

**The Economic Impact of All Terrain Vehicle Recreation in
Canada: National, Provincial, and Territorial**

For

Robert Ramsay

President

Canadian All Terrain Vehicle Distributors Council

By

Peter E. Gunther

President

Smith Gunther Associates Ltd

December 31, 2006

Executive Summary

Direct Impacts

In 2005, Canadians spent \$3.3 billion directly on activities involving 975,000 operating ATVs. Slightly over a quarter of these funds were spent on the purchase of new ATVs and slightly less than a quarter on accommodations and meals outside of the house. Although ATVs conserve fuel relative to heavier modes of travel, towing of trailers, travel to undertake ATV activities and vehicle upgrades to facilitate towing all raised fuel consumption so that twelve percent of direct expenditures are for fuel.

Twenty-four thousand Canadians are either directly employed or self-employed serving ATV users.

Even if annual sales remain flat, the number of operating ATVs will grow at over 5.86 percent annually out to 2010.

2005 sales in all three Western Provinces exceeded the benchmark national growth rate led by Alberta with sufficient sales growth to add twelve percent to the fleet size if the historical sale shares are retained in the province. Rising incomes and the relocation of the workforce to jobs located in Alberta with a relatively heavy deployment of ATVs suggest that sales will grow, thereby accelerating growth in the size of the fleet of ATVs and participants in their use.

Direct and Indirect Impacts

National direct and indirect impacts from ATV expenditures increased:

- Gross output, a measure of Canadian transactions, by \$4.66 billion;
- GDP by \$2.01 billion;
- Total employment by 37,619;
- Labour income before deduction of direct taxes by \$1,226 million;
- Operating surpluses before deduction of direct taxes by \$676 million; and,
- Government revenues inclusive of revenues from direct taxation by \$577 million.

The economic activity is concentrated in Ontario, Quebec, and Alberta with Alberta's share increasing rapidly as the Canadian population shifts to the province. The economic multipliers with respect to the sum of the direct and indirect impacts relative to direct impacts are of the expected magnitudes among the indicators.

Induced Impacts

The majority of the impacts come through induced expenditures generated out of the incomes earned directly, indirectly, and through earlier rounds of induced expenditures.

Induced outcomes reflect both the ratios of total to direct impacts and the multipliers for all iterations of derived from induced expenditures. Thus the direct GDP impact of \$928 million yields direct and indirect GDP initially of \$1,446 million directly and indirectly which when multiplied through additional rounds of expenditures results in induced additions to GDP of \$3.5 to \$5.5 billion, dependent on governments' expenditures of tax revenues or not.

Those actions will impact on induced employment ranging from 54,922 to 85,810, both well above the initial direct employment of 14,964 and initial direct and indirect of 22,650 employees. Induced labour incomes are modest relative to employment growth but significant in the range of \$2.4 to \$3.8 billion. As a proxy for business transacted the results are significant and strong at \$6.5 to \$10.2 billion, but care must be taken not to exaggerate impacts using this measure.

In all provinces induced impacts exceed the direct and indirect ones. Given the location of the national capital, Ontario is the province that is most sensitive to whether or not the governments spend their incremental revenues.

The larger impacts derived above reflect the reality of government expenditure habits, albeit fairer to use the lower estimates when contrasting impacts with government programming decisions.

Total Impacts

Total impacts are multiples of the economic stimuli created from purchases of ATVs and undertaking ATV activities. Total impacts have been assessed for gross output, GDP, labour income and employment. The initial stimulus of \$2.8 billion in gross output resulted in an \$11.2 to \$14.8 billion total impact on gross output.

GDP is a better measure of economic activity than gross output since it avoids the double counting inherent in gross output. It is however a "gross" figure in that no depreciation is deducted. The stimulus of \$1,190 million to national GDP from ATV purchases and activities resulted in estimates of total GDP impacts range between \$5.5 and \$7.5 billion depending on whether or not government expenditures are included. Notably, the national GDP multipliers are stronger than those on gross output. With the exception of Saskatchewan, provincial multipliers are also relatively high west of the Quebec-Ontario border compared to other provinces

Since labour income is a part of GDP, both the stimulus of \$707 million and estimates of total impacts on labour income, at \$3.7 billion to \$5.1 billion, are fractions of those on GDP. Generally, employment multipliers are large relative to those on other indicators suggesting that labour incomes are spent on items whose manufacture requires relatively high wages compared to those earned in direct employment related to ATV activities *per se*. Given that direct domestic expenditures are concentrated in the services industry – accommodations, out-of-home meals and insurance – this result expected.

Relative to direct employment of 24 thousand, total estimated employment impacts appearing of 93 to 123 thousand are significant. This outcome suggests that induced expenditures by those earning incomes for ATV purchases and activities stimulate real growth. The relatively low employment multipliers in Alberta illustrate tightness in that Province's labour markets, the migration of ATVs originally sold there into the rest of the country and the refusal of the province to incur debt. The employment multipliers are particularly strong in Ontario, Manitoba, and British Columbia

Table of Contents

Executive Summary	1
Direct Impacts	1
Direct and Indirect Impacts	1
Induced Impacts	2
Total Impacts	2
1. Introduction	6
2. Direct Expenditures and Employment	7
2.1 Introduction	7
2.2 Direct Expenditures Related to ATVs	7
2.2.1 Sales and Fleet Sizes	8
2.2.2 Expenditures	9
2.3 Direct Employment Related to ATV Activities	11
2.4 Conclusions	12
3.1 Introduction	13
3.2 Gross Output	13
3.3 Direct and Indirect GDP	15
3.4 Direct and Indirect Employment	16
3.5 Direct and Indirect Labour Income	17
3.6 Operating Surpluses	18
3.7 Government Revenues	18
3.8 Conclusions	19
4. Induced Impacts	20
4.1 Introduction	20
4.2 Induced Expenditures	20
4.2.1 National Induced Impacts	21
4.2.2 Provincial Induced Impacts	23
4.3 Conclusions	26
5. Conclusions: Total Impacts and Multipliers	27
5.1 Introduction	27
5.2 Gross Output	27
5.3 GDP	28
5.4 Labour Income	29
5.5 Employment	30
Appendix 1: Initial Shock	31
Appendix 2: Induced Demand	34
Appendix 3: Data Sources	38
ATV Sales and Fleets	38
Exhibitions and Fairs	40
Statistics Canada	41
The Questionnaire	42
British Columbia	43
Alberta	43
Saskatchewan	44

Manitoba	44
Ontario	45
Quebec.....	45
New Brunswick.....	46
Nova Scotia.....	46
Prince Edward Island	47
Newfoundland and Labrador	47
Canada.....	48

1. Introduction

In October 2006, the Canadian All Terrain Vehicle Distributors Council (CATV) commissioned Smith Gunther Associates Ltd. to undertake an economic impact of all terrain vehicle activities in Canada. The purpose of this study was to comprehensively determine the economic impacts of not only the purchase of the all terrain vehicles but also related economic activities. Such activities encompass their use, exhibitions and fairs to show case products, the purchase of additional equipment such as trailers, clothing and insurance and related to travel to undertake all of the above. Together these purchases and activities constitute the direct expenditures on and inputs into ATV participation.

Data on these direct expenditures were determined by province and territory and used as an economic shock to Statistics Canada's Input Output Provincial and Territorial Model of the Canadian economy in order to determine indirect impacts on gross output, direct and indirect employment, and personal and government income. This exercise traced the inputs into ATV activities back through each of their production process in order to determine the main sector and industrial impacts of ATV activities.

Yet, these results yield only a part of the total economic activity generated. In addition, personal incomes generated directly and indirectly from ATV activities will be spent at least partially by income earners, recipients of higher operating surpluses and various governments from incremental tax revenues stimulated by ATV operations. The incremental expenditures stemming from these additional expenditures are termed "Induced," since they stem from the incremental direct and indirect incomes.

The following chapters establish the direct impacts, direct and indirect impacts, induced impacts, and the total impacts for Canada and each of its provinces and territories.

2. Direct Expenditures and Employment

2.1 Introduction

This section first establishes direct expenditures related to ATV use in Canada by province and territory for specific commodities before deriving direct employment in both paid and unpaid positions.

Canada's 975,000 ATVs are primarily used for recreational purposes and, to a lesser extent, commerce and agriculture. Commercial uses provide access to relatively remote sites for constructing and servicing of hydro and communications transmission systems, pipeline networks and remote petroleum exploration sites and operations. Agriculture uses take place on owners' lands for servicing fences and family recreational activities. Generally, 66 percent of ATVs appear to be used for recreational purposes based on the size of club and Internet memberships of owners. A further, 10 percent of ATVs appear to be in commercial fleets. This percentage is an approximation since many of the fleets are not owned by large utilities or sponsoring exploration companies, but by very much smaller and more obscure drilling, installation, and repair companies that service drilling sites, camps and relatively remote transmission lines and sites. ATVs in commercial service tend to be deployed more intensively and utilize twice as much gasoline as do recreational ATVs prior to those remaining in good repair being auctioned into the recreational market after about five years of service. The remaining 24 percent operate on private property and farms in much the same fashion as the recreational ones but without the need for associated transportation systems such as larger vehicles and trailers. Their owners do not generally incur the accommodation costs experienced by the average recreational participant.

While weights among expenditures vary with the purposes for which they are used, expenditures are generally comprised of purchases of ATVs and licensing costs, purchases of complementary goods and services such as trailers, information gathering at motorcycle and ATV shows and fairs and exhibitions, ATV club activities, and operating costs.

2.2 Direct Expenditures Related to ATVs

The purchase of an ATV is but the beginning of expenditures related to owning and operating a recreational ATV. All provinces but BC require licenses. Operating activities involve purchases of complementary items – clothing, embellishments to ATVs, trailers, club memberships, food and accommodations consumed as part of ATV activities, insurance, larger towing vehicles that would have been purchased for non-ATV activities and gasoline to operate the ATVs, to travel to and from residences to ATV trails, and to operate incrementally the larger vehicles. Both actual and prospective ATV operators attend specialized motorcycle and ATV shows, sportsmen's shows and display pavilions

at fairs and exhibitions across the country. In addition, many recreational ATV operators take out club memberships and are active in maintaining trails. The ownership and resulting responsibilities for trail maintenance vary among jurisdictions from those that are owned by clubs which are responsible for their upkeep to those on crown land both in and outside of government run and maintained parks. In any case, expenditures are made to construct and maintain these trails.

2.2.1 Sales and Fleet Sizes

The best data available on annual sales comes from CATV adjusted for the market share of its members and on the number of ATVs licensed annually in recent years in Quebec. Missing from the licensed database are registrations in British Columbia and Saskatchewan and unregistered ATVs in other provinces. The latter is made all the more obscure by unknown interprovincial movements of ATVs from either vehicle re-sales or migration of the owners, e.g. Newfoundlanders returning from Fort McMurray or elsewhere in Alberta with their ATVs. From annual sales and 2005 licenses in Quebec, it was possible to estimate annual retirement rates at 2.15 percent until the 18th year in service when they rose sharply over the next seven years. Assuming the same level of use across the county, it was then possible to estimate unregistered ATVs in all provinces including BC as well as total fleets from the previous 25 years of sales. Of the estimates 180,000 unregistered ATVs, 66,000 were in BC. The rest are scattered across the rest of the country used primarily on private lands such as farms. Those used by farmers off their lands are generally licensed. Table 2 contains fleets and 2005 sales for the provinces.

Table 2: Sales and Fleets 2005: Provinces (Number of ATVs)

	BC	AB	SK	MN	ON	PC	NB	PE	NS	NF
Sales	9,404	24,354	5,316	4,751	24,609	26,469	4,136	360	3,638	3,766
Fleets	65,854	109,016	40,368	18,835	292,479	308,422	36,733	2,677	43,427	54,765

The relatively high share of 2005 sales to fleet size in Alberta reflects Alberta’s rapid economic and population growth, its lack of provincial sales tax, and the apparent inter-provincial flow of ATVs into other provinces including Saskatchewan and the Atlantic region. With services to the oil patch centered in Alberta, commercial fleets purchased in Alberta are likely to be servicing enhanced recovery activities at wells in Saskatchewan as well and may be licensed there.

The sport has become sufficiently popular that even with unit sales remaining flat over the next five years, fleet sizes would grow at an average of 5.86 percent annually. This expansion is expected to be further buoyed by real income growth and the expansion of club activities – Nova Scotia expects 13 percent annual growth. Rising provincial incomes and the relocation of the workforce to jobs in Alberta suggest that sales will grow, thereby accelerating growth in the size of the fleet of ATVs and participants in their use. The two percentages are however not additive. It would take a 9.5% increase in sales from the present sales levels to obtain a one percent increase in the size of the fleet

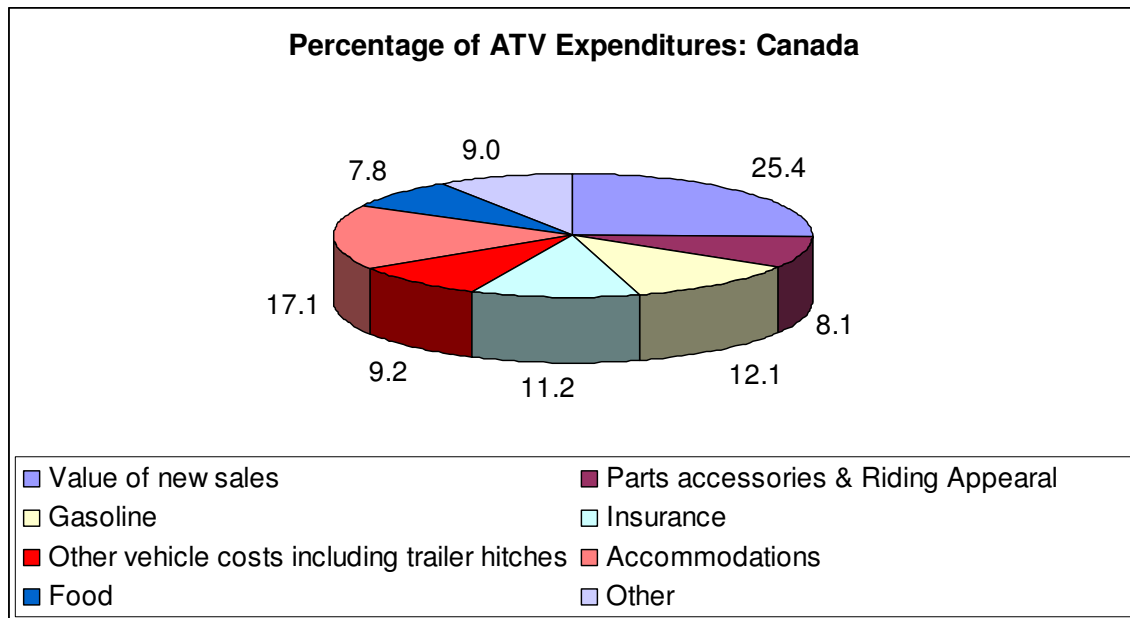
in use. 2005 sales in all three Western Provinces exceeded this benchmark growth rate led by Alberta with sufficient sales growth to add twelve percent to the fleet size annually if the historical sale shares are used in the province.

Commercial use may further expand with continuing pressure on international oil prices that accelerate activities in the oil patch. Thus impacts are expected to grow over the next five years in excess of 6 percent annually.

2.2.2 Expenditures

In 2005, Canadians spent \$3.3 billion on ATVs and related ATV activities. At 25.4% the largest share of expenditures was for new ATVs as shown in Chart 1. Accommodations and restaurant meals together accounted for nearly another quarter of expenditures (24.9%). The average recreational ATV user spends 6.8 nights a year in accommodations. These were priced in line with government rates, since they are differentiated among provinces based on regularly updated cost surveys. Similarly meal prices were determined in a parallel manner. Total expenditures on accommodations and meals include not only those services consumed by ATV operators, but also those who attend exhibitions and shows to view ATVs and to work at those shows.

Chart 2:



The third largest expenditure was for gasoline at 12.1 percent. This estimate may appear to be surprisingly high since the average ATV recreational use of ATVs requires only 59 gallons per year. What pushes the estimate up is travel to and from residences to trail gates and use of larger vehicles than would otherwise have been purchased including the related gas consumption in all activities undertaken in those vehicles. In addition, commercial ATV fleets were used more intensively than were the recreational ones so

that gasoline consumption per unit was about twice as high for those purposes, albeit considerably less than the alternative larger fully enclosed trucks, tractors, etc.

The fourth largest share of expenditures is for insurance. The bulk of these costs were borne by owners based on industry quotes, generally in the \$340 to \$375 per unit worth \$10,000 in all provinces with the exception of British Columbia where they were \$630 per unit due to the lack of quickly accessible registration information and licensing. That shortcoming makes it difficult to trace stolen ATVs even if the police stop the perpetrators. In addition, clubs frequently carried insurance for directors and, where they were owners on the use of their trails. The higher insurance rates in BC, make the sport more expensive there than in the rest of the country. This estimate may be upward biased since not all machines are currently insured, albeit mandatory requirements are due to be enforced. Secondly more competitive bids may be available in some regions or the coverage slightly less on lower cost machines.

The 9.2 percent of expenditures related to other vehicle costs included both up-scaled vehicles, trailers, and trailer hitches. The basic assumptions underpinning these figures were that 9 percent of new ATV purchasers spent \$2,500 on vehicle upgrades, trailer hitches and trailers. Trailers were priced modestly at \$1,000, slightly above the \$800 charged by Canadian Tire for steel webbed trailers, but well below the more exotic versions at the Toronto Exhibition.

The 8.1 percent in parts and accessories included upgrades to equipment, GPS systems, clothing and other items that are applicable on both new sales and shares of the existing fleet that may not have been fully equipped at the time of the original purchase. Alternatively, equipment may simply be upgraded.

The major constituent parts of the 9 percent of “Other direct expenditures,” include repair services on both the ATVs and incremental services on the larger towing vehicles followed by other consumer purchases including alcohol, toiletries, maps and general consumables. While these amount to about half of the other grouping the remaining items captured include trail construction and repair, club administration, ATV shares of entry fees to motorcycle and ATV exhibitions, sportsman shows, other exhibitions and fairs and telephone calls while traveling. The shares attributable to ATVs at the motorcycle and sportsmen’s shows were taken to be the ATV share of the floor space occupied by motorized vehicles – roughly 10 percent at motorcycle shows and 5 percent at more broadly based Sportsmen’s shows. The share of more general revenues of \$2.5 billion that Canadians spend annually at over 1800 days of fairs and exhibitions was set at 0.1 percent. The other group also captures the capital carrying costs of demonstration units dedicated to shows and exhibitions and other non-transportation costs of the shows themselves. Indirect taxes on the purchase of used ATV equipment were assumed to be spent by governments on trails and law enforcement.

The resulting detailed shock to the economy from these estimates is presented in Appendix 1.

2.3 Direct Employment Related to ATV Activities

Direct employment is derived by industry using Statistics Canada’s Input Output Tables (I/O). Since these tables can be used allowing or disallowing imports and interprovincial trade three possible outcomes are considered. The first is a “Low Case” estimate since it allows for normal trade in Canadian tourism expenditures, particularly in the United States that obviously would not occur with respect to the ATV activities taking place in Canada. Conversely, the closed model – allowing no foreign or interprovincial direct trade – eliminates direct imports of ATVs. It answers the question concerning possible outcomes if governments required all ATVs to be built in the province of purchase and consumers failed to react to any resulting price increases. Yet, Canada is not protectionist so the resulting employment impacts are exaggerated in this “High Case”.

Estimates of the number of direct Canadian employees range from 21,839 to 23,332 with the estimate allowing for direct imports of ATVs being 22,892. Total direct employment estimates range from 22,985 to 24,353 and the final estimate at 24,040. These totals are slightly above the sum of the provinces, since a minor amount of employment is in the territories.

Adjusted for free interprovincial trade and the importation of ATVs provincial estimates are reported in Table 3 for both employees and total employment inclusive of working owners.

Table 3: Direct Employment Estimates by Province

	BC	AB	SK	MN	ON	PC	NB	PE	NS	NF
Paid Employees	1817	2986	1011	692	6566	6541	890	394	735	1078
Total Employment	1948	3106	1083	725	6982	6835	945	414	788	1138

Not unexpectedly, direct employment is concentrated in Ontario and Quebec followed by Alberta where the majority of ATVs and much of Canadian manufacturing are located.

Given the relative importance of expenditures on accommodations and food and beverage expenditures outside of the home and the employment intensive nature of those industries, 13,500 jobs, over half, are located in that service sector. Another 7,000 are located in manufacturing and related wholesale and retail and 1,200 in finance, insurance, and real estate, primarily the first two. Other direct expenditures are scattered among various industries with no substantial concentrations.

2.4 Conclusions

In 2005, Canadian direct expenditures for ATV activities amounted to \$3.3 billion. Of this amount slightly over a quarter was spent on new ATVs and slightly less than a quarter on accommodations and meals out of the house. Although use of ATVs conserves fuel relative to larger vehicles, towing of trailers, travel to undertake ATV activities and upgrades to towing vehicles all tend to raise fuel usage so that twelve percent of direct expenditures are for fuel.

Twenty-four thousand Canadians are either directly employed or self-employed serving ATV users.

Even if sales remain flat, the number of operating ATVs will grow at 5.86 percent annually out to 2010. Rising incomes and the relocation of the workforce to jobs in Alberta suggest that growth sales will grow, thereby accelerating growth in the size of the fleet of ATVs and participants in their use. The two percentages are however not additive. It would take a 9.5% increase in sales from the present sales levels to obtain a one percent increase in the size of the fleet in use. 2005 sales in all three Western Provinces exceeded this benchmark growth rate led by Alberta with sufficient sales growth to add twelve percent to the fleet size if the historical sale shares are retained in the province.

3. Direct and Indirect Impacts

3.1 Introduction

The direct and indirect impacts include estimates of the goods and services required to produce not just what is being consumed, but also Canadian material, energy and transportation inputs to produce what is being consumed, on backward through multiple rounds of inputs into inputs. This chapter develops several indicators of Canadian economic activities arising from ATV activities, particularly measures of:

- Gross shipments;
- GDP;
- Employment;
- Labour income;
- Operating surpluses; and,
- Government revenues.

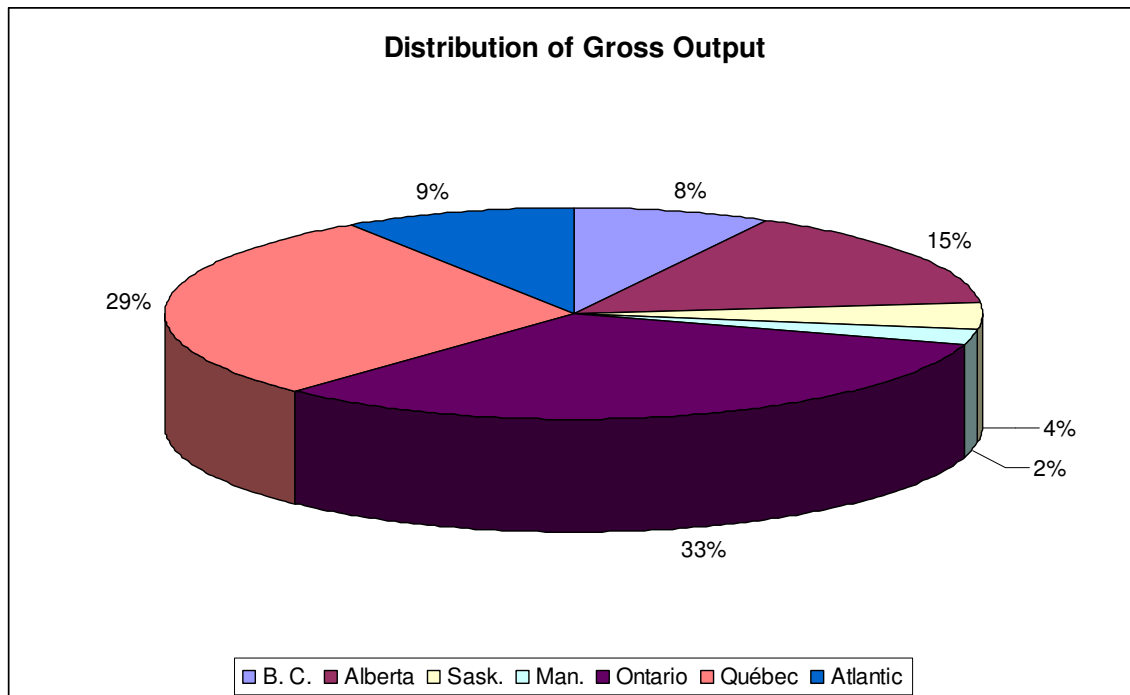
Considering an ATV, the direct impacts measure retailing, transporting, wholesaling and manufacture of the ATV. The indirect impacts identify what it takes to make the parts for the ATV and further back into the production processes including parts for the parts and even minerals and fuels to produce all the parts. Funds escape further analysis when they are used for imports. Payments of workers, owners, and taxes on the sale of goods and services, gasoline, duties and other indirect taxes are recorded but otherwise fall outside the purview of subsequent indirect spending; but, unlike imports, are further examined under induced effects in Chapter 4.

3.2 Gross Output

Direct and indirect gross output impacts tend to be larger than the expenditures *per se* since costs of the inputs are included at each stage moving forward in production include the costs of parts. That is mineral costs are also embedded in an initial part, that may be included in an engine and then again in the costs of the engine and yet again in the installed engine when it is sold by a final manufacturer of ATVs. Thus, in this example, the value of gross shipments, all the shipments culminating in the final product count the mineral costs four times over and the initial part thrice. For these reasons gross shipments often exceed the expenditure stimulus. Nevertheless, Gross Shipment remains an interesting measure since it indicates the amount of business generated by Canadian businesses in meeting demands for ATVs and ATV activities. Gross shipment results are smaller than business transactions since transactions included the purchase of imports whereas gross shipments are only those from businesses located in Canada regardless of who owns the business.

Of the total expenditures on ATVs and ATV activities of \$3.30 billion, \$3.12 billion entered into the I/O analysis. The remainder flowed into governments or to exports before otherwise impacting on the economy. This initial stimulus to Gross Output resulted in direct and indirect Gross Output of \$4.66 billion with a multiplier of 1.66 nationally. Provincial shares are shown in Table 3. Reflective of its more integral economy with specialized manufacturers, Ontario has the largest share of Gross Output. Of the major indicators observed here, Gross Shipments is the indicator of which Ontario has the largest share. It is not an ideal measure of economic activity since less specialized firms may be more vertically integrated and therefore produce rather than buy some components. Since there is no transaction, what might be a shipment in Ontario may not be identified as such in the smaller economy.

Table 3



Provincial Gross Output multipliers varied considerably over a range of 1.48 in PEI to 3.48 in Nova Scotia, in part due to its traditional entrepot function in the Atlantic region. Among the other provinces both Ontario (1.83) and Alberta (1.76) were relatively high due to Ontario’s traditional manufacturing strengths and Alberta’s tourism and fledging fabricating industries as well as destination appeal.

BC also has some considerable tourism appeal as expressed by Glen French, President of the **Crows Nest Pass Quad Squad**. This club has “counters” on its trails; one trail alone had over 10,000 trips tallied. There is a huge influx on weekends; riders come from over 100 km away. It is considered a “destination trail” area with access from five points within 120 miles. In short it is a tourist attraction and available for ATV adventures.

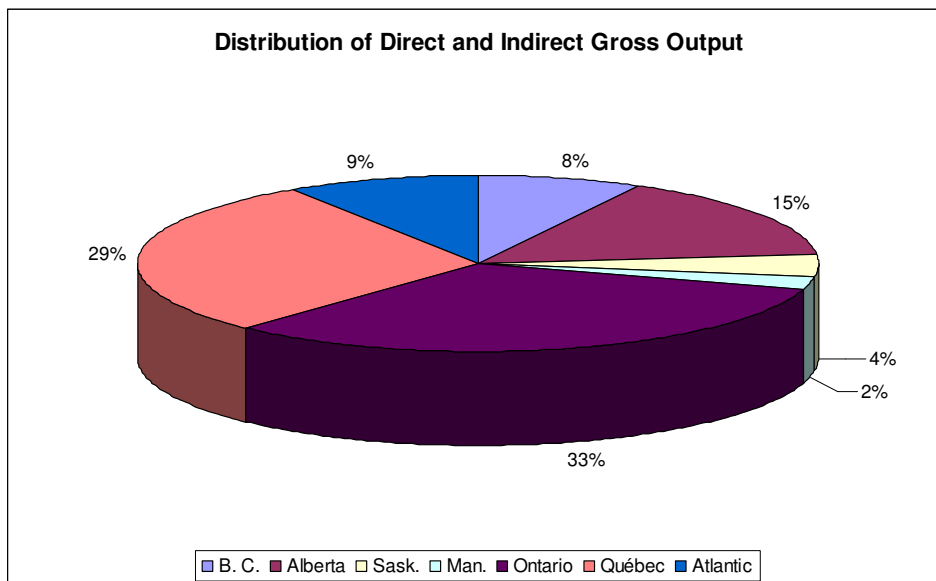
3.3 Direct and Indirect GDP

Conceptually, GDP differs markedly from Gross Value Shipped in that GDP captures only the value added at each stage of any economic activity. Thus at retail it captures primarily the wages and salaries and profits earned by the retailer with no accounting for costs of goods purchased by the retailer or energy he or she consumes to heat and run the store. If the goods being sold are imported there is no Canadian value added attached to them other than that obtained by the retailer and transport company that moved them to the store from the border. If the goods sold are produced here, then only the Canadian value added embodied in the products is captured. Aside from their transportation and shipping costs incurred in Canada, imported inputs do not enter into value added calculations. The process can be envisaged as moving back through several stages of production of inputs into inputs *ad infinitum*. Thus even though GDP is calculated prior to depreciation, due to the openness of the Canadian economy to imports, it is very much smaller than Gross Output.

The import intensive nature of ATVs leads to direct GDP impacts of \$1.19 billion. The combined direct and indirect GDP impacts amount to \$2.01 billion for a multiplier of 1.69. The direct and indirect GDP impacts are well below the expenditure stimulus of \$3.3 billion.

Direct and indirect GDP is earned primarily in Ontario and Quebec as shown in Chart 4. Alberta is the dominant province among the Prairie Provinces and is twice that of British Columbia. Ten percent of ATV direct and indirect GDP is generated in Atlantic Canada.

Chart 4



While the above national multipliers have been adjusted for the importation of ATVs from the closed case, provincial ones have not. They appear for both the open and closed cases for each province in Table 4.

Table 4: GDP Multipliers by Province

	BC	AB	SK	MN	ON	PC	NB	PE	NS	NF
Open to trade	1.66	1.93	1.64	1.63	1.72	1.56	1.51	1.34	1.71	1.71
Closed to trade	1.85	2.09	1.79	2.00	1.96	1.62	1.57	1.36	3.85	1.78

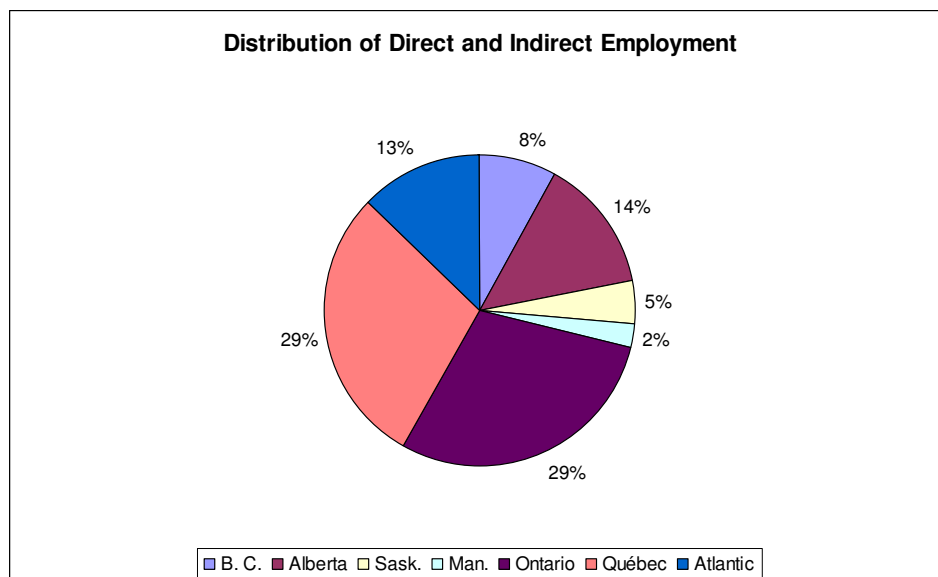
Due to their activity levels in tourism, Alberta, Ontario, and Quebec may have multipliers that are close to the open trade ones above. Other provincial multipliers are likely within the ranges in the Table. NS multipliers in the closed case suffered from small sampling and appear to be inordinately high, an outlier for each of the indicators.

3.4 Direct and Indirect Employment

Since this stimulus starts at employment intensive retail and services sector and then works back through the less labour intensive manufacturing, employment multipliers tend to be smaller than those for GDP. At the national level direct employment of 24,040 is associated with direct and indirect employment of 37,619 for a multiplier of 1.56, well below the national multiplier for GDP.

The distribution of the direct and indirect employment, depicted in Chart 5, is concentrated in a similar fashion to that of GDP, albeit somewhat less concentrated in the three regions with large shares in favour of the Atlantic and Saskatchewan.

Chart 5



Provincial employment multipliers are shown in Table 5 for both cases open and closed to trade. Again the closed trade cases resulted in higher multipliers that were nevertheless below the GDP multipliers in all provinces. Again reliance on imports for ATVs reduces the size of the multipliers early in the process. Generally, the indirect employment is concentrated in centres of industrial and services clusters.

Table 5: Employment Multipliers by Province

	BC	AB	SK	MN	ON	PC	NB	PE	NS	NF
Open to trade	1.40	1.35	1.28	1.41	1.47	1.35	1.33	1.21	1.41	1.21
Closed to trade	1.63	1.50	1.34	1.63	1.73	1.55	1.40	1.26	3.05	1.30

3.5 Direct and Indirect Labour Income

Excluding supplemental income, indirect impacts on labour income of \$519 add significantly to \$707 million earned in direct income at a multiplier of 1.65. The resulting \$1,226 million is distributed in line with the GDP, as illustrated in Chart 6, with the exception of a percentage loss from Alberta to BC based on the 2003 embedded in Statistics Canada’s I/O. Given the relative escalation of wages and salaries due to labour market pressures in Alberta, current differences may have been reversed. In short, Alberta’s shares are apt to be higher in both instances.

Chart 6

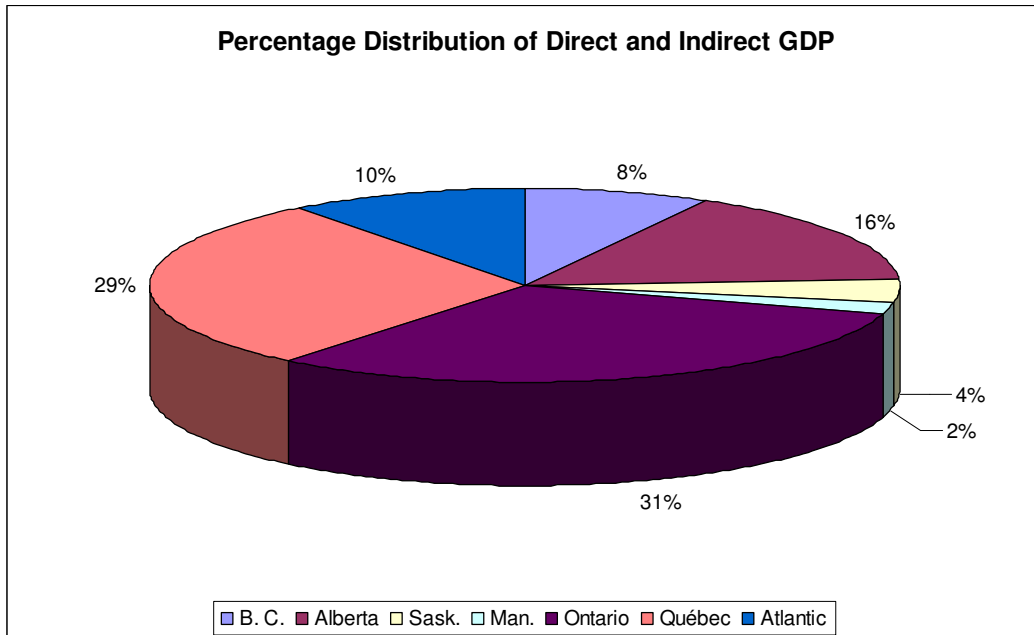


Table 6 captures the labour income multipliers by province. They are in excess of those for employment due to higher productivity and matching remuneration in manufacturing compared to the services initially impacted. Again the bias in using the 2003 I/O Tables rather than a more updated version may miss indirect impacts in Alberta and exaggerate them in the Atlantic by one or two percent.

Table 6: Labour Income Multipliers by Province

	BC	AB	SK	MN	ON	PC	NB	PE	NS	NF
Open to trade	1.58	1.58	1.43	1.55	1.69	1.50	1.53	1.33	1.69	1.36
Closed to trade	1.76	1.69	1.44	1.74	2.07	1.71	1.66	1.38	3.38	1.46

3.6 Operating Surpluses

The other avenue whereby incomes may increase is through operating surpluses. These too accrue directly and indirectly to pay for capital equipment and generate the funds for renewed investments and innovations. The two cases produced quite different results for this estimator. Conservatively, the operating surplus used in the rest of the study is the average of the two at \$676 million. It was highly concentrated in Quebec and Ontario but it would have been more broadly distributed if the I/O structure had been more up-to-date.

3.7 Government Revenues

Direct and indirect impacts also increase revenues for governments as noted in Table 7. The first three lines of Table 7 concerning Indirect Taxes have not been included earlier. The word “Indirect” denotes taxes paid indirectly through a third party to government and has nothing to do with indirect rather than direct impacts. The last two lines contain direct taxes paid by personal and corporate taxpayers directly to governments. The first comes out of personal incomes and the second out of business surpluses. Personal income taxes are by province as a percentage of personal incomes estimated by Statistics Canada based on its access to tax data. The second is an approximation of taxes paid by corporations at a 10 percent effective tax rate out of corporate surpluses. This effective rate is far from stable since it is subject to loss carry forward provisions and changes in corporate tax rates and exemptions.

Table 7: Direct and Indirect Impacts on Government Revenue Sources by Province (\$1000s)

	BC	AB	SK	MN	ON	PC	NB	PE	NS	NF	Total
Indirect taxes											
Federal	6,235	7,559	433	4,421	34,438	32,009	2,847	4,909	16,707	9,235	119,445
Provincial	10,143	11,725	634	5,575	54,936	43,902	3,214	4,947	5,566	11,398	152,209
Municipal	0	0	12	0	0	0	19	140	0	285	456
Direct Taxes											
Personal Income	9,264	6,804	1,513	6,178	67,337	80,032	6,128	8,553	33,888	17,238	237,411
Corporate Income	3,739	1,332	583	1,759	18,020	20,887	1,022	2,772	12,302	4,866	67,628
Total	29,381	27,420	3,177	17,933	174,731	176,830	13,231	21,321	68,463	43,021	577,148

Source: I/O runs. Rows do not add since the 0.3 percent of the revenues raised in the territories is omitted from the table but included in the totals.

The major federal taxes included under “Federal” are the sales tax and the gasoline taxes. The major “Provincial taxes,” are the gasoline and either the PST or HST depending on the provincial tax system. In excess of 10 percent of all expenditures on ATV activities accrue to governments in one jurisdiction or another. Ontario and Quebec taxpayers contribute over 30 percent of all tax revenues (30.6%) and Quebecois (30.3%) percent followed by Alberta at (11.9%).

3.8 Conclusions

National direct and indirect impacts from ATV expenditures have been measured by a series of indicators and found to increase:

- Gross output, a measure of Canadian transactions, by \$4.66 billion;
- GDP by \$2.01 billion;
- Total employment by 37,619;
- Labour income before deduction of direct taxes by \$1,226 million;
- Operating surpluses before deduction of direct taxes by \$676 million; and,
- Government revenues inclusive of revenues from direct taxation by \$577 million.

Regionally the economic activity is concentrated in Ontario, Quebec, and Alberta. The multipliers with respect to the sum of the direct and indirect impacts relative to direct impacts are of the expected magnitudes among the indicators. They are all modest due to the predominance of imported ATVs and the significant leakage of funds into income, operating surpluses and government revenues. Direct and indirect multipliers are incomplete since they do not account for any induced expenditures arising from these income streams.

4. Induced Impacts

4.1 Introduction

Appendix 2 contains the detailed numbers included in the induced expenditure shock based on labour income, operating surpluses, and government revenues from the direct and indirect impacts discussed in the previous chapter. This chapter begins with a description of how that detailed shock was derived. It then goes on to describe the impacts of the induced expenditures and to derive final multipliers.

4.2 Induced Expenditures

As noted above the direct and indirect impacts generate specific income flows for each province that are not further analyzed by that process. They are significant as noted by the national totals:

- Labour income before deduction of direct taxes by \$1,226 million;
- Operating surpluses before deduction of direct taxes by \$676 million; and,
- Government revenues inclusive of revenues from direct taxation by \$577 million.

Fortunately, Statistics Canada also generates series on detailed family expenditures by commodity for each province and territory inclusive of funds paid in direct taxes for 2006. Those matrices have been deployed to allocate expenditures base on incomes in the commodity space in an I/O shock at the medium level of aggregation shown in Appendix 2. They are also used in determining personal income taxes paid into consolidated government accounts by province, which also cover how government revenues are spent.

As noted earlier, determining effective payments of corporate taxes is extremely complex and detailed due to tax expenditures, carry forward provisions, and differential tax rates. Delving that deeply requires tax data that are not publicly available. The average effective corporate tax rate has been set at 10 percent and allocated as revenues into the consolidated corporate accounts by province.

The remaining induced expenditures by investors are allocated to purchases of machinery and equipment or plant in line with provincial ratios related to total preliminary investment data from 2005. Government expenditures have been broken out by the province in which they were earned and allocated among commodities based average government spending of revenues in each province contained in Statistic Canada's consolidated accounts. This methodology has the advantage of avoiding double counting and relying on the most up to date government sources.

The resulting aggregate expenditures used to determine the induced impacts are noted in Table 8. This concentration follows expected patterns as noted earlier with corporate surpluses playing a relatively large role in Alberta than elsewhere. The total induced stimulus is \$2,080 million, 61 percent of the initial expenditures. The remaining 39 percent goes into imports and savings.

Table 8: Sources of Induced Impacts (\$1,000s)

	BC	AB	SK	MN	ON	PC	NB	PE	NS	NF	Total
Personal income net of income taxes and savings	78,797	120,156	35,724	22,129	281,262	252,883	26,731	6,587	30,707	37,846	894,488
Operating surpluses net of corp. taxes and foreign investments	43,795	110,715	24,945	9,199	187,982	162,183	15,831	5,250	11,989	33,650	608,651
Government	43,021	68,463	21,321	13,231	176,830	174,731	17,933	3,177	27,420	29,381	577,148
Total	165,613	299,334	81,990	44,558	646,074	589,796	60,495	15,014	70,115	100,877	2,080,287

4.2.1 National Induced Impacts

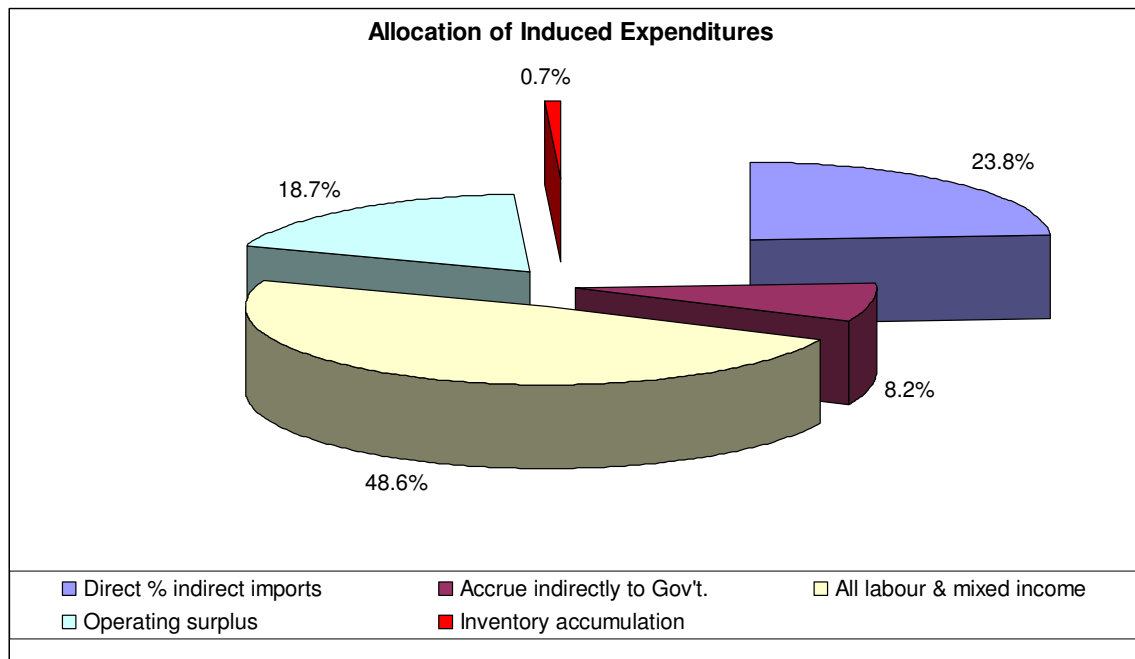
The impact was run on the version of the I/O that assumes business as usual for imports and interprovincial trade. Because of the openness of the Canadian economy, imports are expected to curtail induced effects. Further, leaving interprovincial trade open to historical patterns results in more concentration of economic activity in Ontario and Quebec than might otherwise have been the case. Of the \$2,080 million in induced expenditures \$2,068 million is captured by items covered in the I/O Tables. Further, only \$259 million would be spent directly on imports and a further \$233 million indirectly on imports incorporated into products and services produced in Canada. A minor amount of \$15 million is dedicated to larger inventories to meet higher overall economic demands. For consistency, 10 percent of operating surpluses are assumed to move either offshore or into savings.

Since funds spent on imports or moved offshore accrue to non-residents and increased inventories by definition have not been purchased by consumers all imports plus changes in inventories are treated as leakages from any further rounds of additional induced expenditures. It is why this 24.5 percent of the initial induced expenditures are left out of the core circle of allocation of induced expenditures shown in Chart 6. Not shown in this amount are the 10 percent of operating surpluses that move offshore. Otherwise the remaining three elements, income accruing to labour and mixed income, operating surpluses, and governments are available to Canadians persons, businesses, and governments for additional induced expenditures in Canada. Since each successive round of recycled funds will involve some imports and inventory accumulation, each subsequent round will be smaller. The upshot is that the accumulated induced

expenditures over time will be about \$7,835 million or 3.79 times the initial induced effect.

This multiplier is larger than normally obtained since most analyses assume that funds accruing to governments are not spent. If all government revenues including those from direct taxes, not shown in Chart 6, were saved after the initial round of expenditures or used to pay down non-existing foreign debt, yield total induced impacts of \$5.014 million or 2.42 times the initial induced effect. Given the recent track records of governments in Canada of spending all but 2.7 percent of revenues, it is hard to argue that they will save all their additional revenues. The higher of these two estimates where governments make use of all but 2.7 percent of their improved fiscal capacity from the direct and indirect impacts would then be the more likely outcome.

Chart 6:



Since this process requires expenditures of successive rounds of expenditures, it should be noted that three quarters of the higher impacts is achieved within the first four rounds of the expenditures and is therefore fairly immediate.

The corresponding national induced impacts on the other economic indicators are shown in Table 9 first with the governments spending their incremental fiscal capacities and secondly with them all being saved.

Table 9: National Induced Impacts: Incremental Fiscal Capacities Being Spent or Saved (\$1,000 except for Employment)

	Using Incremental Fiscal Capacity	With Government Saving Its Incremental Revenues After the Initial Induced Expenditures
GDP	5,479,681	3,507,234
Employment	85,810	54,922
Labour income	3,806,872	2,436,564
Gross output	10,188,728	6,521,228

Induced outcomes reflect both the ratios of total to direct impacts and the multipliers for all iterations of derived induced expenditures. Thus the directly induced GDP of \$928 million yields direct and indirect GDP initially of \$1,446 million in income which when multiplied through additional rounds of expenditures results in induced additions to GDP of \$3.5 to \$5.5 billion, dependent on governments' expenditures of tax revenues. Those actions will impact on induced employment ranging from 54,922 to 85,810, both well above the initial direct employment of 14,964 and initial direct and indirect of 22,650 employees. Induced labour incomes are modest relative to employment growth but significant in the range of \$2.4 to \$3.8 billion. Readers are reminded of the double counting in the gross output estimates. As a proxy for business transacted the results are significant and strong at \$6.5 to \$10.2 billion, but care must be taken not to exaggerate impacts using this measure.

4.2.2 Provincial Induced Impacts

The relative magnitude of the impacts by province will depend on the industrial infrastructure of the province as reflected in interprovincial trade flows. Provinces with higher imports from the rest of the country than exports to the rest of the country experience further leakages from incomes that erode the impacts. Those with the opposite trade flows experience exaggerated induced impacts. As illustrated in Chart 7, these multipliers range from a provincial low of 2.2 in Newfoundland and Labrador to a high of 5.1 in Ontario when governments make use of their additional fiscal capacity. Other than for the size of the initial induced expenditures no adjustment is made for differences in savings ratios in the consolidated accounts at the provincial level.

The resulting provincial shares after the application of each provincial multiplier for the high multiplier case appear in Chart 8 with the obvious concentrations in Ontario, Quebec, Alberta and British Columbia with a solid regional impact in the Atlantic. Reflective of their small populations, less than 0.18 percent of induced expenditures are in the Territories.

Chart 7:

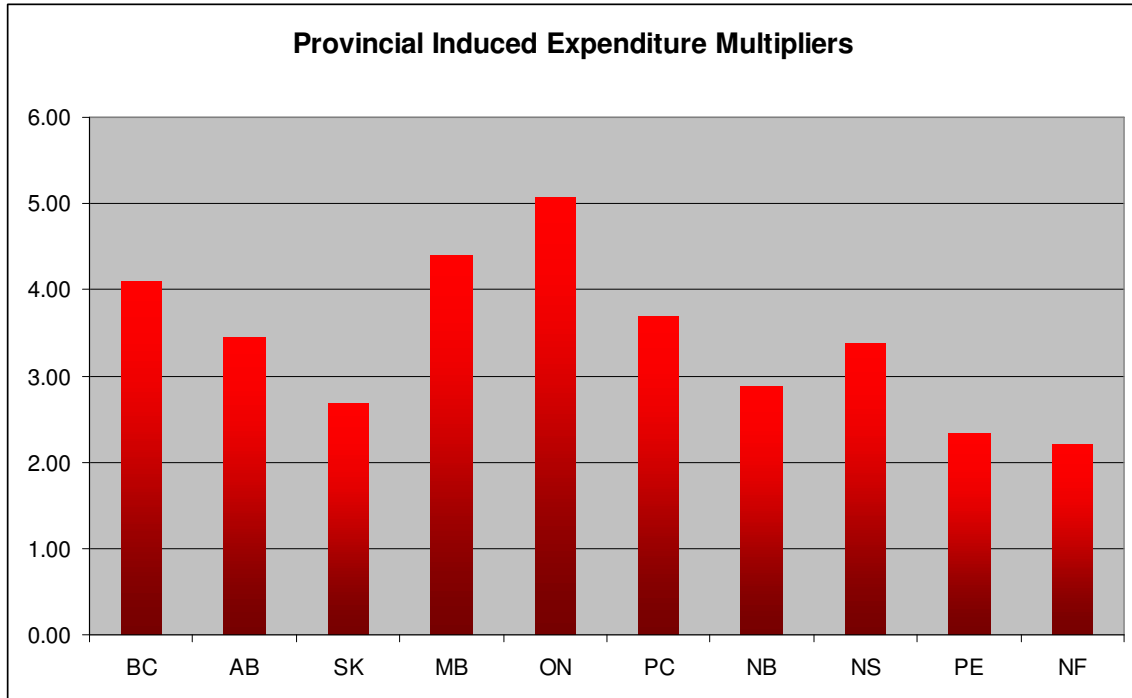
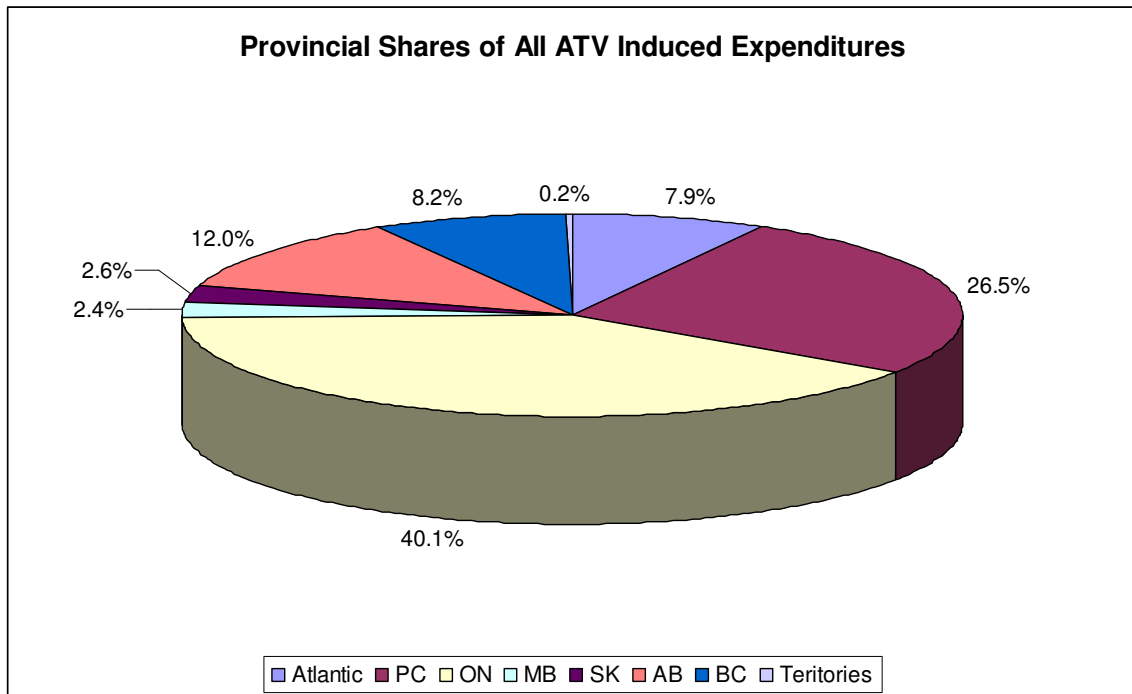


Chart 8:



The provincial results for other economic indicators are presented in Table 10. In all provinces the induced impacts exceed the direct and indirect ones. Given the location of the national capital, Ontario is the province that is most sensitive to whether or not the governments spend their incremental revenues. The least sensitive provinces include

Newfoundland and Alberta where governments have been paying off or avoiding debt so that there is already some adjustment for savings at the indirect analysis. The GDP and labour income shares tend to be larger than employment shares in Alberta and Ontario where average labour incomes are relatively high but lower in the other Prairies Provinces, the Atlantic and British Columbia to a less extent, where the opposite is true. Those spreads are somewhat understated by the use of 2003 rather than more current I/O Tables Quebec average labour income approaches the national average.

Table 10: Total Induced Impacts by Indicator

Total GDP	BC	AB	SK	MN	ON	PC	NB	NS	PE	NF	Terri- tories
With Government Spending of Incremental Revenues	445,026	642,625	117,983	131,493	2,356,785	1,417,869	97,914	149,077	16,286	96,147	8,476
With Government Saving of Incremental Revenues	287,705	460,991	92,593	80,582	1,337,471	962,745	75,124	107,233	13,457	82,339	6,995
Labour Income											
With Government Spending of Incremental Revenues	315,240	419,881	78,512	92,029	1,655,188	979,543	70,324	112,308	12,146	65,968	5,733
With Government Saving of Incremental Revenues	204,060	301,590	61,694	56,470	940,517	665,968	54,025	80,888	10,049	56,566	4,738
Employment											
With Government Spending of Incremental Revenues	7,572	8,971	2,098	2,496	35,087	22,709	1,867	2,899	359	1,659	93
With Government Saving of Incremental Revenues	4,875	6,409	1,639	1,523	19,830	15,356	1,426	2,077	296	1,415	76
Gross Output											
With Government Spending of Incremental Revenues	811,345	1,248,874	230,684	247,693	4,386,361	2,566,480	186,031	272,561	31,479	190,298	16,921
With Government Saving of Incremental Revenues	524,070	895,109	180,883	151,659	2,487,085	1,741,145	142,608	195,886	25,988	162,826	13,970

Relative to the direct and indirect impacts, the induced ones are significant in that they exceed not only the initial stimulus but also the direct and indirect impacts for all indicators, even with the more modest multipliers. That discussion is however left to the next chapter.

4.3 Conclusions

The majority of the impacts come through induced expenditures generated out of the incomes earned directly, indirectly, and through subsequent rounds of induced expenditures. The openness of the Canadian economy to imports, repatriation of operating surpluses and possible government savings all erode the induced impacts. The implications of government spending of its incremental revenues have been assessed by assuming business as usual where only 2.7 percent of the additional revenues from the direct and indirect impacts are saved and contrasting it with a case in which all the incremental induced government revenues are saved. Of these the former is based on current habits and expectations and the later on the normal, but mythical, approach to impact analysis. To give that approach its due when assessing government programs it is founded on the idea that each government decision to spend is separable and has its own related multiplier. But government programs are not being assessed but rather the normal chain reactions to the ATV activities reflective of built in government tendencies to spend the vast majority of their revenues.

Induced outcomes reflect both the ratios of total to direct impacts and the multipliers for all iterations of derived induced expenditures. Thus the direct GDP impact of \$928 million yields direct and indirect GDP initially of \$1,446 million in income which when multiplied through additional rounds of expenditures results in induced additions to GDP of \$3.5 to \$5.5 billion, dependent on governments' expenditures of tax revenues. Those actions will impact on induced employment ranging from 54,922 to 85,810, both well above the initial direct employment of 14,964 and initial direct and indirect of 22,650 employees. Induced labour incomes are modest relative to employment growth but significant in the range of \$2.4 to \$3.8 billion. As a proxy for business transacted the results are significant and strong at \$6.5 to \$10.2 billion, but care must be taken not to exaggerate impacts using this measure.

In all provinces the induced impacts exceed the direct and indirect ones. Given the location of the national capital, Ontario is the province that is most sensitive to whether or not the governments spend their incremental revenues. The least sensitive provinces include Newfoundland and Alberta where governments have been paying off or avoiding debt so that there is already some adjustment for savings at the indirect analysis. The GDP and labour income shares tend to be larger than employment shares in Alberta and Ontario where average labour incomes are relatively high but lower in the other Prairies Provinces, the Atlantic and British Columbia to a less extent, where the opposite is true. Those spreads are somewhat understated by the use of 2003 rather than more current I/O Tables Quebec average labour income approaches the national average.

The larger impacts derived above reflect this reality, albeit fairer to use the lower estimates when making contrasts impacts with government programming decisions.

5. Conclusions: Total Impacts and Multipliers

5.1 Introduction

The results are summarized in Table 11-14. They contain the middle case direct, direct and indirect, and total impacts with and without induced government expenditures and derived final multipliers by province and for the nation for gross output, GDP, employment, and labour income.

5.2 Gross Output

Table 11 summarizes the impacts from ATV sales and activities. The first line contains the direct impacts from Chapter 2, the second the direct and the indirect impacts from Chapter 3. The third and fourth line establish total impacts including and excluding government expenditures of increased revenues accruing to the governments, aside from the any initial savings from the direct and indirect impacts but inclusive of any additional borrowing consistent with present practices. The last two lines establish the multipliers derived by dividing each estimate of total impacts by the direct impacts (line 1).

Table 11: Gross Output Impacts (\$1,000 except multipliers)

	BC	AB	SK	MN	ON	PC	NB	NS	PE	NF	Canada
Direct	220,871	408,440	123,016	62,082	819,266	881,447	79,419	75,328	8,358	118,458	2,800,000
Direct and indirect	361,701	719,227	196,669	103,965	1,495,432	1,346,127	117,264	101,640	29,077	179,247	4,659,850
Total with gov't. spending of incremental revenues	1,173,045	1,968,100	427,353	351,659	5,881,792	3,912,607	303,296	374,201	60,557	369,546	14,848,578
Total without gov't spending of incremental revenues	885,770	1,614,336	377,552	255,625	3,982,517	3,087,272	259,872	297,525	55,066	342,073	11,181,078
Multiplier with spending of incremental gov't. revenues	5.3	4.8	3.5	5.7	7.2	4.4	3.8	5.0	7.2	3.1	5.3
Multiplier without spending of incremental gov't. revenues	4.0	4.0	3.1	4.1	4.9	3.5	3.3	3.9	6.6	2.9	4.0

As noted earlier total gross output figures are useful in indicating total transactions but inadequate for assessing other economic objectives such as employment and income. Due to the double counting inherent in gross output, use of the \$11.2 to \$14.8 billion total impact on gross output should be limited and guarded.

Generally gross output multipliers are fairly high given large percentage of machines that are imported. There are considerable differences among the provinces. The high multiplier without government spending for Ontario reflects its industrial strength. Inclusive of government expenditures it also includes impacts arising from government borrowing in line with its fiscal capacity to do so. While the multipliers for BC and Alberta are similar without government expenditures included, BC's is higher inclusive of government expenditures reflective of its more aggressive expenditures relative to fiscal capacity. Weak multipliers for Newfoundland reflect shortcomings in its industrial structure and repayment of debt with the consolidated accounts across governments.

Statistics Canada has issued warnings about the accuracy of I/O based analysis in small jurisdictions suggesting that high multipliers for PEI may be misleading throughout this analysis.

5.3 GDP

GDP is a better measure of economic activity than gross output since it avoids double counting. It is however a "gross" figure in that no depreciation is deducted. National estimates of total GDP impacts range between \$5.5 and \$7.5 billion depending on whether or not government expenditures are included.

Table 12: GDP Impacts (\$1,000 except multipliers)

	BC	AB	SK	MN	ON	PC	NB	NS	PE	NF	Canada
Direct	94,554	162,986	47,940	20,306	340,935	388,491	34,592	41,149	3,368	54,054	1,190,000
Direct and indirect	162,073	316,631	79,826	37,776	620,349	582,689	50,242	52,116	12,004	89,429	2,008,800
Total with gov't. spending of incremental revenues	607,099	959,256	197,809	169,269	2,977,135	2,000,558	148,156	201,193	28,290	185,576	7,488,481
Total without gov't spending of incremental revenues	449,777	777,622	172,418	118,358	1,957,820	1,545,434	125,367	159,349	25,461	171,767	5,516,034
Multiplier with spending of incremental gov't. revenues	6.4	5.9	4.1	8.3	8.7	5.1	4.3	4.9	8.4	3.4	6.3
Multiplier without spending of incremental gov't. revenues	4.8	4.8	3.6	5.8	5.7	4.0	3.6	3.9	7.6	3.2	4.6

Notably, the national GDP multipliers are stronger than those on gross output. With the exception of Saskatchewan, provincial multipliers are also strong west of the Quebec-Ontario border relative to other provinces. Statistics Canada’s warnings about the lack of precision of I/O applications to small economies, suggests caution in using impact results for PEI and Manitoba.

5.4 Labour Income

Since labour income is a part of GDP, estimates of total impacts on labour income, at \$3.7 billion to \$5.1 billion, are only a fraction of those on GDP. These results are in Table 13. Generally, these multipliers are large relative to those on other indicators suggesting that labour incomes are spent on items whose manufacture requires relatively high wages compared to those earned in direct employment. Given that direct domestic expenditures are concentrated in the services industry – accommodations, out-of-home meals and insurance – this result expected.

Table 13: Labour Income Impacts (\$1,000 except multipliers)

	BC	AB	SK	MN	ON	PC	NB	NS	PE	NF	Canada
Direct	62,355	111,416	34,569	17,092	190,005	211,391	19,071	26,385	2,507	31,024	706,922
Direct and indirect	109,669	188,180	49,893	29,730	393,770	361,655	31,750	36,342	8,482	45,340	1,256,874
Total with gov't. spending of incremental revenues	424,909	608,061	128,405	121,759	2,048,958	1,341,197	102,073	148,651	20,629	111,308	5,063,746
Total without gov't spending of incremental revenues	313,729	489,770	111,588	86,199	1,334,287	1,027,623	85,774	117,230	18,532	101,906	3,693,437
Multiplier with spending of incremental gov't. revenues	6.8	5.5	3.7	7.1	10.8	6.3	5.4	5.6	8.2	3.6	7.2
Multiplier without spending of incremental gov't. revenues	5.0	4.4	3.2	5.0	7.0	4.9	4.5	4.4	7.4	3.3	5.2

This indicator has larger multipliers both nationally and among the provinces than any of the others included in this report and is particularly strong in Ontario and British Columbia.

5.5 Employment

Total estimated employment impacts, appearing in Table 14, of 93 to 123 thousand are significant even though they are accompanied by more modest multipliers than those for labour income. This outcome suggests that ATV purchases and activities stimulate real growth in incomes. The relatively low multipliers in Alberta illustrate tightness in that Province's labour markets and the migration of ATVs originally sold there into the rest of the country. The employment multipliers are particularly strong in Ontario, Manitoba, and British Columbia

Table 14: Employment Impacts

	BC	AB	SK	MN	ON	PC	NB	NS	PE	NF	Canada
Direct	1,870	3,429	1,293	556	6,317	6,986	911	1,202	82	1,360	24,040
Direct and indirect	3,054	5,153	1,738	912	10,958	10,912	1,285	1,527	253	1,778	37,619
Total with gov't. spending of incremental revenues	10,626	14,124	3,836	3,408	46,045	33,621	3,151	4,426	612	3,437	123,429
Total without gov't spending of incremental revenues	7,929	11,562	3,378	2,435	30,787	26,268	2,711	3,604	549	3,193	92,541
Multiplier with spending of incremental gov't. revenues	5.7	4.1	3.0	6.1	7.3	4.8	3.5	3.7	7.4	2.5	5.1
Multiplier without spending of incremental gov't. revenues	4.2	3.4	2.6	4.4	4.9	3.8	3.0	3.0	6.7	2.3	3.8

Appendix 1: Initial Shock

Table A.1.1: Induced Expenditures Resulting from ATV Activities (\$1,000)

Commodity \ Province or Territory	NL	PE	NS	NB	PC	ON	MN	SK	AB	BC	YK	NW	NU	Total
Other clothing and accessories, excluding dressed furs and fur apparel	1,208	59	958	810	6,801	6,449	415	890	2,404	1,452	14	12	23	21,495
Custom tailoring	3	3	5	3	57	59	6	5	65	59	3	0	2	270
Passenger vans	2,074	122	1,722	1,582	12,305	11,610	1,124	1,830	6,131	3,073	66	60	95	41,794
Motor homes, motorcycles and atvs	29,190	2,790	28,193	32,058	205,147	190,731	36,825	41,204	188,754	72,884	3,071	2,868	4,147	837,860
Non-commercial trailers	323	31	312	355	2,271	2,111	408	456	2,090	807	34	32	46	9,275
Motor vehicle fabric accessories	15,026	735	11,916	10,079	84,624	80,250	5,168	11,076	29,912	18,069	174	147	287	267,461
Other motor vehicle parts and accessories and motor vehicle	17,007	779	12,663	10,790	100,723	91,309	5,405	11,097	33,290	19,255	160	120	231	302,829
Motor gasoline	24,291	1,134	18,221	15,265	131,870	114,301	7,376	15,808	42,691	27,709	507	428	835	400,436
Recreational equipment	4,296	210	3,407	2,881	24,193	22,943	1,477	3,167	8,551	5,166	50	42	82	76,464
Road, highway and airport runway construction	664	32	527	446	3,741	3,548	228	490	1,322	799	8	6	13	11,825
Air transportation, passenger	0	0	0	0	92	99	0	0	98	14	0	0	0	303
Automotive repair and maintenance service	4,073	199	3,230	2,732	22,936	21,750	1,401	3,002	8,107	4,897	47	40	78	72,491
Retailing margins	330	32	319	362	2,318	2,155	416	466	2,133	824	35	32	47	9,467
Paid charges, banks and other deposit account intermediation	0	0	0	0	461	480	0	0	370	189	0	0	0	1,500
Management fees of companies and enterprises	275	13	218	184	1,549	1,469	95	203	548	331	3	3	5	4,896
Non-life insurance	18,775	971	15,757	13,878	114,987	106,119	6,551	14,041	37,373	41,674	230	194	379	370,930
Advertising services	151	7	120	101	849	805	52	111	300	181	2	1	3	2,683
Hotel and motel	31,532	1,549	25,009	21,152	177,965	168,838	10,856	23,258	63,134	38,354	371	308	608	562,934

accommodation services														
Meals (outside home)	14,448	724	11,469	9,696	81,780	77,622	4,998	10,662	29,235	17,611	183	141	290	258,859
Other information services	0	0	0	0	1,082	787	0	0	551	75	0	0	0	2,496
Rental of automobiles and trucks	3	2	4	3	214	222	5	13	232	159	2	0	2	860
Art, entertainment and recreation services provided by non-profit institutions serving households	9	8	12	8	138	191	15	12	113	63	7	0	6	580
Other government services	0	80	695	661	20,356	11,699	1,300	2,018	4,906	0	34	114	29	41,892

Appendix 2: Induced Demand

As described in the text, the induced shock was developed based on three major sources – personal income, increased operating surpluses and government revenues. The resulting expenditures in the elements of the induced shock are shown for each of these in Tables A.2.1 to A.2.3. While it is normal to leave government expenditures out of induced impacts, there is little to justify a stance that governments will avoid spending and a wealth of recent history to suggest that they will spend it.

Table A.2.1: Induced Expenditures Resulting from Increments to Personal Income Net of Income Taxes and Savings (\$1,000)

Commodity \ Province or Territory	NL	PE	NS	NB	PC	ON	MN	SK	AB	BC	YK	NW	NU	Total
Meat	905	154	694	606	5,925	5,289	412	617	2,069	1,259	8	11	17	17,982
Dairy products and eggs	626	107	480	419	4,543	3,635	296	444	1,488	1,059	7	9	14	13,138
Fish and other marine products	133	23	102	89	924	901	48	72	240	275	2	2	4	2,816
Fruits nuts and vegetables	796	136	610	533	6,130	5,602	424	636	2,134	1,679	11	14	22	18,743
Bakery Products & eggs and fats and oils	723	123	555	484	4,588	3,864	329	493	1,654	1,166	8	10	16	14,025
Other foods, materials and food preparations	650	111	499	436	4,013	3,441	340	510	1,710	1,101	7	9	15	12,853
Sugar, sugar preparations and non-alcoholic beverages	341	58	261	228	2,090	1,897	172	257	863	465	3	4	6	6,653
Alcohol	731	137	605	507	4,811	3,793	380	632	2,222	1,469	13	18	19	15,359
Tobacco	488	91	403	338	3,207	2,528	253	422	1,482	979	8	12	13	10,239
Leather and leather products	320	49	215	191	1,929	2,161	159	265	912	566	3	5	5	6,789
Hosiery and knitted clothing	1,066	162	717	637	6,429	7,204	531	884	3,042	1,888	10	17	15	22,630
Other clothing and accessories	746	114	502	446	4,500	5,043	372	619	2,129	1,321	7	12	11	15,841
Furniture and fixtures	547	84	364	337	3,146	3,498	274	463	1,690	982	5	6	7	11,422
Motor vehicles, mobile homes and trailers and semi-trailers	2,795	453	2,177	2,088	16,757	20,319	1,609	2,659	8,676	5,417	36	39	21	62,983
Motor vehicle parts	699	113	544	522	4,189	5,080	402	665	2,169	1,354	9	10	5	15,746
Other transport equipment and repairs	1,048	170	816	783	6,284	7,620	603	997	3,254	2,031	13	15	8	23,618

Appliances and household equipment	1,110	170	740	685	6387	7,102	557	941	3,431	1,993	10	12	15	23,191
Motor gasoline and other fuel oils	1,747	283	1,361	1,305	10,473	12,699	1,006	1,662	5,423	3,386	22	25	13	39,364
Pharmaceuticals	934	191	779	743	7,324	5,218	509	909	3,005	2,117	6	9	6	21,835
Reading materials and other printed matter	182	42	181	145	1,363	1,595	136	193	638	416	3	3	2	4,912
Residential construction	770	151	694	568	5,706	7,428	487	787	2,766	2,010	11	17	11	21,412
Other transportation and storage	699	113	544	522	4,189	5,080	402	665	2,169	1,354	9	10	5	15,746
Radio and television broadcasting, including cable	1,129	204	953	826	6,397	7,623	616	1,027	3,382	2,100	13	16	16	24,295
Telephone and other telecommunication services	1,129	204	953	826	6,397	7,623	616	1,027	3,382	2,100	13	16	16	24,295
Postal and courier services	251	45	212	184	1,421	1,694	137	228	752	467	3	4	3	5,399
Electric power	1,925	379	1,734	1,421	14,266	18,569	1,218	1,966	6,916	5,024	27	41	28	53,531
Other utilities	5,005	985	4,509	3,694	37,091	48,279	3,168	5,112	17,980	13,064	71	107	74	139,181
Personal insurance payments and pension contributions	2,842	524	2,328	2,075	21,345	21,534	1,862	2,966	8,513	5,049	37	49	37	69,241
Education	793	154	695	473	3,818	7,950	470	668	2,838	2,101	5	6	3	19,989
Health and social services	460	94	384	366	3,607	2,570	251	448	1,480	1,043	3	4	3	10,754
Recreation, Games of Chance & Misc.	3,781	587	3,051	2,634	25,316	26,859	2,539	4,097	13,744	8,189	57	74	72	90,738
Food purchased from restaurants	1,564	267	1,199	1,047	12,316	11,835	1,075	1,611	5,402	3,841	25	33	51	40,294
Personal care	910	150	663	574	6,003	5,727	476	784	2,603	1,530	8	12	10	19,475
Total Induced from personal income	37,846	6,627	30,523	26,731	25,2883	28,1262	22,129	35,724	120,156	78,797	474	630	561	894,488

Sources:

Table A.2.2: Induced Expenditures Resulting from Increments to Operating Surpluses Net of Corporate Income Taxes (\$1,000)

Commodity \ Province or Territory	NL	PE	NS	NB	PC	ON	MN	SK	AB	BC	YK	NW	NU	Total
Other machinery	10,874	2,083	4,282	6,588	61,739	81,239	4,214	8,946	36,644	13,173	93	650	46	230,840
Non-residential construction	22,776	3,167	7,707	9,242	100,443	106,744	4,984	15,998	74,071	30,622	248	1,809	266	377,811

Table A.2.3: Induced Expenditures Funded from Increments to Taxes Revenues (\$1,000)

Commodity \ Province or Territory	NL	PE	NS	NB	PC	ON	MN	SK	AB	BC	YK	NW	NU	Total
Government funding of hospital and residential care facilities	7,049	1,026	8,944	5,794	48,228	67,692	4,743	6,690	19,783	14,878	75	157	107	185,167
Government funding of education	5,282	713	6,823	4,261	36,814	44,265	2,817	4,766	16,017	10,347	80	139	86	132,412
Defence services	881	95	823	538	5,242	5,305	397	640	2,054	1,291	13	21	15	17,314
Other municipal government services	256	20	105	274	2,127	626	304	192	127	109	7	48	12	4,206
Other provincial government services	4,151	531	6,045	3,449	42,499	32,402	2,578	4,239	8,992	7,630	141	179	127	112,962
Other federal government services	4,151	531	6,045	3,449	42,499	32,402	2,578	4,239	8,992	7,630	141	179	127	112,962

Appendix 3: Data Sources

There are several important sources of data that have been used in determining the size of ATV fleets, inputs used to undertake ATV operations, activities associated with various types of exhibitions, the statistical analysis and club activities.

ATV Sales and Fleets

The CATV houses annual current and historical data on new sales of ATVs by its members in each province and territory as well as expertise on the totality of the members' market share. These two pieces of information determined total annual sales. As noted in the text licensing data are also available for all provinces and territories but BC and Saskatchewan. In the opinion of CATV, the Quebec licensing database was the most complete. Further, their understanding was that there was only a gradual retirement of ATVs over the first 18 years, followed by a sharper decline. A modest decline of 2.1% annually followed by a sharper decline to approach zero over the next seven years fitted the Quebec base data. While not unique, this methodology fitted the national fleet-determination a priori of the Association's executives based on the best available data. It also yielded solutions among the other provinces, other than BC and Saskatchewan, where total registrations were not available, that were consistent with 12.7 to 12.9 percent remaining unregistered ATVs, slightly over half those being used principally on private lands. If ATVs are retired faster in other provinces than Quebec, there may be some upward bias in the fleet estimate. If they last longer than in Quebec, the opposite bias would occur.

There is also room for a potential downward bias in fleet sizes if all Quebec machines are not registered or if market shares by non-CATV members are particularly high in a given province. For example, in an interview with Ray Gouthro, Executive Director ATVANS, indicated that NS Health would agree with the licensed fleet size for NS of 37,800 but he disagrees that there only 43,400 ATVs operating in NS. His estimate was closer to 60,000 OHVs in-use in Nova Scotia. Yet OHVs include ATVs and off-road motorcycles so that ATV estimate of 43,400 fits very closely. Actual numbers of ATVs in use will only be firmed up once registration is fully enforced, expected to start in the spring of 2007. As those figures are confirmed, this analysis remains useful in that many of the results are linear and can be factored up to obtain reasonable estimates.

Alberta is the most difficult province for the estimation of fleet size. Since there is no provincial sales tax, it is appealing for non-residents to buy there. Further, it has had a history of fairly high sales from the early years so that the depreciation assumptions play a stronger role there than elsewhere. Despite an estimated 14,000 unregistered ATVs, the total estimated fleet of 109,000 ATVs might be conservative. That estimate implies interprovincial transfers 63,000, or 2,520 units a year, and 19,000 retirements from the 191,000 in sales 1981-2005. More modest transfers would result in a larger Alberta fleet and more Alberta ATV activity but correspondingly less elsewhere.

The expenses per unit come from a number of sources:

- Gasoline per unit in recreational and private use at 59 gallons a year and double that for units in commercial fleets based on discussions with fleet operators;
- Insurance has been estimated at rates designed to fully cover all operating ATVs as quoted by one of the leading insurers and per member costs incurred by clubs for Board of Directors and trail insurance based on the survey of the clubs;
- Average number of nights in commercial accommodations comes from the survey of ATV clubs who identified the share of participants thought to use commercial accommodations for 1, 2, 3, 4 or 5 and more nights, truncated at 5 nights;
- Average daily travel costs for accommodations, meals and miscellaneous expenses are from Treasury Board Guidelines for travel allowances by province and territory and are consistently deployed for ATV participants, those attending shows and key booth organizers aside for accommodations for the last of these which are show specific based on rates at show designated accommodations;
- The costs of upgrades to vans from Ford Five Hundreds is based on difference in the sticker price of similarly equipped vehicles for 9% or new buyers with replacement vehicles being purchased every 5 years;
- Incremental gas mileage for vehicles is based on the differential in the posted gas mileage of each of the above driven an average of 25,000 km. annually;
- In line with the OFSC estimates, 13 percent¹ of buyers are assumed to require trailers and vehicle upgrades with the trailers priced at \$1,000 each - \$200 above wire mesh trailers at Canadian Tire but lower than the superior enclosed ones displayed at the Toronto Motorcycle Exhibition at \$1,999 and up;
- The percentage of sales of used ATVs was also derived from the literature and assigned a modest retail margin of 6 percent;
- The trail construction and repair data per unit in the fleet emanates from survey of the clubs responsible for those activities;
- The annual costs of licenses are from various provincial government sources and have been applied to fleets due to the pending expected heavier enforcement, except in British Columbia where they are set at zero;
- Economy air travel was utilized for travel of key booth personnel among major centres; and,
- The ratio of accessories and clothing sales to new sales from the literature were used to estimate those expenditures.

While it might have been useful to delve into some of these costs somewhat more deeply, the base data are reasonable and could be pulled together within the project's budget.

¹ This percentage is lower than for those purchasing trailers, since some of those who buy trailers will be driving vans for other purposes.

Exhibitions and Fairs

The information on Exhibitions falls into two categories Motorcycle shows run by MMIC and CATV and the Sportsmen's shows where motorcycle and ATV are key attractions of more general exhibitions and fairs where ATVs have a presence but are more of a side show.

The websites on motorcycle and ATV shows generally contained information on locale, price of admission, attendance and the number of exhibitors. CATV was of the opinion that about 10 percent of the floor space occupied by motorized vehicles at their shows was dedicated to ATV's. This opinion was confirmed through attendance and pacing-off of key booths at the December 2006 Toronto exhibition. Since motorized vehicles are the obvious attraction at these events, 10 percent of the gate and travel costs of clients and prospective clients attending motorcycle shows as well as the show costs were attributed to ATV activities. The percentages traveling by car and partaking of meals were highest in BC since the venue is located out at Abbotsford, outside the major population centre of Vancouver. The Toronto and Montreal shows are more easily accessible from mass transit involving corresponding less automobile traffic. Out of town traffic was set at 20 percent for the Toronto show and 80 percent for Abbotsford. Cars used per hundred visitors ranged from 40 in Toronto and Montreal to 67 in Abbotsford, Calgary and Edmonton and feed into estimates of parking and gas consumption.

Based on CATV expertise, show specialists of 15 per booth were deemed to be on travel status during the events and attended for a couple of days of set-up, during the event and a day for pack-up. The room costs were set at the average of the rates quoted a pre-selected designated even hotels or failing that Treasury Board Guidelines. Meal miscellaneous expenditures are in accordance with Treasury Board Guidelines. Out of town attendees are assumed to be on a one day meal allowances and in-town ones to consume one meal.

The second group of 520 exhibitions and fairs range in size and duration of the Canadian National Exhibition to one-day rural efforts. All appear on the Canadian Fairs website with the number of days over which each exhibition and fair is held. Most also post the costs of attending. The data on attendance *per se* is however less prevalent. Yet since there is a clear relationship between duration of a fair or exhibition and attendance, it is possible to estimate attendance at these exhibitions and fairs and therefore approximate gate revenues from the relatively small sample of fairs that list attendance on their web sites. Generally attendance rises with the number of days the event is held, also reflective of the size of the event with the Canadian National Exhibition and the Pacific National Exhibition being the largest. The 1814 days over which fairs and exhibitions are held in Canada annually are deemed to produce gate receipts of \$2.2 billion, of which 0.1 percent were attributed to ATV attractions. Generally attendees were deemed to consume one meal at a fair. The exhibitors utilized a full day's meal allowances. These expenditures in the total scheme of ATV marketing are not large.

Statistics Canada

Four major segments of data for the analysis come from Statistics Canada. The I/O Tables are from 2003, the latest years for which they are available. The tables link 719 commodities and services to 289 industries and organizations producing them by province and territory, among those jurisdictions and internationally. The complexity contained in these tables makes complaints about their timeliness facile. The project is grateful due the Ronald Rioux and his staff for their dedication, diligence, and co-operation. These tables facilitate identifying the indirect and induced impacts. In keeping with the principles of calculus, impacts from proportionately small changes to Canadian economy of over a trillion dollars, the impacts are assumed to be linear.

Also germane to estimates of the induced impacts are matrixes delineating how provincial and territorial residents spend incremental funds earned both directly and indirectly by them. The initial run of the I/O Tables identified incomes earned directly and indirectly earned by jurisdiction by three forms – personal income before income taxes, operating surpluses before corporate taxes and governments from indirect taxes. The induced impacts are based on the expenditures of these funds after payment of direct taxes by persons and corporations.

Statistics Canada has produced a matrix for 2005² delineating personal expenditures by jurisdiction, including the payment of direct taxes. This table was further supplement for those items involving household investment by a further Statistics Canada matrix breaking them out into repairs and maintenance, replacement of equipment, renovations and alterations and new installations³. These matrixes were used by jurisdiction to delineate initial expenditures from the incremental personal income generated directly and indirectly from ATV activities. In addition, Statistics Canada also produced preliminary tables by province and territory on investment in 2005⁴. These were used as proxies for the allocation of operating surpluses. The result may be a little biased in favour of construction and machinery and equipment rather than investments in upgrading skills since the last of (?) are not included in the Statistics Canada investment data.

Government revenues by jurisdiction flowed through to expenditures via the government revenue and expenditure tables consolidated for each province and territory.⁵ These tables are sufficiently detailed to allow those jurisdictions where debt is being paid down to allocate a similar share of the incremental revenues to that endeavor and for other borrowers to further incur debt. Totals resulted in the modest repayment of debt, thereby mollifying impacts.

² [Source: Statistics Canada, CANSIM, table 203-0001.](#)

³ [Source: Income Statistics Division, Homeowner Repair and Renovation Expenditure 2002, Catalogue no. 62-201-XIB.](#)

⁴ Statistics Canada, Investment Outlook.

⁵ [Source: Statistics Canada, CANSIM, table \(for fee\) 385-0001.](#)

The Questionnaire

The purpose of the questionnaire was to fill data holes quickly and efficiently. It asked the following questions of clubs concerning their operations and their members' activities:

1. What were your revenues from the 2005 sale of ATV permits? \$|_|_|, |_|_|_|, |_|_|_|_|
2. What total outlays did you make in 2005 on:
 - a. New Trail Construction \$|_|_|, |_|_|_|, |_|_|_|_|
 - b. Trail Upkeep \$|_|_|, |_|_|_|, |_|_|_|_|
 - c. Insurance \$|_|_|, |_|_|_|, |_|_|_|_|
 - d. General Administration \$|_|_|, |_|_|_|, |_|_|_|_|
 - e. Marketing \$|_|_|, |_|_|_|, |_|_|_|_|
 - f. Other \$|_|_|, |_|_|_|, |_|_|_|_|

(Please specify) _____
3. What percentage of your membership fees came from ATV participants? |_|_|_|%
4. How many kilometres of trails does your organization have? |_|_|_|, |_|_|_|_| km.
5. What percentage of your trails is used for ATV activities? |_|_|_|%
6. Approximately how many ATVs used your trails in 2005? |_|_|_|_|, |_|_|_|_| people.
7. Approximately what percentage ATV users paid local accommodation for:
 - a. One night |_|_|_|%
 - b. Two nights |_|_|_|%
 - c. Three nights |_|_|_|%
 - d. Four nights |_|_|_|%
 - e. 5-10 nights |_|_|_|%
8. What percentage of ATV users resided within 40 km. of their trail's entrance? |_|_|_|%

Through the over arching provincial organizations and various web sites SGAL determined that there are about 440 clubs of which 289 are in Quebec, 60-61 in New Brunswick, 60 in Alberta, 31-32 in each of Ontario, British Columbia and Nova Scotia. In contrast Manitoba ATV participants generally do not have clubs but communicate over and notify each other of events over an active website with over 3,000 users. Saskatchewan participants similarly participate in a major province-wide websites. The organizational structure is also different in Newfoundland and Labrador where it is centered on tour operators, largely utilizing the infrastructure related to the old railroad. Given public access to most trails, that website and its participants fulfill many of the socializing functions province-wide carried out locally by clubs elsewhere.

Of the clubs, attempts were made to contact 106 of which 90 were contacted with 22 responding in time to be included in the analysis. The clubs included in the sample covered a range of sizes from about 60 members to several hundred including major operations such as the **Crows Nest Pass Quad Squad**. Late returns were added to the original sample to see if the results would substantially change. It would appear that national results related to accommodation might be upward biasing that aspect of ATV activities in Nova Scotia. {More to come here}

Appendix 4: Provincial and National Tables

British Columbia

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	220,871	94,554	62,355	1,870
Direct and indirect	361,701	162,073	109,669	3,054
Total with gov't. spending of incremental revenues	1,173,045	607,099	424,909	10,626
Total without gov't spending of incremental revenues	885,770	449,777	313,729	7,929
Multiplier with spending of incremental gov't. revenues	5.3	6.4	6.8	5.7
Multiplier without spending of incremental gov't. revenues	4.0	4.8	5.0	4.2

Alberta

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	408,440	162,986	111,416	3,429
Direct and indirect	719,227	316,631	188,180	5,153
Total with gov't. spending of incremental revenues	1,968,100	959,256	608,061	14,124
Total without gov't spending of incremental revenues	1,614,336	777,622	489,770	11,562
Multiplier with spending of incremental gov't. revenues	4.8	5.9	5.5	4.1
Multiplier without spending of incremental gov't. revenues	4.0	4.8	4.4	3.4

Saskatchewan

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	123,016	47,940	34,569	1,293
Direct and indirect	196,669	79,826	49,893	1,738
Total with gov't. spending of incremental revenues	427,353	197,809	128,405	3,836
Total without gov't spending of incremental revenues	377,552	172,418	111,588	3,378
Multiplier with spending of incremental gov't. revenues	3.5	4.1	3.7	3.0
Multiplier without spending of incremental gov't. revenues	3.1	3.6	3.2	2.6

Manitoba

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	62,082	20,306	17,092	556
Direct and indirect	103,965	37,776	29,730	912
Total with gov't. spending of incremental revenues	351,659	169,269	121,759	3,408
Total without gov't spending of incremental revenues	255,625	118,358	86,199	2,435
Multiplier with spending of incremental gov't. revenues	5.7	8.3	7.1	6.1
Multiplier without spending of incremental gov't. revenues	4.1	5.8	5.0	4.4

Ontario

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	819,266	340,935	190,005	6,317
Direct and indirect	1,495,432	620,349	393,770	10,958
Total with gov't. spending of incremental revenues	5,881,792	2,977,135	2,048,958	46,045
Total without gov't spending of incremental revenues	3,982,517	1,957,820	1,334,287	30,787
Multiplier with spending of incremental gov't. revenues	7.2	8.7	10.8	7.3
Multiplier without spending of incremental gov't. revenues	4.9	5.7	7.0	4.9

Quebec

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	881,447	388,491	211,391	6,986
Direct and indirect	1,346,127	582,689	361,655	10,912
Total with gov't. spending of incremental revenues	3,912,607	2,000,558	1,341,197	33,621
Total without gov't spending of incremental revenues	3,087,272	1,545,434	1,027,623	26,268
Multiplier with spending of incremental gov't. revenues	4.4	5.1	6.3	4.8
Multiplier without spending of incremental gov't. revenues	3.5	4.0	4.9	3.8

New Brunswick

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	79,419	34,592	19,071	911
Direct and indirect	117,264	50,242	31,750	1,285
Total with gov't. spending of incremental revenues	303,296	148,156	102,073	3,151
Total without gov't spending of incremental revenues	259,872	125,367	85,774	2,711
Multiplier with spending of incremental gov't. revenues	3.8	4.3	5.4	3.5
Multiplier without spending of incremental gov't. revenues	3.3	3.6	4.5	3.0

Nova Scotia

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	75,328	41,149	26,385	1,202
Direct and indirect	101,640	52,116	36,342	1,527
Total with gov't. spending of incremental revenues	374,201	201,193	148,651	4,426
Total without gov't spending of incremental revenues	297,525	159,349	117,230	3,604
Multiplier with spending of incremental gov't. revenues	5.0	4.9	5.6	3.7
Multiplier without spending of incremental gov't. revenues	3.9	3.9	4.4	3.0

Prince Edward Island

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	8,358	3,368	2,507	82
Direct and indirect	29,077	12,004	8,482	253
Total with gov't. spending of incremental revenues	60,557	28,290	20,629	612
Total without gov't spending of incremental revenues	55,066	25,461	18,532	549
Multiplier with spending of incremental gov't. revenues	7.2	8.4	8.2	7.4
Multiplier without spending of incremental gov't. revenues	6.6	7.6	7.4	6.7

Statistics Canada warns that small market results are open to error where interprovincial-trading ties may not be getting picked up.

Newfoundland and Labrador

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	118,458	54,054	31,024	1,360
Direct and indirect	179,247	89,429	45,340	1,778
Total with gov't. spending of incremental revenues	369,546	185,576	111,308	3,437
Total without gov't spending of incremental revenues	342,073	171,767	101,906	3,193
Multiplier with spending of incremental gov't. revenues	3.1	3.4	3.6	2.5
Multiplier without spending of incremental gov't. revenues	2.9	3.2	3.3	2.3

Canada

Indicator	Gross Output (\$1,000s)	GDP (\$1,000s)	Labour Income (\$1,000s)	Employment
Direct	2,800,000	1,190,000	706,922	24,040
Direct and indirect	4,659,850	2,008,800	1,256,874	37,619
Total with gov't. spending of incremental revenues	14,848,578	7,488,481	5,063,746	123,429
Total without gov't spending of incremental revenues	11,181,078	5,516,034	3,693,437	92,541
Multiplier with spending of incremental gov't. revenues	5.3	6.3	7.2	5.1
Multiplier without spending of incremental gov't. revenues	4.0	4.6	5.2	3.8