academic.) Service between British Columbia and the State of Washington is also provided by Empire Lines Inc., Creston to Spokane, and Osoyoos to Spokane and Yakima.

Dewdney Trails is a charter and tour operator in Trail, and serves as an agent for Greyhound. It operates a regular service three times a day between Trail and Castlegar. This is a 30-minute trip, scheduled to provide connections with every bus on Greyhound's interprovincial service through Castlegar.

There are a number of similar connections, in northern areas of the province, which also extend Greyhound's routes into more remote areas. Vista Bus Service of Tumbler Ridge, a charter operator and Greyhound agent, has a scheduled service to meet the Edmonton buses at Dawson Creek. Another charter and tour operator, and Greyhound agent, Seaport Limousine Ltd. of Stewart, meets the buses to and from Prince Rupert at Terrace. Connecting with the same Greyhound route, as well as the Stewart bus, is Farwest Bus Lines of Kitimat. Both companies also serve the Terrace airport.

Beyond Greyhound's route to Whitehorse in Yukon, a tri-weekly service is provided to Dawson City by Norline Coaches. Gray Line of Alaska provides a summer service from Anchorage to Whitehorse, connecting with Greyhound. Peace Coach Lines (a charter line, also operating as Diamond Dee Tours) provides service between Chetwynd and Fort St. John, via Hudson Hope. One of the smaller carriers, Atlin Coach Lines, is authorized to operate a vehicle with between 6 and 11 seats between Whitehorse and Atlin.

Not all of these small remote schedules provide direct connections with Greyhound's buses, and not all of the carriers serve as Greyhound agents. There is, nevertheless, an informal network of these feeder bus lines maintaining service to a number of remote and thinly populated locations. Since they are virtually all charter and tour operators first, it is reasonable to speculate that these operations subsidize the scheduled services, with some help from Greyhound commission revenues.

Alberta and Northwest Territories

As in British Columbia, Greyhound is the dominant carrier in Alberta. It provides service between the British Columbia and Saskatchewan borders along the Trans-Canada Highway and on the southern route through

Lethbridge. It serves the main north–south artery between Lethbridge, Calgary, Edmonton and Fort McMurray, together with a number of contiguous routes to the east and west. From Edmonton it serves the northern areas of Cold Lake, Slave Lake and Peace River, extending as far north as Hay River in the Northwest Territories.

It is in the latter northern extremes of Greyhound's Alberta and Northwest Territories network where the feeder carriers operate. LaCrete Bus Lines of LaCrete, operates a bus which connects at High River with the Greyhound service between Peace River and Hay River. Arctic Frontier Carriers Ltd., of Yellowknife, operates charter and school buses as well as a local scheduled service to Rae, and a tri-weekly service to Hay River. At Hay River, it connects with Greyhound, and with a similar carrier, North of 60 Bus Lines, from Fort Smith.

Greyhound has some competition in Alberta from Red Arrow Deluxe Service of Edmonton.[12] Red Arrow made a case before the Motor Transport Board in Alberta that there was a distinct unserved market for a "deluxe" express bus service between Edmonton and Calgary, and between Edmonton and Fort McMurray, using downtown hotels as terminals. It is the equivalent of the air industry's "business class," and the fare is $4 per round trip higher than Greyhound's. When Red Arrow's route authorities were originally obtained, local service was required; this was later abandoned.

A recent report[13] made available by Transport Canada, described a new carrier, Big Rock Bus Lines of Okotoks, which was granted permission almost two years ago to provide service into Calgary from Okotoks, High River and Turner Valley. This is a commuter service with buses operating into Calgary in the morning and back out in the late afternoon. These routes are inside a 40 mile radius of Calgary. Okotoks and High River are also served by Greyhound's Calgary–Lethbridge local service, which may well share some of this commuter business. The one-way fare between Okotoks City and Calgary is $4.05 on Big Rock, compared to Greyhound's $3.65. According to Greyhound, its Okotoks fare has not been adjusted since the Big Rock service began, except as the result of province-wide rate increases.

Saskatchewan

Greyhound operates across Saskatchewan on the Trans-Canada Highway from Alberta through Maple Creek, Swift Current, Moose Jaw, Regina, and

Moosomin into Manitoba. It also operates the more northerly route from Alberta through both Lloydminster and Wainwright to North Battleford. This route continues east through Saskatoon, Lanigan and Yorkton, into Manitoba through both Roblin and Russell.

The only "local" service provided by Greyhound in Saskatchewan is a Regina-to-Winnipeg route through Reston, Manitoba. This serves a local market, probably at a financial loss, but provides a feed from the region to Greyhound's Trans-Canada service, which might make it a viable operation overall. There probably are other local Greyhound services in Alberta and British Columbia in this category.

While Greyhound provides the "main road" interprovincial service through Saskatchewan, most of the intra-provincial route network belongs to Saskatchewan Transportation Company (STC), a provincial Crown corporation. On most of Greyhound's routes, there is no STC service, but there is on some (Regina to Moose Jaw, and Saskatoon to North Battleford and Marsden are examples). Greyhound also "pools" with STC between Saskatoon and Alsask. On such routes there is potential for competition between the two. Fares have to be approved by the provincial authorities, however, and no price differentials exist. Any competition must, therefore, be based on service and schedules.

There are a few small operators in Saskatchewan such as:

- Leader Carriers Ltd., which operates between Swift Current and Leader;
- Western Trailways Motor Coach Lines Ltd.,[14] between Saskatoon and Eston;
- Moose Mountain Lines Ltd., between Regina and Rocanville;
- Frances Enterprises Ltd., between Regina and Maryfield; and
- Hertz Bus Lines, between Regina and Bengough.

In Saskatchewan, the right to operate a scheduled line service does not bring with it any right to operate charter or tour services. They must be applied for separately. There is not the incentive, therefore, that exists in other provinces for a charter operator to subsidize a scheduled service. There are bus carriers operating both services in Saskatchewan, but they are apparently not cross subsidizing.

Two provincial government programs ensure service to communities without sufficient traffic potential to make scheduled bus operations commercially viable. These are the Rural Bus Subsidy Program and the Rural Transportation Assistance Program, and are in addition to the indirect subsidy resulting from the government's ownership of STC. These programs and STC are discussed in section 11.

Manitoba

The situation in Manitoba is similar to that in Saskatchewan. Greyhound operates service through the province from Saskatchewan, on the Trans-Canada Highway from Regina, and on the more northerly routes from Saskatoon and Yorkton. There is also the "local" route between Regina and Winnipeg through Reston, described earlier. From Winnipeg, the Greyhound service into northern Ontario operates along the Trans-Canada. As well, there is a local service, five times a week, via the old Trans- Canada (now Highway 44), through Rennie and Whiteshell Provincial Park.

Greyhound provides local service over its interprovincial routes, but most intra-provincial service in Manitoba is provided exclusively by Grey Goose Bus Lines Ltd. Grey Goose is owned by Laidlaw Inc., which in turn is part of Canadian Pacific. Laidlaw also owns Vancouver Island Coach Lines Ltd., which provides most of the service on Vancouver Island, as described earlier.

Grey Goose serves a comprehensive network throughout Manitoba, including regular service to the North, as far as Flin Flon, Lynn Lake, Thompson and Gillam. It also provides service to and within northern Ontario.

For the most part, Greyhound and Grey Goose do not compete. However, there are no restrictions on either's rights to pick up or let off passengers over their routes, so they do compete where their routes overlap. This situation exists on Greyhound's northerly routes between the Saskatchewan border and Winnipeg, and along the Trans-Canada between Winnipeg and Portage la Prairie. They also compete technically between the cities of Winnipeg and Brandon, but Greyhound operates over the direct Trans-Canada route, and Grey Goose has only its local circuitous service using the highways south of the Trans-Canada.

Similarly, both provide interprovincial service via different routes between Winnipeg and Thunder Bay. Greyhound follows the Trans Canada Highway through Kenora, while Grey Goose uses the route south of the Lake of the Woods, through Minnesota. Triangle Transport has recently replaced Greyhound Lines Inc. (of the U.S.) on the route from Fargo, North Dakota to Winnipeg.

Technically there are two other intercity carriers in Manitoba, but both can be disregarded in the context of this paper. Beaver Lines, a charter operator, provides a commuter service between Winnipeg and Selkirk, with a commuter tariff (discounted multi-voyage tickets, etc.). There are a number of charter bus lines in northern Manitoba, one of which, Northern Bus Lines of Flin Flon, has contracts to operate a few Grey Goose routes, but legally these are Grey Goose services.

Northern Ontario

In northern Ontario, Greyhound continues its service along the Trans-Canada Highway from Manitoba east through Thunder Bay, Sault Ste. Marie and Sudbury, then south to Toronto. As well, it provides service between Thunder Bay and Hearst, and between Sudbury and North Bay.

Grey Goose connects Manitoba and Thunder Bay, through Minnesota, provides services from Thunder Bay to Armstrong and over the same route as Greyhound to Hearst. Each carrier provides service once daily or five days a week to Hearst, at different times of the day, probably more complementary than competitive.

The Ontario Northland Transportation Commission (ONTC) operates bus services, as well as the Ontario Northland Railway, on behalf of the Ontario government. It has a bus service between Hearst and North Bay, which also serves Timmins. This service connects with both Greyhound and Grey Goose at Hearst, at North Bay with Voyageur Colonial to Ottawa and Montreal, and until recently with Gray Coach Lines to Toronto. ONTC also provides service between Timmins and Sudbury, and between Timmins, Wawa and Sault Ste. Marie. The latter two communities are also part of Greyhound's trans-Canada service four times a day.

Ontario Northland and Gray Coach had, for some time, a bus pooling agreement between Timmins and Toronto, on the routes via Sudbury and North

Bay. This enabled passengers to travel between Timmins and Toronto without a change of coach. In an important development, the provincially owned ONTC, that used to connect with Gray Coach to and from Toronto, has bought Gray's major routes between Sudbury and Toronto and between North Bay and Toronto. Now it must be considered a major "trunk line" intercity carrier. Significantly, a Crown-owned carrier has entered a major intercity market in competition with an incumbent, privately owned operation. This is inconsistent with the recent trend in Canada and elsewhere.

In Ontario, most of the local scheduled services to remote or thinly populated areas not served by the larger regional carriers are provided by small bus operators whose primary business is charter, tour and/or school bus services.

Two small bus lines operate in northern Ontario, according to the *Official Canadian Bus Guide*.[15] Excel Coach Lines of Kenora, operates daily services south to Fort Frances, and north to Red Lake; A.J. Bus Lines of Elliot Lake operates a route to Serpent River and links the communities of Manitoulin Island with Espanola.

Southern Ontario

Two bus services join northern and southern Ontario. The final leg of Greyhound's trans-Canada route operates as an express service only between Sudbury and Toronto. Until recently, Gray Coach Lines, Inc., of Toronto operated over the same route, with one express service a day, and another weekend express service, in direct competition with Greyhound, but at the same fares.[16]

Gray Coach also provided a daily local service to Sudbury, and another to North Bay, both of which connected with the Ontario Northland service to Timmins. As previously explained, Gray Coach and Ontario Northland had a bus pooling agreement between Toronto and Timmins, on both routes. The sale of Gray Coach's rights to operate between Toronto, Barrie, Sudbury and North Bay was mentioned above. Also included in the sale were Gray's rights to operate via Barrie to Penetang (Penetanguishene), Collingwood and Owen Sound, and some coaches.

Within southern Ontario, Gray Coach operates services from Toronto to the Niagara Peninsula and across the border to Buffalo, New York, as well as to

Guelph, Kitchener and Brampton, and north to Owen Sound via Highway 10 from Brampton and via Highway 6 from Guelph.

Greyhound operates express service from Toronto to London and the Windsor–Detroit gateway, directly via Highway 401, and also local service via Highway 2, through Hamilton. There are as many as 14 daily departures in each direction between Toronto and London, including one with "V.I.P." service (low-density seating, videos, and beverage and snack service) with a surcharge of $6 each way. As well, Greyhound operates a local service between London and Windsor along the lake shore via Highway 3, and a through service from Toronto to the Niagara Falls and Buffalo gateways.

Ontario regulations require proof of public convenience and necessity for rights to be granted to operate a bus service. The phenomenon, described earlier, of entry to the charter market by proving the need for a scheduled service, is common in Ontario, and there are a number of charter operators with local scheduled line services.

Those listed in the *Official Canadian Bus Guide*[17] which apparently fit into this category are:

- Sherwood Transportation, operating between Goderich and Stratford;
- Cherrey Bus Lines Inc., operating between Palmerston and Stratford;
- McCoy Coach Lines, operating between Simcoe and Nanticoke, Tillsonburg and Hamilton;
- United Trails Inc., operating between Kitchener and Elmira, and between Guelph and Port Dover;
- Farr's Coach Lines Ltd., operating between Hamilton, Welland and Dunnville, and between Port Colborne, Welland and St. Catharines;
- Pacific Western Transportation, operating between Toronto and Beaverton; and
- McGinnis Coach Lines Inc., operating between Belleville and Picton.

Questions to these operators elicited similar responses indicating that scheduled line-haul service generally provides less than 10 percent of their revenue.

There are a few bus operators in this category with more extensive networks of scheduled routes. One is Penetang-Midland Coach Lines Ltd., which provides at least three scheduled daily departures each way between Toronto and Penetang, and at least two a day to and from Owen Sound. Can-Ar Coach Service of Concord has an even larger network of scheduled services. It operates northwest from Toronto to Southampton in the Bruce Peninsula, northeast to the Lindsay–Peterborough area and as far north as Haliburton, but is primarily a charter and tour operator.

There are, however, a few carriers whose scheduled line operations are more significant. Canada Coach Lines Ltd. is owned and operated by the Hamilton Street Railway which in turn is owned by the Regional Municipality of Hamilton-Wentworth. It provides scheduled bus service between Hamilton and Toronto Airport, Niagara Falls, Buffalo, Brantford, Kitchener and Guelph, as well as charters and tours. The scheduled service consumes 48 percent of its bus miles, and provides 30 percent of its operating revenue. Chatham Coach Lines and its subsidiary Cha-Co Trails operate extensive services throughout western Ontario (Windsor, Leamington, Chatham, Sarnia, Port Stanley, London, Kitchener, Owen Sound, Goderich) and earn most of their revenue from that element of the business, although they also have charter and tour services.

GO Transit is the commuter rail system operated by the Government of Ontario to serve the Greater Toronto area; it also operates a network of bus routes as an extension of the rail system.

Adirondack Trailways (part of the U.S. Trailways system now owned by Greyhound) operates between Cornwall and New York State, with direct service to Albany and New York City.

There is one other major carrier in Ontario, which provides the bus link to Quebec. Voyageur Colonial Ltd. operates express and local service in the Toronto–Ottawa–Montreal triangle. It also provides service between Toronto, Peterborough and Pembroke, and between Ottawa and Hawkesbury, Cornwall, Kingston and North Bay. As well, it serves some routes between Ottawa and Quebec–Ottawa to Maniwaki and Grand Remous, to Mirabel Airport and to Montreal via the north shore of the Ottawa River. Voyageur Colonial is what remains of what was, until earlier this year, not only the sole scheduled intercity carrier in the triangle, but throughout the province of Quebec as well.

Quebec

Scheduled intercity bus service in Quebec was once provided almost exclusively by the Provincial Transport Company. Provincial merged with Colonial Coach Lines, to form Voyageur Enterprises Ltd., the former parent of Voyageur Inc. and Voyageur Colonial (VCL), under the eventual ownership of Canada Steamships Lines (CSL). Voyageur dominated the markets of Quebec and eastern Ontario. The company's traffic levels peaked in 1978, but since then a declining market, combined with labour and financial problems, forced a reorganization of CSL's bus interests late last year. As a result, by the end of March 1991, the structure of intercity bus transportation in Quebec had changed considerably.

The rights to serve particular routes were divided and sold to three groups of companies. The division was made in such a way that each of the new enterprises got a proportionate share of "good" and "bad" routes — a built-in design for cross subsidization. The remaining routes, those in or into eastern Ontario which were described earlier, together with the Ottawa and Montreal bus terminals, remained with the restructured Voyageur Colonial Ltd. Ownership of the Montreal terminal has since reverted to VCL's parent company (CSL).

Autobus Auger Inc. of Chateauguay, south of Montreal, acquired the rights to provide service on the Montreal–Sherbrooke–Quebec City route, and between Montreal and the far northern communities of Val d'Or, Chibougamou, Matagami, LaSarre, Rouyn-Noranda, and from Rouyn-Noranda to Kirkland Lake in Ontario, thence south to North Bay.

Some former Voyageur managers founded Orléans Express Inc., and acquired the routes between Montreal and Quebec City, via Trois-Rivières, between Quebec City and the Gaspé, and the routes within the Gaspé peninsula. The more remote routes, on the north shore of the St. Lawrence River from Quebec City to Baie-Comeau, Sept-Îles, and the Lac-St.-Jean region, are being served by Jasmin-Fournier, Inc.

Finally, because it is interprovincial, the route between Rivière-du-Loup, on the south shore of the St. Lawrence, and Edmundston, New Brunswick, could not be transferred to any of the new carriers. Eventually, special arrangements were made between Quebec and New Brunswick to allow SMT (Eastern) of New Brunswick to serve it.

The new order in the bus industry serving Quebec — a number of regional carriers rather than one major carrier throughout and beyond the province — was discussed with one of its principal architects, the President of Voyageur Colonial Ltd. It was designed to save Voyageur from increasing losses, and at the same time, to prevent the complete loss of a viable intercity bus system in Quebec.

The continuing failure of Voyageur Colonial to rid itself of increasing operating losses was attributed to two main categories of problems. One was the steady decline in bus traffic since 1978, exacerbated in 1984 and 1985 by significant reductions in fares by VIA Rail Canada in attempts to build its market share in the Quebec City–Windsor corridor. The other was the proliferation of labour unions at Voyageur.

In 1980, the combined VCL and Voyageur Inc. employees were represented by 10 separate unions. One was an in-house organization, the others were affiliated with either the International Teamsters, the Canadian Brotherhood of Railway, Transport and General Workers (CBRT), or the Confédération des syndicats nationaux (CSN). This situation was largely the result of mergers and acquisitions. Each union negotiated independently, and any labour action by one union, such as work stoppage, was generally respected by the others, resulting in either severe impairment or a total shut-down of operations. Sizeable losses resulted from these interruptions, and labour costs grew considerably higher than the industry average — too high to enable profitable operation of the network in a period of passenger demand decline.

The new carriers did not inherit the full extent of these burdens, but Voyageur still has the high wage levels if not as many unions. The 1991 rate for a bus driver at Voyageur is approximately 15 percent higher than at Greyhound. Voyageur obviously expects that its new condensed network, which includes several of the highest volume routes in the country, together with much lower overhead and significant union concessions, will allow it to attain financial viability.

New Brunswick

SMT (Eastern) operates the only province-wide scheduled intercity bus service in New Brunswick. It serves routes between St. Stephen, Saint John, Moncton, Chatham and Campbellton; Saint John, Fredericton, Bathurst and

Campbellton; and Moncton and Edmundston. Its routes extend about five miles into Nova Scotia, to connect with Acadian Lines at Amherst Nova Scotia (where ongoing passengers must change coaches); and into Quebec about 75 miles from Edmundston to Rivière-du-Loup, the route once operated by Voyageur (again, passengers must change at Rivière-du-Loup). It also operates the regular service to and within Prince Edward Island.

SMT has recently reached agreement to operate to Bangor, Maine, with a connection with Greyhound Lines Inc. to Boston.

As well, there are 10 other carriers licensed for scheduled service. Most of these operate rural school bus or airport minivan services. A few operate standard coach service, usually on short routes. One example is A & L Transit, operating between Chatham and Newcastle, a distance of less than 10 miles.

There have been only three new licences for scheduled services under New Brunswick's "reverse onus" regulations, and about 10 new charter licences. A number of these new charter licences have resulted from applications by existing charter operators whose territory was limited to as little as a single county, seeking authority to extend their territory to include the entire province.

Prince Edward Island

SMT (Eastern) of New Brunswick has the only year-round interprovincial bus service in Prince Edward Island, operating between Charlottetown, Kensington, Summerside, Borden and on the ferry service to Cape Tormentine.

There are a number of charter operators, one of which, Trius Motor Coach Tours, operates some local scheduled services, which complement rather than compete with SMT. In addition, there is the provincial government-owned Island Transit, which has operated scheduled services in the summer only, applying for approval every year for temporary schedules and fares. Island Transit does not operate charter or tour services.

Until this year, Island Transit operated a summer service from Charlottetown to New Glasgow, Nova Scotia, via the Wood Islands ferry to Caribou, Nova Scotia, making a direct connection with Acadian Lines. This summer the service is being operated on a trial basis by Trius, under temporary authorities from both provinces.

Nova Scotia

The major intercity bus carrier in Nova Scotia is Acadian Lines. It provides service on routes between Halifax and Yarmouth through the Annapolis Valley, between Halifax and Amherst, connecting with SMT (Eastern) service to New Brunswick, and between Halifax and Sydney on Cape Breton Island.

A few small bus operations complement Acadian's service. MacKenzie Bus Line Ltd. serves the route between Halifax and Yarmouth via Highway 103 along the south shore, and Zinck's Bus Co. Ltd., provides service between Halifax and Sherbrooke, east along the south shore on Highway 7. Al's Cabs and Vans Limited operates vans and a 15-passenger minibus on the 90-mile route between Antigonish and Canso. Transoverland Ltd. operates a daily service between Cheticamp, on the Cabot Trail, and Sydney.

Newfoundland

Canadian National Railways (CN) operated a regular rail passenger service in Newfoundland from 1949, when Newfoundland became a province of Canada, until the Canadian Transport Commission permitted CN to abandon the rail passenger service and substitute a bus service. The bus operation, CN Roadcruiser, was introduced in December 1968 and operated parallel to the rail service for six months before final authority was granted to abandon the latter.

CN Roadcruiser currently operates a daily service on the Trans-Canada Highway between St. John's and Port aux Basques, where connection is made with the Marine Atlantic ferry service to North Sydney, Nova Scotia. A fleet of 25, 47-seat MCI buses is used. Terminal facilities are provided at former railway stations in St. John's, Grand Falls and Corner Brook, leased space at Gander and Stephenville airports, and the Marine Atlantic terminal at Port aux Basques. Roadcruiser loses money.

There are approximately 50 scheduled services authorized under the Newfoundland and Labrador *Motor Carrier Act* to operate in Newfoundland, connecting virtually every population centre with one or more Roadcruiser points. Generally these are local routes with low traffic density, and most carriers use vans or minibuses.

Only four or five of these operations use full-size buses. Some are the 47-seat Prévost or MCI type, but some are the smaller Bluebird type or converted school buses. One of these operations serves a route from St. Anthony in the far north of Newfoundland to Deer Lake and Corner Brook. Another operates between Cannings Cove on Bonavista Peninsula and Clarenville and St. John's. There is also a service which connects St. John's with Argentia and the ferry service from North Sydney, Nova Scotia.

Summary

In Western Canada, Greyhound is the dominant carrier. It operates a through service from Vancouver to Toronto, then to Buffalo and Windsor. It is also the major carrier throughout British Columbia and Alberta. There are two major regional carriers in Western Canada: STC provides intra-provincial services in Saskatchewan, as does Grey Goose in Manitoba and northwestern Ontario. In addition there are a number of small local services in specific regions not served by these major carriers. Five of these operate in the southern mainland of British Columbia and on Vancouver Island, one in the Trail-Castlegar area, and about eight in northern British Columbia, Alberta, the Northwest Territories and Yukon. As well, there are a number of small connecting and supplementary services in Saskatchewan, some of these assisted by provincial subsidy programs, and two in northwestern Ontario. In Alberta there is one real example of competition to Greyhound: Red Arrow's higher-priced "deluxe" service between Edmonton and Calgary, and between Edmonton and Fort McMurray.

Ontario Northland, and Greyhound, join northern Ontario to Toronto. There are six significant regional carriers (including Gray Coach) providing service in southern Ontario. This includes Voyageur Colonial, which is the dominant carrier in southeastern Ontario. There are at least seven small carriers providing service on local routes. Generally, these are primarily charter and tour bus operators. Apart from some overlapping of routes in southwestern Ontario, the only real competition seems to be between Greyhound and Gray Coach on the Sudbury–Toronto and Toronto–Buffalo routes.

The former dominant carrier in Quebec, Voyageur, has divested most of its routes in that province, which are now served by four regional carriers.

SMT (Eastern) remains the only significant carrier in New Brunswick and Prince Edward Island, despite loosened entry regulations. Acadian Lines is the dominant carrier in Nova Scotia, and Roadcruiser in Newfoundland. There are about 10 small carriers licensed in New Brunswick, two in Prince Edward Island, four in Nova Scotia and as many as 50 in Newfoundland. However, most of these small carriers (almost all of the ones in New Brunswick and Newfoundland) operate very short feeder or airport services using vans or minibuses.

There are publicly owned intercity bus carriers in Canada. These include Newfoundland's Roadcruiser, owned and operated by Canadian National; Saskatchewan Transportation Company and Ontario Northland Transportation, both provincial Crown corporations. Canada Coach Lines is municipally owned and operated.

5. Comparative Fare Levels

INTRODUCTION

An important aspect of intercity bus regulation in Canada is the regulation of fares. The range and variance of regulated fares help provide an understanding of regional differences in the Canadian bus industry and how changes in the regulatory regime might affect it. Published bus fares[18] in different regions and situations are examined below. Unless otherwise stated, circumstances are reported as of July 1990. Regardless of differences in exit and entry regulatory practices in different jurisdictions, every province requires at least that maximum fares be approved by its regulatory agency.

Interprovincial

Fares are approved by the individual provincial regulatory authorities. This includes the portions of interprovincial fares which apply to the route segments within the provinces. Thus, the fare levels for Greyhound's trans-Canada service vary from province to province. There is a through rate from Vancouver to Toronto (as of mid-1990 it was $220, about 8¢ per mile),[19] which is lower than the sum of the individual segments. The fares per mile for segments within the provinces, listed in Table 2, illustrate the differences between the provinces.

Table 2
LOCAL FARES, GREYHOUND'S TRANS-CANADA SERVICE

Province	Fare per mile
British Columbia	12.3¢
Alberta	13.7
Saskatchewan	12.0
Manitoba	12.0
Ontario	(varies) 15.3–17.4

The mid-1990 through fare, Vancouver to Halifax[20], was $320, and fares for the segments east of Toronto with the carrier serving each segment, are shown in Table 3.

Table 3
LOCAL FARES, TORONTO TO HALIFAX SERVICES

Province	Fare per mile	Carrier
Ontario	16.1¢	Voyageur Colonial
Quebec	19.1	Orléans Express
New Brunswick	17.3	SMT (Eastern)
Nova Scotia	14.5	Acadian Lines

As can be seen, there are differences in overall fare levels from province to province.[21] Alberta mid-1990 fares were higher than those in the other western provinces, but fares in Western Canada were significantly lower than those in Eastern Canada. In the east, Nova Scotia had the lowest fares and Québec the highest.

The only "competitive"[22] segments among the above are the short Moose Jaw–Regina portion of the route within Saskatchewan, between Wawa and Sault Ste. Marie, and Sudbury and Toronto. In Ontario, these were the segments with the *higher* fares per mile, 16.9¢ and 17.4¢ respectively.

British Columbia

In British Columbia, Greyhound's fares averaged about 12-1/2¢ per mile. The fares do not vary, apart from a taper which produces fares as high as 14¢ per mile for short distances and as low as 12¢ per mile for longer distances.

Maverick Bus Lines service between Vancouver and Pemberton had fares of about 10¢ per mile, that is, $10 to Whistler, $12 to Pemberton. Vancouver Island Coach Lines has a tapered fare schedule that ranged from 15¢ to 16¢ per mile. Examples are shown in Table 4.

Table 4
VANCOUVER ISLAND COACH LINES SAMPLE FARES

Route	Fare	Fare per mile
Victoria to Duncan	$6.40	16.0¢
Victoria to Nanaimo	11.20	15.5
Victoria to Port Alberni	19.20	15.7
Victoria to Campbell River	25.60	15.4

Alberta

In Alberta, as in British Columbia, Greyhound dominates the bus industry, and fares generally are for Greyhound routes. The fare level in Alberta was about 14¢ per mile, with some taper providing a range from as low as 13¢ to as high as 15¢ for shorter distances. Because the maximum rate per mile is regulated, rates are generally consistent throughout the province, north and south.

There are two exceptions. Greyhound's through fare between Calgary and Edmonton was $22, or 11.7¢ per mile, and its fare from Edmonton to Fort McMurray was $30, or 10.9¢ per mile. These are the two routes over which Red Arrow Deluxe Service also operates, but at higher fares. This suggests that to compete, Greyhound has had to maintain its fares at a lower level than elsewhere in Alberta, where competition is absent.

Saskatchewan

The average fare level in Saskatchewan was 12¢ per mile, with no apparent taper. Most of the fares are for STC routes. On routes served exclusively by Greyhound, rates seem to be fractionally *higher*, about 12.3¢ per mile. (There was one anomalous situation noted where two different rates were published from Yorkton to Saskatoon, $25.30 (12.3¢/mile) applying to STC, and $27.00 (13.2¢/mile) applying to Greyhound; certainly this is not evidence of meeting "competition.")

Manitoba

Apart from the through routes served by Greyhound, the scheduled bus service in Manitoba is provided by Grey Goose Bus Lines. Manitoba had about the same fare level as Saskatchewan, 12¢ per mile with very little taper.

There is an exception, the only example discovered of a common fare applicable to a group of points in a geographic area, a common practice in freight pricing. From Winnipeg there was a fare of $69.75 applying to a number of communities in the far North, between the junction at Ponton and points beyond, such as Thompson and Lynn Lake. The resulting fares to the less distant points were higher than the 12¢ norm for the province, 14.6¢ to Thompson, with Ponton the highest at 18.2¢ per mile.

Ontario

The fare structure in Ontario is more diverse than in the other provinces and offers additional insight into what increased competition might bring.

There are three major bus lines operating in northern Ontario. Greyhound and Grey Goose have overlapping routes, but fares do not appear to be affected by this. For the through routes, regardless of whether one or both carriers are involved, the fares have some taper, and ranged between 14-1/2¢ and 16-1/2¢ per mile. The third carrier is the provincially owned Ontario Northland whose fares were higher, averaging 17-1/2¢ to 18¢ per mile with no taper.

Greyhound's shorter-distance local fares were higher, given the taper. North Bay to Sudbury, 130 miles, was 16.4¢ per mile, Sudbury to Espanola, 70 miles, was 17.3¢ per mile. These fares can be contrasted with those charged by A.J. Bus Lines, a charter line operating a scheduled service between Espanola and communities on Manitoulin Island. The fare to Little Current was $4.25 or 12.9¢ per mile.

The fares between northern and southern Ontario were higher than those in either the north or the south. The fare on the Greyhound express service between Sudbury and Toronto, at 17.5¢ per mile, was higher than on any other segment of its trans-Canada route, yet it is this route that has one of the country's few instances of intra-modal bus competition.

Gray Coach Lines had one express bus per day on this route which operates between the same terminals at the same price as Greyhound. Regulations allow for different fares, but the transparency of tariffs probably renders this impractical as a long-term competitive tool. The two carriers seemed to compete, but senior managers expressed different views. Greyhound considers the Gray Coach service more complementary than competitive; Gray Coach considers itself in competition with Greyhound, but not on the basis of fares. Gray Coach also provided the once a day local service over this route. As well, it operated the only through service between North Bay and Toronto, at a fare of 20.4¢ per mile.

Gray Coach operated other routes northwest of Toronto, at fares ranging from 20.8¢ to 23.4¢ per mile, some of them in competition with Penetang Midland Coach Lines at the same fares. Serving different routes in the same region is Chatham Coach Lines/Cha-Co Trails, whose fares were similar, 22.5¢ to 23.5¢ per mile. Can-Ar Coach Service had lower fares on its route from Southampton to Toronto — 19¢ per mile.

Routes in southern Ontario have varying fare levels, with no apparent pattern. Greyhound's fares and those of the smaller lines ranged from 11.7¢ through 23¢ per mile, with no apparent pattern to distinguish Greyhound's from the others.

Apart from a few local scheduled routes served by regional charter lines, routes east of Toronto are served exclusively by Voyageur Colonial. The biggest market in eastern Ontario is the Toronto–Ottawa–Montreal corridor. Voyageur's fares are lower per mile in this corridor (where there is competition from subsidized rail services) than on the lower density routes:

- For the 125 mile Ottawa–Montreal route the fare was 16.1¢ per mile; but 18.7¢ for the 133 mile Pembroke–North Bay route.
- Montreal to Toronto is 342 miles[23] and the fare was 15.7¢ per mile; by contrast, Montreal to North Bay is 336 miles and the fare 18.0¢ per mile.
- Some local intermediate portions of the corridor routes had fares as high as 21¢ per mile.

The lower fares on the corridor express services probably are the result of competition from VIA Rail. Nevertheless, both the higher and lower scales of Voyageur's fares fall within the range of average fares in southern Ontario.

As discussed earlier, there appears to be a degree of non-compliance with Ontario's regulations requiring filing and approval of fares. There is evidence of reduced fares being implemented without being filed until later, or at all.

There are frequent cases in Ontario of fare changes and special fares as marketing tools. An example was Greyhound's introduction last winter of advance purchase fares on a number of routes at greatly reduced levels, apparently with disappointing results. There are a number of special discounts available from most carriers. These include discounts for specific groups, such as seniors and students, and special fares for such things as same day return. Such discounts appear to be more numerous and larger on routes where VIA Rail offers discount fares.

Quebec

In Quebec, fares were higher than in Ontario, but were generally consistent within the province. For the shortest trips, under 100 miles, the fares averaged about 22¢ per mile, and beyond that, with no apparent further taper, a little over 18¢. Fares for travel within the Gaspé, and to a lesser extent to and from the Gaspé, were lower than fares elsewhere, as low as 15.8¢ per mile between the communities of Rivière-du-Loup and Gaspé, a distance of 312 miles; and 16.5¢ between Quebec City and Gaspé, 427 miles.

New Brunswick and Prince Edward Island

In New Brunswick SMT operates all scheduled bus transportation services. Fares averaged about 18¢ per mile, with a taper that caused a range from 25¢ for 34 miles, to 17¢ for 300 miles.

Interprovincial fares from Prince Edward Island were the sum of the fare of $15.25 from Charlottetown to Amherst (including the ferry), and the appropriate fares beyond.

Nova Scotia

In Nova Scotia it appears to be a little more difficult (or at least slower) to get a fare increase approved by the regulatory agency. Any application for a fare increase results automatically in a public hearing. That may be a contributing factor to a level of fares in Nova Scotia which are three or four cents per mile lower than those in New Brunswick, and lower than any other province east of Manitoba.

There is a taper, but less than in the past, and Acadian Lines plans to remove it. The fares were calculated at 9¢ per kilometre up to 250 km, and 8¢ per km beyond. (Acadian is one carrier which does use kilometres internally.) The result was a schedule of fares ranging from 14¢ per mile for the 255 miles from Halifax to Sydney, to 14.5¢ for distances less than 154 miles (250 kilometres).

MacKenzie Bus Lines operated the service on the south shore between Halifax and Yarmouth at fares lower than Acadian, tapering from 10.9¢ per mile for the 220 miles from Halifax to Yarmouth, to 13.4¢ for the 67 miles to Lunenburg. MacKenzie's fare to Yarmouth was $24, and Acadian had a competitive fare of $25, or 11.4¢ per mile. This compares favourably to the $31 the fare would have been if calculated the same way as the others.

Newfoundland

CN Roadcruiser's fares are subject to approval by the federal regulatory agency, that is, the National Transportation Agency. The fare schedule in effect in 1990 was a tapered scale ranging from 12¢ per mile for the 562-mile trip from St. John's to Port aux Basques, to 20.8¢ for the short 60-mile trip between St. John's and Windsor/Grand Falls. These fares are among the lowest in the country, without any competition existing in Roadcruiser's market.

Summary

The provincial regulatory regimes generally lead to quite consistent fares, generally on a constant per passenger-mile basis, irrespective of route type, load factor and trip distance. Notable exceptions include Greyhound's Calgary–Edmonton and Edmonton–Ft McMurray fares (where there is competition from Red Arrow), and within Ontario where there is a substantial range. Quebec fares are generally the highest.

Two of the three provinces with the lowest fare levels in the country are Saskatchewan and Newfoundland. In both of these provinces, the dominant carrier is publicly owned, STC by Saskatchewan and Roadcruiser by the federal Crown corporation Canadian National. Both carriers have operating losses.

6. COMPETITION

This section first presents a brief description of the bus industry's competitive environment and the extent of competition from other modes. Then, competition (or its absence) between bus carriers in their regulated environment is discussed.

6.1 INTERMODAL

According to the most recent available data,[24] in 1988, about 37 percent of domestic intercity journeys, using scheduled public transport, were made by bus. The average journey by all public modes was about 600 kilometres; by bus it was 155 kilometres. It follows that the bus mode accounts for only about 10 percent of passenger-kilometres.

The bus is perceived as "the poor person's" mode of travel. It is traditionally the lowest-priced mode. The typical bus passengers are perceived, not as those who choose not to drive their own cars on short to intermediate trips, but those who cannot drive because of age or disability or do not have cars to drive (working poor, unemployed, students).

Demand for intercity scheduled bus travel is considered to be countercyclical, or at least does not suffer as badly in poor economic times as do the other modes. It is a more attractive alternative to those whose economic value of time is low. During recessionary times, as the lowest cost alternative, it attracts new business from the automobile and higher-cost public modes; during prosperous times, it loses passengers to the more expensive public modes and to the private automobile.

Air

Air traditionally has not been seen as competitive with bus in Canada. Air fares were usually seen as being out of reach for the typical bus passenger. As well, the time saved by air travel, that mode's chief advantage, probably does not have as high a value to the average bus traveller. There have been airline deep-discount fares and seat sales from time to time which have come close to, and occasionally met, bus fares over longer distances. These fares, however, have required advance booking and advance ticket purchase. Most bus travellers are not accustomed to purchasing tickets in advance,

and the finances of many may be such that they cannot. Further, most of the rural communities and small towns served by bus do not have air service or even an airport.

This does not mean there is *no* competition between the air and bus modes. There certainly are travellers who prefer the faster air mode but because of their high sensitivity to price opt for the bus. Students are an example. When sufficiently low air fares are available, these bus passengers will accept the conditions and travel by air. In the United States where air fares are generally lower than in Canada, this competition was sufficient to have made a major contribution to the growing losses suffered by the large long-distance bus carriers. Since 1990, air seems to have had an increasing impact on longer-distance revenues of Canadian bus carriers. As of 1992, longer-distance air discount fares regularly fall below undiscounted bus fares.

During off-peak travel periods before and after the Christmas-New Year period of the winter of 1991, Greyhound introduced large discounts on a few selected routes (as much as 70 percent in some cases). These were advanced purchase excursion fares, restricted to certain days of the week, and specified (off-peak) departures. Furthermore, only a limited number of these excursion passengers could be carried on a single departure, and there was no refund. According to Greyhound, they met with very little success, largely because most bus travellers will not purchase tickets in advance. It may also indicate that they do not travel for the sake of travelling, so do not travel more because of a seat sale; in other words, it might suggest that demand of bus customers for travel, though not necessarily by bus, is price inelastic. Finally, the season might have excluded such price-sensitive segments of the market as students.

Rail

Rail travel traditionally has been more elegant, more comfortable, but higher priced than bus; more time consuming but more comfortable and less expensive than air. For some years, however, VIA Rail has implemented marketing strategies aimed at increasing volume and market share. They have been aimed at the air mode in the shorter distance Toronto–Ottawa–Montreal market, with emphasis on faster schedules, more convenience and better service (VIA 1). As well, the strategies have targeted the high-volume bus mode and the private car with discount fares.

As other VIA Rail services have been discontinued in recent years, the emphasis of their competition with the bus carriers has been in the Quebec City to Windsor corridor. The most affected carrier is Voyageur Colonial (VCL), which has VIA competition virtually throughout its system. According to its President, VCL loses a considerable amount of traffic to VIA. He expresses anger and frustration that VIA is able to compete effectively with fares sometimes lower than the bus fares, while it recovers only a small portion of its costs. If it were not government owned and financed, he says, it would have to have a commercially sound fare structure. In that case, VIA would not be such a competitive threat and VCL's viability would not be threatened. VCL fares on the services with direct competition from VIA are lower per kilometre than elsewhere, no doubt a result of that competition, but made possible because of the higher traffic volume.

VIA probably does not greatly affect the traffic volumes of bus carriers elsewhere in the country, particularly since the 1990 cuts. Two of the services cut were in Nova Scotia, and it is not clear what effect, if any, was felt by the bus mode.

VIA operated services between Halifax and Yarmouth, via the Annapolis Valley, and between Halifax and Sydney on Cape Breton Island. Both of these services were discontinued on January 15, 1990. Acadian Lines estimated that VIA had between 15 and 20 percent of the public travel market on those routes. Data have been provided by Acadian which indicate that the number of passengers carried on those routes in the last six months of 1990, after VIA discontinued the service, were three to four percent *lower* than for the same period in 1989, before the VIA cuts. (The full year's data were not used because they are distorted by an eight-week strike at Acadian during the spring of 1989.)

Discussion with Acadian's President produced two possible explanations. Some VIA passengers, who had been using connecting bus service, or bus service for one half of a round trip, might not be travelling in the absence of rail service. In other words, there were VIA passengers for whom Acadian provided feeder service. Alternatively, gains from VIA might have been masked by overall demand effects. Acadian's passenger business has been declining for years, as is true elsewhere in the industry. Acadian might have gained traffic from the VIA cuts, but the net year-to-year change is still negative. In other words, had VIA continued its service, Acadian's volume might have

declined by considerably more than three or four percent. Fare increases of 8.25 percent on August 1989, 9 percent on February 1 1990, and 9.5 percent on September 1 1990 are also relevant.

6.2 INTRA-MODAL

The regulatory environment in which most of the Canadian bus industry operates, effectively discourages competition among carriers on the same routes. There are, of course, important exceptions. New Brunswick and Prince Edward Island removed the major legal barriers to market entry in 1987. Beginning in 1977, the Ontario environment apparently became more accepting of competition. In Alberta there is a noteworthy instance of two competitive services.

These exceptions are discussed below. There are a number of other instances where, technically at least, "competitive" bus service exists, but these are of little consequence and not discussed here in detail. They are mostly overlaps in the routes of carriers, such as Greyhound's trans-Canada routes and the intra-provincial services of Saskatchewan Transportation Company.

New Brunswick and Prince Edward Island

New Brunswick and Prince Edward Island removed a major hurdle to competitive bus service January 1, 1988, by no longer requiring applicants for operating authority to prove "public convenience and necessity." Instead the burden passed to those objecting to an application, who now must prove the proposed service will be detrimental to the public interest.

The new rules do not appear to have attracted many new entrants into the market. In New Brunswick there are three new licences for very restricted scheduled services; at least one is a new airport service. Ten new charter licences have been issued, but most of these are established operators expanding their territory throughout the province.

These provinces do not have large population centres and SMT (Eastern) appears to have an efficient and reasonably priced service in most areas. There has been no apparent attempt to challenge that monopoly in the scheduled market. On the other hand, new charter operators, and to a greater extent existing charter operators with increased territory, have

resulted in a significant decline in SMT's charter business. Three years ago, SMT had 37 buses assigned to charter service; that number has been reduced to 10.

Ontario

In 1977, for the first time, the Government of Ontario authorized a bus carrier to operate on routes in Ontario over which bus service already existed.

Greyhound's trans-Canada service from the west coast extended to Toronto, but on the last leg of the route, between Sudbury and Toronto, it was Gray Coach Lines which had the authority to operate, not Greyhound. By agreement, Gray Coach operated Greyhound's buses over that route. Also, Greyhound operated service from Toronto to connect with the U.S. bus networks through Detroit, but not through Buffalo. Again, it was Gray Coach that had exclusive authority to operate between Toronto and Buffalo.

Greyhound appealed to the Government of Ontario for authority to operate between Sudbury and Toronto, and between Toronto and Buffalo. This was granted by a Cabinet Order in 1977, but with a "closed-door" restriction, that is, no rights to carry passengers between intermediate points.

Greyhound operates five daily runs between Sudbury and Toronto. Four of these runs are part of its trans-Canada system. All are express (through) services. As discussed above, Gray Coach operated, and now the Crown-owned Ontario Northland operates, one express service a day in addition to a local service.

Senior representatives of the two carriers have expressed different interpretations of the Greyhound-Gray Coach relationship on this route. Greyhound considers the Gray Coach service as complementary, not competitive. Gray Coach sees it as strictly competitive, but not on the basis of price. The Gray Coach express service and one of Greyhound's buses left Toronto at what could be perceived to be competitive times, between 4:00 and 6:00 p.m. Apparently there have been a number of changes made in these departure times. According to Gray Coach, this was done to gain competitive advantage.

When, as discussed earlier, Greyhound introduced experimental advance-booking fare reductions, ranging to as much as 70 percent, the experiment was only carried out on a few selected routes, including that between

Toronto and Sudbury (Toronto–London where it competes with VIA Rail and Thunder Bay–Winnipeg were two others). According to Greyhound, the purpose was to determine whether low fares would significantly increase volumes. The Greyhound spokesman said that Gray Coach was advised in advance of these fares being introduced on the Toronto–Sudbury route. Gray Coach met the reduced fares, and advertised them with posters in the terminals. It appears, however, that Gray Coach failed to file or was exempted from filing the appropriate tariffs with Ontario's Carrier Licensing Office, as regulations normally require.

Price competition in public passenger transportation is difficult regardless of what regulations exist. A fare reduction must be publicized to have the desired effect. Even if the carrier neglects to file the tariff change with the authorities as required, the reduction will be known to the (presumably watchful) competitor rather quickly. A spokesman for Gray Coach Lines expressed the view that price competition does not make sense, because everybody loses. He stated further that Gray Coach meets any other carrier's fare reduction, but will not set fares lower than competitors — it will not get into a price war. In his opinion there is not really any price competition between bus carriers, but fare reductions will be introduced to increase market.

Gray Coach also considers itself in competition for through traffic between Toronto and Buffalo. Gray Coach had pool agreements with Greyhound (U.S.) to operate each other's buses, allowing the convenience of through coach service between Toronto and major U.S. points, with only driver changes. With Greyhound (U.S.) on a complicated strike, Gray Coach did not want to operate its buses, so the agreement is no longer in force. The spokesman said that recently Gray Coach has entered into equivalent agreements with other U.S. carriers, and now "beats" Greyhound of Canada's connections to New York and most other major U.S. destinations.

With Gray Coach's sale of certain routes to the provincial Crown corporation, Ontario Northland Transportation Commission (ONTC), competition could change. The routes involved extend north from Toronto to Barrie, Penetang and Midland, Owen Sound via Collingwood, North Bay and Sudbury. Not included are its other two routes to Owen Sound, and its southern routes between Toronto and Niagara Falls, Buffalo, Cambridge, Guelph and Kitchener.

Gray Coach has been operating between Toronto and Owen Sound via Guelph and Highway 6, and via Brampton and Highway 10 through Orangeville. It is the only carrier on those routes. It also had authority to operate to Owen Sound via Barrie and Highway 26 through Collingwood, and through Barrie to Midland and Penetang. Penetang-Midland Coach Lines (PMCL) also has authority over these two routes. Until recently, neither carrier has been operating the full routes. Gray Coach has operated between Toronto and Barrie; PMCL has not. PMCL has operated north of Barrie; Gray Coach has not. However, PMCL has just introduced a service between Toronto and Barrie.

Two of the parties in opposition to Gray's sale of licences to Ontario Northland deserve some attention in the context of this discussion of intra-modal competition. Greyhound had Gray Coach operating some "complementary" service on its Toronto–Sudbury route, probably causing only minimal damage. With approval of this sale to ONTC, it could be faced with stronger and more frequent complementary service from a government-financed carrier. But, perhaps as a result of some understanding, Greyhound has withdrawn its opposition.

The remaining opposing carrier, PMCL, operated in a territory where it enjoyed a monopoly position as long as Gray Coach or its successor chose not to avail itself of its operating authorities. Now it will face a competitor financed by the provincial government.

There is other scattered and restrained competition in Ontario, particularly in the densely populated southwest.

Both Greyhound and Gray Coach operate between Toronto and Hamilton, a short distance, but in a densely populated area. The Queen Elizabeth Way route to St. Catharines, Niagara Falls and Fort Erie (and Buffalo) is served by Canada Coach Lines out of Hamilton, and by Gray Coach out of Toronto. (As already mentioned Greyhound operates a "closed door" service between Toronto and Buffalo.) Also in the Niagara Peninsula but over different highways, Farr's Coach Lines provides service between Port Colborne and St. Catharines, and between Hamilton and Dunnville.

Greyhound has a monopoly on the through service between Toronto and Windsor, between Buffalo and London, and between London and Windsor

via Route 3 along Lake Erie, although there is some overlap by other carriers between some of the intermediate points. For example, Chatham Coach Lines operates tri-weekly local service between Windsor and Leamington, but not at the same times as Greyhound.

There are a number of situations where licences have been granted to different carriers to operate distinct services, but their routes overlap for relatively short distances. On some of those overlapping segments there might be limited competition although, as far as can be determined, the fares are the same.

There is an example in the Bruce Peninsula. Cha-Co Trails (a subsidiary of Chatham Coach Lines) has service between London and Owen Sound. Can-Ar Coach Service operates between Toronto and Southampton. These routes overlap along Highway 21, for the 30 miles between Kincardine and Southampton. Both operate in the morning southbound, one leaving Southampton at 6:30, the other at 9:00; and at night northbound, leaving Kincardine at 8:50 and 9:20 respectively. They are probably more complementary than competitive in this rather small local market, and the schedule times are doubtless set to accommodate the larger end points of the routes.

The 50-mile Toronto to Orangeville segment of this Can-Ar route also overlaps with the Gray Coach service to Owen Sound. The daily Can-Ar bus operates at about the same time as one of the two daily Gray Coach buses. The carriers depart from Toronto at 5:30 and 6:00 p.m. respectively, and from Orangeville at 9:45 and 9:15 a.m. The similar arrival and departure times at Toronto probably are set to meet the demands of the two individual markets, rather than to gain competitive advantage on the Orangeville segment.

In addition to the above, industry representatives have pointed out that Ontario's GO Transit operates buses and trains over the routes of intercity carriers within a substantial radius of Toronto. This constitutes competition with respect to a portion of the carriers' potential riders. Also, competition in a restricted intermodal context has been provided by bus service from southern Ontario communities to the U.S. and Buffalo airport,[25] and there have been reports of scheduled services operating between major Ontario centres without operating authority.

Alberta

Greyhound has competition in Alberta from Red Arrow Deluxe Service of Edmonton. Red Arrow made a case before the Motor Transport Board in Alberta that there was a distinct unserved market for a "deluxe" express bus service between Edmonton and Calgary, and between Edmonton and Fort McMurray. It is the equivalent of the air industry's "business class." Buses have 10 rows of seats with a two by one configuration, instead of Greyhound's standard 12 rows, two by two. The result is 30 seats per bus instead of 47. Red Arrow's service has washrooms, video entertainment and earphones, like Greyhound's, but also has facilities to provide light refreshments (tea, coffee, hot chocolate, cookies, cheese and crackers). Alcoholic beverages are not available. Red Arrow also cooperates intermodally with VIA Rail, including bus-rail through fares.

Red Arrow fares were higher than Greyhound's — in 1990, $26 versus $22, Edmonton to Calgary; $34 versus $30, Edmonton to Fort McMurray. On the Calgary route, Red Arrow appears to have load factors similar to those of Greyhound, and a little over 15 percent market share. On the Fort McMurray route, it seems to have load factors a little higher than Greyhound's, and about 50 percent of the market.

These routes are probably two of Greyhound's most profitable; certainly the high-density Edmonton–Calgary route must be. However, Greyhound's fares on these routes are generally lower than elsewhere. Between Edmonton and Calgary, the through express rate in 1990 was equivalent to about 11.6¢ per mile; on intermediate segments it was about 13.7¢. This appears to be the only Greyhound route, at least in Alberta, with a significantly lower rate per mile for the through service, no doubt the result of the Red Arrow competition.

As already described, Big Rock Bus Lines provides service between Calgary and Okotoks, High River and Turner Valley. Although Greyhound may serve the same market with its Calgary–Lethbridge local service, this is a commuter market and, thus, not a competitive intercity service in the context of the Commission's work.

Summary

Throughout most of Canada there is substantial competition in the charter bus industry, and this has been growing in recent years. Competition in

scheduled services is primarily intermodal and limited to a very small proportion of the routes served by the industry. With very few exceptions, where it does occur the competition is either between services approved as different in either quality or route, or price competition is absent.

7. Carrier Cost Structures

To allow comparison and analysis of different bus services, operated by different carriers, a common and simple method to estimate costs was designed. This costing was based on cost and statistical data made available on a confidential basis by various bus operators. The data were combined to present a reasonable approximation of average costs for segments of the industry, while not compromising the confidentiality of any single contributor of data.

The cost estimates were not simple averages. Rather they were the product of analysis of the costs of the various carriers and the differences among them, to achieve unit costs which appeared to represent a typical or normal level of cost. Two costing formulae were developed — one for use with services of small carriers, the other for major carriers. These formulae were computed for the use of the Commission's research staff to analyze fares and profitability of specific typical intercity scheduled bus services.

The measure used by the bus industry for cost analysis is the bus-mile. It was felt that comparisons would be a little more meaningful if other measures were used as well. To make the comparisons required by the Commission, costs were attributed according to more than a single per bus-mile variable. Some of the income statement cost categories were attributed to bus-miles. Others were attributed to bus-hours to reflect the different time-to-distance ratios of some services, and per passenger to reflect costs that are variable with the volume of traffic (number of passengers), but not with distance travelled.

The depreciation cost of buses is included in the bus hour cost. It is a common cost for the industry based on an average capital cost and age of a standard bus in intercity service. As well, cost of capital is included, using the 10 percent real rate of return assumed as appropriate for the overall transportation industry, for the purposes of the Commission's work.

The cost per passenger includes a cost for terminals, but this is not ownership cost. Instead, an amount representing terminal charges or rent is used. Some carriers own all the terminals they use; some do not own any. Most of the large carriers own some terminals and pay charges or rent for the shared or exclusive use of others. At least one major carrier owns a terminal, which is treated as a distinct profit centre, with charges made to the bus operation for its use.

The unit cost reflecting bus time is calculated per scheduled bus-hour. This makes calculation of the cost for specific services easier, because the cost includes an idle or utilization factor. The analysis done for this paper indicates that there are between 3.5 and 5 buses owned for every one actually moving and carrying passengers on scheduled service at an average point in time. Overall, it is estimated that for every hour a bus is moving with passengers, it has spent or will spend almost three and a half hours in terminals, in a garage or being available for service. This reflects the high degree of peaking in the transportation industry, and the practice in the bus mode of providing extras or overloads — supplying as many buses as necessary to accommodate all passengers who wish to use the service. This factor was calculated using bus inventory, bus-miles and an estimate of average schedule speed of 40 or 50 miles per hour. It provides a rough approximation, but data required to make more dependable estimates were not available.

Data were received from a variety of carriers, some large, some small, some operating in major population centres, some in remote areas. Some carriers operated primarily scheduled intercity services, and some had mainly charter operations. Although income statement data are difficult to compare, total costs were estimated for each of eight carriers. Total operating cost ranged from just over $2 per bus-mile to just over $4, but there is no clear pattern for carriers' relative positions on the range. From lowest cost to highest cost, they rank as follows:

1. small, primarily charter
2. medium-size regional
3. small/medium-size regional
4. large
5. medium-size regional

6. large

7. medium-size regional

8. small, remote, mostly packages

Cost structures of the small carriers do not differ as much as the above list might suggest. Generally these carriers are small operations with only a few buses, and a high proportion of charter business. Utilization of the buses and facilities and sometimes even drivers, not to mention trip distances, can cause radical cost-per- mile variance, because the numbers are relatively small.

Two elements which will affect the cost structures of carriers of all sizes are the size and treatment of their debt and the rates of pay for drivers. (These are factors that were not distinguished in the cost model.) Usually small carriers enjoy an advantage over large carriers in both these respects. Two of the largest carriers in Canada, however, have very different costs, caused by these two factors together with a difference of about 30 percent in average bus use.

The publicly owned bus carriers in Canada include Newfoundland's Roadcruiser, owned and operated by Canadian National, a federal Crown corporation; Saskatchewan Transportation Company and Ontario Northland Transportation, both provincial Crown corporations; and Canada Coach Lines, municipally owned and operated. Some data have been made available for the federal carrier, one of the provincials and the municipal carrier. The latter seems to be in line with total costs per mile of other carriers of its size and scope; the provincial and federal Crown corporations rank at the high end of the cost-per-bus-mile range.

Some statistical analysis would be useful here, but the data received from the various carriers are not sufficiently detailed or consistent. As well, such analysis would risk violation of the confidentiality agreed upon with the individual carriers.

8. Cross Subsidization[26]

Bus industry representatives and several carrier officials, in particular the presidents of two major intercity bus companies, insist that, without the present system of monopolies maintained by regulation, many small communities

would lose their bus service. In fact, this is the predominant defence of the status quo. It is asserted that regular service to small communities at restrained prices is only possible because carriers are required or expected to provide it as a condition of authorities to operate profitable unit toll routes and charter services. The president of one major carrier has stated that the day after deregulation he will withdraw service from more than 100 communities.[27]

The costing system for intercity bus was designed to enable sharp focus on the question of cross subsidization. In particular, this was the principal reason for inclusion of the bus-hours (small community or local service is characterized by many stops and thus slow average speed) and the per passenger (local trips are usually shorter) output variables, in addition to the usual passenger-kilometres or bus-kilometres measure of output. This allowed an important degree of specificity in terms of isolation of cost levels associated with local versus express interurban services.

Calculation of the cost of a service, using these unit costs, required the appropriate operational output units: bus-miles, bus-hours and number of passengers. Bus-miles and bus-hours were estimated using the schedules contained in the *Official Canadian Bus Guide*. To analyze profitability and examine the extent of cross subsidization, the break-even load factors were compared to actual or probable carryings. Detailed passenger carryings were only available from one major carrier; load factors (percentages of seats filled), in varying detail, were provided by a few other carriers. This, together with the uncertain accuracy of these data, made it necessary to analyze a broad range of services, without knowing relevant numbers of passengers. The method adopted was to use the appropriate bus fares[28] to calculate its break-even passenger load for each specific service in the sample; that is, the number of passengers, at the given fare, required to cover the cost of providing the service — below which the service loses money, above which it earns a profit.[29]

This introduced another variable, segments. On a local bus service, passengers get on and off at intermediate points along the route. In accordance with the principles of the costing methodology being used, each time a passenger boards the bus, the cost of a passenger is incurred.[30] For some local services with shorter average trip distances, the per passenger element (at break-even traffic volume) exceeded 60% of total cost, with 25% attributable to bus-kilometres and 15% to bus-hours. On the other hand, for a longer

distance express service, over 60% of cost at break-even load is attributable to the bus-kilometres element and less than 10% to the per passenger element.

A few examples for actual routes and averaged costs are offered in Table 5.

Table 5
EXAMPLES OF ROUTES AND AVERAGED MAJOR CARRIER COSTS

Route description	Service type	Break-even load factor (as a percentage)
Major intercity	Express	53
	Semi-express	59
	Local	151
Medium to large city	Express	32
Small to medium city	Express	35
Large city to rural	Local	131
Medium to large city	Local	39

The figures given in Table 5 for break-even load factor represent the average seat occupancy that would be necessary were the service in question to recover the generalized level of cost (including a reasonable economic return on capital invested) for a major carrier as has been described. The service conditions were selected from some 50 examples to which the cost models were applied. The examples illustrated in Table 5 suggest the potential diversity of cost recovery on various routes.

Load factors of 151% and 131% are not possible. There is no chance that services as described could recover cost (unless there was a lot of profitable freight, which was not the case for any of the examples). In fact, rural services or, worse, local services connecting rural areas to a city can never achieve high average loads; 50% would be very optimistic, 20% to 30% generally realistic. On the other hand, major intercity operations regularly exceed an average of 60%, indicating that some of the above are very profitable (in isolation).

The results of the cost analysis using actual values, when compared to route and service-specific loadings provided by the carriers, demonstrated cross subsidization even more clearly. The most profitable express run

investigated earned revenue which exceeded by more than 100% its computed fully allocated cost (including return on investment). Interurban express services whose revenues cover total cost plus 50% are the rule. At the other end of the scale are local services whose revenues cover as little as 15% of fully allocated cost. Profitable locals are the exceptions, and cost-recovery levels of only 25% are typical for local routes which parallel express service between major urban centres provided by express operations. At the intermediate level, mixed services (where interurban passengers are carried but stops at small communities are also made), and longer-distance interprovincial services, are (for the most part) comfortably profitable.

The very poor results for local services actually overstate real losses in most cases but it is not known by how much. Not considered are revenues from parcels or the profits from possibly lengthy journeys that start and/or end with a short leg on a local service. None of the carriers consulted had accounting systems from which the parcel freight and connecting stage joint products for local services could be reliably attributed to those individual local services. It is clear, however, that parcels are generally a very important source of revenue for services to remote areas, particularly in the North. Nearer urban areas, courier services effectively compete for the parcel market. Also, there are long- or medium-length journeys which might not be made by bus if there is no service connecting with origins or destinations on local routes.

It is also relevant to note that the losses for local services, and hence the extent of cross subsidization, are also the result of the fare policies discussed above. Fares per kilometre for short-distance local services are rarely much above, and are sometimes below, fares for high-density interurban travel. Relaxation of the regulations that protect monopolies on profitable routes would, presumably, be accompanied by relaxation of the restraints on local fares. Presuming a relatively inelastic demand,[31] fare increases would make some local services viable.

There are also other possibilities for economical service to small communities that would leave them served by other than full-size coaches with washrooms. The market would be opened to mini bus operations, more use of school buses on short scheduled runs, and a variety of part-time ventures into local scheduled service. Inevitably, there even might be communities not now served by scheduled service that would gain it. Notwithstanding all of these possibilities, some communities would lose service.

Overall, examination of cross subsidization of bus routes in Canada suggests that the most vulnerable services (the highest recipients of cross subsidy with the lowest prospect of viability through parcels or fare increases) are those serving small communities between major centres where the major centres are served by interurban express operations. This is most prevalent in the relatively urbanized south of Canada.

9. Effects of Economic Regulation in Other Countries[32]

9.1 REGULATORY REFORM

Studies of the industry's structure prepared by the U.S. Department of Transportation and the academic community supported the total deregulation of the intercity bus industry in that country. Academic research in the United States indicated there were no significant economies of scale in bus operations. The earlier belief that the industry was a natural monopoly was set aside. This encouraged policy makers to view competition as the means of securing the most efficient and socially acceptable intercity bus transportation system, and led to the deregulation of interstate bus services, with some states following suit.

British research also supported a reduction in economic regulation. In most public bus operations, the cost of providing a seat-mile of service falls with the capacity of the bus in use. There are thus economies of scale with larger vehicles. Such economies do not, however, constitute a barrier to market entry since buses are readily purchased or transferred from other services. Thus, while certain types of scale economies exist, they do not present restrictions on free entry or exit from the market. The British evidence indicated that, with suitable policy measures in place to control sunk costs under private control (terminals, reservation systems and so on), liberalization of pricing and entry met the requirements of maximizing efficiency and social welfare in the largely contestable intercity bus market. Britain deregulated interurban bus services, and later privatized its dominant Crown-owned national bus carrier.

As of 1992, we have a decade of experience with substantially reduced economic regulation in both the United States and the United Kingdom.

Although research in both the United States and Britain was supportive of total deregulation in both nations, the final legislation — though substantial in terms of reform — fell short of total deregulation. The British approach went further than that of the U.S., particularly with regard to express bus services.

United States

The 1982 U.S. legislation was restricted to interstate services and left in place:

- the requirement that new service applicants apply to, and be certified by, the Interstate Commerce Commission (ICC);
- antitrust immunity for the bus industry to discuss general and promotional fare changes; and
- ICC authority to regulate collective rate making.

Interviews with officials of the Congressional Research Service indicate that ICC decisions have pre-empted overwhelmingly state decisions in favour of carrier requests for abandonments and higher fares. This ICC policy has greatly weakened state regulation of intercity bus service and fares. Also since deregulation, the ICC has approved almost every application for new service authority, causing some to question the ICC's approval standards.

Unlike the case of airline deregulation, the U.S. Congress did not (at that time) build subsidy protection for small communities into the *Bus Regulatory Reform Act, 1982*, even though many expressed the fear that small and rural places, for which bus transportation is often the sole means of public intercity travel, would likely lose service. Instead, Congress took the view that small town protection is a state rather than a federal responsibility and elected to omit any form of special protection. Many favoured special protection and waited anxiously to assess the outcomes of reform. A decade later, however, in addition to state support of bus service to small communities, the *Federal Transit Act* provides subsidy funds for sharing the cost of intercity bus service assistance with the states.

Britain

The key feature of regulatory reform under the *British Motor Carriers Act* of 1980 relates to the road service licence. First, the legislation reclassified types of bus transport with a view to permitting greater product differentiation

and diversity. Second, it makes it easier to obtain licences in general and limits the power of the commissioners to impose conditions. The exemption of express services from road service licensing is of considerable importance. The definition of such services under the Act is couched in terms of the distance every passenger travels — this must exceed 30 miles. In effect, long- and medium-distance intercity bus transportation is no longer subject to entry and exit regulation, although operators are still required to provide commissioners with details about their services. Local bus companies can offer virtually any bus service they deem profitable, subject only to a minimum of 42 days notice.[33]

To initiate an interurban bus service in Britain, candidate operators must only demonstrate that they are of good repute, of appropriate financial standing (a test of "fitness") and that they or their transport managers are professionally competent (a test of "ableness"). They must then register the service (a test of "willingness" to provide common carrier service and meet consequent obligations).

9.2 EVIDENCE — EFFECTS OF REDUCED REGULATION

United States

Between November 1982 and May 1990, more than 7,400 applications were filed by new and existing firms for regular-route and charter-operating authority. A total of 5,600 of these were filed by new applicants. Approximately 13 percent of these applications sought regular-route authority.

The number of ICC-regulated bus companies rose from about 1,300 in 1980 to more than 3,600 in 1989. The majority of these operators provide charter, commuter and special-operations services. It would appear, therefore, that the post-deregulation industry will continue to be made up of a large number of independent operators.

This significant increase of U.S. operators masks considerable concentration in the regular-route "Class I" segment of the industry since deregulation. In March 1987, amid declining ridership and serious labour disputes, the Greyhound Corporation sold Greyhound Lines to GLI Holding Company. Later that year, citing Trailways' deteriorating financial condition, GLI petitioned the ICC for authority to purchase the operating rights and assets of

Trailways. In the spring of 1988, the ICC authorized GLI to purchase the interstate and intra-state operating rights and principal operating assets of Trailways Lines and Trailways' 50 percent interest in Continental Panhandle Lines.

From a competitive standpoint, the Greyhound-Trailways merger would appear threatening, since Greyhound now provides the vast majority of interstate regular-route service. In 1989, Greyhound accounted for some 85 percent of the revenues generated by the Class I intercity bus companies. Greyhound now provides the only intercity transportation in 9,000 of the approximately 9,500 markets it serves. Thus far, however, "anti-competitive" practices have not occurred. The legislation's entry provisions make it possible for other carriers to enter markets now served exclusively by Greyhound, and the essential contestability of the market appears to be preventing market abuse. As well, by ensuring that carriers can abandon unprofitable service, the ICC believes that the legislation encourages the introduction of new, innovative services (see "network" effects below).

Deregulation led the major operators to institute serious cost-cutting measures, including franchising, work-rule changes and the elimination of numerous routes they considered unprofitable. This action, along with other cost-cutting measures such as the renegotiation of wage contracts, helped reduce costs in the late 1980s but not by enough to reverse a trend of decreasing profits.

In more recent cost-cutting efforts, Greyhound Lines has shifted away from scheduled service to more profitable charter services; the company has given up certain low-density markets to smaller bus companies and, in a highly controversial step, increased the hiring of non-union labour. The latter, together with fundamental disagreements over major concessions sought by management, has precipitated a major strike. Labour is entrenched and as of the time of writing, the dispute shows no signs of easing.

Although deregulation led to serious cost cutting, including franchising, renegotiation of wage contracts, work-rule changes and the elimination of numerous unprofitable routes, this was not enough to reverse a trend of decreasing profits.

The intercity bus industry continues to provide extensive service throughout the United States, but there have been service reductions since 1982. According to the American Association of State Transportation and Highway Officials, about 4,000 communities lost intercity bus service between the start of regulatory reform in 1982 and the summer of 1988. Looking only federally, however, the ICC reports that, as of May 1990, it had received only 75 petitions to review applications to abandon interstate routes (nearly all of which were granted). The difference is in intra-state routes that are not federally controlled, and many of which remain regulated. The vast majority of the decline thus seems to be a continuation of past trends in the decline of the intra-state bus industry.

During the five years prior to deregulation, U.S. communities receiving bus service declined by 3.3 percent per year. For the three years following regulatory reform it was approximately 10 percent per year, a clear acceleration. Nonetheless, during the 1970s, when strict entry and exit regulations were in place, 1,800 communities lost bus interstate service. Moreover, many analysts believe that, without regulatory reform, more bus companies would have experienced bankruptcy, with even more rapid decline in the number of points served.

The Greyhound-Trailways merger led to a development that the authors of the 1982 Act hoped would occur, namely the commencement of rural feeder operations. Greyhound's "rural connection" which operates in a manner similar to the airlines hub-and-spoke system, uses vans to provide service in areas where there is insufficient demand to warrant the use of full-sized vehicles. These feeder lines, which are linked to communities served directly by Greyhound, are operated by independent entrepreneurs who act as agents for Greyhound and receive a portion of the fare. As noted earlier, similar operations are in evidence in Canada, particularly in the more northerly and remote regions.

Britain

In Britain, the immediate effect of regulatory reform was a considerable reorganization and initial concentration within the express bus sector. Six major private companies combined to form a consortium, British Coachways, offering services from London to major destinations. The

consortium was intended to provide a major competitor to the Crown-owned National Express, embracing the activities of the National Bus Company (in England and Wales) and the Scottish Bus Group.

After about four years of deregulation, however, the Crown carrier — National Express — had become, once more, a monopoly supplier on many routes where private operators had, in 1980-81, initially offered new service. Others now offer joint services with National Express. Further, British Coachways suffered from a succession of membership withdrawals and, by January 1982, had essentially collapsed.

Deregulation permitted new entry at fare levels potentially profitable to the private operators if load factors could be pushed up. Competition, however, brought a response from National Express (and from the Crown-owned railway which fought back with aggressive pricing policies of its own) both in terms of lower fares and improved service. The economies of scope enjoyed by National Express, and its aggressiveness, permitted recapture of the market from the independents on most routes. The threat of possible new entrants would appear, however, to have prevented National Express from raising fares once a monopoly position had been established.

National Express was privatized in 1987. Perhaps, had it been privatized seven years earlier, the deregulated industry might have developed differently.

As in the United States, studies in Britain found reduced numbers of areas with good access to interurban bus transportation after deregulation. A commission of inquiry, four years after regulatory reform, concluded that most of the areas that lost a service already had a low level of service, and most of the residents were unaffected by the loss because they made little use of the service anyway.[34]

These discontinued services between urban centres were not considered to have left a significant number of people without adequate transport. The results, for local services linking rural areas and small communities to the larger centres, were quite different. This was more of a privatization than a deregulation exercise. Contractual subsidies, administered by the local (shire) authorities, prevented virtually any loss of service attributable to bus deregulation or privatization. Considerable savings to the taxpayer were reported.

Australia

Some Australian bus services have not been subject to economic regulation for many years. A 1955 court decision exempted Australian road transport from state economic regulation. The effect was, however, different from that of the analogous 1951 Canadian court (*Winner*) decision (see Appendix A). While all operations of Canadian carriers whose services extend beyond a single province are under federal jurisdiction, Australian interstate bus operators require state authorization to pick up and set down passengers whose travel is intra-state.

While interstate bus services are essentially unregulated, and charter licences are generally subject only to "fit and proper" (fitness) entry tests and to vehicle safety certification, intra-state scheduled bus services are tightly regulated. This notwithstanding, competing bus services are not precluded as they generally are in Canada. The regulators tend to discourage bus services that compete with, rather than feed, rail. Competition between bus carriers seems less of a concern. Varying degrees of competition are permitted on a variety of more major intra-state routes and on interstate routes where intra-state passengers are carried. Protection and cross subsidization of rural bus services do not seem to be a major rationale for Australian regulation.

Although there are still more companies in the deregulated interstate bus industry than there were in the early 1980s, the economic downturn and possibly the effect on some routes of airline deregulation, have reduced the industry through failures and mergers. Most non-urban bus companies are privately owned but in one state the government owns a fleet. Each state tends to have a small number of major intra-state operators plus a large number of smaller "one-route" operations that link particular regions with the state capital.

The intra-state carriers are strictly regulated as to approval to operate specific routes. Their fares are effectively controlled by the low (subsidized) rail fares. In two states, rail passenger transport is protected by regulating the bus companies to provide their service under contract to the railways. Fare levels do not show any sharp distinction between regulated/non-regulated routes or between routes on which competition does or does not exist.

Experimental entry liberalization for two corridors in New South Wales (regulation was reduced to approval of service changes and 14 days' notice of fare changes) led to lower fares, more service and a substantial capture of passengers from air, the automobile and (especially) rail. Terrain, size of market, and cost/price competition (particularly airlines) rather than regulation are the main influences on fare levels.

On the question of remote services, most communities in settled Australia are served daily by bus and/or train and the remote areas once, twice or three times a week. In rare cases community transit feeds the nearest regulated bus route.

As in Canada, there are a variety of local, regional and national carriers in Australia. In Western Australia the intra-state market is dominated by the bus operations of the state-owned railway; otherwise, privately owned carriers are the norm. In mid-1990 there were four or five firms that might be considered national in scope; now there are two, and these cooperate operationally with merger contemplated. In addition, there are local carriers affiliated with and serving as feeders to the dominant Greyhound/Pioneer.

Other Countries

Although the most industrialized countries virtually all opted for bus regulation approximately 60 years ago, in many other nations unregulated private and very competitive bus industries emerged. These are nations with standards of living below Canada's, and where the demand for bus travel has shown, and for the most part still shows, healthy growth.

In some of these countries, bus was regulated and then deregulated. In others, it was never regulated. In still others, regulation was simply ignored by many bus operators. Whether regulated or unregulated, bus industries internationally are rarely without problems that seem to suggest changes to the regulatory regime.

General conclusions of those who have studied these bus industries include a tendency toward intense competition for passengers and the emergence of both high quality/price and low quality/price operations over the same routes. Independent minibuses appear on many shorter routes, and some powerful monopolies (with blatant abuses that would not be tolerated in

Canada) have developed. In general, the key to the prevention of abuses and achievement of a healthy competitive bus industry seems to have been strong competition legislation that is effectively enforced.

10. Monopoly Power

The success of relaxed economic regulation of intercity busing will depend on the practicality of competitive challenges to the present regional monopolies. This could come from large bus operators expanding into each other's traditional markets. However, charter carriers and the small local operators that presently connect with the large monopoly carriers may be a more reliable long-term source for such competition.

The existing Canadian bus carriers did not develop in a competitive market, and some are large and powerful — particularly those owning key terminals. Greyhound controls a sophisticated customer information system that could readily be extended to reservations and ticketing.

Exchanging regulated bus monopolies for unregulated monopolies that set high fares would not be a step forward. Experience elsewhere, including in Britain, suggests that potential new competitors may require protection. A market open to entry will not function efficiently if carriers interested in expansion into an established bus company's market are intimidated by monopolizing conduct of the dominant carrier.

The topic of monopoly power is broader than the bus mode, but potential problems are particularly apparent in this context. For instance, enhanced general competition legislation could defend a competitor against pricing and other predatory practices used by a dominant carrier. The dominant carrier would sustain short-run losses in order to drive competition out of the market. Thus, it would seem prudent to strengthen Canada's competition legislation to guard against this possibility.

For the intercity bus market to operate competitively over the long term, potential competitors must have confidence that remedies to "abuse of dominant position" will be quick and firm to protect them effectively from anti-competitive acts, and to ensure that smaller carriers have a fair opportunity to compete. The present *Competition Act* is a substantial advance

over its predecessor. The question is whether the Act and the adjudicative processes provide timely and decisive response and redress to encourage active and effective competition in a newly deregulated bus market.

Protection for the small local carrier that might choose to extend its operations into the routes dominated by a carrier many times its size, and with which it interchanges passengers and shares terminals, should fall within the "abuse of dominant position" and the "refusal to deal" provisions of the Act. Effective protection for the small potential competitor would also seem to require provision for compensation for damages resulting from anti-competitive acts engaged in by dominant firms, at least from the time of filing of a complaint. Although provision for damages would be similar to that under the criminal side of the Competition Act, enforcement under its civil provisions would seem a more effective approach for transportation.

Competition policy is of much more general application than transportation, and must take into account a range of considerations — including jurisdictional ones — which may be complex. If, however, the intercity bus industry is to be opened and regulatory controls lifted, and competition is to prevail over monopoly, there are concerns to address. Otherwise, potential entrants into the scheduled intercity bus services market could be discouraged by fears of anti-competitive behaviour.

11. Carrier Subsidies

A point frequently raised in discussions of deregulation is that some areas of the country will lose public passenger service, and to the extent that service will be seen as essential, subsidization will be required. Subsidization of rural bus services was provided for with deregulation in Britain; it is encouraging that subsidy costs reportedly have been significantly less than had been budgeted. When the U.S. deregulated interstate services, subsidy of services to smaller communities was also presumed but considered a state responsibility by Congress. More recently, a decision was made to contribute federal moneys to small community intercity bus subsidies.

In Canada, with regulation of the intercity bus industry still generally in place, there are instances of subsidy. Saskatchewan has two such programs. They support small carriers who supplement the services of the provincial Crown

corporation, which is the principal supplier of bus transportation within Saskatchewan. Subsidy can also be achieved through public (government) ownership and operation at a loss.

Michigan, before deregulation, had a set of subsidy programs in place. These are more imaginative and varied than the traditional loss compensation programs and apparently have met the needs resulting from deregulation.

11.1 SASKATCHEWAN

There are three provincial government programs in Saskatchewan to ensure service to communities without sufficient traffic potential to make scheduled bus operations commercially viable. These are in addition to the government's ownership of the principal intra-provincial bus carrier, Saskatchewan Transportation Company (STC).

The Rural Bus Subsidy Program provides that if a bus operator applies to discontinue a service, and shows that it cannot be operated without a financial loss, the Department of Highways may provide a subsidy for its continued operation. This is done by public tender, with the service awarded to the carrier requiring the lowest amount of subsidy to provide the specified service. For example, until recently, Moose Mountain Lines Ltd. operated the service between Regina and Maryfield, as well as the one to Rocanville. It applied to discontinue both because they were losing money. The services were put to separate tenders. Moose Mountain was successful on only one, and the Maryfield service was awarded to Frances Enterprises Ltd., which had submitted a lower bid.

Under the Rural Transportation Assistance Program (RTAP) a community that can demonstrate a need for a bus service which is not, or no longer, being provided, can form a legal entity called a local transit authority (LTA) to provide the service. This LTA calls for tenders to operate a service linking the community to an STC point and awards a two-year contract to the successful bidder. Service is almost always provided with minivans. Fares are set by the provincial Department of Highways and Transportation (DHT). Revenues are collected by the LTA, which in turn pays the operator for the service. Shortfalls in revenue are met by the provincial government.

Finally, the relatively small Northern Feeder Program, which is similar to the RTAP, is specifically directed to ensuring service between remote communities in the northeastern part of Saskatchewan and STC points.

Under these programs, 467,000 bus-miles (756,000 kilometres) were operated in 1990 and 25,000 passengers carried. The amount paid out was $420,000. The numbers for the three programs are shown in Table 6.

Table 6
Saskatchewan Intercity Bus Subsidy Programs

	Rural bus subsidy	Rural transportation assistance	Northern feeder	Total
Bus-miles	210,000	191,000	66,000	467,000
Passengers	12,000	8,000	5,000	25,000
Subsidy	$150,000	$265,000	$8,000	$423,000
– per bus-mile	$0.71	$1.39	$0.12	$0.91
– per passenger	$12.50	$33.12	$1.60	$16.92

The minivan services linking communities with the STC network under the RTAP require greater subsidization per bus-mile and per passenger than the standard bus services under the Rural Bus Subsidy Program. It is logical to assume that the latter are better used than the former.

For perspective, it might be useful to compare these amounts with the subsidy paid in 1990 for operation of remote rail service between The Pas and Lynn Lake in Manitoba. VIA Rail handled about 8,600 passengers and was paid $1,596,000 ($186 per passenger), compared to the Saskatchewan bus subsidies of $423,000 for 25,000 passengers ($17 per passenger). The above should not, in any way, be interpreted as critical of the management of VIA which provides a different type of service subject to different costs; it is merely presented as an indication of scale against which the cost of the bus subsidies might be assessed.

11.2 MICHIGAN[35]

In the United States, the federal government has jurisdiction over interstate transportation, including buses. Operations within a state fall under state jurisdiction. The *Bus Regulatory Reform Act of 1982* (BRRA) deregulated the

interstate bus industry. The states reacted in different ways. Some left the regulatory regime in place, others instituted various small degrees of deregulation. Two states, Florida and Michigan, removed all entry, exit and rate regulation immediately following enactment of the BRRA.

Michigan does not simply provide state funds to make up the operating losses of bus services to ensure continuation of essential service. It does this when necessary, but only after evaluation of the service and a competitive bidding process to encourage efficiency and minimize cost. To reduce the necessity of these operating subsidies, the Michigan Department of Transportation (MDT) tries to retain service with other more imaginative schemes, which provide help to carriers and communities to improve the probability that service can be operated profitably. In one community this might be improvements to the bus terminal; in another, a new one. One area might be served by a carrier with buses owned by the state, in another there might be a major bus marketing campaign organized by a professional agency and funded by the state.

Before deregulation, the MDT had a program in place to provide assistance to the intra-state scheduled bus industry. The Intercity Bus Program was planned as a result of the energy shortages of the early 1970s and was introduced in 1976. It comprises individual programs which provide assistance in a variety of forms.

The Bus Passenger Terminal Program assists carriers or communities with the development, construction or rehabilitation of bus terminals. It also pays for security in terminals to improve safety, enhance perception of their safety and extend open hours.

The Intercity Bus Capital Equipment Loan Program provides for the state to own buses and make them available to bus operators through a contract lease arrangement. This is intended to be in lieu of assistance under the Intercity Bus Operations Program, but can be an incentive to establish new bus companies.

The Intercity Bus Operations Program uses the competitive bid process to fund "operating projects for purchase of intercity regular-route services" to prevent isolation of communities, to provide essential transportation, to respond to the effects of deregulation, and to introduce new services. Under

this program, an unprofitable service is operated under a two-year contract with the carrier which submitted the lowest bid. There are three other programs which support the Bus Operations Program.

The Regular Route Saviour Program is intended "to create a climate in which bus companies can be profitable on a regular scheduled route and, thus, would not consider service elimination on that route." State funds can be provided for public relations campaigns to educate the public about the importance of the bus services to the community.

The Service Continuation Program provides funds to a carrier applying for discontinuance of service, which would cause isolation of an area. The funds enable the carrier to continue to provide service until an evaluation has been carried out and a contract has been awarded under the Bus Operations Program. A service which already has been discontinued can be resumed temporarily under this program.

The Demonstration Project Program provides funds for experimental projects. These may include service to a new market area, innovations in public service or testing of new technology.

12. Government Ownership of Carriers

Direct subsidy can be avoided through the ownership of bus transportation enterprises by federal, provincial or municipal governments. Most publicly owned carriers are established to provide service which is considered economically or socially necessary or desirable, but which is not provided, or adequately provided, by the private sector. A government service can be the sole or major provider of the bus transportation (as is the case in Saskatchewan), a supplement to the private industry (as in Prince Edward Island), or a regional service provided to encourage development (as in northern Ontario).

Research suggests that Crown carriers are a relatively inefficient means of delivering transportation that might be deemed socially necessary. The international example, typified by Britain, has been toward privatization with revenue supplement through public tender if necessary.

MUNICIPAL GOVERNMENT OWNERSHIP

A municipal or regional government's public transit system may expand into the intercity scheduled and charter market for a variety of reasons. One might be no more than an attempt to find a profitable sideline to help subsidize the transit system. Expansion of the scope of its bus operations might bring a city economic benefits from more effective links with other communities and outlying areas.

Gray Coach Lines was originally the creation and subsidiary of the Toronto Transit Corporation (TTC) but was sold and is now in private hands. The TTC retained the bus terminal in Toronto, which it recently rebuilt.

The Hamilton Street Railway, the urban transit system owned by the Regional Municipality of Hamilton-Wentworth, owns and operates Canada Coach Lines, a charter and scheduled bus operation. Its intercity scheduled service joins Hamilton with Buffalo and points throughout the Niagara Peninsula, as well as Brantford, Cambridge, Kitchener, Waterloo and Guelph.

Its 1989 accounting records suggest that Canada Coach Lines is not subsidizing the public transit system or vice versa. It does provide, however, a service to the population of Hamilton-Wentworth, which probably also gains from the transportation links to the areas it serves.

PROVINCIAL GOVERNMENT OWNERSHIP

The Ontario Northland Transportation Commission (ONTC) is a money-losing but expanding organization. It was founded by the Ontario government about 90 years ago to provide transportation and communications services essential to the development of the northern part of the province. It now operates a network of rail, air, marine, telecommunications, trucking and bus services in northern Ontario.

ONTC had consolidated operating profit in 1989 of $14.1 million, on revenues of $142.6 million. These revenues include $24.8 million of subsidy payments.[36] Excluding these payments, ONTC had revenues of $117.8 million in 1989, and an operating loss of $10.7 million.

ONTC's bus division operates charter and tour services as well as a network of intercity scheduled routes. Recently, it has expanded out of the remote access role for which it was created. The bus division earned revenue in 1989 of $5.1 million (which includes no subsidy payments) and experienced an operating loss of $79,000. In the previous year its operating loss was $319,000, on revenues of $4.3 million.

Too recent to be reflected in the above results, Ontario Northland's bus division has purchased the rights from Gray Coach Lines to operate scheduled services on a number of routes north from Toronto. As mentioned above, the new routes will enable ONTC to operate from its present territory through to Toronto, and to expand into the Bruce Peninsula. Also included are contingent charter and tour rights. The new routes which will connect Toronto with its present northern network have been advanced as a logical and practical expansion of ONTC's northern development role, notwithstanding the fact that the Sudbury–Toronto route is served by Greyhound.

The new routes to Midland, Penetang, Collingwood and Owen Sound, however, are more difficult to rationalize with the original objectives of Ontario Northland. The area is not lacking in development nor infrastructure. The routes are served by Penetang-Midland Coach Lines, with at least two daily departures each way in the Collingwood and Owen Sound service, and at least three in the Midland and Penetang service. It would appear, therefore, that this acquisition is an expansion of ONTC's bus network to meet its own commercial objectives and an expansion of its mandate beyond that of an instrument of development for northern Ontario.

There are two other examples of provincial Crown corporations operating in Canada, a rather large one in Saskatchewan and a very small one in Prince Edward Island.

Saskatchewan has the most extensive bus network of any province in the country. Most of the intra-provincial routes belong to Saskatchewan Transportation Company (STC). As described earlier, its service is supplemented by private carriers operating over connecting routes, particularly in the northeast, on behalf of STC, or under one of the province's subsidy programs. Fares in Saskatchewan are among the lowest in the country; this low level applies to the Saskatchewan segments of Greyhound's trans-Canada routes as well as to the intra-provincial network.

For the year ending October 31, 1990, STC incurred a loss (after depreciation and interest) of $5.339 million, on revenues of $16.216 million. This loss is 17 percent greater than it was in the preceding year, and 90 percent greater than in 1985-86. When combined with the $423,000 cost of subsidy programs described earlier, this loss represents a total subsidization of the intra-provincial bus industry by the Saskatchewan government of $5,762,000.

STC operated 5.63 million bus-miles and carried 648,000 passengers in 1989-90. The operating loss is equivalent to 95¢ per bus-mile, or $8.24 per passenger. This is more per bus-mile than the cost of the Rural Bus Subsidy Program, but less per passenger.[37] The difference per bus-mile suggests that the small contract carriers under the Rural Bus Subsidy Program, operating services not sufficiently profitable for STC, are doing so at a higher level of cost efficiency than STC, with presumably lower load factors and shorter trips.

The Government of Prince Edward Island owns Island Transit, which is small and operates a summer-only scheduled service. Until this summer it also operated a service from Charlottetown to New Glasgow, Nova Scotia, via the Wood Islands ferry. Island Transit does not operate charter or tour services. As already discussed, SMT (Eastern) of New Brunswick is the major carrier in Prince Edward Island.

FEDERAL GOVERNMENT OWNERSHIP

Before joining Canadian Confederation in 1949, Newfoundland had a government-owned national railway, which provided most of the passenger and freight transportation in the country; coastal vessels were the other important mode.

The Terms of Union[38] called for the Government of Canada to "take over . . . and . . . relieve the Province of Newfoundland of the public costs incurred in respect of . . . the Newfoundland Railway" (paragraph 31), and the railway became the property of Canada (paragraph 33). The Canadian government incorporated the Newfoundland rail service in the mandate of its Crown corporation Canadian National Railways.

As was happening throughout North America, the car and the truck began to grow in importance in intercity passenger and freight transportation. This was aided by completion of the Trans-Canada Highway in Newfoundland.

Soon the viability of the railway service in Newfoundland was questioned. By 1968, after a lengthy campaign, CN received permission to abandon its passenger rail service on condition that it substitute an equivalent bus service. The result is that the major passenger carrier in Newfoundland, CN Roadcruiser, is a bus service owned and operated by the federal government. It is also the only bus service under federal regulatory jurisdiction (for reasons described earlier).

Roadcruiser loses money. It does so operating over the province's densest corridors, while smaller locally managed operations seem viable. The Roadcruiser operation, until recently, was included in CN's railway organization as an operating division with the typical railway organization and management structure designed for, and experienced in, operating a freight railway. A few years ago, this was changed and Roadcruiser was given its own organization, more suitable to a bus operation, but still reporting to senior railway freight experts.

Roadcruiser's driver costs appear to be appreciably higher than the industry average. CN's vice president in Moncton explained that this results from drivers being railway employees, who have benefited from wage levels and increases over the years enjoyed by employees of the railway industry across Canada. CN is hoping to separate Roadcruiser employees from the labour contracts and wage levels of their rail operations, but does not expect this to be an easy or short-term project.

Roadcruiser could be described as an evolutionary anomaly. It is the only bus service operated by CN, and the only passenger service. In 1949 it was part of a rail operation and, at that time, CN operated rail passenger services throughout Canada. Neither is true now, but history has left a reluctant CN with a passenger bus service. Logically CN should be relieved of this operation, but this probably will happen only after agreement has been reached to provide financial compensation from the federal government.

There are a number of ways Roadcruiser could be removed from CN. Its assets and rights could be sold to a private carrier. It could be taken over and operated by the province. Subsidized operation over its routes could be arranged by public tender (there are a number of small rural bus lines in Newfoundland). Under any of these alternatives, the operation would revert to provincial jurisdiction[39] under existing legislation. Unless costs could be reduced without any revenue depletion, fares would rise or subsidies would

persist. The operation has, in the past, been perceived as a constitutional obligation of the federal government. When the Newfoundland railway was shut down in 1988, however, Premier Peckford stated publicly that no constitutional obligation to maintain the railway existed.

13. Scenario for the Future

The *Motor Vehicle Transport Act, 1987*,[40] implemented a substantial measure of deregulation for trucking, but did not extend it to busing. It would be difficult for the Commission to ignore the question of whether the "reverse onus" principle should be extended to bus regulation, or whether some other form of deregulation or regulatory revision should be recommended.

Although the broad deregulation of extra-provincial bus undertakings is not the only option for change, it is the most extreme. The deregulation scenario assumes substantial — even dramatic — change for Canada's intercity bus industry. The federal *Motor Vehicle Transport Act* is presumed amended to relax the regulation of extra-provincial busing. Faced with the potential flight of aspiring new competitors and territory defenders alike to federal jurisdiction, the provinces follow suit.

The revised legislation reduces entry restrictions to a performance bond and adequate insurance. The bond is against prepaid tickets and for route abandonment without the required (four weeks) public notice. Provisions require tariff filings, and schedules and fares publication.

Fare increases are subject to publication with two weeks' notice. There are no onerous filing and publication requirements. Prominent display at a company's terminals and on its buses is all that is required. A copy of the posted notices mailed to the National Transportation Agency constitutes filing.

A provision in the legislation specifies that, in spite of the residual degree of regulation, the bus mode is subject to competition legislation. Further, sanction of collective rate making is restricted to joint interline and/or intermodal fares. The *Competition Act* is presumed amended to include provision for private parties to bring "abuse of dominant position" and other reviewable trade practices before the Competition Tribunal. There is also provision for awarding damages for conduct contrary to a civil provision of the Act.

It is safe to assume there would be changes if the industry were deregulated. What these changes might be would depend, however, on many factors other than the regulatory regime. These include economic conditions, government policies in related areas, such as highway policies or fuel prices, or in not directly related areas, such as taxation policy.

There would be changes in or removal of situations which exist only because of regulation. Cross subsidization, that is, unprofitable but obligatory services financed by profitable services, was discussed earlier. This is a standard characteristic of a regulatory system which provides exclusive rights to a carrier in a region; the profits from "monopolistic pricing" are in effect "taxed back" in the form of unprofitable but socially desirable services.

With deregulation, these carriers would be deprived of their exclusive rights. Their profitable routes would be subject to competition, and the fares they charge would presumably be reduced. This removes the financial ability and incentive to provide unprofitable services. Regardless of what happens to its prices, the carrier would no longer have reason to finance services that, on the margin, were unprofitable.

The bus industry has told us that, without the present system of regulated monopolies, many small communities would lose their service. This is the predominant defence of the status quo. It is asserted that regular service to small communities at restrained prices is only possible because carriers are required or expected to provide it as a condition of authorities to operate profitable scheduled routes and charter services. One carrier officer stated that the day after regulatory reform his company would withdraw service from more than a hundred communities. But, there are reasons why carriers might be cautious and analyze the market carefully before abandoning feeder routes that might give a potential competitor a strategic advantage.

In a newly deregulated environment, identification of the correct commercial decisions would be difficult. Some carriers who terminate services might find that the loss of elements of their networks undermines their competitive position in the passenger and parcel markets as a whole.

It is safe to assume that a significant proportion of routes would be discontinued, and some communities deprived of service. Where the affected population or government consider some public transportation to be

socially necessary, or necessary to improve or ensure the economic viability of a community or area, a way would be found to provide it. Some of these routes would survive in much the same form, but with reduced frequency and increased prices. In other areas, the vehicles used to provide the service would be more suitable to volume demands. Thus, more smaller, older buses and part-time operators with minivans would appear in lower-population regions. As already described, this is a common practice in Newfoundland.

Some of the routes apparently sustained by cross subsidization are unprofitable only if analyzed in isolation. These make a contribution to the profits of other routes by feeding traffic to them, or providing connections crucial to the attractiveness of the bus service. It, however, is unlikely that the bus system would develop or sustain a hub-and-spoke network directly comparable to what has occurred for air because each spoke would be a local service capable of stopping en route, unlike the airlines' networks where all passengers are brought to the hub for potential onward connection regardless of their intended destination.

It is probable that the core high-density routes in any region would be operated by a single, large dominant carrier, possibly two, with the economies of scale derived from the flexibility of a large fleet, terminals in major cities, automated systems for tariffs, ticketing, reservations and scheduling, and a large-scale marketing and advertising program. Feeder services would not make profitable components of this carrier's empire, and one would expect to see them operated by a plethora of small regional or local bus lines, some of whose cash box (passenger and package) revenues would be supplemented by commissions from the core carrier.

Whether these would be franchised carriers, using the core carrier's name and logo ("Greyhound Puppies" and "Voyageur Cubs"?) or interlined in some less complete way and perhaps not paid for transferred passengers could mean the difference between success or failure of the low-density routes. The carriers which connect with the mainline (probably continental) carrier in the latter's bus terminals in major centres, would also have small offices in hotels or other locations in some communities. The others, the non-interlined, would merely pick up and drop off passengers at hotels, street corners or designated highway locations with the more successful among them finding other local connections to serve.

In an environment of reduced regulation, the large dominant carriers are not expected to be completely immune from competition. There would be instances of some degree of challenge on the high-density routes, probably both by high performance and comfort, and by low-cost bargain services. So long as the adopted, reformed regulatory regimes contained effective and speedy remedies to predation, the ability of even a single continental carrier to exact excessive monopoly rates should be controlled.

A continental bus carrier may not serve the entire country. It is possible that in some areas, such as eastern Quebec and the Atlantic provinces, the combination of a strong local competitor and limited volumes would deter attempts at entry from major outside carriers. The result would be a proportionately smaller but equivalent regional network, again a single dominant carrier, with a network of local feeder lines.

Specialized bus systems would find niches. Some would be a form of commuter service, linking large cities with areas outside the range of urban transit, perhaps even intermingling with the transit system. Others would serve the needs of a region, such as the Bruce Peninsula or Vancouver Island, providing intra-regional bus services, rather than connections between big cities. Another example of similar systems would be summer-only services in tourist or summer cottage regions. There are examples of these services now.

Bus service pricing would change considerably. The one, possibly two, major core bus network(s) would require rather high load factors to support large-scale operations and investment. This would necessitate a more scientific and creative pricing system than is in place now in most bus companies. This is not to suggest any deficiency in the industry itself. Voyageur Colonial, for one, has several discounts, same day return fares and other incentives in place. The main factor preventing more pricing initiatives is the generally high level of fare regulation.

The objective, to keep buses full, can be pursued on two fronts. One is the reduction of imbalances in traffic, and the negative effects they have on fleet size and average use of almost all assets. The other is the increase of traffic volume, involving growth in the travel market share (intermodal

competition) and growth in the total travel market. There would be fare incentives to promote travel in off-peak seasons of the year, off-peak days of the week, and off-peak times of the day. There would also be innovative pricing and other incentives along the lines of excursion fares and tour packages including hotels to encourage people to travel or to travel without their cars.

APPENDIX A

HISTORY OF REGULATORY RESPONSIBILITY FOR INTERCITY BUS TRANSPORTATION

Early History

Under the provisions of the *British North America Act, 1867*,[41] section 92, the provinces have the authority to regulate highways and the manner in which they are provided. By extension, the provinces have authority over the users of these highways, and this includes public buses. Section 92(10)(a), however, describes certain exceptions to provincial jurisdiction, including "Works and Undertakings connecting the Province with any other or others of the Provinces or extending beyond the Limits of the Province."

In 1949, Israel Winner of Lewiston, Maine, applied for and was granted a licence by the Motor Carrier Board of New Brunswick, to operate public motor buses from Boston, Massachusetts, through New Brunswick to Glace Bay and Halifax, Nova Scotia, and vice versa. The licence contained the restriction "not to embus or debus passengers in the said Province of New Brunswick." Winner considered the New Brunswick legislation under which the licence was issued to be *ultra vires*. Consequently, he ignored the restriction and carried passengers to, from and between points in New Brunswick, along the route over which he was authorized to operate.

SMT (Eastern) went to court seeking an injunction to restrain Winner from embusing and debusing passengers within the province; a declaration that he had no legal right to do so; an accounting of fares received for this; and damages and costs. The legal questions were referred to the Supreme Court of New Brunswick, which ruled the licensee was prohibited from his actions, and the legislation under which he was prohibited was "*intra vires* of the Legislature of the Province of New Brunswick."

Winner appealed to the Supreme Court of Canada, which, in a 1951 majority decision, ruled that "a bus line consisting of the service of carriage along with the means and organisation, may be an 'undertaking' within s. 92(10)(a) of the *B.N.A. Act*. . . . [and that] federal authority attaches to an undertaking although it originates in a foreign country (e.g., in the United States) and connects with one or more Provinces. Nor need the connection be physical."

In regard to the intra-provincial operations of an extra-provincial carrier, the Court ruled:

> the Province has power to control purely intraprovincial bus traffic. In this respect there is a difference in the position of an interprovincial or international bus line and the position of an interprovincial or international railway or telegraph system. These latter are specifically mentioned in s. 92(10)(a) and all their operations in their constitutional ambit fall within exclusive federal control regardless of the geographical points within which they occur.

The Supreme Court decision was reviewed by the Judicial Committee of the Privy Council which, in 1954, reversed the latter ruling, finding instead that as with a railway or telegraph system, the federal government has jurisdiction over all of the operations of a highway transport carrier that engages in any interprovincial or international operations.

The federal government came unexpectedly and immediately under strong pressure. The administrative infrastructure was not in place to take over motor vehicle regulation immediately. Meanwhile, the industry was trying to promote this new opportunity to escape from multiple regulatory jurisdictions. At the same time, however, the provinces made strong representations for mandated control over extra-provincial motor vehicle carriage. Control over motor vehicle operations, particularly trucking, provided an important source of political and commercial influence for provincial governments.

The federal *Motor Vehicle Transport Act* (MVTA) was enacted in 1954. It delegated federal authority over all the operations of extra-provincial motor carriers to the provinces. The provincial regulatory boards retained this authority, subject to the power of the federal government to "exempt" a specific motor vehicle undertaking from its terms, thus returning it to federal jurisdiction.

Existing Legislation

The *Motor Vehicle Transport Act, 1987* was substantially changed from the 1954 Act with respect to trucking, but for bus it is essentially unchanged. In Part I, Bus Transport, it reads:

Operating Licence

4. Where in any province a licence is, by the law of the province, required for the operation of a local bus undertaking, no person shall operate an extra-provincial bus undertaking in that province except under and in accordance with a licence issued under the authority of this Part.

5. The provincial transport board in each province may, in its discretion, issue a licence to a person to operate an extra-provincial bus undertaking in the province on the like terms and conditions and in the like manner as if the extra-provincial bus undertaking were a local bus undertaking.

Tariffs and Tolls

6. Where in any province tariffs and tolls for local bus transport are determined or regulated by the provincial transport board, the provincial transport board may, in its discretion, determine or regulate the tariffs and tolls for extra-provincial bus transport on the like terms and conditions and in the like manner as if the extra-provincial bus transport were local bus transport.

Also, Part IV, Exceptions and Enforcement of the Act states:

Exemption

16. The Governor in Council may, by regulation, on the recommendation of the Minister made after consultation by the Minister with the government of each province affected thereby, exempt from the application of this Act or of any provision of this Act, either generally or for a limited period or in respect of a limited area, any person, the whole or any part of any extra-provincial bus undertaking or extra-provincial truck undertaking, every extra-provincial bus undertaking or extra-provincial truck undertaking, any group or class of such undertakings or any extra-provincial bus transport or extra-provincial truck transport.

Experience with the Exemption Provision

The only exemption to provincial regulation under the provisions of the MVTA has been in Newfoundland. (While this exemption occurred under the 1954 Act, the relevant provisions of the 1954 and 1987 Acts are very similar.) A Canadian National Railways subsidiary, CN Roadcruiser, was introduced in 1968 when authority was granted to abandon the passenger rail service (the Newfie Bullet). CN Roadcruiser was authorized to operate in accordance with the provincial *Motor Carrier Act.* A series of appeals by Roadcruiser against the 1971 disallowance of a tariff by the Board of Commissioners of Public Utilities of Newfoundland (PUB), culminated in a 1975 Supreme Court decision that the service should be regulated under the federal legislation.

This changed the legislative authority under which Roadcruiser operated, but it did not remove it from the jurisdiction of the PUB. The PUB issued the appropriate certificate of authority, but placed restrictions on its tariff, which Roadcruiser appealed. Poor relations between Roadcruiser and the PUB eventually resulted in service being halted. The Government of Canada issued an Order in Council exempting the Roadcruiser service from the MVTA pursuant to section 5[42] of the Act. Under the *National Transportation Act* (1967) the Roadcruiser service then became subject to regulation by the Canadian Transport Commission.[43]

As viewed from our present perspective, the Governor in Council exempted a purely intra-provincial bus operation where the extra-provincial parent (Canadian National Railways) had no bus operations anywhere else in the country. This of course results from the Supreme Court decision that the service was "a part of the total Canadian Passenger Service operated by Canadian National and therefore should properly be regulated under the federal [Act]." Of course, now this is Canadian National's only passenger service as well as its only bus service, and it is interesting to speculate what decision the Court might reach today.

ENDNOTES

1. Statistics Canada, *Canadian Civil Aviation*, Catalogue No. 51-206, Table 2.2, and *Passenger Bus and Urban Transit Statistics*, Catalogue No. 53-215. Passenger-kilometres based on bus load factor of 38 percent, from D. Ward, *Profile of the Intercity Bus Industry* (Ottawa: Transport Canada, October 1990).

   Railway statistics were taken from unpublished data from the Transportation Division, Statistics Canada.

2. Local service in Newfoundland is by a number of small operators, often with small vehicles.

3. In the case of Greyhound, reference is to the charter use of its "Greyhound" line-haul buses. The company also owns Brewster Transport Company Ltd., which operates exclusively in the charter market. (Some Brewster buses are chartered occasionally by Greyhound during peak demand.)

4. Excluding Brewster.

5. Most of this section was prepared by Royal Commission staff member Pierre Dulude.

6. Experience with wheelchair-accessible coaches has been disappointing. Ridership by those requiring the facilities has been very low. The incremental cost per passenger with a mobility impairment has been very high. Industry asks us who will pay the cost and questions whether bus passengers, who tend to come from the lower-income groups, should pay for this other disadvantaged group.

7. *Official Canadian Bus Guide* (Cedar Rapids, Iowa: Russell's Guides, Inc. January–March 1991).

8. The provisions of this Act and its history are discussed in Appendix A.

9. Two studies of the bus industry were undertaken for the Commission by consultants: Peat Marwick Stevenson & Kellogg, *Intercity Passenger Bus Regulation in Canada*, a report prepared for the Royal Commission on National Passenger Transportation, RR-02, July 1991; Hickling Corporation, *Regulatory Reform in the Intercity Bus Industry: An International Comparison*, a report prepared for the Royal Commission on National Passenger Transportation, RR-06, September 1991.

10. Voyageur Colonial's former sister company in Quebec.

11. See endnote 7.

12. Owned by Pacific Western Transportation Ltd., Calgary.

13. Lorraine C. Hope and Barry E. Prentice, Transport Institute, University of Manitoba, *Analysis of Scheduled Bus Service in the Canadian Prairies (Draft)*, prepared for Economic Research Branch, Transport Canada, TP 11135-E, October 1991.

14. Like Red Arrow, Western Trailways is owned by Pacific Western Transportation Ltd., Calgary.

15. See endnote 7.

16. There is little (if any) price competition in the scheduled intercity bus industry. This is discussed later in section 6.2 which deals with intra-modal competition.

17. See endnote 7.

18. Bus fares used here are from the *Canadian Passenger Tariff No. 1* (Chicago, Illinois: National Bus Traffic Association, Inc.). They are the fares in effect July 15, 1990, just before the Commission's public hearings. They are used here to compare fare levels within the bus mode, rather than to make comparisons between modes, or to try and estimate current travel costs.

19. Generally, carriers operate in miles internally (there are exceptions) and convert to kilometres when required.

20. Newfoundland is not included in this discussion of interprovincial fares. Fares are not published nor tickets sold between points in Newfoundland and other provinces; not even tickets for the ferry service to Nova Scotia are available from Roadcruiser.

21. Voyageur Colonial significantly increased and restructured its fares during 1991 (in response to increased use of discount fares by VIA Rail).

22. The word "competitive" is used loosely in this context. It refers to segments over which buses of more than one carrier operate. These may be no more than relatively short overlaps of two routes, or they may be routes where two or more carriers compete. For instance, Greyhound and Gray Coach Lines do compete on the Sudbury–Toronto segment.

23. 365 miles for the local service at the same fare.

24. See endnote 1.

25. This service is licensed as Airways Transit Service Ltd. Also noteworthy in this context, a service operated by Quick Coach Lines Ltd., and licensed to operate from Vancouver to Bellingham and Sea Tac airports, and to (actually through) downtown Seattle, provides service to intermodal travellers and to origin-destination travellers (in competition with Greyhound).

26. The cost and revenue schedules, from which these conclusions have been reached, were developed from corporate data provided to the Royal Commission's Research Division in confidence.

27. Explorations of this question with analytical staff of another major carrier revealed that it will be very difficult for carriers, faced with a newly deregulated environment, to identify the correct commercial decision in every case. Doubtless, were deregulation to occur, some carriers who terminate services might find that the loss of some of these elements of their networks undermines their competitive position in the passenger and parcel markets as a whole.

28. *Canadian Passenger Tariff No. 1.*

29. The methodology does not account for other fare levels (discounts for senior citizens or students, same day return reduced fares, etc.), and to that extent the calculated break-even passenger load is understated.

30. For a local service, the sum of the individual bus fares for the route segments was used.

31. This would seem a reasonable assumption, particularly if one considers the low absolute level of present fares for the usually short trips concerned, and/or if one accepts the argument that the withdrawal of service would cause severe social hardship.

32. Most of the material in this section was taken from two reports on the bus industry prepared for the Royal Commission: Peat Marwick Stevenson & Kellogg, *Intercity Passenger Bus Regulation*, RR-02, July 1991, and Hickling Corporation, *Regulatory Reform in the Intercity Bus Industry: An International Comparison*, RR-06, September 1991.

33. Jose A. Gomez-Ibanez and John R. Meyer, "Privatizing and Deregulating Local Public Services, Lessons from Britain's Buses," *APA Journal* 9, winter 1990.

34. Hickling, Regulatory Reform, citing European Council of Ministers, *Regulating Reforms in the Transport Sector*, Madrid, 26–27 May 1987.

35. The information in this section is taken from the report by Peat Marwick Stevenson & Kellogg, *Intercity Passenger Bus*.

36. These payments include compensation of $22.4 million from the Ministry of Northern Development and Mines, in accordance with a fixed-price contract, for operations designated "non-commercial": rail $17.8 million, air $4.5 million; and marine $62,000. The remaining $2.4 million was compensation from the Government of Canada for losses on the passenger rail service between North Bay and Toronto, in accordance with section 261 of the *Railway Act*.

37. The higher amount per bus-mile and lower amount per passenger probably reflect higher average load factors.

38. *Newfoundland Act*, R.S.C. 1985, Appendix II, no. 32.

39. The Supreme Court's reason for its 1975 decision was that the bus service was a part of the total integrated bus-ferry passenger service operated by CN, and particularly its integration with the ferry mode. Presumably, with other than CN operation this no longer would be true. In this regard, it is noted that CN no longer operates the ferry service.

40. See Appendix A.

41. Now called the *Constitution Act, 1867*.

42. MVTA section 6 (previously section 5) stated:

> 6. The Governor in Council may exempt any person or the whole or any part of an extra-provincial undertaking or any extra-provincial transport from all or any of the provisions of this Act. R.S., c.M-14, s.5.

This wording seems, to the layman, merely a more concise (if less conciliatory) expression of the MVTA, 1987 section 16 quoted earlier. So, similar power persists.

43. As with the MVTA, the NTA of 1967 and the NTA, 1987 are similar in this regard. Part IV of NTA, 1987 provides for the regulation of bus transport by the National Transportation Agency but specifies:

> 184. (1) While the *Motor Vehicle Transport Act, 1987* is in force and notwithstanding anything in this Act, this Division applies only in respect of such extra-provincial bus undertaking or such part thereof as is exempted from the application of the *Motor Vehicle Transport Act, 1987* pursuant to section 16 of that Act.

17

VIA RAIL SERVICES: ECONOMIC ANALYSIS

Charles Schwier* and Richard Lake**

July 1992

1. INTRODUCTION

This paper examines the present cost structure of VIA Rail Canada and presents a costing model which allows for the determination of fully allocated costs by groups of VIA Rail passenger services and the integration of anticipated changes in the efficiencies, equipment and mode of operation for future railway passenger services. This model is then used to examine the total costs, financial results and projected deficits for a variety of Canadian rail passenger services. Recent Canadian results are compared to the results of the United States railway passenger system, Amtrak. The context for the economic analysis of VIA Rail is also presented.

Section 2 provides a historical summary of VIA's overall financial and operational indicators plus a service-by-service summary of 1989 results. Although later data are available, circumstances (particularly in 1990) were most unusual; reference is only made to these results as they might indicate trends unrelated to or beyond the major service cuts executed during that year.

Section 3 describes the costing model and procedures for projecting the future financial viability of VIA's services. The Montreal–Ottawa–Toronto service group is used as an example. Using this model, Section 4 summarizes

* Canadian Institute of Guided Ground Transport.
** The Research and Traffic Group.

the projected costs and revenues for a number of VIA's service groups assuming what for convenience is called a "steady-state environment" or "adjusted case" which allows for improvements from emerging demand growth, productivity improvements and equipment upgrades reasonably foreseeable in the next few years.

In Section 5, the recent financial experience of VIA is contrasted briefly with results for a number of foreign passenger railway systems. The financial progress of Amtrak is examined in more detail and compared with VIA's financial experience. Reasons for differences are offered.

Sections 6 and 7 consider the institutional and policy-setting environment in which VIA has operated and the way in which this setting may have affected the internal operations of VIA. Of special interest is the influence these factors may have had on VIA not achieving the level of financial improvement that Amtrak has experienced over its first 15 years of life. Implications concerning VIA direction and management are discussed in Section 7.

In Section 8, each of the eight mandatory remote services which VIA operates are examined in some detail, especially the ridership patterns and options for the future.

The prospects for viability of VIA's rail passenger services and the concerns that large VIA subsidies pose with respect to equal treatment of modes are discussed in Section 9. This is followed in Section 10 by an estimation of the one-time costs that would be incurred if VIA — and federally supported rail passenger services — were terminated.

1.1 RAIL'S INHERENT CHARACTERISTICS

The transportation of passengers by rail has certain inherent characteristics that distinguish it from the service provided by the other modes. These are the characteristics that attract those who extol the virtues of rail, and they are the characteristics that should dictate VIA Rail's niche as Canada enters the next century with a mature transportation system.

Capacity

Trains can move a large number of people. A double track could handle 25 trains per hour each way, each carrying in excess of a thousand persons.[1] This is three times the hourly capacity of a four-lane freeway with an average

of two persons per car. It equals the hourly capacity of four runways handling aircraft each carrying 350 passengers. It would be, however, of less capacity than a two-lane highway dedicated to 47-passenger buses. Regardless, such capacities are an order of magnitude above anything VIA Rail might have reason to contemplate.

Service Capability

Rail is able to provide very comfortable service with a wide range of amenities, and can do so at speeds of 300 kilometres per hour.[2] Magnetic levitation will probably allow speeds of 500 kilometres per hour. Railway technology is capable of operation under extreme weather conditions and with zero driver visibility.

Environmental Impact

Railway noise has a substantial but local effect. Tracks can interrupt drainage and trains can be a hazard to wildlife if the right-of-way is not fenced, and an obstruction to animal migration where it is fenced. However, rail does not allow uncontrolled access by passengers to sensitive areas through which the track passes.

It is practical to operate trains using electric power. If this power were generated from hydraulic or other non-combustion sources, rail could be the least emissions-causing mode. Current railway diesel systems, however, emit both carbon dioxide and nitrogen oxides (that cause harm to both the natural environment and human health). For current railway services in Canada, emissions per passenger, while often lower than for cars, are substantially higher than for intercity bus. Transcontinental train (sleeper) travel with current equipment can consume more fuel per passenger than any other mode, and thus pollute more.

Economics

Operating a railway passenger service is expensive. Track is expensive to build and expensive to maintain. A rail car is many times heavier than a bus and, with its share of the locomotive, costs 7 times as much while having a capacity of less than twice as many passengers. The operation and control of trains are complicated and labour intensive. Cost per train hour is high.

If trains are to be economical, relative to the other modes, they must be intensively used. One must move a lot of seats quickly, and they must be full. Rail can only be successful if it is fast and supported by many riders who value the comfort and amenities it offers and are prepared to pay for them.

1.2 CANADA'S RAILWAY PASSENGER SERVICES

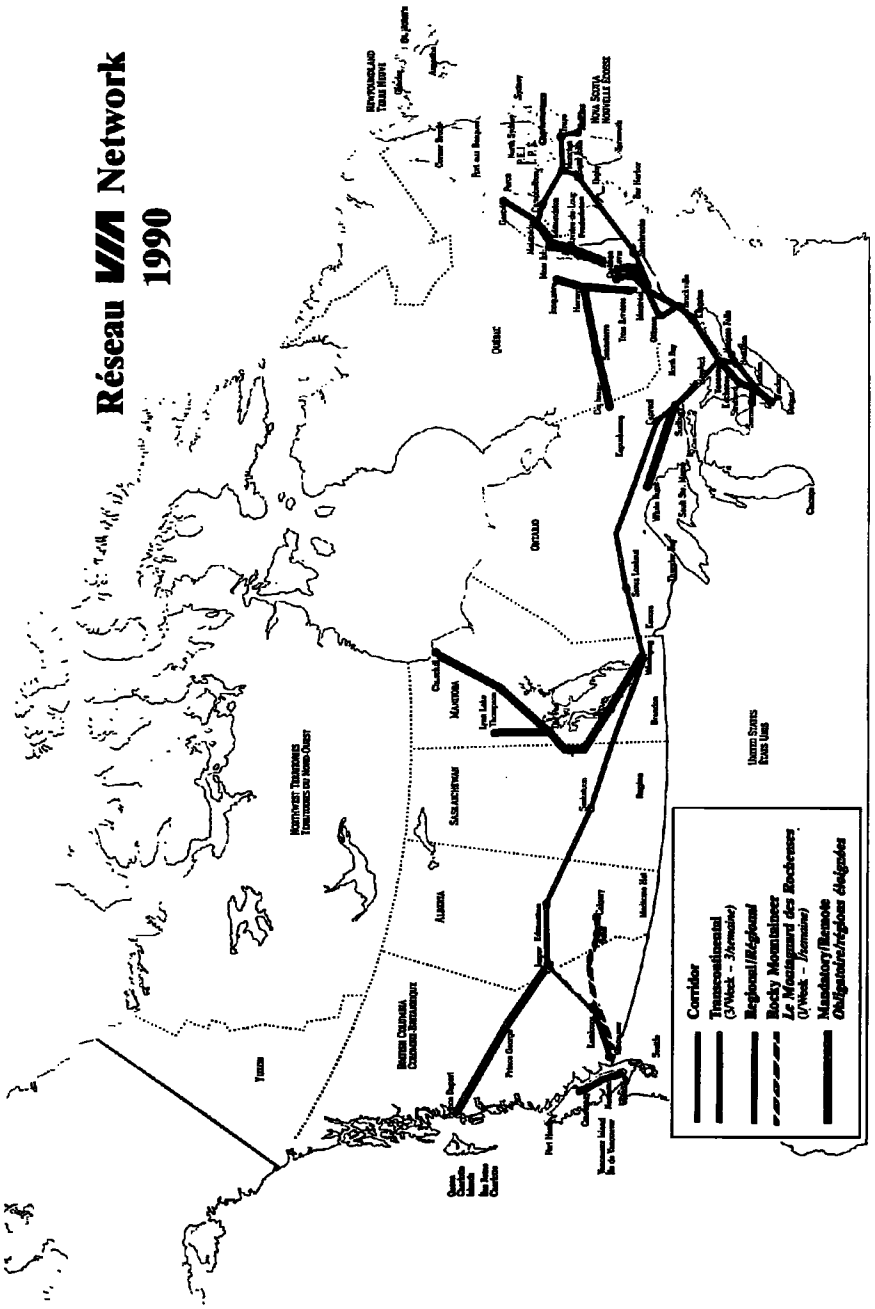
For more than half a century the railways were the only practical means for passengers to cross Canada or to reach its interior. Alternatives to rail travel were best characterized as tests of endurance and survival; they were adventures suited only to the fittest. Most of interior Canada's population arrived by train.

While the railway is important in Canada's history, the present is quite different. Even in the developing world, few countries depend on rail for their basic passenger access. In Canada, use of rail has faded. Rail remains an important long-distance mode in China, India and Russia, and it is important in the more compact countries of developed Asia and Europe, but not for long-distance travel. Passenger rail in Japan and Europe is essentially a short distance mode; most travel is less than 100 kilometres. As in Canada and the United States, passenger rail in Europe and Japan is, on average, subsidized.

In 1976, Dr. R.A. Bandeen, then President of Canadian National, apparently without the knowledge of the government, sponsored a major promotion of an Amtrak-style approach for railway passenger services in Canada. He had a turbo train painted blue and yellow, with the now familiar VIA logo, and operated it *with passengers* — mostly reporters — at a record speed approaching 230 kilometres per hour over a measured mile on a run from Montreal to Kingston. The promotion was a media success.

VIA Rail Canada Inc. was incorporated in January 1977 as a reorganization within Canadian National Railways. Within a matter of months the government had adopted the VIA Rail concept and organization, and the corporation was formally purchased from CN for $100,000 as of December 1977.[3]

Figure 1
VIA Rail Network and Related Routes, 1990



Source: VIA Rail's 1990 network map as revised by authors.

Canada's national railway passenger corporation (VIA) inherited most of the nation's passenger operations when the federal government relieved Canadian National Railways and Canadian Pacific Limited of the responsibility for these services. Unlike the passenger railways of other countries, including the Amtrak system, VIA Rail (route map illustrated on Figure 1) does not own or operate a major track system.

Creation of VIA Rail was promoted as heralding a new era of improved passenger rail services. VIA took over all existing CN and CP intercity services with the exception of minor Newfoundland mixed trains (combined passenger and freight) and one mixed train in Alberta. The organizational separation, that led to VIA Rail as a railway passenger Crown corporation in December 1977, was initially upbeat, but soon became a less pleasant divorce. More than a decade later, disputes persist over how much VIA should pay, particularly to CN, for equipment and services and for use of the stations and tracks.

2. VIA Rail's Performance

2.1 VIA'S PERFORMANCE 1980–1989

Table 1 summarizes VIA's financial and operational results from 1979 through 1991. For comparison purposes, this study has focussed on 1980 through 1989, 1980 being the first year in which VIA had full responsibility for operation of most passenger trains in Canada, and 1989 being the last year before the significant downsizing of VIA's network and operations disrupted the data time series.

During the 1980s, annual passenger volumes dropped 15 to 20 percent from 7.6 million to 6.4 million. Passenger-kilometres dropped by 21 percent over the same period, reflecting shorter average trip lengths. To a large extent, this can be attributed to a progressive reduction in the number and extent of routes offered; total train-kilometres dropped by 16 percent over the same period. A measure of passenger density, average passenger-kilometres per train-kilometre, fell from a high of 127 in 1980 to 119 in 1989. While train-kilometres had fallen by only 16 percent, car-kilometres fell by 31 percent since 1980, reflecting a decreasing use of non-revenue train space and an increasing use of higher-capacity cars. With the exception of 1989, when the average rose to 59 percent, load factors have been reasonably constant in the 50 to 53 percent range.

On the financial side, passenger revenues increased by 74 percent (not adjusted for inflation) but have remained steady in constant dollars. The average "service" revenue per passenger-kilometre, however, increased 31 percent *in real terms* between 1980 and 1989. This reflects a combination of real fare increases and a changing product mix. Non-passenger revenues increased substantially but remained small.[4]

Operating expenses have followed the same general pattern, increasing 69 percent before inflation. Even after inflation, VIA's total operating expenses increased slightly despite the decline in passenger volume and workloads. In real terms, the expenses per passenger-kilometre have increased by 30 percent; per train-kilometre by 22 percent and per car-kilometre by 48 percent. The reasons for these increasing unit costs are varied. Among them:

- the presence of economies of scale/scope and "fixed" costs in the railway industry such that costs do not change in proportion to changes in ridership;
- improvements in the level of service and reliability of operation, especially the on-time performance of trains;
- steadily increasing maintenance and servicing requirements of older passenger cars and locomotives;
- the gradual transfer of functions, assets and employees from the operating railways to VIA. The transfer process has resulted in significant organization and training costs which should be a temporary rather than a permanent cost;[5] and
- abrupt changes in the network and services offered due to government-mandated service cuts and restoration which have interfered with the long-run planning process.

The net result is that VIA's operating deficit has grown from $319 million in 1980 to $527 million in 1989. In real (current dollar) terms, the increase is relatively small — only 5 percent in 10 years. However, given the decline in traffic, the real operating deficit per passenger-kilometre increased by 27 percent between 1980 and 1989, despite a substantial increase in revenue per passenger-kilometre. VIA's level of cost recovery has been stagnant through the 1980s, ranging between 28 and 32 percent with no discernible long-term trend toward improvement.

Table 1

VIA HISTORICAL PERFORMANCE DATA, 1980–1991

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Traffic/Operating												
Total route-km ('000)	28.9	23.7	na	23.2	24.0	25.1	24.7	24.5	24.5	24.5	16.6	16.6
Unique route-km ('000)	22.6	18.7	na	18.4	19.5	19.9	19.5	19.4	19.4	19.4	13.5	13.5
Passengers ('000)	7,586	7,809	6,849	6,541	6,770	7,034	6,286	5,865	6,415	6,457	3,536	3,633
Passenger-km (M)	3,104	3,011	2,447	2,411	2,379	2,483	2,261	2,093	2,299	2,442	1,263	1,320
Average employees	4,200	4,135	3,640	3,474	3,653	4,178	5,370	5,726	6,873	6,584	4,663	4,477
Train-km (M)	24	24	20	20	20	21	21	20	20	20	10	10
Car-km (M)	164	161	127	115	116	123	119	108	116	114	58	58
Financial (Current $)												
Passenger revenue ($M)	140	165	162	173	177	201	204	195	220	244	139	144
Other revenue ($M)	0	3	17	21	24	4	5	2	3	4	4	6
Operating expense ($M)	459	581	602	642	595	725	689	696	790	775	540	524
Operating deficit ($M)	319	413	423	448	394	519	480	499	566	527	397	373
Cost recovery ratio	0.31	0.29	0.30	0.30	0.34	0.28	0.30	0.28	0.28	0.32	0.26	0.29
Capital expenditures ($M)	90	109	114	135	154	154	93	81	126	61	31	40
Government funding ($M)	408	521	535	598	473	631	506	536	637	532	441	393
Government funding (%)	74%	76%	75%	75%	70%	75%	71%	73%	74%	68%	73%	71%
Deficit per pass-km (¢)	10.3	13.7	17.3	18.6	16.6	20.9	21.2	23.8	24.6	21.6	31.4	28.3
Indicators (Current $)												
Pass-km/employee ('000)	739	728	672	694	651	594	421	365	334	371	271	295
Pass-km/route-km ('000)	138	161	na	131	122	125	116	108	117	124	94	98
Train-km/route-km ('000)	1,084	1,269	na	1,069	1,010	1,046	1,076	1,011	1,022	1,039	759	745
Passenger-km/train-km	127	127	123	123	121	119	108	107	114	119	123	131
Average trip length (km)	409	386	357	369	351	353	360	357	358	378	357	363
Load factor (%)	53%	51%	50%	53%	52%	52%	51%	52%	52%	59%	57%	58%

Table 1 (cont'd)

VIA Historical Performance Data, 1980–1991

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Revenue/pass-km (¢)	4.4	5.3	6.4	7.0	7.3	7.9	8.8	9.0	9.1	9.5	10.6	10.9
Operate cost/pass-km (¢)	14.8	19.3	24.6	26.6	25.0	29.2	30.5	33.3	34.4	31.7	42.7	39.7
Deficit/passenger-km (¢)	10.3	13.7	17.3	18.6	16.6	20.9	21.2	23.8	24.6	21.6	31.4	28.3
Operating cost/car-km ($)	2.8	3.6	4.8	5.6	5.1	5.9	5.8	6.4	6.8	6.8	9.4	9.1
Operate cost/train-km ($)	18.8	24.5	30.2	32.7	30.3	34.8	32.8	35.5	39.3	37.9	52.7	52.1
Depreciation as % of cost	2%	2%	4%	4%	6%	6%	9%	8%	7%	7%	8%	8%
RRy payments as % of cost	na	64%	62%	62%	61%	59%	37%	29%	14%	12%	na	na
Indicators (Constant 1990 $)												
Revenue/passenger-km (¢)	7.6	8.3	9.0	9.3	9.2	9.7	10.3	10.2	10.0	9.9	10.6	10.4
Operate cost/pass-km (¢)	25.4	29.8	34.5	35.1	31.7	35.7	35.9	37.7	37.5	33.1	42.7	37.9
Deficit/passenger-km (¢)	17.6	21.2	24.2	24.5	21.0	25.6	25.0	27.0	26.9	22.5	31.4	27.0
Operating cost/car-km ($)	4.8	5.6	6.7	7.3	6.5	7.2	6.8	7.3	7.4	7.1	9.4	8.7
Operating cost/train-km ($)	32.3	37.9	42.3	43.2	38.4	42.6	38.7	40.3	42.8	39.5	52.7	49.7

Notes: **Financial data taken from VIA annual reports. The most recent restated data have been used.**
Route-km approximated from year-end timetables and rounded to nearest 25 km.
"Government funding" is sum of operating contract revenues plus capital advances.
Funding includes $59.7 million for labour protection in 1990 and $24.7 million in 1991, not reflected in funding percentage.
Prior to 1988, government contract revenue included an allowance for depreciation.
$161 million in labour protection costs due to restructuring is not included in 1989 operating expenses.
Depreciation is included in expenses in calculation of cost recovery ratio. Starting in 1991, VIA excluded depreciation.
"Revenue per passenger-km" is net of tour revenue.
"CN/CP Payments" include only money paid to CN and CP for train operations.
"Constant dollar" conversions based on the GDP Deflator published by Statistics Canada.
Distance data originally reported in miles; converted to km.
M = million

Over this period, VIA incurred a total of $4.6 billion in operating deficits. Net capital expenditures totalled $1.2 billion.

2.2 PERFORMANCE CHANGES 1989–1991

At the beginning of 1990, VIA — under instructions from the federal government — underwent a significant downsizing which included a 30 percent reduction in the extent of VIA's network and a 50 percent reduction in the number of train-kilometres operated. The downsizing included both the elimination of many services and the reduction in frequency on other services. Only the remote services were unaffected by the service cuts.

The immediate results of these changes included a 46 percent reduction in ridership — although this translated into only a 43 percent reduction in revenues. Operating expenses dropped — but only by 30 percent. Thus VIA was able to reduce its operating deficit by some $170 million. The downsizing did nothing to improve *relative* financial performance: cost recovery fell from 32 percent to 26 percent while the deficit per passenger-kilometre increased by 40 percent in real terms. The reasons for this are varied.

- The very poorly performing remote services became a larger part of VIA's overall portfolio.
- VIA's long-distance trains switched to a three-day-per-week schedule, which is less expensive in total, but much less efficient than the previous daily operation.
- Many of VIA's overhead and shared facility costs could not be adjusted downwards as fast as the reductions in train services and ridership. In fact, the cost of some functions could be reduced only by the same amount as the reduction in service.
- Ridership on some routes dropped more than expected given the change in service levels between 1989 and 1990.

In 1991, revenues and ridership recovered somewhat from 1990 levels. Operating expenses were reduced slightly. Thus VIA was able to post a 29 percent cost recovery — about the average for the 1980s. The deficit per passenger-kilometre was reduced by 14 percent in real terms from the 1990 level but still remained some 20 percent higher than the level achieved in 1989.

VIA continues to undertake programs to improve operational efficiency and to regain lost ridership. Thus it is not clear if the financial results for 1991 are indicative of the long-term, post-restructuring situation, even allowing for "new" initiatives. It is clear, however, that overall financial performance has suffered as a result of the service cuts.

2.3 1989 PERFORMANCE BY SERVICE

In 1989, before the restructuring and cutbacks, VIA offered nearly 40 different passenger train services.[6] The financial results for these services are summarized in Table 2. The costs reported in Table 2 must be viewed with caution since these data represent only costs which are deemed by VIA Rail to be avoidable with specific train services, and there is a great deal of arbitrariness and latitude for interpretation here. Avoidable costs (as attributed by VIA)[7] accounted for only 58 percent of VIA's operating expenses in 1989.

The services were divided into a number of service groupings.

Western Interprovincial

Services in 1989 included a daily train from Montreal/Toronto (joining in Sudbury) to Vancouver; a daily train between Winnipeg and Vancouver and thrice weekly service to Prince Rupert. The latter service connected with the Winnipeg–Vancouver train at Jasper and provided service to some "remote" areas in northern British Columbia. Western trips tend to be a blend of long and short journeys. The western services recovered about half of "avoidable" costs. In 1991, western service was limited to a single Toronto–Winnipeg–Edmonton–Vancouver train operating three days per week.

Eastern Interprovincial

In 1989 eastern services consisted of a daily train between Montreal and Halifax via Saint John and a daily train from Montreal via Campbellton to Moncton where it connected with the Halifax train. Through connections were provided, three days a week, to Gaspé from the Moncton train. Although markets and revenue yields are weaker in the East than in the West, the eastern services recovered just over half of "avoidable" costs in 1989. In 1991, there was three-days-per-week service on the Montreal–Saint John–Halifax, the Montreal–Campbellton–Halifax and the Montreal–Gaspé routes.

Table 2
1989 VIA RESULTS BY SERVICE

	See Appendix A, notes to specific line entries	Route-km	Daily trains	Best trip time	Pass-trips ('000)	Pass-km ('000)	Load factor (%)	Train-km ('000)	Cars per train	Avg. pass-trip (km)
Montreal–Quebec (South Shore)		272	3*	3:20	262	64,001	45	763	3.0	244
Montreal–Ottawa		187	4*	2:00	317	55,902	50	555	3.5	176
Montreal–Toronto		539	6	4:30	1,204	493,534	62	2,414	5.7	410
Toronto–Ottawa		446	4	3:59	505	163,564	54	1,207	3.8	324
Toronto–Kingston		254	1*	2:45	64	11,674	44	158	2.8	182
Mtl–Ott–Tor					2,090	724,675	59	4,334	4.8	347
Toronto–Windsor		359	4	4:10	783	174,878	53	1,125	5.1	223
Toronto–Sarnia	1,2	280	5	3:00	589	81,567	43	834	3.7	138
Toronto–London	1	185	4*	2:05	307	37,474	45	467	3.0	122
Toronto–Niagara Falls	3	132	3	1:55	266	28,368	52	290	3.7	107
SW Ontario					1,945	322,286	49	2,175	4.2	166
Corridor subtotal					4,297	1,110,961	55	7,812	4.4	259
Moncton–Montreal (Ocean)	4	1,047	1	15:45	218	94,802	60	760	7.6	435
Gaspé–Montreal	4	1,052	3/wk	16:30	66	49,700	49	237	4.8	753
Halifax–Montreal (Atlantic)		1,210	1	20:40	267	159,889	68	879	9.5	599
Eastern subtotal					551	304,390	61	1,875	9.5	552
Toronto/Montreal–Vancouver	5	4,645	1	75:05	631	618,258	82	3,673	9.3	980
Winnipeg–Vancouver	6	2,508	1	39:40	208	206,986	69	1,811	6.6	995
Jasper–Prince Rupert	6	1,160	3/wk	21:55	27	19,272	48	354	4.8	714
Western subtotal					866	844,516	78	5,837	8.2	975

Table 2 (cont'd)

1989 VIA Results by Service

	See Appendix A, notes to specific line entries	Route-km	Daily trains	Best trip time	Pass-trips ('000)	Pass-km ('000)	Load factor (%)	Train-km ('000)	Cars per train	Avg. pass-trip (km)
Montreal–Jonquière		496	3/wk	8:55	27	5,959	24	154	3.3	221
Montreal–Senneterre		703	3/wk	13:00	38	9,712	23	214	5.9	256
Winnipeg–Capreol		1,498	3/wk	22:15	48	12,003	22	465	2.8	250
Senneterre–Cochrane		296	3/wk	5:35	4	510	11	64	2.1	128
Sudbury–White River		484	3/wk*	8:20	10	1,379	17	143	1.4	138
Winnipeg–Churchill		1,697	3/wk	34:35	43	19,594	33	518	5.2	456
Wabowden–Churchill	7	702	1/wk	two days	0	63	4	0	1.0	n.a.
The Pas–Lynn Lake	8	389	3/wk	10:05	8	1,519	22	39	6.0	190
Remote subtotal					178	50,739	25	1,598	4.0	285
Halifax–Sydney		473	8/wk	5:49	115	31,994	51	439	2.3	278
Halifax–Yarmouth		348	1	5:35	58	10,128	39	253	1.6	175
Halifax–Moncton–Saint John		449	1*	6:00	49	9,803	31	317	1.8	200
Moncton–Campbellton		301	1*	3:30	29	5,929	35	214	1.3	204
Moncton–Edmundston		372	3/wk	5:30	10	3,009	33	116	1.3	301
Quebec–Mont Joli		357	1*	5:15	37	7,097	19	246	2.1	192
Mtl–Trois Rivières–Quebec		277	2	3:30	36	8,224	28	486	1.0	228
Montreal–Sherbrooke		159	1*	2:10	20	2,028	39	89	1.0	101
Toronto–Havelock		163	1	2:43	44	4,118	28	116	1.9	94
Toronto–North Bay	9	367	9/wk	4:45	66	20,954	46	328	4.0	317
Cochrane–Kapuskasing	9	111	1	1:53	7	769	15	77	2.0	110
Victoria–Courtenay		225	6/wk	4:00	50	7,236	50	161	1.4	145
Regional subtotal	10				521	111,288	37	2,842	1.9	214
Rocky Mountaineer			seasonal*		15	13,887	74	56	6.5	926
Grand total					**6,428**	**2,435,782**	**59**	**20,020**	**5.6**	**379**

Note: n.a. = not available

Table 2 (cont'd)
1989 VIA RESULTS BY SERVICE

	Route density pkm/rkm ('000)	Service revenue ($'000)	Avoidable cost ($'000)	Avoidable cost recovery (%)	Revenue per pass-km (¢)	Avoidable cost/ pass-km (¢)	Status after 1990 restructuring
Montreal–Quebec (South Shore)	235	7,546	16,287	46	9.9	25.4	Retained
Montreal–Ottawa	299	6,164	12,781	48	10.6	22.9	Retained at 3/day, now 4
Montreal–Toronto	915	48,375	69,835	69	9.5	14.1	Retained at 5/day, now 6
Toronto–Ottawa	367	17,568	25,423	69	10.6	15.5	Retained at 3/day, now 4
Toronto–Kingston	46	1,159	2,125	55	9.9	18.2	Discontinued
Mtl–Ott–Tor		73,266	110,164	67	9.8	15.2	
Toronto–Windsor	487	18,814	27,083	69	10.7	15.5	Retained
Toronto–Sarnia	291	8,657	15,513	56	10.6	19.0	Retained at 2/day
Toronto–London	202	4,254	8,015	53	11.3	21.4	Daily (prov. support)
Toronto–Niagara Falls	215	3,346	5,786	58	10.3	20.4	Retained at 3/day
SW Ontario		35,071	56,397	62	10.7	17.5	
Corridor subtotal		115,883	182,848	63	10.1	16.5	
Moncton–Montreal (Ocean)	91	7,890	18,530	43	8.3	19.5	3/wk through to Halifax
Gaspé–Montreal	47	4,529	7,401	61	9.0	14.9	Retained as separate train
Halifax–Montreal (Atlantic)	132	14,081	25,194	56	8.5	15.8	Retained at 3/wk
Eastern subtotal		26,500	50,388	53	8.5	16.6	
Toronto/Montreal–Vancouver	133	53,738	98,782	54	7.9	16.0	3/wk ex Toronto via CN
Winnipeg–Vancouver	83	17,284	42,398	41	7.7	20.5	Discontinued
Jasper–Prince Rupert	17	1,700	7,387	23	7.8	38.3	Retained
Western subtotal		72,722	148,567	49	7.8	17.6	

Table 2 (cont'd)

1989 VIA Results by Service

	Route density pkm/rkm ('000)	Service revenue ($'000)	Avoidable cost ($'000)	Avoidable cost recovery (%)	Revenue per pass km (¢)	Avoidable cost/ pass km (¢)	Status after 1990 restructuring
Montreal–Jonquière	12	557	2,529	22	8.7	42.4	Retained
Montreal–Senneterre	14	963	4,357	22	9.9	44.9	Retained
Winnipeg–Capreol	8	1,039	8,121	13	8.5	67.7	Served by Interprovincial
Senneterre–Cochrane	2	67	1,009	7	9.4	197.8	Service cut back
Sudbury–White River	3	136	963	14	9.9	69.8	Retained
Winnipeg–Churchill	12	2,527	12,057	21	9.9	61.5	Retained
Wabowden–Churchill	n.a.	5	59	8	8.0	94.0	Retained
The Pas–Lynn Lake	4	146	978	15	9.3	64.4	Retained
Remote subtotal		5,440	30,073	18	9.4	59.3	
Halifax–Sydney	68	2,242	6,034	37$	7.0	18.9	Discontinued
Halifax–Yarmouth	29	882	2,573	34	8.6	25.4	Discontinued
Halifax–Moncton–Saint John	22	781	3,470	23	8.0	35.4	Discontinued
Moncton–Campbellton	20	510	1,828	28	8.6	30.8	Discontinued
Moncton–Edmunston	8	232	888	26	7.7	29.5	Discontinued
Quebec–Mont Joli	20	584	2,804	21	8.2	39.5	Discontinued
Mtl–Trois Rivières–Quebec	30	712	3,159	23	7.5	38.4	Discontinued
Montreal–Sherbrooke	13	188	722	26	9.3	35.6	Discontinued
Toronto–Havelock	25	504	1,376	37	12.2	33.4	Discontinued
Toronto–North Bay	57	2,297	5,863	39	10.6	28.0	Discontinued
Cochrane–Kapuskasing	7	117	1,171	10	14.7	152.2	Discontinued
Victoria–Courtenay	32	738	1,440	51	8.2	19.9	Retained (court case)
Regional subtotal		9,787	31,328	31	8.5	28.2	
Rocky Mountaineer		6,614	5,506	120	47.6	39.6	Sold to private operator
Grand total		**236,946**	**448,710**	**53**	**9.2**	**18.4**	

Note: See Appendix A, Notes to VIA Route Specific Data
n.a. = not available

Montreal–Ottawa–Toronto Corridor (M–O–T)

A number of departures that constitutes a reasonable intercity option for travellers, and travel times comparable with or better than the car, are provided between Montreal and Ottawa, Ottawa and Toronto, and Toronto and Montreal using VIA's newer LRC equipment (the cars, not generally the locomotives). Ridership in this group increased in recent years as a result of various service and marketing initiatives. M–O–T services account for nearly a third of VIA's total ridership (passengers and passenger/kilometres) and recover approximately two thirds of "avoidable" costs from passenger revenues.

Southwestern Ontario

Considered by VIA as part of the M–O–T corridor, four routes are served westbound from Toronto. Trip distances tend to be short (averaging 166 kilometres) reflecting a long-distance commuter and day-trip market. Revenues from southwestern Ontario covered 62 percent of "avoidable" costs. Ridership was nearly one third of VIA's total.

Regional Services

For the most part, regional services consisted of short (one- or two-car) trains operating once a day offering either a "commuter-like" service into regional centres or supplementary service on lines served by transcontinental trains. Ridership on many regional services has been stagnant or declining in recent years. While there were notable exceptions for individual routes as a whole, VIA's regional services recovered less than a third of "avoidable" costs. For the most part, regional services had been eliminated by 1991.

Remote Services

VIA operates eight[8] train services through "remote" areas where, for some of the run, there is no other ground transportation available. Service varies from long, overnight trains (Winnipeg–Churchill) to short, mixed trains (Lynn Lake). Load factors and passenger density tend to be low, resulting in "avoidable" cost recovery ranging between 7 and 22 percent. There are two points worth noting with respect to remote services:

- Generally only a portion of the route is truly without alternate transportation.

- In some cases, a long-distance train (incidentally) provides services to remote communities which, in the 1970s, were served by a separate, short-distance train.[9]

2.4 OTHER RAIL PASSENGER SERVICES AND FINANCIAL RESULTS COMPARED WITH VIA

Regular intercity and rural rail passenger services are also offered by six other railways. These services account for less than 5 percent of the total Canadian intercity and rural railway passenger market. In the case of provincially owned railways, subsidies are provided by the provincial government. In the case of federally chartered railway carriers, a subsidy of 80 percent of the actual loss (based on long-run variable cost, including an allowance for capital) is provided by the Government of Canada under section 270 of the *Railway Act*, a process unchanged from the *National Transportation Act* of 1967. While there are differences in funding arrangements, the financial performance of these services is not significantly different from similar services offered by VIA.

The **Algoma Central Railway** (ACR) provides service between Sault Ste Marie and Hearst (476 kilometres) six days per week during the summer and three days per week during the winter. Most of this route is without road access. Ridership is approximately 40,000 annually — about 45 percent tour passengers. Revenues cover about 25 percent of costs. For 1987 the ACR received $2.3 million in federal subsidies under section 270. The ACR also operates a number of separate tour trains with annual ridership on the order of 100,000. Tour revenues cover incremental operating costs but do not provide sufficient net income for reinvestment in equipment or to cover any significant allocation of fixed costs. Passenger trains — including government subsidies — account for one fifth of the ACR's receipts. Declining freight revenues have resulted in the passenger system having to bear an increasing proportion of maintenance and administrative costs and in significant financial difficulties for the ACR. Over a five-year period starting in 1987, the ACR was paid a total of $15 million under the terms of a joint federal–provincial agreement designed to "continue its non-passenger rail services." In the 1990s, the ACR received other provincial subsidies as well.

Rail passenger service is a minor part of the provincially owned **British Columbia Railway** (BCR) with passenger revenues being less than 1 percent of freight revenues. The BCR offers daily service between North Vancouver

and Lillooet (254 kilometres). Trains continue through to Prince George (490 kilometres) three days per week (daily during the peak period). In 1987, 79,000 passengers were carried, and there has been significant revenue/ridership growth in subsequent years. The BCR attributes over half of its ridership to tour groups. Specific provincial funding contributions to the rail passenger operations has grown from $2.1 million in 1985 to $3.3 million in 1990.[10] The province has also provided separate capital funding totalling $5 million between 1985 and 1990 for the BCR to rebuild its passenger fleet.

Until the beginning of 1990, **Canadian National** operated a weekly mixed train service between Edmonton and Waterways (Fort McMurray), Alberta. In 1987, federal subsidy payments for this service were approximately $310,000.

In 1987, the **Ontario Northland Railway** (owned by the Province of Ontario) handled 130,000 intercity passengers with weekday service between Toronto and Timmins (784 kilometres), daily overnight service between Toronto and Cochrane (776 kilometres),[11] and thrice weekly mixed train service in the remote area between Cochrane and Moosonee (300 kilometres). The ONR also provides daily tour train service between Cochrane and Moosonee during the summer with ridership of 20,000 to 25,000. Passenger activity accounted for about one quarter of the ONR's railway operations. In 1987, provincial operating subsidies (based on fully allocated costs) totalled $11.2 million for the passenger operations[12] plus $8.4 million for the total operation of the Moosonee branch line (freight and passenger combined). The province also provides capital funding as required, and the company has spent $25 million in recent years building a fleet of modern passenger cars.

The **Quebec North Shore and Labrador Railway** (QNS&L) provides twice weekly mixed train service from Sept-Îles to the Schefferville/Labrador City area (about 600 kilometres of remote area). In 1987, the federal government provided $1.14 million — representing about 1 percent of company revenues — in section 270 payments for this service.

Amtrak, the United States national rail passenger corporation, offers one train a day from Toronto to Chicago via Sarnia and from Toronto to New York via Niagara Falls. These trains are operated jointly with VIA, and the statistics are included in those of the respective companies (Table 2 and Table 10). Amtrak also offers two trains per day between Montreal and

New York/Washington. These trains are operated in Amtrak's own name, and it purchases support services from VIA and from CN. No Canadian subsidies are paid for Amtrak's Montreal services.

In addition to intercity rail passenger, there are two major suburban commuter systems operated by the railways in Canada:

- *Montreal Urban Community Transportation Commission:* The Commission provides commuter service on a number of routes in the Montreal area using CN and CP facilities. These services — which do not qualify for section 270 payments — were formerly operated by the two railways at a loss. The federal government subsidizes capital assets for the Montreal commuter services.

- *GO Transit:* The Ontario government provides urban and short-distance intercity service in the vicinity of Toronto. Although GO owns some track, for the most part, their trains operate over the tracks of CP and CN. In addition to track access, both railways provide various other services to GO under contract. It is of interest to note that some of GO's services have replaced services provided by VIA in its early years. There are no federal subsidies for these services.

Table 3 compares the 1987[13] financial results of the four Class II regional railways offering intercity passenger service to the results for VIA.[14]

Table 3
Four Class II Railways and VIA: Financial Results, 1987

		VIA	ACR	BCR	ONR	QNS&L
Passengers	*('000)*	5,865	40	79	132	19
Passenger-km	*('000)*	2,092,628	8,967	18,159	53,622	5,429
Passenger revenue	*($'000)*	197,602	927	1,616	4,207	n.a.
"Operating" subsidy	*($'000)*	498,524	2,284	2,450	15,893	958
Revenue per passenger-km	*(cents)*	9.4	10.3	8.9	7.8	n.a.
Subsidy per passenger-km	*(cents)*	23.8	25.5	13.5	29.6	17.6
Cost recovery	*(ratio)*	0.28	0.25	0.40	0.21	n.a.
Government funding	*(percent)*	72	60	60	79	n.a.
Railway funding	*(percent)*	—	15	—	—	n.a.

Source: **Commission estimates based on data in railway annual reports and *Jane's World Railways*.**

Note: **n.a. = not available**

On the basis of the data, it is clear that the cost structure of the BCR is quite low, as evidenced by the 13-cent per passenger-kilometre subsidy level. This appears to be the result of using modern equipment, an efficient operation and relatively low station and marketing costs due to the high preponderance of tour passengers. The BCR's revenue per passenger-kilometre is not significantly higher than other railways, and the overall financial performance is on a par with some of VIA's better regional or corridor services. The ONR's subsidy level and government funding percentage is the highest, due in part to the fully allocated nature of the costing, and to the seemingly low revenue base, compared to similar VIA services. The ONR's services have a significant remote component, and the overall level of cost recovery does not appear out of line from those of VIA's remote services. The ACR's operation is essentially a remote service as well, but benefits from a significant tourism component which increases the level of cost recovery. The ACR's 60 percent government funding level, however, can be quite misleading. Unlike the two provincial railways, the ACR must bear at least 15 percent of the calculated passenger train losses; losses which are also calculated on a less inclusive cost base than those for other companies.

3. Rail Passenger Cost Model

While there are considerable historical data that describe the past performance of rail passenger services — at least in terms of direct costs — these data are not appropriate decision variables for the assessment of future performance. The past, however, is important in that it is the base from which productivity improvements and other changes must be analyzed. Similarly, the use of system average values per train-kilometre, car-kilometre, passenger and average overhead burdens allow for an easy analysis, but only result in "accurate" costs being determined for the hypothetical *average* train service or perhaps for the total of the entire railway network. Since individual services differ significantly from the average in terms of train size, utilization, services offered and other attributes, considerable bias would be introduced. By the same token, station facilities must also be examined on a specific basis. The costs of handling the same number of passengers at two terminal stations is significantly different than handling them at a dozen line stations even over the same route.

It was necessary, for the present review, to specify a passenger train costing model which, on the one hand, would provide for ease of analysis, but, on the other, capture the important differences between services. VIA's operating data and costs, that served as a starting point for the present analysis, are given in Appendix B. An explanation, by individual cost element, of the model's cost attribution/allocation procedure is contained in Appendix C. There are five general types of information which are incorporated into the railway costing model:

- service attributes under the *control of management*;
- service attributes dictated by the *nature of the market*;
- changes (improvements) in productivity unrelated to service attributes;
- the allocation of overhead and indirect costs; and
- the incorporation of changes in traffic levels.

Typical service attributes (the first two categories above) would be the route length and location, train frequency, the level of on-board services provided, train length and load factors, type of equipment used (locomotive-hauled cars as opposed to self-propelled cars, new cars versus old cars) and so on. Each element has an impact on costs. For example, a decision to offer diner service adds a requirement for an extra car per train, thus increasing the number of cars required per passenger. As well, the diner itself is often a higher-cost car than one which provides only coach seating. Such cars also require additional staffing.

The distinction between the two types of service attributes is somewhat blurry. To return to the previous example, management always has the prerogative of adding a diner to any train. The nature of the market, however, can be such that management may have no choice but to provide a diner (long-distance, transcontinental trips), or there may be absolutely no reason to contemplate a diner (a 150-kilometre, two-car trip). Nevertheless, train sizes and equipment requirements are attributes which are mainly governed by the market.

Incorporation of service attributes has been handled by specifying a number of service groups[15] with broadly similar characteristics:

- Montreal–Ottawa–Toronto corridor;

- southwestern Ontario;
- western interprovincial;
- eastern interprovincial (Montreal–Maritimes)
- short-distance regionals; and
- remote services.[16]

The service costing is based on VIA's 1990[17] year-end data plus some 1988 cost relationships which were established on the basis of 1988 or 1989 results and converted to 1990 price levels. Thus, the wage rates, work rules and operating conditions currently in force are embedded in the costs. A forward-looking cost model must be able to address the changes which are expected to take place in the coming years. Elements include "normal" cost escalation (not examined in this paper), structural changes in labour practices and different equipment. Such changes are accommodated by altering the specific cost relationships depending on the assumptions for the future. For example, the projected elimination of the second engine driver and a train crew person result in lower average crew costs per kilometre, but *only* for those services or service groups where crew reduction would actually occur.

Overheads and indirect costs are also an important issue. Forty-two percent of VIA's 1988 costs fall into this category. Allocation of these costs is necessary to determine a fully allocated cost. Proper allocation is necessary so as not to bias the estimated financial performance of any group of services at the expense of other sectors. For a number of cost categories, it is possible to attribute some expenses to corresponding service groups (although not to specific train runs). Equipment capital costs are an example of this type of attribution. There still remain some cost elements, general administration for example, which must be allocated on the basis of some notional causal factor, be it related direct costs or related physical measures of output. Care has been taken, however, to ensure that all indirect and overhead costs are not assumed to be fully variable with changes in the scale and scope of operations. Thus, the costs of providing station facilities in the M–O–T corridor, while related to passenger volume, would not be projected to increase by 20 percent given a 20 percent increase in traffic.

Much of the cost impact of changes in ridership is incorporated by the appropriate adjustment of service attributes, in particular train size (both cars *and*

locomotives as required) and frequency, if required. Thus, the accommodation of passengers through increasing the load factors results in little additional operational costs. If additional cars are required, but existing trains are sufficient to handle the total projected passenger volume, there is no change in either the crew or a significant part of the track usage fees. Other costs would vary more directly with passenger volumes, for example, credit- card discounts and ticket agency commissions.

It should be noted that fully allocated costs are developed for the present context, and the classical fixed-variable distinction in railway costing is not developed. Thus, if all VIA's service groups are costed, VIA's total expenditures will be attributed to one service group or another. The use of fully allocated costs is sometimes questioned, especially in railway studies, on the grounds that it may mask the fact that the incremental cost per passenger may be significantly different from the average cost, even allowing for long-run adjustments. This should not be a problem in the present context since changes in ridership are addressed directly through specific revenue and cost adjustments, rather than through the use of averages.

3.1 TYPICAL MODEL RESULTS

The cost and financial viability prospects estimates development is presented in Table 4 using the Montreal–Ottawa–Toronto (M–O–T) service group as an example. These estimates are also compared with VIA's present results. Other services could be selected for similar treatment but M–O–T has the greatest prospects for viability, and if M–O–T cannot be made viable, the prospects for VIA's other services will not be better.

The costs estimated here and discussed below were derived from and can be related to those reported to the Royal Commission by VIA, but there are a number of significant differences. The most striking difference is the inclusion of full capital charges for the equipment and facilities which are required by the individual services. This results in lower cost recovery rates than reported by VIA. The second major difference is that the present costing attempts to allocate overhead and indirect costs to services in a causal manner. VIA treats such costs as overhead on direct expenditures.

Table 4

COST ESTIMATES DEVELOPMENT: BASED ON VIA DATA
MONTREAL–OTTAWA–TORONTO SERVICES (EXAMPLE)

		In 1988 $	In 1990 $
1988 VIA data	Ridership (M)	2.2	2.2
	Revenues ($M)	69.7	75.7
	Avoidable operating costs ($M)	105.5	114.5
	Apparent cost recovery	66%	66%
	Share of common costs ($M)	58.2	63.2
	Total operating costs ($M)	163.8	177.7
	Cost recovery	43%	43%
	Total deficit per passenger ($)	43.11	46.77
1990 VIA data	Ridership (M)		1.6
	Revenues ($M)		58.0
	Avoidable operating costs ($M)		81.7
	Apparent cost recovery		71%
	Share of common costs ($M)		57.8
	Total operating costs ($M)		139.5
	Cost recovery		42%
	Total deficit per passenger ($)		50.80
Re-estimate of VIA's 1990 results	Ridership (M)		1.6
	Revenues ($M)		58.0
	Total operating costs ($M)		125.7
	Total recovery		46%
	Total deficit per passenger ($)		42.19
Estimate of steady-state costs assuming 1990 ridership	Ridership (M)		1.6
	Revenues ($M)		58.0
	Total operating costs ($M)		115.8
	Total recovery		50%
	Total deficit per passenger ($)		36.02
Estimate assuming steady-state costs and 25 percent ridership growth	Ridership (M)		2.0
	Revenues ($M)		76.2
	Total operating costs ($M)		126.8
	Total recovery		60%
	Total deficit per passenger ($)		25.27
Estimate incorporating cost of capital charges	Ridership (M)		2.0
	Revenues ($M)		76.2
	Operating costs ($M)		126.8
	Capital charges ($M)		19.5
	Total costs ($M)		146.3
	Total cost recovery		52%
	Total deficit per passenger ($)		35.01

Note: M = million

1988 VIA Data

For 1988, VIA reported revenues of $70 million and avoidable costs of $105 million for the M–O–T service group. This implies an avoidable cost recovery of 66 percent. Since avoidable costs account for approximately two thirds of VIA's total operating costs on these services, the apparent cost-recovery rate does not give a clear picture. If all other (non-capital) costs are allocated to services in the manner used in VIA's 1989 *Review of Passenger Rail Transportation in Canada (1989 Review)*, total M–O–T costs rise to $163.8 million, implying a cost recovery rate of only 43 percent and a deficit per passenger of $43, on a traffic base of 2.2 million passengers. (The 1988 results are quoted in 1988 price levels. For comparative purposes, 1988 costs and revenues shown in Table 4 are adjusted to 1990 price levels in the right-hand column of the table.)

1990 VIA Data

In 1990, VIA reported revenues of $58 million and avoidable costs of $82 million for the sector, with an avoidable cost recovery rate of 71 percent. Inclusion of common costs, using the same procedure as used for 1988, gives a recovery rate of 42 percent and a total deficit of $51 per passenger on a base of 1.6 million passengers. Although 1990 represented a moderate deterioration in relative financial performance, the total deficit for the sector was reduced by $21 million (20 percent).

Re-estimate

One of the major differences between 1990 and 1988 is the impact of the downsizing of VIA. M–O–T ridership dropped by 27 percent, train sizes were reduced, and one train was discontinued on each route in the sector. It is worth noting that the decrease in revenue appears to be attributable to the decrease in ridership. Only 5 percent of the decline in revenue is attributable to an apparent decrease in the revenue yield per passenger-kilometre. On the cost side, $13 million (in allocated common costs) of the $126 million total operating cost is an increase over that which would have applied had the 1988 avoidable to common relationship applied in 1990. This type of result is to be expected. Using a simple model, the decrease in ridership and operations would have indicated a decrease in total costs of some $45 million (including a proportional change in allocated common costs

which did not occur). In addition, it appears that there was some $5 million in efficiency gains in the M–O–T sector attributable to the use of newer locomotives and changes in the way VIA provided service.

Working with the present model and using VIA's reported 1990 ridership and operational data, total costs are estimated to be $126 million. The $14 million difference between VIA data and the estimate developed here can be attributed in a large part to a more service-specific allocation of overheads and other non-direct costs and to a lesser extent to the removal from the cost base of extraordinary catch-up equipment maintenance costs. On this basis, this study estimates that there is a 46 percent cost recovery level for the M–O–T sector with a deficit per passenger of $42. The total deficit attributable to M–O–T is estimated as $68 million, 17 percent lower than that implied from applying the *1989 Review* methodology to VIA's 1990 reported data.

Estimate of Steady State

The next set of figures in Table 4 represents the incorporation of cost efficiency gains that might be reasonably expected in the short to medium term. These are programs which are presently in place, in the planning stages or which could be readily implemented. Included are crew reductions, improved equipment and reduced overhead. When the 1990 M–O–T sector data is recomputed with these Steady State Costs, total costs drop by some $10 million (8 percent), bringing the forecast cost recovery rate up to 50 percent and the deficit per passenger down to $36. The potential for efficiency gains from new equipment is not as great for the M–O–T sector as for some other sectors since the 1990 data reflect a considerable number of newer F40 locomotives and since the differences between the existing LRC coach and new coaches are not as striking as the differences between the existing conventional cars and new cars.

Ridership Growth

Thus far, the analysis has been limited to reported 1990 ridership levels. Actual ridership for the first six months of 1991 was 12 percent higher than for the corresponding period in 1990. To accommodate this, the results have been recomputed assuming a steady-state increment of 25 percent in ridership and 5 percent in the average yield.[18] Car-kilometres have been increased so that the load factor is held to an average of 70 percent (from the 1990 actual value of 65 percent). In addition, the equivalent of one

additional Ottawa–Toronto train has been assumed.[19] Locomotive-kilometres and other output measures have been adjusted commensurate with the projected new levels of demand, car-kilometres and train-kilometres.

These changes would result in estimated M–O–T revenues of $76 million and total costs of $127 million. Due to the more intensive use of the existing trains and other assets and services, it is estimated that the incremental costs of serving the incremental passenger demand is less than the incremental revenues, resulting in an overall cost recovery rate of 60 percent and a deficit per passenger of $25. Given these cost and ridership assumptions, the total deficit for the M–O–T sector is brought down to approximately $50 million.

The above step in the analysis illustrates an important point with respect to VIA's services: *Ridership is a key element to improved financial performance.* Given existing train services that are not stretched to the limit of capacity, the incremental cost of additional ridership can be quite low in a steady-state environment where good equipment, as opposed to resurrected, old equipment from storage, can be deployed and service provided in an orderly fashion. To be truly viable, however, the additional ridership must be the result of natural growth, aggressive marketing or service quality.

Ticket price discounting as a method of attracting ridership cannot be seen as a quick fix. For example, a 6 percent reduction in the average yield as a means of attracting the additional ridership would dilute total revenue sufficiently that incremental costs would be greater than incremental revenues. The cost recovery percentage would improve, but the total deficit would increase slightly. This example also illustrates the downside effects of decreased ridership — the potential for greater than proportional increases in the deficit.

Incorporating Cost of Capital

In addition to the operating costs that have been discussed in the previous steps, there are significant capital costs associated with providing the M–O–T service, many of which are not included in VIA Rail's accounts. Assuming a 10 percent real cost of money and assets being 50 percent depreciated, an annual capital charge — including depreciation — of nearly $20 million ($10 per passenger) would be applicable to the M–O–T sector.

This includes the valuation of all required rolling stock at approximately 1990 replacement costs, the capital costs of maintenance facilities and other assets. It excludes various sunk capital expenditures such as the upgrading of the Ottawa–Toronto route and upgrading of various major stations. Inclusion of the capital charge brings the prospective total cost recovery down to 52 percent and increases the deficit per passenger to $35.

Including capital charges in this way provides an estimate of revenues that would be required for the operation to be commercially viable on a longer-term basis, particularly when equipment requires replacement. It is also the appropriate measure from the point of view of government, which must supply the capital. In the past, operating costs may have been more appropriate from VIA's perspective, since it received capital funding separately and was not mandatated to recover its costs.

4. Projected Cost Recovery by Service Group

Table 5 shows projections of VIA's costs and financial results for a number of service groups. The costs are fully allocated in the sense that provision is made for functional overheads, general corporate overheads, shared facilities and operations plus the cost of capital on equipment and facilities. The costs are steady-state, that is, allowance has been made for improvements in the cost experience of passenger rail. The cost and revenue numbers represent no specific year in the future, but rather a generic future period, presumably within the 1990s. In particular, it is assumed that modern, efficient equipment is in place, improvements in crewing practices have occurred and VIA has been successful in carrying out a number of projected overhead reduction programs.

Passenger demand and revenues, and train service patterns are based on the 1990 services offered by VIA, but are adjusted from VIA's 1990 experience. In particular, allowance has been made for growth in the market and for a recovery from the transient effects of the 1990 network downsizing.

To aid in the analysis, costs are reported under four headings. *Operations* cost is the actual cost of running trains (crews, fuel, maintenance, track and so on). *Customer services* cover stations, ticketing and marketing. *Administration* costs, as shown here, include the corporate executive and other general administrative functions. Specific administrative expenses for train operations or the marketing system are included in operations or customer

service as appropriate. *Capital charges* include depreciation and a 10 percent cost of money, assuming all assets, most importantly equipment, are of new quality (as discussed above) and 50 percent depreciated.

Table 5

PROJECTIONS OF VIA COSTS AND REVENUES: SELECTED SERVICES

(BASED ON FULL COSTS ASSUMING STEADY STATE RIDERSHIP, EQUIPMENT AND PRODUCTIVITY, 1990 $)

	Corridor M–O–T*	Corridor MT–OT*	South-western Ontario	Inter-provincial West	Inter-provincial East	Example Regional Network
Train-km (million)	3.7	3.3	2.0	1.8	1.2	1.5
Car-km (million)	17.2	15.4	9.6	18.6	12.3	2.6
Cars per train	4.7	4.7	4.8	10.1	10.6	1.8
Passengers ('000)	2,004	1,709	1,326	202	297	275
Trip length (km)	351	381	183	1,430	716	229
Load factor	70%	71%	47%	79%	64%	36%
Passenger-km/ train-km	191	200	122	158	183	43
Revenue ($ million)	76	69	31	31	19	5
Revenue per passenger–km ($)	.11	.11	.13	.11	.09	.08
Costs ($ million)						
Operations	83	73	44	63	45	14
Customer service	31	28	18	12	10	4
Administration	13	11	7	8	6	2
Capital charges	20	17	15	20	20	5
Total costs	146	130	84	103	81	25
Deficit ($ million)	70	61	54	72	62	20
Total cost recovery	52%	53%	36%	30%	24%	20%
Operating cost recovery	60%	61%	44%	37%	31%	25%
Revenue per passenger ($)	38	41	23	155	65	19
Total cost per passenger ($)	73	76	63	511	274	92
Total deficit per passenger ($)	35	36	40	356	209	73
Total deficit per passenger–km ($)	.10	.09	.22	.25	.29	.32

Note: **M–O–T represents the Montreal–Ottawa, Ottawa–Toronto and Montreal–Toronto services.**
MT–OT represents the Montreal–Toronto and Ottawa–Toronto services.

Unless specified otherwise, all references to costs, deficits and cost recovery percentages are based on total costs including operations, overheads and capital charges. An operating cost recovery rate has also been included in the table. This value excludes depreciation and capital costs from the calculation and is directly compatible with the type of values which VIA has calculated in its *Corporate Plan*.

4.1 WESTERN INTERPROVINCIAL

The western interprovincial services (Toronto to Winnipeg and Winnipeg to Vancouver, plus the Edmonton to Prince Rupert segment) are characterized by long average passenger trips (1,430 kilometres[20]) and a need to provide sleeper cars, diners and other non-revenue cars. This results in higher transportation costs per passenger compared to other services and additional costs that are not recovered through revenues. Load factors are relatively high (79 percent), which reflects the very high demand during the tourist season and the reduction in the train (cars are removed) during the off-peak.

Based on 1990 passenger demand and services, fully allocated, steady-state costs are estimated to be $511 per passenger. Revenues are estimated at $155, resulting in a 30 percent full cost recovery rate.

The relative financial performance (recovery rate and deficit per passenger-kilometre) is influenced by the way the services have been restructured. The Toronto–Vancouver service is provided three times per week on a single route compared with the former daily service over a more extensive route. Three days per week operation of long-distance services, which has been used as a total cost cutting measure for the past two decades, can result in less efficient crew[21] and equipment deployment. The costs of other functions and facilities (especially stations and maintenance points) cannot be scaled down without increases in average costs.[22]

Another factor affecting the financial performance is the service to remote areas which is provided as part of the western interprovincial services. Segments of the route between Capreol and Winnipeg are considered remote and had been served by separate trains. Covering this area by rerouting the main western interprovincial service may result in significant savings to VIA as a whole, but it adds to the cost burden on the interprovincial service group. Similarly, revenues and ridership on the Prince Rupert segment

(which also features "remote" areas) are much lower than the average in the West. Without these burdens, cost recovery could be five percentage points better, with corresponding reductions in deficits.

There are some ways of restructuring the western interprovincial services, while still providing long-distance service. Such restructuring may reduce the overall deficit slightly, but it is unlikely that any significant improvements can be made. One type of service that might be investigated is the replacement of the long-distance, overnight operation with a series of daytime intercity trains. Capacity (seats per car) would rise and costs should fall. However, past experiments have not been overly successful, and market penetration — of a small market — might only be achieved by twice-a-day operation.

The results do not include tourist-only trains such as the *Rocky Mountaineer* which VIA operated in 1988 and 1989. This type of service should operate on a break-even basis[23] due to a very high revenue base and elimination of the need to provide service throughout the year and to all stations. Inclusion of tourist trains might improve the average financial performance of this service group. However, any real improvement would be by way of cross subsidy rather than by a true reduction of the costs of operating interprovincial services.[24]

VIA's 1994 *Corporate Plan* projections for the western services are similar to those determined here — a 37 percent operating cost recovery. The present study's estimates show a higher passenger count than does VIA due to the inclusion of the Prince Rupert service. VIA's estimates, however, allow for a greater emphasis on tourist services.

4.2 EASTERN INTERPROVINCIAL

Eastern interprovincial services (Montreal to Halifax via Saint John and via Campbellton) are similar in character to those in the west, but route and average trip lengths are correspondingly shorter than in the west. There are, however, a number of differences in the nature of the market resulting in lower ticket price yields in the east and the lack of growth potential.

Based on 1990 demand and services, fully allocated, steady-state costs are estimated to average $274 per passenger. Revenues are estimated at

$65, resulting in a 24 percent cost recovery rate and a $0.29 deficit per passenger-kilometre.

From a cost perspective, interprovincial services in the east are similar to the West. The shorter route distance and lower load factors in the east, however, contribute to higher costs per unit of transportation. The east doesn't appear to suffer as greatly from the three-days-a-week service inefficiencies. For one thing, there is six-days-a-week service between Montreal and Halifax (over two routes), and a significant part of the eastern routes are common (Montreal–Campbellton and Moncton–Halifax) giving the effect of nearly daily operation.

Opportunities for restructuring are also limited in the east. The possibility of a daytime service between Montreal and Moncton has been noted. A more obvious restructuring would involve collapsing the two Halifax trains into a single route. Net savings, however, are not likely to result in a significant improvement to cost recovery ratios, especially since any means of consolidation would come at the cost of some form of reduced or eliminated service on some portions of the affected routes.

The east also illustrates another passenger rail issue which is just starting to arise but may become more common. CN had received approval from the National Transportation Agency for the abandonment of its line between Chandler and Gaspé. Under present legislation, if passenger services are to continue to Gaspé, VIA must bear the full costs of line operation rather than paying a linehaul charge based on CN's national average long-run variable unit cost of its roadway. This would result in an increase in the effective cost of linehaul for the abandoned section of track from the range of $1,500 per track kilometre to the range of $5,000 to $5,500, and perhaps more if major track renewal is required. This increase does not affect eastern services as a whole, to any great extent, but it does make a significant difference to the incremental cost recovery for service to the Gaspé. Also, such changes may not signal an increase in the true cost of providing rail passenger service, but a change in attribution of costs. On some lines, passenger trains are the dominant traffic and are clearly one of the reasons that the line has been kept open.

VIA's projections for the eastern services of 1994 show a somewhat lower total operating cost recovery than is projected here. The present study estimates assume new equipment while VIA may actually be operating some

older equipment in 1994; the difference is the study's focus on a longer term and the prospects for full viability. VIA also assumes a slightly higher rate of growth in passenger demand and fares.

4.3 LOW-DENSITY, SHORT-DISTANCE REGIONAL SERVICES

Until 1990, there were a number of low-density regional rail services. These were characterized by the use of short (one or two cars) self-propelled (SPV) trains. Route lengths ranged between 200 to 500 kilometres. Few amenities were offered on the typical regional service; many, in fact, offered no on-board services of any type. Passenger demand was generally low (less than 40 passenger-kilometres per train-kilometre) resulting in load factors in the range of 30 to 40 percent.[25]

Regional services (except for Victoria–Courtenay which was the subject of a constitutional court action) have now been eliminated. Nevertheless, submissions to the Royal Commission have advocated their reinstatement, and it is instructive to examine what their costs and performance might have been or might be. To this end, the somewhat integrated network of Maritime regional trains has been hypothetically resurrected (on paper). This included daily service between Halifax and Yarmouth, Sydney and Saint John; daily service between Moncton and Campbellton; and three-days-a-week service between Moncton and Edmundston. Based on typical 1988 demand patterns and service attributes, the fully allocated, steady-state costs of a regional rail service network are estimated to be $92 per passenger. Revenues are in the range of $19 per passenger. As a result, regional services average a 20 percent cost recovery rate.

Within a typical regional service network,[26] there is considerable variation in individual financial experience, driven mainly by differences in passenger demand and only partially by costs. It should be noted, however, that trimming the "poorest" services from a network may not improve the financial performance as much as might be expected since there are many common cost elements. This would be much less so if total networks closed down.

The low cost recovery rates experienced in this type of regional service are primarily a function of the low average passenger demand rather than any extraordinary cost issues. Crew, other linehaul and a number of other costs are governed by train-kilometres rather than train size. Thus, the average

level of these cost components per passenger is much higher than that experienced in most other segments of the rail passenger system. A preponderance of short trips also affects the financial performance since a greater share of revenue is devoted to ticketing, passenger handling and marketing. This is not to say that low-density regional services are provided in a costly manner. If anything, the use of self-propelled vehicles means that this type of regional network could be operated in a very efficient manner, given the size of the market. However, no matter how efficiently operated, such rail services will rarely approach the cost effectiveness of a bus.

Short of a complete departure from standard North American railway practice and attempting to operate as a bus company on rails, no restructuring options have been identified that would result in any improvement that would lead to near cost recovery for short-distance, low-density regional service. There are possible options which would increase cost recovery rates by a few percentage points but nothing major. The main opportunity for improvement appears to be in increases in ridership/revenues, and such improvement would be restricted to an improved cost recovery percentage. Unless one projects unrealistic orders of magnitude of increased demand, a trend of demand increases for regional services would lead to higher absolute subsidies.

4.4 CORRIDOR SERVICES (MONTREAL–OTTAWA–TORONTO)

Corridor services (Montreal–Ottawa–Toronto) are characterized by three to six departures each way per day, moderate train sizes (four to eight cars) and a mix of origin-destination trips as well as "local" service. Load factors tend to be above 60 percent with 200 or more passenger kilometres per train-kilometre. Equipment utilization is reasonable. Services are provided using all-coach (not sleepers), locomotive-hauled cars. Given current technology and infrastructure conditions, speeds up to 145 kilometres per hour are achieved. At present, separate services are offered between Toronto and Montreal, Toronto and Ottawa, and between Montreal and Ottawa.

As described in more detail in subsection 3.1, the cost per passenger for corridor services is estimated at $73 based on 1990 corridor service patterns.[27] Including an allowance for increases in ridership and ticket yields, and full cost of capital charges, the deficit per passenger is estimated to be $35, resulting in a 52 percent total cost recovery rate.

One aspect of corridor services which may be a drain on their financial performance is a high incidence of peaking in passenger demand.[28] While this may not have a significant impact on pure train operation costs, it results in additional fleet requirements and adds to the total maintenance requirements. With the equipment available, the incremental costs of handling additional passengers in the corridor at off-peak times may be very low compared to the average noted above.

Compared to the 1990 situation, these projections reflect a significant potential for improvement. Could there be even greater improvement? The three segments of the corridor are relatively similar, but the financial performance of the Montreal–Ottawa segment is poorer than the other two segments. This is due to the shorter trip length (which results in higher customer service costs per passenger) and a lower level of demand[29] (which results in shorter trains with higher costs per passenger). While yields are slightly higher on this segment, the market is such that the additional costs cannot be fully reflected in the ticket price.

Since it is a "small" service, dropping the Montreal–Ottawa service would allow the balance of the corridor services to be operated with an overall deficit some $10 to $13 million lower, and result in a two or three percentage point increase in the level of cost recovery.[30] For the balance of the corridor, there appears to be little difference in the financial performance of the Montreal–Toronto and Ottawa–Toronto services (in spite of the relatively slow transit from Brockville to Ottawa). Deficits for Montreal–Toronto are higher, reflecting the greater level of activity (more trains per day and an extra 90-kilometre trip distance).

Within the corridor, there appear to be few opportunities for restructuring services. Longer, less frequent trains might be offered. However, the market demands frequency and choice of departure time. As was aptly demonstrated with the service reductions at the beginning of 1990, the reduction in frequency would reduce ridership. Savings would be strictly train-related, and the train-related component is not a large proportion of total costs.

Another possibility would be the combination of the three routes into a single, spinal route through Ottawa. Given the present services, combination of the three routes could offer much greater frequency with the possibility of further augmented revenues and a reduction in the extent of the network with

potential savings. Unfortunately, with the present circuitous track routing, this would result in unacceptable increases in trip times for the Montreal–Toronto passengers. A route through Ottawa that would add only 37 kilometres or 7 percent to the Montreal–Toronto distance has been defined (and much of the right-of-way is already owned by VIA) but the investment in track necessary to achieve less than present transit time for Toronto–Montreal passengers would represent a very long-term commitment to the continuance of Toronto–Ottawa–Montreal rail service. It would seem reasonable that such investment should not be considered in isolation but as one of a series of quantum improvements in the corridor short of, or culminating with, electrified high-speed rail.

VIA's financial projections for 1994 for its Montreal–Ottawa–Toronto services are, in aggregate if not in detail, virtually the same as presented by this study — a 60 percent level of total operating cost recovery with just over two million passengers. The effect of VIA's higher estimate for ticket price ($40 as opposed to $38) has an equivalent to the impact of the difference in assumptions with respect to productivity in the steady state.

4.5 SOUTHWESTERN ONTARIO

Rail passenger service in southwestern Ontario (SWO) is characterized by short-distance coach service. Passenger trips tend to be short (averaging 183 kilometres). This results in an apparently low load factor (in the range of 45–50 percent).[31] While there is potential to increase ridership without increasing train sizes, a significant proportion of the empty seat-kilometres appears to be generated by the incidence of short trips into and out of Toronto — trips which are much shorter than the route distance.[32] In 1988, there was a mix of locomotive-hauled trains and self-propelled vehicles (SPVs). At the present time, locomotive-hauled trains are used exclusively. Most of the trains are 40-year old steam-heated equipment rather than the LRCs which are used in the corridor.

Based on 1990 passenger demand and services, fully allocated, steady-state costs are estimated to be $63 per passenger — significantly greater than the estimated revenues of $23 per passenger. The low cost recovery rate (36 percent) is indicative of the short-distance trips and the importance of the costs of stations, passenger handling and marketing.[33] These costs are somewhat higher per passenger than for Montreal–Toronto. The low cost recovery rate also reflects the use of locomotive-hauled equipment on some

short train runs. In the SWO situation, the use of self-propelled equipment might be more advantageous, provided there is sufficient demand to justify a separate equipment pool.

Another aspect worth noting in southwestern Ontario is an apparent low equipment utilization rate. This stems both from maintaining a high peak-load capacity for Friday/Sunday service and from the fact that, given the schedules and apparent passenger demand, there are many train runs which require one full trainset to generate a relatively short round trip. The equipment itself is capable of providing significantly higher utilization. This implies that there would be capacity to increase off-peak carryings at less than the average incremental equipment-related costs, if the demand were there.

This study's estimates of total operating cost recovery (44 percent for southwestern Ontario) is somewhat higher than VIA's 1994 projection (40 percent). The major difference here is that VIA expects to be operating the existing equipment in this market until the end of 1994; while this study considers the longer term.

4.6 REMOTE SERVICES

The government has designated certain mandatory or remote services for protection. In some cases, there are communities served by rail where road alternatives do not exist. The designated mandatory services are characterized by low passenger volumes and very high subsidies per passenger. As a group, less than 10 percent of their costs are recovered through fares. The costs of the remote services are not considered in any detail in this paper. The relevant questions in these cases are whether passenger rail should be maintained as a social service, and whether there are cheaper ways of doing this than the present VIA operations.

The issue of remote services is considered in greater detail in Section 8.

5. INTERNATIONAL RAIL, PARTICULARLY AMTRAK, COMPARABILITY WITH VIA

Beyond the general, but important, point that they are usually government-owned and operated, and heavily subsidized, examination of foreign railway passenger systems, other than Amtrak, gives little guidance in resolving Canadian issues.

With few exceptions, worldwide railway passenger services are not commercial enterprises financed through passenger revenues. For the most part, passenger services are operated by government owned and supported railways. Table 6 summarizes three key indicators for VIA and for the national railway passenger operations of the United States and a number of member countries, of the Organisation for Economic Co-operation and Development (OECD), based on operating results for the year 1986.

Table 6
Comparison of International Rail Passenger Systems, 1986

	Railway market share[a] (%)	Operating cost recovery (%)	Average trip length (km)
Japan	38.1	59	28
Switzerland	12.6	76	41
France	9.5	61	78
Austria	9.4	61	46
Spain	9.4	40	81
Italy	7.9	23	102
Belgium	7.6	44	44
Denmark	7.5	65	31
United Kingdom	7.0	74	45
(West) Germany	6.8	59	41
Sweden	6.5	84	84
Netherlands	5.6	54	42
Finland	5.1	69	77
Norway	4.8	63	63
Canada[b]	**1.9**	**30**	**360**
United States[b]	**0.7**	**56**	**397**

Source: **T.H. Oum and C. Yu, *An International Comparison of the Economic Efficiency of Passenger Railway Systems*, a report prepared for the Royal Commission on National Passenger Transportation, RR-08, October 1991.**

a **Percentage of passenger-kilometres (metro systems excluded).**

b **Intercity only.**

In terms of operating cost recovery, VIA is near the bottom of the scale, but it is worth noting that few railways recover more than two thirds of operating costs. Also, with a variety of accounting practices[34] and the inclusion of some freight activity, the data presented in Table 6 are not strictly comparable. The average trip length illustrates an important difference between VIA and the OECD railways. Average passenger journeys are much longer in Canada. While some difference is due to geography, long-distance commuter

and frequent regional services are a major part of most OECD systems. This is illustrated by the market share: VIA had less than 2 percent of the market, less than half of that of the lowest market share OECD railway system.

Most comparable to the Canadian railway passenger situation is that of the United States. The U.S. rail passenger system, Amtrak, was formed in 1971. Improvements in performance over recent years are examined below for Amtrak as a whole and by three service type categories. These are contrasted with the comparable VIA history. Service-specific data for Amtrak operations are presented and contrasted with data for VIA operations with similar superficial characteristics, and some explanation for performance differences is developed.

5.1 RECENT AMTRAK PERFORMANCE

Table 7 summarizes Amtrak performance at the system level from 1983 to 1989. The data for the table were primarily taken from Amtrak accounts and therefore do not include much of the cost associated with capital investment — depreciation, interest or cost of capital. Monies for capital investment allocated from Congress are not reflected in Amtrak's accounts.

Much of Amtrak's improvement took place in the mid to late 1980s. The key points of note for this period are:

- Amtrak has averaged 2 percent annual growth in ridership. On top of this, the average trip length has increased by more than 20 percent.
- There has been a steady improvement in financial performance as evidenced by a 50 percent increase in the revenue/total cost[35] ratio (from 0.45 to 0.66).
- Total operating expenses per passenger-kilometre fell by 5 percent, before taking inflation into account.[36] Adjusting for inflation, expense per passenger-kilometre dropped by 22 percent. While this represents a measure of cost control, it also reflects growing ridership and a sharing of costs over more passengers.
- There has been a significantly high, sustained program of investment by the U.S. government in Amtrak's equipment and infrastructure.

Table 7

AMTRAK HISTORICAL DATA (CURRENT US$ UNLESS SPECIFIED)

	1983	1984	1985	1986	1987	1988	1989
Resources							
Cars (operating fleet)	1,480	1,379	1,523	1,661	1,705	1,710	1,742
Locomotives (operating fleet)	273	284	291	291	289	298	312
Miles of roadway	23,159	23,356	23,394	23,499	23,499	23,499	23,499
Capital expenditures ($ million)	215	351	293	175	138	184	n.a.
Employees	21,740	22,891	23,418	24,832	24,832	24,832	24,832
Traffic/Operating data							
Passengers (million)	18.9	19.5	20.8	20.3	20.4	21.5	21.4
Passenger-miles (million)	4,228	4,427	4,825	5,013	5,221	5,678	5,859
Train-miles (million)	28.8	29.1	30.0	28.6	30.0	30.0	31.0
Car-miles (million)	223.5	234.6	250.6	249.7	266.1	277.8	n.a.
Financial ($ million)							
Operating revenues	664	759	826	861	974	1,107	1,270
Operating expenses	1,469	1,522	1,600	1,564	1,672	1,757	1,935
Net operating income	(805)	(763)	(774)	(702)	(699)	(650)	(665)
Ratios/Indicators							
Passenger-miles/ employee (thousand)	194	193	206	201	210	228	235
Passenger-miles/ train-miles	146.8	152.1	160.8	175.3	174.0	189.3	189.0
Average trip length (miles)	224	227	232	247	256	264	274
Operating revenues/ passenger-miles[a]	0.192	0.201	0.195	0.191	0.201	0.204	0.217
Operating expenses/ passenger-miles[a]	0.424	0.404	0.378	0.347	0.345	0.323	0.330
Revenue/Total cost ratio	0.45	0.50	0.52	0.55	0.58	0.63	0.66
Revenue/Total cost ratio (Amtrak)[b]	0.54	0.56	0.58	0.62	0.65	0.69	0.72
Revenue/Short-term avoidable cost	0.80	0.83	0.86	0.96	1.03	1.15	1.20
Revenue/Long-term avoidable cost	0.68	0.70	0.71	0.78	0.79	0.90	0.97

Note: **n.a. = not available.**

a **Converted to 1989 constant U.S. dollars.**

b **Amtrak excludes depreciation from costs but includes non-federal subsidies ($7.8 million in 1989) in revenue.**

- Fare increases in excess of inflation have played a role (on average) in the improvement in financial performance, but do not appear to be the driving factor. Total revenue per passenger-kilometre increased some 13 percent after taking inflation into account. What is not clear is how much of this increase is attributable to passenger revenues and how much is attributable to increases in other revenues. The language of the trade literature and Amtrak's annual reports suggests that the latter contribution is considerable.
- Two of the major factors driving the steady reduction in unit operating costs have been changes in the way labour is compensated and improvements in asset utilization. For example, the average trainload (passenger-kilometres/train-kilometres) rose from 147 to 189, while the traffic density (passenger-kilometres/route-kilometres) progressed from 183,000 to 249,000. At the same time, crews were switched from the traditional distance base to an hourly pay system.
- Labour productivity, as measured by passenger-kilometres per employee, also improved by 3.3 percent per annum, although when measured in terms of trains handled it was static, suggesting that the productivity improvements were driven by growth in traffic volume. The data suggests a strategy of exploiting the company's advantages, particularly its highest density services, and reducing the cost of losers (but not necessarily eliminating them).
- The improvement in financial performance was not achieved by significantly reducing the size of the network. For the U.S. passenger system, service reductions occurred with (not after) the creation of Amtrak.[37] To a great extent, Amtrak appears to have been created as a rationalized network.

5.2 AMTRAK PERFORMANCE BY SERVICE CATEGORY

Table 8 compares Amtrak performance by service category, using 1989 data obtained from Amtrak (presented on a route-by-route basis in Table 10) and 1981 data reported in a Congressional Budget Office study.[38]

Amtrak divides its routes into three categories.

Northeast Corridor (NEC): These are five short/medium-distance intercity services in the most densely travelled corridor in the United States. The NEC is owned by Amtrak; it is being upgraded (extension of electrification,

new equipment) primarily with public funds as decided by Congress. NEC services are characterized by the fastest trip times, the largest number of departures, the best on-time performances, and the highest revenue per passenger-kilometre (about 50 percent higher than the system average). The level of service on the New York City–Washington route has more in common with 200 kilometres per hour high-speed rail service, in terms of service attributes if not the speed, than with other North American passenger rail services. The NEC carries more than half the system traffic (passengers), for short average distances (211 kilometres). The revenue/LTAC ratio is 1.41 (system: 0.97), and reaches 1.81 for the premium service metroliners.

Table 8
AMTRAK PERFORMANCE BY SERVICE CATEGORY: 1981 AND 1989 (1989 US$)

	Northeast corridor		Other short-distance		Long-distance	
	1981	1989	1981	1989	1981	1989
Passengers ('000)	10,792	11,113	5,048	4,726	4,707	5,456
Passenger-km (millions)	1,756	2,349	1,078	1,038	4,799	6,012
Revenues ($'000)	191,755	344,402	89,207	101,894	357,439	456,591
Short-term avoidable cost ($'000)	200,032	189,451	150,149	107,049	543,663	465,098
Long-term avoidable cost ($'000)	242,538	243,964	182,055	132,649	659,189	614,685
Average trip length (km)	163	211	214	220	1,020	1,102
Revenue/passenger-km ($)	0.109	0.147	0.083	0.098	0.074	0.076
STAC/passenger-km ($)	0.114	0.081	0.139	0.103	0.113	0.077
LTAC/passenger-km ($)	0.138	0.104	0.169	0.128	0.137	0.102
Revenue/STAC ratio	0.96	1.82	0.59	0.95	0.66	0.98
Revenue/LTAC ratio	0.79	1.41	0.49	0.77	0.54	0.74

Short-Distance Services: These are 15 short/medium-distance services; daily departures range from one to seven per day; average speeds are from 53 to 100 kilometres per hour; 11 of the 15 services have on-time performances of 70 percent or above. In terms of markets served, level of service and financial performance, the "better" short-distance services are comparable with VIA's southwestern Ontario, Toronto–Ottawa and Ottawa–Montreal services. Only a few of the services compare to VIA's former regional services. The short-distance services carry one fifth of Amtrak's riders, for an average trip of 219 kilometres; revenue per passenger-kilometre (9.8 cents) is close to the system average.

Long-Distance Services: These are trips exceeding 12 hours in duration and include both north-south and transcontinental routes. (They are analogous to Canada's western and eastern interprovincial trains.) In the majority of cases, service is daily. A number of the services, particularly between Chicago and the West Coast, are split into separate sections in Salt Lake City or some other centre to provide direct service to a number of destinations. Speeds are relatively slow (88.5 kilometres per hour or below), while on-time performance is less reliable than other Amtrak services. The long-distance services carry 26 percent of Amtrak's riders for an average trip of 1102 kilometres; revenue per passenger-kilometre is 21 percent lower than the system average. The financial ratios are similar to those of the short-distance services (LTAC ratio of 0.74).

Table 8 indicates that the improvements in Amtrak performance were broadly based. Although the degree of financial improvement, as measured by the two revenue/cost ratios, was the greatest for the NEC, the LTAC ratio improved by 61 percent for the short-distance services and by 47 percent for long-distance services.

The data further suggest that the reasons for the financial improvements varied. Significant reductions in costs per passenger-kilometre occurred across the board, ranging from 26 percent (short-distance) to 32 percent (long-distance) for short-term avoidable, and averaging 24 to 25 percent for all groups for long-term avoidable. However, on the revenue side, real yields remained constant for long-distance services, improved moderately (19 percent) for short-distance services, and most significantly they improved by 34 percent for northeast corridor services.

Long-distance fares were presumably constrained by air competition in the aftermath of deregulation. When measured in terms of average fare, the NEC increase was even more impressive, due to the 30 percent increase in average trip length.

5.3 COMPARISON WITH VIA

There are differences in costing treatment and in the determination of equitable payments by the passenger operator to the freight railways that affect the apparent relative costs and cost recovery.

Initially, payments by Amtrak for services provided by the freight railways were based on strictly avoidable[39] or short-run variable cost. Canadian railways' remuneration is mandated according to a long-run variable[40] definition. This was not intended to provide full cost recovery; the initial contracts with Amtrak provided that the "railroad is willing to waive, during an interim period, certain elements of compensation. . . ." However, for most railroads dealing with Amtrak that initial period is over. They have negotiated contract amendments that provide, in aggregate, improved remuneration.

Increasingly, both Amtrak and VIA negotiate contracts with the freight railways, that may depart from the cost definitions above, for track occupancy and other services. Nonetheless, the base line for negotiation seems to remain the cost computed pursuant to the operational legislation for each system. In essence CP Rail and CN Rail receive payments compensating them for a broader definition of the track ownership and maintenance and other costs of services provided to VIA than applies to the U.S. railroads for services provided to Amtrak. While the differences between VIA and Amtrak in this area are substantially more favourable for Amtrak, it is of little consequence in terms of services viability. VIA's train service agreements with CN and CP now account for, at most, 10 percent of VIA's total expenses, and any savings from more stringent terms would be a small fraction of that small percentage.

The ownership, by Amtrak, of assets from which it can earn income effectively defrays some of the deficit from intercity passenger rail operations. It also means Amtrak's cost recovery percentage appears to be higher, relative to that of VIA, than it otherwise would be. For example, if Amtrak's incremental long-run costs of earning the $360 million in other revenues in 1989 were one third of that level ($120 million), the total cost recovery rate for passenger train operation would be 50 percent, not 66 percent. This should not be misinterpreted as stating that Amtrak somehow "hides" its true losses or has "hidden" subsidies; Amtrak has simply found other, non-passenger, sources of revenue with which to share the cost of some of the assets and operations that are required for the passenger operations.

In the comparisons that follow, no attempt has been made to adjust the financial data or for differences in accounting practices or payment principles as discussed above. This would require considerable analytical effort and could be imperfect at best. More importantly, it would add little to an

understanding of the principal differences between Amtrak and VIA from the perspective of the Royal Commission. The key observation is that Amtrak has been able to improve its financial position progressively and substantially. VIA's results, on the other hand are clouded by externally imposed (by government decision) routes and services changes and unusual expenses; however, it is apparent that cost recovery improvement paralleling that of Amtrak has not occurred.

A quick comparison for 1989 reveals sharp differences as presented in Table 9.

Table 9
COMPARISON OF 1989 PERFORMANCE BY AMTRAK, VIA

	Amtrak	VIA
Total passengers carried (millions)	21.40	6.46
Total cost recovery ratio (depreciation excluded)	72%	34%
Operating deficit per passenger (US$ and CAN$)	31.00	82.00
Operating deficit per passenger-km (US$ and CAN$)	0.07	0.22
"Service-related" revenue per passenger	42.40	36.90
"All other" revenue per passenger (US$ and CAN$)	17.00	0.90

VIA's operating deficit per passenger is more than three times that of Amtrak. VIA's revenues cover about a third of operating costs; Amtrak's cover well over two thirds.

Although VIA's average fares lag behind those of Amtrak for comparable trips by approximately the exchange rate (if that is an appropriate measure), the differences cannot be substantially attributed to revenue yield or average fare. Amtrak is attracting about 15 percent more "service" revenue per passenger than VIA. This is reasonable since Amtrak's average passenger trip is about 16 percent longer than VIA's, and on a passenger-kilometre basis Amtrak's US$ yields averaged slightly less than VIA's (in CAN$). It is of interest to note that Amtrak's yields for the Northeast Corridor are noticeably higher than VIA's M–O–T corridor yields while their regional and long-distance yields are noticeably lower than VIA's for corresponding business segments.

Amtrak receives state subsidies, known as section 403(b) payments,[41] for some of its operations. These are treated as earned revenue. While such payments vary greatly by route, the total in 1989 was only $7.8 million, less than $0.37 per passenger on a system basis. With the exception of a small

payment by the province of Ontario, VIA receives no non-federal monies. Thus, non-federal subsidies are not significant in a comparison between the United States and Canada.

The non-passenger, non-subsidy revenue appears to make a significant difference. In 1989 Amtrak earned approximately $360 million[42] ($17.00 per passenger) from contract commuter operations, contract shop and maintenance operations, right-of-way leasing, real estate development, electrical co-generation and mail and express services. Such earnings account for nearly 30 percent of Amtrak's total revenues. VIA earned almost no such revenues. In the case of mail and express, VIA has concluded that there is little opportunity in this area. In the case of commuter operations and station development, VIA has not been in a good position to exploit any opportunities since many of the assets belong to CN and CP.[43]

Such additional funds could not, however, drastically reduce the gap between Amtrak and VIA. Assuming the same level of gross revenue per passenger and that only one third of the revenue represents incremental long-run avoidable costs, then VIA's deficit per passenger might be reduced by some 15 percent. But it would still be about two and a half times higher than Amtrak's, after correction for the difference in passenger trip lengths.

It is clear that Amtrak is outperforming VIA, and it is on the cost side that the major differences between VIA and Amtrak must be explained. There are a number of areas noted below where Amtrak has an advantage over VIA.

- Amtrak has been operating for many years with new or rebuilt equipment. With the exception of the LRC, which was an unfortunate acquisition, VIA is just starting to obtain new locomotives and rebuild cars.
- Amtrak, to a large extent, has rationalized its crew size and a number of other labour practices. VIA is just starting.
- Amtrak's average train load is 20 percent greater than VIA's. This results in a lower average cost per passenger in many functional areas, such as crew.
- Amtrak's activities constitute a more balanced network and are more concentrated than VIA's. Amtrak has a more rational system than has VIA in the way that its routes and schedules link to each other and to maintenance

facilities, resulting in more intensive use of assets such as cars, locomotives, maintenance facilities and stations. This again contributes to a lower cost per passenger. For example, Amtrak gets 50 percent more use out of a passenger car than does VIA. Much of VIA's lower utilization is driven solely by the nature of VIA's network and service frequencies, not by the age of its fleet.

- Amtrak may pay the freight railways less for the use of track than VIA. As noted below, the Amtrak legislation specifies incremental costs as the basis for track pricing. For VIA it is long-run variable, including the long-run variable portion of the cost of capital.

From the available relative data for comparable services, it is estimated that VIA might be operating in the 60 percent range[44] for overall operating cost recovery if it had:

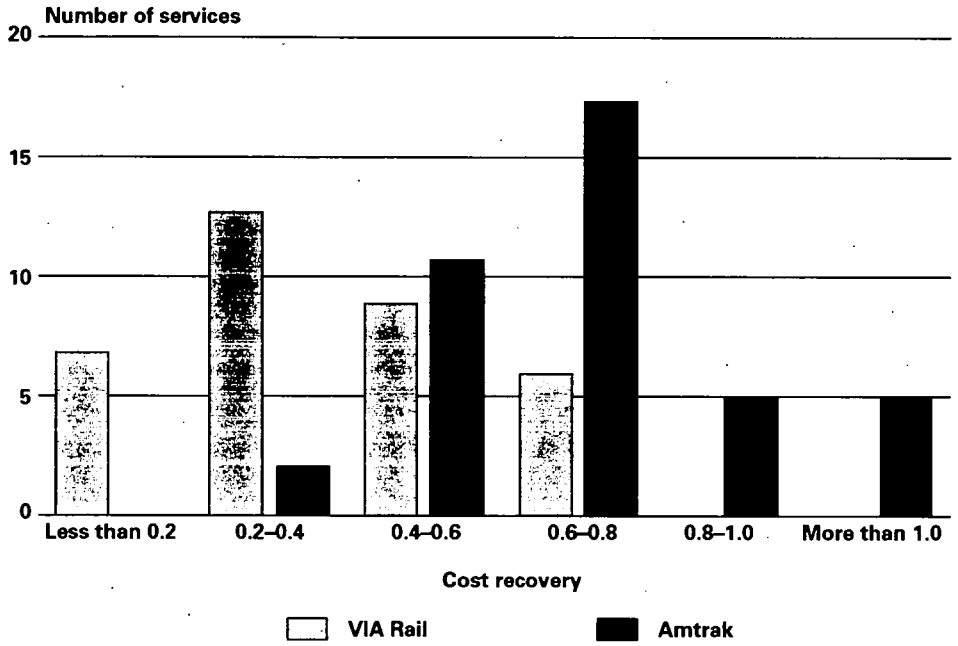
- Amtrak's crew practices and costs;
- up-to-date equipment;
- no remote or very low-density regional services;
- greater passenger loads per train; and
- Amtrak's management practices and effectiveness.

It has been popular to argue that, were VIA managed as efficiently as Amtrak, it would recover a substantially greater portion of its cost. The above differences are relevant to this topic. Amtrak's relatively easy access to costless capital from Congress, and the fact that the cost of this capital is not reflected in the company's accounts, are probably more important.

Comparison of Individual Services

Figure 2 compares the general level of cost recovery for Amtrak services and for VIA services in 1989. The ratio used for VIA services is revenue to avoidable cost (as calculated by VIA); for Amtrak the ratio of revenue to LTAC has been used. While there may be a slight bias against VIA, the two measures are comparable.[45] Nonetheless, it is clear that the frequency distribution of VIA cost ratios is well to the left of that of the Amtrak services. In 1989, most NEC services covered their long-term avoidable costs; none of the VIA services did.

Figure 2
AMTRAK AND VIA COST RECOVERY BY SERVICE
COST RECOVERY IS SCATTERED

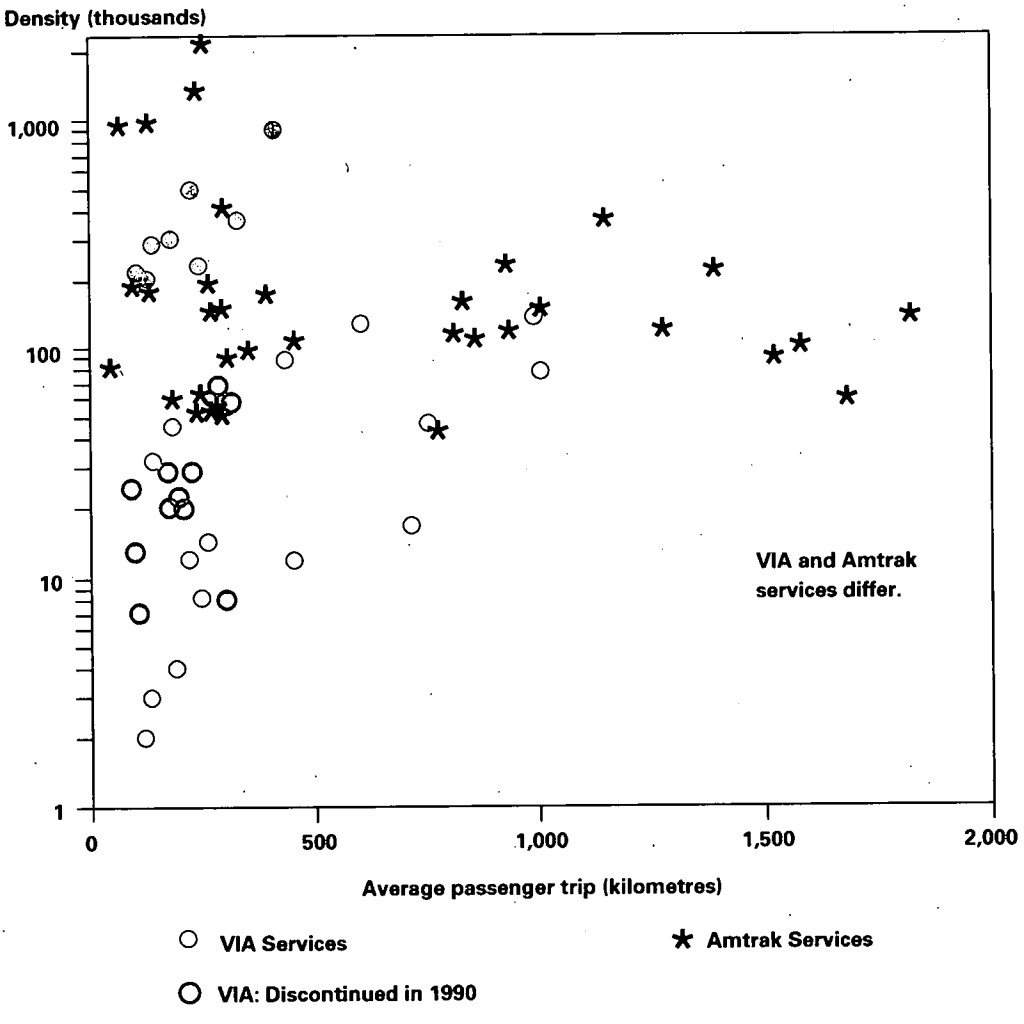


Note: Data are for 1989 (prior to 1990 cuts)

Amtrak route-specific financial and operational data are presented in Table 10. Figure 3, contrived to illustrate similarities and differences among services, compares traffic density for Amtrak and VIA services, based on 1989 data.

Traffic density is defined as passenger-kilometres per route-kilometre. The other axis indicates the average trip length for a rider on the service (passenger-kilometres per passenger). Caution should be exercised in drawing detailed service-specific conclusions from this figure, particularly on some of the (mostly longer distance) Amtrak services that are not named on the illustration. There are difficulties with definition. Is a train that originates in Chicago and splits in Salt Lake City continuing in sections to Oakland, Seattle and Los Angeles one service? or three? or four?

Figure 3
AMTRAK AND VIA SERVICES — DENSITY AND LENGTH



Sources: Data provided by carriers and Royal Commission staff calculations.

Note: Density = pass-km per route-km.

Table 10

1989 AMTRAK RESULTS BY SERVICE

Route	Route-km	Daily trains	Best trip time	Avg. speed (km/h)	On-time perfor-mance	Pass-trips ('000)	Pass-km ('000)	Avg. pass-trip (km)	Route density pkm/rkm ('000)
New York–Washington Metroliner	360	16	2:37	138	93%	2,063	490,606	238	1,361
NEC Conventional	764	19	3:17	110	84%	6,622	1,665,702	252	2,179
Washington–Atlantic City	325	4	3:11	102	80%	106	19,795	187	61
New York–Philadelphia	146	6	1:14	119	86%	2,005	139,194	69	950
New York–Phil.–Harrisburg	167	6 *	1:53	89	93%	317	33,849	107	202
N.E. corridor services subtotal						**11,113**	**2,349,146**	**211**	
Chicago–St. Louis	457	17/wk *	5:55	77	32%	243	69,337	285	152
Chicago–Milwaukee	137	5 *	1:26	95	92%	197	26,205	133	192
Chicago–Detroit–Toledo	542	2	7:20	74	82%	296	81,103	274	150
Chicago–Carbondale	497	1 *	5:26	92	86%	91	28,881	317	58
Chicago–Quincy	423	1	4:15	100	78%	79	22,946	290	54
Chicago–Port Huron–(Toronto)	505	1	6:10	82	64%	99	28,154	284	56
Chicago–Valparaiso	71	5/wk *	1:20	53	86%	139	5,850	42	83
Chicago–Indianapolis	314	1 *	4:10	75	57%	63	16,872	268	54
Chicago–Grand Rapids	291	1	3:52	75	76%	66	15,759	239	54
Los Angeles–San Diego	204	8	2:45	74	76%	1,694	220,358	130	1,078
Portland–Seattle	299	1 *	4:00	75	79%	79	19,803	251	66
Oakland–Bakersfield	501	2	6:05	82	77%	363	95,357	263	191
(New York)–Albany–Montreal	377	1	7:10	53	32%	90	41,442	460	110
New York–Niagara Falls	742	varies	7:47	95	78%	1,053	312,796	297	422
(New York)–Phil.–Pittsburgh	566	1 *	7:14	78	73%	174	52,799	303	93
Short-distance services subtotal						**4,726**	**1,037,664**	**220**	

Table 10 (cont'd)
1989 AMTRAK RESULTS BY SERVICE

Route	Route-km	Daily trains	Best trip time	Avg. speed (km/h)	On-time perfor-mance	Pass-trips ('000)	Pass-km ('000)	Avg. pass-trip (km)	Route density pkm/rkm ('000)
Washington–Montreal	1,160	1	18:24	63	89%	29	20,075	692	17
New York–Columbia–Florida	2,264	1	26:23	86	51%	429	524,451	1,222	232
New York–Charleston–Florida	2,332	1	26:28	88	51%	454	541,491	1,193	232
New York–Jacksonville	1,592	1	16:45	95	71%	193	151,142	783	95
Auto Train (Washington–Florida)	1,399	1	17:30	80	77%	230	316,847	1,378	227
Chicago–Philadelphia–New York	1,466	1	19:02	77	63%	194	180,895	932	123
Chicago–Washington–New York	1,849	3/wk	26:40	69	72%	105	80,981	771	44
Chicago–Washington	1,233	1	17:22	71	71%	164	138,887	847	113
Chicago–Albany–New York/Boston	1,545	1	18:30	84	55%	380	314,466	828	204
Chicago–Seattle/Portland	3,568	1	45:40	78	43%	413	522,898	1,266	147
Chicago–Salt Lake City–Oakland	3,898	1	51:10	76	20%	408	540,955	1,326	139
(Chicago)–SLC–Seattle	4,328	1	56:35	76	28%	151	210,071	1,391	49
(Chicago)–SLC–Los Angeles	3,854	1	49:07	78	59%	161	305,213	1,896	79
Chicago–Centralia–New Orleans	1,487	1	18:05	82	27%	213	173,809	816	117
Kansas City–Centralia–(New Orl.)	552	1	7:10	77	46%	160	55,252	345	100
Chicago–Sante Fe–Los Angeles	3,615	1	41:10	88	35%	283	513,404	1,814	142
Chicago–Texas–(Los Angeles)	2,007	3/wk	26:00	77	44%	157	237,165	1,511	118
New Orleans–Los Angeles	3,272	3/wk	41:00	80	70%	115	194,750	1,693	60
Los Angeles–Seattle	2,237	1	32:55	68	64%	568	524,699	924	235
Boston–Newport News	666	1 *	12:25	54	84%	302	117,890	390	177
New York–New Orleans	2,221	1	29:45	75	73%	347	346,819	999	156
Long-distance services subtotal						**5,456**	**6,012,159**	**1,102**	
Grand total						**21,295**	**9,398,969**	**581**	

Note: See Appendix D: Notes to Amtrak Route-Specific Data.

Table 10 (cont'd)
1989 AMTRAK RESULTS BY SERVICE

Route	Pass-revenue ($'000)	Non-federal payments ($'000)	Short-term avoid. costs ($'000)	Long-term avoid. costs ($'000)	Rev. to cost ratio (short)	Rev. to cost ratio (long)	Rev. per pass-km ($)	LTAC per pass-km ($)	See Appendix D notes to specific line entries
New York–Washington Metroliner	109,572		47,646	60,630	2.30	1.81	0.223	0.124	
NEC Conventional	217,302		122,741	158,597	1.77	1.37	0.130	0.095	
Washington–Atlantic City	1,861		4,514	5,613	0.41	0.33	0.094	0.284	15
New York–Philadelphia	12,881		9,148	12,782	1.41	1.01	0.093	0.092	
New York–Phil.–Harrisburg	2,786	405	5,402	6,747	0.52	0.41	0.082	0.199	
N.E. corridor services subtotal	**344,402**	**405**	**189,451**	**244,369**	**1.82**	**1.41**	**0.147**	**0.104**	
Chicago–St. Louis	5,409	783	8,761	11,415	0.62	0.47	0.078	0.165	
Chicago–Milwaukee	2,259		3,235	4,078	0.70	0.55	0.086	0.156	7
Chicago–Detroit–Toledo	5,565		9,717	12,632	0.57	0.44	0.069	0.156	
Chicago–Carbondale	2,660	138	3,119	4,167	0.85	0.64	0.092	0.144	
Chicago–Quincy	2,082	651	2,835	3,590	0.73	0.58	0.091	0.156	
Chicago–Port Huron–(Toronto)	2,721	417	3,196	4,048	0.85	0.67	0.097	0.144	
Chicago–Valparaiso	336		971	1,311	0.35	0.26	0.057	0.224	
Chicago–Indianapolis	1,396		2,579	3,207	0.54	0.44	0.083	0.190	
Chicago–Grand Rapids	1,662	465	2,186	2,749	0.76	0.60	0.105	0.174	
Los Angeles–San Diego	22,686	940	21,542	27,160	1.05	0.84	0.103	0.123	1
Portland–Seattle	1,426		2,357	2,912	0.61	0.49	0.072	0.147	
Oakland–Bakersfield	9,573	1,548	11,597	14,388	0.83	0.67	0.100	0.151	
(New York)–Albany–Montreal	3,840	227	4,162	5,240	0.92	0.73	0.093	0.126	6
New York–Niagara Falls	35,144		26,649	35,769	1.32	0.98	0.112	0.114	14
(New York)–Phil.–Pittsburgh	5,135	310	4,143	5,462	1.24	0.94	0.097	0.103	
Short-distance services subtotal	**101,894**	**5,479**	**107,049**	**138,128**	**0.95**	**0.74**	**0.098**	**0.133**	

Table 10 (cont'd)
1989 AMTRAK RESULTS BY SERVICE

Route	Pass-revenue ($'000)	Non-federal payments ($'000)	Short-term avoid. costs ($'000)	Long-term avoid. costs ($'000)	Rev. to cost ratio (short)	Rev. to cost ratio (long)	Rev. per pass-km ($)	LTAC per pass-km ($)	See Appendix D notes to specific line entries
Washington–Montreal	1,780		2,143	2,694	0.83	0.66	0.089	0.134	2
New York–Columbia–Florida	36,883		35,068	47,541	1.05	0.78	0.070	0.091	8
New York–Charleston–Florida	37,170		32,749	44,219	1.13	0.84	0.069	0.082	8
New York–Jacksonville	12,203		10,804	14,323	1.13	0.85	0.081	0.095	9
Auto Train (Washington–Florida)	43,997		29,823	38,499	1.48	1.14	0.139	0.122	10
Chicago–Philadelphia–New York	17,038		17,484	23,982	0.97	0.71	0.094	0.133	
Chicago–Washington–New York	6,395		9,830	12,746	0.65	0.50	0.079	0.157	
Chicago–Washington	12,866		15,005	20,147	0.86	0.64	0.093	0.145	
Chicago–Albany–New York/Boston	26,979		24,992	34,352	1.08	0.79	0.086	0.109	5
Chicago–Seattle/Portland	37,174		43,999	57,952	0.84	0.64	0.071	0.111	12
Chicago–Salt Lake City–Oakland	43,245		46,009	59,942	0.94	0.72	0.080	0.111	3
(Chicago)–SLC–Seattle	12,012		16,648	21,890	0.72	0.55	0.057	0.104	3
(Chicago)–SLC–Los Angeles	16,433		15,671	20,881	1.05	0.79	0.054	0.068	3
Chicago–Centralia–New Orleans	12,044		15,570	21,404	0.77	0.56	0.069	0.123	
Kansas City–Centralia–(New Orl.)	4,044	1,940	6,998	8,924	0.58	0.45	0.073	0.162	4
Chicago–Santa Fe–Los Angeles	35,347		35,901	48,881	0.98	0.72	0.069	0.095	
Chicago–Texas–(Los Angeles)	13,450		17,199	22,197	0.78	0.61	0.057	0.094	13
New Orleans–Los Angeles	11,826		16,590	21,416	0.71	0.55	0.061	0.110	
Los Angeles–Seattle	37,673		36,936	47,092	1.02	0.80	0.072	0.090	
Boston–Newport News	10,286		6,626	8,257	1.55	1.25	0.087	0.070	11
New York–New Orleans	27,746		29,053	39,286	0.96	0.71	0.080	0.113	
Long-distance services subtotal	**456,591**	**1,940**	**465,098**	**616,625**	**0.98**	**0.74**	**0.076**	**0.103**	
Grand total	**902,887**	**7,824**	**761,598**	**999,122**	**1.19**	**0.90**	**0.096**	**0.106**	

However, it is clear that there are fundamental differences between the low-density regional and remote services provided by VIA and Amtrak's higher-density operations, differences that do something to explain VIA's poorer cost recovery. There are also VIA and Amtrak services that are sufficiently similar to make general comparison reasonable, and here the VIA cost recovery (see Figure 4) may not always fall below that for Amtrak. For example, the recovery of the Chicago–Milwaukee service might not appear superior to Toronto–Stratford–London if the cost of both are stated on equivalent bases. This would require much more detailed research, and overall, Amtrak's cost recovery is clearly superior to VIA's.

Viewing the comparative data:

- VIA runs (although several of the services shown in Figure 3 were cut in 1990) low-density routes with short average trips, with which no Amtrak services are even remotely comparable. These regional and remote services can benefit neither from economies of density, nor from good load factors.[46]

- VIA has at least one service, Montreal to Toronto, with characteristics that appear favourable relative to some of the more viable Amtrak operations. For example, in many respects this VIA service would seem to be the equal of, with possible advantages over, the Los Angeles to San Diego service which recovers 84 percent of long-run avoidable cost, and the New York to Niagara Falls service for which 98 percent is recovered. The question arises: Why, when so well placed relevant to high cost recovery Amtrak services, is this VIA service not closer to being financially viable?

  The relationship of this service to the NEC including the metroliner (electric) operation is also instructive (NEC conventional and metroliner services recover 137 percent and 181 percent of LTAC respectively). Of course, NEC densities are much higher than those of Montreal–Toronto, and there is electrified operation.

- There are four Amtrak moderate-density services with characteristics similar to VIA's Quebec City–Windsor services (other than M–O–T). These include:

	Operating Cost
New York–Niagara Falls	98% recovery
Philadelphia–Harrisburg	41% recovery
Chicago–Milwaukee	55% recovery
Oakland–Bakersfield	67% recovery

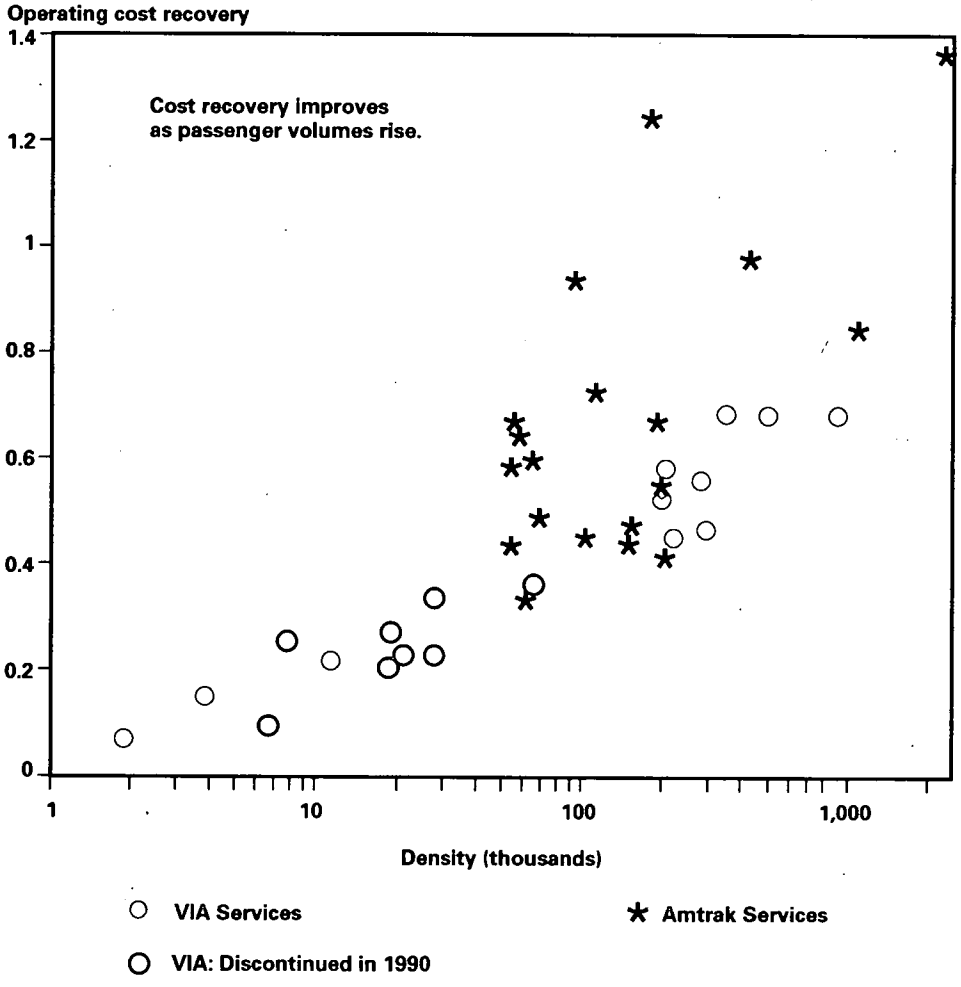
All are losing money and would show greater losses if evaluated on a fully allocated cost basis. However performance appears superior to similar VIA services. Toronto–London (53 percent avoidable recovery) is not dissimilar to the Chicago–Milwaukee or Philadelphia–Harrisburg Amtrak services, and all three share the large-to-small city, as well as the short-distance, low-density characteristics. Oakland–Bakersfield has superficial comparability to Montreal–Quebec City, although the capital contribution by the State of California clearly aids the Amtrak service. VIA's Toronto–Ottawa (69 percent avoidable cost recovery) is similar to Amtrak's New York–Niagara Falls services. Here again, Amtrak clearly benefits from state payments under section 403(b) and from the use of the turbo equipment.

Figure 4 illustrates operating cost recovery for selected Amtrak and VIA services. Excluded are services where the average passenger travels less than 100 kilometres, services where sleeping accommodation is provided and Amtrak's metroliner. At least some of Amtrak's apparently superior cost recovery is attributable to a more generous accounting treatment and not greater operating efficiency. More important, however, are the parallel relations of cost recovery to density, and the relatively poor performance of VIA's lowest density services, some of which were eliminated in 1990. It is also relevant to note that few services of either railway recover their operating cost.

Although cost recovery was not the government's only objective for VIA, it is apparent from Figure 4 that this objective would have been better served by eliminating more of the sparsely used VIA services, while improving service and increasing fares on the popular runs. This was the strategy adopted for Amtrak, especially at the outset. Of course Amtrak does not provide service to remote communities without road access.

Figure 4

AMTRAK AND VIA: 1989 OPERATING COST RECOVERY: INTERMEDIATE DISTANCE NON-SLEEPER SERVICES



Sources: Data provided by carriers and Royal Commission staff calculations.

Note: Density = pass-km per route-km.

At this juncture of the analysis, a definitive response to the question of the potential viability of the VIA regional services eliminated in 1990 is appropriate. These are among the services falling in the low-density/low-cost-recovery

quadrant of Figure 4. A ten-fold demand increase would be necessary before there would be any prospect of operating cost recovery. This is not a realistic prospect.

6. Potential Effect of Differing Amtrak and VIA Mandates

Differences in the nature of the United States and Canadian markets, different accounting treatments, different payment arrangements for access to the track infrastructure, greater renewal, at the government's expense, of rolling stock, and assets with value beyond the provision of intercity railway passenger services, only partially explain Amtrak's superior financial performance. Further, an important question remains only partially answered: *Why has the financial performance of Amtrak improved so impressively while that of VIA has been, at best, stagnant?*

Amtrak and VIA may serve similar roles, continuance of the non-commuter railway passenger services that would have been abandoned by commercial enterprises permitted to do so, but there are important differences in the degree and nature of the government's role versus that of corporate management.

Amtrak is a relatively independent quasi-public corporation with a "for profit" mandate and "owned" by its participating railroad common[47] shareholders.[48] It is managed by a board of directors that includes nominees of the Department of Transportation, a state governor and representatives of commuter agencies, the business community and organized labour. Congress has the principal policy-making role and audits Amtrak's performance. Funds are channelled to Amtrak by Congress through the Federal Railroad Administration but there is not believed to be Administration intervention on routing, service or pricing matters. From a current perspective, the substantial rationalization of Amtrak services in the early 1970s, according to a service plan developed by the Department of Transportation, was doubtless influenced by political considerations, but it was massive and left the corporation with a network that allowed efficient use of equipment and fixed plant assets.

VIA is managed by a board of directors appointed by the government, but effective decision making, with respect to most service parameters with an important public profile, is exercised directly by Cabinet and the Minister of

Transport, advised by Transport Canada. VIA's president is appointed directly by the government, not by the Board of Directors. Pricing, routing and service levels on one hand, and equipment and fixed facilities capital investment on the other, all tend to be effectively controlled by the Minister.[49] Even timetable adjustments require the Minister's approval; if approval is delayed, ticketing and reservations cease. The formal participation of VIA executive management in the political process that determines its service levels is minimal, and effective intervention is largely through the press.

Amtrak and VIA have quite different reporting relationships and consequently, very different results in terms of latitude for managerial discretion and public and legislator influence of, and participation in, the decision-making process.

6.1 VIA AND AMTRAK MANDATES

VIA Rail is, in a formal sense, accountable to the Minister of Transport (and effectively Treasury Board) for the provision of a specified package of services in exchange for specified (subsidy) payments, under the terms of a formal (annual) contract between them. There is no legislation, other than the *Appropriation Act* and the *Financial Administration Act* that specifies a relationship between VIA and either Parliament or the Minister. The contract is quite specific with respect to operational parameters such as equipment deployed, capacity offered and schedules. The terms of the contract are negotiated, and performance under the contract is monitored, by Transport Canada staff on behalf of the Minister. It is specified that any departure from the relatively detailed specifications in the annual contract must be approved by the Minister. VIA is accountable through the annual contract in force to the Minister, and the Minister is accountable for funds provided to VIA to the Treasury Board and Parliament. In practice, VIA is scrutinized and held accountable mainly through the annual budgeting and corporate plan approval process.

Amtrak was created by an Act of Congress, the *Rail Passenger Service Act*, and is dependent for its operating deficit and capital funding on appropriation bills passed by Congress, traditionally overriding the recommendation of the Administration. The annual authorization of funding may be accompanied by amendment to the *Rail Passenger Service Act*, quite an open process. In a practical sense, Amtrak answers to Congress as a whole

regarding the financial performance of the corporation, and to individual Congressional representatives where its activities are of local interest. Amtrak is accountable to the Federal Railroad Administration only for safety matters. While justification of VIA's performance and continuance is concentrated on the Canadian Minister (as influenced by political colleagues), it is Amtrak that must build and maintain its own political constituency. The corporation itself balances local interests as necessary to maintain its funding, and has the opportunity to best accommodate its network and efficiency considerations.

Amtrak may not be perfectly free in its ability to make commercial decisions, just as CN is not perfectly free, but VIA's situation is much worse. Like Amtrak, VIA would only have a chance to make a profit with a network reduced to a handful of services. However, VIA's lack of a viable mandate and the commercial freedom necessary to improve its financial circumstances, as distinct from relative managerial competence,[50] must bear some responsibility for the magnitude of its poor performance relative to Amtrak.

As discussed, the absolute level of Amtrak's higher cost recovery is influenced by circumstances that include advantages of infrastructure ownership, income not related or loosely related to the corporation's role as provider of intercity railway passenger services and mandated advantages in Amtrak's dealings with the freight railways. Amtrak's financial advances during its early years may be attributed to the sorry state of the system it inherited and rationalization of its network, but the corporation has now been operating for over 20 years, and improvements have continued long after rationalization was essentially complete, while VIA's cost recovery has not improved.

Without presenting definitive proof in the form of a comprehensive management audit, it is suggested that the only logical explanation is that Amtrak has made decisions that have been more focussed on improvement of commercial viability than equivalent decisions by VIA (and by successive ministers and governments for VIA) have been.[51] In essence, as a business, Amtrak has been better managed. With VIA, the key management decisions of service, price and investment have been and continue to be elements of the political process. Amtrak appears to have benefited from greater freedom and more structured and open accountability.

6.2 RE-EQUIPMENT AND THE LRC EXAMPLE

VIA's short history is replete with examples of decisions (for which the carrier is financially accountable) that were made through the political process for reasons other than the most cost-effective provision of railway passenger services. Among these, the effects of the purchase of the Light Rapid and Comfortable (LRC)[52] locomotive (a complete reversal of VIA's staff recommendation) are perhaps the most painful.

Although the stimulus that the development and production of the LRC had on Canadian industry may have been worth the expenditure — and this development doubtless made an important contribution to Bombardier's expansion in the world market as a supplier of rail passenger (mostly urban transit) equipment — the cost of this government industrial policy was passed on to VIA. Of course, the cost of this locomotive to VIA only started with the capital cost; when the LRC proved unable to provide quick and reliable service, breakdowns became routine, on-time performance dropped, and operating costs climbed. These locomotives, and a second order purchased after the problems were proven in practice, are now being stored until they can be unobtrusively disposed of. However, the long-run impact on VIA remains.

The LRC issue is an example of the difficulties facing both VIA itself and those in the government who must make long-term investment decisions for an organization without a long-term mandate and floating in red ink. Since the beginning, VIA management emphasized the fact that its equipment was outdated. The negative results are widespread: more spare cars and locomotives must be owned, operating costs are high, reliability is low (resulting in loss of ridership and the ability to charge premium prices), routine maintenance and servicing costs are high, and significant resources must be devoted to persuading cars and locomotives to last yet another few years.

Despite years of study, debate and negotiations, by the end of 1989, VIA was just starting to rebuild part of its long-distance fleet. There were no confirmed plans for dealing with the balance of the VIA fleet. To complicate matters, the only major fleet renewal consisted of rebuilding 1955 vintage cars at a cost in excess of a million dollars a car.

Amtrak undertook fleet renewal early in its existence, although the extent to which equipment was rebuilt and upgraded was much less than VIA is undertaking. The Amtrak fleet rebuilding was aimed at providing reasonably reliable cars while new cars were being acquired. In VIA's case, although there was little debate over the identification by the Minister's Task Force of new equipment and modernization as necessary if VIA were to provide effective service and control its deficits, the question of VIA's continued existence became the stumbling block. Is VIA to continue? If so, under what constraints and with what mandate?

6.3 CONSEQUENCE OF CONTINUANCE WITHOUT A LONGER TERM MANDATE

There is no question that VIA's operating costs could be reduced and ridership improved through the rebuilding or the replacing of equipment. What is not as clear is whether such investments are worthwhile in the sense that capital requirements will be less than the (present) value of the accumulated deficit reduction. Would a half billion dollar investment in new equipment provide any substantive improvement in the financial health of passenger rail, or would it merely shift the deficits from the operating accounts to the capital account?[53] More importantly, much of the potential savings attributed to new equipment was the avoidance, over the longer term, of continual costly programs of partial rebuilding, retrofitting, overhauling and generally patching up obsolete equipment. It is questionable whether this is a legitimate base from which to assert that new equipment would be a "profitable" investment. The option of eliminating these costly programs by eliminating VIA, in other words VIA's future, should be decided first on the basis of whether the benefits of a modernized VIA justify (in economic and/or other terms) the cost. Then, if longer-term retention were decided, the re-equipment question could be addressed rationally.

Investments in track upgrading, equipment maintenance facilities and stations have been made but there is some indication that a longer term commercial focus is lacking. As an example, without question there is a high demand for travel between Montreal and Quebec City, and the possibilities have obviously attracted VIA. Yet, although over $50 million have been spent on infrastructure, nothing that could compete with two uncongested freeways has been approached. The CP Rail north shore track was upgraded at a cost of at least $23 million; yet this investment was far less than would

have been needed to make a real difference, and VIA does not now use the north shore track. The Gare du Palais was renovated at a reported cost of $28 million (with the Montreal–Quebec City rail trip time increasing by 30 minutes for the additional travel to the Gare du Palais). Any benefits, in terms of a truly competitive rail service between Montreal and Quebec City can only come after substantial future infrastructure enhancements (and cost). No comprehensive plan has been disclosed; perhaps different participants in the decision process have somewhat different plans and objectives.

The above is intended to illustrate the more difficult aspects of VIA's existence without a clear mandate and set of targets from which to operate. While there have been investment programs, there is an obvious lack of a long-term government commitment to modernized railway passenger services in Canada. To be sure, Amtrak has had its difficulties with funding; however, there is commitment by Congress to Amtrak and a mandate for longer term decisions. The same cannot be said for VIA. Various observers have even questioned whether VIA was created as a means of quietly getting out of the passenger rail business. Perhaps on the part of CN, it was. Now, it is for the government to decide whether to cut its losses after 10 years of a low and deteriorating rate of cost recovery, or whether to commit to passenger rail over the longer term. In the interim, there is no evidence to suggest that VIA's performance can improve significantly.

7. VIA's Corporate Management

While VIA has been operating in a less than ideal environment, should some part of the responsibility be laid at VIA's own doorstep? Has VIA's management performed as well as the constraints it faced would allow? The questions of VIA management's mandate and the *real* set of objectives it actually faced are important. If cost recovery and the deficit were central to the real mandate, it would seem strange that an efficient management — facing an uncertain future and a host of detractors — would make decisions that resulted in a steadily increasing deficit and a stagnant level of cost recovery. The answer here may well lie in VIA management's emphasis on such statistics as on-time performance and ridership growth.

The day-to-day signals from VIA's owner (the government) did not emphasize efficiency and cost recovery. It has been suggested that cost recovery is not in VIA's mandate, and that its management should not be judged on

that. Various VIA officials have pointed out that, in 1988, they developed a cost-recovering service[54] *Rocky Mountaineer* — and that it was "taken away from them" (privatized in 1989). There is an obvious negative incentive here. Regardless of whether cost recovery and the deficit are important in VIA's objective function, however, there are clearly financial constraints on management's short-term and probably also longer term freedom of action.

Perhaps too much attention has been paid to improving service and building up a structure for the long term and insufficient attention has been paid to day-to-day business concerns. Perhaps the predominant attention has been too short-term and institutional. Perhaps management has misread signals from government or perhaps it has found no incentive for financial improvement. Again, there is the question of what was expected of VIA by the government. It is not obvious that an organization, subjected to public criticism over its on-time performance, should concentrate its efforts on cost cutting with a target of improving cost recovery from 30 percent to 33 percent. But, such a 10 percent relative improvement would be an astounding, if unacclaimed, management achievement. Yet this achievement results in little, if any, acknowledgement or reward; whereas VIA's improved on-time performance has received wide acclaim.

VIA has often been accused of inefficiency, of having too great an administrative component, of studying things to death, and generally acting like a large profitable, or perhaps well-endowed, national institution rather than as a business at the brink of insolvency. A number of points with respect to management and efficiency were raised in 1985 as part of the Minister's Task Force on VIA. VIA did not seem to have undertaken the steps that the freight railways or the airlines have taken towards streamlining at all levels over the past decade. For instance, the first major cut in administration, 205 positions, took place in 1989, and only after the government decision to reduce VIA's funding. VIA reports that these reductions were identified by internal task forces and were unrelated to the downsizing. If this is the case, why did VIA wait until the middle of 1989 to act? What other measures might have been implemented?

What might be implemented now? The cost analysis gave some clear indications in this regard; overheads are high. The belief, expressed by some VIA managers, that eventually everything will fall into place and that new equipment, maintenance facilities and so on will save the day is not well

founded. However, before marked improvement can really be expected, realistic expectations for VIA must be established and management's achievements acknowledged and rewarded accordingly.

8. Remote Rail Services

VIA Rail operates rail services over eight routes which are classified as remote since these are locations without access to all-weather roads. Total ridership on these remote services in 1990 was 80,000. These passengers account for 10 to 15 percent of VIA's total subsidy. As is discussed below, however, most of the passengers on these trains are travelling to and from the more accessible points on the line where alternative transportation (the road mode) is available.

Most of the data for the following analysis were provided by Transport Canada and VIA Rail. The analysis and its conclusions are the authors'. Ridership patterns for the remote services are shown in Table 11.

Little evidence is available to explain why remote service ridership generally declined between 1985 and 1989. The important issues are:

- Is the decline largely the result of declines in ridership over the non-remote segments of these routes?
- Is the population of remote areas declining, thus reducing the inherent demand for transportation services?
- Has there been improvement in the transportation alternatives in the remote areas?
- Have the residents of the remote areas been travelling less?

The 40 percent decline in ridership from 1989 to 1990 is even more puzzling, especially since preliminary figures suggest that ridership in 1991 only rebounded on a few of these services. VIA's cutbacks and restructuring affected these services only slightly.[55] On some routes, especially Winnipeg–Churchill and Jasper–Prince Rupert, the decision to eliminate tour operations has resulted in reduced ridership. This emphasizes the fact that much of the transportation provided on these routes is not designed to meet the needs of remote residents who have no alternative means of transportation.

Table 11
PATRONAGE OF VIA RAIL'S REMOTE SERVICES: 1985 TO 1990

	1985	1986	1987	1988	1989	1990	Change in riders (%) 89/85	Change in riders (%) 90/89
Winnipeg–Churchill	57,493	50,334	52,009	48,847	44,298[a]	30,446	–23	–31
Wabowden–Churchill	1,631	1,041	952	797	399	210	–76	–47
The Pas–Lynn Lake	11,616	9,156	8,660	8,871	7,679	8,603	–34	12
Sudbury–White River	8,598	10,423	9,590	10,195	9,805	4,715	14	–52
Capreol–Winnipeg	71,643	65,057	54,616	54,101	48,479	—[b]	–32	
Montreal–Senneterre	54,615	50,798	42,979	43,197	38,131	21,759	–30	–43
Senneterre–Cochrane	6,815	5,997	5,329	5,043	4,293	1,591	–37	–63
Montreal–Jonquière	37,295	34,416	31,350	31,400	27,248	11,937	–27	–56
Subtotal	**249,706**	**227,222**	**205,485**	**202,451**	**180,332**	**79,261**	–28	–40
Jasper–Prince Rupert	23,334	29,712	26,817	26,665	27,171	16,766	16	–38
Total[c]						**96,027**		

Source: **Data from Transport Canada.**

a **This datum is 1,000 passengers greater than the equivalent figure (from another source) in Table 2.**

b **The Capreol–Winnipeg remote service has been provided by the Toronto–Vancouver train since 1990.**

c **The Jasper–Prince Rupert service was declared a mandatory (remote) service in October 1989.**

Another possible explanation of the recent decline is a change in the ticket price structure which eliminated a 40 percent discount for return fares. If this is the case, the decline in ridership would suggest that the issue of not having alternative means of transportation is not as great as it was once thought.[56]

Table 12 presents costs, revenues and deficits for the various remote services. The figures of Table 10 are based on an approximation of VIA's fully allocated costs, including depreciation but not including an allowance for the

cost of capital on assets used to provide the remote services. These figures are limited to actual annual operating expenses; costs of restructuring the network following the 1990 cuts have been eliminated from the data; no allowance for future productivity gains has been included.

Table 12
REMOTE PASSENGER RAIL SERVICES SUBSIDIES

	1989			1990		
	Total subsidy ($'000)	Cost recovery ratio (%)	Subsidy per passenger -km ($)	Total subsidy ($'000)	Cost recovery ratio (%)	Subsidy per passenger -km ($)
Jasper–Prince Rupert	11,022	13	0.57	12,688	7	1.24
Montreal–Jonquière	3,799	13	0.64	5,587	5	1.92
Montreal–Senneterre	6,541	13	0.67	9,799	6	1.70
Winnipeg–Capreol	12,947	7	1.08			
Senneterre–Cochrane	1,671	4	3.27	1,927	2	11.16
Sudbury–White River	1,523	8	1.10	3,082	3	3.45
Winnipeg–Churchill	18,238	12	0.93	19,409	8	1.24
Wabowden–Churchill	97	5	1.54	59	8	1.26
The Pas–Lynn Lake	1,538	9	1.01	1,267	10	0.78
Remote subtotal	57,376	11	0.82	53,818	7	1.44
VIA total (excluding remote)	**526,832**	**32**	**0.22**	**397,000**	**27**	**0.31**
Remote as percent of VIA total	11	35	379	14	25	468

Remote services account for about 3 percent of total VIA ridership and revenues but they account for 7 to 10 percent of total workload as measured by car-kilometres or train-kilometres. This disproportion tends to reduce VIA's overall financial performance.

8.1 REMOTE AREAS CAPTIVE TO RAIL

One of the popular misconceptions about VIA's remote services is the actual size and scope of the remote areas served. Many of these services pass through a remote area, but few of the services are limited to only serving a remote area. In some cases, trains may serve non-remote areas simply because they must pass through them (loaded or empty) in order to gain access to a reasonable terminal location or maintenance facilities. For the most part, however, the remote services routings currently in operation are

an artifact of the pre-VIA national railway passenger network and provide passengers with rail access not only to remote areas but to other areas of the country as well. When other regional services were eliminated, those that provided remote access were simply exempted. For the most part, they were not redesigned.

Routings and utilization for each remote service are described below.

Montreal–Jonquière

The route is 496 kilometres from Montreal. The remote area lies in the middle between Rivière à Pierre (237 kilometres northeast of Montreal) and Lac Brochette (66 kilometres southeast of Jonquière). While there is a network of bush roads and winter roads, only one location (Lac Edouard) is served by an all-weather road. No permanent population centres have been identified within the remote segment.

Passenger survey data[57] indicate that less than 40 percent of the total ridership involves travel to or from the remote segment of the route. Nearly one quarter of these remote trips involve travel to or from Lac Edouard which is served by an all-weather road, albeit a somewhat circuitous route compared to rail. There is little or no ridership between remote locations. The other 60 percent of the total service ridership is "local" traffic at the southern end of the route or riders passing through the remote area. In the case of some of these through passengers, the train may be the most direct and through route. Of the passengers to/from the remote area, most indicated that the purpose of the trip was access to a seasonal recreational residence or a hunting/fishing club. One quarter of the stops in the remote area have the word "Club" in the place name.

The rail line has a well established freight traffic base consisting mainly of long trains operating from the Lac St-Jean area to Montreal with a stop at the Garneau Yard (just west of the remote area) for a crew change.

Montreal–Senneterre

This route is 703 kilometres from Montreal. Only the northern 60 percent is remote. All locations south of Fitzpatrick (La Tuque) are served by all-weather roads. Most of the larger communities on the southern portion of this route have bus service. The estimated permanent population of the remote area

is 2,400. The Community of Parent, with bush road access and air access, accounts for a third of the remote total.[58]

Passenger surveys suggests that 65 to 72 percent[59] of the total ridership involves trips to and from the remote section of the line. Approximately two thirds of this ridership are from the southern end of the route. The remaining one third represent trips between Senneterre and the remote area. Only 10 percent of the total ridership is trips through the remote area from Senneterre to southern destinations. The balance of the passengers using this line take "local" trips in the area between Montreal and La Tuque. Similar to the Montreal–Jonquière service, many passengers use the Senneterre service to access seasonal residences and hunting/fishing lodges. There are at least 10 such establishments listed in the timetable. The Senneterre passenger service is also used to access remote employment areas, especially for forestry.

There are reasonable volumes of freight using this line, much of it through trains between Senneterre and the Garneau Yard and beyond. Freight, especially wood chips, originates on the remote section of the line, but there does not appear to be any regularly scheduled way or local freight services which serve the entire remote section.

Senneterre–Cochrane

The majority of the population affected by this service is in the Abitibi region of northern Quebec which comprises the eastern 156 kilometres of the route. There is a well-developed road network; all communities served by rail are also served by roads. Bus service is provided in the area by two companies. The truly remote section of the route is 60 to 70 kilometres from the Quebec-Ontario border to access points on Lake Abitibi. The final 40 to 50 kilometres into Cochrane appear to have all-weather road access. The remote area has a reported all year population of 10 plus up to 75 seasonal residents. In addition, the train provides access to Lake Abitibi for campers and tourists.

Passenger surveys showed that 60 percent of the traffic consisted of local trips within the non-remote segment of the route or trips between this non-remote segment and southern destinations via connections with the Montreal–Senneterre service.[60] Seventeen percent of the ridership involved

trips between Cochrane and the Senneterre region (or more southerly points where the access was via the Montreal–Senneterre service). The balance — only 22 percent of the total passengers — were trips between Cochrane and the remote section along Lake Abitibi.

Canadian National no longer operates freight service on the remote segment of the route and had been authorized to abandon the line between Cochrane and LaSarre. The abandonment order was stayed by the Governor-in-Council in the fall of 1991.

The Pas–Lynn Lake

Most of the 389-kilometre route between The Pas and Lynn Lake is remote. Only the southern section (88 kilometres from The Pas to Cranberry Lake) plus a short segment near The Pas is served by road. Through bus service is available between the terminals via an alternative route. The northern terminal (Lynn Lake) has a road connection to Thompson plus air service. There is daily bus service to Thompson.

While the total catchment area has a permanent population of 13,000, only 1800 people are shown in census data as living in areas without road access. Most of these are residents of the Pukatawagan Reserve (population 1,620) 138 kilometres south of Lynn Lake. There is a public airport on the Pukatawagan reserve, but no regularly scheduled air service.

Survey data show that nearly all of the ridership involves travel to/from remote locations. Only a small fraction of trips are through trips (The Pas–Lynn Lake) or between points where there is an adjacent road. Most of the ridership is trips to/from Pukatawagan. Half of the Pukatawagan trips are to/from The Pas or Lynn Lake and half are to/from the remote areas.

Canadian National operates way freight service between The Pas and Lynn Lake once a week. The VIA cars are carried on this train. On the other two days per week, train operation is essentially the same although there are no scheduled freight cars. On these days, the train is costed as a full passenger train.

Winnipeg–Churchill

While this 1,698-kilometre route is often thought of as a single entity, it is made up of three distinct segments, with vastly different market and operational characteristics:

- The non-remote "southern" segment (NRS) between Winnipeg and The Pas is a 780-kilometre route. All communities served by the railway in this segment have all-weather road access and many of the larger communities are served by bus.
- The 220-kilometre segment from The Pas to Wabowden is partially served by the main road to Thompson. Of the 20 points listed as served by rail, eight have no road access and four have bush road access. The total permanent population without alternative access is 500 and is concentrated near the end of a bush road at the northeastern corner of Cormorant Provincial Park.
- The 700-kilometre segment between Wabowden and Churchill has no highway. With a population of 14,300, Thompson, Manitoba is the largest centre in this area. It is served by road from The Pas/Wabowden. There is also a road connection between Thompson and Gillam, 252 kilometres by rail. There is air service to Thompson, Gillam and Churchill. In addition, there are public airport facilities shown at Thicket Portage, Pikwitonei and Ilford. Including Wabowden, but excluding Thompson, the total permanent population along this line is 5,300.[61] Of these, less than 2,200 are without all-weather roads. Two thirds of those without road access live in Churchill.

Ridership surveys yield the following breakdown on the Winnipeg–Churchill service:

Trips entirely in the non-remote southern (NRS) area	10%
Trips between the NRS area and Thompson/ Wabowden/Gillam	5%
Trips between the NRS area and the remote areas	3%
Trips between the NRS area and Churchill	28%
Trips between the remote area and Churchill	1%
Trips between Thompson/Wabowden/Gillam and Churchill	21%
Trips within the remote area (excluding Churchill)	31%
Unknown but involving remote origin or destination	1%

Of the trips within the remote area, few are between centres with alternative road or air access (such as between Wabowden and Thompson). Much of the ridership in this area consists of short-distance trips between Thompson and Pikwitonei, Thicket Portage or adjacent communities.

Jasper–Prince Rupert

Little of the 1160-kilometre route from Jasper to Prince Rupert is remote. At the eastern end there is a 185-kilometre segment centred around McBride where there are 14 railway locations listed with either no road access or only bush road access. The total population of these settlements is 110. In this area, the railway line runs parallel to the Yellowhead Highway but on the opposite side of the Fraser River. There is an 80-kilometre segment centred on Burns Lake where there are four railway locations listed with either no road access or only bush road access. The total population of these settlements is 58. Here again, the rail line is closely followed by the Yellowhead highway and it is not possible to tell how far these settlements may be from the road. Near Terrace, there is a 120-kilometre segment where there are eight railway locations without road access. The population (1 to 10) is known for only one of these locations. In this area, the rail line is on the opposite side of the Skeena River from the highway. There are also two communities (population unknown) 25 kilometres inland from Prince Rupert without road access.

Transport Canada has also identified a number of native communities with a total population of 6000 located within 40 kilometres of the Jasper–Prince Rupert line. From the available maps, none could be identified as being captive to rail.

Survey data showed that only 7 percent of the ridership on this route involved a remote origin/destination. Nearly all of these trips originated or terminated at Dorreen — population unknown — some 50 kilometres west of Terrace.[62]

Sudbury–White River

There are 37 locations on the 484-kilometre Sudbury–White River route without all-weather road access.[63] A further two communities have bush road access. The total permanent population of these 39 points is estimated to be 316, the majority of whom are located at the two settlements with bush road access. The upper limit of the seasonal population is estimated to

be 1,200. There is a developed road system in the region; however, it is one of north-south roads crossing the rail line rather than an east-west parallel road. For the most part road access between two points is more circuitous than the rail routing. No significant segments of the rail line pass through non-remote areas.

Survey data indicate that 40 percent of the ridership involves trips to/from remote points. There are few trips between remote points. A further 34 percent of the trips are between Sudbury, Chapleau and White River. These communities have alternative access. There are no origin or destination data for at least 20 percent of the riders.

Capreol–Winnipeg

The 1498-kilometre route can be divided into the following segments:

- The 478 kilometres between Capreol and Hornepayne pass through largely empty areas. Only 12 communities are listed along the rail line in this segment. Of these eight are without all-weather road access, although Oba has alternative rail access via the Algoma Central Railway. The total permanent population along this segment is listed as 28. The seasonal population is about 225.
- The 615 kilometres between Hornepayne and Sioux Lookout also pass through largely empty areas, although there are some populated areas with a road system. Of the 17 communities listed on the rail line, nine lack all-weather road access. All of these communities are located on the western half of the segment. The permanent population of this remote segment is estimated to be 175. The seasonal population is estimated to be about another 100.
- There are seven points along the 115-kilometre rail line between Sioux Lookout and Red Lake Road. Five do not have road access. The permanent population of these communities is less than 10. The seasonal population is 37.
- The 290 kilometres between Red Lake Road and Winnipeg is an intensive cottage and tourist area. The western 110 kilometres is well served by road. There are at least 10 locations listed on the rail line in the eastern part of this segment which are not served by all-weather roads. The total permanent population not served by road is 125. The seasonal population

is estimated to be approximately 2,000. It is worth noting that the largest remote community in this region is Brereton Lake (at the entrance to Whiteshell Provincial Park). It appears to be accessible via Manitoba Highway 307 (a two-lane paved secondary road).[64] Brereton Lake accounts for nearly three quarters of the remote permanent and seasonal population in this area. There has been significant road building and upgrading in the past decade. There may be other remote communities in this segment which now have or soon will have alternative access.

At present the Capreol to Winnipeg route is served by the Toronto– Vancouver train. Thus the costs attributed to the remote service are those related to the incremental capacity, passenger handling and ticketing, station facilities, and any costs related to a slower transit time through northern Ontario due to the additional stops. In the years immediately before VIA's restructuring, the service was provided by separate trains running three-days-a-week.

Passenger survey data indicate that the traffic on this route is evenly split between the Capreol–Hornepayne, Hornepayne–Sioux Lookout and the Sioux Lookout–Winnipeg segments of this route.[65] On the two eastern segments, roughly one third to one half of the trips involve a remote origin or destination. On the western segment, most of the trips appear to be between Winnipeg and the remote cottage/lodge areas. In general there is little or no traffic between remote points and little travel between locations in the individual segments. It is worth noting that in 1989 the average length of a passenger trip on the Capreol–Winnipeg service was 250 kilometres — far longer than is necessary to provide remote access.

Property owners who depend on VIA Rail to provide weekend train service to their camps are dissatisfied with the present Tuesdays, Thursdays and Saturdays arrangement. The campers and their association are petitioning VIA for regular dependable weekend train service.[66]

8.2 REMOTE ACCESS ISSUES

The apparent rationale for continuing to provide these remote rail passenger services at a subsidy per passenger-kilometre five times higher than the national passenger rail average is the notion that the populations so served have no adequate alternative means of transportation, and that they have an entitlement to continuation of rail service.

But, what is meant by "adequate alternative means of transportation"? Is direct road access the criterion? Does having access require public transportation? Must this be scheduled surface transportation? Is regularly scheduled common carrier or charter air service, at a much higher ticket price than rail or bus, an adequate alternative? If one considers scheduled bus service, how close must the bus stop be to be considered an adequate alternative means of transportation? There are many communities in Canada which might be classified as remote by applying the criteria implicit in VIA's services.

Does an adequate alternative require there to be common carrier service or simply alternative infrastructure — road or airport — to allow access? How do the most used forms of transportation in most of the communities involved — boat and snowmobile — fit in?

In the same vein, does any obligation to provide adequate transportation in remote areas require the provision of rail service from each remote location to anywhere in the national system or merely from the remote location to the nearest community with road or air access? Is the obligation to provide transportation the same to "true residents" of remote communities or to anyone who wishes to go — including tourists, cottagers and hunting parties? In this case, the distinction blurs since the tourists, cottagers and hunters may be necessary to support the livelihood of the "true" residents of a number of remote communities.[67] Is there an obligation to provide rail service where it may be significantly more direct and convenient than road service?

Another consideration with respect to remote services is the type of passenger. In some communities, the main employer is the (freight) railway. Indeed the community may only exist to support the railway function. Even non-railway employees may only be there because of the railway. Is the provision of passenger transportation to such communities an obligation of the government or (as before VIA was created) an obligation of the railways? Clearly, access for employees is part of the normal cost of operating railways in remote areas.

There is no obvious point at which the provision of public passenger service becomes a necessity. What is clear, however is that many users of the present remote railway services travel between points where there are apparently adequate alternatives that would be considered entirely reasonable

in other contexts. Yet, provision of similar levels of service in areas where there is no remote aspect has long since been discontinued.

8.3 OPTIONS FOR REMOTE SERVICES

With reference to the above issues, in the discussion that follows, the main assumption is that publicly supported remote rail passenger services should be limited to what is necessary for the remote areas. The services should be designed to bring the passengers out to the closest convenient point where transfer can be made to some other mode. Usually this would be a local community with road access and scheduled bus service. Such a community would generally also have services, particularly shopping, that many remote residents would wish to access regularly.

It makes little sense for passengers to be moved at high cost for hundreds of kilometres by rail where there is a parallel road and bus service that affords a convenient connection for a short and relatively economical rail trip into the remote area. Also, continuing rail operations need not always be the most effective and economical way to provide remote access. Air or road infrastructure may be more appropriate in some circumstances.

Presuming that it is decided that there is some need, however defined, for railway transportation in remote areas, there is also a well recognized need to reduce the net subsidy required for these services.

Given the nature of the services, there is not much scope for improving cost recovery through revenue enhancement. A doubling or even tripling of revenue would not greatly reduce the subsidy requirements. In most cases, a market does not exist for improvements and much of the incremental revenues would be consumed by the incremental costs of providing a service that would attract additional ridership. Thus, any control of subsidies must come more from the reductions in the extent of the routes and the control of costs.

The Mixed Train Alternative

Given the present institutional arrangements, the mixed train alternative is the least cost method of providing railway passenger service in remote areas. As late as 1955, CN listed 90 to 100 routes in its timetable where mixed train services were offered. A mixed train is simply a freight train with passenger cars. Where demand is very light and a caboose is still used, a separate

passenger car might not even be required.[68] Compared to a conventional passenger train, the direct operating costs charged to VIA of a mixed train could be 75 to 80 percent lower. There is no technological reason for this difference, the freight railways historically have simply not charged for crew, locomotives and track access. They have only charged the incremental fuel and maintenance costs of the passenger cars.

Even if the railways were to charge for crew, locomotives and other expenses on a fully allocated basis, the mixed train would be financially attractive compared to the operation of a passenger train. The advantage is that one train could be operated instead of two separate trains, resulting in a reduced requirement for crews and locomotives.

The mixed train alternative is presently used only on the weekly Wabowden–Churchill service and on some of The Pas–Lynn Lake runs. Why are mixed trains not used more? There are a number of reasons:

- Passenger service must be provided on a fixed schedule. On many routes the way freights operate on an as and when needed basis. Thus it may be impossible to schedule the service.[69]
- The way-freight service must cover the section of route that a passenger train would cover. Often way-freight assignments do not match the passenger routes.
- The mixed train service must be provided by a way freight or other local train. There may be through freights that meet the geographical criteria and operate on a sufficiently regular schedule. However, there are often practical and commercial issues which make stopping a 5000-tonne express freight every 15 kilometres for passengers inappropriate.
- There may also be a concern of providing passenger transportation in trains handling dangerous commodities. Gasoline, chlorine and similar substances may often be handled on way freights.

There appears to be little potential for a reasonable replacement of many of the present remote passenger trains with mixed trains. This is due primarily to the fact that there are now only a few regular way freights. CN and CP traffic patterns should be reviewed in detail before the mixed train option is completely discarded. A much better fit between freight and passenger may exist if passenger service is only provided between truly remote areas and

the closest centre tied in with the rest of the national passenger transportation system. Perhaps some incentive might be offered to the freight railways to harmonize local freight with such passenger operations.

While the mixed train option may be the least expensive means of delivering remote services, it must also be recognized that it may also be the least convenient means as well. Trip times will be longer to allow for switching and other activities and the ride quality may deteriorate. These considerations must be balanced against the costs.

8.4 ANALYSIS OF INDIVIDUAL ROUTES

This section examines, in a very preliminary way, the circumstances of each of the present remote services based on the apparent requirements for remote transportation discussed above.

One of the most striking ramifications of the analysis is a questioning of whether VIA is the appropriate vehicle for delivery of remote rail passenger services. With few exceptions, a restructured (remote service only) route would not be physically connected to VIA's network. The nature of these services is such that the use of VIA's marketing, reservations and customer services expertise may not be necessary, and VIA would simply become an administrative intermediary between the government and the actual operating railway. In some ways it may be necessary to undo some of the changes that have taken place through the implementation of VIA Rail. For example, it is probably more effective to draw on the existing CN crew rosters to operate passenger trains in northern Quebec rather than maintain a separate set of VIA crews in the area.

Northern Manitoba

A detailed examination of all instances of subsidized remote rail passenger travel is beyond the scope of this preliminary analysis. However, use of the Winnipeg–Churchill service as an example should illustrate the issues involved, and their possible resolution.

There are three reasons for the selection of Churchill as the example:

- Churchill is the only substantial Canadian community (approximately 1,200 residents) with rail but no road access.

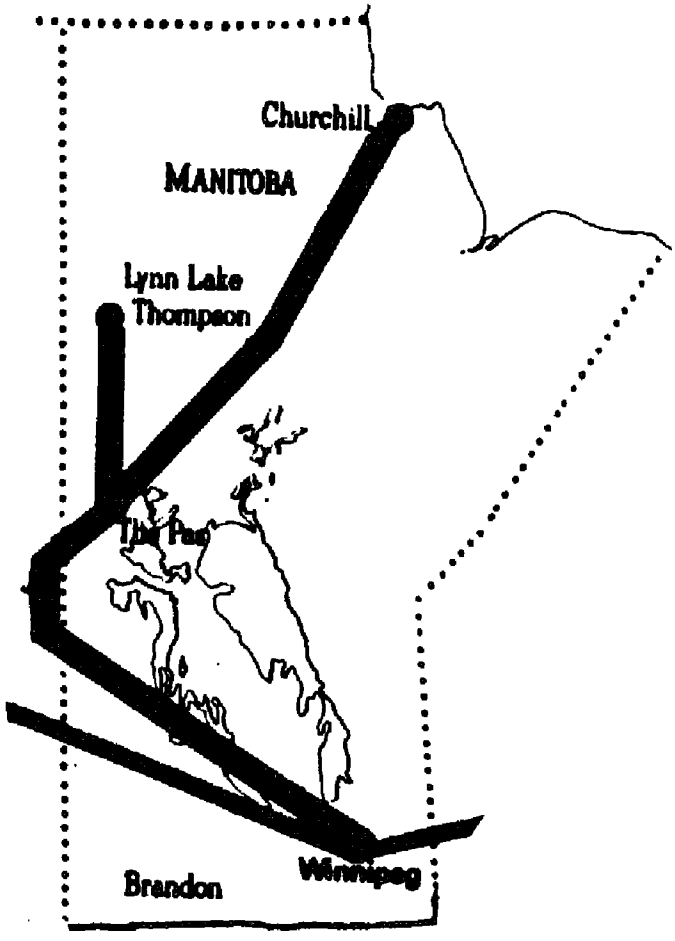
- At $19.5 million in 1990, Churchill services require the largest single remote rail subsidy. Excluding Jasper–Prince Rupert, which is not really a remote service, the Churchill services account for almost half of total remote rail subsidies.
- Churchill has two quite different rail services. A full service (including dining and bedroom facilities) train operates over a 1700-kilometre distance from Winnipeg. A mixed freight and passenger train only goes to Wabowden (through Gillam). Gillam, only 300 kilometres south of Churchill, has regular bus service to Winnipeg.

With costs allocated on the basis of revenue, the transportation of a passenger from Winnipeg to Churchill, including basic sleeping accommodation,[70] costs $3,000; the cost to the passenger is $230 (plus GST). The cost for a passenger willing to sit up for two nights is $2,050, and the fare is $157. Scheduled time is 35 1/2 hours. The regular one way air fare is $353 (including Air Transportation Tax (ATT) but not GST); discount excursion fares start at $331 return. The rail fare for the 6 1/2 hour trip from Gillam to Churchill is $40; bus from Gillam to Winnipeg costs $91.35 and takes 15 hours for bus-rail totals of $131 and 24 1/2 hours (including a three-hour wait in Gillam).

Intervenors at the Commission's hearings included the Churchill Development Board. Its presentation focussed on the importance of long-term continuance of an improved railway passenger service with an upgraded rail bed to the town's tourist industry. Specifically requested were: additional sleeping cars in the summer, replacement of the cafe/lounge car with a full dining car and a dome-type observation car, group discounts, and an improved reservation system tailored for tour operators. Use of passenger rail by the town's residents was not mentioned.

Almost all, if not all, use of the rail service by persons lacking alternative transportation (at least four-wheel drive access to within a few kilometres for most of the year) are located north of Wabowden. They are served by the weekly mixed freight and passenger train from Wabowden to Gillam, continuing the next day from Gillam to Churchill. Continuation of this service but elimination of the train to Winnipeg would save approximately $20 million in subsidies annually, or $1,650 per year for every resident of Churchill, many of whom rarely, if ever, use the train.

Figure 5
VIA Rail Remote Services in Manitoba



The Wabowden–Churchill operation cost $105,000 in 1990. To the extent that former riders of the Winnipeg train used it, and no increase in capacity was required, the cost recovery for this service would rise. At the 1990 average of two passengers per train run, capacity is not a problem; however, addition of another passenger coach to the freight train should be achievable at modest (less that $100,000) cost. Even were it decided to increase mixed train service to thrice weekly, or operate short daylight passenger trains, estimated subsidy, of the order of $2 million annually, would represent a 90 percent saving over present levels.

This points out one of the most obvious issue with respect to the Winnipeg–Churchill: *Is there a need for a rail passenger link between Winnipeg and northern Manitoba at all?* Nearly half of the route has no remote component. Serious consideration must be given to moving the southern terminal of the route to The Pas, Wabowden or even Thompson. This would eliminate a significant part of the operating costs of the service, but would require some expansion in maintenance and servicing facilities in the North as well as some periodic non-revenue movements to Winnipeg of passenger equipment for maintenance. On the other hand, service could be provided with a single trainset rather than the two trainsets presently required.

Given that much of the demand in this area is for local service in to and out of Thompson, consideration might also be given to the operation of a separate local service in the Thompson area, perhaps connecting as far as Gillam and reducing the number of through passenger trains to Churchill. Experiments with various railbus technologies in the mid 1980s in this area, confirmed the potential for such a service.

As noted above, northern Manitoba is a special case. Unlike any other route, the far terminal — Churchill — is without road access. The passenger train is also used to provide intermodal freight service to Churchill, from Thompson, however, not Winnipeg. With the exception of grain trains, the sole purpose of the line to Churchill is to provide remote access. If the rail line is to remain at all, there is no reason to impose an artificial separation between the provision of general freight and passenger service as well as the maintenance of the infrastructure itself. One unified operating entity should be established in this area. The Churchill line is also a case where billing some of the cost of the infrastructure through the passenger system creates a somewhat artificial cost structure. As much as 20 percent of what VIA pays in avoidable costs are charges from CN for infrastructure use. This is simply part of the cost of maintaining an operational and operating line to Churchill.

While the focus should be solely on the provision of service on the northern segment of this line, VIA's recent experience has demonstrated that there is some opportunity to commercially exploit an upscale rail tourism market to Churchill. A tourist section might well be operated during the summer and potentially could contribute to the cost of providing the basic service.

Exploitation of any such opportunity should be a separate commercial venture. Certainly, it should not be an integral part of a heavily subsidized remote access operation.

Jasper–Prince Rupert

If a through rail passenger service between Prince Rupert and Jasper is to be maintained as part of western interprovincial services for tourism or other reasons, then serving the few remote locations with this train as is presently done would be the most cost effective means of service delivery. The incremental costs to serve these remote areas appear to be minor. Remote service, however, should not be the driving force behind maintaining the present long-distance service.

Given the apparent demands for remote access, service could be provided by mixed train, provided there are sufficient scheduled way freights between Prince George and Jasper and between Prince Rupert and Smithers. There is no evidence, however, that the appropriate freight trains exist. As an alternative, rail diesel car service[71] could be provided in these two areas at a cost significantly less than the present service. This would leave only the four communities near Burns Lake (total remote population 58) to be accommodated.

It would also be of value to examine the transportation demand and alternatives in more detail. Some areas might be better served by road or air. Some of the areas may not be as remote as thought. The survey data raises serious questions as to whether there is a need for any form of rail service to the areas identified as remote.

Senneterre–Cochrane

On this route, it appears clear that there is no need to provide a through service to provide remote access. The northern end of Lake Abitibi can best be served from Cochrane. There appears to be adequate alternatives between Senneterre and Cochrane, and the Abitibi area of Quebec is well served.

If rail is to be used, it would be necessary to acquire some 90 kilometres of track from CN and undertake some investment in upgrading.[72] The Ontario Northland Railway — either in its own right or as an agent of the Government of Canada — would appear to be the appropriate vehicle for operating this

segment. VIA has no presence in the Cochrane area. The ONR has a significant presence in the area and has already acquired CN's line running west from Cochrane. It could be expected that the ONR could potentially operate a service at little incremental expense. With a short distance and no freight, it might also be possible to avoid or postpone line upgrading costs. With no freight traffic on the line, it might also be possible to use some form of modified non-standard railbus rather than conventional passenger equipment.

A road alternative has also been identified by the Ontario Ministry of Transportation as being feasible. Upgrading costs are estimated at two to seven million dollars.

Montreal–Jonquière

If only the remote areas are to be served, a train could be operated out of the Garneau Yard — the closest convenient crew change and equipment layover point. Such a change would cut the route length nearly in half. In this instance, there appears to be little scope for a mixed train. Nearly all freight movements consist of long, fast non-stop trains which are unsuitable for mixed train operations.

An alternative consideration would be the use of one or two upgraded rail diesel cars at a capital cost of two million dollars each to replace the one locomotive and three or four conventional cars presently deployed which eventually will require major upgrading or replacement. Depending on crew on-duty time limits, it might be possible to cover the remote area and return in a single day.[73] Such an option may require some expansion in equipment facilities at Garneau to accommodate routine servicing of the equipment. This type of option is estimated to substantially reduce the operating subsidies compared to the present system. The capital costs of providing RDCs are likely to be the same or lower than what will be required eventually for the present service.

A road alternative might also be considered. Unlike the Senneterre–Cochrane case noted above, this option would require a substantial road building/ upgrading program rather than marginal upgrading in one specific area.

Montreal–Senneterre

The issues related to providing remote service on this route are similar to those on the Montreal–Jonquière route. There appears to be an existing service between La Tuque and Senneterre — two established crew change

points. From an operational point of view, the use of Senneterre as a base of operations would be attractive since it is CN's major centre in the area with some equipment servicing capability. Freight traffic between Senneterre and La Tuque is such that the use of mixed trains may be possible. There is no evidence, however, that the appropriate way freights now exist although some of the operating savings of a mixed train might be offered as an incentive to CN to restructure its freight system to provide the schedules required for such a service.

In the event that mixed trains do not prove feasible, the use of short self-propelled equipment which can provide reliable operations in winter conditions would contribute to reducing operating expenditures.

Sudbury–White River

Given the use of separate passenger trains, there are few options that might prove significantly less costly than the present three-day-per-week operation. No segment of the route could be dropped without abandoning some remote communities. Neither road or air alternatives appear to be any less expensive.

This route points out the issue of balancing the costs to the public of providing remote services against the convenience and needs of the users of the service. At present, a passenger cannot go to one of the regional centres and return on the same day, and many trips to White River or Chapleau may not allow the traveller more than an hour in town during business hours without an overnight stay. At least one proposal has been identified which would address this problem. While some of the additional cost could be recovered from increased revenues, how much extra public cost can be justified to provide convenient service, especially where half of the ridership may not be truly remote without alternative access?

Capreol–Winnipeg

As with the Jasper–Prince Rupert service, the present method of serving the remote areas in northern Ontario by the Toronto–Vancouver interprovincial train is probably the lowest cost alternative. In the long term this presupposes the continued operation of a transcontinental train. The remote service may be one of the factors considered in any decision regarding Toronto–Vancouver service, but not the determining factor.

In the absence of the Toronto–Vancouver train — or other through train — some form of mixed strategy appears to be worthy of consideration. Some remote locations might be served by careful attention to road upgrading and expansion. Other seasonal, primarily tourism locations, could be served by air.

Since the primary demand for rail service appears to be for short-distance trips, some form of regional self-propelled or mixed train service operating out of Capreol, Hornepayne and Sioux Lookout appears to offer scope for an improvement in costs. Forestry and mining are listed as primary activity at some remote locations. This would indicate that some form of local freight service exists.

At the Winnipeg end, serious examination must be made as to how remote many of the cottage locations actually may be and what type of road upgrading may be necessary to provide access similar to that provided to other cottage areas in Canada.

8.5 REMOTE RAIL POLICY

The above examples, or rather some of the potential resolutions, presume general principles and definitions with respect to remote community access. Such access can be defined in two dimensions:

- access to the highway network; and
- access to public transport.

Most of Canada's population has both; some communities have only one; a few Canadians have neither. Public transportation for Canadians with road access but who cannot afford or who cannot drive a car, among whom the elderly are prominent, is one issue. With respect to Canadians who lack access to the road network (the remote rail issue), any responsibility would logically seem limited to persons who have had public mode (rail) service for a sustained period. The responsibility would also be limited to the most economical basic coach and baggage service to a point where onward public (usually bus) travel is available.

Where publicly provided road infrastructure is available, this is deemed by most as adequate access for very small settlements. Where there is no direct road connection, however, it would be unreasonable to assume the

ownership of a car once the person is transported to a point on the road system. Adequate connection into the transportation network is normally an affordable public mode connection. A decision to assume responsibility for the access of persons captive to rail does not necessarily mean that the persons concerned have a right to continued transportation service. Responsibility can also be resolved through compensation.

Where abandonment of a passenger rail service leaves communities without direct road access, the size of the community (permanent residents, defined as 10 months of residence over each of the last two years) and the availability of other transportation should be assessed. Transportation, in this context, would include four-wheel drive vehicle access, snowmobile tracks and boat access to/from all-weather roads or points with air access; such modes may (even with train service available) be used a great deal more than the train. For communities where the principle *raison d'être* is the railway itself and its maintenance, access via high-rail vehicle, freight trains and work trains would also be considered. It would then be decided whether communities losing passenger-rail service will be left with access inferior to the norm for generally equivalent communities without road access (that never had rail) — essentially, whether communities are rail dependent.

Financial compensation of those residents deciding to relocate would be negotiated where allocation is more economical than continuance of the rail service. Financial compensation of rail-dependent seasonal businesses whose owners elected to abandon them could also be considered.

9. Perspectives for Viability of VIA Services

How viable are VIA's individual services in the long term? Could any of the services recover costs from passenger revenues?

The Toronto–Ottawa–Montreal services seem to offer the greatest prospect for viability. Results of the cost analysis for a projection of the status quo, service, however, show that even this service, with new equipment and a 25 percent increase in ridership, would at best recover just over half of total costs (including cost of capital). Hypothetical inclusion of green credits[74] would, even at an optimistic five dollars a passenger, only increase the level of (full economic) cost recovery to two thirds.

Judging from the Amtrak experience in the northeast corridor, a very substantial increase in ridership and/or in ticket prices (most likely ticket prices) would still be necessary. However, it is unlikely that increases much more than those projected in this paper could be realized without fundamental change in the service package.

Such change would require a very large investment in new and upgraded track and different equipment to allow Toronto–Montreal operations through Ottawa at present or lower transit times. This would allow for a potential increase in frequency to eight trains per day between the three major centres without any significant increase in fleet size and with an important improvement in trip times to Ottawa. However, an investment in reducing Montreal–Toronto trip times might be as effective; however, it is unlikely that either investment would be economically justified. The combination of the two — a high-speed Toronto–Ottawa–Montreal rail system — is the topic of exhaustive study. For an economic return on the capital investment required for such a system to be achieved, ridership and yield would have to increase much further.

The situation in the Montreal–Quebec City market is somewhat more perverse. While there is substantial travel demand between the two centres, the presence of two relatively uncongested (outside of suburban Montreal) freeways results in a low market share for rail, and it puts a limit on the potential for increasing rail ticket prices. Also, although there are also two rail lines, the one that is well situated for a speedy Montreal–Quebec City passenger connection is not constructed to suitable standards. Substantial infrastructure investment would be required to allow VIA to penetrate the car and bus dominated market.

Regardless of improvements, cost recovery levels for Montreal–Quebec City must be expected to continue to substantially lag behind those for Montreal–Toronto. Since these are connecting services, and partially integrated in terms of operation, a case can be made for crediting some potential Toronto–Montreal revenue to a Montreal–Quebec City upgrading. As with the size of the connecting rail traffic, any such credit would be small. More significant is the case for political symmetry — a system upgrading that links the capitals of Ontario and Quebec with the nation's capital.

As noted earlier, the railway passenger mode in southwestern Ontario is dominated by traffic into and out of Toronto from much smaller communities and thus can never hope to achieve high average load factors. The use of different equipment and organizing the service delivery more in line with commuter operations would no doubt allow an improvement from the 36 percent cost recovery level projected in this paper, but 100 percent is difficult to conceive, except possibly for a dedicated London service. In this context it is noted that, while there may be a Quebec City–Toronto corridor, there is really no Quebec City–Windsor corridor in the sense that, west of Toronto the service is better characterized as a local network of three services terminating in Windsor, Sarnia and Niagara Falls. The major communities served are not oriented linearly, and little of the traffic is destined to the east of Toronto.

If there is a key ingredient with respect to possible improvements in the viability of southwest Ontario services it would seem to be the progression of congestion on the local intercity highways, and its effect on the fares that travellers will pay to avoid it. A large (unrealistic) fare increase would be necessary to make existing rail services viable. An alternative would be subsidies contributed by government, presumably the province, in the name of congestion abatement; however, the cost of avoiding congestion would be high, and there would be equity concerns. In general, the economically advantaged use the train while those with low incomes ride the bus.

Western Interprovincial services can be expected to improve somewhat from present levels, but recovery of much more than one third of total costs is unrealistic for a true transcontinental transportation service. The Amtrak experience is much the same. In this sector, the inclusion of green credits would not markedly affect viability; the difference between rail and other modes is simply not that significant. When considering the general issue of credits, it would be worthwhile to include a separate credit for any remote service that is provided by these trains. This would not be of consequence in terms of the viability of the service beyond the remote region.

It would only be considerations of linking east and west (nation-binding) and of the promotion of tourism that might tilt an analysis and decision on the western services in favour of retention. The financial viability of the train services will augur against it. As noted earlier, tour trains can be viable in the western market, but the factors that lead to their financial viability (catering

to upper-income travellers and offering limited service frequency and destinations) may not be considered factors that justify public subsidy, ownership and operation of the transportation service. Further, the operation of a tourism service in order to subsidize basic east-west and western intercity rail transportation would seem neither feasible nor appropriate.

VIA's analysis of the western services is quite similar to ours. For the next decade, VIA offers two options, both of which rely heavily on tourist services between Jasper/Calgary and Vancouver. One option includes the retention of a year-round Toronto–Vancouver train three days per week plus three-day-a-week, summer-season tourist service on both the CN and CP routes through the mountains. VIA expects that such a service package could recover 60 percent of total operating costs assuming sustained growth in ridership and real fare increases. This option would require new capital investment of some $140 million to provide additional train capacity and replace the present recently upgraded fleet. Inclusion of the capital would result in less than 50 percent total cost recovery. VIA's second option features daily tour train service on both mountain routes during the summer season only. Capital requirements are modest — only $30 million. VIA anticipates that the tourist-only option would generate a modest operating profit, but the total cost recovery, including capital, would be in the range of 90 percent in the initial years.

Commercial prospects for the eastern interprovincial services are much the same as in the West, except that there seems to be very limited tourism potential. Due to market factors, financial performance in the East is likely to always lag behind the West, and as with the West, inclusion of green credits is unlikely to improve viability to the extent that it might for Toronto–Montreal services.

Another factor at play in the East is the generally declining level of total railway activity and profitability. Already, some of the track used by these services has been approved for abandonment; other line segments may follow. In such a situation, increases in the attribution of infrastructure expenses to the passenger services will be necessary.[75]

In the East, VIA has examined the option of a single daily train between Montreal and Halifax via Campbellton with the elimination of rail service to both Saint John and the Gaspé. Assuming moderate traffic growth but no real ticket price increases, VIA estimates that this option could result in an operating cost recovery of just under 50 percent, with much of the financial improvement coming from the cost savings associated with consolidation of the present three train services. Inclusion of capital would bring the total cost recovery down to less than 40 percent. VIA also estimates that there may be some tourism potential in the East, but not enough to significantly alter the financial results.

Financial viability *per se* is not the issue with VIA's remote services. Such services are (or should be) only provided on the presumption that access alternatives to a subsidized rail service are either absent or would be more expensive. Thus the key questions for remote services are: *How can costs be controlled?* and *What is the lowest cost method of providing these services?* In some cases, non-rail alternatives may be the answer. In other cases, it appears that significant savings can be made by eliminating the long-distance trains in favour of trains which serve only the remote areas. In some cases, more use of mixed trains may be in order. However, the potential in this area is limited.

10. The Cost of Eliminating Services

The discussion above indicates that few if any of VIA Rail's services have significant prospects of viability without subsidy. The very mention of this topic suggests that some or all of the services might not be continued. In this context it is recognized that discontinuing such government provided services has its own cost. The present section develops an order of magnitude estimate of the one time cost required to terminate the Canadian intercity railway passenger network and the operations of VIA. The cost would depend on the way the system was wound down. It is assumed for this analysis that any termination would be done in an orderly, well-timed fashion — say over a year — rather than abruptly.

The cost of termination is estimated to be $556 million — plus the budgeted subsidy for the year of termination — and would fall into the following categories:

Severance/assistance for labour	$ 407,000,000
Terminating day-to-day supply and other contracts	nil
Terminating leases	$ 20,000,000
Clearing any unfunded pension liability	$ 34,000,000
The actual winding down of the company	$ 25,000,000
Losses in revenue for trains still operating	$ 70,000,000
Mitigation of environmental damage at facilities	undetermined

Against these costs a credit must be given for the net proceeds upon disposal of VIA's assets. An overall value on the order of $250 million seems appropriate for this credit. This value includes:

Sale of cars and locomotives	$ 68,000,000
Disposition of infrastructure	nil
Disposition of stations	$100,000,000
Disposition of shops	$ 75,000,000
Disposition of other assets	$ 10,000,000

Each of these costs and credits is discussed below.

10.1 LABOUR SEVERANCE

A number of VIA's unionized employees, with eight or more years' service, have labour protection clauses in their collective agreements which amount to what might be considered a lifetime guarantee of employment,[76] provided that the employee "remains available for work." These guarantees apply to shopcraft employees and to non-operating employees (clerical, station, on-train staff and some support staff). The running trades (train and engine crews) do not have the same form of contractual job security. Instead individual agreements are negotiated in each instance under the material change provisions of the collective agreements. United Transportation Union (UTU) officials expect that settlements for the running trades would be similar in value to those obtained by other unions.

Many of VIA's employees, especially those with the employment guarantees, are former CN employees who were transferred to VIA between 1978 and 1988.[77] Seniority and years of service for all transferred employees date from the time the employee first entered CN or CP service. The transfer agreement between the railways for non-operating employees, on-board service staff and shopcraft employees provides no residual rights to return to CN or CP. For the running trades, the agreements provide that all former employees are entitled to return to CN in the event that they "can no longer hold work" at VIA. Presumably the closure of VIA would be a valid reason for not being able to "hold work," which could lead to a situation where the closure of VIA led to layoffs of CN employees. This is not considered here.

Based on the pre-cutback distribution of employees, between 35 and 40 percent of VIA's projected 1993 work force of 4,200 employees may be entitled to some form of job protection or employment security benefits. This would apply to about 1,600 employees. The distribution by age group is not known, although many of the protected employees would be older than the average. For the purposes of the analysis, it is assumed that the one-time cost to terminate these employees would average $210,000 per person. This represents an average of seven years' payment at a rate of $44,000, discounted at 10 percent. This totals $336 million.

This value of $210,000 per person may be high. For the termination of the Newfoundland Railway it was reported that employees with job protection would average seven years' pay. No confirmation has been found for this number and it must be noted that a number of the affected employees could exercise seniority rights in other locations in the Maritimes or could be reassigned (after a four-year moratorium). VIA in its calculations for its *1989 Review* adopted the seven-year figure.

In late 1991, CP laid off over 1,200 employees with the closure of the Angus Shops in Montreal. All employees with more than eight years' service were to receive full wages and benefits until retirement. No specific cost for the labour settlement was reported by CP. However, CP included a $250 million extraordinary charge against 1991 earnings for work force reductions in the shop and administrative areas. As part of its overall package, CP offered $100,000 cash settlements for employees that chose the alternative of leaving the company. Older employees were offered early retirement incentives. Employees for which CP had employment elsewhere and that chose to relocate were offered bonuses of $45,000.

One of the ways to reduce this cost might involve the reintegration of VIA with CN. While separate freight and passenger collective agreements would remain intact, it is not unreasonable to expect that CN might negotiate an agreement that allows it to recall former passenger employees on labour protection as it needs these skills.[78] This would result in significantly reduced net severance costs. CN may also be able to use a number of the other skilled employees now employed by VIA.[79]

It is assumed that the one-year notice of the termination of VIA — including an allowance for full wages of all staff during this period — would serve as the equivalent of a severance package for other classes of employees. This is not to say that employees would receive severance pay as required by law. Instead, it is assumed that operations and administrative activity would be scaled back over the year and that employees would be terminated throughout the year.

In the case of the Newfoundland Railway, the average severance package in 1988 for employees without job security was $40,000. CP, on the other hand, appears to have made no special provisions for the few workers at Angus with less than eight years service. If the Newfoundland experience were a precedent, an additional allowance of up to $50 million (2,000 employees at $25,000) might be made for additional severance packages.

As an additional item, it can be expected that there would be various retraining, counselling, and out-placement programs provided on a ongoing basis during the termination period. At a net average expenditure of, say, $5,000 per employee, this cost would be $21 million.

10.2 SHORT-TERM CONTRACTS FOR SUPPLIES AND OTHER SERVICES

It appears that most of VIA's contracts for materials are short-term contracts. Given the one year winding down period, there would probably be no net costs of termination since adequate notice could be given.

10.3 TERMINATING LEASES

In its analysis for the *1989 Review*, VIA used a cost of $26 million to terminate long-term leases. This seems a bit high, and one can assume that there may have already been some reductions in this area due to the past downsizing. A cost of $20 million is suggested.

10.4 UNFUNDED PENSION LIABILITY

Note 2 of VIA's 1990 *Annual Report* suggests that there was some unfunded pension liability. Note 8 states that the accumulated benefits were estimated to be $634 million as of the end of 1990 while the market value of the available pension assets was $600 million. The difference, $34 million, has been used as an approximation for this cost.

In addition to the costs of clearing the unfunded pension liability, a one-time payment might also need to be made to provide for ongoing administration of the pension system. No provision had been made for this cost.

10.5 WINDING DOWN THE COMPANY

Since it is assumed that one year's notice would be given of any termination, much of the executive and administrative effort presently devoted to training, product development, long-term planning and so forth could be devoted to the mechanics of winding down the company. There would still be other expenses and effort would continue past the end of the one year notice period. A value of $25 million has been used for these costs. This is equal to approximately half of VIA's total 1990 administrative costs. As suggested above, this task might reasonably be given to CN which has experience in this field.

10.6 PREMATURE LOSS OF TRAFFIC

Ridership will start to drop off as soon as any decision to terminate VIA is announced. It will also drop off as services are terminated throughout the transition year. It is unlikely that VIA would be able to reduce costs to match the drop in ridership, especially if it is assumed that the one year termination period and notice subsumes severance and other costs of termination. A value of $70 million is suggested as the loss in revenue for the transition year. This is equivalent to half VIA's 1990 revenues.

10.7 MITIGATION OF ENVIRONMENTAL DAMAGE

Under current legislation, it would be necessary for VIA to clean up any sites it had used. No estimate has been made for this item. It might reasonably be expected that clean-up costs would be reflected in the realizable value of contaminated properties rather than as a specific direct cost.

10.8 SALE OF CARS AND LOCOMOTIVES

The net realizable value of VIA's fleet varies from scrap values for the very oldest cars and locomotives to potentially three quarters of a million dollars for its newest locomotives. Potential buyers for equipment include short-line railways, tourist railways, railway museums, and even freight railways which use passenger equipment for work trains. Some of the equipment might also be transferred to any entity that is charged with the responsibility for operating any residual remote services.

It is assumed that the costs of disposal would be at least 15 percent of proceeds. The following valuation (based on VIA's 1990–1993 fleet projections published in its June 1990 Corporate Plan) is suggested:

Table 13
VIA Rail Rolling Stock: Estimated Disposal Value

Equipment	Manufactured	Replication cost ($)	Fleet size	Disposal value ($)	Subtotal ($)
F40 locomotives	1986 through 1990	2,000,000	59	750,000	44,250,000
LRC locomotives	Early to mid 1980s	2,000,000	10	100,000	1,000,000
GP418 locomotives	Rebuilt mid 1980s	1,000,000	15	200,000	3,000,000
Other locomotives	Mid to late 1950s		14	20,000	280,000
Steam generators	Mid to late 1950s		60	15,000	900,000
Rail diesel cars	Recently upgraded	1,000,000	5	250,000	1,250,000
LRC cars	Early to mid 1980s	1,750,000	109	50,000	5,450,000
Stainless cars	Upgraded 1988 to 1992	1,100,000	80	250,000	20,000,000
Stainless cars	Mid 1950s		80	25,000	2,000,000
Old blue cars	Mid 1950s or earlier		220	10,000	2,200,000
Subtotal			**652**		**80,330,000**
	Less 15% allowance for disposal costs				12,049,500
Net estimated proceeds (including parts)					**68,280,500**

10.9 DISPOSAL OF INFRASTRUCTURE

VIA owns little track. It is assumed that the net proceeds on disposal would be low. For example, VIA owns the track from the outskirts of Ottawa to the outskirts of Smiths Falls. This track is no longer required for freight traffic and does not occupy any seemingly valuable land. Much of VIA's investment in track has taken the form of paying for specific improvements made to the CN and CP tracks it uses. There would be no assets to directly dispose of.

10.10 DISPOSAL OF STATIONS

VIA owns a variety of stations, ranging from major properties in Halifax, Quebec City,[80] Ottawa, Winnipeg and Vancouver to hundreds of small line stations. The largest and most valuable, Toronto and Montreal, are not owned by VIA and are also used by urban commuter services.

There are a number of unknown factors here. Does VIA own all the land occupied by its stations or is it leased from the railways? Do the facilities revert to CN and CP if no longer needed for passenger service? In the context of the termination of intercity passenger services, it is unimportant whether the value on disposal accrues to the public through VIA or through CN. It is clear that there would be a significant realizable value for VIA's stations. The Ottawa station and associated tracks, for example, occupy a large tract of land served by major urban transport links which could provide a substantial development site. Similarly, the Halifax station is located on the edge of an area which has seen significant redevelopment during the past decade.

On balance, a disposal value of $100 million for stations is not unreasonable.

10.11 DISPOSAL OF MAINTENANCE FACILITIES

VIA has a nationwide network of maintenance facilities which were opened during the mid to late 1980s with an original cost in excess of $200 million. The largest facilities are in Toronto and Montreal with smaller facilities in Halifax, Winnipeg and Vancouver. VIA owns the land occupied by some of these facilities. In Toronto and Montreal, the land appears to be leased from CN.

The buildings and machinery all have value in reuse. GO Transit might be a potential buyer for the Toronto facility. GO is expanding its network, increasing its maintenance requirements and reportedly starting to outgrow its present maintenance facility near the VIA facility. As a first approximation, it is assumed that the proceeds from disposition might be on the order of $75 million, about one third of the original investment.

10.12 DISPOSAL OF OTHER ASSETS

The termination of VIA would release a wide range of low-valued assets such as office equipment and so on. For the whole system, these might be sold en masse to a company specializing in such disposal for anywhere between 5 and 10 million dollars.

10.13 RELEASE OF CN AND CP ASSETS

With the termination of VIA, there are a number of assets, which are solely related to passenger rail, which CN and CP would no longer require. The realizable value on such assets might be substantial.

Typical of these assets would be tracks leading from the mainline to individual stations, some sidings and passing tracks, and some stations. For example, the Edmonton passenger station is located downtown and requires a loop track from the CN mainline to the downtown. CN has indicated this track is not required for its freight system.

In theory, there should be no gain to the railways if these assets have been properly priced in the setting of charges for VIA. The railway would be no better off by selling the assets than it was by charging VIA for the use of the assets. In practice, it is unlikely that the two values would be equal. For one thing, there are significant differences between market land values and the land values the railways are allowed to use for costing purposes.[81] No estimate has been made of this value.

In addition to passenger-only assets, CN and CP may have some lines which carry passenger and freight traffic but which could be abandoned if there were no passenger trains. While there are a number of examples from the past where CN and CP have not been allowed to abandon a line due to

the presence of passenger traffic, the 1987 legislation changed the situation so that VIA is required to either buy such lines or to pay the "full" cost to use them. This study has not identified any such lines.

It is clear that in the absence of intercity passenger trains, CN — and to a lesser extent CP — will have more infrastructure and other assets than might otherwise be justified by the present and future freight transportation requirements and it may take some time to adjust this level of plant investment.

10.14 OTHER POTENTIAL COST IMPACTS

There are three other direct impacts that might be reasonably considered as part of the costs and savings in the termination of the intercity passenger network.

Provision of Alternative Transportation in Remote Areas

Some of the present VIA routes have been identified as serving remote areas where there is no reasonable alternative. There are a variety of alternatives for serving those areas which are truly remote, with cost estimates ranging from as low as $50 million to as high as $250 million.

Changes in the Costs of GO Transit and MUCTC

In Montreal and Toronto, suburban rail transit systems use some of the same track, stations and other facilities as VIA. If these are not shared with VIA, some change in the cost structure for the transit systems can be expected.

Changes in the Net Costs of CN and CP

As with the urban transit systems, some of the operating costs of providing rail freight service are based on sharing track with passenger trains. To the extent that the actual avoidable costs differ from the charges to VIA, there may be some impact on CN and CP's net operating costs. Even if VIA were paying the true long-run costs, it might take some time for all of the long-run adjustments to be made. As an indicator of the magnitude of any such impact, payments to CN and CP for services provided to VIA totalled $129 million in 1989, roughly 2 percent of the total domestic revenues of the two companies.

ENDNOTES

1. Trains can carry 1,000 passengers or more. For a "state-of-the-art" passenger system, François Lacote, the Director of Mechanical Engineering of the French National Railways (SNCF) states that the "Northern high speed line . . . will allow for a traffic potential of 22,000 passengers per hour in each direction. . . . This in fact corresponds to the potential of a 14-lane expressway." *TGV System Developments*, March 1992, p. 52. This implies 40 trains per hour each way (which seems very high for the speeds that the SNCF contemplates for this line).

2. As of April 1992, the fastest revenue service is at 300 kilometres per hour. The "Chunnel" line is being designed for 320 km/h; possible future "extension" to 350 km/h has been discussed. The TGV has set a world speed record of 515 km/h.

3. In addition to this amount for the corporation, the railways were paid $70 million for passenger rolling stock in 1978, and a further $47 million for rolling stock and infrastructure in 1979.

4. In the mid-1980s VIA received significant interest income due to the differences in timing between receipt of government payments and actual expenditures. This situation has been changed and, in any event, does not represent true "earnings" for the passenger rail system.

5. To the extent that such costs are really "one-time" costs, they might properly be identified separately as part of the start-up costs of VIA, and be considered as much part of the investment as the purchase of stations, maintenance facilities and rolling stock. Doubtless, there is a significant ongoing component.

6. These services are essentially routes served. However, there may be overlaps. As an example, Toronto–Kingston passengers may be accommodated on the Toronto–Montreal and Toronto–Ottawa services, as well as on the (now cancelled) Toronto–Kingston service.

7. In its cost recovery reports and other documents, VIA makes a distinction between "avoidable" costs and "common system costs" (referred to as simply "common" or "system" costs or as "excluded" costs). These categories should not be interpreted as equivalent to "variable" and "fixed" costs. While nearly all of VIA's "avoidable" costs are "variable," not all of the "common system costs" are "fixed" given the general accepted usage of the term in railway costing. Nor are all the "common system costs" overhead costs in the generally accepted usage of the term.

   VIA's distinction between "avoidable" and "system" costs stems from the traceability of costs to specific train services. In very general terms, any cost — short-run variable, long-run variable or "fixed" — which can be attributed to a single service is classified as an "avoidable" cost. Costs which cannot be directly traced to specific services are classified as "excluded" costs.

8. The Prince Rupert train was designated as a mandatory service providing remote access in October 1989.

9. For example, a weekly train used to be operated between Quebec City and Chambord, to serve 28 stations in the 225-kilometre remote area between Hervey and Chambord. The Montreal–Jonquière (Chicoutimi) train now serves these points and has, as a remote service, been designated mandatory. One could question whether provision of rail service to the sparsely populated remote segment of this train run was the reason or the excuse for retention of the Montreal–Jonquière full service train that also provides convenient service to cottages, clubs and lodges.

10. The rail passenger subsidy is less than 1 percent of the BCR's consolidated revenues.

11. This service was offered jointly with VIA, with the Toronto–North Bay portion included in VIA's results. Thus there may be some overlap in total passengers handled. With VIA's 1990 cancellation of its part of the Toronto–Cochrane service, the ONR has restructured its services providing one daytime train six days per week between Toronto and Cochrane with bus connections to Timmins.

12. Approximately $2 million of this money comes from the federal government as a section 270 payment. The ONR is not eligible for federal subsidies. The Toronto–North Bay part of the route, however, is legally operated by CN and thus qualifies for payments. Federal monies received by the ONR have generally been treated as a credit by the province against its subsidy obligations to the ONR.

13. This is the latest year for which fully compatible data were available.

14. The costing base for each railway is slightly different. For VIA, the operating subsidy includes the full cost of VIA with the exception of an allowance for the cost of capital on assets owned by VIA. For the ACR, the subsidy is only 80 percent of the loss, with the costing base being long-run variable costs — somewhat less than full costs of some functions, but including depreciation and cost of capital on all assets. For the BCR, the subsidy is based on the "full costs of operating the passenger services," but not of the extent of using fully allocated costs or including a capital charge for passenger equipment (which is separately funded). For the ONR, a full subsidy is paid based on fully allocated costs, including the cost of capital and depreciation. The subsidy for the QNS&L is the same as for the ACR; namely 80 percent of the loss, based on long-run variable costs.

15. The service groups used here are NOT the same as those used by VIA. Most importantly, the Ontario–Quebec services, grouped by VIA into a category called "*corridor*" are separated.

16. Some aspects of all remote services are homogenous, but there can be significant differences.

17. The 1990 VIA cost data, on which the analysis is based, exclude any extraordinary expenditures related to the downsizing of VIA.

18. This study does not so much project that ridership will reach two million in a few years' time, as assume a level of ridership that is reasonable given past and present trends in the market.

19. An additional frequency may not be physically necessary to handle the ridership increase, but would be required as a service improvement to attract the projected ridership.

20. Note that the typical passenger trip is significantly less than the route distance. Thus, the train services may be long distance, but the market is a blend of short to medium-distance trips plus some true transcontinental travel.

21. In some instances, crews cannot get a revenue-producing return trip but must be paid to return to their home base. In addition, crews qualify for "held away from home" allowances.

22. The above illustrates one of the issues with respect to operation of the passenger railway system as a separate entity (from the freight operation) with separate employees and facilities. Separate operation requires some minimum scale of activity to be effective. At some point, it may become less expensive to provide some of the operations as a marginal activity to the freight system. To return to the example of crews, there is sufficient freight traffic that the "deadheading" of passenger train crews might not be necessary if the

freight and passenger services drew from a crew pool. Would such savings be greater than the benefit of having dedicated passenger-train crews and fewer employees to train? Are three trains per week sufficient to justify a separate maintenance centre in Vancouver?

23. Revenues for the 1989 season were 20 percent higher than avoidable costs.

24. The Western Interprovincial services do "benefit" from tourism which provides a significant ridership base and contributes to the higher ticket prices. Tourism also provides much of the potential for ridership growth. However, tourist demand is very seasonal, and accommodating it leads to idle empty cars for much of the year.

25. On many services, passenger demand tends to be greater nearer the larger centre served by the regional train. Thus, the load factor somewhat understates the unused capacity available. A train may leave the origin with 15 percent occupancy and arrive with nearly 90 percent occupancy.

26. In this context, a network is defined as a group of services which operate into one or two common terminals using a common pool of equipment.

27. The estimates here do not include the higher-cost, lower-revenue overnight trains offered by VIA between Toronto and Montreal/Ottawa which were eliminated as part of the restructuring of VIA.

28. Peaks in demand affect most services in one way or another. As a general rule, the shorter the average passenger origin-destination travel time, the higher the peaking.

29. At a distance of 200 kilometres, and with a direct and uncongested freeway, bus and car have a relative (to Toronto–Montreal and Toronto–Ottawa) advantage. The relatively poor and slow Ottawa–Montreal track also has an effect.

30. Since the Montreal–Ottawa service is fully integrated in terms of equipment and the use of both the Montreal and Ottawa facilities, not all its fully allocated costs are truly avoidable. Removal of this service would result in a slight decrease in the cost-efficiency of the Montreal–Toronto and Ottawa–Toronto services.

31. An increase in the load factor might be possible. This would not, however, significantly alter the conclusions with respect to the low cost recovery of this service network.

32. Trains tend to be much fuller than a 55 percent load factor would imply between Toronto and London and somewhat emptier between, say, London and Windsor or Sarnia.

33. In some ways, services in southwestern Ontario are very similar to those of a regional network as described above, but on a larger scale. In addition, it is difficult to separate true intercity services or regional services from the provision of a wide-area Toronto commuter service.

34. For example, the SNCF receives specific, separate government funding for some activities. This is treated as earned revenue. In VIA's case, all government funding appears as deficit.

35. Note that four separate cost ratios are used in the table. The first is defined as total revenues divided by total expenses, including depreciation. The second (quoted from Amtrak's annual report) excludes depreciation and amortization from expenses. This ratio is not referred to in the present paper. The final two ratios exclude revenues earned from sources other than intercity passenger transportation. They are referred to as the *STAC* and the *LTAC* ratios.

36. In comparing Amtrak's results with figures for VIA, there are important definitional differences:

    - Short-term avoidable costs (as used by Amtrak) (STAC) are defined as "costs of activities that would stop [immediately] with the discontinuance of a route or train, or begin with the introduction of a new route or train." STAC include crews, fuel and power, and maintenance of way. In 1989, based on the ratios reported in the annual report, STAC accounted for 55 percent of expenses.
    - Long-term avoidable costs (as used by Amtrak) (LTAC) are defined as "all short-term avoidable costs, plus claims expenses, heavy maintenance and a portion of corporate and field overhead." In 1989, based on the ratios reported in the annual report, LTAC accounted for 72 percent of expenses.
    - Total cost (applied here to VIA) is defined as the full cost of operating the service, including an allocation of overhead and shared facilities plus an allowance for the opportunity cost of the capital invested in fungible assets.

37. Approximately 30 percent of the then existing rail passenger routes were included in the Amtrak network when it was created. On April 30, 1971 there were 547 intercity passenger trains operating in the United States. The next day, when Amtrak began, there were 243. By way of contrast, nearly every CN and CP passenger service became part of VIA when it was created as a separate entity.

38. *Federal Subsidies for Rail Passenger Service: An Assessment of Amtrak* (Washington, D.C.: Congress of the United States, Congressional Budget Office, July 1982).

39. The passenger services that were abandoned are costs that would disappear over a fairly short period of time (generally less than a year).

40. Included are proportions computed to be variable, over the longer term (several years as the system adjusted to abandonment of the passenger service), of property taxes, depreciation, cost of capital and administration.

41. Under this system, the state authority is expected to contribute 45 percent of the short-run loss in the first year of operation of a service and 65 percent of the long-term loss in future years, plus half of any new capital expenditures required for a service.

42. It was not possible to identify the extent to which the costs related to earning this $360 million reduce this effective cross subsidy. However, it is believed that these revenues make a significant contribution to overheads and profits.

43. VIA is now starting to earn a small amount of revenue from its equipment maintenance facilities.

44. This estimate does not make allowance for any capital requirements.

45. In 1989, the total avoidable costs of all of VIA's services accounted for 58 percent of total operating expenses (including depreciation). The total of all service LTACs accounted for 51 percent of Amtrak's total expenses. The inclusion of any avoidable costs of operating non-intercity passenger services would bring the Amtrak percentage closer to VIA's. There are no significant differences between the two railways in terms of what elements of cost are included in "avoidable." It should also be noted that some of Amtrak's cost advantage over VIA is the result of capital expenditures for which Amtrak is not required to account.

46. A service that carries passengers to/from several small centres destined from/to a large city is doomed to low average load factors as it empties progressively to the end of the line.

47. There is also cumulative 6 percent preferred stock, held by the Secretary of Transportation and issued in return for federal operating subsidies and capital contributions.

48. Essentially, the railroads were offered a choice of joining Amtrak and subscribing capital — in the form of assets or cash in proportion to their passenger train losses — and being relieved of their passenger train obligations, or having to wait five years before even applying to discontinue passenger trains. All major railways, except the Southern, the Rock Island and the Rio Grande, chose to join Amtrak.

49. The full page width headline read: "*Backward rail car has Transport Minister talking in all directions,*" (*The Citizen* [Ottawa], September 24, 1991). The Hon. Jean Corbeil was being taken to task for the position of the dome car on the Jasper to Prince Rupert train, and although there was an undertone of humour in the article, the publicity for the Minister was negative. From the perspective of VIA's viability, there is a danger that Amtrak (answering periodically and only directly to the legislature) does not face. The Minister or one of his advisors might be tempted to instruct VIA to "turn the car." This would cause the deficit of a service, justified on the basis of the access it gives to a few small communities without road access, to increase beyond the 1990 level of $11 million (a 91 percent subsidy). A cost-conscious management, on the other hand, would be more likely to remove the dome and reduce the deficit.

50. Of course, losses (in the face of an impossible mandate) of those among its key professionals with attractive alternative employment prospects have been widely attributed as a contributor to VIA's difficulties.

51. It is noted that the *Rocky Mountaineer*, VIA's venture that achieved commercial viability, was sold in 1989, and that such action does not constitute an incentive for VIA management to focus on this objective.

52. Although this locomotive was originally envisaged as light and rapid (comfortable does not really apply to a locomotive), as design progressed to prototype development, a very heavy machine emerged. Also, with its weight it lost the ability to go fast, and with a high unsprung mass on its axles, track damage considerations limited the LRC to speeds below 145 kilometres per hour, even on track of the highest standard. The LRC locomotive was a design failure, obvious even before prototype testing; normally such development projects would have been terminated before production. The LRC car has not been without problems as well, notably the banking system and, more recently, the axles.

53. It is worth noting that Amtrak's impressive cost recovery figures do not reflect the full extent of the significant capital expenditures required to bring about its resurgence.

54. In terms of VIA's definition of avoidable costs but not necessarily in terms of total costs.

55. In the case of Sudbury–White River, one might have expected an increase due to the cut-backs since *The Canadian* no longer served this route. Ridership survey results suggest that the change in schedule which makes return trips more difficult has resulted in a decline in ridership.

56. In the case of the one service where survey data were available, it appeared that less than 5 percent of the passengers made use of this type of fare. Most paid full fare, even for return trips.

57. All passenger survey data are based on a series of two one-week samples undertaken by Transport Canada in the summer of 1990. It is not known how representative these data may be of annual demand patterns.

58. An inspection of 1985-vintage Quebec highway maps indicates that, in addition to Parent, another third of the permanent population of the remote area is located on numbered bush roads.

59. The data contained significant numbers of trips with an unknown origin and destination, which may or may not involve the remote segment; thus the range.

60. This component included a number of school groups. In addition, the survey was carried out in 1988 and may be more reflective of past rather than current ridership.

61. This figure includes 1,615 residents of the Split Lake native community on the Thompson–Gillam road. It is not clear if the Fox Lake, the Valley River and the War Lake communities (total population 1,168) are included in the summary population estimates. Parts of these communities are along the line between Pikwitonei and Gillam.

62. These results may be a direct result of using a two-week sample of ridership.

63. At least four of the points thought to be remote appear to be accessible by some type of road.

64. The passenger demand survey for July 1990 confirms this.

65. Data for other years suggest that the traffic was seasonally concentrated between Winnipeg and the cottage area west of Sioux Lookout.

66. *The Sudbury Star*, June 2, 1992.

67. Obligations to provide remote transportation may be further blurred by residual common carrier obligations. Cottages may have been established in remote areas in good faith at a time when rail transportation was offered as a profitable business.

68. Change in NTA safety regulations and labour agreements might be necessary to carry passengers in a caboose.

69. This recently occurred with the Lynn Lake service. Freight demand dropped such that it was no longer necessary for CN to operate three regular freight trains. Thus VIA has been charged with the total train operating costs of at least one of the three trains each week.

70. Average of upper and lower berths.

71. The advantage of the railway diesel car (RDC) or other self-propelled equipment in low passenger density areas is that there are less crew, fuel and maintenance requirements. The cost of operating two RDCs (which are in good condition) is generally less than operating two passenger cars plus a locomotive. The RDC is also more flexible. On some routes, CN has had some trouble operating RDCs in winter conditions. RDCs have, however, been successfully operated in northern areas in Canada. At the present time, the British Columbia Railway operates a fleet of rebuilt RDCs between Vancouver and Prince George. VIA owns 60 or more operational RDCs which are not now used. Rebuilding would be required to operate in any of the remote areas and would entail $2 million to $2.5 million per unit. There is, however, both VIA's and the British Columbia Railway's rebuilding experience to draw upon.

72. This analysis assumes that CN is allowed to abandon the Cochrane–LaSarre portion of the line, or at least get out of any freight obligations and charge the passenger service the full cost of owning, operating and maintaining the affected part of the line.

73. The same-day return would require a substantial change in the time at which trains depart from and return to the Garneau Yard. It might be argued that any additional complication in the non-remote, non-rail part of the trip should be weighed against the operating subsidy savings.

74. A concept of payments or credits for not polluting or for polluting less is not practical; rather it is logical to charge polluters proportionally for the societal damage they cause. In the unimodal context of the present paper, it is really higher charges to the competing air and car modes that are represented as credits. Among the present VIA services, it is to the Toronto–Montreal and perhaps to some southwest Ontario operations that positive net externalities credits are the most likely to apply.

75. On much of CP's line to Saint John, the *Atlantic* often is one out of two or three daily trains (freight plus passenger) operated in each direction. The NTA ordered CN to abandon the easternmost 90 kilometres of the Gaspé line in February of 1992. This order has been rescinded by the Governor in Council, possibly in response to the Commission's interim recommendation to freeze branch-line abandonment.

76. The current agreements themselves have not been reviewed for this analysis. There are obviously a number of different levels of employment security benefits depending on the position and the length of service. For example, a 1986 Employment Security Supplemental Agreement between VIA and the Brotherhood of Railway Transport and General Workers, calls for VIA to make payments to employees laid off due to technological or organizational change, such that the worker's earnings — after receipt of unemployment insurance payments — are 80 percent of his average pre-layoff earnings. For workers with 30 or more years' service, such employment security payments would continue for up to five years. Should such an employee elect to resign, the one-time severance pay would not exceed one and a half years' pay. The present agreements, which provide for the augmented job security for employees with eight or more years' service date from the middle of 1989.

77. CP also transferred employees to VIA, but fewer than CN. CP's train crews were never transferred.

78. It is interesting to note that CN is already in the process of downsizing its work force. In 1990, for example, it reported that it had hired no new employees of any description in Atlantic Canada.

79. Using CN as the agency to terminate VIA is not unreasonable. CN, through its subsidiary Canac, acted as VIA's agent in the disposition of equipment made surplus from the 1990 service cuts. CN also has an organization in place for the disposal of land and other railway assets.

80. Quebec City owns a significant share as well.

81. CN and CP might benefit from the sale of surplus land since the Costing Regulations generally do not allow land to be priced at market rates when setting charges for VIA.

APPENDIX A: NOTES TO VIA ROUTE-SPECIFIC DATA

Financial and operational data were derived from the *Cost Recovery Report* prepared by VIA's Finance Department, June 1991. Distance and frequency data were developed from the VIA Timetable, October 1989. Service group definitions follow those of VIA.

Train frequencies quoted are for a typical day and do not reflect weekend schedule adjustments.

An asterisk (*) after frequency indicates that additional frequency on all or most of this route is provided by other train services.

Revenue per passenger-kilometre excludes all revenues incidental to the transportation activity, including non-transportation tour and station revenues that could attribute to specific services.

All data have been converted from imperial to metric units.

NOTES TO SPECIFIC LINE ENTRIES

1. Distance shown through Brantford. Some trains run via Stratford, 9.6 kilometres longer.
2. One train per day becomes the Amtrak train through to Chicago.
3. One train per day becomes the Amtrak train through to New York.
4. With the exception of peak periods, the *Ocean* and the Gaspé train operate as a single train between Montreal and Matapedia.
5. Distance shown for Montreal–Vancouver. The Toronto distance is 280 kilometres shorter, but adds 280 route-kilometres.
6. The Prince Rupert train is generally operated jointly with the Winnipeg–Vancouver train to Jasper.
7. Operated as a mixed train with an overnight layover at Gillam.
8. Some days operated as a passenger train and other days operated as a mixed train.
9. The Toronto–North Bay–Cochrane–Kapuskasing service operated jointly with the ONR as a through train. The data here exclude the North Bay–Cochrane segment. VIA operated a second Toronto–North Bay train on weekends using rented ONR equipment.
10. Does not include the Moncton–Charlottetown bus service.

Appendix B: VIA's Operating Cost Structure

VIA's 1988 operating statistics, revenues and costs, and cost avoidability, according to VIA's procedure, are summarized as:

	System total		Excluded dollars	Avoidable %	Avoidable dollars	Common content
Operating data (millions)						
Passengers	6.4					
Passenger–km	2,285.3					
Seat–km	4,360.5					
Train–km	20.0					
Car–km	115.2					
Motive power–km	20.3					
Revenue ($ million)						
Transportation	185.3		0.0	100	185.31	
On–board services (OBS)	16.6		0.0	100	16.59	
Other	1.0		0.0	100	1.04	
Tour	13.2		0.0	100	13.19	
Sales tax	(1.2)		0.0	100	(1.22)	
Station	0.9		0.3	43	0.58	
Total	**215.8**		**0.3**	**99**	**215.49**	
Non service	2.3		2.3	0		
Costs ($ million)						
Transport overhead	3.4	[0%]	3.4	98		Low
Linehaul	40.0	[5%]			40.0	
Rentals	2.3	[0%]			2.3	
Crew	79.8	[11%]			79.8	
Fuel	35.4	[5%]			35.4	
Equipment Mtc	217.4	[29%]	89.4	59	128.0	High
Switching	7.9	[1%]	4.7	40	3.2	High
Bus/taxi	0.8	[0%]		100	0.8	
Other CN/CP	14.5	[2%]	11.8	11	2.7	Unknown
Provisions	5.6	[1%]	0.6	89	5.0	
Incentives	9.2	[1%]		100	9.2	
On–train OBS	82.1	[11%]	11.7	86	70.4	Low-med.
Off–train OBS	58.7	[8%]	33.0	44	25.7	High
Marketing/sales	43.6	[6%]	22.5	48	21.1	Unknown
Station property	26.5	[4%]	22.1	17	4.4	Very high
Administration	63.1	[8%]	63.1	0		Very low
Corporate expenses	4.8	[1%]	4.8	0		Very low
Ownership	55.6	[7%]	55.6	0		Very high
Total	**750.7**	**[100%]**	**322.7**	**57**	**428.0**	
Extraordinary item	40.0		40.0			

Note: **The extraordinary item (not VIA's wording) is $40 million in what is considered to be catch-up maintenance expenses on old equipment. The 1990 cost structure is similar and is reflected in the cost model.**

APPENDIX C: COST ELEMENT ALLOCATION RATIONALE

For purposes of the present analysis, the individual cost accounts were allocated on the basis of the following considerations.

TRANSPORTATION

This cost category includes mainly transportation supervision and functional overheads. There is little (if any) direct, but unallocated, cost. The transportation overheads represent about two percent on direct transportation (fuel, linehaul and crew) costs. There are a variety of explanatory variables for this expense. In this analysis, one quarter is attributed to *train-kilometres* (to capture work performed), one quarter is attributed to *direct transportation expenses*, and one half to *route-kilometres* (to capture the higher costs per passenger of operation of low-density services). This attribution methodology also reflects the fact that much of the transportation function will not change in step with direct expenses.[1]

LINEHAUL

This is the payment made by VIA for use of the track to CN and CP and accounts for approximately 5 percent of the total costs. Linehaul is priced (by CN and CP) using a combination of *train-kilometres* and *gross-tonne-kilometre* values. In the event that VIA must operate its own lines, there would be a substantial increase in this cost.

RENTALS

This represents payments by VIA for use of equipment other than its own. For most services there are no rental costs. Much of the rental expense is incurred on the Toronto–North Bay–Kapuskasing (now discontinued), the Toronto–Niagara Falls and the Toronto–Sarnia services where the VIA train is operated in conjunction with that of either the ONR or Amtrak respectively. There are also significant rental expenses in northern Manitoba where more extensive use of CN equipment is made. For the most part, rentals are so small that this cost item can be safely ignored.

CREW

Crew costs represent approximately 10 percent of VIA's total costs. The majority of crew costs are incurred directly by VIA. Only crews operating on long sections of CP track and those in northern Manitoba are supplied by the freight railways. It is reasonable to expect crew costs to decrease in a long-term, steady-state operation. To date, VIA has reached agreement with the Brotherhood of Locomotive Engineers (BLE) to eliminate the second engine crew member on most locomotive-hauled trains and agreement with the United Transportation Union (UTU) to reduce the number of train crew on many routes. Both of these agreements will take some time to fully implement since the reductions will take place mainly through attrition. Other potential areas of savings include the basis of pay and the length of crew runs. The fact that VIA has reached crew reduction agreements with its labour force, lends credence to its ability to reduce crew costs in other ways. For this analysis, savings of 10 percent[2] to 40 percent have been assumed, depending on the type of service.

FUEL

Fuel accounts for only four percent of VIA's 1988 costs. Modest improvements can be expected as the system moves to the use of modern locomotives and rolling stock. It is of interest to note that the effective price paid for fuel has increased by 19 percent in 1990.

EQUIPMENT MAINTENANCE

The maintenance of cars and locomotives — including cleaning and inspection as well as pure preventive maintenance and repair — accounted for $257 million in 1988. This is one third of VIA's total reported costs. VIA attributes approximately half of its equipment maintenance costs to services. The other half is split between the costs of operating the maintenance centres, a functional overhead, and major equipment maintenance and repair. The 1988 cost data included an inordinate amount of catch-up maintenance. Thus the basis of costing has been reduced by $40 million. The excluded costs in the maintenance category have been treated as overheads (approximately 50 percent) to the direct maintenance costs on a system basis. In addition to the catch-up expenditures, the level of maintenance costs is also governed by the fact that much of the equipment is old and inefficient, and

there are many inefficiencies in the maintenance process. As an approximation, a 20 percent average reduction in maintenance costs has been assumed to be reasonable for a steady-state railway system which is equipped with modern equipment.[3]

SWITCHING

VIA's switching requirements are a minor part of the overall cost and are predicted to decrease substantially with changes in maintenance centres and other practices. As a simple expedient, estimates of direct switching costs have been increased to account for the switching that VIA considers to be excluded.

ON-BOARD CUSTOMER SERVICES (OBS)

On-board services account for about 11 percent of total costs. Most of these costs can be attributed directly to specific train requirements. The *excluded* component of this category consists mainly of provisioning and support personnel and can be treated as a functional overhead (16 percent in 1988, 6.2 percent in 1990[4]) to the direct costs. The OBS overheads are heavily weighted to corridor services due to the costs of the employee service centres in Toronto and Montreal. For this reason, direct OBS expenses for corridor trains are given a double weight in the calculation of the overhead.

OFF-TRAIN CUSTOMER SERVICES

Well over half of the customer services expenses (station employees and passenger handling) is treated as *excluded* by VIA. Much of this exclusion represents facilities shared by a number of services rather than functional overheads. The true customer services costs vary significantly by route and there could be significant economies of density (major terminal stations versus minor line stations). Non-administrative costs of shared stations have been apportioned to the service groups in an approximate manner, based partially on 1988 data. Reservation system costs have been related to both passengers carried and passenger-kilometres.

MARKETING AND SALES

Avoidable marketing and sales expenses include three elements: tour expenses (approximately $8 million in 1988), advertising and promotion aimed at a

specific service (low in 1988) and credit card discounts/agency commissions on tickets. Since there were no tour expenses or specific advertising expenses incurred in 1990, it has been possible to determine an aggregate credit card discount/agency commission rate as a percentage of revenue. These range from 2 to 7 percent depending on the service type.

STATION PROPERTY

Station property expenses are limited to the non-capital[5] costs of operating stations. Very little of the excluded portion of station property is considered to be a functional overhead. For the most part, the excluded costs are attributable to maintaining stations which are shared by a number of services. In the analysis, the costs — net of concession and other revenues — for each station or series of stations on a specific line segment were assigned directly to the service group involved. This process left a few terminal stations for which the costs (about 20 percent of the total) had to be allocated between service groups on the basis of passengers handled. The station data indicate that station property costs are relatively insensitive to variations in passenger demand. As a result, it is assumed that only 5 percent of station costs vary with changes in demand.

ADMINISTRATION

In 1988, VIA reported administration costs to be $63 million. These are mainly administrative rather than functional overheads[6] or shared direct costs and include functions such as finance, human resources, data processing and legal services. Most of these costs are incurred at headquarters rather than at the regional level. Administrative expenses, including corporate expenses below, have been treated as an overhead to all other non-capital railway costs. Given VIA's 1988 results, the overhead is approximately 11 percent. Following the 1990 network restructuring, this overhead appears to have increased to 14 percent. There are three issues with respect to administrative overheads: *What is the appropriate level of overheads?*[7] *Do some types of services require more administration than is implied by treating this cost as an overhead? How do administrative requirements change as direct costs change?*

On the first issue, it is worth noting that VIA's administrative component has ranged from 9 to 11 percent on direct costs for the past 10 years. The data suggest no particular pattern or relationship. What is clear is that the recent increase (most of which actually appears in the 1989 financial results) is related to the network restructuring and downsizing of VIA. Part of the increase is a natural result of decreasing the direct cost base over which administrative overheads are allocated. Some is related to the actual work of restructuring.[8] It can also be assumed that changes required to downsize some of the administrative costs will lag behind changes in fuel, crew and other expenditures. Barring any evidence to the contrary, it is assumed that a steady-state level of administrative expense would be equivalent to 11 percent (the average of the 1988 and the 1990 experience) for the 1990 cost and operations base.[9]

There is little evidence upon which to base analysis of the second issue. It can be argued that the segments such as the remote services may attract more administrative costs than the M–O–T corridor. On the other hand, it is also clear that the corridor attracts more attention (and expense) in terms of looking at service improvements and other administrative activity. Pending other evidence to the contrary, no attempt has been made to apply different administrative overhead rates to different services,

Again, there is little evidence upon which to base an analysis of the third issue. It can be expected that, as the intensity (as opposed to the scope) of activities increases, administrative costs should not increase as fast as direct costs. On the other hand, it can be expected that efficiency gains in transportation and customer service activity might not result in similar gains in certain types of administration. The approach taken in this analysis is to assume that administrative costs vary in proportion to other costs. Thus, there may be some understatement of administrative expenses for the presently "downsized" VIA operation, but the analysis should reasonably reflect the steady-state assumption where VIA is no longer in the middle of a crash program of rebuilding its fleet, building maintenance facilities, transferring employees from CN, upgrading stations and so on.

CORPORATE EXPENSES

Corporate expenses (including the senior executive function) have been included in administration and increase the administrative overhead by approximately one percentage point for the 1988 data.

These are VIA's depreciation expenses. None of these expenses have been attributed to services. VIA reported the following gross investments:

	$ million
Land	2
Rolling stock	541
Stations	13
Maintenance buildings	165
Machinery	13
Office furniture	24
Leasehold improvements	139
Other	53

In the costing, capital assets have been included on the basis of annual depreciation plus 10 percent real cost of capital on the net book value, assuming that the assets are 50 percent depreciated.

Rather than using VIA's present rolling stock asset base, new equipment has been assumed to have been purchased at current prices. Maintenance buildings and machinery[10] have been treated as an overhead on maintenance activities. Office furniture has been treated in the same way as administrative expenses.

A capital charge for stations, leasehold improvements and other has not been included in the analysis since there is not yet a breakdown of these assets. In aggregate these could account for some $15 million per year. The asset base is a mix of small expenditures on many stations with significant expenditures on specific assets. For example, the Gare du Palais upgrading is reported to have cost $30 million. Capital charges for this asset should only be attributed to the Montreal–Quebec City service. The Ottawa–Brockville track improvement reportedly cost $60 million. This would be attributable only to the Ottawa–Toronto service.

ENDNOTES TO APPENDIX C

1. The train control centre, for example, should be independent of the level of crewing, fuel efficiency and the length of the trains.

2. There are a number of short-distance, self-propelled vehicle (SPV) runs where the potential for crew reductions and other improvements is limited.

3. It can be expected that repair experience would be better than 20 percent. The cleaning and routine inspection requirements, however, are not expected to decrease dramatically with the introduction of modern equipment.

4. This significant decrease appears to be due in part to a real reduction in the level of overheads incurred and in part to some functions being directly attributable to specific train services.

5. Except to the extent that capital costs may be included in the rental payments to CN and CP. This leaves some important issues unresolved; for example, the apparent price to VIA for use of the Toronto and Montreal stations appears low given the location of the real estate (if one presumes that the CN/VIA "divorce" was appropriately settled with these passenger assets going to CN). On the other hand, there are other stations — notably Winnipeg—with relatively high costs given the present levels of traffic.

6. Pensions, UIC, CPP/QPP and similar overhead expenses are accounted for in the direct functional and other costs, and are not included in administration.

7. This issue is the descriptive one of determining overheads applicable for long-run steady-state operation rather than the normative one of determining whether VIA spends too much on administration.

8. The direct costs of restructuring — severance pay and so on — have been netted out of VIA's financial data that are being used for this analysis.

9. This figure allows for netting out of approximately $6 million in non-service revenues earned by VIA.

10. In 1990, maintenance facility gross investment stood in excess of $215 million. Some of this is new capital, some is included in the land and leasehold improvements. In general, however, it appears that the asset base is lower than the reported expenditures on maintenance facilities.

APPENDIX D: NOTES TO AMTRAK ROUTE-SPECIFIC DATA

Financial data were derived from the *Route Report* prepared by the Controller's Department, National Railroad Passenger Corporation, Washington, January 23, 1990. Train distance data were supplied by Intergovernmental Affairs, Amtrak. Distance, trip time and frequency data were developed from the Amtrak timetable, October 29, 1989. All service and service group definitions are those of Amtrak.

An asterisk (*) after frequency indicates that there is additional frequency on all or part of this route provided by other train services.

All data have been converted from U.S. measure to metric units.

NOTES TO SPECIFIC LINE ENTRIES

1. Includes one train/day with an additional 166 kilometres to Santa Barbara.
2. Operated only part of 1989.
3. One train operates 2,577 kilometres between Chicago and Salt Lake City and then splits.
4. Operates via St. Louis. Distance and time are shown to Centralia only where train joins with Chicago–New Orleans. Does not seem to show second train Kansas City–St. Louis. Train kilometres appear correct for two Kansas City–St. Louis trains.
5. Time and distance are shown for New York to Chicago; the Boston section is 93 kilometres longer over 322 additional route-kilometres.
6. Actually a through train New York–Albany–Montreal; the New York–Albany portion is included in New York–Niagara Falls.
7. Train-kilometres appear to be missing two round-trips per day.
8. Timetable time and distance are shown to Miami. Both trains have Tampa sections. The total route is about 3,235 kilometres.
9. Duplicates route-kilometres of New York–Charleston–Florida service.
10. Significant duplication of New York–Florida route-kilometres.
11. All but 172 route-kilometres duplicated by NEC or Florida trains. Data may include daily train, New York to Richmond.
12. Train splits at Spokane, Washington; allow additional 608 kilometres for Portland connection.
13. Time and distance are shown to Houston. Train splits in Dallas with section destined for San Antonio to connect with New Orleans–Los Angeles train. This adds 509 route-kilometres.
14. Includes approximately 45 trains per week New York–Albany/Schenectady, seven of which go on to Montreal, plus 17 trains per week to Niagara Falls, seven of which go on to Toronto.
15. This service was reinstated during 1989. This may account for the low recovery ratio.

Appendix E: Canadian Views on Rail Transportation*

The Commission's public hearings process enabled a broad range of Canadians to present their views on the national rail network. Of the verbal submissions, about 20 percent dealt primarily with rail transportation, with many more raising the subject in the context of the transportation system in general. On the "dial-a-brief" line, 108 out of the 128 submissions received were on the subject of rail transportation. In terms of numbers of submissions received, rail transportation appears to be at the top of the nation's transportation agenda.

Submissions were received from all parts of Canada, and from groups representing a broad cross section of Canadian society. In general, we can say that the Commission heard representative views from:

- railway companies;
- high speed rail interest groups;
- rail unions and rail pensioners;
- rail support groups;
- environmental groups;
- the tourism sector;
- provincial and municipal governments; and
- the general public (including most "dial-a-briefs").

Common threads run through most of these submissions. The single most popular subject was VIA Rail. The majority of these submissions either condemned the 1990 service cuts, or offered suggestions for how to improve the operation of the company. Interventions in support of high-speed rail came a distant second, followed by submissions dealing with rail freight.

* The first draft of this appendix was prepared by Royal Commission staff member Paul Monlezun.

RAILWAY COMPANIES

Canadian National, Canadian Pacific, and VIA Rail all told the Commission that it would be unrealistic to separate passenger transportation from freight. They pointed out that the close relationship between passengers and freight, particularly in the rail mode, meant that studying passenger transportation alone would distort the picture too greatly.

All three companies said that the single most important question facing the Commission was how to make an adequate comparison between operating subsidies and transportation modes. CN and CP, in particular, were concerned about the relative competitive disadvantage their companies faced compared to the trucking industry. They felt that trucks were unfairly subsidized and that the federal government should levy user fees to cover the operational, maintenance and development costs of road infrastructure.

VIA Rail focussed on the cuts to scheduled services which came into effect on January 1, 1990. The company provided an overview of its recent history and suggested that many of the company's problems derived from a lack of political leadership. They felt that if the company had been allowed to modernize and keep pace with the demands of the marketplace, VIA would be in a better financial situation.

The railways also devoted significant portions of their presentations to high speed rail in the Quebec City–Windsor corridor. VIA Rail and CN, in particular, were highly enthusiastic about the possibilities. CP, while endorsing the concept of fast trains, doubted that high-speed rail would be financially viable if the government continued to subsidize competing modes indirectly by covering the costs of highways and airports.

CN and CP were both aware of the suggestions that the companies share one right-of-way in the corridor to allow the other one to be dedicated to passenger trains. Neither company seemed to be particularly enthusiastic about the idea; however the subsequent more private CP message to Commission staff was more positive.

HIGH-SPEED RAIL INTEREST GROUPS

The Commission received submissions from both private-sector consortia who had expressed an interest in building a high-speed rail system in the Quebec City–Windsor corridor. Air Canada, in partnership with CP, has more recently announced its interest in the system. Both Asea Brown Boveri (ABB) and Bombardier, which holds the North American rights to the French TGV, made pitches for their particular technologies, but the two companies also pointed to the need for high-speed rail and the potential advantages of such a system.

Both companies argued that the Montreal–Toronto travel market was mature enough to support high-speed rail, they also felt that the project could boost the economies of both Ontario and Quebec. ABB believes that a high-speed train could be introduced with little or no direct public funding. Bombardier, on the other hand, told the Commission that a TGV train would require several billion dollars in government funds. Bombardier pointed out, however, that in the long run, the TGV could save Canada money through the reduction of both road and air congestion.

RAIL UNIONS AND RAIL PENSIONERS

The primary interest of the railway unions, above all, was to protect and preserve the jobs of union members. The 10 transportation union groups that appeared before the Commission, and several others which sent written submissions alone, condemned the job cuts that accompanied the 1990 VIA Rail service reduction.

Labour almost uniformly stated that VIA Rail had been mismanaged since its creation. A number of union submissions even suggested that the government was deliberately allowing VIA Rail to fail so that they could justify shutting down the system altogether.

All the rail unions demanded that the government fully restore the recently cut VIA services. They also called on the government to give the railway a legislative mandate and the money to buy modern rail cars. When asked whether VIA Rail could be operated profitably if it were given a mandate and modern rolling stock, several intervenors were unable to answer.

Rail pensioner groups, like the unions, were adamant that the government should restore rail services. The four groups, however, seemed to be much more concerned with preserving "the railway culture" and maintaining historic rail lines than was organized labour. The CP Rail pensioners also pointed out that because most of the VIA services running on CP tracks had been cut, their free rail passes were no longer of any value.

RAIL SUPPORT GROUPS

Rail support groups, notably Rural Dignity, the Western Rail Passenger Restoration Committee, the Save VIA Rail Committee, and several branches of Transport 2000 were enthusiastic boosters of passenger rail. They argued that rail transportation was the safest, most accessible and most "environmentally friendly" mode of transportation available to Canadians. They also highlighted VIA Rail's role in providing transportation to otherwise isolated communities.

These intervenors shared the conviction of the unions that the government was allowing VIA rail to fail so that it could justify dismantling the company. They also agreed that the federal government should spend millions of dollars on new rail cars and locomotives. In their submissions, Transport 2000 and the Western Rail Passenger Restoration Committee suggested that VIA Rail would be much better off if it were modelled after Amtrak, which operates passenger rail services in the United States.

ENVIRONMENTAL GROUPS

Most of the environmental groups that appeared before the Commission singled out rail transportation as one of the cornerstones on which to build an "environmentally friendly" transportation system. These groups felt that Canada had become to depend on the car. In general, environmentalists wanted to see a modernized VIA Rail, better connections between train stations and transit systems, and stiff fuel taxes that would encourage travellers to switch to the train. Some groups also supported high-speed rail, but only after an exhaustive environmental review.

THE TOURISM SECTOR

The Commission received several submissions from the tourism sector, including one from a group that was trying to start its own rail service. In general, the tourism industry was very concerned about the cancellation of VIA Rail services, especially the *Canadian*. They pointed out that rail travel packages were very popular with tourists, in particular the Japanese, and that the cancellation of the *Canadian* had a noticeable effect on travel bookings. The industry was pleased that the *Rocky Mountaineer* had been privatized, but they were concerned that Canadian Pacific might not allow the company to have adequate access to its tracks.

Sam Blyth and Company joined other intervenors in condemning the uncooperative attitude of the big railroads. Mr. Blyth was convinced that it would be possible to run a profitable luxury train service, but felt that the most difficult part would be convincing Canadian Pacific to allow his company to use its tracks. Blyth and Company was also concerned about VIA Rail's plans to launch its own luxury train service, which it said would be publicly subsidized and might "ruin the market" for luxury trains in Canada if it were operated improperly.

PROVINCIAL AND MUNICIPAL GOVERNMENTS

At every one of its hearings, the Commission received submissions from representatives of the provincial and municipal levels of government. In general, the provinces attempted to look at rail within the context of the transportation system as a whole. Most provincial governments reminded the Commission that rail was an integral part of the transportation network and should not be overlooked. In the West and Atlantic Canada, the provinces called on the federal government to reinstate the cancelled VIA Rail services. Ontario, while supporting VIA Rail, was not as forceful as the other provinces.

At most stops, the Commission heard from municipalities that had been directly affected by the VIA Rail cuts. Some of these towns and cities, such as Moncton, Melville (Saskatchewan) and Calgary, saw the VIA cuts as major blows to their local economies. Many others complained that their citizens had lost a transportation option. Even some communities that had not been served by rail for many years called on the government to reinstate VIA services.

THE GENERAL PUBLIC

Every single private intervenor that appeared before the Commission to talk about rail transportation supported VIA Rail. Private submissions, however, came in disproportionate numbers from Nova Scotia, Saskatchewan and Alberta, where public outrage over the VIA cuts was strongest. Public interventions contained all the same points that the VIA Rail support groups made, but they differed from them in a couple of key ways:

- Private intervenors seemed to have a greater attachment to the train than did other presenters, frequently stressing the train's role in building the country and in maintaining national unity.
- They did not directly address the question of subsidies and the cost of operating passenger rail services.