Recreational Motorcycling in Canada And its Provinces - 2014-2040

Prepared for

The Motorcyclists Confederation of Canada

By

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"*This year we gave $528 to each of the six hospitals in Almonte, Arnprior, Renfrew, Pembroke, Shawville and Wakefield. And to the eight Food banks in Lanark, Arnprior, Renfrew, Pembroke, Eganville, Bouffe Pontiac, The Blessed Cupboard (Shawville Pentecostal Church) and the Wakefield United Church*.[1]"

[1] Northern Old Bastards Vintage Motorcycle Club (Excerpted from *Valley Vendor*, May 2015, p. 46)

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Executive Overview

Introduction

Within provinces and right across Canada, motorcyclists – veterans, EMS workers and their erstwhile contemporaries, competitors, and everyday riders – have formed over 420 motorcycle clubs. They do so for camaraderie, safety, building trails, organizing events, charitable fundraising, and lobbying governments. Club activities encompass all these functions as well as regular rides, sharing stories, advice, training, and competing.

This document gives the Motorcycling Confederation of Canada (MCC) and its member clubs statistical information by which they can discuss current and projected impacts of Canadian and provincial recreational motorcycling (2014-2040). The overview summarizes findings based on a survey of motorcyclists,[2] club executive interviews, and official sources.

In 2014, direct recreational motorcycling expenditures were $1.89 billion of which $1.34 billion was spent directly on domestically produced goods and services like helmets, safety gear and motorcycles. Recreational motorcycling generated Canadian output of at least $2.68 billion dollars in 2014, twice the amount spent domestically.

Allowing for 2.5% annual growth to 2040 and using Regional Economic Model Inc.'s (REMI's) model, impacts will be close to or periodically exceed $4.0 billion[3] annually from 2020 to 2040.

Of particular notice, there were at least 17,500 Canadians employed in jobs dependent on motorcycling in 2014. As a comparison, this roughly equals 2.5% of all Canadians employed in information, culture and recreation, or 12% of utility employees.

Projecting into the future using the REMI model, recreational motorcycling dependent jobs peak at 23,100 in 2016 and remain roughly in the 20,000[4] range from 2020 to 2040 due to expanding demands from a growing but cyclical economy accompanied by labour saving productivity gains within the supply chain.

These jobs generate personal income, before deducting personal income taxes, starting at $1.1 billion in 2014 rising to $3.9 billion by 2040 in current dollars. Personal income per job rises with the productivity gains and, because it is denominated in current annual dollars, from underlying inflation.

[2] Smith Gunther's Survey covered 1,400 motorcyclists with details discussed throughout the report.
[3] That is within $267 million of the $4.0 billion.
[4] Within 1,023 jobs of the 20,000.

With the question, “What?” covered above, the rest of this overview is organized under ‘who, where, why, when and how’. Following the five ‘Ws’, is a list of ways and means of improving the motorcycling experience suggested by 1,400 survey participants and club executives.

Who Motorcycles

In 2014, there were 708,700 Canadian licensed motorcyclists riding 717,500 licensed and in-use motorcycles. Motorcyclists are concentrated among youth and empty-nesters.

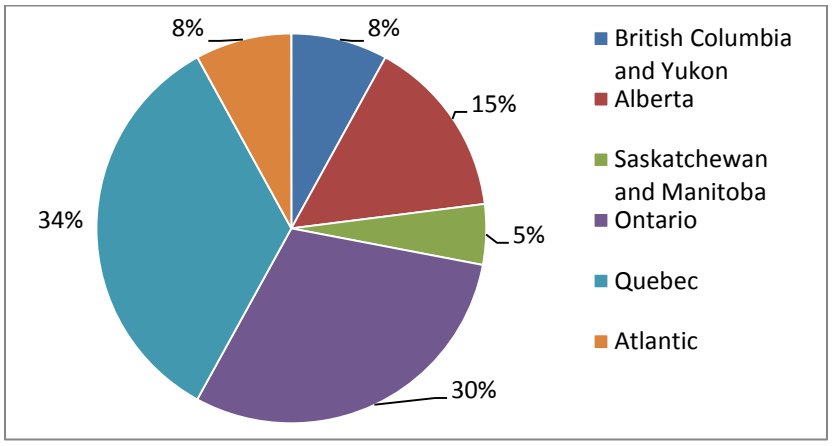
Motorcycling families are relatively affluent when compared with Canadian average family earnings. In 2014, 77% of motorcycling families had household incomes above the midpoint of Canadian household incomes of $61,072[5] determined by the 2011 Census. In 2014, 57.7% of motorcyclists’ household incomes exceeded $95,000.

All club executives interviewed commented that female participation in motorcycling has been increasing relative to males. This is happening, they say, because female incomes improve and as children leave home, women buy their own motorcycles rather than ride pillion or in side-cars. Of the respondents to the survey, 8.7% were females with only 11% of between the ages of 30 and 50. The remaining 89% outside the child-rearing age reinforces concentration of riders either prior to family formation or after becoming empty-nesters

Where?

Motorcyclists are concentrated in the most populated provinces a noted in Chart EO-1, i.e. Quebec and Ontario. Alberta has a higher distribution relative to the other provinces due to that province’s age composition and the lack of its lack for a sales tax.

Chart EO-1: Geographical Distribution of Motorcyclists 2014



Note: Regions are ordered starting at the top-of-the-clock for BC and moving clockwise

[5] Source: Statistics Canada, 2011 National Household Survey (NHS). http://www5.statcan.gc.ca/cansim/a26 .

Motorcycling events attract motorcyclists from around the world. Held on each Friday the 13th, "D13" in Port Dover rivals competing cities worldwide to host the largest gathering of motorcyclists. Other host club executives mentioned attendees at their events from the United States and Mexico and, as far away as, Dubai.

Just as Canada attracts out-of-country participants, Canadians travel to the United States and a few to Europe, Africa and South America. Of the 1,392 respondents to a question on favourite events, 170 responded with events outside of Canada of which all but seven were in the United States. Of those venues 77 were located in boarder states and the majority further south. Note: Canadian event organizers have to fight for market share on an international basis, not just to attract foreigners but to retain their own.

Despite the glamour of international activities, most events are run locally and attended by those residing nearby. 87.7% of survey respondents indicated that their favourite event was Canadian while those with international preferences generally attended local events as well.

Why

Like most people in the broader society, motorcyclists have their own reasons for belonging to a particular group, association or club. Christian Motorcyclists, for instance, spread the word of God; women riders often ride with other women, Retreads are mostly oldies, veterans ride with other soldiers and the White Knights ride to save lives. Even amongst the chapters of a nationwide group, there are distinct personality traits.

In noting the importance of motorcycle club activities for themselves, motorcyclists also explain some of their reasons for motorcycling in conjunction with clubs. Chart EO-2 illustrates the number one reason for belonging to a motorcycling club was camaraderie, followed closely by notification of events, access to trails, and access to club events. Secondary to these are advisory functions (including advice on repairs, travel and training). Participation in charitable events was viewed as at least moderately important by a quarter of respondents.

When

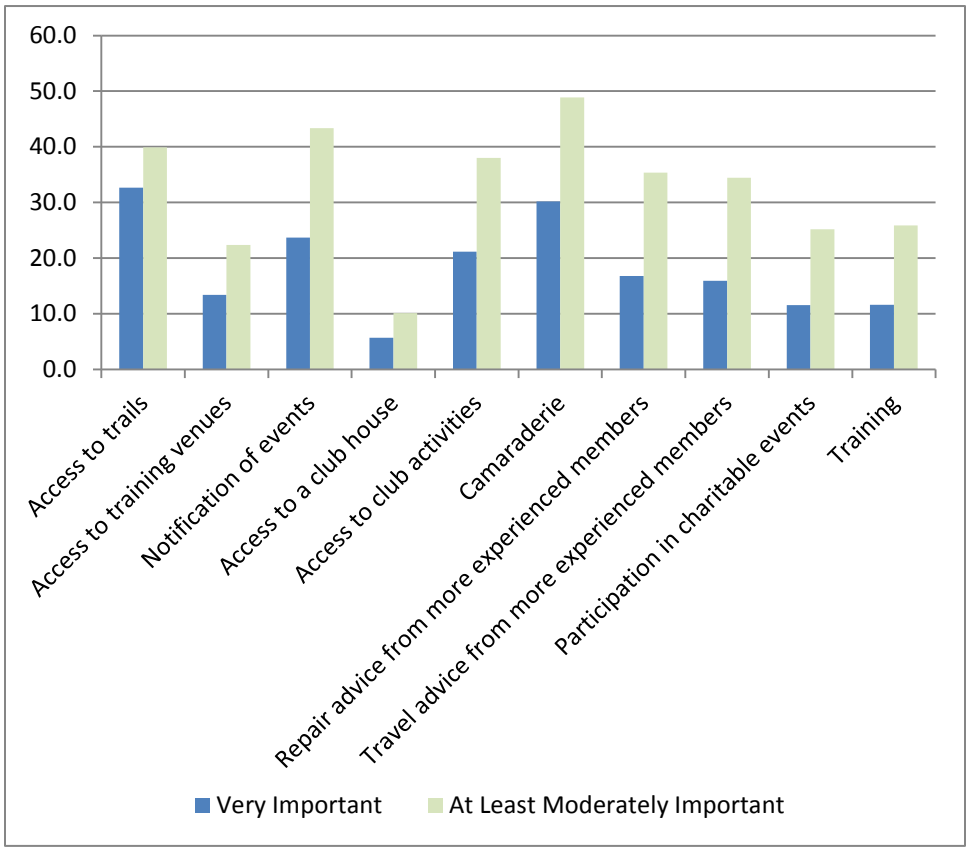
Weather dictates the Canadian motorcycling season; generally April 1 and the end of October, except in coastal areas of British Columbia's Lower Mainland of and the West Coast Islands[6]. Some empty nesters who keep residences in the southern United States may also extend their season; that may explain why over 80 respondents had favourite events south of states adjacent to Canada's border.

Winter and early spring motorcycle shows provide opportunities for suppliers to showcase their wares and consumers to whet appetites for the coming season. Other off-season activities

[6] Remember that palm tree still flourish on the southern tip of Vancouver Island! Similarly residents near Windsor Ontario, which is south of a third of the continental Untired States, may also manage to extend their seasons.

include repairs and maintenance on motorcycles, but trail repairs need to wait for the frost to get out of the ground so there are seasonal cycles to particular motorcycling activities.

Chart EO-2: Importance of Club Activities to Motorcyclists (n=1,400)



How

The "How" covered here is how to use the more technical aspects of this report, particularly in promoting motorcycling and related events. The purpose is to provide those who are considering hosting events with a way to use the report to make a case before provincial and local governments and other stakeholders. Government support is often useful not only for funding but also in gaining safer access to roads and trail systems.

The input-output results indicate that for every additional dollar spent by motorcyclists, the provincial output will grow as noted in the first line of Table EO-1. Growing economies usually experience job expansions. The last line of the table indicates the number of jobs generated per direct fulltime equivalent job[7].

[7] According to Statistics Canada, a fulltime equivalent (FTE) direct job requires at least 1,500 hours per year. It may be comprised of one full-time job of at least 30 hours per week for 50 weeks or the sum of several part-time ones.

Table EO-1: Multiplier Impacts of a Dollar Spent on Motorcycling Or for Every New Full-Time Job Created 2014

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC	Canada
Output	2.26	2.01	2.06	1.80	1.82	2.08	1.90	2.09	2.12	2.31	2.00
Jobs (FTEs)	1.52	1.77	1.80	1.66	1.81	2.27	1.83	1.79	1.71	2.08	1.94

Note: Jobs are in full-time equivalents.

Of the $1.89 billion spent directly by motorcyclists, product and production taxes ensured that $332 million ended up with governments - $118 million with the Federal government and $167 million with the provinces and $47 million with municipalities[8]. Once any organization can estimate the total spend[9], (or expected spend,) for its event, it can use the product tax levels above based on the $1.89 billion to estimates likely product and production taxes from its event.

In 2014, additional personal income taxes added a further $72 million to the tax take with the split between the orders of government dependent on relative tax rates. Use of the above amounts as fractions of the $1.89 billion in direct expenditures will yield preliminary estimates of the tax revenues your event is likely to generate for each level of government.

Adding personal income taxes to product and production taxes results in over $400 million of the $1.89 billion in expenditures accruing to governments. Let them know what you as riders are contributing and this may create greater understanding when concessions are being sought.

Motorcyclists participate in one or both types of motorcycling – on-road and off-road[10]. In 2014 off-road motorcyclists spent $1.21 billion while generating 7,923 jobs based using Statistic Canada's I/O approach. Using REMI, Canadian job impacts from off-road motorcycling peak at 10,761 in 2016 but range annually around 9,460[11] from 2020-2040.

Canadian annual personal income impacts from off-road motorcycling start at $506 million in 2014 and rise to $1,819 million in 2040 generating personal disposable income of $399 million in 2014 rising to $1,443 million in 2040 yielding personal income taxes accruing to federal and provincial governments of $107 million in 2014 rising to $376 million in 2040.

[8] Product taxes were derived in aggregate from the I/O analysis so individual tax sources are not available but it is safe to say the product taxes would have been dominated by federal and provincial sales taxes and production taxes revenues by gasoline taxes

[9] "Total spend," includes gate receipts, and all spending by participants and other attendees on travel, accommodations, food and beverages, mementos, and incremental repair and conditioning expenses. It also includes all site preparation covered from other than gate receipts, e.g. from government grants or by volunteers out of their own pockets, such as non-reimbursed trail workers commuting over several weekends.

[10] Chapter II of this report encompasses both types of motorcycling and Chapter III off-road motorcycling.

[11] Within the range of 580 jobs from the 9,640 jobs.

This report first discusses the total impacts of recreational motorcycling before moving to off-road motorcycling. On-road motorcycling impacts are the total impacts less the off-road impacts for each of the above metrics.

Lessons Learned

Lessons learned from this process include:

- Over $400 million in annual revenues accruing to governments from recreational motorcycling.
- Currently White Knights are legally constrained in the treatment they can give to 'Good Samaritan levels. Expanding the treatment permitted to be given by White Knights to their medical training and capabilities could improve immediate medical care.
- The links between types of motorcycles owned by riders and used on trails is becoming more tenuous so that if future it would be useful to have separate questions on the percentage of time and kilometres travelled by dual motorcycle and other classes of motorcycles riders spend on and off tails.
- The Fédération Québécoise des Motos Hors Route (FQMHR) approach to both revenue sharing from the sale of license plates and partial payment of motorcyclists' insurance warrants further study and thought.
- The legal terminology and approaches to licensing among the provinces are so different as to need separate provincial questions concerning their acceptability to fully do justice to each licensing process. A more detailed study than this one covering accidents and fatalities by age group and licensing stage needs to be undertaken to understand the efficacy of each licensing system and to optimize among them.

Highlights

Recreational motorcycling covers recreational activities in conjunction with motorized two-wheeled vehicles undertaken by Canadians. This report covers motorcycling *per se* as well as attendance at motorcycle shows, and motorcycling club activities such as site specifications, preparations and the hosting of events as well as charitable fundraising and donations by motorcycling clubs.

There are 708,700 participants in recreational motorcycling distributed across the country. The vast majority of motorcyclists cruise casually on road, off-road, or both, albeit a small percentage of participants are involved competitively both in Canada and abroad.

National and provincial highlights from the analysis include:

- 708,700 Canadian motorcyclists ride 717,500 licensed and in-use motorcycles.

- 77% of motorcycling families have household incomes above the midpoint of Canadian household incomes. The midpoint of motorcyclists' household income is $95,000 to $124,000 range compared to the 2011 Canadian average of $61,072[12].
- In 2014 direct recreational motorcycling expenditures were $1.89 billion of which $1.34 billion was spent on domestically produced goods and services.
- Including direct, indirect and induced impacts, total 2014 recreational motorcycling outputs reached $2.68 billion in constant 2014 dollars. Using more up-to-date data and the fully articulated Regional Economic Model Inc.'s (REMI) model in 2011 dollars annual output impacts 2014-2040 reached $3.98±$0.265 billion.
- Aside from Quebec and New Brunswick, Input Output (I/O) provincial output multipliers all exceeded the national multiplier of 2, indicating that total output impacts more than doubled what motorcyclists spent in each of the provinces.
- I/O provincial multipliers differed due to alternative motorcycling activities and industrial concentrations of suppliers as documented in the report.
- I/O employment impacts were 15,400 measured in full-time equivalents (FTEs) comprised of 17,500 jobs dependent on motorcycling when hours worked per week are ignored. This level of employment is roughly equivalent to 2.5% of those employed in information, culture and recreation, and 12% of utilities employees. Attaining the higher output levels estimated in the more complete REMI model generates even more jobs peaking at 23,100 in 2016 and in the 20,000±1,023 range annually from 2020 to 2038.
- The I/O estimates yield direct labour income of $420.0 million with a total impact of $826.5 million in 2014. The broader current dollar income measure used in REMI is all of personal income (PI) before deduction of personal income taxes where impacts start at $1.1 billion and rise to $3.98 billion in 2040 of which $759 million (2014) and $3.0 billion (2040) enhance citizens' personal disposable incomes (PDI).
- Discounted at 5%, the stream of personal income tax generated in Canada over the period 2014-2040 has a net present value (NPV) of $6.5 billion.
- Discounted at 5%, the stream of personal income tax generated in Ontario over the period 2014-2040 has a net present value (NPV) of $1.9 billion.
- Parallel NPV from personal income tax impacts in the rest of the country is $4.6 billion.
- If relative provincial growth rates among provinces other than Ontario continue in the same proportion as they have during this century, there will be a massive shift in the impacts of recreational motorcycling to Alberta. From 2014 to 2040, Alberta's share of employment impacts will rise from 14% to 19%, GDP from 17% to 22.7% and PI in current dollars from 17% to 32%.
- Annual charitable donations in 2014 were $13.2 million in time, effort, and money.

[12] Source: Statistics Canada, 2011 National Household Survey (NHS). http://www5.statcan.gc.ca/cansim/a26 .

- There was a consensus among club executives that female participation has been increasing. 8.7% of the respondents to our motorcycle survey were females with 11% of those respondents between the ages of 30 and 50.
- Chapter III delineates off-road motorcycling impacts reaching $1.21 billion in total expenditures generating 6,801 FTEs or 7,923 jobs based on the I/O approach. Based on REMI, Canadian job impacts peak at 10,761 in 2016 but range annually between 9,460±560 from 2020-2040.
- Canadian annual personal income (PI) impacts from off-road motorcycling start at $506 million and rise to $1,819 million generating PDI of $399 million in 2014 rising to $1,443 million yielding personal income taxes of $107 million in 2014 rising to $376 million in 2040.
- Ontario off-road PI impacts start modestly at $158 million in 2014 before rising to $515 million in 2040 accompanied by PDI increase of $125 million to $410 million yielding annual personal tax revenues of $33 million in 2014 extending to $105 million in 2040.
- At a 5% discount rate, the net personal value (NPV) of the increased personal income taxes from off-road motorcycling is $3.1 billion of which $886 million occurs in Ontario
- In addition to hiking personal income tax revenues, recreational motorcycling annually generates annual product and production taxes of $117.6 million federally and $166.6 million among all the provinces.
- The parallel assumptions in the I/O analysis and the initial REMI approaches are that recreational motorcycling expenditures come from savings, funds that would have been spent externally to Canada or from additional earnings. Modifying that assumption by taking 76% of the funds that would otherwise have been spent in Canada weakens the estimated impacts as documented in the report.

Provincial impacts from are delineated throughout the report where the alternative toe expenditures on recreational motorcycling expenditures would either not be spent in Canada or saved. Cases where 76% of expenditures on recreational motorcycling substitute for other expenditures are covered in Appendix 2.

Any regional bias in favour of Ontario in the report stems from the modelling limitations where the dynamic REMI model is built for Canada and Ontario with the differences between the two jurisdictions being the rest of Canada. Within the rest of Canada Smith Gunther Associates Ltd has derived provincial and regional impacts by combining the REMI and Statistics Canada I/O results. Those outcomes are solely the responsibility of Smith Gunther Associates Ltd. and do not imply sanctions by either of the other organizations.

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Introduction and Objective

The objective of this methodology is to extrapolate estimates to cover motorcycling activities from the excellent response levels to a 2015 survey of recreational motorcyclists on their activities and expenditures in 2014.

Various statistical procedures, such as Input/Output analyses and dynamic economic modelling, have allowed Smith Gunther to estimate impacts of recreational motorcycling by province and Canada[13], hereafter, "jurisdictions". The process is complex because databases among jurisdictions differ due to variations in licensing procedures and registration requirements among provinces, particularly with regard to off-road motorcycles and to differing emphasis on activities undertaken among jurisdictions. To strengthen the results, Smith Gunther has utilized alternative lines of evidence to determine totals by jurisdiction. The aggregates involve not just the number of motorcyclists and motorcycles but also kilometres of trails and participation in motorcycle activities, from purchasing motorcycles to trail riding and competitions.

Approaches

The 1,400 responses to the survey of motorcyclists provided details on individual activities and expenses. That number of responses facilitated making estimates of regional activities based on multiples of less than a thousand of the initial estimate. From survey data these are low multiples compared with the four and five digit ones deployed frequently by Statistics Canada so by national standards the data are of reasonable quality. Because individual surveys were available on-line and because respondents tended to reply while at various motorcycle shows across the country, survey participants may be more enthusiastic than the average motorcyclist.

In jurisdictions where all motorcycles are required to be licensed, this possible bias was tested by estimating the number of motorcycles expected from both the survey approach and those currently licensed adjusted for the percentage of old retired license plates not currently in use as determined from the survey of motorcyclists. If there was any overly zealous bias, it was not detected.

Another line of evidence on total activities comes from interviews with provincial level executives of motorcycle associations, and a few clubs. While the response level among provincial and territorial level associations was good, Smith Gunther did not attain a sufficient sample among individual clubs for extrapolation due to the large numbers of clubs of vastly

[13] Due to their sizes, there was insufficient data to make separate estimates for the territories, so Yukon is included with British Columbia, the Northwest Territories with Saskatchewan, and Nunavut with Quebec.

different sizes, diverse activities, time limitations and budget constraints. Yet, the process provided insights into some of the *joie de vie* of recreational motorcycling, shared in Chapter 1.

Once the total level of activities was determined by jurisdiction, Smith Gunther extrapolated the level of direct expenditures by industry from the survey of motorcyclists for each jurisdiction. Consumables included motorcycle assembly, helmets, other apparel, accommodations, food and beverage, gasoline, repair and maintenance, replacement parts, attendance at motorcycle shows, through to retail and wholesale, etc. as discussed in that section of the report.

Indirect and Induced Impacts

The direct annual expenditures provide only a snapshot of current activities. They do not capture any of the indirect and induced expenditures generated by recreational motorcyclists. "Indirect impacts" are the economic impacts moving back up the supply chain to produce all inputs for motorcycling purchased from retailers and wholesalers to manufacturers, back to raw material producers. "Induced impacts" emanate through expenditures from incomes earned by those employed in motorcyclists' supply chains as well as those who receive income from meeting other induced demands. These impacts all augment economic activity measured by key economic indicators - employment, incomes, government revenues, and additional revenues generated for governments. Total impacts in any jurisdiction are the sum of the direct, indirect and induced impacts on each of the key indicators.

Multipliers for each of these measures are derived by dividing total impacts by the direct ones. When attributed to a single year, Input Output (I/O) analyses multipliers are inherently upward biased because several iterations of induced expenditures are likely to occur over more than the single year in which the direct activity takes place. More sophisticated analyses add econometrics to Smith Gunther's modelling capabilities to take such dynamics into account through lagged variables. Those models generally more fully articulate economic activity than do Statistics Canada processes with the impact of reaching higher estimated on induced impacts. The multipliers are useful because they ought to be reasonably applicable to documenting total impacts of future planning of similar events based on expected direct impacts.

Smith Gunther's approach to analyzing the indirect and induced impacts has been two-fold. The first was to utilize Statistics Canada's latest reversions of its regional I/O tables for Canada. Due to lags in firming up national account estimates, Statistics Canada released its latest version in March of 2015 based on 2011 data. Disappointingly it is still using more dated tables to run its simulations albeit Regional Economic Models Inc. (REMI) has already embedded the latest Statistic Canada I/O tables in its simulation model of Ontario and the rest of Canada. Smith Gunther uses both approaches in analyzing recreational motorcycling. The latter is superior because it is more up-to-date, dynamic and more complete

The derived tables facilitate analysis of motorcycle expenditures by jurisdiction so that interprovincial trade flows come into play in determining the jurisdiction of the direct, indirect

and induced impacts and therefore total impacts by jurisdiction. Understandably larger jurisdictions with more diverse economies are the main recipients of indirect and induced benefits so that multipliers tend to be higher in larger jurisdictions than elsewhere in the Canadian economy. Imports anywhere in the supply chain will weaken multipliers as will taxes because taxes curtail subsequent private sector consumption. Aside from Quebec's share of motorcycling licensing revenues allocated to the Fédération Québécoise des Motos Hors Route (FQMHR), government expenditures from incremental tax revenues are treated as arising from separable decisions by governments and are excluded from recreational motorcycling impacts.

The I/O analysis is static in that it covers 2014 impacts, without any ability to consider the dynamic evolution of recreational motorcycling in a non-static economy. Yet the Canadian economy is dynamic. Canadian compound annual growth rates (CAGR) on key economic indicators for this century appear in **Table 1**.

Table 1: Canadian and Provincial Compound Annual Growth Rates: Employment, Real Gross Domestic Product and Population 2001-2013

	Employment	RGPP	Population
Newfoundland and Labrador	1.60	2.09	0.09
Prince Edward Island	0.99	1.98	0.51
Nova Scotia	0.73	1.20	0.09
New Brunswick	0.46	1.05	0.07
Quebec	1.05	1.55	0.82
Ontario	1.15	1.41	1.06
Manitoba	1.36	2.45	0.74
Saskatchewan	2.17	2.53	0.80
Alberta	2.81	3.06	2.25
British Columbia	1.84	2.50	1.04
Yukon	2.62	4.42	1.62
Northwest Territories	1.63	-0.75	0.48
Nunavut	1.51	4.09	1.96

Notes: CAGR is a logarithmic estimate of average annual growth 2001-2013 based on annual data from Statistics Canada sources: Statistics Canada. Table 281-0024 - Employment Unadjusted for seasonal variation. North American Industrial Classification System (NAICS), CANSIM (database) (Accessed: 2015-03-03), Statistics Canada. Table 384-0037 - Gross domestic product, income-based, provincial and territorial, annual (dollars), CANSIM (database) (Accessed: 2015-03-03), Statistics Canada. Table 384-0039 - Implicit price indexes, gross domestic product, provincial and territorial, annual (2007=100 unless otherwise noted), CANSIM (database) (Accessed: 2015-03-03), and, Statistics Canada. Table 384-5000 - Data on long-run provincial and territorial economic performance, annual (dollars unless otherwise noted), CANSIM (database) (Accessed: 2015-03-03). Population is based on long-run estimates of economic variables for the provinces and territories. The data were originally compiled for: M. Brown and R. Macdonald, 2015, Provincial Convergence and Divergence in Canada, 1926 to 2011, Statistics Canada Catalogue no. 11F0027M, Ottawa, Ontario, Economic Analysis Research Paper Series, no. 096.

Relatively high growth rates in the three Western provinces and Yukon indicate a shift in economic activity to these resource rich provinces and territory. Due to offshore developments on the East Coast, and mining in Labrador, Newfoundland and Labrador (hereafter "Newfoundland") mirrors western resource-based growth rates in employment and real GDP (RGDP), the constant dollar measure of national output, but eschews high population growth rates to somewhat mitigate relatively high historic unemployment rates.

At the onset of the century, Quebec had 37,700 more people than did Alberta and British Columbia combined. By 2006, the population of the two western-most provinces nudged ahead of Quebec's and by 2013 their population exceeded Quebec's by 40,000. During that time, the RGDP of the combined two western provinces has risen from 33% above Quebec's in 2001 to 56.4% in 2013.

While Ontario remains the largest province, it, too, has slower growth than Alberta by all three criteria and relative to British Columbia in all but population where the two are very similar. Whereas the combined RGDP of Alberta and British Columbia was only 69.9% of Ontario's in 2001, by 2013, it had reached 81.9%. In allocating future recreational motorcycling and its emerging markets, it is important to account for these underlying dynamic trends.

The REMI model is designed to model the nation and, at this time, one other province. Because it is the biggest, Ontario is modelled within REMI. Given both Canadian and Ontario results, those for the rest of the country involve subtracting Ontario results from the Canadian ones. Smith Gunther has allocated these results among the remaining provinces according to projected market shares based on 21st Century growth trends discussed above. Total impacts out to 2040 are, however, capped annually to the REMI estimates in order to force consistency.

The static shortcomings of the I/O tables are partially overcome by taking the above longer term growth trends into account. For that reason, Smith Gunther undertook a second approach to modeling the impacts on each Canadian jurisdiction by utilizing the REMI dynamic equilibrium model. This model builds on the extensive experience gained by REMI in establishing national and inter-jurisdictional models. While REMI incorporates Statistic Canada's new interregional I/O tables into its modelling environment, it embellishes that model with dynamic equations concerning lagged drivers of the economy and those on interprovincial trade that also give more precise and comprehensive accounts of the indirect and induced impacts over time, i.e. REMI modelling avoids assuming that all induced impacts occur in the year of the initial transaction and improves results.

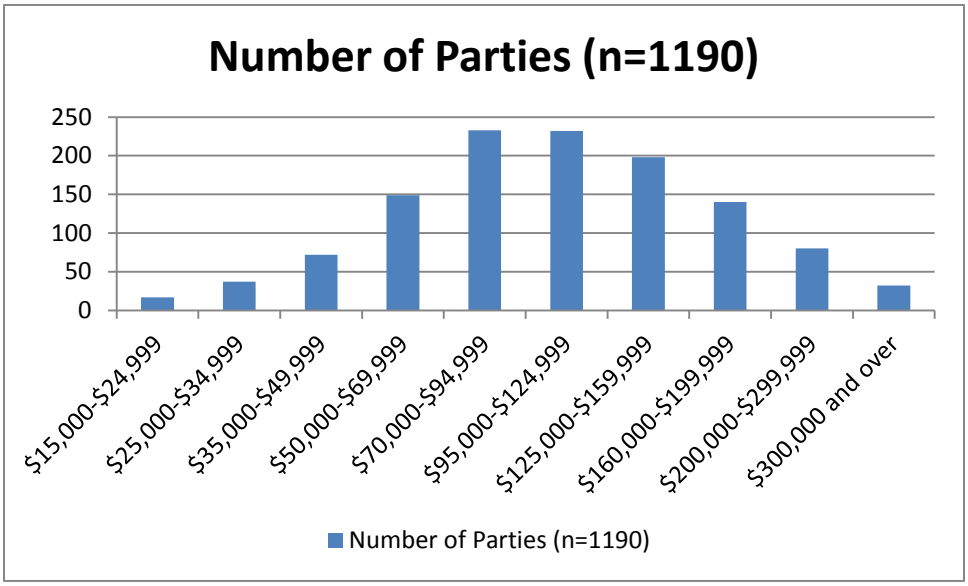
Who Motorcycles?

There are 708,700 recreational motorcyclists in Canada distributed across the country with higher concentrations than for population in Alberta, other Prairie Provinces and Quebec offset

by lower participating population shares in British Columbia and Ontario[14]. Males account for 85-89 percent of the motorcycling population; club executives, however, point out that the number of females riding is increasing as female incomes improve and the number of empty nesters rises with Canada's aging population.

Canadian motorcycling families are relatively well-off compared to average Canadian household incomes. Smith Gunther survey results put median family incomes of motorcyclists in the $95,000 to $124,000 range as shown in **Chart 1**.

Chart 1: Income of Motorcycling Families Surveyed Before Income Tax $ (n=1,190)



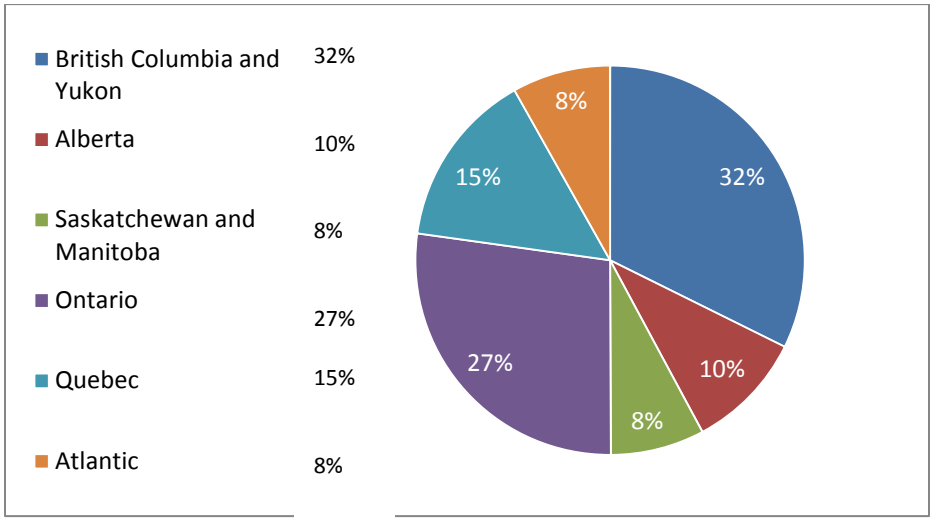
Data on motorcycling households' incomes are based on 1,190 responses to the income question from the survey of 1,400 Canadian motorcycling parties[15] who answered most of the rest of the questions. Because the parties responded as immediate families – spouses, sons and/or daughters living at home – it is legitimate to compare the parties' incomes with household incomes collected in Statistics Canada's Household Survey. Relative to the median household income in Canada in 2011 of $61,072[16], 77% of motorcycling families' incomes exceeds Canadian median household incomes.

[14] Source: Statistics Canada, 2011 National Household Survey (NHS) adjusted as described herein. http://www5.statcan.gc.ca/cansim/a26. Alberta has 6% more registered motorcycles than its population share and Quebec 5% more while Ontario has 9% less and British Columbia 2% less, reflective in part of the relatively youthful age of Alberta's population and other economic forces discussed more fully later.
[15] Typically respondents are hesitant to give income information so that there was a reasonably good level or response.
[16] Source: Statistics Canada, 2011 National Household Survey (NHS). http://www5.statcan.gc.ca/cansim/a26 .

There is no perfect set of numbers on either how many registered motorcycles are in use or how many Canadians are involved in recreational motorcycling. One of the objectives of the survey has been to gain greater accuracy on participation in this recreational activity. While Statistics Canada generates time series on registered motorcycles, licensing requirements have differed across the country. Traditionally, British Columbia has not required off-road motorcycles to be registered so that British Columbian registrations are understated; Ontarians, because off-road licenses are only issued once, have been notoriously bad about returning retired and unused plates so that Ontario registrations exaggerate usage. Smith Gunther's survey provided information to facilitate including unregistered off-road motorcycles in British Columbia and excluding unused off-road licenses in Ontario generating a "Registered and in-use" database that is one of the benchmarks deployed here[17].

Because survey responses are more heavily weighted to British Columbia and the Yukon and less to Alberta and Quebec than the registered and in-use series, following normal statistical procedures, different provincial weights of survey information are deployed to attain provincial and national totals. **Chart 2** illustrates the percentages of responses by jurisdiction in aggregations designed to preserve confidentiality of survey respondents while nevertheless capturing regional idiosyncrasies.

Chart 2: Geographical Distribution of Responses to the Survey (n=1,400)



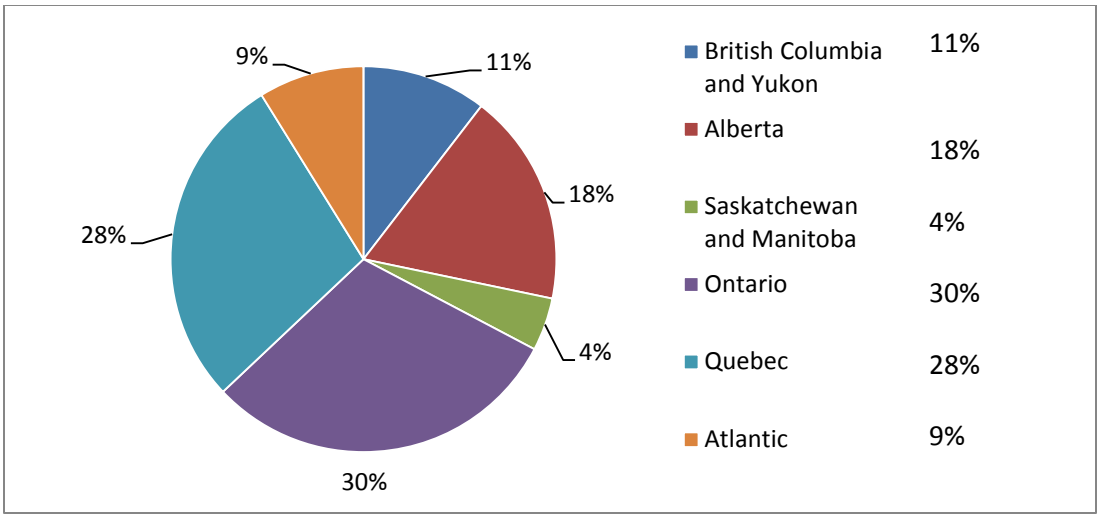
Note: Regions are ordered starting at 12:00 (the top-of-the-clock) for BC and moving clockwise.

In direct contrast with the shares of survey respondents, appearing in **Chart 3,** Canada's 708,700 motorcycles registered and in use are more concentrated in Alberta and Quebec and less so in British Columbia, Ontario and the Atlantic. Compared to the survey results, the registered and

[17] See Technical Appendix 1.

in-use data generate smaller shares in British Columbia and in Saskatchewan-Manitoba. While the regional aggregates are used in generating data from the questionnaire, provincial estimates are used throughout in assessing economic impacts with respect to aggregations pertaining to motorcycles. Total 2014 economic impacts are all broken out by province.

Chart 3: Geographical Distribution of Survey Registered And In-Use Motorcycles 2014-2015



Note: Regions are ordered starting at the top-of-the-clock for BC and moving clockwise.

Even the registered and in-use data may be somewhat transitional in favour of Alberta. Because Alberta does not impose a sales tax, rational transitional workers i.e. those working in the oil patch from other provinces, have incentives to purchase durables, including motorcycles, in Alberta and transport them home when it is convenient. It may take years before they are required to register their motorcycles as 'used vehicles' where their families' remain resident[18]. The longer those owners can draw out the process, the less valuable the motorcycles become on relicensing and the lower the sales tax due. No account has been taken of such transitory transactions in this study explaining, in part, why motorcycling registry and use is relatively high in Alberta compared to its population[19].

While the registered and in-use data, repairs on them, gasoline purchases, enhancements for them pertain to aggregations of "Motorcycles," aggregations of personal consumables such as attire for motorcycle operators pertain to "Motorcyclists" rather than motorcycles *per se*. Because many motorcyclists own several motorcycles but share in others in varying degrees among

[18] With interprovincial movements of students exempted, most provinces require that ownership and licensing be registered within six weeks of moving to a jurisdiction so workers visiting for less than six weeks do not need to transfer registrations among jurisdictions.

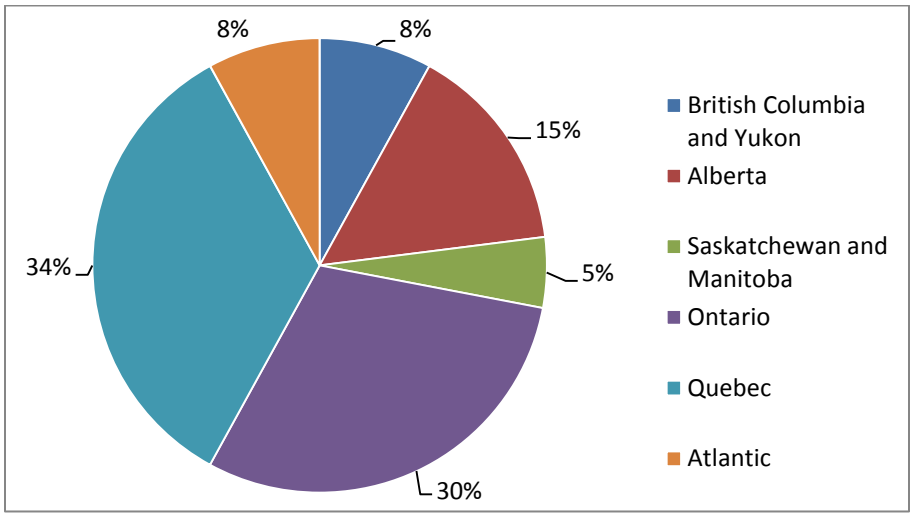
[19] From motorcycle sales and registration data in Ontario, about 20,000 motorcycles are registered there which were not purchased new in that province; this type of transition can also come from migration patterns into Ontario rather than solely from Alberta's transitory labour force.

jurisdictions, the aggregations of the number of registered and in-use motorcycles do not have the same provincial shares as those of motorcyclists.

From the survey, the average Canadian household size was 2.79 people owning 3.01 registered and in-use motorcycles. Remembering households are comprised of one or more riders, the number of motorcyclists is 92.6 percent of the number of registered and in-use motorcycles. Provincial percentages differ, with British Columbia and the Yukon having the lowest percentage of motorcyclists to registered and in-use motorcycles at 75.8% followed by Alberta at 83.0%, Ontario at 98.6%, and the Atlantic at 92.6%. Quebec and Saskatchewan-Manitoba had more motorcyclists than registered and in-use motorcycles at 1.18%, where, for example, siblings or spouses may share use of motorcycles.

For these reasons, Quebec and Saskatchewan-Manitoba shares of Canada's 708,700 motorcyclists are higher than for registered and in-use motorcycles as noted in **Chart 4**. Correspondingly, those same shares in the other two western provinces are less.

Chart 4: Geographical Distribution of Motorcyclists 2014



Note: Regions are ordered starting at the top-of-the-clock for BC and moving clockwise.

The remainder of this report consists of five major chapters:

- Why Motorcycle?
- National and Provincial Economic Impacts of Motorcycling
- National and Provincial Economic Impacts of Off-Road Motorcycling
- Bonus Results
- Conclusions

‘Why Motorcycle?’ captures some of the essence of interviews that Smith Gunther carried out with various club executives across the country. These conversations highlighted the effort that many motorcyclists and clubs put into their sport, and captured a lot of the *joie de vie* that recreational motorcyclists experience. Their claims are empirically captured in some of the surveys’ responses but are only marginally captured in the more economic-oriented chapters.

The remaining economic chapters deploy both static economic and dynamic equilibrium analyses to delineate economic impacts for activities undertaken in a single year, 2014, and then to observe likely impacts into the future – out to 2040, of all motorcycling activities and off-road activities. Chapter 2 covers all recreational motorcycling activities while Chapter 3 addresses the impacts of off-road motorcycling. Chapter 4 covers survey results that are of interest but beyond data requirements for economic modelling. Chapter 5 contains the conclusions while various appendices cover the more technical aspects of the analysis.

Chapter I: Why Motorcycle?

Introduction

Motorcyclists are fairly unique; on the one hand they're ordinary people with the everyday worries and troubles of most of us. On the other hand, they give time, effort and money willingly and unstintingly for good causes, local charities or because they recognize a great community need.

Stereotypical motorcyclists - beards, bandanas, and belts, leather safety gear and tattoos – stand out in crowds but are pretty ordinary looking to other bikers; and like most people in the broader society, they have their own reasons for belonging to a particular group, association or club. Christian Motorcyclists, for instance, spread the word of God; women riders often ride with other women, Retreads are mostly oldies, veterans ride with other soldiers and the White Knights ride to save lives. Even amongst the chapters of a nationwide group, there are distinct personality traits.

Members of the Christian Motorcyclists Association ride in 31 countries. The organization is international and nonprofit; it was established in 1975 to evangelize to the motorcycling community. Money raised by the 26 Chapters and 700 members of the Christian Motorcyclists Association across Canada goes to "outreach ministries for Bibles, tracts," says Yvon Audet, Chair of Christian Motorcyclists Association Canada. Lance Inman, PEI Chapter, adds their money goes to world-wide evangelism - 20% missionary ventures, 20% Open Doors ministries, 20% Jesus Film Project, 40% back into organization for Bibles and bikers' evangelistic outreach projects. As well as a youth ministry, grandparents often ride with their grandkids and fifty percent of the riders are women.

Women are riding more - statistics show this[20]. They have more discretionary income, and no longer want to ride pillion or side-car. As the number of women riders grows, the number of women-rider clubs grows. There are The Free-Wheelin' Canadian Women's Motorcycle Club of the Lower Mainland BC, many Iron Sirens' chapters throughout Ontario, the Motor Maids out of Atlantic Canada, and the Saddlebags out of Cape Breton, to name a few.

The Retreads, as the Christian Motorcyclists Association, are an international club. In addition to Canada, they are located in the States, the UK and New Zealand. Like the Christian Motorcyclists Association , it's a not-for-profit, socially-oriented corporation. It has 5,000 plus members around the world and they all share two things: they're 40+ and love motorcycling.

[20] From 1998 to 2003, the percentage of licensed motorcyclists in the United States that were female increased from 8% to 10%. http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/special_reports_and_issue_briefs/special_report/2009_05_14/html/entire.html . Smith Gunther's interviews with club executives indicate that this trend is both occurring in Canada and continuing.

Members of the Veterans Motorcycle Club of Canada ride Harley-Davidsons and have served in the Canadian Armed Forces or the Forces of NATO Allies. Again, it's a not-for-profit organization and was essentially formed by former soldiers to be around soldiers, and to support serving members[21].

The EMS White Knights, a paramedic and medical professional motorcycle association, like the others, is a not-for-profit organization. Members of the White Knights are casualty-care trained personnel, and promote motorcycle safety[22]. Under improved regulations they could achieve even more beneficial health outcomes.

Many of the distinct groups across Canada have worldwide affiliations. Within their distinctness, however, they display very similar characteristics - not-for-profit, desire to proselytize i.e. for God and family (Christian Motorcyclists Association), for motorcycle safety (White Knights), for soldiers Veterans Motorcycle Club (VMC), camaraderie (all of them). And while many of these groups have unique profiles, there are also hundreds of smaller groups whose members just get out for a weekend of riding.

The other side of motorcycling is the off-road rider who likes the unstructured freedom of the woods and mountains, the competitiveness of the enduros and hare scrambles and the physicality of manhandling smaller bikes over tough terrain. Many of these belong to smaller clubs/groups catering to members in a specific geographic area, a specific age, or a specific make of bike - but there are lots of them. They, too, plan for, and travel to rallies; volunteers are the backbone of their organizations. They give back to surrounding communities by raising money for local charities and hosting events. The off-road motorcycling community spends a significant amount of volunteer time maintaining the trails they ride. In most cases these trails are multi-use so that the benefits are shared among all users – hikers, mountain bikers and horseback riders among others.

Motorcycle Trends

From our interviews with motorcyclists across Canada, at least two trends have emerged - the age of motorcyclists is rising[23], and more women are buying and riding their own bikes. As well as the trends picked up in our interviews, on-line motorcycle trends show (among others) a move

[21] http://www.veteransmccanada.com/recruitment.html

[22] http://www.emswhiteknights.com

[23] American data support this general trend. "Survey data from the Motorcycle Industry Council on motorcycle owner demographics for the 1985 to 2003 period reveals a shift towards older owners. The median age of owners increased from 27.1 years in 1985 to 41.0 years in 2003. From 1985 to 2003, the percentage of owners 40-49 years old increased from 13.2 to 27.9 percent, and the percentage of owners 50+ years old increased from 8.1 to 25.1 percent."
http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/special_reports_and_issue_briefs/special_report/2009_05_14/html/entire.html.

towards electric motorcycles, superbikes, three-wheel bikes - excluded herein, and a far greater emphasis on safety for new, and well-seasoned, motorcyclists.

Aging

There are several reasons for this phenomenon but it all comes down to money; older motorcyclists have more discretionary income and many of them who biked in their youth are going back to the freedom of the road as empty nesters, in their retirement, or emerging retirement, years. One thing that changes little is that motorcycling requires funds.

The Retreads, an international motorcycling organization, is a good example (but not the only one) of older motorcyclists. "Retreads," comes from the name of vehicle tires which were initially used during World War II. Retreading (putting new treads on used tires) was a process that permitted many civilians during the war years to continue to use their vehicles when their tires wore out. New tires were very difficult, if not impossible to get during years of rationing.

"Similarly, many of us began our motorcycling years back when we were young. When we got married and started raising a family, many of us had no time or money available for such luxuries as motorcycles. However, once the children were 'well on their own', and free time and more money were available, our thoughts of motorcycles returned and we were itching to get back on the bikes we loved so much. So in a way, we were "Retreaded[24]."

Jordan Szoke, "the winningest Superbike racer in Canadian history"[25] has his own theory about the rising age of motorcyclists. "Their wives are sick of them," he explains a little apologetically. "'Get out of my hair,' they say." So men who are now in their 40s, 50s and 60s (and who have the money), ride BMWs and "get their freedom back." Szoke, 36, and a full-time rider, says some of his riding buddies today are in their 50s and 60s, but few of them rode between their 30s and early 50s. "Once the kids are gone and their wives are busy, they go back to it," he says. As several motorcyclists put it, "The distance I go to start my motorcycling activity is the property gate. Once past it, I am free and cruising."

Most of the older motorcyclists are on-road riders. Chris Waterhouse, regional representative for the Calgary Retread Chapter (and representing British Columbia, Alberta, Saskatchewan and Manitoba) explains why. "You have to be fit and able to bounce back from a fall if you ride off-road." Because youth (and perhaps fitness) aren't on their side, most Retreads ride "cruiser types" - Hondas, BMWs, Harleys, and Suzukis. And most riders usually have only one bike except for the "project" bike that is bought cheap, in need of repair and worked on over the winter as an in-house undertaking.

But there is a downside: The Insurance Institute for Highway Safety in the States says that in the early 1980s the proportion of fatally injured motorcyclists who were 50 and older started to

[24] http://retreads.org/history.html
[25] www.jordanszoke.com

increase. In 1982, three percent of all rider deaths were aged 50 or older; in 2013, 34 percent were 50 or older.

More Women Motorcyclists

A second trend is that more women are motorcycling. They, too, have more discretionary income, and rather than riding on the back of the bike, or in a side-car, they buy their own.

In the BC Interior, there are three female motorcycle clubs of about 50-60 members, according to Peter Sprague, Executive Director of the BC Off-Road Motorcycle Association.

On the other side of the country, Paula Mackeigan of the Cape Breton Saddlebags out of Sydney rides with about a dozen women on a weekly basis. They meet at a local coffee shop, decide on their ride and take off for the day. There is no club house nor fee, they all ride street bikes, and on an annual basis host two charitable fundraisers - one for the pediatric unit and one a charity of their own choosing. The fundraisers are one-day events, and every hour that goes into the planning is volunteered. On a yearly basis Mackeigan says she rides about 4,000 km.

British Columbian Kellee Irwin is a the Chair of the Motorcyclists Confederation of Canada. MCC is another national grassroots advocacy organization championing motorcycling interests throughout Canada. Irwin – an insurance executive - has been riding since she was five, is now 51, and has owned at least 40 motorcyclists over the years. She has ease and incentive for motorcycling on her side - her grandfather started a bike shop, her brother (the third generation) now heads it, and so she has her pick of bikes as well as an available repair crew (if needed). She rides between 20,000 and 30,000 km a year; last year she rode about 3,400 km in Africa as well.

And for all the riding she does, her costs are higher; she has four helmets ($250-$800 each), an oil change every three months at $60, gear at $2000, accommodations, food every two weeks for a group ride ($200), and over long weekends or bike rallies she spends $800-$900 per week three times a year.

Irwin says women make up 25 percent of the motorcycle business in Canada.

She points out that fatalities among women are less - “there’s quite a big difference.” United States figures show that 91 percent of motorcyclists killed in 2013 were males, and nine percent were females[26]. Of the female motorcyclists who died in 2013, 61 percent were passengers. Canadian data are more dated. In 2011 of the 2,351 killed in transport accidents, 170 were motorcyclists of whom 18 were women – just over 10% of motorcycling fatalities[27].

[26] Insurance Institute for Highway Safety www.iihs.org – Motorcycles and ATVs/2013

[27] Statistics Canada. *Table 102-0540 – Deaths, by cause, Chapter XX: External causes of morbidity and mortality (V01 toY89), age group and sex, Canada, annual (number)*, CANSIM (database). (Accessed: 2015-05-26). In contrast with the 188 deaths from motorcycle accidents, 541 Canadians died from assaults in that year.

Other Emerging Trends

Number one electric bike manufacturer Zero is being challenged by Harley Davidson in launching its first **electric bike** and U.S. based Lightning Motorcycles released the electric LS-21 - "the fastest production motorcycle in the world - gas or electric at 218 mph[28] while others seriously consider entering the field.

According to *Motorcycle Trends and Predictions 2015 | MotorCycle Direct*, both Kawasaki and BMW are packing in more horsepower and new tech on their **superbikes.**

KTM-Sportmotorcycle AG claims to have revealed the "safest bike in the world". The horse power has been lowered and it boasts a "complete system monitoring service[29]" And while faster bikes are on the horizon, there is a move towards making motorcycling **safer**; even older riders, who have been on the roads and hills for years, benefit from safer bikes and re-education on safety and etiquette.

Irwin points out that "in the future, there will be a concentration on safety first for new riders - many have, or get, big, powerful bikes and don't know how to use/ride them." She is a strong proponent of graduated licensing "which is in most provinces now; it saves both lives and money."

Szoke also advocates an off-road motorcycle code of conduct such as those already published by Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia. "Many trails now are open not just to motorcyclists, but hikers, joggers, horse-back riders and others as well. If people aren't passionate about motorcycling, they hate it." He estimates that "forty percent of hikers yell at you." Szoke practices his own Code of Conduct - he gets off his bike, and lets hikers or horseback riders pass.

But not just motorcyclists are safer; **equipment** i.e. **helmets** have been getting a lot of attention. Improved design, rear view mirrors to improve safety, low street/wind noise is a priority, and "in development is the LiveMap, a hi-tech motorbike helmet with built-in navigation system and voice controlled interface. It combines GPS capabilities and a heads-up display system with a voice controlled interface[30]." As well as helmets, **air-bag jackets** are being developed, **gloves** will be better at keeping out wind and water, **lights** are being developed to make the rider see better and be seen faster, and a flexible impact technology in **boots** is being researched[31]

Recreational

Not many motorcyclists ride during winter months; most get on as the snow melts and ride until

[28] http://www.motorcycledirect.co.uk/my-mcd/trends-and-predictions-2015.php .
[29] http://www.motorcycledirect.co.uk/my-mcd/trends-and-predictions-2015.php .
[30] http://www.motorcycledirect.co.uk/my-mcd/trends-and-predictions-2015.php#sthash.9XCCIikS.dpuf.
[31] http://www.motorcycledirect.co.uk/my-mcd/trends-and-predictions-2015.php.

a skim of snow covers the ground again multiple months later depending on climate. Lance Inman, a Christian Motorcyclists Association member from the PEI Chapter would ride as early as February (if he could) but on PEI this February 280 cm covered the ground (where the average is 58cm.).

There are two types of recreational motorcyclists - on- and off-road. Both on- and off-road motorcyclists attend rallies of like-minded riders for fun events and brotherly/sisterly camaraderie (like the Rally in the Beaver Valley, British Columbia). Off-road motorcyclists also participate in competitive (Enduros, hare scrambles, cross-country, like The Corduroy in Ontario). For both groups of motorcyclists there is often an incentive and that incentive is frequently a fundraiser for a cause of particular interest to the individual motorcycle group, or for a charity in the wider community. For the more rugged Enduros, often the incentive is just bragging rights i.e. The Corduroy.

Volunteering

From Newfoundland to British Columbia as well as raising thousands of dollars for specific causes, thousands of hours are volunteered annually over the short riding season. The Disciples Motorcycle Club in Newfoundland hosts two to three fundraisers a year including Ride for Sight and Children's Wish Foundation. Ian McLeod, a member of the West Kootenay Road Runners in BC says money this year is going to kids' sports in memory of one of their riders; he says the amount should be about $4,500. Kathleen Marie Wells says the Beau Bois Heritage Motorcycle Rally outside of Marystown in Newfoundland brought in $1,800 to the Children's Wish Foundation last year.

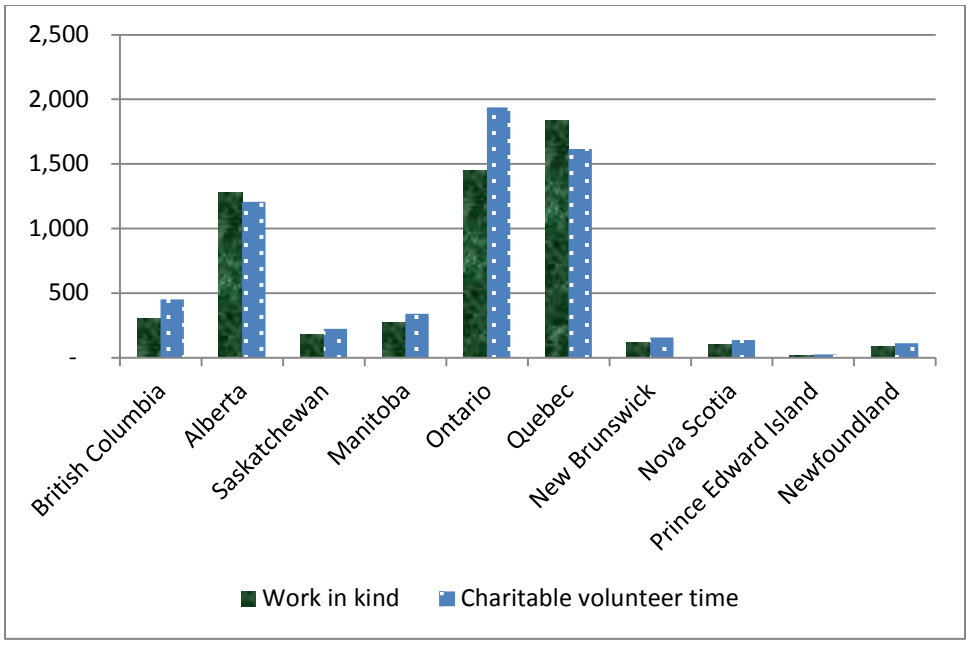
And while the money for charities is impressive, what's more so is the number of hours of volunteering. "Hundreds of thousands of volunteer hours across the country" are willingly given says Irwin of the Motorcyclists Confederation of Canada. She puts in up to 1,000 hours a year. Between 150 and 175 volunteers are needed each year for The Corduroy - a two (sometimes three) day event - checkers, cleaners, sweepers, staff for meals and community centre staff. The Beaver Valley Rally expects 12 volunteers this year - at 100 hours each that's 1200 hours of volunteer work for the rally alone. Wells in Beau Bois, Newfoundland puts in 730 hours of volunteer hours herself, and for the day of the rally another 200 hours will be given by 20 volunteers. The Wharf Rat Rally in Nova Scotia is totally dependent on volunteers to maintain its sustainability as a not-for-profit organization.

Across the country motorcyclists donated more than $11.8 million in volunteer time[32]. The regional distribution of volunteer work differed between work for the clubs and raising funds for charities as noted in **Chart I-1**. Work on behalf of the clubs included organizing events and

[32] These data are documented by the survey in volunteer time valued at 66.7% of average wages and salary levels in each province (hourly regional wages and salaries for all 15 and over (Stats Can. April 2014). That costing is similar to approaches used in benefit cost estimates arising from time-saving new or proposed infrastructure.

general club activities. For example, The Corduroy requires about ten work crews of 3-4 persons over 10-16 weekends each to prepare the trail, plus about 175 volunteers during the event. The charitable efforts are delineated elsewhere. As expected, the size of provincial contributions increases with the population of the province.

Chart I-1: The Value of Volunteer Time by Province (1,000s$)
($11.8 Million)

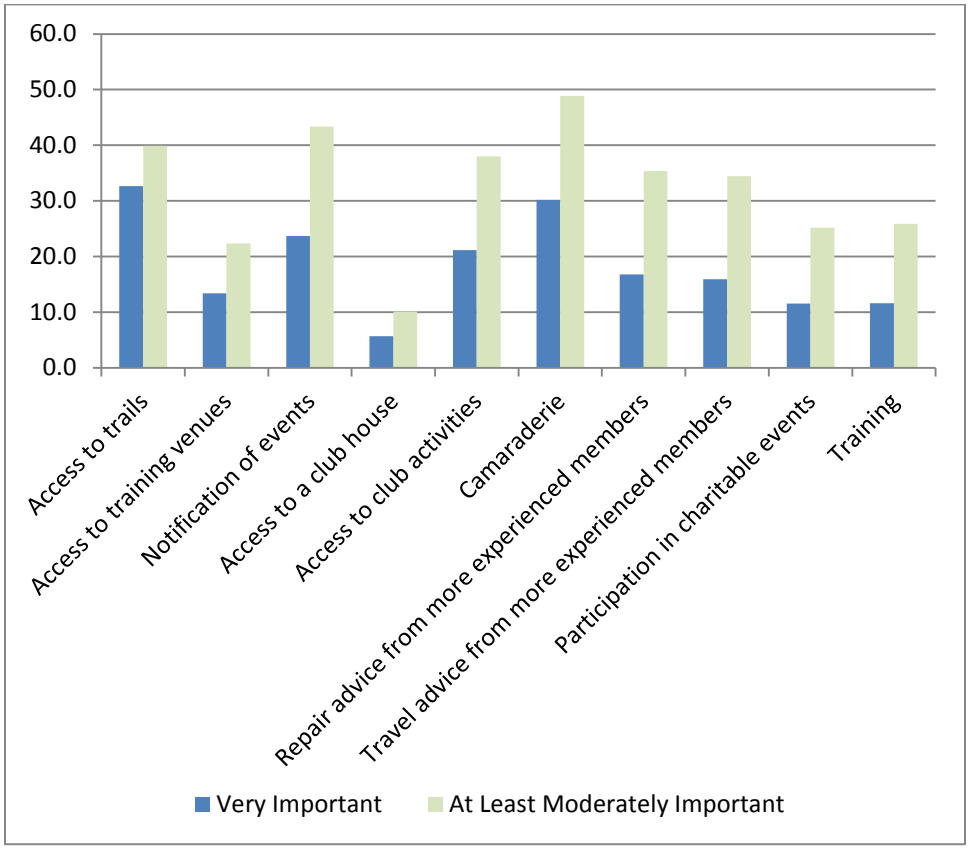


Contributions per motorcyclist top-out on the Prairies at $31.71 followed by Alberta at $19.43, Quebec at $17.05, and Ontario at $15.61. The Atlantic contributions per motorcyclist are $11.80 with British Columbia at $10.10. In all likelihood these are conservative estimates because they were not extrapolated for clubs not covered in our conversations with club executives. The motorcyclists' questionnaire asked respondents to classify certain club activities from unimportant to very important. Differing percentages of respondents identified alternative activities. Smith Gunther has classified responses in two groupings as "Very important," with a response of 10 and "At least moderately important," with responses of 8-10.

The highest level of response of an activity being very important was Access to Trails followed by Camaraderie and Notification of Events. The rankings change among those recognizing club activities are at least moderately important with Camaraderie in the lead with approval by nearly 49% of respondents followed by Notification of Events and Access to Trails. This latter result is not surprising because not all riders utilize trails. The fourth to sixth ranked activities of Access to Club Activities and appreciation for the various types of expertise of older members underline the supporting role of clubs for their members. All these activities were recognized as being at

least moderately important by over a third of respondents as noted in **Chart I-2**. 25% of respondents recognized working for charities as being at least moderately important.

Chart I-2: Importance of Club Activities to Motorcyclists (n=1,400)



To minimize, many groups don't have clubhouses. Retreads, for example, agree to meet at a certain place via Facebook or email, have their first coffee of the day there and then head out on a day ride. Some, like Paula Mackeigan of the Cape Breton Saddlebags Club, meet at a local coffee shop; the Nova Scotia Coastal Drifters meet at a library. Following biblical precedents, Christian Motorcycle Association members meet at members' homes and plan their rides over a potluck supper. 49.4% of respondents to the questionnaire replied that clubhouse activities were not applicable and less than 10% found clubhouse activities to be at least moderately important.

A relatively small percentage of respondents viewed "Access to Training Venues," and "Training," itself as being moderately important, inherently reflecting the confidence in respondents' experience. While heads of families dominated in the responses, over half of the motorcyclist activities covered by the survey were 18 or younger.

Nova Scotia

Nova Scotia offers riding on several road grades all within 100 miles of the sea and often over mountainous terrain. Leading tourism regions include vintage shipbuilding towns along the South Shore and the Annapolis Valley, in transition from apple growing to fledgling wineries with sites to remember Evangeline's heritage. Along the northern shore, warm waters at Brule Beach ease the entry to the rugged seascapes of Cape Breton, and the Bell Museum, as well as erstwhile French military strength at Fortress Louisbourg. Cape Breton offers riding adventures over mountain ranges and curving roadways through the famous Cabot Trail and motorcycling events often accompany celebrations of Canada's folk musical heritage, and swimming, golf and old logging roads are easily accessible everywhere.

Urbanites can always retreat to Halifax bustling with the resurrection of shipbuilding and offshore fossil fuel finds. Halifax houses 880,000 people within 100 km of its city core. Famous as the Citadel of the North, old fortifications remain in place overlooking the renewal of the port below midst traces of the Halifax explosion [1] as well as the graves of many Titanic victims.

The summer of 2015 brings with it 55 Nova Scotia motorcycling events beginning in late June and continuing into October. [2]. The Apple Valley Riders, with core membership in Wolfville and surrounds, has hosted the Bluenose Rally for 45 years and is the oldest motorcycle rally in the Maritimes. As well as the rally, the Apple Valley Riders sponsor road rides and other social events. The Wharf Rat Rally in Digby, Nova Scotia, is a large, multi-day rally with live music, stunt shows and time trials, as well as show 'n' shine and tattoo competitions. Thousands of motorcycles line the streets of Digby for this annual event, with visitors from all over the United States and Canada and even as far away as Dubai.

Nova Scotia offers more than just on highway riding, if you're looking for some fast paced excitement the Atlantic Roadracing League begins it race season in May and continues on into October drawing in racers and spectators from all over the province [3]. The Nova Scotia Off Road Riders Association provides a variety of family friendly, well maintained ride parks for off road riding all over the province, within the Halifax Regional Municipality extending to locations in Cape Breton and northern Nova Scotia. They also offer a Hare Scramble series during the summer months that draws riders from all over Nova Scotia to as far away as Quebec [4].

New Brunswick

Officially bilingual, New Brunswick offers English and French language access to its forestry, fishing and settlement heritage sites along interior rivers and coasts. Conduits down the mountainous Saint John River or along the Bay of Chaleur proceeding down the northern shore and along extensions of the Appellation Tail and the Miramichi River, famous for its wild

[2] http://www.motorcycletourguidens.com/2015-rallies-and-events
[3] http://www.atlanticroadracing.com/index.html
[4] http://www.nsorra.ca/2015-hare-scramble-series/

salmon fishing, provide access to sparsely populated areas. Southern New Brunswick contains most of its population, significant art galleries in Fredericton and Sackville, Fundy National Park with its fabulously high tides and offshore flower pots carved by the tides and other urban centres of Saint John and Moncton, the regional distribution hub.

The summer of 2015 brings with it 16 motorcycling events dotted throughout the province. They occur on July 10, August 5, and September 1[33].

Québec

The Québec situation is unlike any other provincial motorcycle association. Fédération Québécoise des Motos Hors Route (FQMHR) is the umbrella association for 80 groups including clubs. The FQMHR receives a share of the revenues from the provincial government's annual licensing of each motorcycle, including scooters and off-road motorcycles. Given that annual licenses cost $90 or more, depending on the type of motorcycle, the vast majority of owners who pay that level of fee can be expected to ride. These arrangements then give the FQMHR solid 2014 data on the number of motorcycles, including scooters, in the province – 191,427[34].

The number of motorcyclists *per se* is somewhat smaller because one owner may have more than one motorcycle. While Benoît-Gilles Depont, Director General of the FQMHR, was uncertain about the number of owners with multiple motorcycles, he did note that the number of multiple ownerships would likely have declined with higher gasoline prices during the non-winter months of 2014. In his opinion, gasoline prices severely limited numbers participating in various racing and cross-country events[35] thereby decreasing demands for multiple motorcycles.

The number of families in clubs is smaller due to lower female participation albeit about 15% of riders are females[36] and that percentage has been rising over time. The types of motorcycles ridden in Quebec included:

a) Street motorcycles 67.4%

b) Scooters and Mini Bikes 16.4%

c) Off-Road motorcycles 13.6%

d) Competition 0.6%, about a sixth of what it was in 2010, before gas prices spiked.

[33] http://www.motorcycletourguidens.com/2015-rallies-and-events
[34] Interview with Benoit- Gilles Depont: There may be a few three-wheeled motorcycles mixed in with this number. To put this total in perspective, in Quebec there are 185,136 snowmobiles and 382,434 ATVs.
[35] Due to taxation policies in Québec, gasoline prices are generally higher than in other provinces.
[36] Depont's range on this figure was 10%-20%.

Like other provincial leaders, he found that the current national breakout of types of motorcycles did not conform to realities about the use made of on-road motorcycles because some dual purpose on-road motorcycles are used for off-road travel as well.

There are two classes of trails in Québec - 8,000 km are shared club roads[37] and about another 24,000 km are abandoned logging roads. In 2014, FQMHR distributed $285,000 to 31 clubs for trail construction and maintenance against which clubs leveraged other construction and maintenance funds into a total of $1.4 million[38]. Based on this data, construction and repair costs were $1,750 per km of trail. Under Québec regulations, clubs not only construct and maintain trails, they are also responsible for monitoring them to ensure safety.

Logging roads, interlaced with the highway system are also accessible at riders' risks. Unlike Ontario, foresters in Québec are not responsible for accidents on abandoned logging roads and infrastructure, such as abandoned bridges, so that abandoned bridges remain intact until natural deterioration destroys them. In contrast to limited access in Ontario, Québec's total network of off-road trails is more extensive – sufficient to traverse much of the province both north and south of the St. Lawrence River.

In addition, competitors with multiple motorcycles utilize large RVs when competing in order to both transport their bikes and for accommodations on weekends. The RVs have added to the expense of competing not only for their capital costs but also because of fuel costs due to the small number of kilometres/liter for RV travel.

Of the 23 parks available to motorcycles, 13 are for off-road motorcycles only, 6 for trail and on-road motorcycles, 2 allow both types of motorcycles as well as All-Terrain Vehicles (ATVs) while one allows off-road and ATVs but not on-road motorcycles[39]. Most participants commute between their homes and the events but parks specific to motorcycling attract weekenders and overnight guests. There are about five parks that are sufficiently remote that families stay for a couple of nights with 100-250 staying in each at any one time. Fees for trail access are about $35 per day. Across the five parks setting accommodations at 1000 guests operating at 80% of capacity over the 214 days, trail fees alone would reach $5,992,000 and camping fees $30 per night adding another $5,136,000. The combined outlay in these more remote parks is in excess of $11 million. Parks located closer to large urban areas draw locals to park trails that return home and do not incur accommodation expenditures. An advantage which FQMHR delivers to member clubs is that it carries an insurance policy covering all clubs' liabilities at modest rates of $350 per club for up to $5 million in liability.

[37] The season for using club trails is limited from May 1 to November 30 of each year. Motorcyclists who put a ski on either wheel must use snowmobile trails. The start date is as late as it is to curtail rutting of the trails.
[38] Other than the subsidy from the FQMHR, other club funds come from hosting events and other fundraisers as well as assistance from municipalities.
[39] http://www.fqmhr.qc.ca/en/tracks/park-members/

Most overnight guests are either young riders or empty nesters. Their choice of accommodations is age-related. Couples who can afford large motorcycles tend to use commercial accommodations while competitors increasingly travel in RVs. Those of the younger generation who stay in tents pay normal campsite fees.

In 2014 there were:

1. 202,000 motorcycles registered in Quebec;
2. 241,000 motorcyclists of whom 15% were part of a growing female membership;
3. 8,000 km of club trails
4. 24,000 km of logging roads used as trails
5. Construction, maintenance and repair of trails cost $1,750 per km.
6. The total budget for the FQMHR was $500,000-$600,000 inclusive of the grants made to the 31 clubs.
7. About 12 Fun Family events took place
8. In addition there were 23 parks with related trails generating revenues well in excess of $1 million.

Ontario

Mike Jacobs sets the Ontario scene for motorcycling:

"*What is Ontario's Motorcycle Touring Experience? It's an incredible array of landscapes, from deep forests, pristine lakes, winding roads and friendly people. It's everything from the wine regions of Niagara, to the majesty of Lake Superior, to the rolling hills of the Ottawa Valley. It's twisty, turny backroads and weekend trips, and epic long distance road trips. It's something for every type of rider, from adventure touring in the far North, to pleasure cruising in the 'deep south'.*[40]"

On top of all that there are easily accessible off-road trails that run for miles in all directions. Documentation on 22 of these sites in Ontario is readily available[41].

A Northern Ontario site lists 187 motorcycling events being held across Ontario during 2015 – April 1, May 30, June 49, July 40, August 46, September 17, and October 3, and November 1[42]. These events cover a wide range of activities to meet all tastes. Because many are staged weekly during the summer months, activity levels far exceed the number of listed events.

As noted elsewhere in this chapter, the motorcycle trails dotted across Ontario's rugged terrain have not been carved out by an invisible hand but by many club members' dogged hard work in gaining access and physically building trails. Some trail crews of four to five work over several

[40] http://www.northernontario.travel/motorcycle-touring/motorcycle-touring-in-ontario. Published in *Ontario Touring*.
[41] http://funontrails.wikidot.com/
[42] http://www.northernontario.travel/motorcycle-touring/motorcycle-touring-in-ontario

weekends to build and repair trails for Enduros. Others volunteer over less time but in more concentrated chunks to prepare food and feed the masses which would otherwise overrun small communities and their normal capacity to entertain and extend warm hospitality to visitors.

The Corduroy Enduro is probably the "toughest in Canada" says Kirk Holden of The Haliburton Trail Riders, "and the finish rate is low." The Corduroy began in 1952; over that time, some riders have returned for 20 years. "They're in their 50s and 60s now and still doing it," Holden says with a bit of awe in his voice. Mileage on the course varies from year to year - 125-150 on Saturday; 130-140 on Sunday. Trail conditions are bush, and the event is lengthy. "Every kilometre feels like 10!" Riders come from all over including the States and New Zealand.

Holden adds the Enduro brings 300-400 extra people a year to the small community of Gooderham and says probably each entrant spends $1000 on that particular weekend. "It's after the summer and before the hunting season; cottages, hotels, motels fill up fast."

The ladies' numbers are also picking up," he adds - "now it's six to ten percent. A few years ago it was just a handful."

Local enthusiasts play a big role; "as many as 150-175 volunteer as checkers, sweepers, cleaners, staff for meals, community centre staff."

Port Dover's Friday the 13th (PD13), when held during the summer months (e.g. July 10, 2015), challenges to become the world's largest motorcycling event. With motorcycles, leathers and people flocking to PD13 from all over North America, a Mardi Gras atmosphere creates a street party like no other on the continent. The next summer PD13 will have to wait until 2018 albeit less well-attended ones will occur on Friday the 13ths which fall into shoulder seasons when good weather is less likely but not impossible.

Smaller events like the Calabogie Boogie (outside of Ottawa) entice riders from northern New York, western Quebec and all across Ontario, says Chris Davis of the Bytown Motorcycle Association. "The Boogie is our Port Dover." It's been going 24 years. The oldest rider is 74 and females make up five percent of the motorcyclists." Port Dover hosts motorcyclists every Friday 13; the next this year is in November.

Each event goes beyond scenery by adding new stories to its history so community legacies ever build - etched in the minds of the old and the new.

Along with the Corduroy Enduro and Calabogie Boogie, the member clubs of the Ontario Federation of Trail Riders organize numerous recreational family oriented trail riding events across southern Ontario each year. For those with a competitive bent, the member clubs and promoters of Off-Road Ontario stage a number of off-road competitions each season[43]. These

[43] https://oftr.ca/ and https://www.google.ca/?gfe_rd=cr&ei=19SfVabPLuSM8Qf3hbXoDQ&gws_rd=ssl#q=offroad+ontario+2015+schedule.

grassroots events attract hundreds of riders, volunteers and spectators from across Canada and the US.

Among participants in many charitable events are the White Knights as first responders in emergencies, evangelistic Christians to care for souls, veterans to ensure safety, and families and riders just out having fun.

The White Knights "go from Windsor to Trenton to help escort a ride for the military. We travel from Toronto to Ottawa and to Sault St. Marie twice. The distance for these rides is 650km and then we assist with the ride for various distances up to 200km, then the ride back of the same 650km distance," writes Denis Barnes, president of the organization.

"The types of injuries we encounter are of minor severity. Broken ankle, dislocated shoulders and scrapes. In the past we have had some serious injuries where we actually lost a patient but one, at least, was brought back from cardiac arrest. Most members make up their own trauma bag; we have had some help with supplies."

Time commitment among members varies. Barnes "attended 22 events at an average of well over eight hours each, due to long distance travelling and overnight stays." Barnes says they need an ambulance. "We have just lost ours due to rust and old age. We are having a hard time replacing it since we have no money to purchase one and the rules and regulations prevent the different departments from donating one to us." There are also legal limits on the services that erstwhile EMS workers can provide. Those legal limits which currently thwart treatment need to be upgraded to better match patient needs with the White Knight's actual skill sets.

Motorcycling is alive and well in Ontario. Because Smith Gunther has not been able reach all event organizers, if anything, contributions to charities in this study may be understated. They are certainly not exaggerated.

British Columbia

Initial "data" for British Columbia are based on ranges provided by Peter Sprague and calculations from sales data and from the Smith Gunther/MCC survey of motorcyclists. Sprague is Head of BC Off-Road Motorcycle Association.

Smith Gunther has solid sales data by province as well as an accurate accounting for registrations from Québec. Adjusting for historically unregistered off-road motorcycles there were about 75.000 motorcycles in use in British Columbia, in 2014. Based on the average number of motorcycles owned per motorcyclist, this obtains the number of motorcyclists of 57,000.

According to Peter Sprague, there is a significant contingent of BC motorcyclists located on Vancouver Island and in the Lower Mainland, parallel with the main concentrations of British Columbia's population. Given the close proximity to the sea, such concentrations expose motorcycles to salt water which can accelerate attrition. In addition, the higher level of general

affluence in British Columbia relative to Québec may accelerate replacement of older motorcycles relative to retirement rates in Québec. Both these factors suggest that the attrition rate may be higher in British Columbia than in Québec.

There are 4,000-5,000 kilometres of managed trails within the province with a relatively strong presence on Vancouver Island and in the interior but less of a presence in and around Prince Rupert, where there is a single club and the Kootenay region (although Alberta riders make use of trails in the Kootenay region).

Specific clubs have "Trail Stewards" who are responsible for ensuring trails are groomed and in reasonable condition. In recent years, ranchers have become more careful of their lands and aboriginal people have been exercising jurisdiction as they move closer to self-government, thereby increasing control over their lands and curtailing access. Both these trends have curtailed trail access. In addition Kootenay trails bump into the international border that has been coming under increasing electronic scrutiny of late requiring greater care not to transgress than may have been the case earlier.

Both off-trail and on-trail motorcycles use these trails as do hikers and mountain bikers. Other than for licensing purposes, there is little use in the classification of motorcycles being used by the national associations. More useful information might be gained by a division based on engine size.

In addition to managed trails, there are another 400,000 kilometers of trails on old logging roads and similar sites but these can become overgrown quickly and are not well groomed so that rutting can cause water run-off problems. Recreational clubs are trying to avoid such environmental degradation.

In the BC Interior, there are three female motorcyclist clubs of about 50-60 members each and even more female riders. Female participation on Vancouver Island is not as strong. Recreational motorcycling is male dominated on the Island, although some couples do ride.

Modelled on Revelstoke's "Family and Friends Fun Ride Festival', there are about 12 such events held annually throughout the province which have drawn increasing numbers of riders, currently in the range of 80-100 per event.

Riders tend to overnight in their trucks or RVs. There is a specific site up the Fraser Valley with 55 campsites that tend to be occupied by motorcyclists' RVs throughout the summer and another two in the interior which operate on the weekends accommodating 70-120 between them. The Revelstoke Fun Ride includes occupying a lodge by the riders staying.

Other organized events include teaching of 33-100 riders annually.

Sprague estimates annual operating expenditures of $3,000 to $3,500 per recreational motorcyclist. Under those conditions total BC operating costs in his scenario would be $171,000,000 to $200,000,000.

Chapter II: National and Provincial Economic Impacts of Recreational Motorcycling

Introduction

Economic impacts capture the direct, indirect and induced economic repercussions of people undertaking certain activities rather than other activities. In this instance the economic activity is recreational motorcycling as discussed above and the alternative is doing nothing in order to clearly delineate the impacts of recreational motorcycling. That process is fairly standard practice in similar assessments and, of course, exaggerates the impacts in settings where active people are highly likely to undertake alternative domestic forms of recreation, consumption, or savings using financial intermediaries to invest. It however does not exaggerate the impacts if the alternative to recreational motorcycling in Canada is saving all those funds or spending them all on foreign travel such as flying foreign airlines to Los Vegas and blowing the funds gambling. This assumption is tested later in this Chapter.

This chapter first delineates the direct expenditures attributable to recreational motorcycling. Smith Gunther's estimates of those direct expenditures is based largely on a sample of 1,400 motorcycling households which it surveyed from January 2015 to April 2015 concerning their 2014 expenditures. Appendix I explains Smith Gunther's extrapolation of the survey results to the population of motorcyclists. For most readers it is sufficient to know that the extrapolations are limited by and consistent with registered and in-use motorcycles, the number of motorcyclists and type of motorcycles operated by families. In addition, sales of new motorcycles by type and jurisdiction are consistent with Motorcycle and Moped Industry Council's (MMIC's) preliminary sales unit data for 2014 given pricing growth estimated by Statistics Canada.

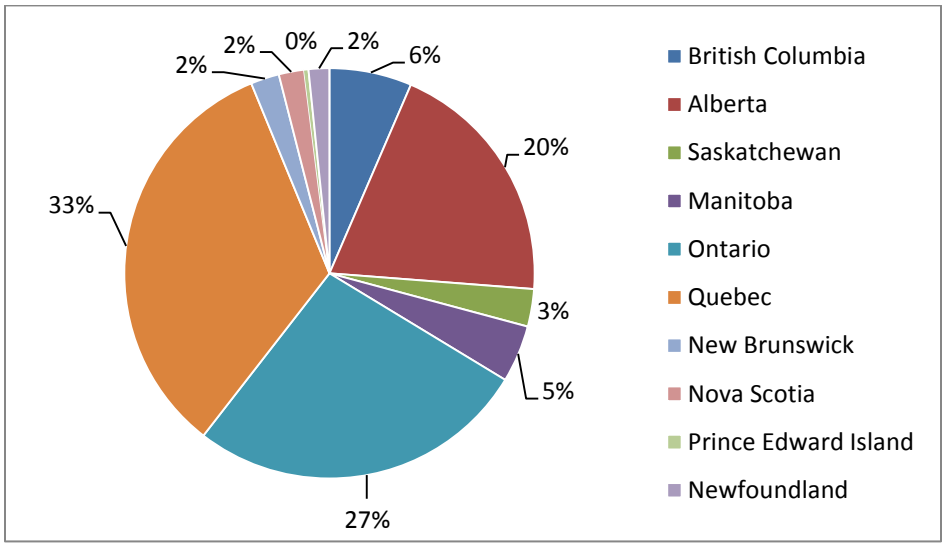
This chapter identifies the direct impact followed by indirect and induced impacts both nationally and provincially. Conceptually, indirect impacts take account of the Canadian inputs into both motorcycles and all other direct expenditures made in recreational motorcycling as well as inputs into those inputs back through several iterations of what is produced in Canada. Via Statistics Canada's I/O Tables, the indirect impacts also capture interprovincial trade so if fuel is burned in an Ontario motorcycle from an Ontario refinery refining Alberta crude oil that interprovincial trade is captured as are all the other inputs into refining in Ontario as well as the inputs into crude oil extraction and transportation in Alberta and intervening provinces.

Induced impacts result from incomes earned by workers and industries producing both direct and indirect impacts as well as earlier induced inputs. Without the direct expenditures the incomes would not have been earned so under the assumption that the workers would have otherwise been unemployed, induced expenditures are tied to the initial direct expenditures.

Direct Expenditures

Direct expenditures for motorcycling amounted to $1.89 billion spread among the provinces as shown in **Chart II-1**. Accounting for 86.7% of the total are six specific expenditures – new motorcycles, parts and enhancements, insurance, gasoline, apparel, and travel.

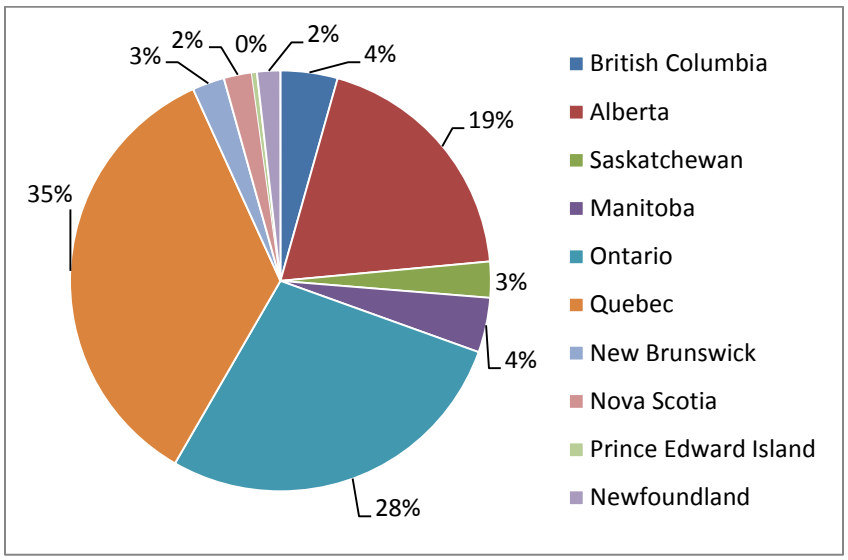
Chart II-1: Provincial Shares of Direct Expenditures for Motorcycling ($1.89 billion)



Note: Provinces are ordered starting at the top-of-the-clock for BC and moving clockwise.

The largest single direct expenditure was for new motorcycles at $740.1 million. Shown in **Chart II-2**, provincial shares only differ slightly from total expenditures with Ontario, Quebec and New Brunswick gaining at the expense of British Columbia, Alberta and Manitoba.

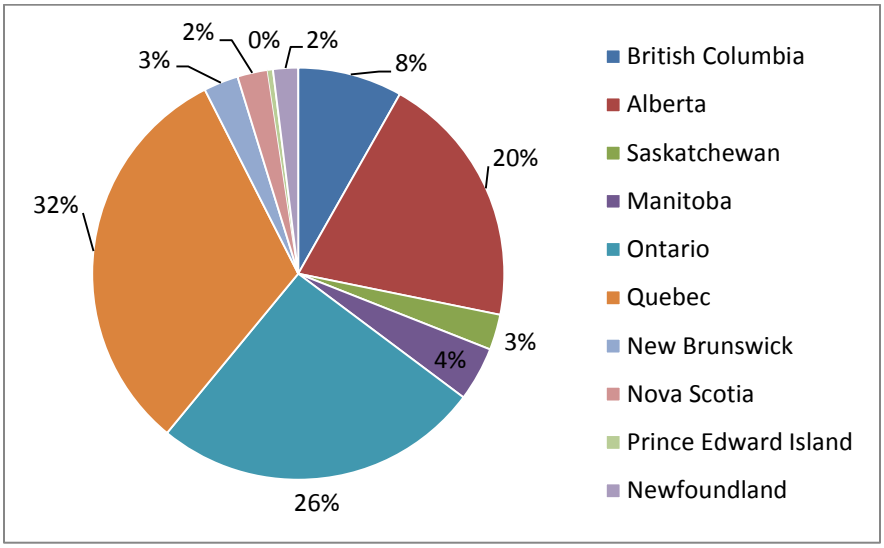
Chart II-2: Provincial Shares of Direct Expenditures on New Motorcycles ($740.1 million)



Note: Provinces are ordered starting at the top-of-the-clock for BC and moving clockwise.

The second largest outlay was for parts and enhancements at $283.3 million. Here the rugged terrain of the two most Western provinces as well as New Brunswick lead them to have slightly larger shares of this grouping than of new motorcycles at Quebec's expense as demonstrated in **Chart II-3**.

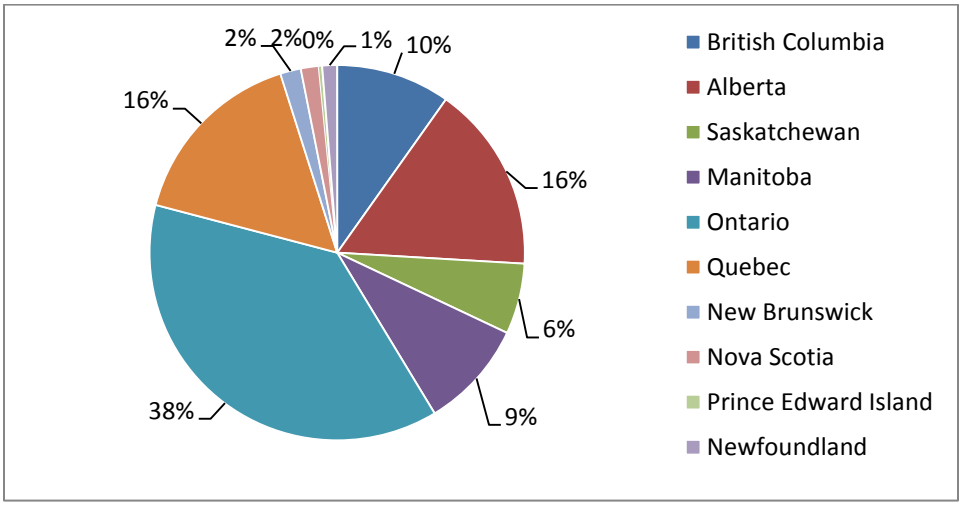
Chart II-3: Provincial Shares of Direct Expenditures on Motorcycling Parts and Enhancements ($283.3 million)



Note: Provinces are ordered starting at the top-of-the-clock for BC and moving clockwise.

Outlays for insurance were the third largest single expenditure category at $189.0 million. The provincial breakout in **Chart II-4** shows a considerably smaller share being incurred in Quebec because the FQMHR includes its clubs and members participation in event at recognized clubs under a low-cost umbrella insurance policy. Riders is Quebec have their insurance covered if they are riding/racing in parks or closed courses. The facilities, which are members of FQMHR, pay a premium (c $2,500) for insurance obtained by FQMHR. Yet, off-road motorcyclists riding on other trails are required to provide their own liability insurance with $500,000 coverage. For those reasons the share of national insurance costs borne by Quebec motorcyclists are about half the share of other motorcycling expenditures.

Chart II-4: Provincial Shares of Direct Expenditures on Insurance for Motorcycling ($189.0 million)

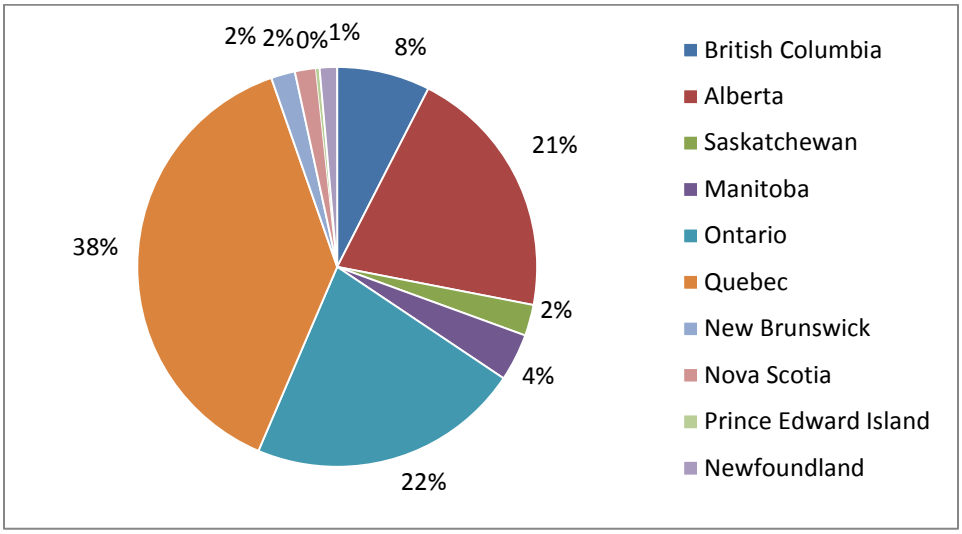


Note: Provinces are ordered starting at the top-of-the-clock for BC and moving clockwise.

From the survey of their expenditures, Canadian motorcyclists spent $164.9 million on gasoline in travelling to and from events, preparing for and participating in them. The provincial shares appear in **Chart II-5** reflecting both modes of transportation utilized and the relative price of gasoline among the provinces with gasoline in Quebec being relatively expensive and Alberta's cheap, but with higher utilization of trucks for transporting motorcycles in Alberta.

While the total share of expenditures being made on gasoline may oscillate with its price of several years, increased consumption can also be expected with the lower prices.

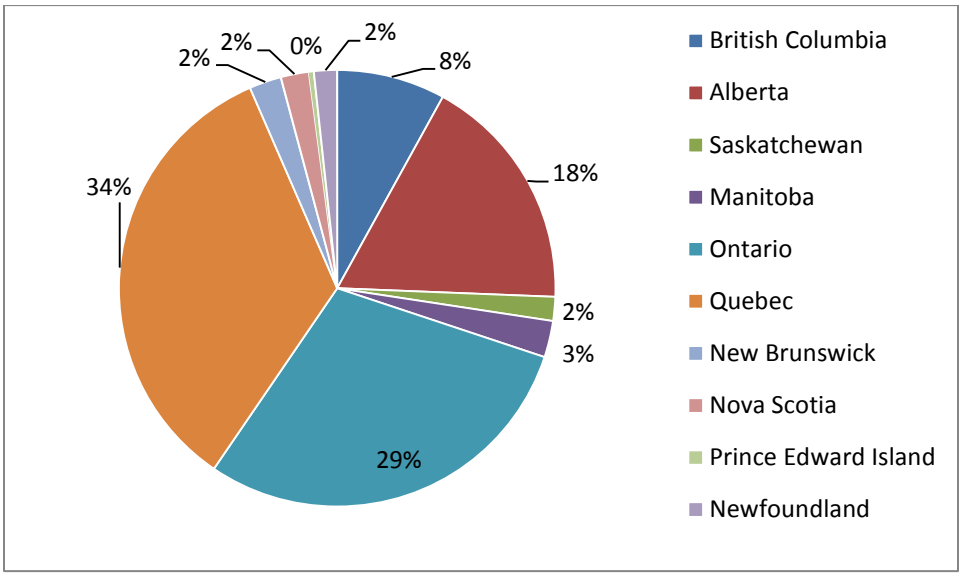
Chart II-5: Provincial Shares of Direct Expenditures on Gasoline ($164.9 million)



Note: Provinces are ordered starting at the top-of-the-clock for BC and moving clockwise.

Apparel is critical to motorcycling in Canadian weather. Exposure combined with speed ensures the need for warm clothing and good protective gear against mishaps. Canadian motorcyclists spent $162.2 million in Canada on apparel in 2014 broken out by province in **Chart II-6**.

Chart II-6: Provincial Shares of Expenditures on Motorcycling Apparel ($162.2 million)

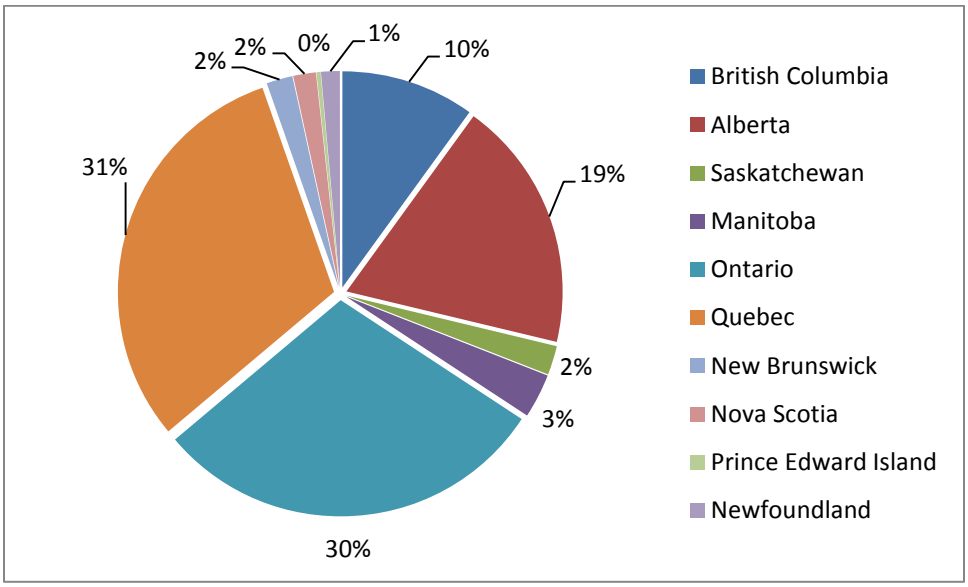


Note: Provinces are ordered starting at the top-of-the-clock for BC and moving clockwise

The use of motorcycles for travelling to events is not always feasible for participants because off-road motorcycles are neither licensed nor ideal for highway travel. Of the 1,373 responding to the question on their mode of transportation to travel to and from their favourite event, 43.6% rode motorcycles, 30.4% utilized trucks, 18.9% travelled in this own car, and 5.0% drove RVs. The remainder drove with friends or took public transportation.

Other than licensing, domestic transportation costs were the sixth largest expenditures among those surveyed. Travel in Canada is generally assumed to be via roads while international travel to other than the United States has been allocated to air transportation. Road transportation in the United States does not have a direct impact on Canadian Gross Domestic Product (GDP). **Chart II-7** combines these two modes of travel, although they are separated in the I/O runs. Road transportation costs are set at $.50 per km in line with Revenue Canada's criteria for income tax deductions, and travel by air set at a fixed cost of $50 plus $0.75 per km per passenger based on Air Canada's rates[44]. The provincial shares reflect longer riding seasons in British Columbians. There may be a slight bias on the British Columbia shares due to the presence of a few globe trotters among that segment of the sample. The $4.1 million in international air travel is assumed to occur on Canadian-based airlines.

Chart II-7: Provincial Shares of Expenditures on Transportation for Motorcycling ($36.0 million)



Note: Provinces are ordered starting at the top-of-the-clock for BC and moving clockwise.

The remaining 16.2% of the direct expenditures on recreational motorcycling, in order of importance, include:

[44] http://blog.rome2rio.com/2013/01/02/170779446/

- Licensing
- Club fees
- Commercial accommodations
- Food
- Attendance at motorcycle shows
- Beverages.

Indirect and Induced Impacts

Based on the above direct expenditures by recreational motorcyclists, Smith Gunther has estimated the indirect and induced impacts, as outlined in the introduction to this chapter. In this case the vehicle deployed was Statistic Canada's detailed I/O system for 2009, the latest year available, albeit results are in 2014 dollars. Use of that I/O Table is structured initially to capture all the indirect inputs into not only the processes to produce each of the direct inputs but also into the inputs for the inputs ad infinitum back through the production processes for all inputs into inputs[45]. The second aspect of the estimate makes use of direct and indirect inputs to establish remuneration paid to workers throughout all those production processes when combined with information on their expenditure patterns generates metrics on these income earners' expenditures from that additional income, denoted as "induced income". Just to complicate things further, induced income also captures the expenditures for earnings in meeting the induced demands to that the totality of the impacts initiated from direct impacts are captured.

There are, however, issues with this type of static analysis. In this rapidly evolving world there are no guarantees that when an input is used it will be regenerated again. None of the processes occur instantaneously so what is perceived as happening with a given timeframe may not. Further, there is no way to include expected expansions of an industry and to understand its dynamics. For those reasons our static analysis is supplemented by Regional Economic Model Inc.'s Dynamic Equilibrium Model, extending the analysis out to 2040. As noted earlier, REMI also contains Statistics Canada's 2011 most recent Input/Output tables.

Static Analysis

Based on these direct expenditures, Smith Gunther in conjunction with Statistics Canada has estimated both the direct and indirect impacts of recreational motorcycling on Canada's national and provincial economies, designated as the "Production" impacts. Adding induced impacts to the production ones facilitates Smith Gunther Associates' estimation of total impacts.

Limits to Impacts

I/O based results recognize limitations to impacts imposed by economic relationships and taxes and, in the case of direct impacts, the payment of wages, salaries and other forms of income.

[45] Because each round of domestic inputs is a fraction of total inputs, this exercise involves multiplying fractions time other fractions and is thus asymptotic to zero for all inputs, and with sufficient iterations effectively stabilizes with additional inputs at the margin approaching zero.

These payments limit indirect impacts because once taxes are paid they no longer impact on the Canadian economy. This section explores these limitations before examining impacts of recreational motorcycling on GDP, employment and fiscal capacity by province.

Output

Of the $1.89 billion spent in Canada on recreational motorcycling, $349.5 million is spent on imports directly and a further $262.2 million on imported inputs resulting in $1,272,462,000 spent on domestically supplied goods and services. Including exports, the 2014 Canadian direct output reached $1,342.5 million. Production of this level of goods and services required further Canadian output of $891.9 million in intermediary inputs and called forth induced outputs of another $545.7 million for a total impact of $2,680.1 million, well above the Canadian $1,892 million in expenditures on motorcycling. Canadian output multipliers relative to Canadian output are then 1.59 and 2.00.

The relevant provincial levels of output are dependent on each province's role in supplying motorcyclist demands with provincial multipliers also being influenced by interprovincial trade flows. Direct and indirect output and total output multipliers by province appear in **Table II-1**.

Table II-1: Canadian Output ($1,000s) and Output Multipliers For Recreational Motorcycling 2014*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Direct	10,979	2,477	16,775	29,272	476,704	469,028	42,392	29,018	189,531	75,772
Direct & indirect	20,197	3,740	26,193	42,596	711,984	769,519	64,014	47,976	318,311	127,954
Direct, indirect & induced	24,863	4,970	34,519	52,785	866,489	976,208	80,560	60,516	401,533	175,050
Domestic Output Multipliers										
Direct & indirect	1.84	1.51	1.56	1.46	1.49	1.64	1.51	1.65	1.68	1.69
Direct, indirect & induced	2.26	2.01	2.06	1.80	1.82	2.08	1.90	2.09	2.12	2.31

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Total multipliers equal to or greater than 2 indicate that total output impacts are more than double the expenditures made by motorcyclists. They are relatively strong in provinces with advanced machinery and equipment manufacturing. That industry evolved as part of Ontario's

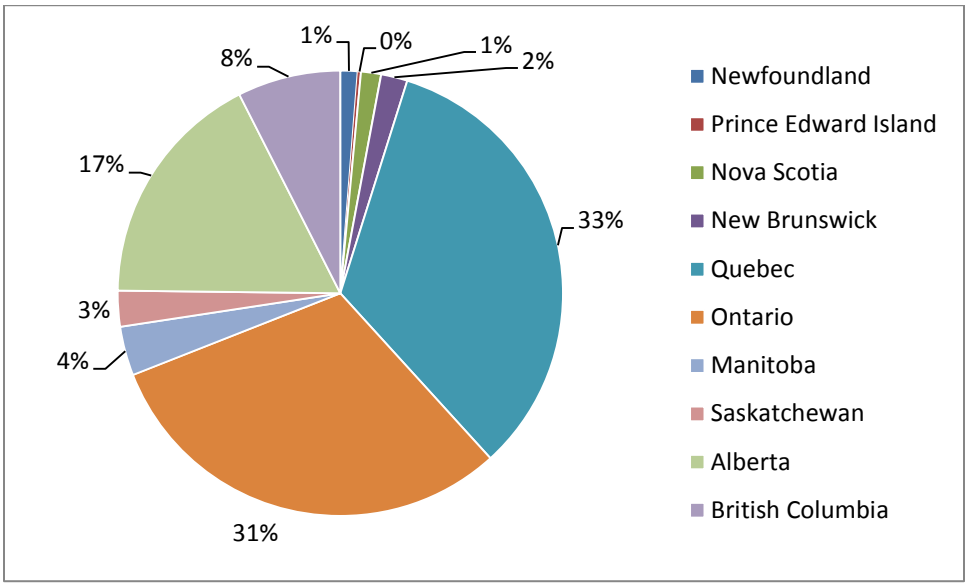
historical role of in-transportation equipment manufacturing and more recently into the West and Newfoundland to supply fossil fuel production. Adding induced impacts to the mix has disproportionately large impacts on provinces where induced expenditures tend to be local – British Columbia, Nova Scotia and Prince Edward Island.

GDP

Double-counting is inherent in output multipliers because each successive round contains the output values of its material inputs. Such double counting is avoided by observing the value added inherent in each stage of production. In this instance, the value added in the final stage of meeting final demand is revenue stripped not only of all imports but also all material inputs. It is mathematically equal to direct GDP. Similarly, the indirect GDP is the GDP generated by supplying industries. Induced GDP that called forth by demands wage earners in the supplying industries to meet direct and indirect GDP to meet demands of both motorcyclists and those spending from incomes earned in supply chains meeting those demands and others supplying induced impacts.

Domestic direct GDP at basic prices is $642.8 million equal to production GDP at basic prices less its indirect components. Total impacts are distributed across the country as demonstrated in **Chart II-8**. Ontario and Quebec despite their concentrations in traditional manufacturing experience total impacts that are 1%-2% less than each of their direct GDP shares. Alberta and British Columbia pick up those percentages on the total GDP impacts.

Chart II-8: Provincial GDP Impact Shares ($1,388.9 million)



Note: Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

GDP at base prices is the metric against which Smith Gunther Associates estimates GDP production and total GDP multipliers. In addition to direct GDP, indirect GDP, in supplying inputs to the industry, is $428.6 million and the induced GDP impacts add $317.4 million. The corresponding national multipliers for the direct and indirect impacts relative to output, discussed in the previous table, are .80 and 1.03 and relative to direct GDP in **Table II-2**, 1.67 and 2.16.

Provincial breakouts appear in **Table II-2** with the first set of multipliers being relative to domestic output in the previous table and the second set being with respect to direct GDP. The first set of multipliers may be used to provide quick estimates of provincial GDP impacts from new or additional domestic output on motorcycling events. The final set of GDP multipliers tend to be higher than output ones.

Table II-2: Canadian GDP ($1,000s) and GDP Multipliers For Recreational Motorcycling 2014*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Direct	6,878	1,557	9,339	13,624	222,382	204,904	24,161	15,526	103,958	40,043
Direct & indirect	13,437	2,313	14,373	10,855	347,943	362,771	36,728	26,099	177,790	68,833
Direct, indirect & induced	16,447	3,040	19,166	25,262	437,833	480,097	46,630	33,117	227,640	97,841
Domestic Output Multipliers										
Direct & indirect	1.22	0.93	0.86	0.68	0.73	0.77	0.87	0.90	0.94	0.91
Direct, indirect & induced	1.50	1.23	1.14	0.86	0.92	1.02	1.10	1.14	1.20	1.29
GDP Multipliers										
Direct & indirect	1.95	1.49	1.54	1.46	1.56	1.77	1.52	1.68	1.71	1.72
Direct, indirect & induced	2.39	1.95	2.05	1.85	1.97	2.34	1.93	2.13	2.19	2.44

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Labour Incomes

Labour incomes are the major share of GDP by industry. In 2014, motorcycling generated direct labour income of $420.0 million. Direct and indirect labour income was $675.1 million and inclusive of induced labour incomes reached $826.5 million. The resulting national multipliers

are 1.61 for the indirect impacts and 1.97 for the direct and indirect impacts. Provincial levels and related multipliers appear in **Table II-3**. Not surprisingly, relatively high wage provinces possess the stronger multipliers.

Table II-3: Canadian Labour Income ($1,000s) and Labour Income Multipliers for Recreational Motorcycling 2014*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Direct	4,873	960	6,498	9,444	146,057	128,509	14,009	9,467	70,530	29,395
Direct & indirect	6,640	1,428	9,563	13,218	223,372	229,915	21,644	14,328	107,008	47,580
Direct, indirect & induced	7,808	1,744	11,782	15,679	266,757	288,999	26,140	17,117	128,727	61,130
Labour Income Multipliers										
Direct & indirect	1.36	1.49	1.47	1.40	1.53	1.79	1.54	1.51	1.52	1.62
Direct, indirect & induced	1.60	1.82	1.81	1.66	1.83	2.25	1.87	1.81	1.83	2.08

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Employment (FTEs)

Motorcycling incomes called forth the equivalent of 7,855 full time equivalent jobs (FTEs) directly as well as 4,302 indirectly and 3,057 induced. The national multipliers were then 1.55 and 1.94. Total national employment impacts are the sum of the three at 15,214 FTEs. FTEs consolidate part-time jobs into FTEs so that the corresponding number of jobs created is 9,087 directly, 4,752 indirectly and 3,613 induced for a total of 17,452. To put that total into context, this level of employment amounts to about 2.5% of those employed in information, culture and recreation, and 12% of those employed by utilities[46].

Contrasting provincial performances in **Table II-4** reveals the concentration of direct FTEs in Quebec followed by Ontario and Alberta with shift in emphasis towards Ontario inclusive of indirect and induced impacts. Total FTE impacts are 5,310 in Quebec, 4,960 in Ontario followed

[46] http://www.statcan.gc.ca/tables-tableaux/sum-som/I01/cst01/labr67a-eng.htm Sourced (May 30, 2015). Statistics Canada Table 282-0088 – *Labour force survey estimates (LFS), employment by North American Industry Classification System (NAICS), seasonally adjusted and unadjusted, monthly (persons)*, CANSIM (database). (Accessed 2015-05-31).

by Alberta at 2,053 and British Columbia at 1,210 with the rest elsewhere on the Prairies and in the Atlantic.

Table II-4: Canadian Employment and Employment Multipliers For Recreational Motorcycling 2014*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Direct	97	24	149	206	2,932	2,185	293	186	1,198	581
Direct & indirect	124	36	215	282	4,341	3,844	436	272	1,681	920
Direct, indirect & induced	147	43	268	343	5,310	4,960	537	334	2,053	1,210
FTE Employment Multipliers										
Direct & indirect	1.28	1.43	1.44	1.37	1.48	1.76	1.49	1.46	1.40	1.58
Direct, indirect & induced	1.52	1.77	1.80	1.66	1.81	2.27	1.83	1.79	1.71	2.08

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Taxes on Products and Production

Current I/O tables also estimate both federal and provincial taxes accruing from motorcycling at two levels combined direct and indirect and the former inclusive of the induced impacts. Nationally, direct and indirect motorcycling impacts generate $98.8 million in product taxes and $270,000 in production taxes. Including indirect impacts augments these figures to $117.1 million and $454,000 respectively. In aggregate, provincial governments raise $114.8 million in product taxes arising from recreational motorcycling and $14.9 million in production taxes from direct and indirect production. Inclusive of the induced impacts, these figures rise to $143.3 million in product taxes arising from recreational motorcycling and $23.3 million in production taxes.

The provincial breakouts are available in **Table II-5**.

Table II-5: Canadian Product and Production Taxes Attributable To Recreational Motorcycling 2014 ($1,000s)*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Federal										
Direct & indirect										
Product	1,518	344	1,847	2,143	32,550	25,952	3,932	2,574	21,503	6,402
Production	6	1	7	6	76	124	13	3	30	23
Direct, indirect & induced										
Product	1,729	393	2,157	2,544	38,350	32,019	4,566	2,988	24,508	7,810
Production	8	2	11	9	122	197	17	5	45	38
Provincial										
Direct & indirect										
Product	2,300	573	3,114	3,121	51,972	35,147	4,455	2,536	3,167	8,446
Production	169	75	110	419	6.478	3,639	778	277	1,962	939
Direct, indirect & induced										
Product	2,702	659	3,714	3,843	62,295	45,079	5,500	3,136	5,544	10,834
Production	218	108	158	608	10,402	5,763	1,078	478	2,950	1,536

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Relative to population sizes, the federal government relies inordinately on product taxes in Alberta while the lack of a sales tax in Alberta reduces that province's tax take on product sales whether or not induced impacts are included. Both Quebec and Ontario continue to benefit from production taxes especially on mining operations mostly other than fossil fuels triggered by off-road motorcycle use. In keeping with their constitutional rights tied to responsibility for resources, the provinces are active in the collection of royalties from resource production which explains provincial predominance in collecting revenue from production relative to the Federal government.

Dynamic Analysis

Background and Assumptions for REMI Analyses

Analyses carried out utilizing REMI yield dynamic results. REMI results differ from those using I/O tables for several reasons. Consumer expenditures used to stimulate the economy cover broader categories in REMI than in the I/O analyses and are therefore open to linkages that may be inappropriate, such as ones for all vehicles as opposed to just motorcycles. The REMI model is also up-to-date and complete in its capture of induced impacts. Further, these economic linkages happen over time where the dynamic model is more suited than the I/O for capturing them because static I/O approach ignores dynamic issues. The second advantage of REMI is that it facilitates testing the underlying assumption behind I/O that the consumption of motorcycling

activities is taken out of savings, spending abroad and/or additional earnings undertaken to facilitate the activity. REMI also yields metrics not covered by the I/O analyses.

The first section of REMI analysis makes the parallel assumptions with the I/O analysis of assuming that funds for motorcycling do not impinge on other expenditures in Canada. Rather than utilizing savings the impacts would be similar if the alternative use of funds were spent travelling abroad using foreign transit or just blowing the funds gambling outside of Canada e.g. Los Vegas. A second segment of the REMI-based analysis tests that assumption by assuming that 76% of expenditures on motorcycling come from across the board reductions of other household expenditures. The first approach facilitates comparisons between the two analytical approaches under reasonably similar assumptions while the second segment is more realistic.

The first approach ensures comparability with the I/O results because it:

- Re-aggregates the I/O expenditure data for REMI consumption categories; and,
- Deploys the regional breakouts for the I/O tables to split annual data between Ontario and the rest.

By extension it:

- Assumes 2.5% annual growth in all motorcycling purchases ranging from motorcycles to apparel, travel, etc. ; and,
- Presumes that all motorcycle expenditures would otherwise have been saved or been spent abroad.

For the above reasons, impacts in this section should be treated generating maximum estimates while the following segment is more constrained.

REMI Results: Without Substituting for Alternative Expenditures

The REMI model produces outcomes on several measures of economic activity - Output, GDP and Personal Income (PI). Further, PI is subdivided between personal income taxes and disposable income. Personal taxes cover-off personal income taxes split between federal and provincial governments. Personal income taxes raised by province are those generated within the province rather than accruing to it.

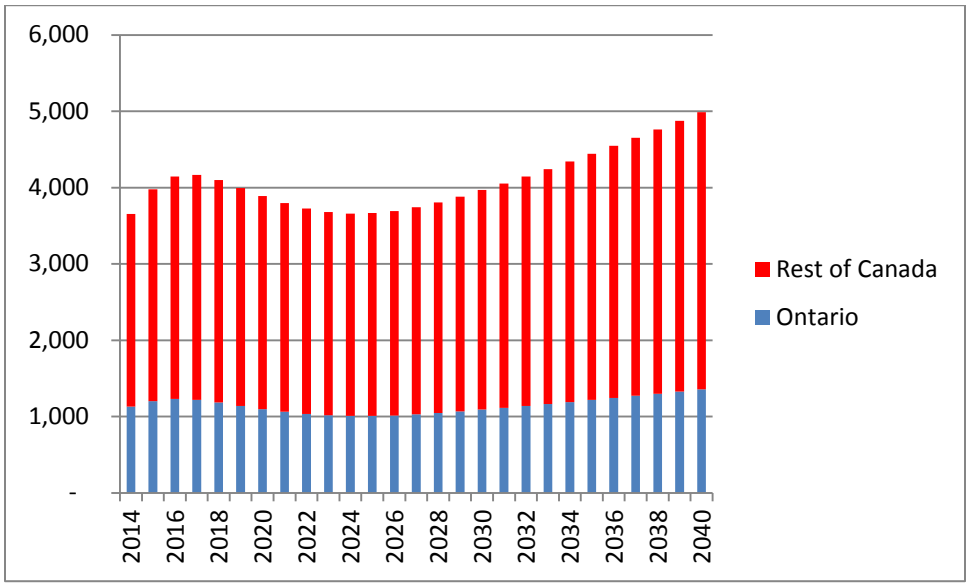
Personal disposable income is also an important metric because unlike PI which partially accrues to income taxes, it identifies the income over which citizens personally control. Increasing it indicates greater freedom of choice! REMI labour statistics capture changes in jobs, not FTEs. In all cases, REMI estimates are relative to its base case annually in order to answer the question, “What would have happened with recreational motorcycling and in this section without curtailing alternative expenditures?” In this segment Smith Gunther’s assumptions are then in tandem with those of Statistics Canada. Although not broken out within REMI, allocations for provinces for other than Ontario are available in the next section with data in Appendix 2.

Output

REMI estimates of economic output extend estimates from the I/O analysis. REMI constant dollar results are in 2011 dollars whereas the I/O estimates were in 2014 dollars which partially offset incremental REMI-based estimates benefit from capturing additional induced linkages excluded in the I/O Tables.

As noted in **Chart II-9**, from 2014-2030. Canadian annual output impacts are in the range of $3.9 billion ±$265 million of which between $1.0 billion and $1.2 billion occur in Ontario. Breakouts for other provinces are

Chart II-9: Output Impacts 2014-2040 (Millions of Fixed 2011 CND. $)

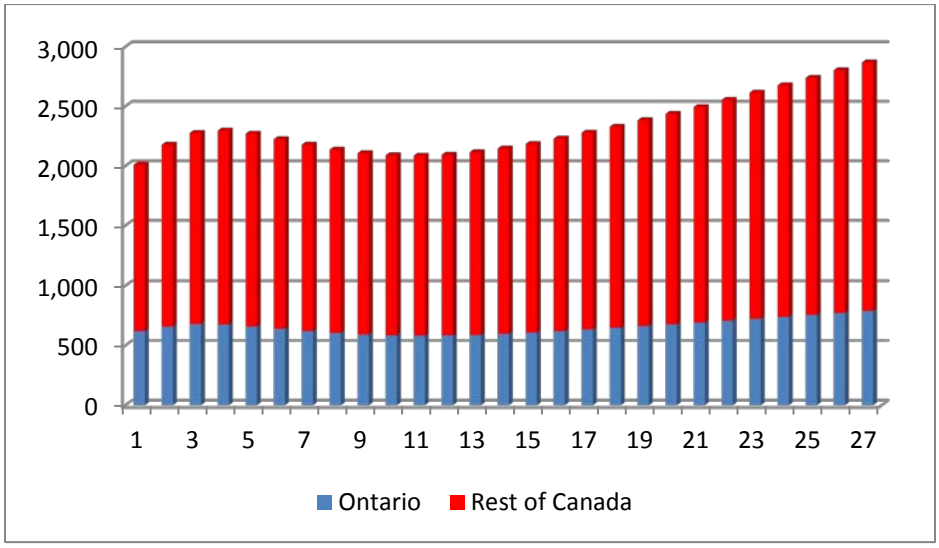


Reflecting expected slower provincial growth relative to the rest of Canada, Ontario's share of Canadian output declines from in 31% to 27%, despite some short-term growth.

GDP

As noted earlier the GDP is void of the double counting plaguing output measures. As noted in **Chart II-10**, in this case GDP is a little more than half as large as current output. Due to productivity changes, it grows faster than output with Ontario's impact share from motorcycling expected to fall to under a quarter by 2040.

Chart II-10: GDP Impacts 2014-2040 (Millions of Fixed 2011 CND. $)

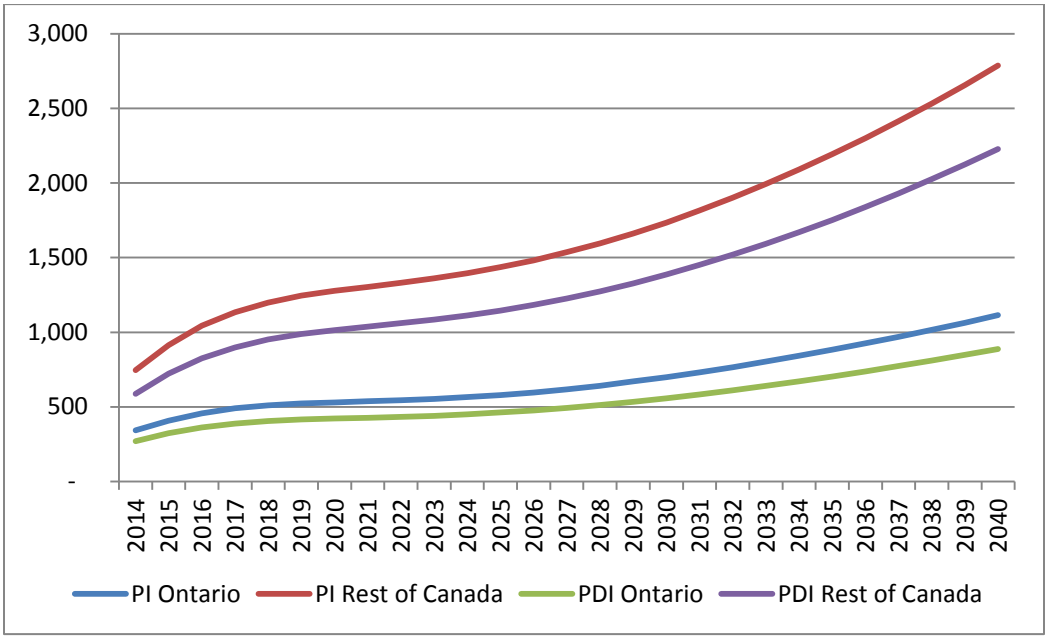


Personal Income and Personal Disposable Income

Unlike the above measures in constant 2011 dollars, REMI measures personal income in current or "as spent" dollars. It does so because the difference between the two is personal income tax which governments like to have denominated in current dollars. Because even minor inflation accumulates over time these metrics rise faster as noted in **Chart II-11** than do the previous two "real dollar" output measures. Canadian PI impacts commence at $2.0 billion rising to $3.9 billion which after personal income taxes yields PDI impact in the $859 million to $3.1 billion range over time. These impacts are more heavily felt in the West due to higher average incomes there than in Ontario.

Personal incomes generated from motorcycling in Ontario start modestly at $334 million in 2014 before rising to $1,114 million in 2040 with corresponding increased impacts on PDI of $271 million to $888 million yielding annual personal tax revenues of $72 million to $226 million. At 5%, the stream of income tax generated in Ontario has a NPV of $1.9 billion. Parallel annual tax impacts for the rest of the country increase from $159 million in 2014 to $558 million in 2040 yielding a NPV of $4.6 billion.

Chart II-11: PI and PDI Impacts 2014-2040 (Millions Current $)

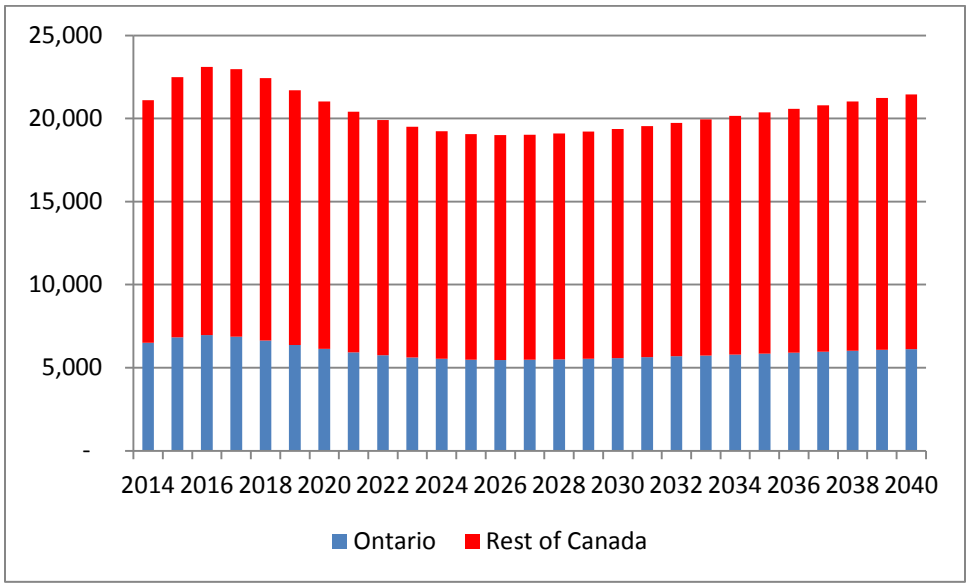


Jobs

REMI delivers information on jobs not FTEs so that comparisons with the I/O results need to be made on jobs. Due to its more thorough tracking of induced activities REMI captures more jobs than does Statistics Canada's closed model. REMI's job estimates without any offsetting cutbacks in other consumption for recreational motorcyclists in 2014 are 21,100 up from the 17,456 jobs captured by the Statistics Canada I/O approach.

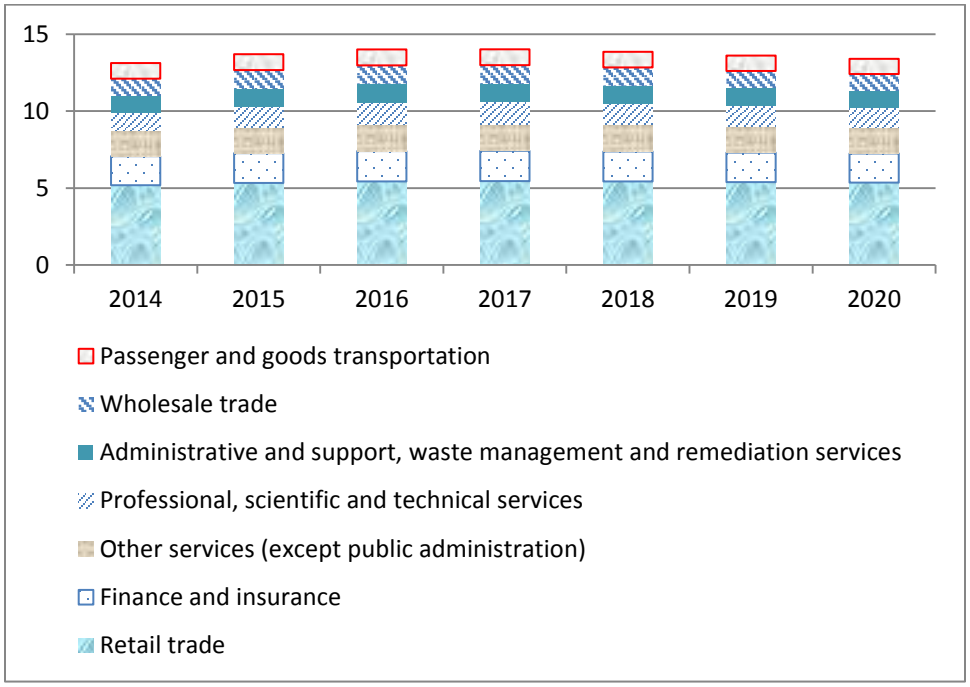
They are distributed between Ontario and the rest of the country as envisaged in **Chart II-12** where Canadian impacts peak at 23,100 in 2016 but are in the 20,000±1,023 range from 2020-2038. These are annual impacts relative to the base case. Even with the underlying assumption of the same growth rates in recreational motorcycling in each jurisdiction, Ontario's share of job impacts shrinks from 31% to 29% over the period.

Chart II-12: Job Impacts 2014-2040 (#)



The vast majority of incremental jobs from motorcycling are in services as illustrated in **Chart II-13** for the nation with retail clearly playing the major role followed by insurance. Repair and maintenance services are included in "Other services (except public administration)". While critical they each play a relatively small role because motorcyclists have a higher propensity for doing their own repairs than do other owners of other vehicles.

Chart II-13: National Job Impacts by Major Service Sector 2014-2040 (1,000s)



Note: Column block in same order as the tile key

Provincial Impacts

This section contains metrics for provinces. Ontario findings, covered above, are consolidated before proceeding to vignettes for each other province from east to west. Provincial metrics cover recreational motorcycling on total domestic output, Real Gross Domestic Product (RGDP), jobs, PI and PDI inclusive with the major difference between the two being personal income taxes[47]. In addition, product and production taxes collected by governments inform them on the impacts of motorcycling on their revenues. The assumptions are those pertaining above with no alternative domestic spending. This section covers all on-road and off-road recreational motorcycling.

Ontario

Aggregate Output

Because earlier charts II-9, II-10 and II-12 cover Ontario as well as Canada, there is no need to repeat them here. The I/O analysis of recreational motorcycling is for direct expenditures of $469 million yielding total output impacts of $976 million in 2014. From the REMI analysis 2014 to 2040, Ontario output impacts run between $1.0 billion and $1.2 billion. Reflecting expected slower provincial growth relative to the rest of Canada, Ontario's share of Canadian output declines from 31% to 27%, despite some short-term growth.

[47] The more complete text also includes fulltime equivalent employment and wages and salaries.

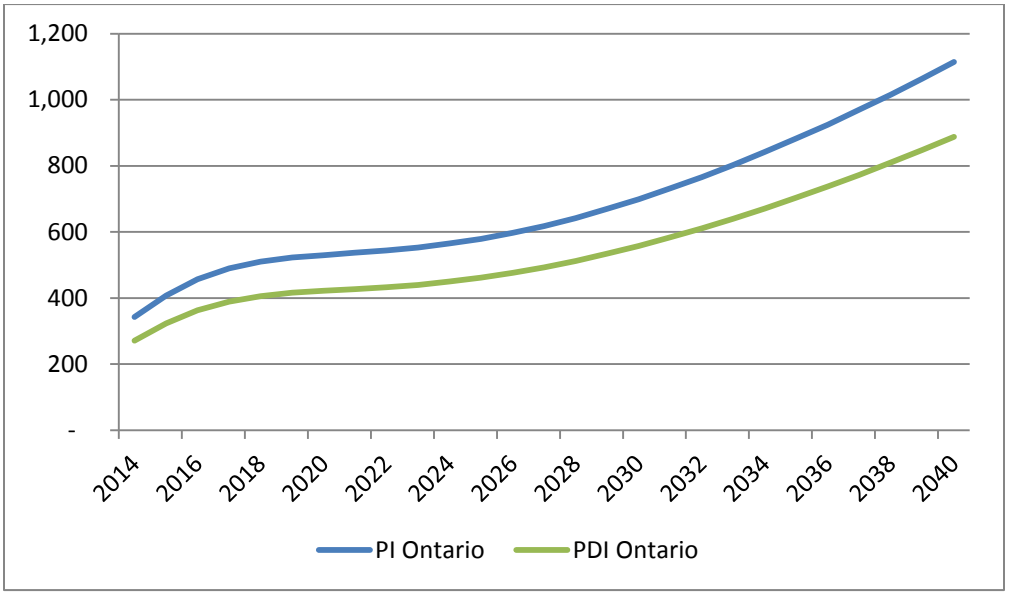
RGDP

At $205 million, Ontario's share of direct RGDP is relatively small compared to national shares of output from motorcycling. Within the I/O modelling framework, that direct RGDP is expected to generate total impacts on Ontario RGDP of $481 million. As above, under REMI, estimates are larger at $619 million in 2014 rising to $788 million in 2040 but nevertheless fall to under a quarter of national totals by 2040.

Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-14, current dollar PI generated from motorcycling in Ontario starts modestly at $334 million in 2014 before rising to $1,114 million in 2040 with corresponding increased impacts on PDI of $271 million to $888 million yielding incremental annual personal tax revenues of $72 million to $226 million. At 5%, the stream of income tax generated in Ontario has a net present value (NPV) of $1.9 billion 2014-2040. Parallel tax impacts for the rest of the country from 2014 to 2040 are $159 million to $558 million yielding a NPV of $4.6 billion.

Chart II-14: Ontario PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)



These are important impact measures because PDI indicates increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the Federal and Ontario governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or having the province go cap-in-hand to the Federal government for more funding.

In addition, incremental annual product and production taxes raised in Ontario generate $32,216,000 in revenues for the Federal government and $50,842,000 for the province.

Jobs

In 2014 REMI's job impact estimates for Ontario are 6,497 as noted in Chart II-12. Unlike the other indicators which grow over time, jobs do so only marginally because labour productivity growth in REMI nearly keeps pace with recreational motorcycling growth. Clearly growing recreational motorcycling faster than labour productivity growth could reverse this result. Ontario job impacts peak at 6,959 in 2016 but are in the 5,800±332 range from 2020-2040. These are annual impacts relative to the base case. Ontario's share of job impacts shrinks from 31% to 29% over the period.

Other Provincial Impacts

In aggregate other provincial impacts are determined econometrically within REMI as Canadian impacts less those in Ontario. In order to keep this project's costs within reason, Smith Gunther has distributed non-Ontario impacts among the remaining nine provinces through the following steps:

- REMI 2014 results have been distributed among the nine provinces in the shares determined by the 2014 I/O results; and
- Thereafter, provincial shares were initially set equal to compound average annual growth rates by province adjusted by capping the total results for the nine provinces to the REMI estimate for each subsequent year.

This process yields provincial allocations of impacts consistent with the REMI results. These provincial allocations are reported from east to west in the following sections containing information on Output, GDP, PI, PDI and personal income taxes raised in each province, and jobs. In general, data are of better quality for larger jurisdictions rather than for the smaller ones, such as Prince Edward Island[48].

Because readers are apt to be interested in their own jurisdictions, each provincial description is designed to stand alone so that the text is somewhat repetitious in the general interpretation of the results. Readers of the entire text may want to skip those repetitious sections.

[48] The non-abbreviated report also contains multiples of the sample results deployed to attain provincial totals. In jurisdictions where response rates to the questionnaire are higher and multiples used to determine provincial aggregates are correspondingly lower, such as British Columbia the data are also stronger and subject to less error.

Newfoundland and Labrador

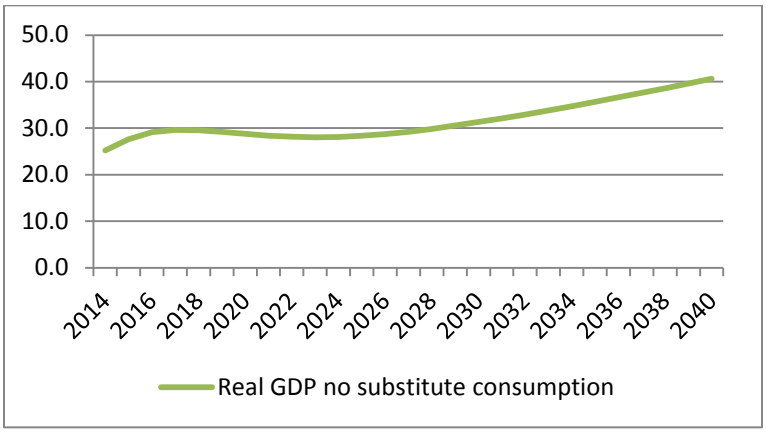
Aggregate Output

In 2014, Newfoundland and Labrador, hereafter "Newfoundland," recreational motorcycling generated $10,979,000 in direct output with total output impacts of $20,197,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $6,878,000 direct RGDP with total RGDP impacts of $16,447,000. Fostered by the offshore growth, Newfoundland's growth rate has been high relative to other provinces 2000-2014 and that is expected to continue. As expected, REMI allocated results were higher with RGDP estimates in 2014 of $25.2 million rising to $40.6 million by 2040 as noted in Chart II-15.

Chart II-15: Newfoundland RGDP Impacts 2014-2040 ($ 2011 Million)



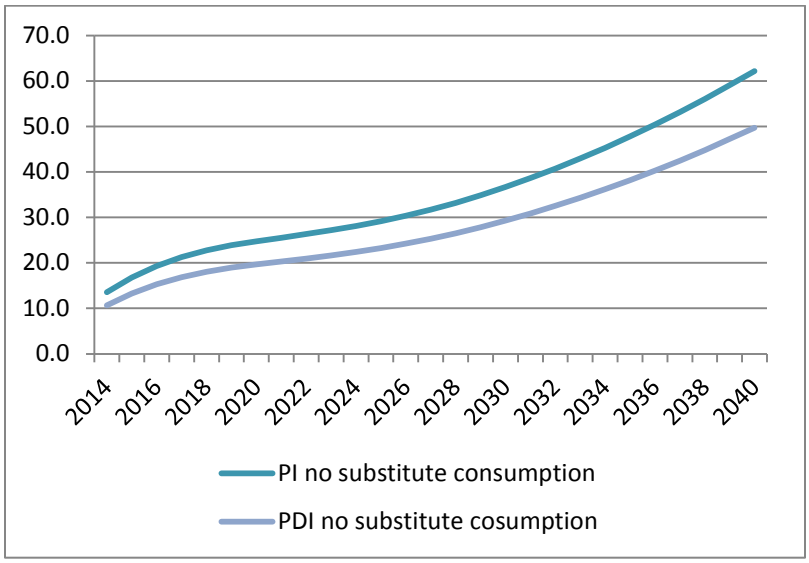
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-16, PI generated from recreational motorcycling in Newfoundland starts modestly at $13.5 million in 2014 before rising to $62.1 million in 2040 with corresponding increased impacts on PDI of $10.6 million to $49.7 million yielding incremental annual personal tax revenues of $2.9 million to $12.4 million. At 5%, the stream of income tax generated in Newfoundland has a net present value (NPV) of $94.5 million.

These are important measures because PDI indicates the increased consumer over what they want to purchase. In addition, personal income taxes add to the revenues over which the Newfoundland and/or federal government is able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Newfoundland generate $1,737,000 in revenues for the Federal government and $2,290,000 for the province.

Chart II-16: Newfoundland PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

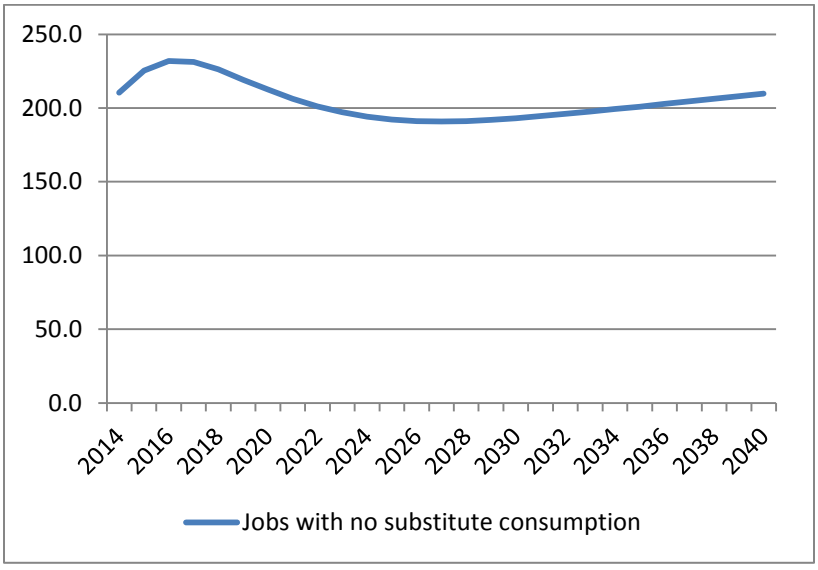


Jobs

In 2014 REMI's job impact estimates for Newfoundland are 211 as noted in Chart II-17. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing recreational motorcycling faster than labour productivity growth could reverse this result.

Newfoundland job impacts peak at 232 in 2016 but are in the 201±12 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart II-17: Newfoundland Job Impacts 2014-2040 (#)



Prince Edward Island

Aggregate Output

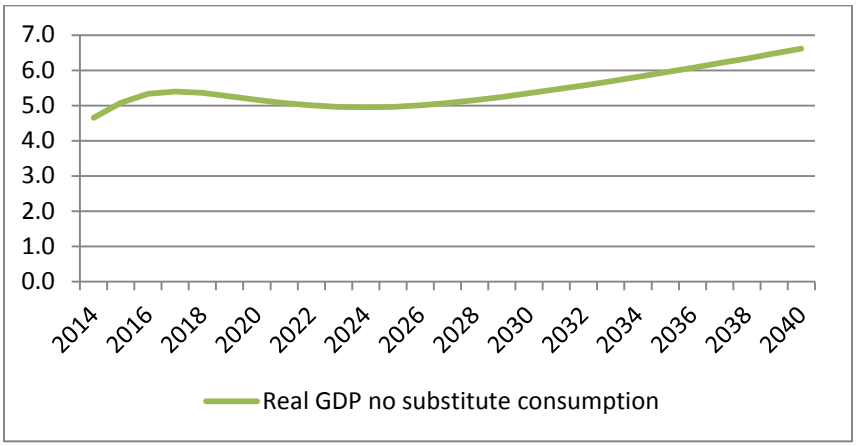
In 2014, Prince Edward Island recreational motorcycling generated $2,477,000 in direct output with a total output impact of $4,970,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $1,557,000 direct RGDP with total RGDP impacts of $3,040,000 in Prince Edward Island.

As expected REMI allocated results were higher with RGDP estimates in 2014 of $4.7 million rising to $6.6 million by 2040 as noted in Chart II-18.

Chart II-18: Prince Edward Island RGDP Impacts 2014-2040 ($ 2011 Millions)



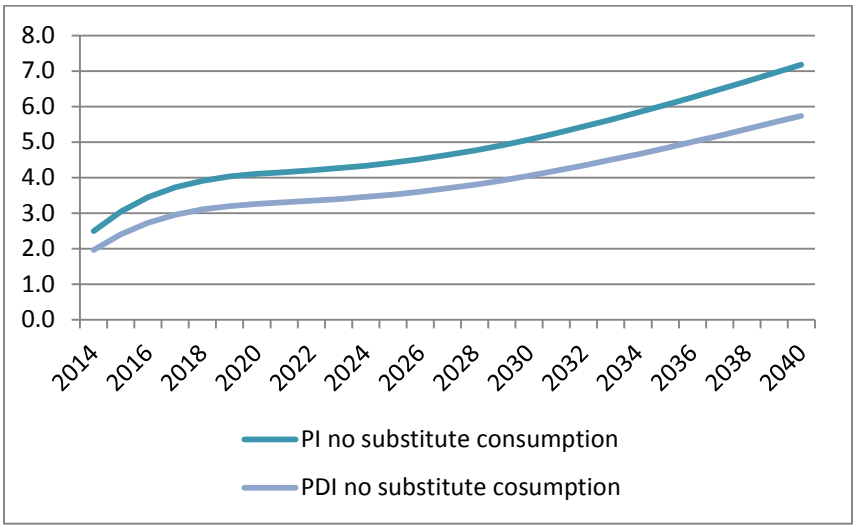
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-19, PI generated from recreational motorcycling in Prince Edward Island starts modestly at $2.5 million in 2014 before rising to $7.2 million in 2040 with corresponding increased impacts on PDI of $2.0 million in 2014 to $5.7 million in 2040 yielding incremental annual personal tax revenues of $0.5 million to $1.5 million. At 5%, the stream of income tax generated in Prince Edward Island has a NPV of $14 million.

PDI indicates the increased choice the consumers receive to exercise over what they want to purchase. In addition, personal income taxes add to the revenues over which the Federal and Prince Edward Island governments are able to exercise their judgements on their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Prince Edward Island generate $395,000 in revenues for the Federal government and $767,000 for the province.

Chart II-19: Prince Edward Island PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

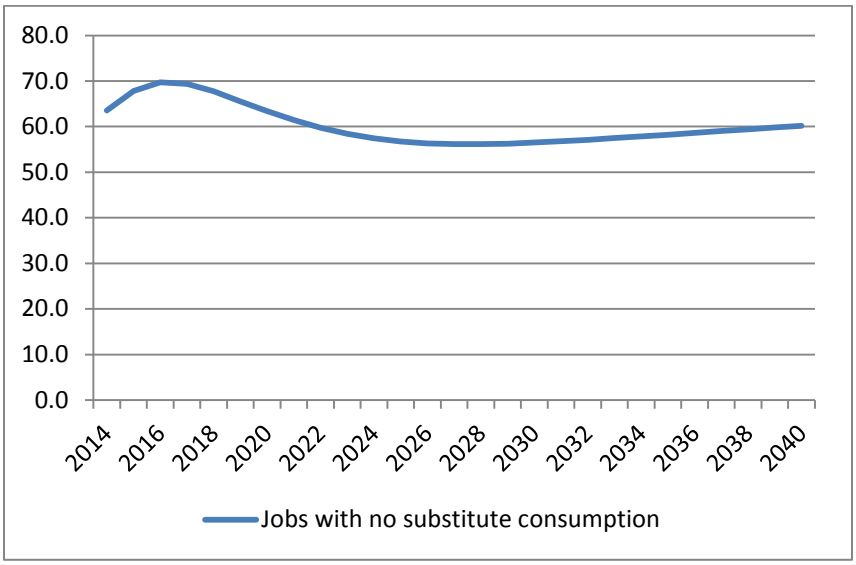


Jobs

In 2014 REMI's job impact estimates for Prince Edward Island are 64 as noted in Chart II-20. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing recreational motorcycling faster than labour productivity growth could reverse this result.

Prince Edward Island job impacts peak at 70 in 2016 but are in the 60±4 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart II-20: Prince Edward Island Job Impacts 2014-2040 (#)



Nova Scotia

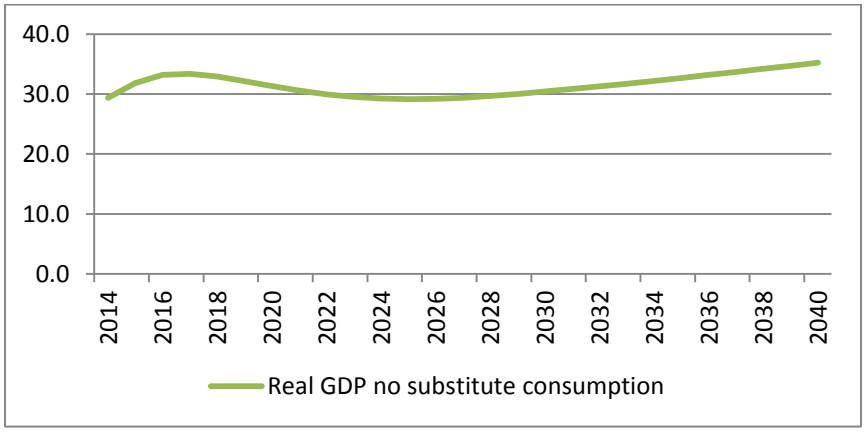
Aggregate Output

In 2014, Nova Scotia recreational motorcycling generated $16,775,000 in direct output with total output impacts of $34,519,000.

RGDP

According to the I/O analysis, these activities resulted in $9,339,000 of direct RGDP with total RGDP impacts of $19,166,000 in Nova Scotia, modest growth compared to Newfoundland. As expected REMI allocated results were higher with RGDP estimates in 2014 of $29.3 million rising to $35.2 million by 2040 as noted in Chart II-21.

Chart II-21: Nova Scotia RGDP Impacts 2014-2040 ($ 2011 Millions)



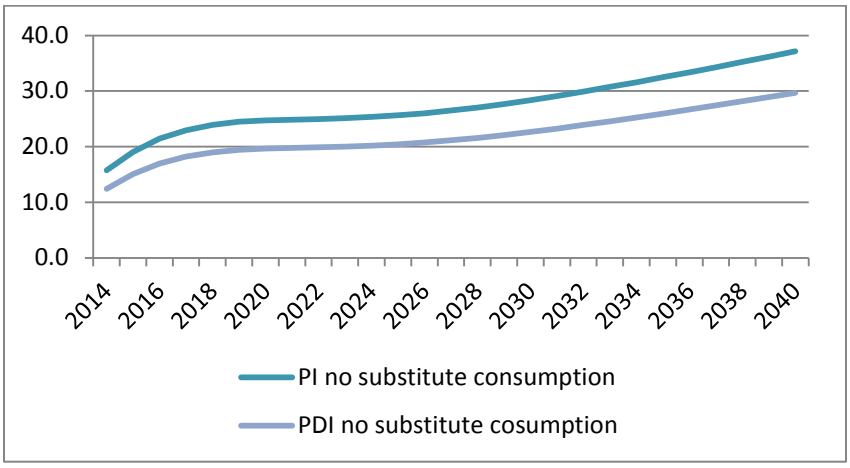
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-22, PI generated from recreational motorcycling in Nova Scotia starts modestly at $15.8 million in 2014 before rising to $37.1 million in 2040 with corresponding increased impacts on PDI of $12.7 million to $29.4 million yielding incremental annual personal tax revenues of $3.1 million to $7.7 million. At 5%, the stream of income tax generated in Nova Scotia has a NPV of $80.6 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Nova Scotia governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

Incremental annual product and production taxes raised in Nova Scotia generate $2,168,000 in revenues for the Federal government and $3,872,000 for the province.

Chart II-22: Nova Scotia PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

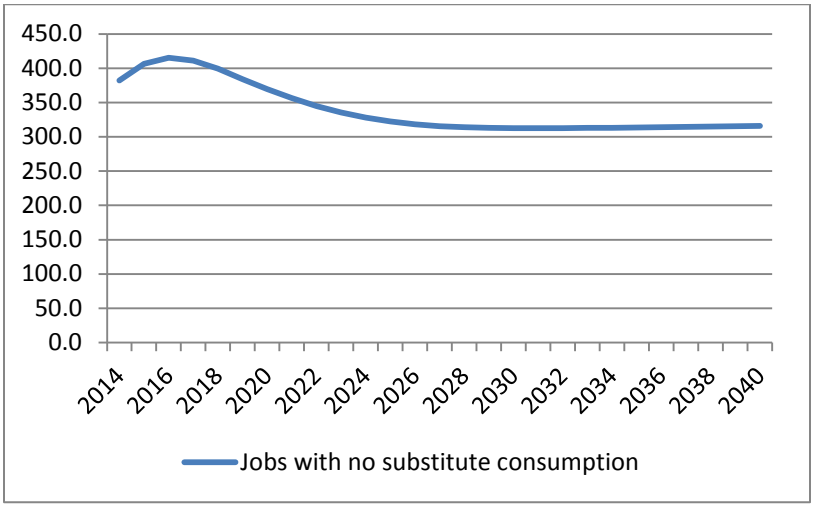


Jobs

In 2014 REMI's job impact estimates for Nova Scotia are 383 as noted in Chart II-23. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing recreational motorcycling faster than labour productivity growth could reverse this result.

Nova Scotia job impacts peak at 416 in 2016 but are in the 340±28 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart II-23: Nova Scotia Job Impacts 2014-2040 (#)



New Brunswick

Aggregate Output

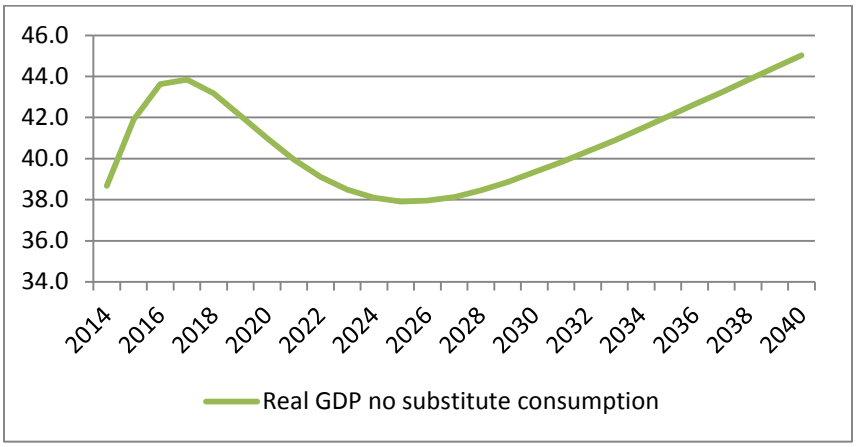
In 2014, New Brunswick recreational motorcycling generated $29,272,000 in direct output with total output impacts of $52,785,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $13,624,000 direct RGDP with total RGDP impacts of $25,262,000 in New Brunswick, modest growth compared to Newfoundland.

As expected REMI allocated results were higher with RGDP estimates in 2014 of $38.7 million rising to $45.0 million by 2040 as noted in Chart II-24.

Chart II-24: New Brunswick RGDP Impacts 2014-2040 ($ 2011 Millions)



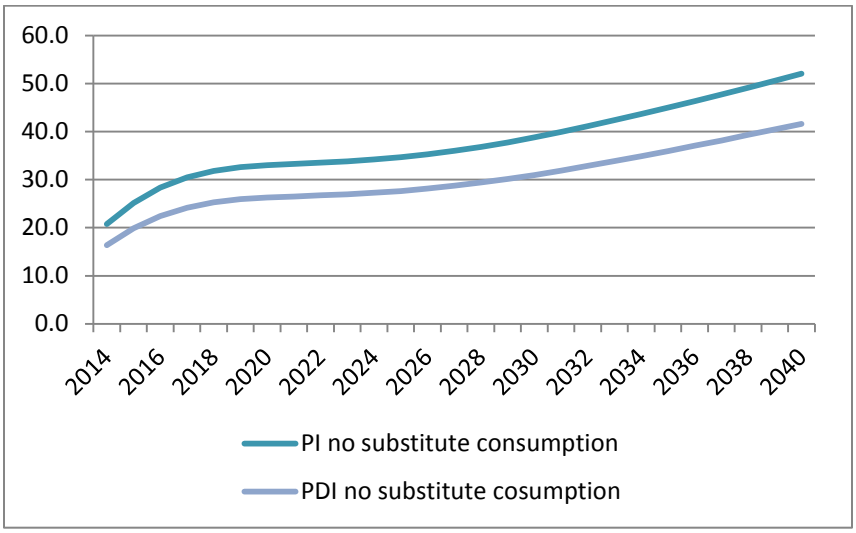
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-25, PI generated from recreational motorcycling in New Brunswick starts modestly at $20.8 million in 2014 before rising to $52.0 million in 2040 with corresponding increased impacts on PDI of $16.3 million to $41.6 million yielding incremental annual personal tax revenues of $4.5 million from 2014 to $10.4 million in 2040. At 5%, the stream of income tax generated in New Brunswick has a NPV of $109.1 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and New Brunswick governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in New Brunswick generate $2,553,000 in revenues for the Federal government and $4,451,000 for the province.

Chart II-25: New Brunswick PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

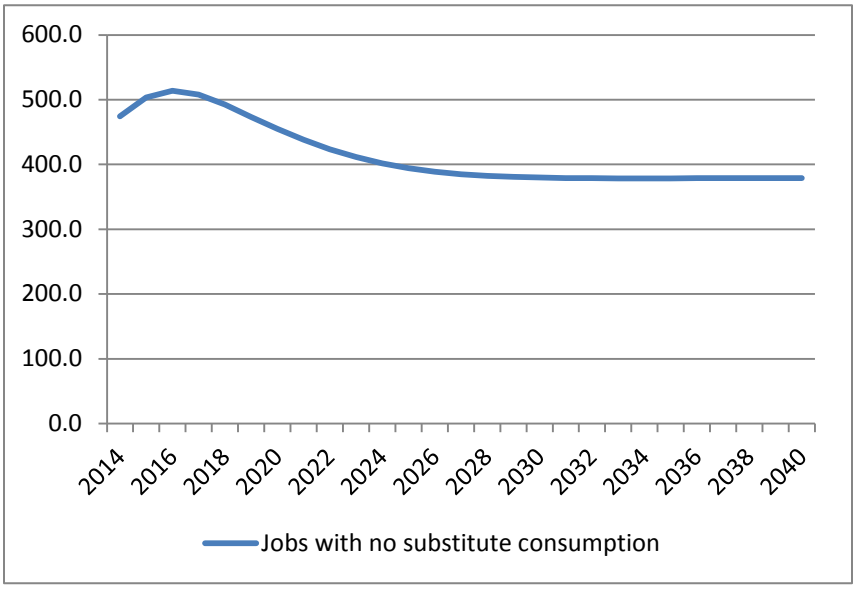


Jobs

In 2014 REMI's job impact estimates for New Brunswick are 475 as noted in Chart II-26. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing recreational motorcycling faster than labour productivity growth could reverse this result.

New Brunswick job impacts peak at 514 in 2016 but are in the 417±38 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart II-26: New Brunswick Job Impacts 2014-2040 (#)



Quebec

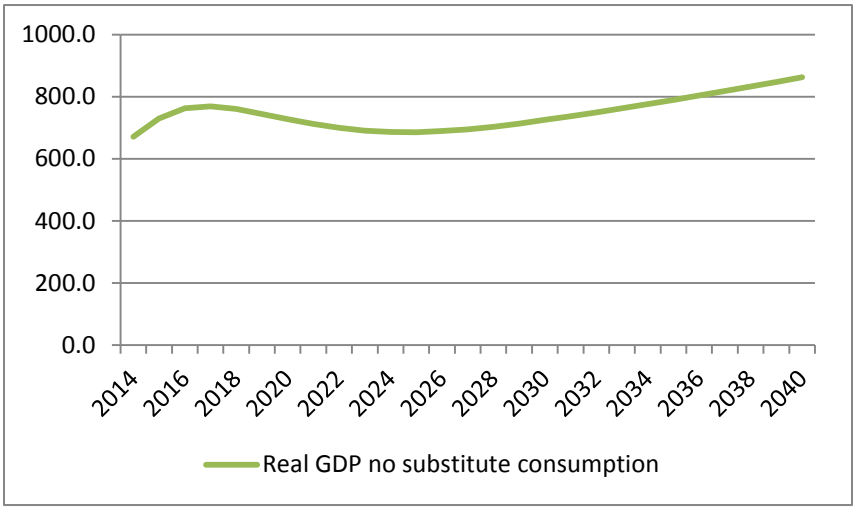
Aggregate Output

In 2014, Quebec recreational motorcycling generated $476,704,000 in direct output with total output impacts of $866,489,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $222,382,000 direct RGDP with total RGDP impacts of $437,833,000 in Quebec.
As expected REMI allocated results were higher with RGDP estimates in 2014 of $670.7 million rising to $862.1 million by 2040 as noted in Chart II-27.

Chart II-27: Quebec RGDP Impacts 2014-2040 ($ 2011 Millions)



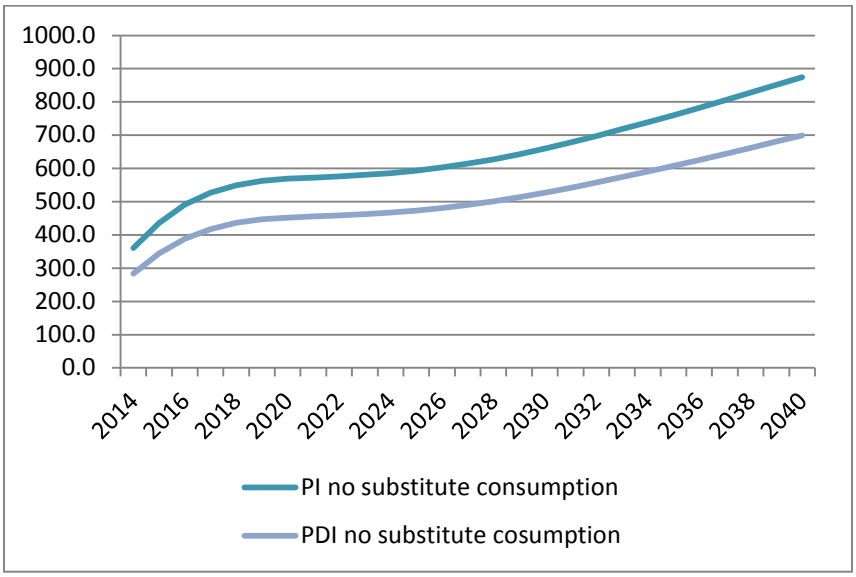
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-28, PI generated from recreational motorcycling in Quebec starts modestly at $360.2 million in 2014 before rising to $874.4 million in 2040 with corresponding increased impacts on PDI of $283.5 million to $699.3 million yielding incremental annual personal tax revenues of $76.7 million to $175.1 million. At 5%, the stream of income tax generated in Quebec has a NPV of $1,866.7 million.

These are important measures because PDI indicates the increased choice the consumers receive to exercise their wills over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Quebec governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Quebec generate $38,472,000 in revenues for the Federal government and $72,697,000 for the province.

Chart II-28: Quebec PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

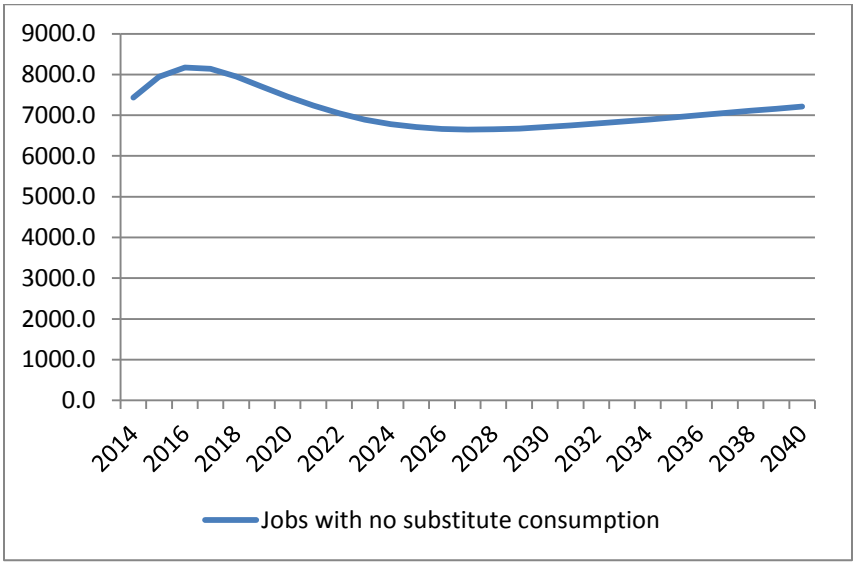


Jobs

In 2014 REMI's job impact estimates for Quebec are 7,433 as noted in Chart II-29. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly growing recreational motorcycling faster than labour productivity growth could reverse this result.

Quebec job impacts peak at 8,174 in 2016 but are in the 7,055±410 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart II-29: Quebec Job Impacts 2014-2040 (#)



Manitoba

Aggregate Output

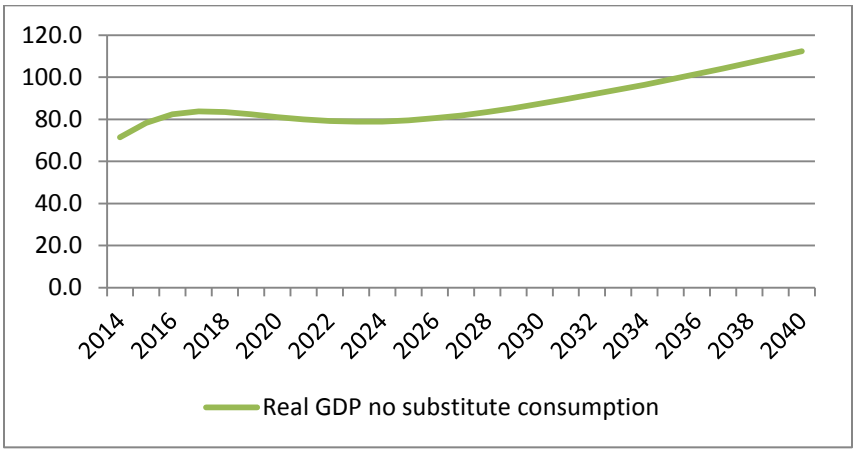
In 2014, Manitoba recreational motorcycling generated $42,392,000 in direct output with total output impacts of $80,560,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $24,161,000 direct RGDP with total RGDP impacts of $46,630,000 in Manitoba

As expected, REMI allocated results were higher with RGDP estimates in 2014 of $71.4 million rising to $112.3 million by 2040 as noted in Chart II-30.

Chart II-30: Manitoba RGDP Impacts 2014-2040 ($ 2011 Millions)



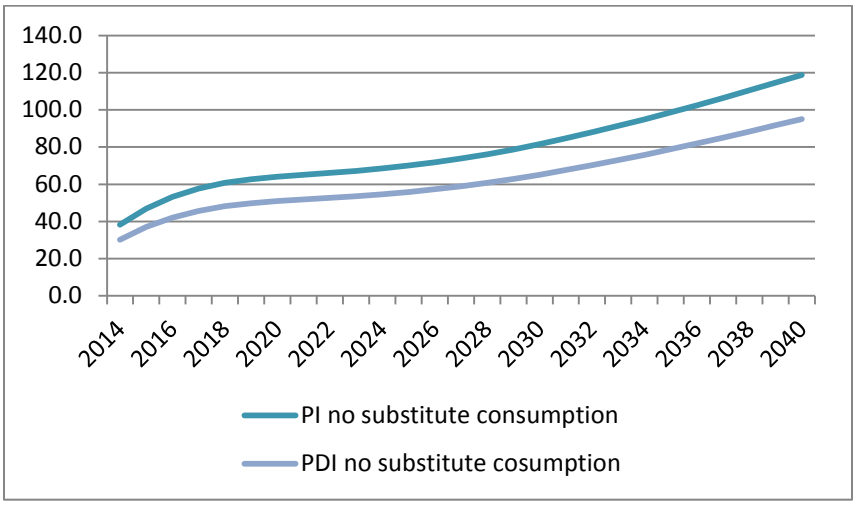
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-31, PI generated from recreational motorcycling in Manitoba starts modestly at $38.3 million in 2014 before rising to $118.8 million in 2040 with corresponding increased impacts on PDI of $30.2 million to $95.0 million yielding incremental annual personal tax revenues of $8.1 million to $23.8 million. At 5%, the stream of income tax generated in Manitoba has a NPV of $221.8million.

These are important measures because PDI indicates the increased choice the consumers receive to exercise their wills over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Manitoba governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Manitoba generate $4,583,000 in revenues for the Federal government and $6,578,000 for the province.

Chart II-31: Manitoba PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

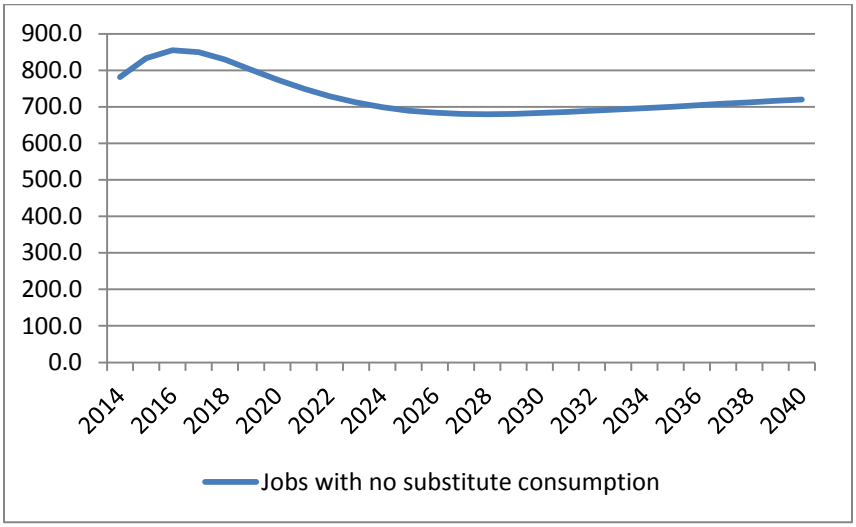


Jobs

In 2014 REMI's job impact estimates for Manitoba are 781 as noted in Chart II-32. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing recreational motorcycling faster than labour productivity growth could reverse this result.

Manitoba job impacts peak at 855 in 2016 but are in the 747±48 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart II-32: Manitoba Job Impacts 2014-2040 (#)



Saskatchewan

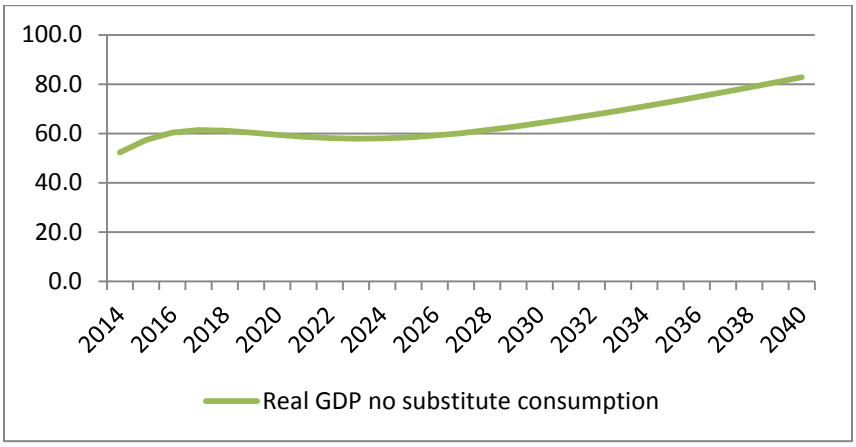
Aggregate Output

In 2014, Saskatchewan recreational motorcycling generated $20,018,000 in direct output with total output impacts of $60,516,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $15,526,000 direct RGDP with total RGDP impacts of $33,117,000 in Saskatchewan. As expected, REMI allocated results were higher with RGDP estimates in 2014 of $52.3 million rising to $82.8 million by 2040 as noted in Chart II-33, smallest impacts among Western Provinces but larger than any of the individual Atlantic ones.

Chart II-33: Saskatchewan RGDP Impacts 2014-2040 ($ 2011 Millions)



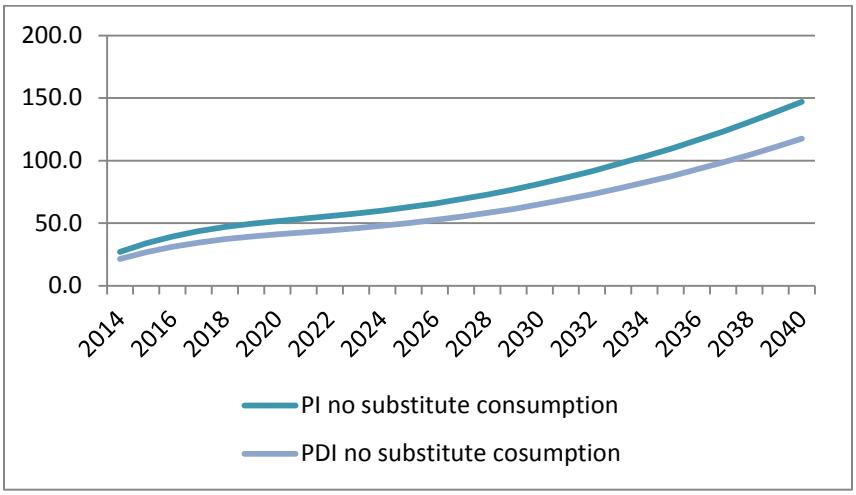
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-34, PI generated from recreational motorcycling in Saskatchewan starts modestly at $27.2 million in 2014 before rising to $146.9 million in 2040 with corresponding increased impacts on PDI of $21.4 million to $117.5 million yielding incremental annual personal tax revenues of $5.8 million to $29.4 million. At 5%, the stream of income tax generated in Saskatchewan has a NPV of $94.5 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which federal and Saskatchewan governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Saskatchewan generate $2,993,000 in revenues for the Federal government and $3,614,000 for the province.

Chart II-34: Saskatchewan PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

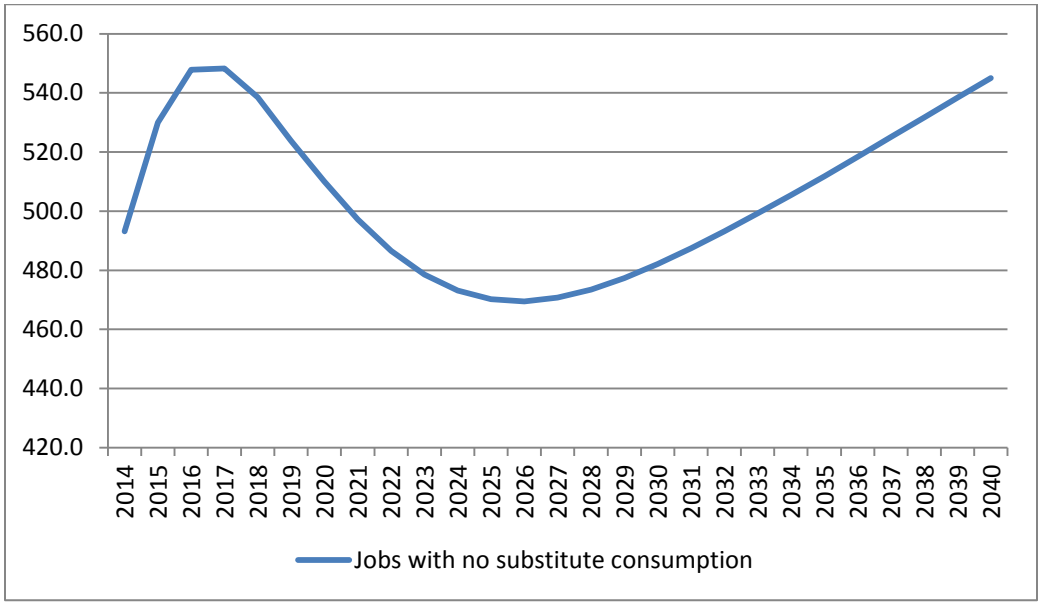


Jobs

In 2014 REMI's job impact estimates for Saskatchewan are 494 as noted in Chart II-35. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing recreational motorcycling faster than labour productivity growth could reverse this result.

Saskatchewan job impacts peak at 549 in 2017 but are in the 490±20 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart II-35: Saskatchewan Job Impacts 2014-2040 (#)



Alberta

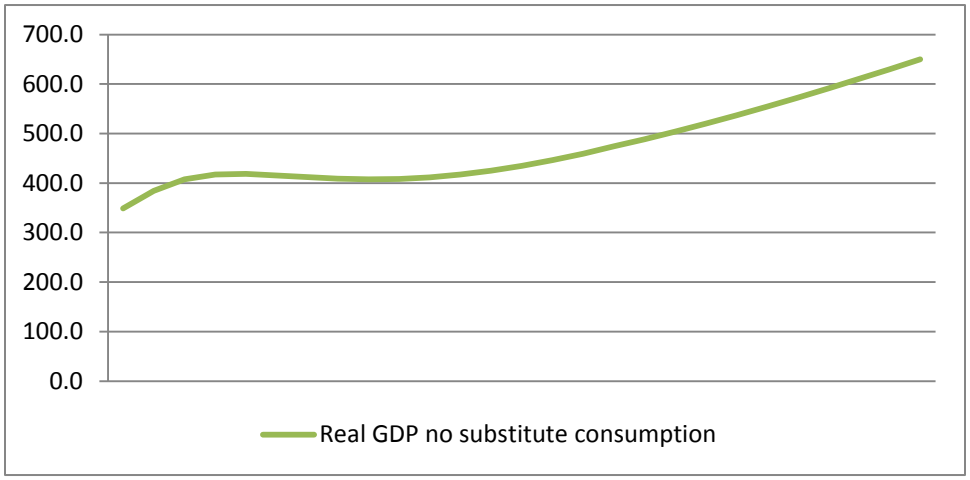
Aggregate Output

In 2014, Alberta recreational motorcycling generated $189,531,000 in direct output with total output impacts of $401,533,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $103,958,000 direct RGDP with total RGDP impacts of $227,640,000 in Alberta.
As expected, REMI allocated results were higher with RGDP estimates in 2014 of $348.5 million rising to $650.2 million by 2040 as noted in Chart II-36.

Chart II-36: Alberta RGDP Impacts 2014-2040 ($ 2011 Millions)



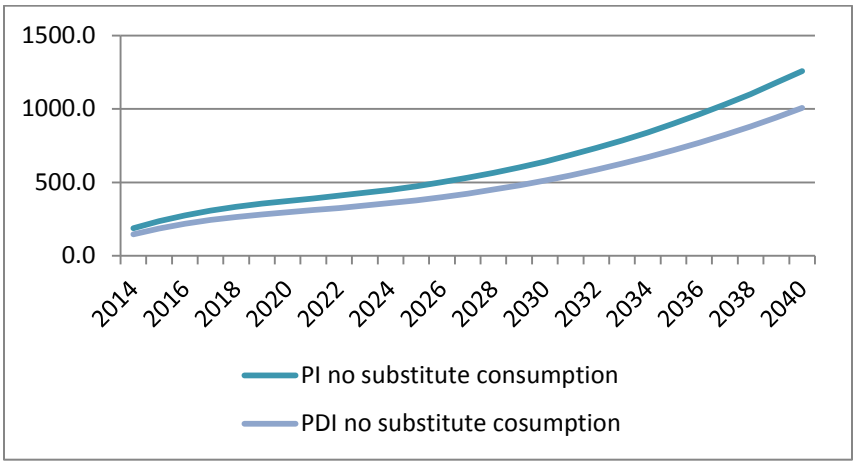
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-37, PI generated from recreational motorcycling in Alberta starts modestly at $187.2 million in 2014 before rising to $1,258.2 million in 2040 with corresponding increased impacts on PDI of $147.3 million to $1,006.2 million yielding incremental annual personal tax revenues of $39.9 million to $252.0 million. At 5%, the stream of income tax generated in Alberta has a NPV of $1,589.3 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Alberta governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for funding.

In addition, incremental annual product and production taxes raised in Alberta generate $24,583,000 in revenues for the Federal government and $8,494,000 for the province.

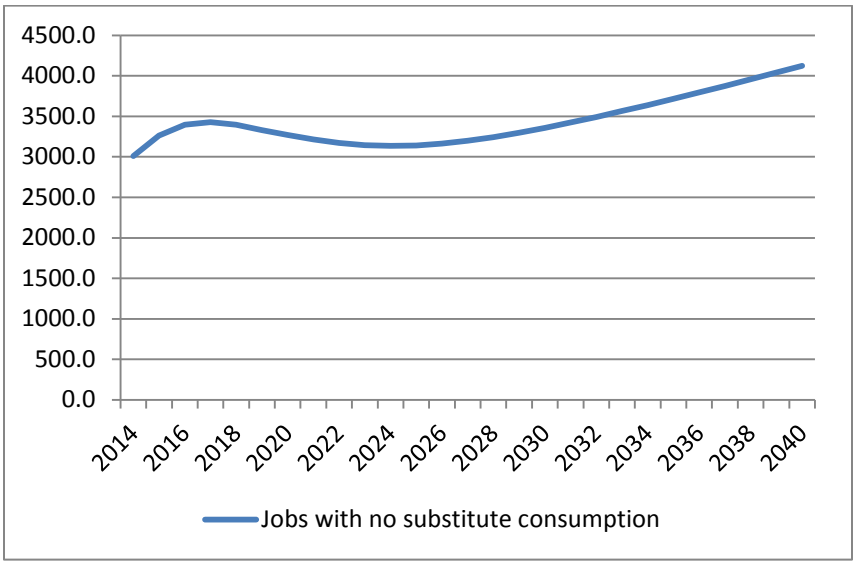
Chart II-37: Alberta PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)



Jobs

In 2014 REMI's job impact estimates for Alberta are 3,009 as noted in Chart II-38. Alberta job impacts peak temporarily at 3,429 in 2017 before falling back to 3,136 after which they rise steadily to 4,124 by 2040. These annual impacts are incremental relative to the base case. In this case they grow to keep pace with the more rapidly growing Alberta economy which increases participation in recreational motorcycling compared to the rest of the country.

Chart II-38: Alberta Job Impacts 2014-2040 (#)



British Columbia

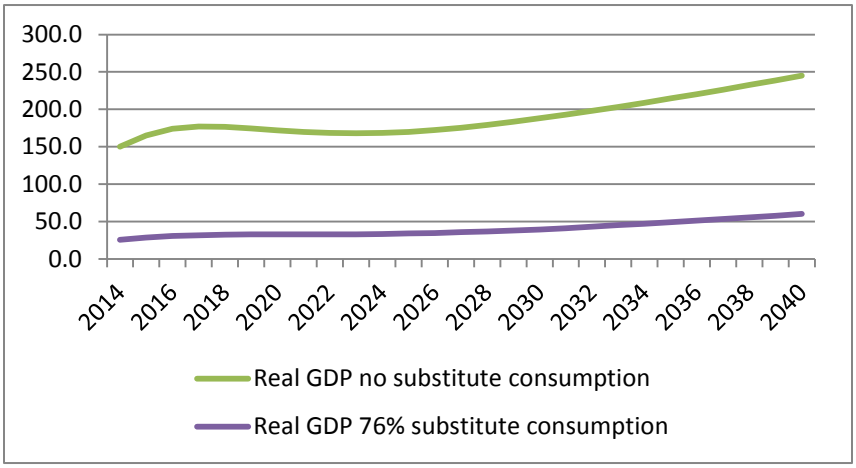
Aggregate Output

In 2014, British Columbia recreational motorcycling generated $75,772,000 in direct output with total output impacts of $175,050,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $40,043,000 direct RGDP with total RGDP impacts of $97,841,000 in British Columbia. As expected, REMI allocated results were higher with RGDP estimates in 2014 of $150.2 million rising to $245.2 million by 2040 as noted in Chart II-39.

Chart II-39: British Columbia RGDP Impacts 2014-2040 ($ 2011 Millions)



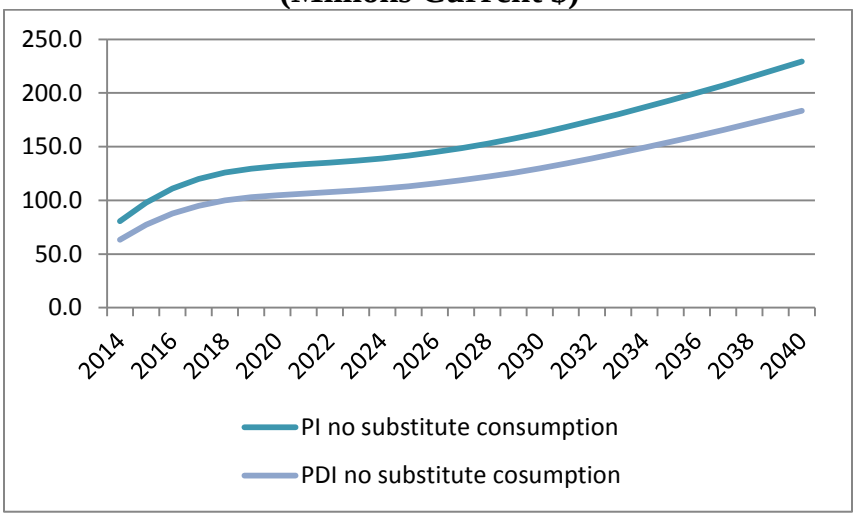
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart II-40, PI generated from recreational motorcycling in British Columbia starts at $80.4 million in 2014 before rising to $229.2 million in 2040 with corresponding increased impacts on PDI of $63.3 million to $183.3 million yielding incremental annual personal tax revenues of $17.1 million to $45.9 million. At 5%, the stream of income tax generated in British Columbia has a net present value (NPV) of $447.8 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and British Columbia governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in British Columbia generated $7,848,000 in revenues for the Federal government and $12,370,000 for the province.

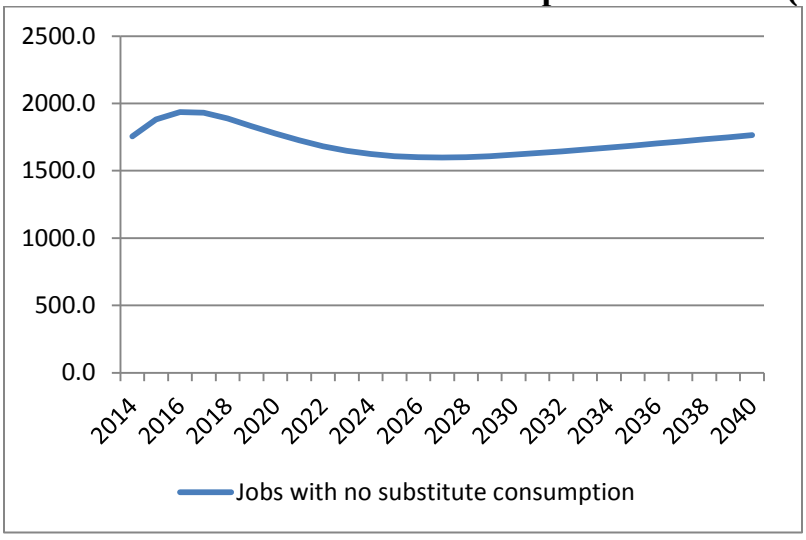
Chart II-40: British Columbia PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)



Jobs

In 2014 REMI's job impact estimates for British Columbia are 1,757 as noted in Chart II-41. They peak at 1,936 in 2016 before a gentle decline into the mid-2020s. From 2020 to 2040 job impacts are in the range of 1,737±40. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly growing recreational motorcycling faster than labour productivity growth could reverse this result. These annual impacts are incremental relative to the base case.

Chart II-41: British Columbia Job Impacts 2014-2040 (#)



REMI Results: Substituting for Alternative Expenditures

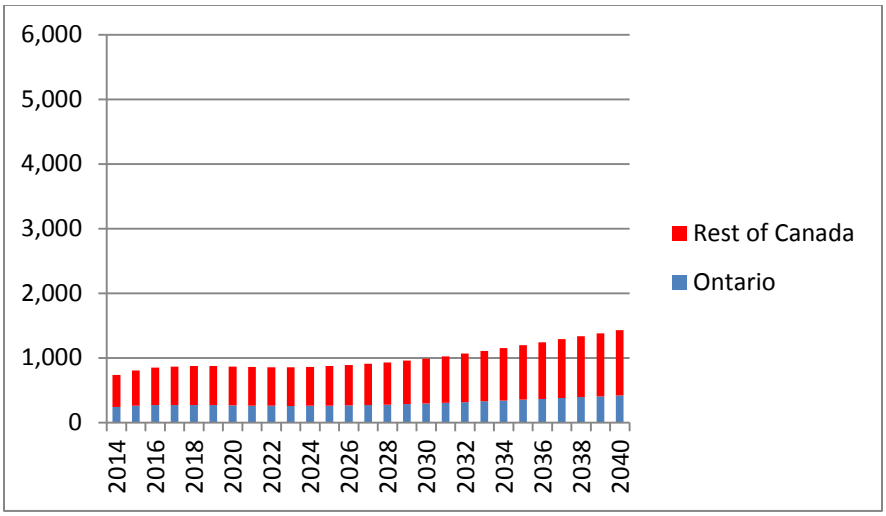
Econometric estimates based on 1,038 survey respondents indicated that changes in income would influence 24% of their consumption related to recreational motorcycling, leaving 76% of motorcyclists' consumption unexplained by income. At least that larger share of consumption is likely to substitute for Canadian consumption of alternative goods and services. For that reason Smith Gunther has run a second REMI case in which 76% of motorcycling expenditures reduce general household expenditures annually. Those reductions severely curtail impacts as illustrated in this segment.

Just what that percentage is in reality is open to debate. For example, many of the empty nesters interviewed said they had returned to motorcycling once their children were well educated and on their way. These families had intended to stop funding their offspring and to do something else with their discretionary income. Rather than motorcycling they could have saved it all. Alternatively, they could have gone to Los Vegas annually and blown it gambling or just travelled abroad. If all motorcyclists behaved in these manners then Canadian motorcycling would have an impact akin to that already discussed.

On the other hand if motorcyclists just spent the allotted 76% of motorcycling consumption on what normally would have been consumed by their peers and took the rest of their motorcycle expenditures out of savings or foreign travel, then the results would be similar to what follows. If even higher percentages of expenditures substitute for other consumption then impacts would be further reduced. If a lower percentage of motorcyclists' expenditures are substituted for other than consumption then impacts would lie between the two cases. In addition, in instances where individuals undertake additional work to finance their motorcycling activities, those funds are not offset by other consumption. To assist in drawing comparisons the following charts utilize the same axis as their earlier parallel charts with no consumption substitution.

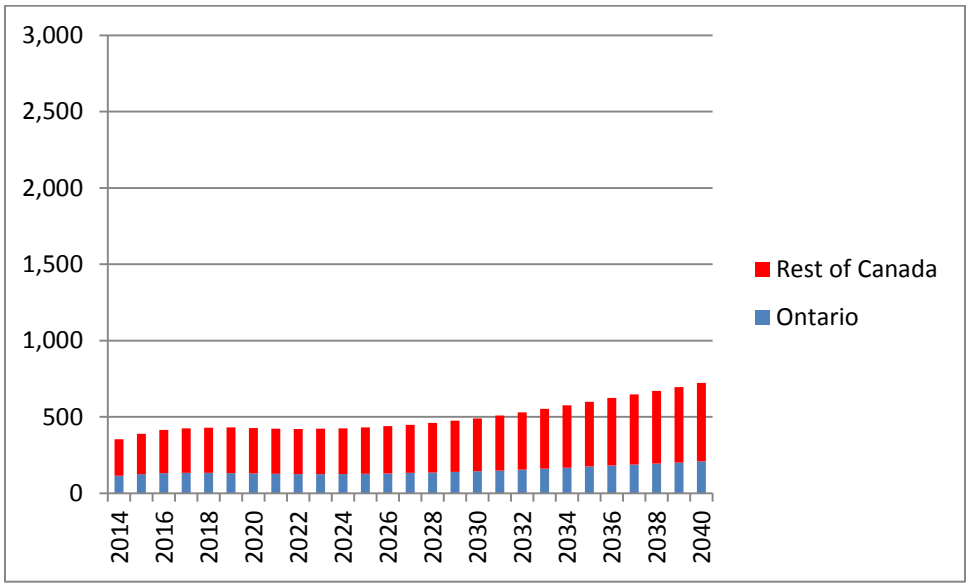
With motorcycling expenditures substituting for 76% of other general consumption, output impacts reach $1.4 billion by 2040 in contrast with the earlier estimate of $5.0 billion. See Chart II-42.

Chart II-42: Output from Off-Road Motorcycling Impacts 2014-2040
With 76% of Expenditures from Displaced Consumption (Millions of Fixed 2011 $)



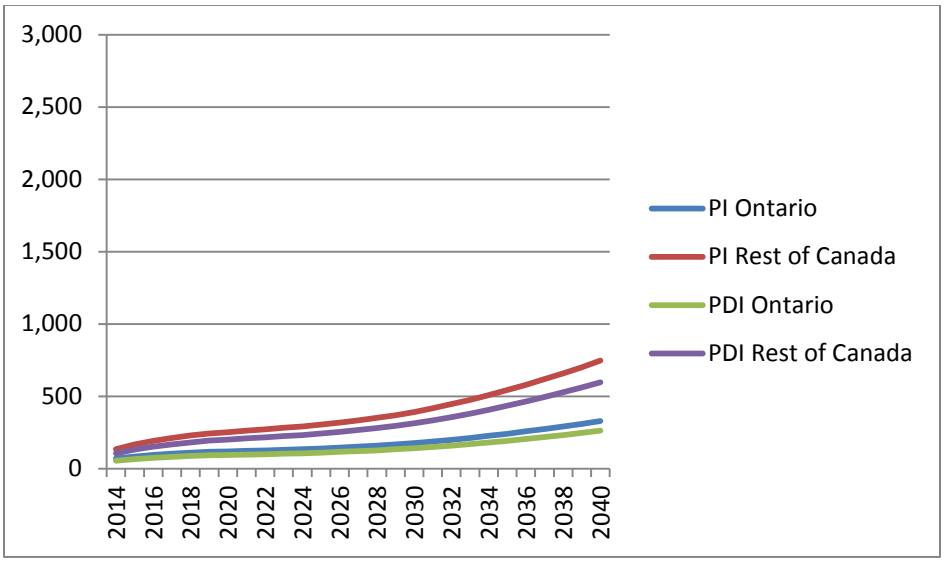
Correspondingly GDP impacts shrink to those appearing in **Chart II-43** topping out at $728 million compared to $2.9 billion.

Chart II-43: GDP Impacts from Off-Road Motorcycling 2014-2040
With 76% of Expenditures from Displaced Consumption (Millions of Fixed 2011 $)



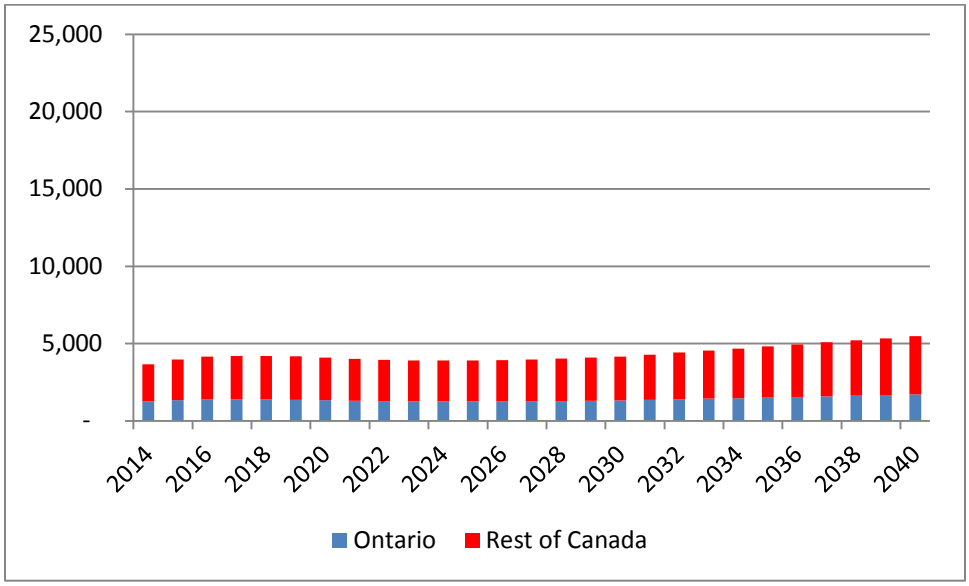
PI and governments' personal income tax impacts are also diminished substituting motorcycling expenditures for other spending as noted in **Chart II-44**. By way of illustration, PI in the rest of Canada is constrained to $747 million from the earlier $2.8 billion.

Chart II-44: PI and PDI Impacts from Off-Road Motorcycling 2014-2040 With 76% of Expenditures from Displaced Consumption (Millions Current $)



Net job impacts are similarly constrained as noted in **Chart II-44** finishing up at 5,472 rather than 21,454 in 2040. See **Chart II-45**.

Chart II-45: Job Impacts from Off-Road Motorcycling 2014-2040 with Other Consumption Displaced (Number)



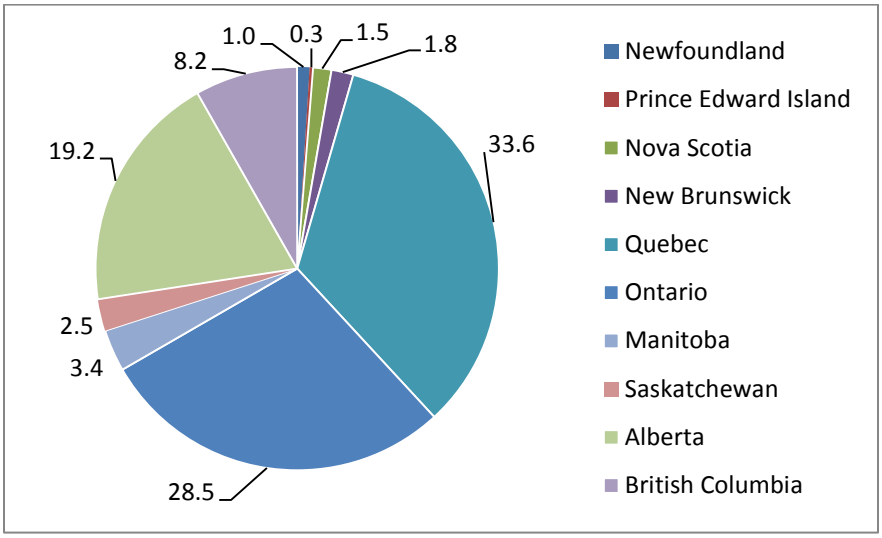
This section demonstrates the criticality of what share of motorcycling consumption displaces other consumption in family budgets in both the I/O approach and REMI applications to assessing impacts.

Overview: 2040

Just as a brief overview, the next three charts illustrate results for total motorcycling impacts with no substitution for other consumption. Reflective of relatively rapid growth in Alberta, there is a 5% shift in its employment shares, a fractional increase in British Columbia and decreases in Ontario's and Quebec's shares. Quebec along with Ontario loses GDP and PI shares to Alberta and to a lesser extent British Columbia. The shift in income shares is further enhanced in current as opposed to real dollars as captured with Alberta gaining 6 percentage points in GDP and 15% in PI.

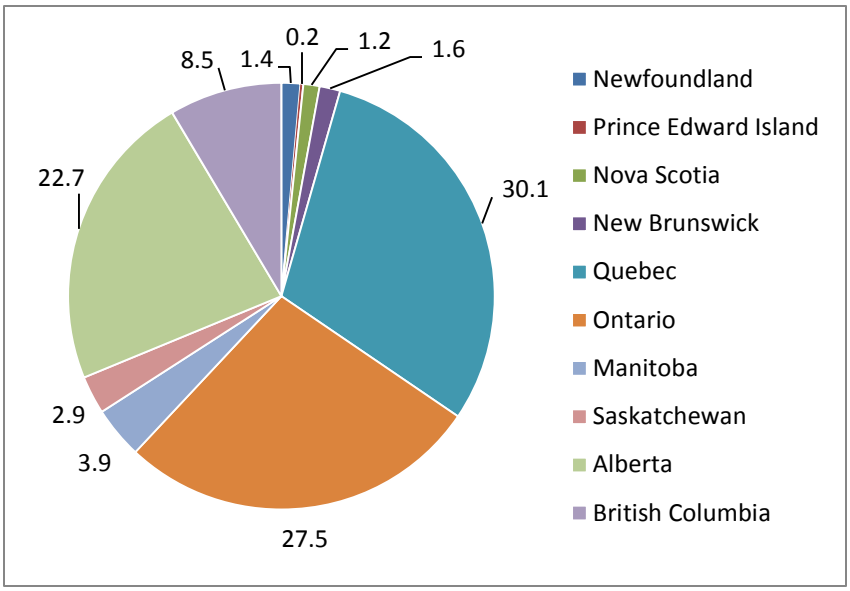
If previous average annual growth rates for this century persist, motorcycling and its impacts will shift massively to Alberta along with the rest of economic activity.

Chart II-47: Provincial Shares of Recreational Motorcycling Job Impacts with No Consumption Substitution 2040 (%)



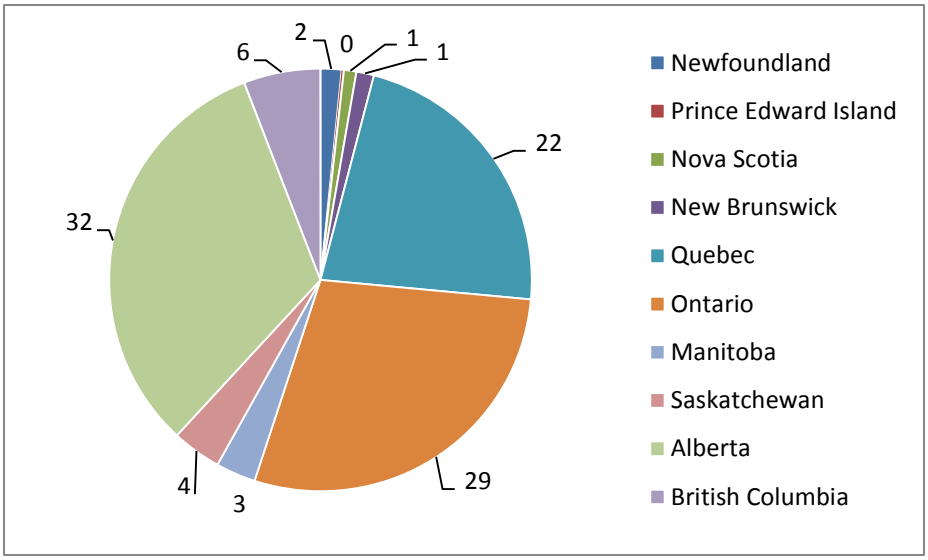
For comparisons with shares in 2014, see Table II-4.
Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

Chart II-48: Provincial Shares of Recreational Motorcycling GDP Impacts with No Consumption Substitution 2040 (%)



Note: Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

Chart II-49: Provincial Shares of Recreational Motorcycling Personal Income Impacts with No Consumption Substitution 2040 (%)



Note: Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

More details on provincial impacts with 76% of recreational motorcycling expenditures coming from alternative assumptions are available in Appendix 2.

Chapter III: National and Provincial Economic Impacts of Off-Road Motorcycling

Introduction

There is no clear distinction between off-road and other motorcycling activities in delineating direct motorcycling expenditures in off-road motorcycling activities. Riders use on-road motorcycles (dual sport) in a variety of activities including riding less-challenging off-road trails. Further, those riding street motorcycles may ride them to attend off-road events. When friends may transport street rider-owned equipment to off-road venues, street motorcyclists may even utilize their street motorcycles for personal transportation to and from their off-road events.

Based on the sample data of 1,400 respondents, **Table III-1** illustrates the type of motorcycle utilized by sample respondents concerning the use at various types of different types of motorcycling events. Because parties owned more than one motorcycle and/or attended more than one event, the number of attendees at events exceeds the number of parties by 4.6 times.

Table III-1: Types of Motorcycles Used at Alternative Motorcycling Activities: Canada 2014 (n=1,400 Parties)

	Street	Scooters	Off-Road	Dual Purpose	Competition	Mini	All
Cross Country	84	9	134	73	59	32	391
Hare Scramble	53	8	121	49	60	33	324
Enduro	69	9	137	81	58	32	386
Distance Event (road)	82	8	33	39	21	16	199
Speed Event (road)	23	5	18	19	25	11	101
Motocross/Supercross	48	7	80	33	76	35	279
Enduro Cross	11	4	34	13	30	13	105
Trials	39	8	70	35	35	15	202
Children's Racing Event	11	1	32	12	23	19	98
Organized Trail Ride	142	17	225	170	68	59	681
Casual Ride	489	42	363	265	114	100	1,373
Children's Event	43	5	39	19	12	13	131
Family Fun Days	141	14	170	89	57	47	518
Multi-Day Events	162	10	66	65	22	20	345
Motorcycle Shows	339	29	220	174	79	67	908
Other, specify	115	13	71	60	33	24	316
Total	1,851	189	1,813	1,196	772	536	6,357
Percentage of Total	29.12	2.97	28.52	18.81	12.14	8.43	

Source: Smith Gunther Associates Ltd. Survey of Motorcyclists 2015

Off-Road Motorcycling

Because the primary purpose of street motorcycles and scooters is for street travel, activities undertaken on these two types of motorcycles have been classified as other than off-road activity although it is acknowledged that some of the activities undertaken on these classes of motorcycles may, from time-to-time, be used as a mode of transportation to off-road events. Off-road motorcycling and impacts are then the total impacts less those undertaken by riders of street motorcycles, scooters, and mopeds. It is also clear that attending motorcycle shows is not primarily an off-road event so that activity is also excluded from off-road motorcycle impacts although some manufacturers display their wares at those shows and off-road motorcyclists do attend.

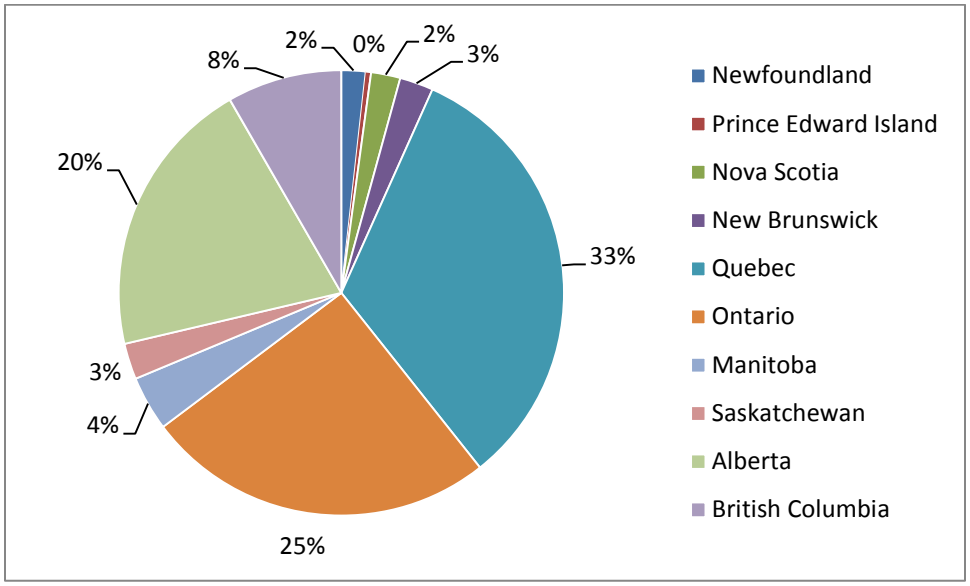
Estimates of expenditures for off-road activities were derived as the residual from total expenditures less those made by owners of street motorcycles and scooters through four approaches:

- Types of motorcycle sales by type of motorcycle were known so off-road motorcycle sales were equal to total sales less sales on street motorcycles and scooters.
- The national share of the sales of various consumable – helmets, other apparel, gasoline, insurance, repairs and enhancements – related to street and scooter motorcycling were estimated for each party depending on their expenditures and the type of motorcycles owned by them with econometrically determined weighting for each type of motorcycle and with the constant term multiplied by the percentage ownership of each type of motorcycle by each owner. Funds allocated to street and scooter motorcycling were then deducted from the earlier total to attain off-road expenditures from each consumable.
- Trail work, both volunteer and paid, was all allocated to off-road activities while activities tied to them were taken to be strictly street motorcycling activities.
- All other activities were allocated in proportion to the sum of the consumables.

These estimating equations all had quite high explanatory powers, in excess of 98%, with parameter values available in Appendix 1.

Under these conditions, off-road expenditures in 2014 in Canada amounted to $829.7 million distributed among the provinces in the percentages shown in **Chart III-1**. This set of charts begins in Newfoundland and ends in British Columbia, unlike their counterparts beginning on the west coast and moving eastward. Off-road activities are more highly concentrated in British Columbia (+2%) and New Brunswick (+1%) but less so in Ontario (-2%) and Manitoba (-1%). Given differences in the length of the seasons and settlement patterns, these differences are to be expected.

Chart III-1: Off-Road Motorcycling Expenditures 2014 ($829.7 million)



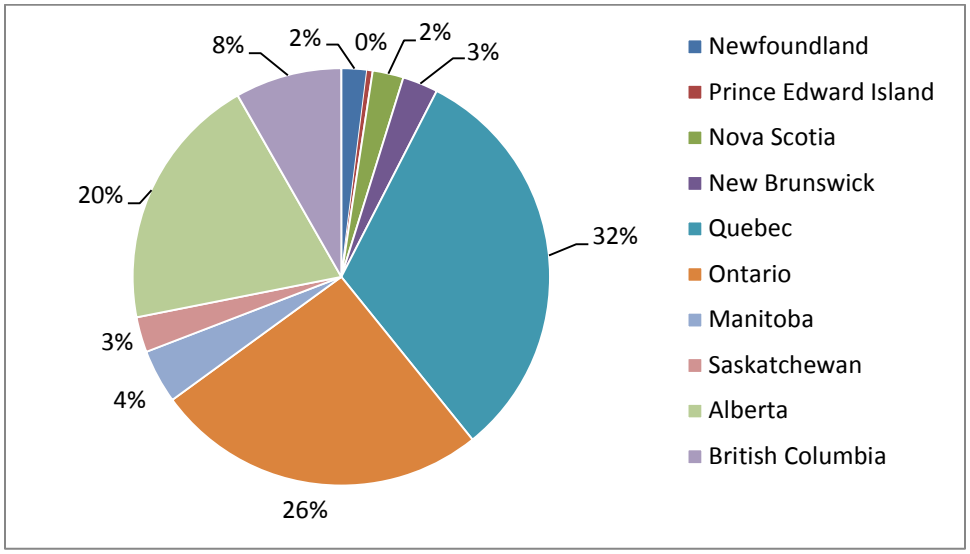
Note: Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

Expenditures

As in the previous Chapter, types of expenditures are discussed in order of their magnitudes. Unlike the previous Chapter, the order of the magnitudes of these expenditures differs between motorcycling aggregates for off-road activities, so that chart numbering also differs.

The largest expenditure category for off-road motorcycling expenditures is for parts including enhancements at $203.4 million. The regional distribution of these expenditures relative to total off-road expenditures shifts by one percent from Quebec to Ontario as noted in **Chart III-2**.

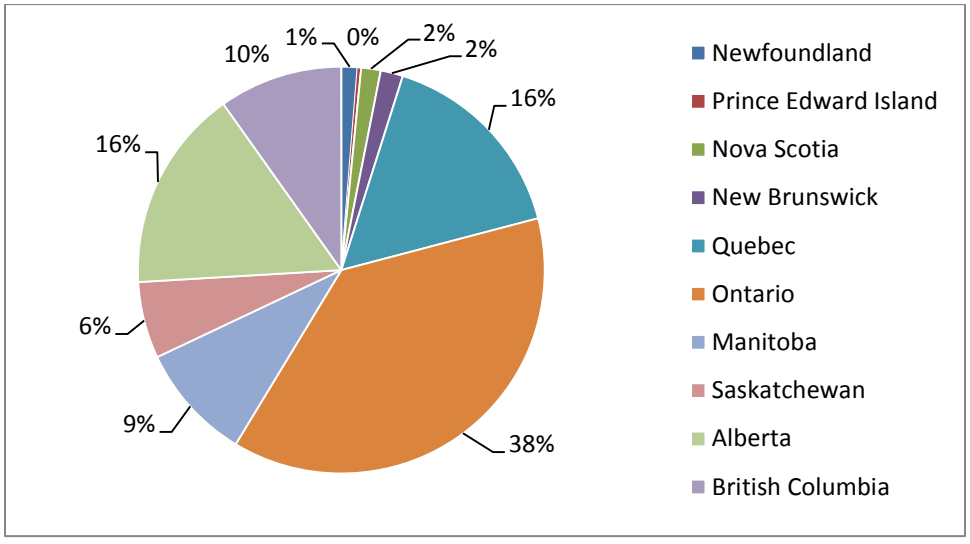
Chart III-2: Off-Road Motorcycling Expenditures on Parts 2014 ($203.4 million)



Note: Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

The next largest off-road expenditure category was insurance. Relatively young riders participating in risky riding adventures are likely to have played a role in heightening off-road insurance expenditures relative to insurance's share of total expenditures. See **Chart III-3**.

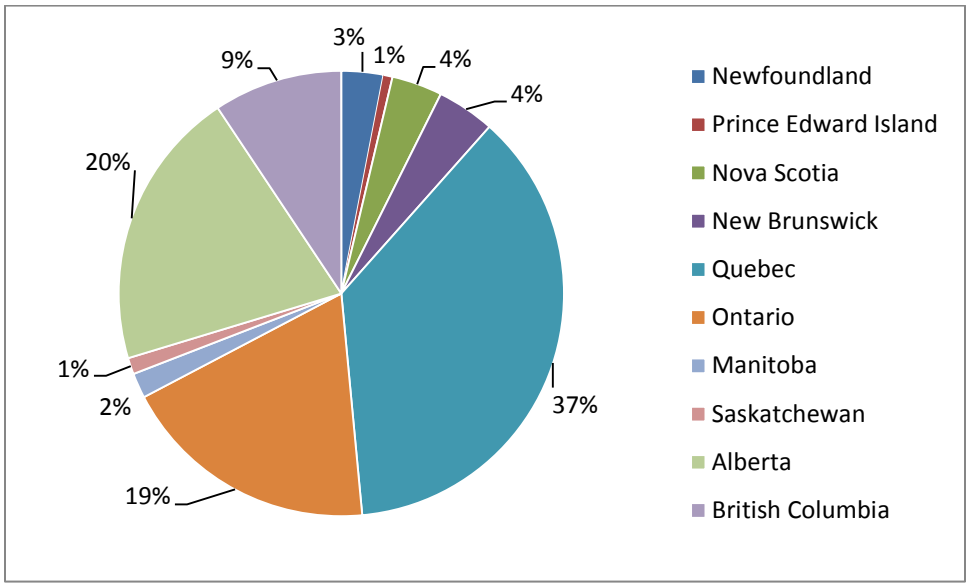
Chart III-3: Off-Road Motorcycling Expenditures on Insurance 2014 ($123.2 million)



Note: Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

An abnormally small share of insurance paid by Quebecers again stems from the different structuring of insurance through the FQMHR note earlier. Aside from the Atlantic region, the remaining provinces all pay larger shares for insurance than for other motorcycling expenditures.

Chart III-4: Off-Road Motorcycling Expenditures on New Motorcycles 2014 ($117.7 million)

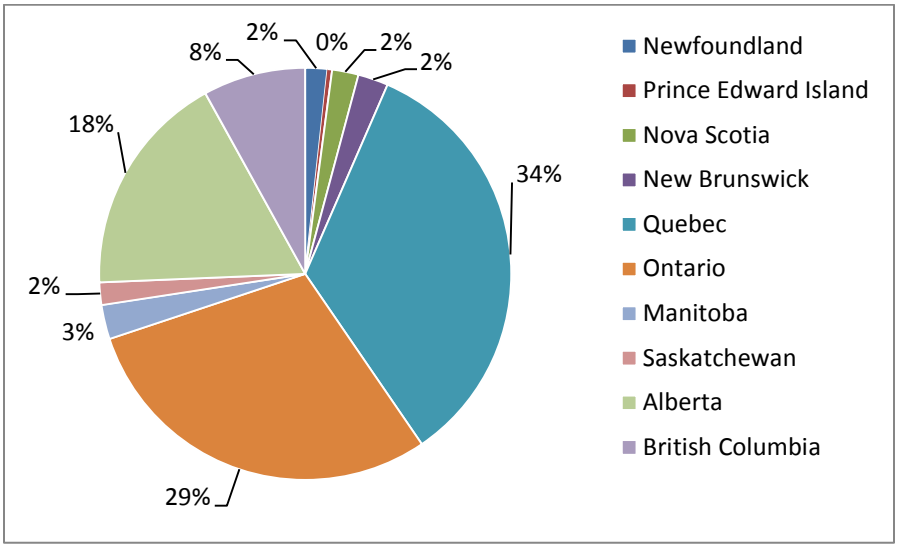


Note: Provinces are ordered starting at at the top-of-the-clock for Newfoundland and moving clockwise.

At $117.7 million, new motorcycle sales in 2014 were strong in Quebec and New Brunswick and British Columbia relative to total off-road motorcycling activities and correspondingly weak in Saskatchewan and Manitoba.

At $109.5 million in 2014, apparel expenditures including helmets by off-road motorcyclists nearly matched new motorcycle sales. Markets were relatively strong in Ontario and Quebec and relatively weak compared to total off-road expenditures in Alberta and across the rest of the Prairies as demonstrated in **Chart III-5**.

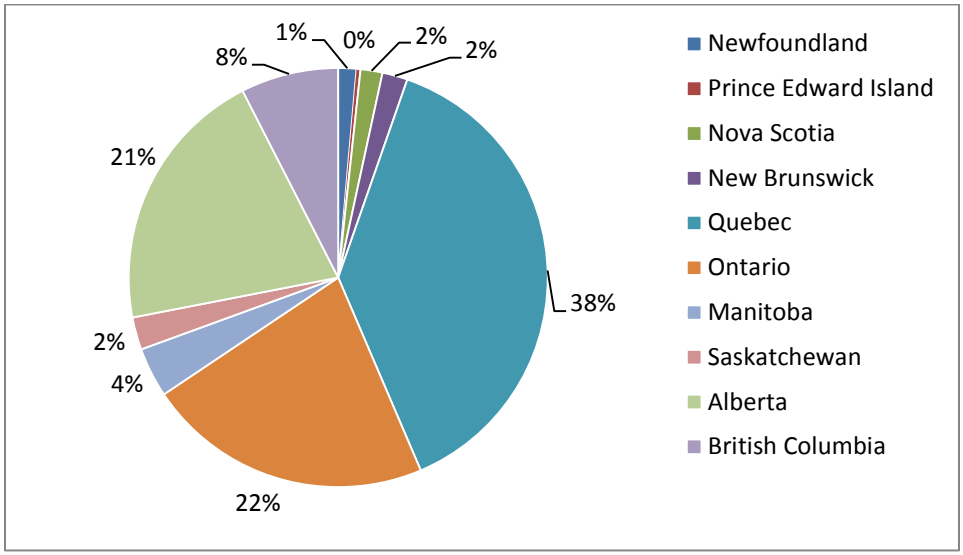
Chart III-5: Off-Road Motorcycling Expenditures on Apparel including Helmets 2014 ($109.5 million)



Note: Provinces are ordered starting at at the top-of-the-clock for Newfoundland and moving clockwise.

In 2014, off-road motorcyclists spent an estimated $101.9 million on gasoline. Compared with their total expenditures, their gasoline expenditures were concentrated in Quebec, due to higher prices and in Alberta and vast distances despite relatively low fuel prices. Provincial shares appear in **Chart III-6**.

Chart III-6: Off-Road Motorcycling Expenditures on Gasoline 2014 ($101.9 million)



Note: Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

Off-road motorcyclists spent less than $100 million but in excess of $20 million on other goods and services. In order of importance, these included:

- Sports equipment
- Licensing, and
- Travel

In addition, there was considerable volunteer effort expended on building and repair of trails, facilitating various motorcycling events and general club administration and service deliveries. A rough value of this time and effort would be $8.9M annually across the nation.

Static Analysis

Based on these direct expenditures, Smith Gunther Associates Ltd in conjunction with Statistics Canada have estimated both the direct and indirect impacts of off-road recreational motorcycling on Canada's national and provincial economies. Because the division between off-road and other motorcycling is strictly binary, the differences between totals in the previous chapter and the off-road motorcycling, included here, is on-road motorcycling. In line with the previous chapter, we designate direct and indirect impacts as the "Production" impacts. Adding induced impacts to the production ones facilitates Smith Gunther Associates' estimation of total impacts.

Limits to Impacts

This methodology recognizes limitations to impacts imposed by economic relationships and taxes and, in the case of direct impacts, the payment of wages, salaries and other forms of income. These payments limit indirect impacts because once paid, they no longer impact on the Canadian economy. This section explores these limitations before examining impacts of recreational motorcycling on GDP, employment and fiscal capacity by province.

Output

Of the $892.7 million spent in Canada on off-road recreational motorcycling, $146.7 million was spent on imports directly and a further $106.6 million on imported inputs resulting in $639.4 million of spending on domestically supplied goods and services. Including exports, the 2014 Canadian direct output was $594.5 million. Production of this level of goods and services required further Canadian output of $366.6 million in intermediary inputs and called forth induced outputs of another $243.4 million for a total impact of $1,204.5 million, well above Canadian expenditures on off-road motorcycling. Canadian output multipliers relative to Canadian output are then 1.62 and 2.03, a shade (0.03%) higher, but not statistically significant, than for all motorcycling.

The relevant provincial levels or output are dependent on each province's role in supplying motorcyclist demands with provincial multipliers also being influenced by interprovincial trade flows. Output and output multipliers for each province appear in **Table III-2**.

Table III-2: Canadian Output ($1,000s) and Output Multipliers For Off-Road Motorcycling 2014*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Direct	5,376	1,244	8,496	14,336	204,333	201,785	18,291	12.306	89,048	39,057
Direct & indirect	10,440	1,918	13,171	20,771	306,606	336,505	28,550	21,878	155,077	65,250
Direct, indirect & induced	12,620	2,501	17,076	25,437	374,115	427,967	35,469	27,088	193,027	87,993
Domestic Output Multipliers										
Direct & indirect	1.94	1.54	1.55	1.45	1.50	1.67	1.56	1.78	1.74	1.67
Direct, indirect & induced	2.35	2.01	2.01	1.77	1.83	2.12	1.94	2.20	2.17	2.25

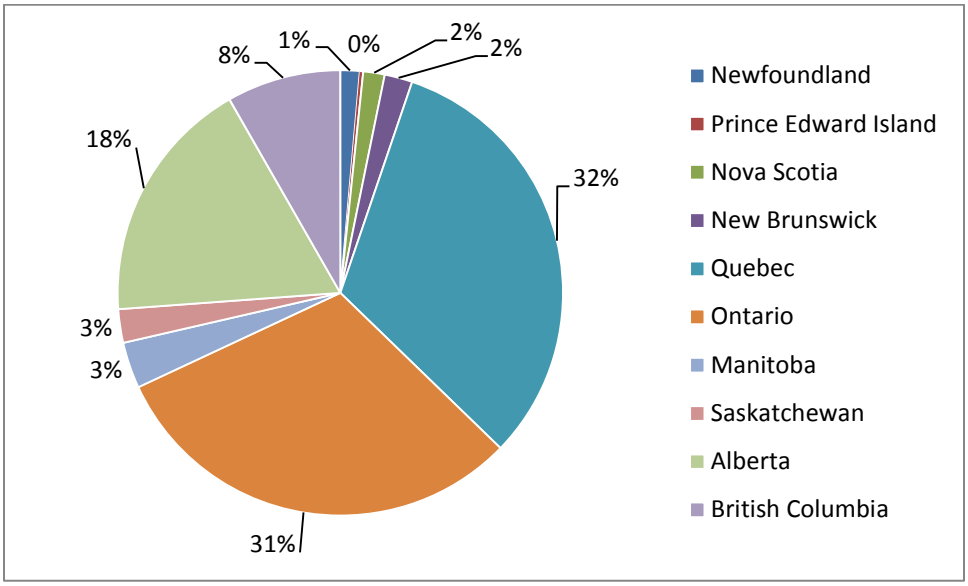
*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

GDP

Double counting is inherent in output multipliers because each successive production stage contains the output values of its material inputs. Such double counting is avoided by observing the value added inherent in each stage of production. In this instance, the value added in the final stage of meeting final off-road motorcycling demand is revenue stripped not only of all imports but also all material inputs with the residual known as direct GDP. Similarly, the indirect GDP is the GDP generated by supply industries all the way back through the supply chain. The induced GDP is called forth by demands of wage earners and profit recipients in the supplying industries and of those generating the induced goods and services.

Total impacts on GDP at basic prices are $626.8 million from direct off-road impacts of $282.0 million. GDP impacts from off-road motorcycling are distributed across the country as was demonstrated earlier in **Chart II-8**. In moving from direct impacts to total ones, Alberta and British Columbia receive the same 1% to 2% shifts in shares as they did for motorcycling with corresponding shrinking shares in Quebec and Ontario. This phenomenon is tied to Alberta's importance as a fuel supplier and its strategy to build up its machining capacity.

Chart III-7: Provincial Shares of Off-Road Motorcycling Impacts on GDP ($626.8 million)



Note: Provinces are ordered starting at the top-of-the-clock for Newfoundland and moving clockwise.

GDP at base prices is the metric against which Smith Gunther estimates GDP production and total GDP multipliers. In addition to direct GDP of $282.0 million to meet off-road demands, indirect GDP, in supplying inputs to the industry, is of $203.1 million and the induced GDP impacts add $141.7 million yielding total impacts of $626.8 million. The corresponding national multipliers for the direct and indirect impacts relative to output, discussed in the previous table, are .82 and 1.05 and relative to direct, 1.72 and 2.22 all marginally higher than for on-road motorcycling.

Provincial breakouts for GDP attributable to off-road motorcycling appear in **Table III-3** with the first set of multipliers being relative to domestic output in the previous table and the second set being with respect to direct GDP. The first set of multipliers may be used to provide quick estimates of provincial GDP impacts from new or additional domestic output on motorcycling events. GDP multipliers equal or exceed 2 in all provinces but New Brunswick suggesting reasonably strong supplier ties to off-road motorcycling in most provinces.

Table III-3: Canadian GDP ($1,000s) and GDP Multipliers For Off-Road Motorcycling 2014*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Direct	3,240	750	4,482	6,425	95,367	90,234	9,835	5,701	45,350	20,513
Direct & indirect	6,889	1,155	7,020	9,505	151,366	162,797	15,887	11,114	83,666	35,126
Direct, indirect & induced	8,293	1,503	9,276	11,988	190,609	214,691	20,001	13,998	106,425	49,207
Domestic Output Multipliers										
Direct & indirect	1.28	0.93	0.83	0.66	0.74	0.81	0.87	0.90	0.94	0.90
Direct, indirect & induced	1.54	1.21	1.09	0.84	0.93	1.06	1.09	1.14	1.20	1.26
GDP Multipliers										
Direct & indirect	2.13	1.54	1.57	1.48	1.59	1.80	1.62	1.95	1.84	1.71
Direct, indirect & induced	2.56	2.00	2.07	1.87	2.00	2.38	2.03	2.46	2.35	2.40

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Labour Incomes

Labour incomes are the major share of GDP by industry. In 2014, purchases by off-road motorcyclists generated $178.8 million in direct labour income. Direct and indirect labour income was $299.3 million and inclusive of induced labour incomes reached $366.7 million. The resulting national multipliers are 1.67 for the indirect impacts and 2.05 for the direct and indirect impacts relative to direct GDP impacts. Provincial levels and related multipliers appear in **Table III-4**.

Table III-4: Canadian Labour Income Impacts ($1,000s) and Labour Income Multipliers for Off-Road Motorcycling 2014*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Direct	2,236	454	3,037	4,243	61,886	53,353	5,022	3,194	30,606	14,634
Direct & indirect	3,177	708	4,586	6,113	96,512	100,427	8,745	5,647	49,287	23,842
Direct, indirect & induced	3,726	858	5,626	7,241	115,463	126,574	10,623	6,793	59,196	30,363
Labour Income Multipliers										
Direct & indirect	1.42	1.56	1.51	1.44	1.56	1.88	1.74	1.77	1.61	1.63
Direct, indirect & induced	1.67	1.89	1.85	1.71	1.87	2.37	2.12	2.14	1.93	2.07

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Not surprisingly, relatively high-wage provinces possess stronger off-road labour force multipliers. Labour income multipliers exceed 2 in Ontario and west except Alberta and are smaller elsewhere, suggesting stronger labour income ties to off-road motorcycling in Ontario and in the West than elsewhere although induced demand ties are weak in Alberta. Alternatively labour in Alberta has been sufficiently scarce that motorcyclists have looked elsewhere or alternatively do such things as repairs themselves.

Employment (FTEs) and Jobs

Income generated by off-road motorcycling entailed the equivalent of 3,424 full time equivalent jobs (FTEs) directly as well as 2,015 indirectly and 1,362 induced. The national multipliers were then 1.59 and 1.99. Total national employment impacts are the sum of the three at 6,801 FTEs. FTEs consolidate part-time jobs into FTEs so that the corresponding number of jobs created is larger at 4,053 directly, 2,250 indirectly and 1,620 induced for a total of 7,923. To put that total into context, this level of employment attributable to off-road motorcycling amounts to about 40 % of the total FTEs generated by motorcycling in total.

Contrasting provincial performances in **Table III-5** reveals the concentration of direct FTEs serving off-road motorcycling activities in Quebec followed by Ontario and Alberta with a shift

in emphasis towards Ontario inclusive of indirect and induced impacts. Total off-road FTE impacts are 2,310 in Quebec, 2,183 in Ontario followed by Alberta at 966 and British Columbia at 610. With the exception of Alberta, multipliers are relatively strong in Ontario and west. Unlike the labour force multipliers, the Alberta multipliers fall below those of all provinces but Newfoundland, again indicative of labour shortages in Alberta in 2014 and interprovincial travel by Alberta motorcyclists.

Table III-5: Canadian Employment Impacts (#) and Employment Multipliers for Off-Road Motorcycling 2014*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Direct	45	11	69	93	1,268	922	102	63	551	298
Direct & indirect	59	17	102	131	1,894	1,689	171	105	796	471
Direct, indirect & induced	70	21	127	158	2,317	2,183	213	131	966	610
FTE Employment Multipliers										
Direct & indirect	1.32	1.49	1.48	1.41	1.49	1.83	1.68	1.68	1.44	1.58
Direct, indirect & induced	1.57	1.84	1.85	1.70	1.83	2.37	2.09	2.09	1.75	2.05

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Taxes on Products and Production

Current I/O tables also estimate both federal and provincial taxes accruing from off-road motorcycling at two levels, combined direct and indirect and the former inclusive of the induced impacts. Nationally, direct and indirect off-road motorcycling impacts generate $43.8 million in product taxes and $140,000 in production taxes for the federal government, and, including indirect revenues, augment these figures to $52.0 million and $213,000 respectively.

In aggregate, provincial governments annually raise $50.6 million in product taxes from off-road motorcycling and $7.1 million in production taxes from direct and indirect production. Inclusive of the induced impacts of off-road motorcycling yielded $74.2 million in product taxes and $10.9 million in production taxes. Off-road motorcycling generates $85.1 million for provincial governments of which Quebec collects $32.7 million, Ontario $21.2 million, British Columbia $6.6 million, Alberta $4.3 million and the rest smaller, easily attained by adding the penultimate and last lines of **Table III-6**.

Table III-6: Canadian Product and Production Taxes Attributable to Off-Road Motorcycling 2014 ($1,000s)*

	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
Federal										
Direct & indirect										
Product	734	168	892	1,038	14,300	10,904	1,479	965	9,811	3,553
Production	3	1	4	3	36	60	6	1	14	12
Direct, indirect & induced										
Product	835	193	1,040	1,223	16,824	13,581	1,737	1,130	11,191	4,250
Production	4	1	5	4	56	92	8	2	21	19
Provincial										
Direct & indirect										
Product	1.097	257	1,484	1,472	23,478	14,104	1,447	923	1,699	4,671
Production	88	40	55	213	3,039	1,764	363	134	938	486
Direct, indirect & induced										
Product	1,288	299	1,771	1,806	27,971	18,488	1,873	1,162	2,791	5,851
Production	111	55	78	300	4,749	2,702	486	215	1,391	778

*Discrepancies between provincial totals and national numbers are explained by minor amounts of activities in the Territories excluded in the above table because of insufficient information on territorial direct impacts.

Relative to population sizes, the federal government relies inordinately on product taxes in Alberta while the lack of a sales tax in Alberta reduces that province's tax take on product sales whether or not induced impacts are included. Both Quebec and Ontario continue to benefit from production taxes especially on mining operations mostly other than fossil fuels triggered by off-road motorcycle use. In keeping with their constitutional rights tied to responsibility for resources, the provinces are active in the collection of royalties from production which explains provincial predominance in collecting revenue from production relative to the Federal government.

Dynamic Analysis

Background and Assumptions for REMI Analyses

Analyses carried out utilizing REMI on the direct expenditures of off-road motorcyclists yield dynamic results for Ontario and the rest of the country. Results differ from those using I/O tables for several reasons. Consumer expenditures used to stimulate the economy cover broader categories in REMI than in the I/O analyses and may contain linkages that may be inappropriate, such as ones for all vehicles as opposed to just motorcycles. Yet the REMI model is more up-to-date and complete than is Statistic Canada's in capturing induced impacts. Further, these linkages happen over time and therefore better articulated through lagged effects than with static I/O approach which ignores dynamics. As before, REMI also facilitates testing the underlying

assumption behind I/O that the consumption of motorcycling activities is taken out of savings or foreign travel. REMI also yields metrics not covered by the I/O analyses.

These sections assess dynamic impacts of off-road motorcycling. The first section makes the parallel assumptions with the I/O analysis. It assumes funds for off-road motorcycling come from savings or foreign travel and do not impinge on other Canadian expenditures. The second section tests that assumption by assuming that 76% of off-road motorcycling expenditures emanate from across the board reductions of other household consumption. The first approach facilitates comparisons between the static and dynamic modelling under reasonably similar assumptions. The second approach is more realistic.

The first approach ensures comparability with the I/O results because it:

- Re-aggregates the I/O expenditure data for REMI consumption categories; and,
- Deploys the regional breakouts for the I/O tables to bifurcate annual data between Ontario and the rest.

By extension it:

- Assumes 2.5% annual growth in all motorcycling purchases ranging from motorcycles to apparel, travel, etc.; and,
- Presumes that all motorcycle consumption would otherwise have gone to savings or foreign travel.

REMI estimates are better designed to capture induced impacts. Because the broader definition of the impacts may be capturing unwarranted linkages, impacts in this section should be treated as maxima. That cautionary note is not true for the subsequent section with large shares of funding for off-road motorcycling coming from alternative Canadian consumption.

REMI Results: Without Substituting for Alternative Expenditures

The REMI model produces outcomes on several measures of economic activity - Output, GDP and PI. Further, PI is subdivided between personal income taxes and disposable income. Personal taxes cover personal income taxes split between federal and provincial governments. Personal disposable income identifies income over which citizens have the power to control. Increasing it indicates a greater freedom of choice.

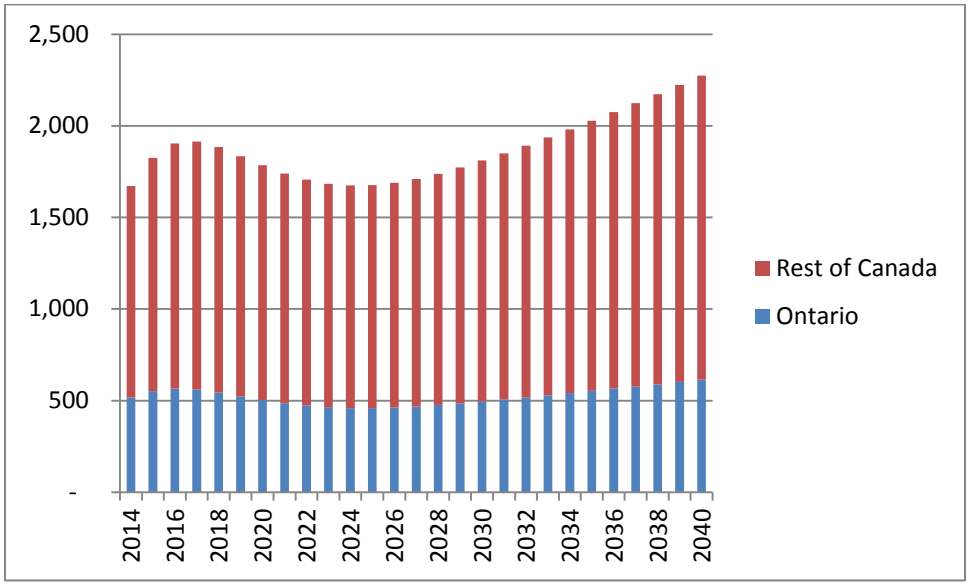
REMI labour statistics capture changes in jobs, not FTEs. In all cases, REMI estimates are relative to its base case annually in order to answer the Question, “What would have happened with off-road motorcycling and in this section without curtailing alternative expenditures?” These assumptions are in tandem with those of Statistics Canada. Although not broken-out in this Chapter or within REMI, provincial and regional allocations for other than Ontario are available in the next section of this chapter with data appearing in Appendix 2.

Output

Annual output impacts for off-road motorcycling exceed estimates from the I/O analysis. REMI assess output impacts in 2011 dollars whereas the previous I/O estimate was in 2014 dollars which partially offsets incremental REMI's estimated benefits from capturing additional induced linkages not prevalent in the I/O analysis.

As noted in **Chart III-8**, from 2014-2040. Canadian annual output impacts from off-road motorcycling activities are in the range of $2,222 million±$350 million. Between $561 million and $614 million occur annually in Ontario.

Chart III-8: Off-Road Output Impacts 2014-2040 (millions of Fixed 2011 $)

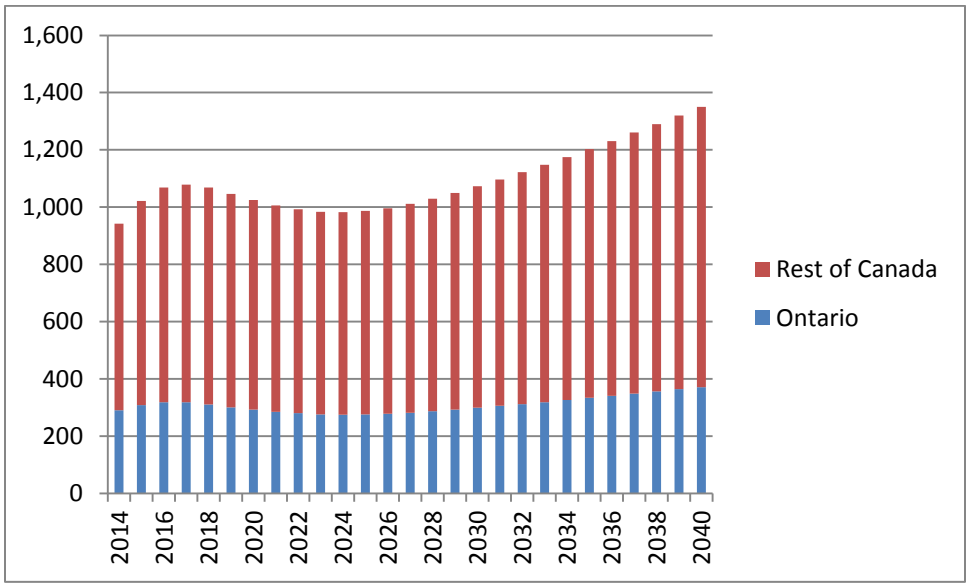


Reflecting expected slower provincial growth relative to the rest of Canada, Ontario's share of Canadian output declines from 31% to 27%, despite some short-term growth.

GDP

As noted earlier, GDP is void of the double counting plaguing output measures. Illustrated in **Chart III-9**, GDP impacts are currently a little more than half as large as those for output. Due to productivity changes GDP impacts grows faster than does output with Ontario's share of Canadian impacts expected to decline by 2040.

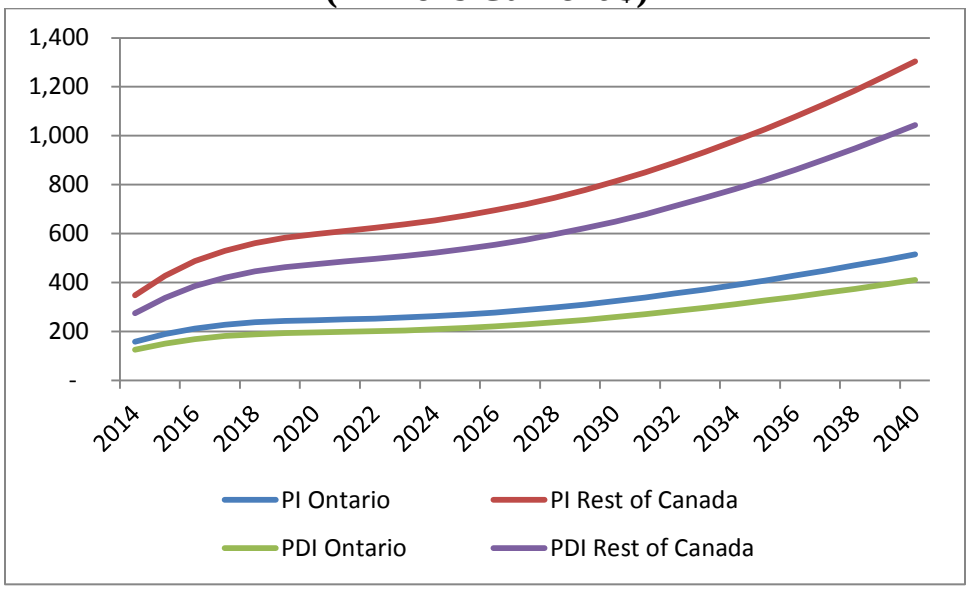
Chart III-9: Off-Road GDP Impacts 2014-2040 (Millions of Fixed 2011 $)



Personal Income and Personal Disposable Income

Unlike the above measures in constant dollars, REMI measures personal income in current or "as spent" dollars. It does so because the difference between the two is personal income tax which governments like to have denominated in current dollars. Because even minor inflation accumulates over time these metrics rise faster than the previous two output measures as noted in **Chart III-10**. These impacts are more heavily felt in the West due to higher average incomes there than in Ontario.

Chart III-10: PI and PDI Impacts of Off-Road Motorcycling 2014-2040 (Millions Current $)



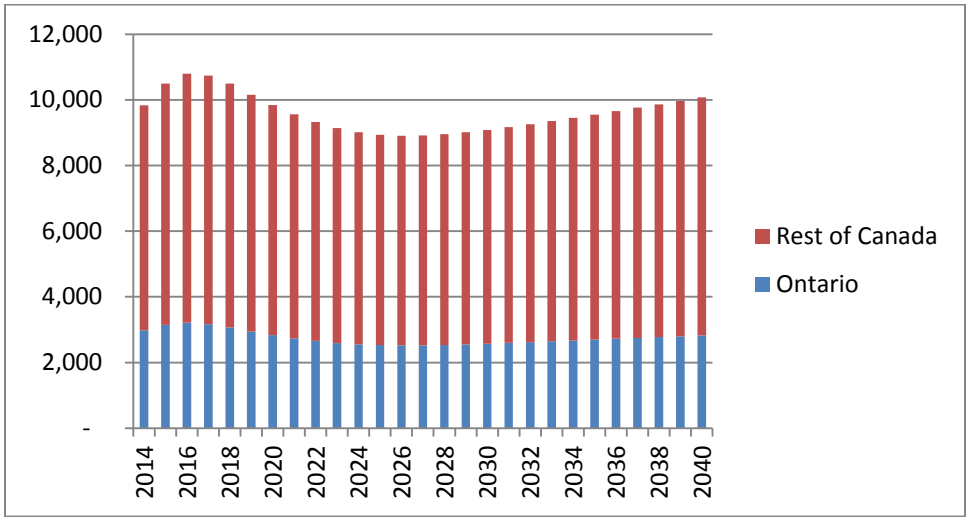
Personal incomes generated from off-road motorcycling in Ontario start modestly at $158 million in 2014 before rising to $515 million in 2040 with corresponding increased impacts on PDI of $125 million to $410 million yielding annual personal tax revenues of $33 million to $105 million. Discounted at 5%, Ontario's stream of income taxes generated has a NPV of $886M. Parallel increases in taxes for the rest of the country rise from $101 million in 2014 to $264 million in 2040 yielding NPV of $2.2 billion.

Jobs

REMI delivers information on jobs, not FTEs, so that comparisons with the I/O results need to be made with respect to jobs. Due to its more thorough tracking induced activities, REMI captures more jobs than does Statistics Canada's closed model. REMI's 2014 job estimates without any offsetting cutbacks in other consumption for recreational motorcyclists in 2014 are 9,830 up from the 7,923 jobs captured by the Statistics Canada I/O approach. Under REMI, annual job impacts peak in 2016 at 10,793, dip to 8,902 a decade later, and finish up at 10,017 in 2040.

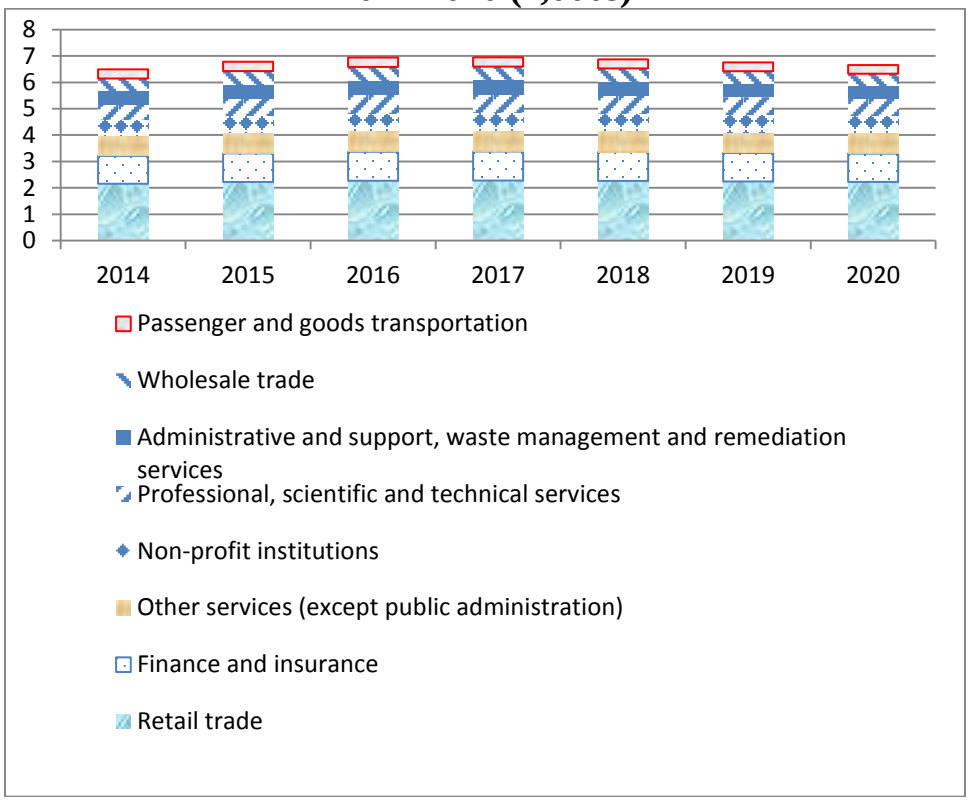
They are distributed between Ontario and the rest of the country as envisaged in **Chart III-11** where Canadian job impacts from off-road motorcycling peak at 10,761 in 2016 but range in the 9,460±560 from 2020-2040. Even with the underlying assumption of the same growth rates in recreational motorcycling in each jurisdiction, Ontario's share of job impacts shrinks from 30% to 28% over the period.

Chart III-11: Off-Road Job Impacts 2014-2040 (Number)



The vast majority of incremental jobs from off-road motorcycling are in services as illustrated in **Chart III-12** out to 2020 for the nation with retail clearly playing the major role followed by insurance albeit not to the same extent as for all motorcycling. These differences arise from the more expensive cost of street motorcycles. It is also attributable to the inclusion of not-for-profits appearing in the main expenditures for off-road motorcyclists, but excluded for all motorcyclists. Repair and maintenance services are included in "Other services (except public administration)". While critical they play a relatively small role because off-road motorcyclists have a higher propensity for doing their own repairs than do other owners of other vehicles.

Chart III-12: Off-Road National Job Impacts by Major Service Sector 2014-2040 (1,000s)



Note: The blocks on each column are in the same order as in the key

Provincial Impacts

This section contains metrics for provinces. Ontario findings, covered above, are consolidated before proceeding to vignettes for each other province from east to west. Provincial metrics cover off-road motorcycling on total domestic output, Real Gross Domestic Product (RGDP), jobs, PI and PDI inclusive of the major difference between the two, personal income taxes[49]. In addition, product and production taxes collected by governments inform them on the impacts of off-road motorcycling on their revenues. The key assumption of no alternative domestic spending pertains. This section covers all off-road motorcycling.

[49] The more complete text also includes full time equivalent employment and wages and salaries.

Ontario

Aggregate Output

Because earlier charts III-8, III-9 and III-11 cover Ontario as well as Canada, there is no need to repeat them here. The I/O analysis of recreational motorcycling is for direct expenditures of $208 million yielding total output impacts of $428 million in 2014. From the REMI analysis 2014 to 2040, Ontario output impacts run between $290 million and $371 million.

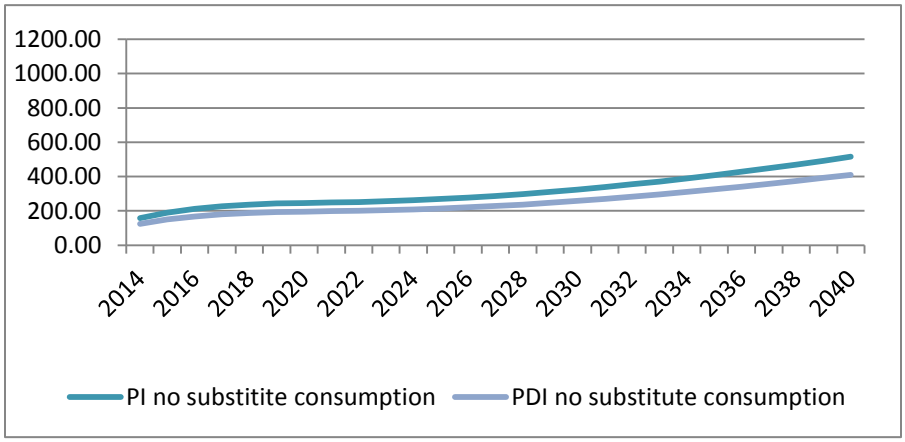
RGDP

At $90 million Ontario's share of direct RGDP is relatively small compared to national shares of output from off-road motorcycling. Within the I/O modelling framework, that direct RGDP is expected to generate total impacts on Ontario RGDP of $215 million. As above under REMI estimates are larger at $290 million in 2014 rising to $371 million in 2040 but nevertheless fall to under a quarter of national totals by 2040.

Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-13, current dollar PI generated from off-road motorcycling in Ontario starts modestly at $158 million in 2014 before rising to $525 million in 2040 with corresponding increased impacts on PDI of $125 million to $410 million yielding incremental annual personal tax revenues of $33 million in 2014 rising to $105 million in 2040.

Chart III-13: Off-Road Ontario PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)



At 5%, the stream of personal income tax generated in Ontario has a net present value (NPV) of $1.9 billion 2014-2040. Parallel tax impacts for the rest of the country over 2014 to 2040 are $159 million to $558 million yielding a NPV of $886 million.

These are important impact measures because PDI indicates increased consumer choice to exercise their wills over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Ontario governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or having the province go to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Ontario generate $13,673,000 in revenues for the Federal government and $21,190,000 for the province.

Jobs

In 2014, REMI's job impact estimate for Ontario is 2,985 as noted in Chart III-11. Unlike the other indicators which grow over time, jobs do so only marginally because labour productivity growth in REMI nearly keeps pace with recreational motorcycling growth. Clearly, growing off-road motorcycling faster than labour productivity growth could reverse this result. Ontario job impacts peak at 3,232 in 2016 but are in the 2,663±150 range from 2020-2040. These are annual impacts relative to the base case. Ontario's share of job impacts shrinks from 31% to 29% over the period.

Other Provincial Impacts

In aggregate other provincial impacts are determined econometrically within REMI as Canadian impacts less those in Ontario. In order to keep this project's costs within reason, Smith Gunther has allocated non-Ontario impacts among the remaining nine provinces through the following steps:

- REMI 2014 results have been distributed among the nine provinces in the shares determined by the 2014 I/O results; and
- Thereafter, provincial shares were initially set equal to compound average annual growth rates by province adjusted by capping the total results for the nine provinces to the REMI estimate for each subsequent year.

This process yields provincial allocations of impacts consistent with the REMI results. These provincial allocations are reported from east to west in the following sections containing information on Output, GDP, PI, PDI and personal income taxes raised in each province and jobs. In general, the data are of better quality for larger jurisdictions rather than the smaller ones, such as Prince Edward Island[50].

Because readers are apt to be interested in their own jurisdictions, each provincial description is designed to stand alone so that the text is somewhat repetitious in the general interpretation of the results. Readers of the entire text may want to skip those repetitious sections.

[50] The non-abbreviated report also contains multiples of the sample results deployed to attain provincial totals. In jurisdictions where response rates to the questionnaire are higher and multiples used to determine provincial aggregates are correspondingly lower, such as British Columbia, the data are also stronger and subject to less error.

Newfoundland and Labrador

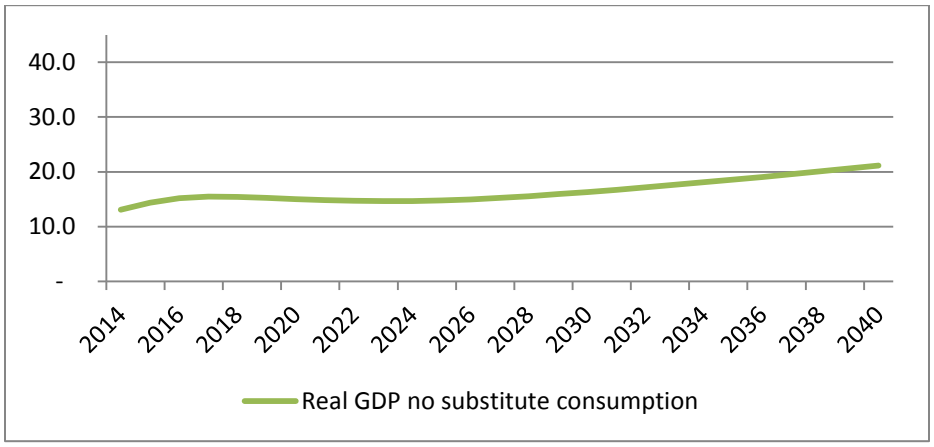
Aggregate Output

In 2014, Newfoundland and Labrador, hereafter "Newfoundland," off-road motorcycling generated $5,376,000 in direct output with total output impacts of $12,620,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $3,240,000 direct RGDP with total RGDP impacts of $8,293,000. Fostered by the offshore growth, Newfoundland's growth rate has been high relative to other provinces 2000-2014 and that is expected to continue. As expected, REMI allocated results were higher with RGDP estimates in 2014 of $13.1 million rising to $21.2 million by 2040 as noted in Chart III-14.

Chart III-14: Off-Road Newfoundland RGDP Impacts 2014-2040 ($ 2011 Millions)



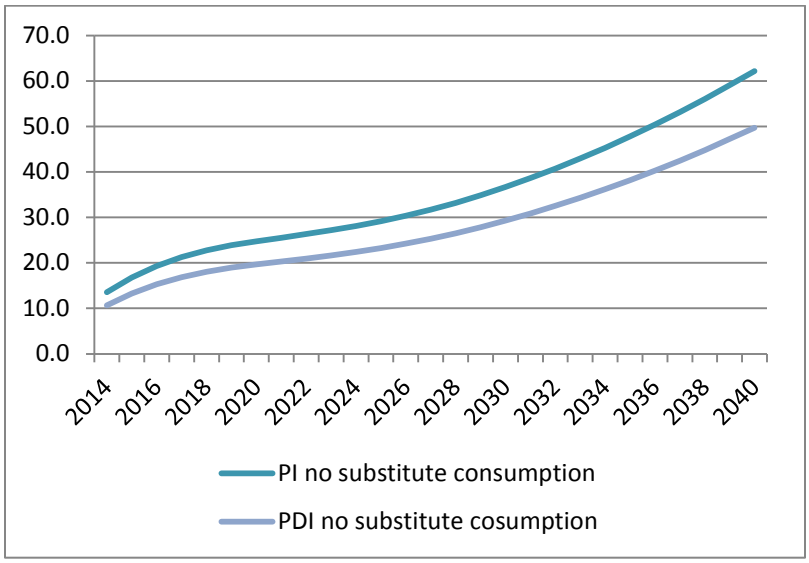
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-15, PI generated from off-road motorcycling in Newfoundland starts modestly at $7.0 million in 2014 before rising to $32.1 million in 2040 with corresponding increased impacts on PDI of $5.5 million to $25.7 million yielding incremental annual personal tax revenues of $1.5 million to $6.4 million. At 5%, the stream of income tax generated in Newfoundland has a NPV of $49.0 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the Newfoundland and/or federal government is able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Newfoundland generate $194,000 in revenues for the Federal government and $354,000 for the province.

Chart III-15: Off-Road Newfoundland PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

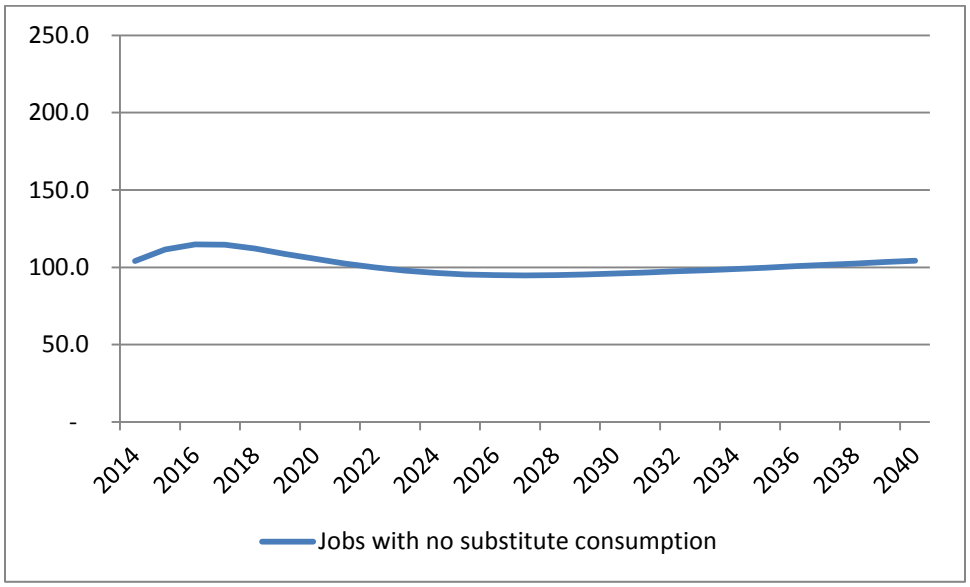


Jobs

In 2014 REMI's job impact estimates for Newfoundland are 105 as noted in Chart III-16. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing off-road motorcycling faster than labour productivity growth could reverse this result.

Newfoundland job impacts peak at 115 in 2016 but are in the 100±5 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart III-16: Off-Road Newfoundland Job Impacts 2014-2040 (#)



Prince Edward Island

Aggregate Output

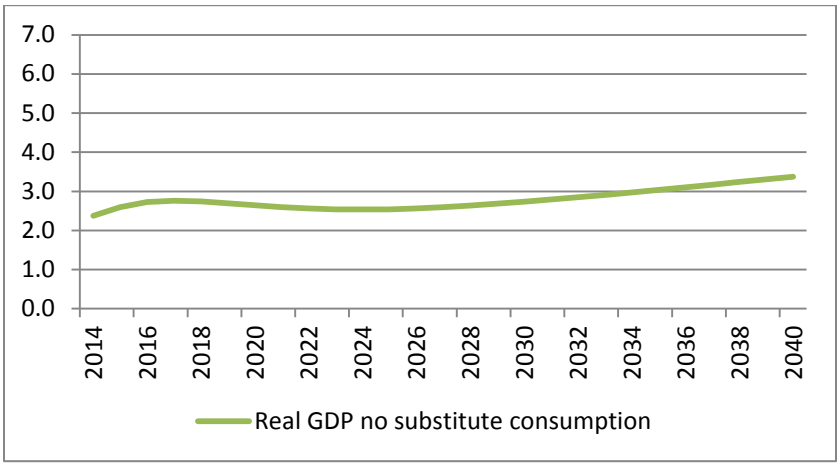
In 2014, Prince Edward Island recreational motorcycling generated $1,244,000 in direct output with total output impacts of $2,501,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $750,000 direct RGDP with total RGDP impacts of $1,503,000 in Prince Edward Island.

As expected REMI allocated results were higher than those from the I/O with RGDP estimates in 2014 of $2.4 million rising to $3.4 million by 2040 as noted in Chart III-17.

Chart III-17: Off-Road Prince Edward Island RGDP Impacts 2014-2040 ($ 2011 Millions)



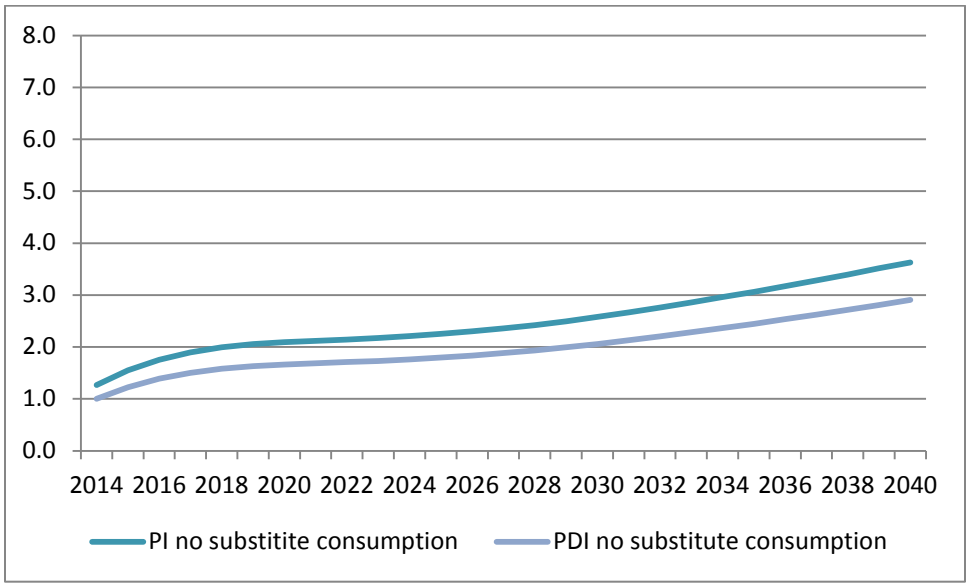
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-18, PI generated from off-road motorcycling in Prince Edward Island starts modestly at $1.3 million in 2014 before rising to $3.6 million in 2040 with corresponding increased impacts on PDI of $1.0 million in 2014 to $2.9 million in 2040 yielding incremental annual personal tax revenues of $0.3 million to $0.7 million. At 5%, the stream of income tax generated in Prince Edward Island has a NPV of $7.1 million.

PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the Federal and Prince Edward Island governments are able to exercise their judgements on their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Prince Edward Island generate $194,000 in revenues for the Federal government and $354,000 for the province.

Chart III-18: Off-Road Prince Edward Island PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

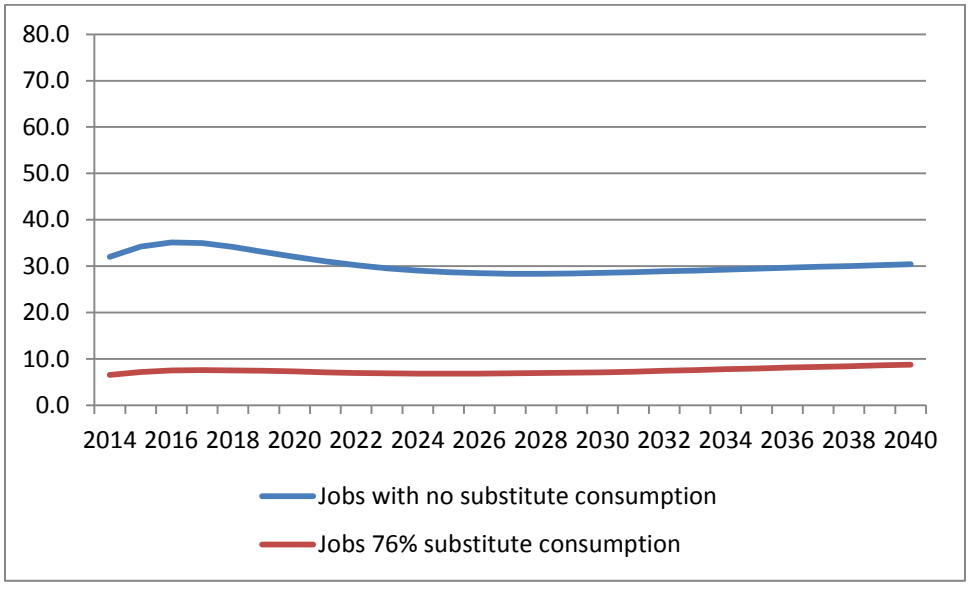


Jobs

In 2014 REMI's job impact estimates for Prince Edward Island are 32 as noted in Chart III-19. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Growing off-road motorcycling faster than labour productivity growth could reverse this result.

Prince Edward Island job impacts peak at 35 in 2016 but are in the 30±2 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart III-19: Off-Road Prince Edward Island Job Impacts 2014-2040 (#)



Nova Scotia

Aggregate Output

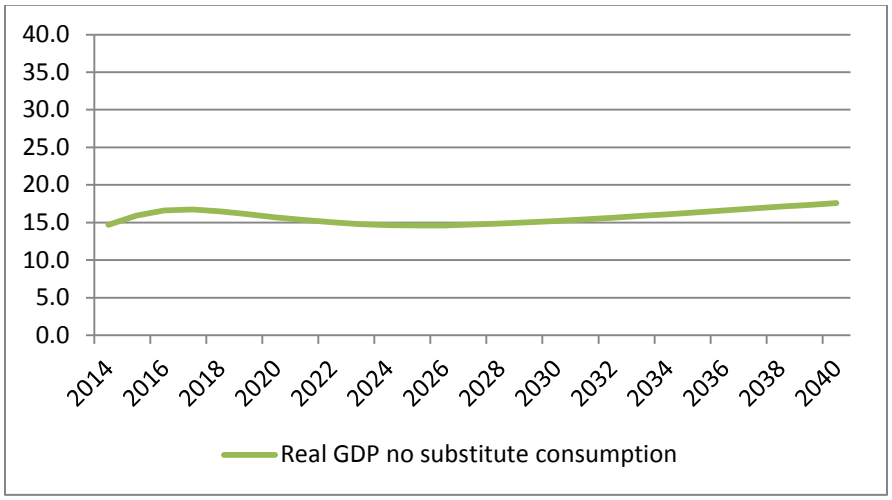
In 2014, Nova Scotia off-road motorcycling generated $8,496,000 in direct output with total output impacts of $25,437,000.

RGDP

According to the I/O analysis, these activities resulted in $4,482,000 of direct RGDP with total RGDP impacts of $9,276,000 in Nova Scotia, modest growth compared to Newfoundland.

As expected REMI allocated results were higher with RGDP estimates in 2014 of $14.8 million rising to $17.6 million by 2040 as noted in Chart III-20.

Chart III-20: Off-Road Nova Scotia RGDP Impacts 2014-2040 ($ 2011 Millions)



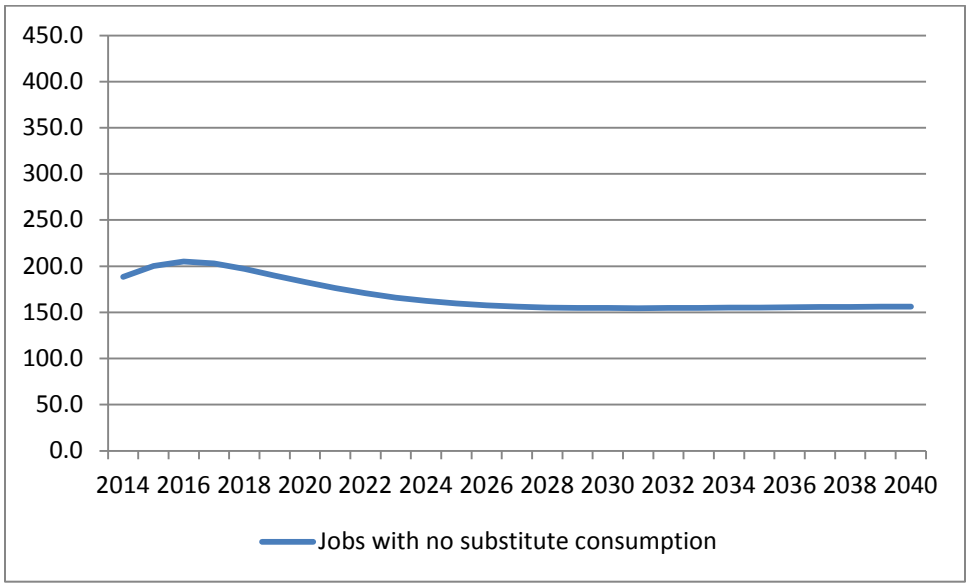
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-21, PI generated from off-road motorcycling in Nova Scotia starts modestly at $7.9 million in 2014 before rising to $18.4 million in 2040 with corresponding increased impacts on PDI of $6.2 million to $14.7 million yielding incremental annual personal tax revenues of $1.7 million to $3.7 million. At 5%, the stream of income tax generated in Nova Scotia has a NPV of $40.1 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Nova Scotia governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

Incremental annual product and production taxes raised in Nova Scotia generate $1,045,000 in revenues for the Federal government and $1,849,000 for the province.

Chart III-21: Off-Road Nova Scotia PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

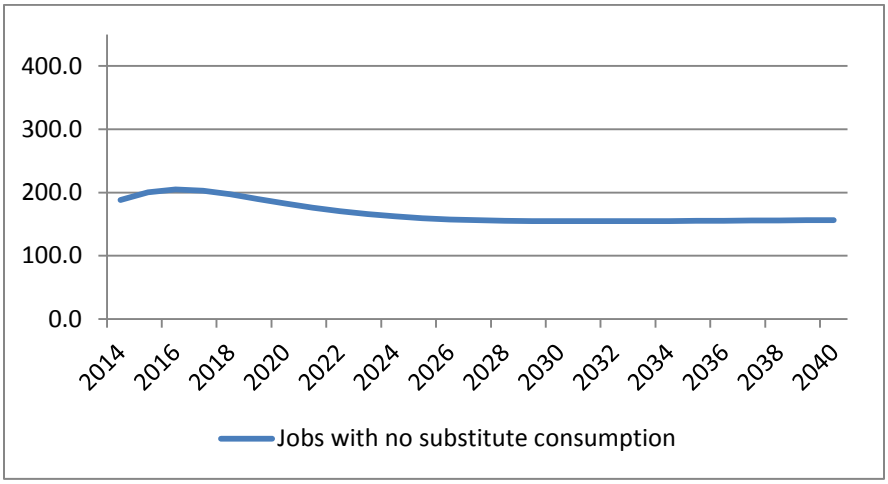


Jobs

In 2014 REMI's job impact estimates for Nova Scotia are 189 as noted in Chart III-22. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Growing off-road motorcycling faster than labour productivity growth could reverse this result.

Nova Scotia job impacts peak at 205 in 2016 but are in the 163±8 range from 2020-2040. These annual impacts are incremental relative to the base case. Relatively slow economic growth flattens out. With the resurrection of shipbuilding and possibilities of oil extraction rom the Continental Margin, Nova Scotia's prospects could improve relative to this retrospective view.

Chart III-22: Off-Road Nova Scotia Job Impacts 2014-2040 (#)



New Brunswick

Aggregate Output

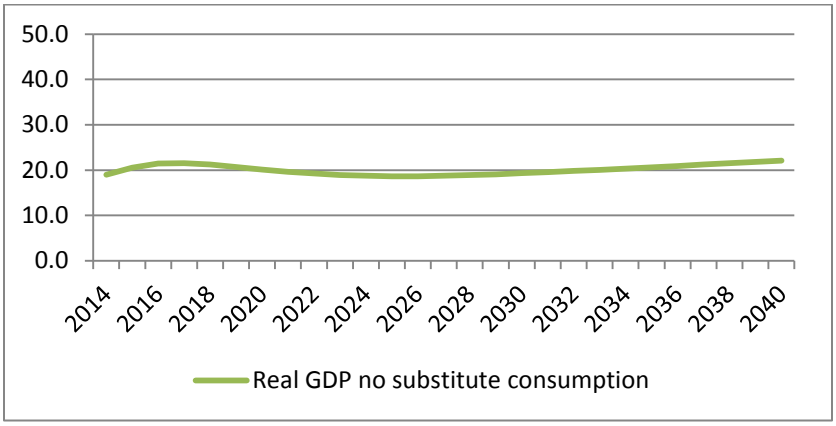
In 2014, New Brunswick off-road motorcycling generated $14,336,000 in direct output with total output impacts of $25,437,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $6,425,000 direct RGDP with total RGDP impacts of $11,988,000 in New Brunswick, modest growth compared to Newfoundland.

As expected REMI allocated results were higher with RGDP estimates in 2014 of $19.0 million rising to $22.1 million by 2040 as noted in Chart III-23.

Chart III-23: Off-Road New Brunswick RGDP Impacts 2014-2040 ($ 2011 Millions)



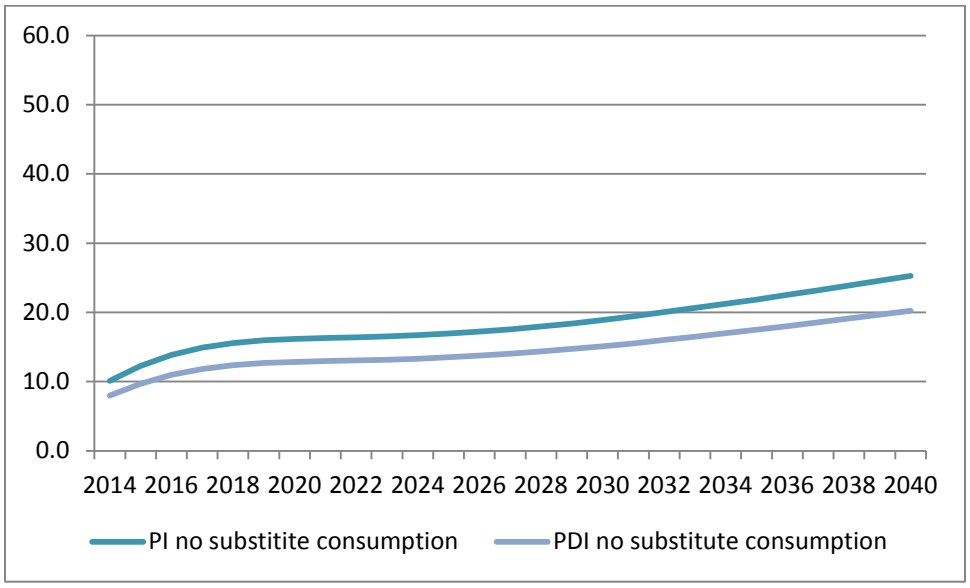
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-24, PI generated from off-road motorcycling in New Brunswick starts modestly at $10.1 million in 2014 before rising to $25.3 million in 2040 with corresponding increased impacts on PDI of $7.9 million to $20.2 million yielding incremental annual personal tax revenues of $2.2 million on 2014 to $5.1 million in 2040. At 5%, the stream of income tax generated in New Brunswick has a NPV of $53.3 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and New Brunswick governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in New Brunswick generate $1,227,000 in revenues for the Federal government and $2,106,000 for the province.

Chart III-24: Off-Road New Brunswick PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

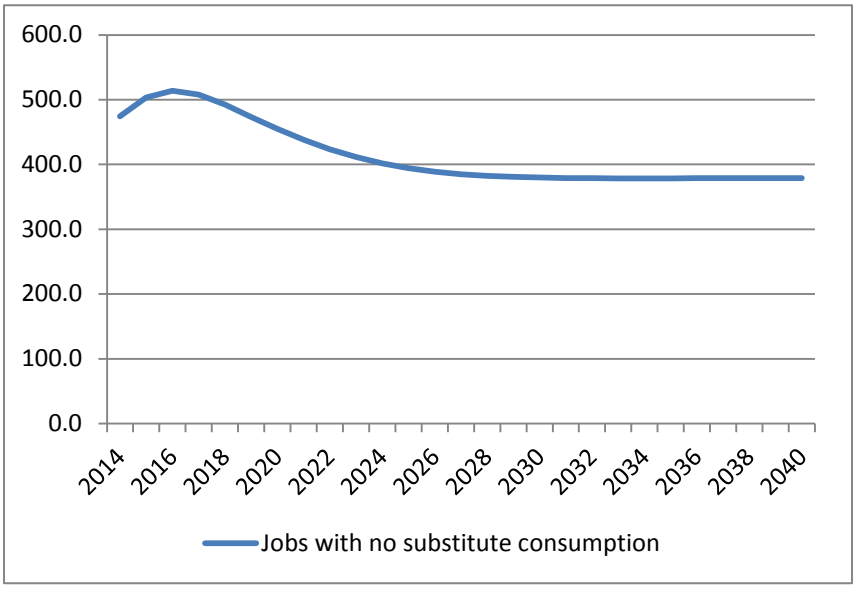


Jobs

In 2014 REMI's job impact estimates for New Brunswick are 228 as noted in Chart III-25. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing off-road motorcycling faster than labour productivity growth could reverse this result.

New Brunswick job impacts peak at 247 in 2016 but are in the 202±17 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart III-25: Off-Road New Brunswick Job Impacts 2014-2040 (#)



Quebec

Aggregate Output

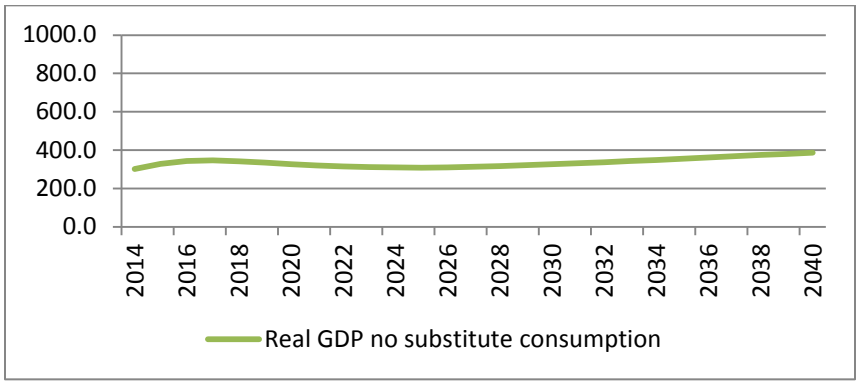
In 2014, Quebec off-road motorcycling generated $204,333,000 in direct output with total output impacts of $347,115,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $95,367,000 direct RGDP with total RGDP impacts of $190,609,000 in Quebec.

As expected REMI allocated results were higher with RGDP estimates in 2014 of $301.9 million rising to $387.6 million by 2040 as noted in Chart III-26.

Chart III-26: Off-Road Quebec RGDP Impacts 2014-2040 ($ 2011 Millions)



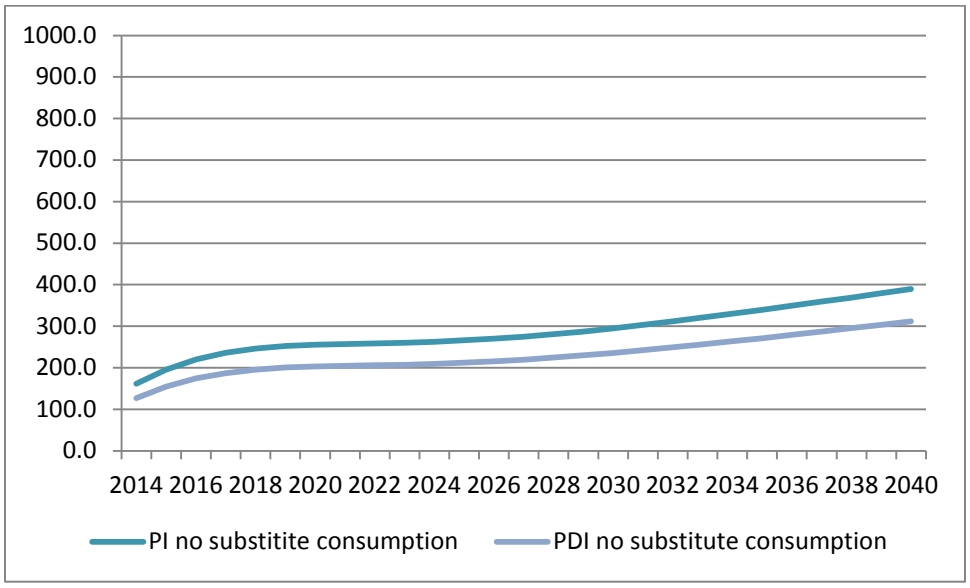
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-27, PI generated from off-road motorcycling in Quebec starts modestly at $161.1 million in 2014 before rising to $389.5 million in 2040 with corresponding increased impacts on PDI of $126.9 million to $311.5 million yielding incremental annual personal tax revenues of $34.2million to $78.0 million. At 5%, the stream of income tax generated in Quebec has a NPV of $836.1 million.

These are important measures because PDI indicates the increased consumer over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Quebec governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Quebec generate $16,880,000 in revenues for the Federal government and $32,720,000 for the province.

Chart III-27: Off-Road Quebec PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

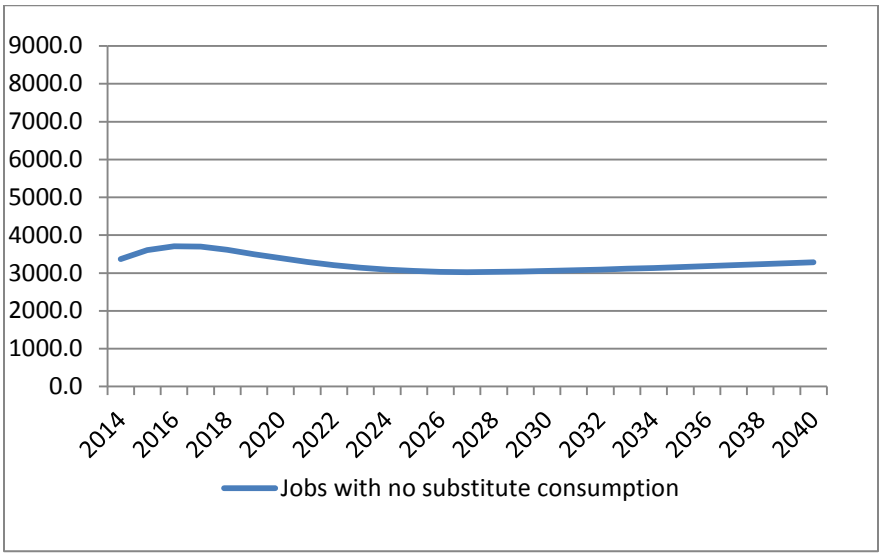


Jobs

In 2014 REMI's job impact estimates for Quebec are 3,370 as noted in Chart III-28. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing off-road motorcycling faster than labour productivity growth could reverse this result.

Quebec job impacts peak at 3,710 in 2016 but are in the 3,208±183 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart III-28: Off-Road Quebec Job Impacts 2014-2040 (#)



Manitoba

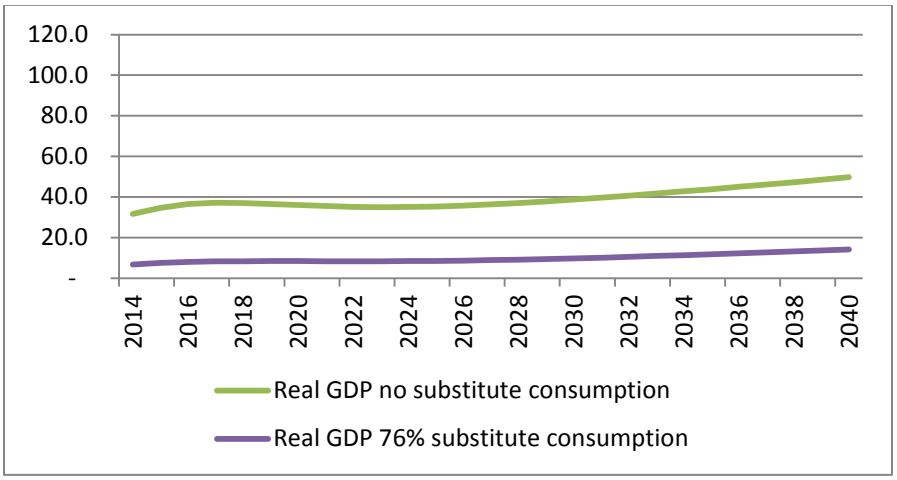
Aggregate Output

In 2014, Manitoba off-road motorcycling generated $18,291,000 in direct output with total output impacts of $35,469,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $9,835,000 direct RGDP with total RGDP impacts of $20,001,000 in Manitoba. As expected, REMI allocated results were higher with RGDP estimates in 2014 of $31.6 million rising to $49.7 million by 2040 as noted in Chart III-29.

Chart III-29: Off-Road Manitoba RGDP Impacts 2014-2040 ($ 2011 Millions)



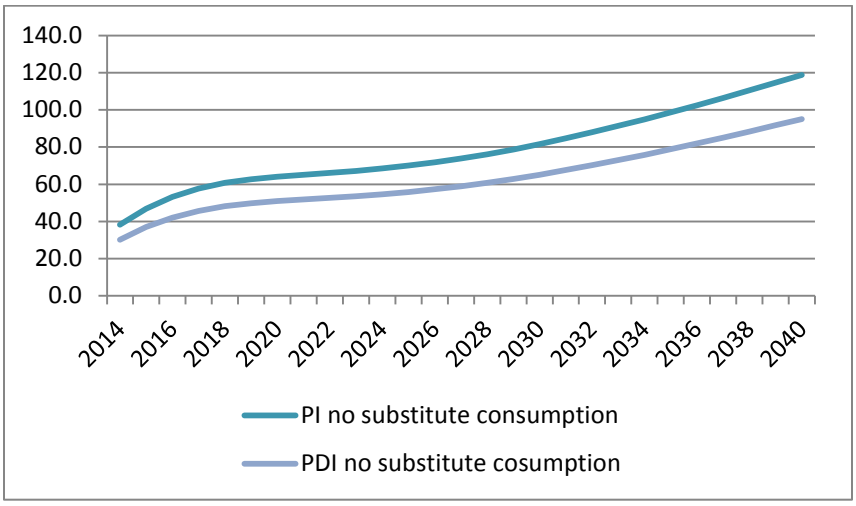
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-30, PI generated from off-road motorcycling in Manitoba starts modestly at $16.9 million in 2014 before rising to $52.1 million in 2040 with corresponding increased impacts on PDI of $13.3 million to $41.7 million yielding incremental annual personal tax revenues of $3.6 million to $10.4 million. At 5%, the stream of income tax generated in Manitoba has a NPV of $97.8 million.

These are important measures because PDI indicates the increased consumer over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Manitoba governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Manitoba generate $1,745,000 in revenues for the Federal government and $2,359,000 for the province.

Chart III-30: Off-Road Manitoba PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)

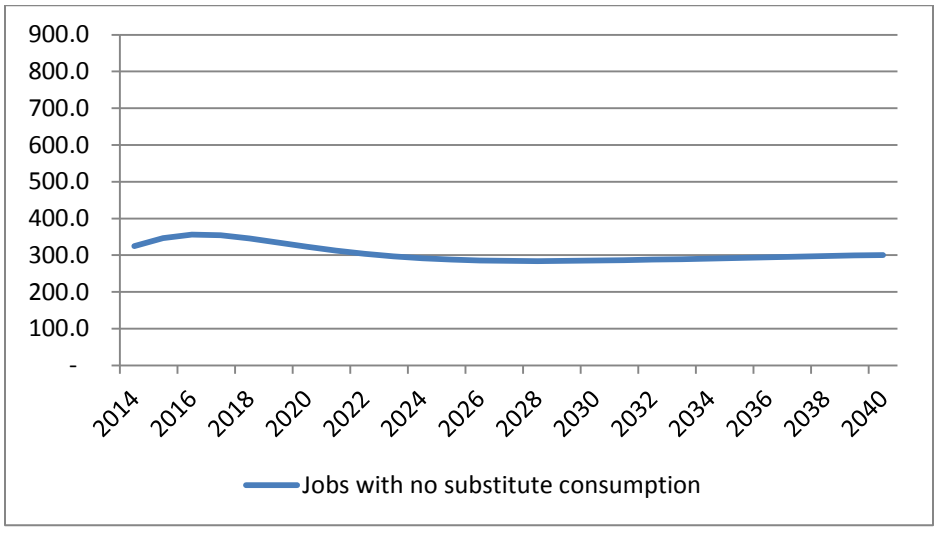


Jobs

In 2014 REMI's job impact estimates for Manitoba are 325 as noted in Chart III-31. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing off-road motorcycling faster than labour productivity growth could reverse this result.

Manitoba job impacts peak at 357 in 2016 but are in the 304±20 range from 2020-2040. These annual impacts are incremental relative to the base case.

Chart III-31: Off-Road Manitoba Job Impacts 2014-2040 (#)



Saskatchewan

Aggregate Output

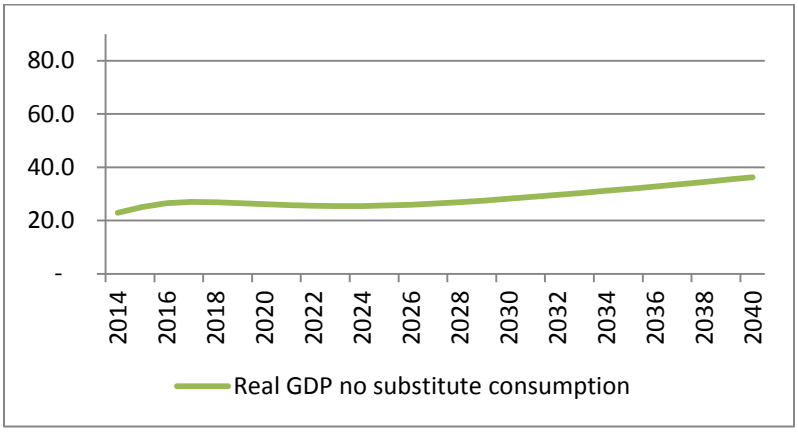
In 2014, Saskatchewan off-road motorcycling generated $12,306,000 in direct output with total output impacts of $27,008,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $5,701,000 direct RGDP with total RGDP impacts of $13,998,000 in Saskatchewan.

As expected, REMI allocated results were higher with RGDP estimates in 2014 of $22.9 million rising to $36.3 million by 2040 as noted in Chart III-32, smallest of the Western Provinces but larger than any of the individual Atlantic ones.

Chart III-32: Off-Road Saskatchewan RGDP Impacts 2014-2040 ($ 2011 Millions)



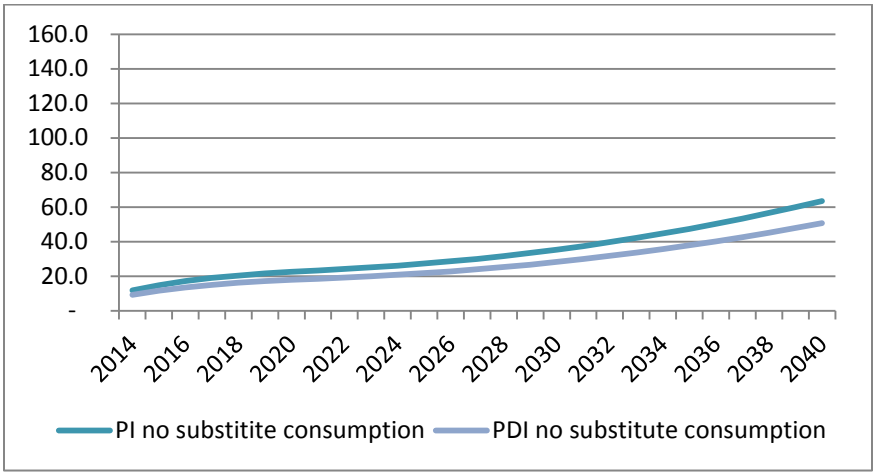
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-33, PI generated from off-road motorcycling in Saskatchewan starts modestly at $11.8 million in 2014 before rising to $63.5 million in 2040 with corresponding increased impacts on PDI of $9.3 million to $50.8 million yielding incremental annual personal tax revenues of $2.5 million to $12.7 million. At 5%, the stream of income tax generated in Saskatchewan has a NPV of $49.0 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which federal and Saskatchewan governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

In addition, incremental annual product and production taxes raised in Saskatchewan generate $1,132,000 in revenues for the Federal government and $1,137,000 for the province.

Chart III-33: Off-Road Saskatchewan PI and PDI and Personal Tax Impacts 2014-2040
(Millions Current $)

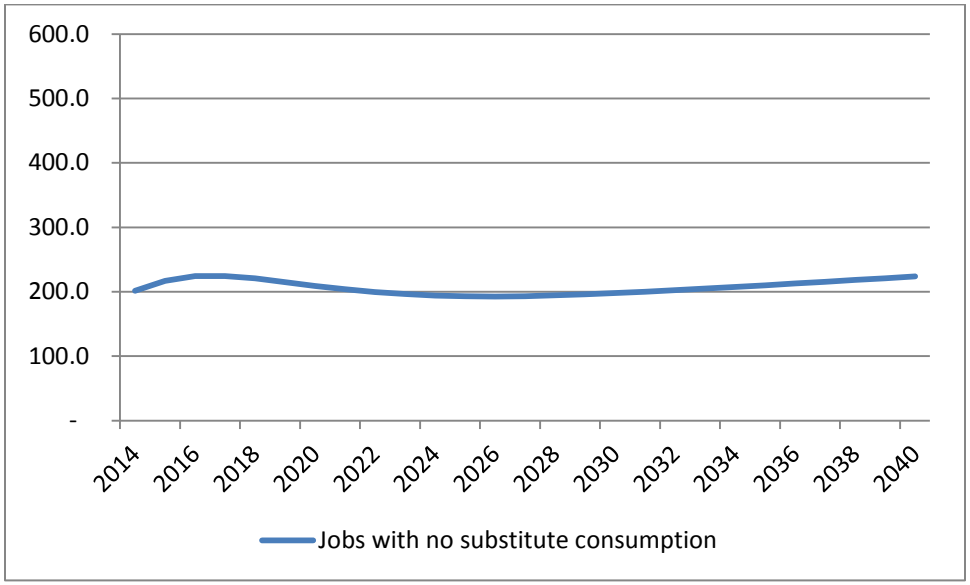


Jobs

In 2014 REMI's job impact estimates for Saskatchewan are 202 as noted in Chart III-34. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing off-road motorcycling faster than labour productivity growth could reverse this result.

Saskatchewan job impacts peak at 225 in 2016 but are in the 202±8 range from 2020-2035 after which expected more rapid growth of the Saskatchewan economy drives demand higher. These annual impacts are incremental relative to the base case.

Chart III-34: Off-Road Saskatchewan Job Impacts 2014-2040 (#)



Alberta

Aggregate Output

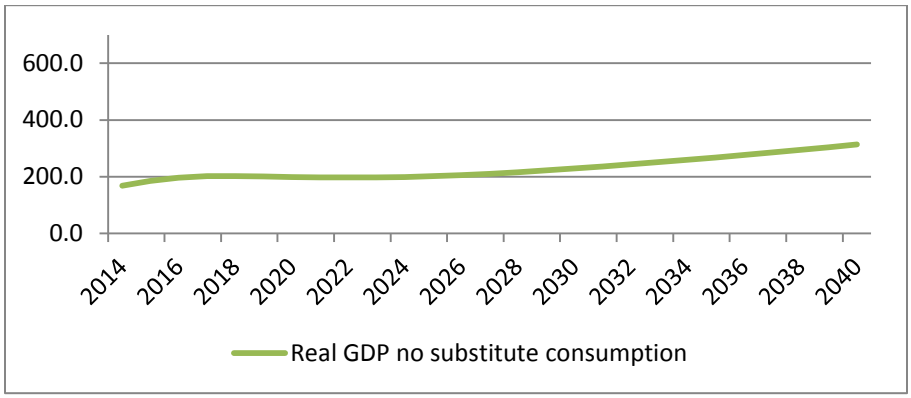
In 2014, Alberta off-road motorcycling generated $89,048,000 in direct output with total output impacts of $193,027,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $45,350,000 direct RGDP with total RGDP impacts of $106,425,000 in Alberta.

As expected, REMI allocated results were higher with RGDP estimates in 2014 of $168.4 million rising to $313.9 million by 2040 as noted in Chart III-35.

Chart III-35: Off-Road Alberta RGDP Impacts 2014-2040 ($ 2011 Millions)



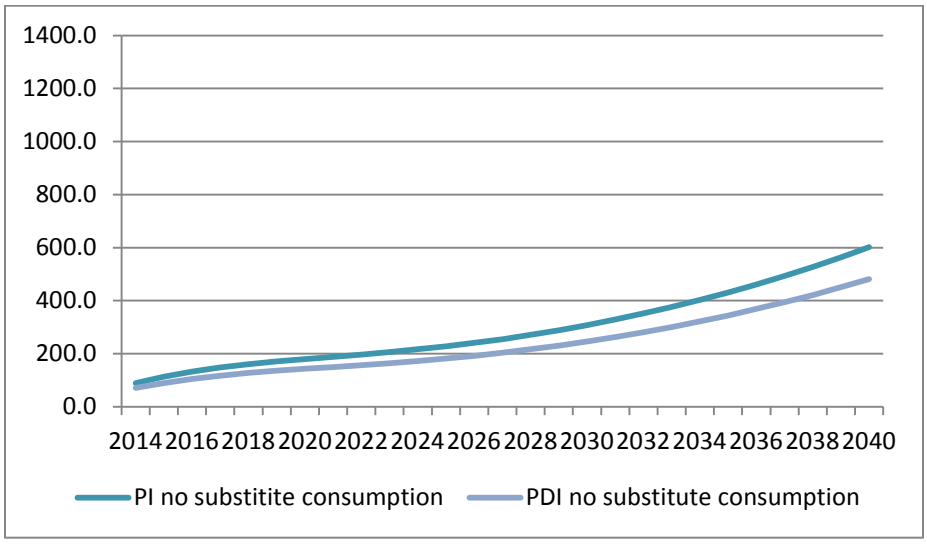
Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-36, PI generated from off-road motorcycling in Alberta starts modestly at $89.9 million in 2014 before rising to $601.7 million in 2040 with corresponding increased impacts on PDI of $75.8 million to $481.2 million yielding incremental annual personal tax revenues of $14.1 million to $120.5 million. At 5%, the stream of income tax generated in Alberta has a NPV of $763.7 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and Alberta governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for funding.

In addition, incremental annual product and production taxes raised in Alberta generate $11,212,000 in revenues for the Federal government and $4,182,000 for the province.

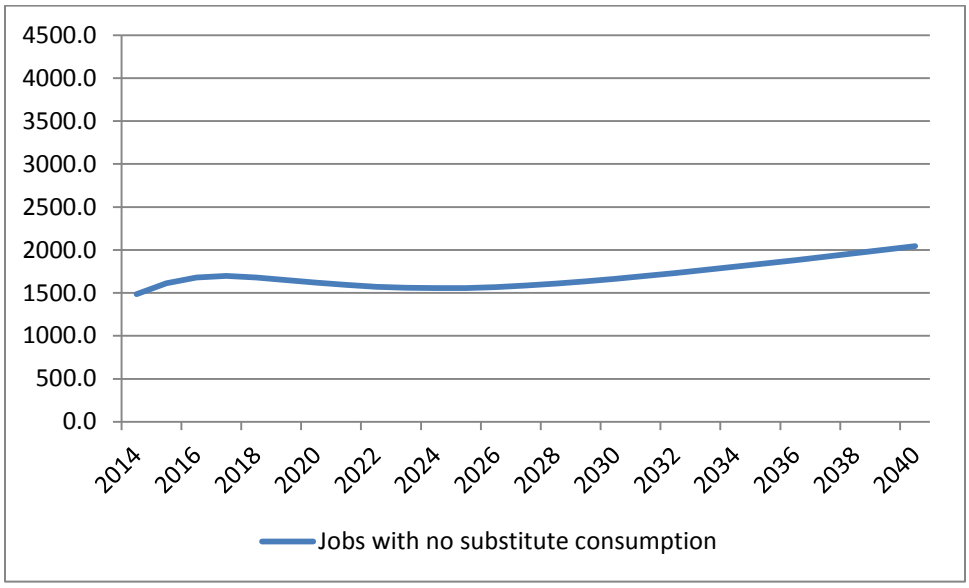
Chart III-36: Off-Road Alberta PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)



Jobs

In 2014 REMI's job impact estimates for Alberta are 1,487 as noted in Chart III-37. Alberta job impacts peak temporarily at 1,697 in 2017 before falling back to 1,555 in 2024 after which they rise steadily to 2,024 by 2040. These annual impacts are incremental relative to the base case. In this case they grow to keep pace with the more rapidly growing Alberta economy which increases participation in off-road motorcycling compared to the rest of the country.

Chart III-37: Off-Road Alberta Job Impacts 2014-2040 (#)



British Columbia

Aggregate Output

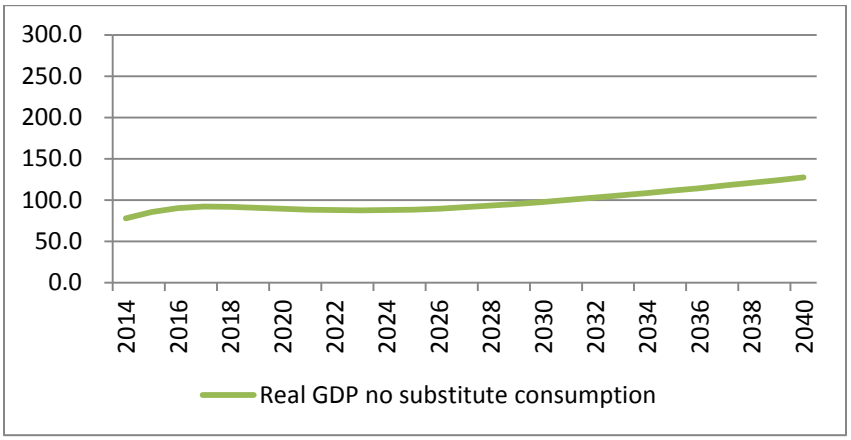
In 2014, British Columbia off-road motorcycling generated $39,057,000 in direct output with total output impacts of $87,993,000.

RGDP

According to the I/O analysis, these activities resulted in RGDP impacts of $20,513,000 direct RGDP with total RGDP impacts of $49,207,000 in British Columbia.

As expected, REMI allocated results were higher with RGDP estimates in 2014 of $78.0 million rising to $127.3 million by 2040 as noted in Chart III-38.

Chart III-38: Off-Road British Columbia RGDP Impacts 2014-2040 ($ 2011 Millions)

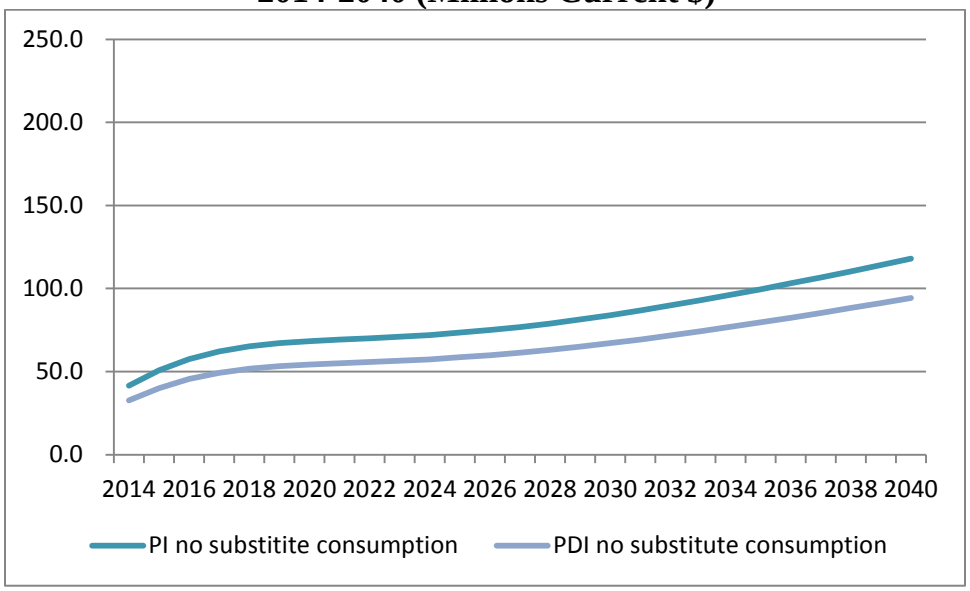


Personal Incomes, Personal Disposable Income and Personal Taxes

Demonstrated in Chart III-39, PI generated from off-road motorcycling in British Columbia starts modestly at $41.6 million in 2014 before rising to $117.7 million in 2040 with corresponding increased impacts on PDI of $32.8 million to $94.3 million yielding incremental annual personal tax revenues of $8.8 million to $23.4 million. At 5%, the stream of income tax generated in British Columbia has a net present value (NPV) of $231.6 million.

These are important measures because PDI indicates the increased consumer choice over what they want to purchase. In addition, personal income taxes add to the revenues over which the federal and British Columbia governments are able to exercise their judgements over their expenditures without incurring further debt, raising tax rates, or the province going cap-in-hand to the federal government for more funding.

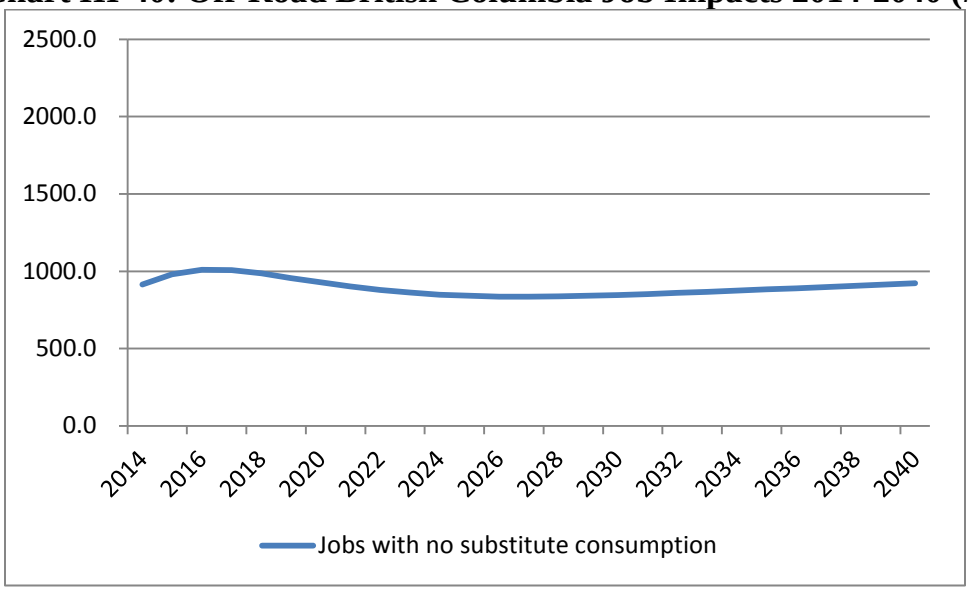
Chart III-39: Off-Road British Columbia PI and PDI and Personal Tax Impacts 2014-2040 (Millions Current $)



Jobs

In 2014 REMI's job impact estimates for British Columbia are 915 as noted in Chart III-40. They peak at 1,010 in 2016 before a gentle decline into the mid-2020s. From 2020 to 2040 job impacts are in the range of 884±48. Unlike the other indicators which grow over time, jobs do not because labour productivity growth in REMI outstrips the activity's growth. Clearly, growing off-road motorcycling faster than labour productivity growth could reverse this result. These annual impacts are incremental relative to the base case.

Chart III-40: Off-Road British Columbia Job Impacts 2014-2040 (#)



REMI Results: Substituting for Alternative Expenditures

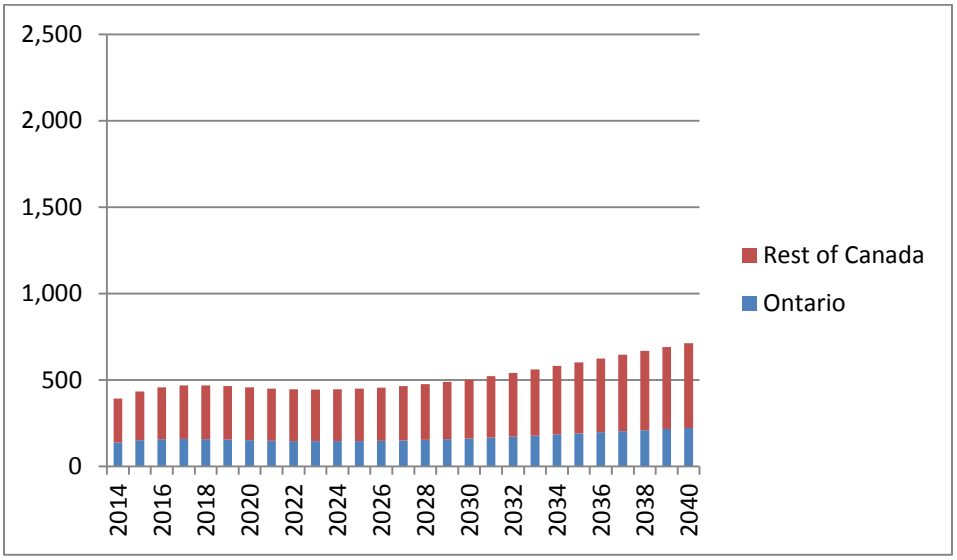
Econometric estimates based on 1,038 survey respondents indicated that changes in income would influence 24% of their consumption related to recreational motorcycling, leaving 76% of motorcyclists' consumption unexplained by income. At least that larger share of off-road motorcycle consumption is likely to substitute for consumption. For that reason Smith Gunther has run a second case in which 76% of off-road motorcycling expenditures reduce general household expenditures annually. Those reductions severely curtail impacts in this segment.

Just what that percentage of substitute consumption is in reality is open to debate. For example, many of the empty nesters interviewed said they had returned to off-road motorcycling once their children were well educated and on their way. These families had intended to stop funding their offspring and to do something else with that share of their discretionary income. Rather than motorcycling they could have saved it all. Alternatively, they could have gone to Las Vegas and blown it gambling or spent it abroad with little impact on Canada. If all off-road motorcyclists behaved in any of these ways then off-road motorcycling would have an impact akin to that already discussed.

On the other hand if off-road motorcyclists just spent the allotted 76% of motorcycling consumption on what normally is consumed by their peers and took the rest out of savings or funds that they would have spent abroad, then the results would be similar to what follows. If even higher percentages of expenditures substitute for other consumption then impacts would be further reduced. If lower percentages of off-road expenditures are substituted for other consumption then impacts would lie between the two cases. In addition, in instances where individuals undertake additional work to finance their motorcycling activities those funds are not offset by other consumption. To assist in drawing comparisons the following charts utilize the same vertical axis as do parallel charts without consumption substitution.

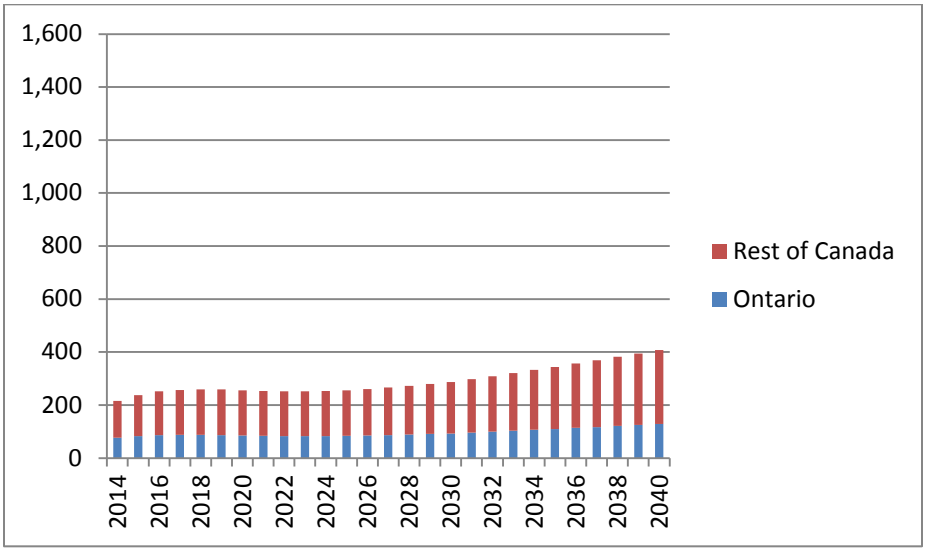
With off-road motorcycling expenditures substituting for 76% of other general consumption, output impacts reach $721 million by 2040 in contrast with the estimate of $2.6 billion when there is no substitute consumption, shown in Chart III-41.

Chart III-41: Output Impacts from Off-Road 2014-2040 with 76% of Off-Road Spending Displacing Other Consumption (Millions of Fixed 2011 $)



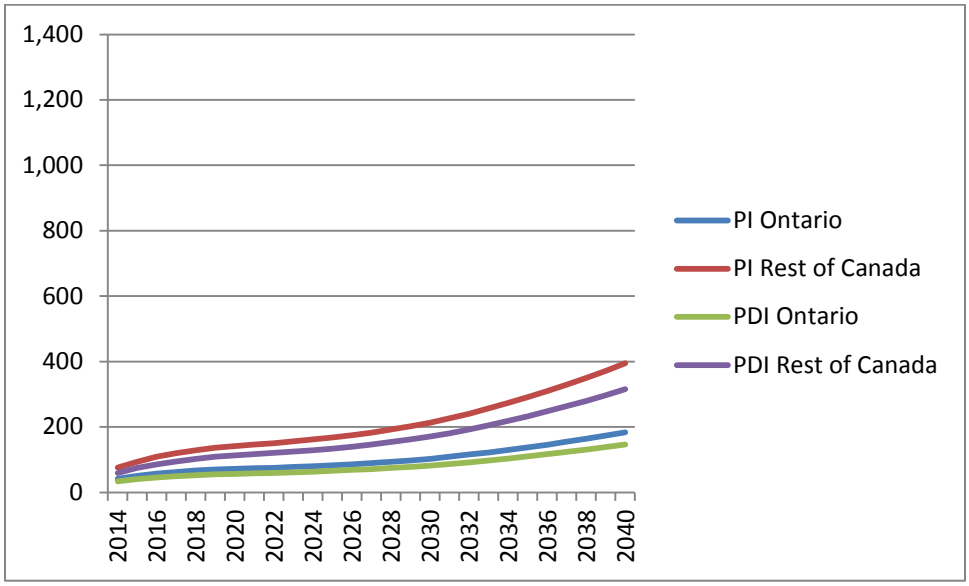
Correspondingly GDP impacts shrink to those appearing in **Chart III-42** topping out at $728 million compared to $2.9 billion in 2040 with no substitute consumption.

Chart III-42: GDP Impacts 2014-2040 with 76% of Off-Road Spending Displacing Other Consumption (Millions of Fixed 2011 $)



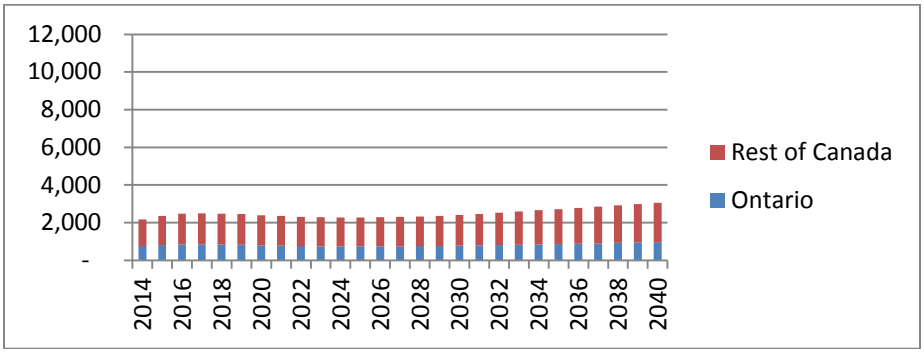
Personal income also diminishes relative to those impacts in the earlier Chart III-43. Including substitute consumption in the analysis reduced the NVP of personal income taxes generated in Ontario to $272 million and in the rest of Canada to $551 million, each a far cry from estimates with no consumption substitutes of $886 million and $2.2 billion respectively by 2040.

Chart III-43: PI and PDI Impacts 2014-2040 with 76% of Off-Road Spending Displacing Other Consumption (Millions Current $)



Net job impacts from off-road motorcycling for all of Canada are similarly constrained as noted in **Chart III-44** finishing up at 3,001 rather than 10,071 in 2040.

Chart III-44: Job Impacts 2014-2040 with 76% of Off-Road Spending Displacing Other Consumption (Number)



This section demonstrates the criticality of what share of off-road motorcycling consumption displaces consumption of domestically produced goods and services in family budgets in both the I/O approach and REMI applications to assessing impacts.

Chapter IV: Motorcycles Markets and Training

Introduction

Although not germane to the impact analysis because they had already been produced, survey respondents answered questions 20-23 on their sales and purchases of used motorcycles. As part of understanding motorcycle markets, the initial part of this brief chapter reports on those transactions. The second part of the chapter covers off survey responses concerning training.

Markets: Purchasers

Question 20 asked if anyone in each respondent's household purchased a new or used motorcycle in 2014. Of the 1,400 responding households, 595 had purchased one or more motorcycles. Remembering that many households contained multiple riders, subsequent responses revealed that in 2014 respondents purchased 2,114 motorcycles of which 915 were new and 1,199 used.

A much smaller sample of respondents was willing to give information on the numbers and types of motorcycles including information on prices, trades and the value of trades. In essence, the market for used motorcycles includes both trades and the outright purchase of used motorcycles with or without trades.

Survey results from purchasers of new motorcycles by type with associated trades appear in **Table IV-1**.

Table IV-1: Average Retail Price by Type of New Motorcycles and Related Trade-In Values 2014

	New		Trade-ins			
Type	Number	Price	Number	Average Value	% with Trade-ins	% of New Retail Revenues Offset by Trade-Ins
Street	72	$16,125	20	$10,620	27.8	18.3
Off-road	90	$7,713	22	$3,777	24.4	12.0
Dual	55	$9,853	14	$5,016	25.5	13.0
Competition	63	$6,751	22	$2,761	34.9	14.3
Mini	9	$1,567	0	$0	0.0	-
Total	289		78			

Source: Report of national data from the survey of motorcyclists with no extrapolation to national aggregates.

Data were too sparse to report on new and used sales of scooters. As expected, prices, defined as average revenues, varied appropriately among the types of motorcycles. The relative values of trade-ins followed a similar pattern albeit at fractions of new selling prices. Aside from minis

and scooters the 25%-35% of sales involved trade-ins depending on the type of motorcycle being purchased. The trades covered 12% to 18.3% of new purchases.

Aside from competition motorcycles, trade-in values, shown in **Table IV-2**, generally exceeded the market value of trades made for used motorcycles.

Table IV-2: Average Retail Price by Type of Used Motorcycles and Related Trade-In Values 2014

	New		Trade-ins			
Type	Number	Price	Number	Average Value	% with Trade-ins	% of New Retail Revenues Offset by Trade-Ins
Street	141	$6,378	25	$5,112	17.7	14.2
Scooter	15	$1,153	0	$ -	0.0	0.0
Off-road	136	$2,912	17	$2,076	12.5	8.9
Dual	69	$4,359	17	$3,059	24.6	17.3
Competition	61	$4,492	14	$2,464	23.0	12.6
Mini	29	$1,040	5	$1,160	17.2	19.2
Total	451		78			

Source: Report of national data from the survey of motorcyclists with no extrapolation to national aggregates.

A significant number of these transactions involved swaps of motorcycles albeit the trade-in values were a smaller share of used transactions than transactions for new motorcycles. Aside from a few transactions for antique motorcycles, nearly all used transactions involved motorcycles produced within the last 20 years, suggesting that, antiques aside, the maximum expected longevity for motorcycles should be no older than 20 years when estimating numbers of motorcycles in current use. Bearing in mind that there will be annual attrition, the number of motorcycles in use may be estimated from annual sales using a declining function asymptotic to zero twenty years out and perhaps sooner in jurisdictions close to saltwater.

Training

1,088 respondents to the survey answered questions on their family's training for their recreational motorcycling activities. Both motorcycle riding associations and respondents placed high a priority on training. Respondents were asked for information concerning each household member's initial training and retraining concerning the number of times courses were attended in order to determine their level of effort devoted to training.

Participation in training is, of course, limited by household sizes. The numbers of households of increasing size are shown in **Table IV-3**.

Table IV-3: Household Composition

Family size	# of Households	People
1	585	585
2	277	554
3	167	501
4	197	788
5	42	210
6 or more	72	432
Total	1340	3070

Source: Motorcycle Survey coverage.

Total enrolment by these individuals stressed training. The data collected provided information on those enrolled in one or more courses new to them as well as similar information on retraining. Aggregated among all household members as well as for non-spousal household members, (mostly children, but always young enough to be called that), 1,380 enrolments appear in total in **Table IV-4**. Because people are enrolled in multiple courses, as noted in the table this result does not mean that all are enrolled in at least one course, just that the number of enrolments in total exceed the number in respondent households.

Table IV-3: Training Enrolments

	Initial Enrolments		Re-Enrolments	
Number of Courses	All Enrolments	Non-Spouses	All Re-Enrolments	Non-Spouses
1	737	170	196	24
2	132	26	78	8
3	54	10	32	3
4	24	5	25	3
5	18	7	23	1
6	10	4	4	0
7	2	0	0	0
8	2	1	4	0
9	0	0	1	0
10	17	6	21	7
Total	996	229	384	46

Source: Motorcycle Survey

The emphasis on adult training implied above suggests that much of tutelage for younger riders is taking place within households rather than in more formal courses. Of the responding

households 218 felt that their family training had been increasing while 159 thought it had been decreasing and the rest thought it was stable and had not been changing.

The effectiveness of the training is hard to judge. While Smith Gunther asked about the licensing status of family members at the beginning and end of 2014, there is a lot of noise in the responses because household members reach benchmarks where they can begin to qualify for licensing, and others grow older and may move in or out, particularly young people learning to ride. Within the households the number with limited speed licenses fell by 4 while those fully licensed increased by 23. Those learning to drive vehicles attained 13 light vehicle driving licenses albeit the numbers holding commercial licenses fell by 3. Those seeking motorcycle licenses may then be marginally more successful than those aspiring for vehicle licenses, but this result could come from just a slight difference in which group of learners left the nest. Far from conclusive evidence.

Chapter V: Conclusions

There are 708,700 participants in recreational motorcycling distributed across the country. While the vast majority of motorcyclists cruise casually either on roads or off-road or both, a small percentage of participants are involved competitively both in Canada and abroad.

National and provincial highlights from the analysis include:

- 708,700 Canadian motorcyclists ride 717,500 licensed and in-use motorcycles.
- 77% of motorcycling families have household incomes above the midpoint of Canadian household incomes. The midpoint of motorcyclists' household income is $95,000 to $124,000 range compared to the 2011 Canadian average of $61,072[51].
- In 2014 direct recreational motorcycling expenditures were $1.89 billion of which $1.34 billion was spent on domestically produced goods and services.
- Including direct, indirect and induced impacts, total 2014 recreational motorcycling outputs reached $2.68 billion in constant 2014 dollars. Using more up-to-date data and the fully articulated Regional Economic Model Inc.'s (REMI) model in 2011 dollars annual output impacts 2014-2040 reached $3.98±$0.265 billion. They rise over time with expanded activities.
- Aside from Quebec and New Brunswick, Input Output (I/O) provincial output multipliers all exceeded the national multiplier of 2, indicating that total output impacts more than doubled what motorcyclists spent in each of the provinces.
- I/O provincial multipliers differed due to alternative motorcycling activities and industrial concentrations of suppliers as documented in the report.
- I/O employment impacts were 15,400 measured in full-time equivalents (FTEs) comprised of 17,500 jobs dependent on motorcycling when hours worked per week are ignored. This level of employment is roughly equivalent to 2.5% of those employed in information, culture and recreation, and 12% of utilities employees. Attaining the higher output levels estimated in the more complete REMI model generates even more jobs peaking at 23,100 in 2016 and in the 20,000±1,023 range annually from 2020 to 2038.
- The I/O estimates yield direct labour income of $420.0 million with a total impact of $826.5 million in 2014. The broader current dollar income measure used in REMI is all of personal income (PI) before deduction of personal income taxes where impacts start at $1.1 billion and rise to $3.98 billion in 2040 of which $759 million (2014) and $3.0 billion (2040) enhance citizens' personal disposable incomes (PDI).
- Discounted at 5%, the stream of personal income tax generated in Canada over the period 2014-2040 has a net present value (NPV) of $6.5 billion.

[51] Source: Statistics Canada, 2011 National Household Survey (NHS). http://www5.statcan.gc.ca/cansim/a26 .

- Discounted at 5%, the stream of personal income tax generated in Ontario over the period 2014-2040 has a net present value (NPV) of $1.9 billion.
- Parallel NPV from personal income tax impacts in the rest of the country is $4.6 billion.
- If relative provincial growth rates among provinces other than Ontario continue in the same proportion as they have during this century, there will be a massive shift in the impacts of recreational motorcycling to Alberta. From 2014 to 2040, Alberta's share of employment impacts will rise from 14% to 19%, GDP from 17% to 22.7% and PI in current dollars from 17% to 32%.
- Annual charitable donations in 2014 were $13.2 million in time, effort, and money.
- There was a consensus among club executives that female participation has been increasing. 8.7% of the respondents to our motorcycle survey were females with 11% of those respondents between the ages of 30 and 50.
- Chapter III delineates off-road motorcycling impacts reaching $1.21 billion in total expenditures generating 6,801 FTEs or 7,923 jobs based on the I/O approach. Based on REMI, Canadian job impacts peak at 10,761 in 2016 but range annually between 9,460±560 from 2020-2040 with annual variations impacted by underlying business cycles, growth rates and suppliers' labour saving productivity gains.
- Canadian annual personal income (PI) impacts from off-road motorcycling start at $506 million and rise to $1,819 million generating PDI of $399 million in 2014 rising to $1,443 million yielding personal income taxes of $107 million in 2014 rising to $376 million in 2040.
- Ontario off-road PI impacts start modestly at $158 million in 2014 before rising to $515 million in 2040 accompanied by PDI increase of $125 million to $410 million yielding annual personal tax revenues of $33 million in 2014 extending to $105 million in 2040.
- At a 5% discount rate, the net personal value (NPV) of the increased personal income taxes from off-road motorcycling is $3.1 billion of which $886 million occurs in Ontario
- In addition to hiking personal income tax revenues, recreational motorcycling annually generates annual product and production taxes of $117.6 million federally and $166.6 million among all the provinces.
- The parallel assumptions in the I/O analysis and the initial REMI approaches are that recreational motorcycling expenditures come from savings, funds that would have been spent externally to Canada or from additional earnings. Modifying that assumption by taking 76% of the funds that would otherwise have been spent in Canada weakens the estimated impacts as documented in the report.

Provincial impacts from are delineated throughout the report where the alternative to expenditures on recreational motorcycling expenditures would either not be spent in Canada or svaed. Cases where 76% of expenditures on recreational motorcycling substitute for other expenditures are covered in Appendix 2.

Appendix 1: Inclusions and Data Aggregations

Inclusions

In conjunction with the sponsor and supporting associations, Smith Gunther Associates Ltd. undertook an open electronic survey of motorcyclists to which 1,400 responded on behalf of their households, covering 4,219 persons. The sample is generally sufficient to cover the various types of motorcycles including street motorcycles (1,458), scooters (96), off-road motorcycles (1,326), dual purpose (646), competition (454) and mini bikes (239).

The intent of the survey was to establish expenditures on recreational motorcycling activities by households by province including expenditures incurred in volunteer activities from organizing and preparing for events to supporting them throughout their duration. The survey also established time which volunteers contributed to motorcycling charitable events. To capture all expenditures on recreational motorcycling, rather than including only gate receipts identified in survey information, Smith Gunther augmented it to include all expenditures undertaken by the shows. Those augmentations were estimated by using gate receipts to calculate all expenditures normally undertaken by such shows. For parallel reasons, travel costs include those incurred by volunteers for trail construction and repair and site preparation over months leading up to competitive events, such as Enduros and Hare Scrmables, as well as volunteer time at the events *per se*.

Entertainment expenditures include those on presentations at shows such as those provided by the likes of Jordan Szoke as well as entertainment purchased by motorcyclists externally to motorcycling events.

Allocations Attributable to Various Types of Motorcycles

While the survey allocates motorcycling costs to various types of expenditures – gasoline, helmets, other apparel, attending events, etc. – it does not allocate them among different riding activities utilizing different kinds of motorcycles. In order to do so Smith Gunther has estimated allocations by type of expenditures by the number of motorcycles of each class owned by survey respondents.

For example the i^{ths} party's expenditures on Helmets (EH) for off-road EHOR is estimated by the following equation:

$$EHOR^{i} = C*(\#\text{ off-road motorcycles owned by i}) / \text{Total motorcycles owned by i}) + \Sigma\alpha_j * M_j$$

"C" is a constant, α_j is the estimated weight assigned to motorcycle type j and M_j is the number of motorcycles of type j owned by each responding household.

The resulting estimated equations for allocating expenditures appearing in Table AI-1 estimate allocations different types of expenditures. Where signs are positive for the type of motorcycle, the motorcyclist would pay more than the average for expenditure to undertake that type of motorcycling e.g. helmets for riding street motorcycles rather than scooters.

Table AI-1: Estimates of Motorcycling Household's Expenditures among Motorcycle Types

Expenditure\ Motorcycles	C	Street	Scooter	Off-Road	Dual	Competition	Mini	AR	MA	R^2
Helmets	274	1.83	-5.37	0.54	1.24	-0.21	-1.27	0.95	1.00	.99
Other apparel	369	0.30	2.55	-0.09	0.98	1.71	-1.32	0.95	0.73	.99
Repair parts	502	1.61	-0.24	-0.34	-0.33	2.69	-1.71	0.98	0.36	.99
Enhancements	598	6.41	1.92	0.58	0.34	-3.42	-3.07	0.93	.60	.99
Gasoline	646	-3.13	5.31	-1.97	3.42	-0.02	-3.21	0.91	.84	.99
Insurance	673	-0.66	-3.07	-0.31	0.32	-0.15	1.00	0.97	1.00	.99
Licensing	182	0.48	0.18	-2.77	1.52	0.60	2.43	0.93	0.26	.99
Club fees	108	0.01	-1.11	0.88	0.56	1.13	-3.01	0.89	100	.98
Other Material	301	-18.2	-15.1	16.5	-6.72	-4.36	-48.7	0.84	0.98	.99

Parameters were significant at the 95% level of confidence in all the equations, for the constant terms and the ordering adjustments as well as for other variable as follows:

- Helmets all parameters except for the one on competition motorcycles;
- Other apparel on competition motorcycles;
- Repair parts were statistically significant on street and competition motorcycles;
- Enhance parameters for street motorcycles;
- Gas consumption were significant for street, of-road and dual motorcycles;
- Insurance on street, scooter and mini motorcycles;
- Licensing on off-road motorcycles;
- Club fees all parameters were statistically different from zero except the one on Street motorcycles with was miniscule; and,
- Other materials street, Off-road and minis.

For example, the results lead to lower shares of helmet expenditures being allocated by motorcyclists riding less expensive types of motorcycles whereas expenditures for repair parts are relatively high per street motorcycle.

Smith Gunther deployed these results to segment expenditures between on road and off-road motorcycling in that on road includes all street motorcycles and scooters and excludes work on trails net of any use of street motorcycles to and from those venues.

Data Aggregation Techniques

As described in the text, Smith Gunther Associates received numbers of survey responses from British Columbia disproportionate to motorcycle sales and known and estimated registrations. Rather than throw evidence away to attain aggregates, Smith Gunther followed normal statistical practices by applying different weights to survey responses by province to estimate aggregates.

An important issue in such an approach is the reasonableness of the distribution criteria among the provinces. Canadian motorcycle registration data have two major known imperfections. Ontario off-road licenses are issued for new motorcycles for the duration of their lifespans so plates and therefore registrations may be retained at no cost to the owners long after Ontario households have retired their off-road motorcycles. The result is that, Ontario registration of off-road motorcycles was known to exaggerate numbers in use. British Columbia had the opposite issue in that for years off-road motorcycles have not required licenses.

One of the goals of the questionnaire was to establish the share of off-road motorcycle licenses in Ontario which have fallen into disuse and to deduct that number from registrations outstanding in order to establish how many continue to be registered and in use.

The alternative problem in British Columbia was redressed from sales data and by establishing survival data from other provinces to estimate the current stock of off-road motorcycles. Combined registration and survey data facilitated estimations of registered and in use motorcycles in each province. Combined with data on motorcycles registered to households responding to the survey, this allowed Smith Gunther to establish multiples from survey responses by province to estimate total provincial expenditures on items included in the survey – helmets, other apparel, gasoline, replacement parts, enhancements, insurance, licenses, club fees, other materials – which were then allocated among types of motorcycles as noted above. There were exceptions in that preliminary new motorcycle sales for 2014 are known by province and by type of motorcycle so that data source was preferable to survey based information. In addition, some of the other expenditures, such as accommodations, food and entertainment, with less background information, were divided among the provinces by type of motorcycle in proportion to the sale of new motorcycles and the estimated sales of other major expenditures.

Weights

The resulting weights in Table AI-2 were then applied to the sample responses by province.

Table AI-2: Provincial Weights by Type of Motorcycle to Expand Samples to Population Data

	Street	Scooters	Off-road	Dual	Competition	Mini	Average
British Columbia							
Weights for motorcycles	47.3	9.5	5.3	7.5	8.4	3.2	14.2
Weights for motorcyclists	35.9	7.2	4.0	5.7	6.4	2.5	10.7
Alberta							
Weights for motorcycles	295.6	59.1	33.1	46.9	52.8	20.3	88.5
Weights for motorcyclists	245.3	49.1	27.5	38.9	43.8	16.8	73.4
Saskatchewan and Manitoba							
Weights for motorcycles	151.0	30.2	16.9	23.9	27.0	10.4	45.2
Weights for motorcyclists	177.9	35.6	20.0	28.2	31.8	12.2	53.3
Ontario							
Weights for motorcycles	200.4	40.1	22.5	31.8	35.8	13.7	60.0
Weights for motorcyclists	197.6	39.5	22.2	31.3	35.3	13.5	59.2
Quebec							
Weights for motorcycles	401.0	80.2	45.0	63.6	71.6	27.5	120.0
Weights for motorcyclists	473.2	94.6	53.1	75.0	84.4	32.4	141.6
Atlantic							
Weights for motorcycles	165.9	33.2	18.6	26.3	29.6	11.4	49.7
Weights for motorcyclists	145.3	29.1	16.3	23.0	25.9	10.0	43.5

Because of the success of the sample in soliciting responses, these weights to attain total estimates are relatively small weights compared to those utilized on tourism by Statistics Canada where weights range into 4-5 digits. The regional aggregations among similar geographies in Saskatchewan and Manitoba as well as thin the Atlantic region maintained confidentialities while registration data facilitated provincial breakouts for the I/O and REMI modelling of motorcycling activities.

I/O Allocations of Estimates of Direct Expenditures

Allocated by Smith Gunther Associates in consultation with Statistics Canada, direct economic shocks by I/O commodity appear in Tables AI-3 for all recreational motorcycling activities and AI-4 for off-road motorcycling activities.

Table AI-3: Direct Recreational Motorcycling Expenditure Shocks to I/O ($1,000s)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Men's and women's clothing	1,596	350	1,929	2,212	34,362	27,363	2,941	1,930	16,673	7,327
Gasoline	2,308	507	2,789	3,198	63,024	36,345	6,307	4,139	33,853	12,404
Other transportation equipment and parts	18,772	4,121	22,685	26,010	347,292	279,103	43,122	28,295	198,340	55,696
Sporting and athletic goods	1,589	349	1,921	2,213	33,767	33,226	3,118	2,046	38,404	10,485
Air passenger transportation services	35	8	42	48	1,883	788	367	241	410	255
Other transit and ground passenger transportation services	474	104	573	657	9,206	9,882	830	544	6,355	3,348
Automotive insurance services	2,423	532	2,928	3,357	30,266	71,363	17,562	11,523	30,425	18,574
Rental of non-residential real estate	0	0	0	23	1,148	705	0	0	901	197
Accounting and related services	0	0	0	53	3,026	1,140	0	0	2,414	529
Amusement and recreation services	61	13	73	59	1,774	672	202	126	1,636	72
Room or unit accommodation services for travelers	61	13	74	85	2,871	981	514	337	5,567	214
Prepared meals	72	16	88	100	3,027	927	304	199	2,470	294
Alcoholic beverages for immediate consumption	23	5	28	32	1,102	463	94	62	1,090	116
Motor vehicle repair and maintenance services	2,221	488	2,684	3,077	38,368	26,777	6,899	4,527	23,234	8,200
Other membership services	409	90	494	567	9,478	7,792	592	388	7,230	1,846
Sales of other services by Non-Profit Institutions Serving Households	196	43	237	272	4,849	3,387	610	400	2,486	757
Sales of other government services	454	100	549	629	44,922	6,124	1,051	690	4,950	2,541

Table AI-4: Direct Off-Road Motorcycling Expenditure Shocks to I/O ($1,000s)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Men's and women's clothing	1,061	233	1,282	1,470	22,835	18,184	1,954	1,282	11,080	4,869
Gasoline	1,427	313	1,724	1,977	38,962	22,469	3,899	2,559	20,928	7,668
Other transportation equipment and related parts	7,599	1,668	9,183	10,529	107,885	74,599	10,636	6,979	64,309	27,819
Sporting and athletic goods	819	180	990	1,135	14,299	14,077	997	654	8,206	3,940
Other miscellaneous goods	340	75	410	475	10,779	10,465	1,405	922	21,627	3,917
Air passenger transportation services	10	2	13	14	565	236	110	72	123	77
Other transit and ground passenger transportation services	298	65	360	413	5,261	6,322	355	233	3,394	2,085
Automotive insurance services	1,579	347	1,909	2,188	19,732	46,526	11,450	7,513	19,835	12,110
Rental of non-residential real estate	0	0	0	11	491	290	0	0	403	111
Accounting and related services	0	0	0	25	1,294	469	0	0	1,080	297
Heritage institution services	29	6	35	40	1,228	404	200	132	2,489	121
Amusement and recreation services	29	6	35	28	759	277	79	49	732	40
Prepared meals	34	8	41	47	1,294	382	118	78	1,104	165
Alcoholic beverages for immediate consumption	11	2	13	15	471	191	37	24	487	65
Motor vehicle repair and maintenance services	626	137	757	867	6,135	4,099	178	117	2,813	2,431
Other membership services	298	65	360	412	6,899	5,672	431	283	5,263	1,344
Sales of other services by Non-Profit Institutions Serving Households	141	31	170	195	4,042	2,419	441	289	1,883	531
Sales of other government services	280	62	339	388	27,743	3,782	649	426	3,057	1,569

Appendix 2: Allocation of Rest of Canada Impacts to Jurisdictions

Allocation of Rest of Canada Impacts to Other Jurisdictions

This appendix documents Smith Gunther provincial allotments of REMI estimates for rest of Canada impacts. Smith Gunther allocated 2014 provincial shares for all provincial jurisdictions except Ontario in line with the share determined by each I/O run. After 2014, it allocated shares using a two stage process. The underlying provincial data is to be found on various Statistics Canada sources, for employment[52], GDP[53] and Wages and Salaries[54] as a proxy for PI.

The initial shares were determined by the requisite growth rates for each jurisdiction during the most recent century. In the second stage it maintained the estimated shares but adjusted totals for each year to equal total for the rest of Canada from REMI so the allotments are consistent with REMI results.

While the REMI model underpins the Ontario and rest of Canada results, the allocations are not otherwise influenced by anything but the allocations as described above. In short they are based on a modicum of economic information, previous growth rates, and are constrained to be consistent in aggregate with REMI. They are approximate allocation unsupported by more sophisticated modelling.
The table contained in this Appendix cover:
Recreational Motorcycling Impacts on:

- Employment with:
  - No consumption substitution
  - 76% consumption substitution
- GDP:
  - No consumption substitution
  - 76% consumption substitution
- Personal Income:

Source: Statistics Canada. Table 384-0038 - Gross domestic product, expenditure-based, provincial and territorial, annual (dollars unless otherwise noted), CANSIM (database). (accessed: 2015-06-05)

Source: Statistics Canada. Table 384-0038 - Gross domestic product, expenditure-based, provincial and territorial, annual (dollars unless otherwise noted), CANSIM (database). (accessed: 2015-06-05)

[54] Statistics Canada. *Table 384-0037 - Gross domestic product, income-based, provincial and territorial, annual (dollars),* CANSIM (database). (accessed: 2015-06-06)

    - No consumption substitution
    - 76% consumption substitution and,

Off-Road Motor Cycling Impact on:

- Employment with:
    - No consumption substitution
    - 76% consumption substitution
- GDP:
    - No consumption substitution
    - 76% consumption substitution
- Personal Income:
    - No consumption substitution
    - 76% consumption substitution.

The employment data are numbers while the monetized values are in 1,000s of Canadian dollars.

MOTORCYCLING

No substitutions

Employment	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	14,603	15,654	16,141	16,116	15,793	15,329	14,891	14,485	14,145	13,881	13,694	13,581	13,534	13,543	13,596	13,681	13,791
Newfoundland	210	225	232	231	226	219	213	206	201	197	194	192	191	191	191	192	193
PEI	64	68	70	69	68	65	63	61	60	58	57	57	56	56	56	56	56
Nova Scotia	382	406	415	411	399	384	370	356	345	335	328	322	318	316	314	313	313
New Brunswick	475	504	514	508	493	473	455	438	424	411	402	394	389	385	382	381	380
Quebec	7,433	7,947	8,173	8,139	7,955	7,700	7,459	7,236	7,046	6,895	6,782	6,707	6,664	6,648	6,654	6,675	6,708
Ontario	6,497	6,836	6,959	6,859	6,639	6,370	6,132	5,922	5,752	5,624	5,538	5,487	5,468	5,473	5,497	5,536	5,582
Manitoba	781	833	855	850	829	801	774	750	729	712	699	689	684	681	680	681	683
Saskatchewan	493	530	548	548	538	524	510	497	487	479	473	470	469	471	473	477	482
Alberta	3,009	3,260	3,398	3,429	3,396	3,331	3,270	3,214	3,172	3,145	3,135	3,142	3,163	3,198	3,244	3,297	3,358
British Columbia	1,756	1,880	1,936	1,931	1,889	1,831	1,776	1,725	1,682	1,648	1,624	1,608	1,600	1,598	1,601	1,609	1,619

MOTORCYCLING

With Consumption Substitutions

Employment	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	2390	2615	2754	2803	2813	2803	2755	2710	2674	2652	2644	2649	2668	2698	2738	2786	2838
Newfoundland	34.449	37.633	39.571	40.2101	40.287	40.076	39.322	38.612	38.031	37.649	37.466	37.465	37.661	38.01	38.496	39.091	39.738
Prince Edward Island	10.396	11.335	11.895	12.0639	12.063	11.977	11.729	11.495	11.3	11.165	11.089	11.067	11.103	11.184	11.305	11.458	11.625
Nova Scotia	62.578	67.872	70.853	71.4786	71.1	70.219	68.402	66.683	65.207	64.088	63.317	62.861	62.734	62.859	63.205	63.72	64.309
New Brunswick	77.662	84.12	87.699	88.3563	87.772	86.569	84.218	81.993	80.072	78.594	77.545	76.885	76.629	76.68	77	77.525	78.137
Quebec	1216.5	1327.6	1394.5	1415.59	1416.8	1408	1380.1	1353.7	1332	1317.3	1309.5	1308.2	1313.6	1324.4	1340	1359.3	1380.4
Ontario	1264	1349	1397	1402	1390	1369	1334	1303	1280	1264	1257	1256	1262	1273	1289	1307	1327
Manitoba	127.81	139.2	145.93	147.845	147.68	146.47	143.28	140.28	137.75	135.96	134.89	134.49	134.78	135.62	136.95	138.65	140.52
Saskatchewan	80.72	88.533	93.461	95.3478	95.91	95.787	94.358	93.023	91.987	91.425	91.342	91.704	92.55	93.777	95.354	97.213	99.214
Alberta	492.47	544.63	579.72	596.335	604.83	609.08	604.97	601.36	599.61	600.9	605.33	612.78	623.57	637.09	653.19	671.45	690.97
British Columbia	287.41	314.07	330.34	335.777	336.52	334.86	328.65	322.81	318.05	314.95	313.51	313.6	315.33	318.34	322.51	327.59	333.11

MOTORCYCLING

No substitutions

Employment	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	13,918	14,056	14,203	14,353	14,510	14,673	14,837	15,000	15,166	15,331
Newfoundland	194	196	198	199	201	203	205	206	208	210
PEI	57	57	57	58	58	59	59	59	60	60
Nova Scotia	312	313	313	313	314	314	315	315	316	316
New Brunswick	379	379	379	379	379	379	379	379	379	379
Quebec	6,748	6,794	6,843	6,892	6,945	7,000	7,054	7,107	7,161	7,214
Ontario	5,631	5,684	5,738	5,794	5,850	5,907	5,962	6,015	6,069	6,123
Manitoba	686	689	692	696	700	704	708	712	716	720
Saskatchewan	487	493	499	505	512	518	525	532	538	545
Alberta	3,423	3,492	3,564	3,638	3,715	3,794	3,875	3,956	4,039	4,123
British Columbia	1,631	1,644	1,658	1,672	1,687	1,703	1,718	1,733	1,749	1,764

MOTORCYCLING

With Consumption Substitutions

Employment	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	2925	3018	3113	3208	3303	3398	3492	3584	3677	3768
Newfoundland	40.87	42.078	43.308	44.53	45.7454	46.953	48.139	49.29	50.447	51.569
Prince Edward Island	11.933	12.262	12.596	12.926	13.2528	13.576	13.892	14.197	14.502	14.795
Nova Scotia	65.664	67.12	68.584	70.012	71.4047	72.762	74.063	75.288	76.501	77.639
New Brunswick	79.678	81.337	83.001	84.617	86.1863	87.708	89.159	90.514	91.85	93.093
Quebec	1418.2	1458.7	1499.8	1540.5	1580.91	1621	1660.2	1698.2	1736.2	1773
Ontario	1361	1398	1436	1474	1513	1552	1590	1628	1666	1704
Manitoba	144.09	147.91	151.77	155.59	159.355	163.07	166.69	170.16	173.64	176.97
Saskatchewan	102.45	105.89	109.42	112.96	116.501	120.05	123.57	127.03	130.53	133.96
Alberta	719.39	749.79	781.2	813.15	845.617	878.63	911.91	945.21	979.31	1013.4
British Columbia	342.69	352.93	363.35	373.72	384.029	394.28	404.36	414.15	424	433.55

MOTORCYCLING

No substitutions

GDP at basic prices	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	1391	1521	1598	1621	1611	1585	1558	1533	1515	1505	1504	1511	1527	1549	1577	1609	1645
Newfoundland	25.178	27.627	29.125	29.6434	29.559	29.177	28.774	28.403	28.158	28.06	28.128	28.345	28.731	29.232	29.847	30.541	31.313
PEI	4.6537	5.0812	5.3304	5.39876	5.357	5.2619	5.1637	5.0721	5.0038	4.9619	4.9496	4.9633	5.0063	5.0685	5.1498	5.2436	5.3499
Nova Scotia	29.341	31.83	33.175	33.3831	32.91	32.118	31.314	30.56	29.954	29.511	29.247	29.138	29.201	29.372	29.651	29.996	30.405
New Brunswick	38.674	41.905	43.625	43.8481	43.177	42.088	40.988	39.955	39.116	38.493	38.105	37.92	37.957	38.136	38.453	38.855	39.34
Quebec	670.74	729.55	762.39	769.201	760.31	743.96	727.26	711.63	699.35	690.82	686.46	685.72	689	694.88	703.32	713.39	725.04
Ontario	619	657	678	675	659	639	620	604	592	585	582	583	588	597	607	620	634
Manitoba	71.386	78.25	82.411	83.7955	83.473	82.315	81.095	79.971	79.204	78.849	78.962	79.492	80.496	81.816	83.456	85.31	87.38
Saskatchewan	52.291	57.334	60.397	61.4276	61.207	60.373	59.493	58.683	58.135	57.889	57.986	58.39	59.142	60.128	61.348	62.727	64.265
Alberta	348.5	384.52	407.63	417.21	418.34	415.25	411.79	408.76	407.5	408.35	411.62	417.12	425.16	434.99	446.62	459.55	473.8
British Columbia	150.23	164.91	173.92	177.093	176.66	174.46	172.12	169.97	168.58	168.06	168.54	169.91	172.3	175.38	179.15	183.39	188.1

MOTORCYCLING

With Consumption Substitutions

GDP at basic prices	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	239	265	284	292	297	300	298	296	296	297	299	303	309	316	325	335	346
Newfoundland	4.3261	4.8133	5.1761	5.33983	5.4494	5.5225	5.5036	5.4842	5.5016	5.5375	5.592	5.6841	5.8141	5.9634	6.1512	6.3588	6.5862
Prince Edward Island	0.7996	0.8853	0.9473	0.97251	0.9876	0.9959	0.9877	0.9794	0.9777	0.9792	0.984	0.9953	1.0131	1.034	1.0613	1.0918	1.1253
Nova Scotia	5.0414	5.5456	5.8959	6.01347	6.0673	6.079	5.9895	5.9007	5.8523	5.8237	5.8144	5.8431	5.909	5.9921	6.1107	6.2453	6.3954
New Brunswick	6.6449	7.3009	7.7531	7.89859	7.96	7.9662	7.8398	7.7147	7.6425	7.5964	7.5754	7.6041	7.6809	7.7799	7.9247	8.0898	8.2746
Quebec	115.25	127.11	135.49	138.56	140.17	140.81	139.1	137.41	136.64	136.33	136.47	137.51	139.43	141.76	144.95	148.53	152.5
Ontario	116	125	131	133	133	132	130	128	126	126	126	128	130	133	136	140	144
Manitoba	12.265	13.633	14.646	15.0945	15.389	15.58	15.511	15.441	15.475	15.56	15.698	15.941	16.289	16.691	17.199	17.762	18.379
Saskatchewan	8.9846	9.9891	10.734	11.0653	11.284	11.427	11.379	11.331	11.358	11.424	11.528	11.709	11.968	12.266	12.643	13.06	13.517
Alberta	59.878	66.994	72.445	75.1542	77.124	78.597	78.764	78.925	79.618	80.585	81.833	83.645	86.036	88.739	92.045	95.682	99.658
British Columbia	25.736	28.647	30.818	31.8071	32.473	32.924	32.824	32.723	32.841	33.069	33.408	33.973	34.765	35.673	36.812	38.07	39.449

MOTORCYCLING

No substitutions

GDP at basic prices	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	1682	1721	1761	1803	1847	1892	1937	1984	2032	2080
Newfoundland	32.107	32.942	33.799	34.698	35.6383	36.601	37.567	38.576	39.606	40.64
PEI	5.4586	5.5731	5.6901	5.8128	5.94109	6.0717	6.2014	6.3366	6.4741	6.6105
Nova Scotia	30.823	31.266	31.716	32.19	32.6881	33.191	33.681	34.193	34.708	35.211
New Brunswick	39.834	40.36	40.893	41.457	42.049	42.646	43.226	43.832	44.441	45.032
Quebec	736.94	749.51	762.31	775.75	789.822	804.09	818.11	832.74	847.53	862.07
Ontario	647	662	676	691	707	723	739	755	771	788
Manitoba	89.507	91.744	94.038	96.443	98.9586	101.53	104.11	106.8	109.54	112.29
Saskatchewan	65.846	67.509	69.214	71.002	72.8725	74.786	76.703	78.704	80.747	82.794
Alberta	488.53	504.04	520.04	536.85	554.486	572.65	591.05	610.3	630.11	650.17
British Columbia	192.96	198.06	203.3	208.79	214.544	220.44	226.35	232.52	238.84	245.18

MOTORCYCLING

With Consumption Substitutions

GDP at basic prices	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	360	375	392	408	425	442	459	476	494	512
Newfoundland	6.8719	7.178	7.5238	7.8519	8.20061	8.5508	8.9023	9.2552	9.6289	10.004
Prince Edward Island	1.1683	1.2144	1.2666	1.3154	1.36708	1.4185	1.4695	1.5203	1.5739	1.6272
Nova Scotia	6.5972	6.8129	7.0602	7.2845	7.52177	7.754	7.9813	8.2036	8.4381	8.6674
New Brunswick	8.5258	8.7944	9.1031	9.3814	9.67578	9.963	10.243	10.516	10.804	11.085
Quebec	157.73	163.32	169.69	175.55	181.744	187.85	193.87	199.79	206.05	212.21
Ontario	149	155	162	168	175	182	188	195	202	210
Manitoba	19.158	19.991	20.933	21.824	22.7711	23.72	24.671	25.623	26.631	27.641
Saskatchewan	14.093	14.71	15.407	16.067	16.7685	17.472	18.176	18.883	19.631	20.38
Alberta	104.56	109.83	115.76	121.49	127.591	133.78	140.06	146.43	153.19	160.05
British Columbia	41.178	43.03	45.123	47.11	49.2233	51.347	53.481	55.624	57.895	60.176

MOTORCYCLING

No substitutions

Personal Income	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	747	914	1043	1134	1199	1245	1277	1304	1332	1362	1396	1436	1482	1536	1595	1662	1735
Newfoundland	13.522	16.766	19.354	21.2812	22.749	23.875	24.744	25.523	26.327	27.176	28.11	29.172	30.363	31.729	33.208	34.865	36.66
PEI	2.4992	3.0433	3.4501	3.72565	3.9113	4.0313	4.1031	4.1564	4.2105	4.2683	4.3359	4.4191	4.5172	4.6357	4.7648	4.9129	5.0733
Nova Scotia	15.757	19.042	21.425	22.9605	23.922	24.47	24.717	24.849	24.981	25.133	25.337	25.628	25.998	26.479	27.01	27.639	28.325
New Brunswick	20.769	25.158	28.373	30.478	31.829	32.634	33.042	33.296	33.553	33.836	34.192	34.665	35.249	35.985	36.794	37.739	38.767
Quebec	360.21	435.8	490.89	526.671	549.35	562.56	568.9	572.57	576.28	580.43	585.83	593.21	602.48	614.3	627.34	642.68	659.38
Ontario	343	408	457	490	510	523	530	537	544	553	565	579	597	618	642	670	699
Manitoba	38.336	46.82	53.237	57.6571	60.708	62.756	64.062	65.086	66.126	67.232	68.498	70.018	71.783	73.883	76.165	78.764	81.575
Saskatchewan	27.227	33.968	39.455	43.6516	46.951	49.58	51.703	53.66	55.693	57.844	60.202	62.863	65.836	69.222	72.897	77.008	81.474
Alberta	187.15	235.48	275.84	307.77	333.85	355.54	373.91	391.36	409.64	429.08	450.37	474.27	500.92	531.16	564.11	600.99	641.25
British Columbia	80.439	97.922	110.98	119.805	125.73	129.55	131.82	133.49	135.19	137	139.13	141.75	144.86	148.61	152.7	157.4	162.49

MOTORCYCLING

With Consumption Substitutions

Personal Income	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	135	167	193	212	229	244	253	262	272	282	292	305	318	334	351	370	391
Newfoundland	2.4436	3.0588	3.576	3.97246	4.3382	4.6719	4.8946	5.1199	5.3674	5.6175	5.87	6.1856	6.5043	6.8876	7.2953	7.7483	8.2473
Prince Edward Island	0.4517	0.5552	0.6375	0.69545	0.7459	0.7888	0.8116	0.8338	0.8584	0.8823	0.9054	0.937	0.9676	1.0063	1.0468	1.0918	1.1413
Nova Scotia	2.8477	3.4742	3.9586	4.28596	4.5619	4.7882	4.8893	4.9847	5.0931	5.1952	5.2911	5.4342	5.5693	5.748	5.9338	6.1425	6.3723
New Brunswick	3.7534	4.5899	5.2423	5.68917	6.0698	6.3859	6.536	6.6792	6.8406	6.9942	7.1401	7.3505	7.5509	7.8115	8.0831	8.3871	8.7213
Quebec	65.098	79.509	90.699	98.311	104.76	110.08	112.53	114.86	117.49	119.98	122.34	125.79	129.06	133.35	137.82	142.83	148.34
Ontario	70	84	95	104	110	116	119	123	126	130	134	139	145	152	159	168	177
Manitoba	6.9283	8.542	9.8363	10.7626	11.577	12.28	12.672	13.056	13.482	13.898	14.304	14.847	15.377	16.038	16.732	17.504	18.352
Saskatchewan	5.075	6.3919	7.5189	8.40417	9.2348	10.007	10.549	11.102	11.711	12.332	12.967	13.748	14.546	15.499	16.517	17.652	18.905
Alberta	33.823	42.961	50.965	57.45	63.665	69.572	73.963	78.508	83.515	88.695	94.048	100.57	107.3	115.3	123.93	133.56	144.26
British Columbia	14.58	17.918	20.566	22.4292	24.048	25.426	26.152	26.858	27.643	28.403	29.139	30.146	31.122	32.355	33.646	35.084	36.663

MOTORCYCLING

No substitutions

Personal Income	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	1816	1902	1994	2090	2192	2300	2413	2532	2657	2786
Newfoundland	38.637	40.734	42.971	45.307	47.7841	50.402	53.139	56.016	59.032	62.141
PEI	5.2511	5.4368	5.6326	5.8324	6.041	6.2578	6.4793	6.7077	6.9422	7.1768
Nova Scotia	29.096	29.897	30.739	31.588	32.4707	33.381	34.302	35.242	36.197	37.138
New Brunswick	39.916	41.111	42.369	43.642	44.967	46.337	47.727	49.15	50.602	52.039
Quebec	678.09	697.54	718.02	738.69	760.182	782.39	804.87	827.87	851.28	874.39
Ontario	732	766	803	842	883	925	970	1016	1064	1114
Manitoba	84.683	87.936	91.372	94.891	98.5752	102.41	106.35	110.43	114.62	118.85
Saskatchewan	86.399	91.651	97.284	103.21	109.523	116.24	123.31	130.79	138.68	146.89
Alberta	685.8	733.66	785.37	840.27	899.27	962.52	1029.7	1101.5	1177.9	1258.2
British Columbia	168.13	174.03	180.24	186.57	193.188	200.06	207.08	214.31	221.73	229.16

MOTORCYCLING

With Consumption Substitutions

Personal Income	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	417	446	476	509	543	580	619	659	702	747
Newfoundland	8.8564	9.5346	10.24	11.014	11.8154	12.687	13.606	14.552	15.567	16.63
Prince Edward Island	1.2037	1.2726	1.3422	1.4178	1.49374	1.5751	1.659	1.7425	1.8307	1.9206
Nova Scotia	6.6694	6.9981	7.3248	7.6792	8.02896	8.4025	8.783	9.1552	9.5457	9.9388
New Brunswick	9.1495	9.623	10.096	10.609	11.1188	11.663	12.22	12.768	13.344	13.927
Quebec	155.43	163.28	171.09	179.58	187.968	196.93	206.09	215.07	224.49	234
Ontario	188	200	213	227	242	258	274	292	310	329
Manitoba	19.411	20.583	21.773	23.068	24.3744	25.779	27.232	28.686	30.227	31.805
Saskatchewan	20.427	22.127	23.91	25.878	27.9319	30.177	32.565	35.044	37.721	40.545
Alberta	157.2	171.73	187.14	204.27	222.36	242.28	263.67	286.15	310.63	336.72
British Columbia	38.653	40.855	43.075	45.49	47.9096	50.505	53.179	55.838	58.646	61.508

OFF-ROAD

No substitutions

Employment	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	6849	7347	7581	7574	7427	7213	7010	6822	6665	6543	6457	6406	6385	6390	6416	6457	6510
Newfoundland	104.1	111.48	114.83	114.522	112.1	108.67	105.41	102.39	99.842	97.821	96.341	95.384	94.873	94.746	94.927	95.323	95.891
Prince Edward Island	32.004	34.207	35.167	35.0051	34.198	33.087	32.034	31.055	30.223	29.553	29.05	28.706	28.496	28.403	28.402	28.465	28.579
Nova Scotia	188.46	200.37	204.91	202.889	197.16	189.76	182.75	176.23	170.61	165.95	162.26	159.5	157.5	156.16	155.33	154.86	154.66
New Brunswick	227.79	241.87	247.02	244.26	237.06	227.85	219.14	211.05	204.04	198.21	193.55	190	187.37	185.53	184.3	183.49	183.02
Quebec	3369.3	3604.5	3709.1	3695.38	3613.4	3499.3	3391	3290.4	3205.1	3137	3086.4	3052.6	3033.1	3026	3028.6	3038.1	3053.1
Ontario	2985	3151	3212	3169	3068	2943	2833	2735	2656	2596	2556	2532	2523	2525	2536	2553	2575
Manitoba	324.88	346.87	356.23	354.215	345.68	334.1	323.12	312.92	304.21	297.16	291.79	288.02	285.62	284.39	284.07	284.41	285.24
Saskatchewan	201.7	216.86	224.27	224.553	220.67	214.77	209.17	203.98	199.69	196.42	194.22	193.06	192.79	193.29	194.43	196.02	197.97
Alberta	1486.1	1611.1	1680	1696.08	1680.6	1649.3	1619.6	1592.5	1572	1559.1	1554.4	1558	1568.7	1585.9	1608.5	1635.1	1665.1
British Columbia	914.6	979.75	1009.5	1007.1	986.07	956.19	927.82	901.48	879.29	861.74	848.96	840.78	836.52	835.65	837.48	841.23	846.49

OFF-ROAD

With Consumption Substitutions

Employment	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	1413	1543	1621	1645	1644	1631	1600	1572	1549	1534	1528	1529	1537	1552	1573	1597	1624
Newfoundland	21.476	23.412	24.553	24.8731	24.813	24.572	24.06	23.594	23.204	22.934	22.798	22.767	22.838	23.012	23.273	23.576	23.921
Prince Edward Island	6.6027	7.1841	7.5196	7.60277	7.5698	7.4817	7.3115	7.156	7.024	6.9288	6.8744	6.8515	6.8597	6.8985	6.9632	7.0402	7.1294
Nova Scotia	38.88	42.081	43.814	44.0654	43.643	42.908	41.712	40.609	39.65	38.907	38.398	38.069	37.914	37.927	38.082	38.3	38.581
New Brunswick	46.995	50.796	52.819	53.051	52.473	51.521	50.018	48.632	47.421	46.47	45.802	45.349	45.104	45.061	45.184	45.383	45.656
Quebec	695.12	757.02	793.1	802.6	799.85	791.26	773.98	758.21	744.9	735.47	730.37	728.6	730.14	734.94	742.52	751.42	761.63
Ontario	764	821	851	853	841	824	801	781	765	754	748	746	747	752	760	769	779
Manitoba	67.025	72.849	76.171	76.9321	76.518	75.547	73.751	72.106	70.701	69.669	69.049	68.746	68.756	69.072	69.646	70.342	71.158
Saskatchewan	41.611	45.544	47.953	48.7709	48.847	48.565	47.742	47.003	46.409	46.051	45.961	46.079	46.408	46.947	47.668	48.481	49.386
Alberta	306.59	338.35	359.21	368.373	372.01	372.93	369.66	366.96	365.34	365.53	367.85	371.86	377.62	385.18	394.34	404.4	415.37
British Columbia	188.69	205.76	215.86	218.732	218.27	216.21	211.77	207.73	204.35	202.04	200.9	200.68	201.37	202.96	205.32	208.06	211.17

OFF-ROAD

No substitutions

Employment	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	6571	6637	6707	6779	6855	6932	7011	7089	7169	7247
Newfoundland	96.57	97.315	98.11	98.927	99.7934	100.67	101.56	102.43	103.32	104.17
Prince Edward Island	28.725	28.891	29.07	29.256	29.4545	29.654	29.859	30.056	30.258	30.448
Nova Scotia	154.63	154.7	154.84	155.01	155.241	155.47	155.72	155.92	156.14	156.3
New Brunswick	182.74	182.58	182.51	182.46	182.496	182.52	182.58	182.57	182.59	182.52
Quebec	3071.5	3092	3114.1	3136.8	3161.03	3185.4	3210.3	3234.5	3259.2	3282.6
Ontario	2597	2621	2646	2672	2698	2724	2750	2774	2799	2824
Manitoba	286.4	287.75	289.23	290.76	292.432	294.1	295.82	297.46	299.14	300.7
Saskatchewan	200.16	202.51	204.98	207.5	210.154	212.83	215.57	218.28	221.05	223.76
Alberta	1697.5	1731.7	1767.3	1804	1842.17	1881.2	1921.2	1961.5	2002.9	2044.2
British Columbia	852.73	859.56	866.84	874.31	882.233	890.21	898.36	906.32	914.45	922.25

OFF-ROAD

With Consumption Substitutions

Employment	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	1667	1713	1760	1808	1855	1903	1950	1996	2043	2089
Newfoundland	24.499	25.117	25.745	26.384	27.0046	27.635	28.247	28.84	29.443	30.027
Prince Edward Island	7.2874	7.4567	7.6284	7.8026	7.97054	8.1408	8.3048	8.4627	8.6228	8.7768
Nova Scotia	39.228	39.928	40.633	41.342	42.0091	42.681	43.311	43.902	44.498	45.054
New Brunswick	46.36	47.125	47.893	48.664	49.3843	50.107	50.781	51.405	52.033	52.614
Quebec	779.22	798.05	817.18	836.6	855.391	874.46	892.9	910.7	928.79	946.24
Ontario	796	813	832	850	869	888	907	925	943	961
Manitoba	72.658	74.267	75.897	77.548	79.1336	80.739	82.279	83.754	85.249	86.679
Saskatchewan	50.78	52.267	53.788	55.343	56.8687	58.428	59.958	61.46	62.994	64.499
Alberta	430.64	446.94	463.76	481.13	498.501	516.42	534.35	552.29	570.78	589.27
British Columbia	216.33	221.85	227.47	233.19	238.737	244.38	249.87	255.19	260.6	265.85

OFF-ROAD

No substitutions

GDP at basic prices	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	652	713	750	761	757	745	732	721	713	708	708	711	718	729	742	757	774
Newfoundland	13.121	14.395	15.191	15.463	15.43	15.233	15.013	14.832	14.711	14.651	14.693	14.797	14.985	15.257	15.572	15.929	16.33
Prince Edward Island	2.3783	2.5966	2.7267	2.76189	2.7425	2.6941	2.6422	2.5976	2.5638	2.5408	2.5356	2.5411	2.5608	2.5944	2.6349	2.6822	2.7362
Nova Scotia	14.676	15.919	16.608	16.7138	16.489	16.094	15.681	15.317	15.02	14.789	14.663	14.6	14.618	14.714	14.847	15.016	15.219
New Brunswick	18.967	20.549	21.415	21.5259	21.212	20.679	20.126	19.635	19.232	18.915	18.733	18.63	18.631	18.732	18.88	19.072	19.308
Quebec	301.85	328.28	343.41	346.508	342.75	335.42	327.69	320.91	315.52	311.49	309.67	309.15	310.34	313.21	316.88	321.33	326.54
Ontario	290	309	319	318	311	301	293	285	280	276	275	276	278	282	287	293	299
Manitoba	31.643	34.683	36.564	37.1814	37.065	36.555	35.991	35.522	35.198	35.019	35.086	35.3	35.712	36.324	37.036	37.849	38.763
Saskatchewan	22.936	25.145	26.516	26.9701	26.893	26.529	26.127	25.793	25.563	25.44	25.495	25.657	25.963	26.415	26.939	27.537	28.209
Alberta	168.37	185.76	197.13	201.775	202.47	201	199.2	197.9	197.38	197.67	199.35	201.89	205.59	210.49	216.03	222.23	229.09
British Columbia	78.05	85.668	90.443	92.1007	91.944	90.806	89.532	88.491	87.807	87.485	87.776	88.437	89.598	91.261	93.182	95.363	97.804

OFF-ROAD

With Consumption Substitutions

GDP at basic prices	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	139	154	165	169	171	172	171	169	169	169	170	172	175	179	183	189	194
Newfoundland	2.7972	3.1102	3.3431	3.43502	3.4866	3.5179	3.5081	3.4776	3.488	3.4982	3.5291	3.5808	3.6536	3.7474	3.8416	3.9783	4.0944
Prince Edward Island	0.507	0.561	0.6001	0.61354	0.6197	0.6222	0.6174	0.6091	0.6079	0.6067	0.609	0.6149	0.6243	0.6372	0.6501	0.6699	0.686
Nova Scotia	3.1287	3.4393	3.6549	3.71289	3.7259	3.7167	3.6644	3.5913	3.5612	3.5312	3.522	3.5331	3.564	3.6141	3.663	3.7503	3.8159
New Brunswick	4.0435	4.4398	4.7127	4.78188	4.7931	4.7757	4.7031	4.6039	4.56	4.5163	4.4994	4.5083	4.5425	4.601	4.6579	4.7633	4.8411
Quebec	64.352	70.928	75.574	76.9751	77.449	77.462	76.574	75.245	74.811	74.376	74.379	74.81	75.664	76.931	78.177	80.251	81.872
Ontario	77	83	87	88	88	87	85	84	83	83	83	84	85	87	89	91	93
Manitoba	6.7461	7.4934	8.0465	8.25967	8.3754	8.4421	8.4104	8.3289	8.3455	8.3617	8.4272	8.5422	8.707	8.9219	9.1372	9.4528	9.7189
Saskatchewan	4.8897	5.4327	5.8352	5.99128	6.0768	6.1267	6.1052	6.0476	6.0611	6.0745	6.1236	6.2087	6.3301	6.488	6.6462	6.8774	7.0729
Alberta	35.896	40.135	43.381	44.8233	45.751	46.419	46.549	46.401	46.8	47.199	47.882	48.855	50.126	51.701	53.297	55.501	57.44
British Columbia	16.597	18.462	19.853	20.4073	20.723	20.917	20.868	20.695	20.766	20.836	21.029	21.346	21.789	22.358	22.93	23.756	24.459

OFF-ROAD

No substitutions

GDP at basic prices	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	791	810	829	849	869	890	912	934	956	979
Newfoundland	16.732	17.178	17.625	18.095	18.5669	19.061	19.579	20.097	20.617	21.161
Prince Edward Island	2.7899	2.8502	2.9101	2.973	3.03554	3.1011	3.1696	3.2377	3.3052	3.3756
Nova Scotia	15.418	15.649	15.874	16.113	16.3455	16.59	16.847	17.098	17.342	17.597
New Brunswick	19.537	19.807	20.069	20.347	20.617	20.902	21.201	21.491	21.772	22.067
Quebec	331.66	337.53	343.3	349.38	355.355	361.63	368.21	374.66	381.01	387.64
Ontario	306	312	319	326	334	341	349	356	364	371
Manitoba	39.678	40.695	41.714	42.784	43.8548	44.978	46.153	47.328	48.505	49.734
Saskatchewan	28.883	29.631	30.38	31.167	31.9552	32.782	33.646	34.512	35.379	36.285
Alberta	236.05	243.69	251.43	259.58	267.831	276.5	285.59	294.79	304.11	313.87
British Columbia	100.26	102.97	105.7	108.56	111.439	114.45	117.61	120.78	123.96	127.28

OFF-ROAD

With Consumption Substitutions

GDP at basic prices	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	202	209	218	226	234	243	252	261	270	279
Newfoundland	4.2743	4.4338	4.6364	4.8185	5.00125	5.2061	5.4116	5.6179	5.8249	6.0325
Prince Edward Island	0.7127	0.7357	0.7655	0.7917	0.81766	0.847	0.8761	0.905	0.9338	0.9623
Nova Scotia	3.9385	4.0391	4.1758	4.2906	4.40287	4.5312	4.6568	4.7794	4.8993	5.0164
New Brunswick	4.9908	5.1124	5.2793	5.4182	5.55347	5.7088	5.8601	6.0075	6.1511	6.2908
Quebec	84.725	87.119	90.306	93.033	95.7195	98.771	101.77	104.73	107.64	110.51
Ontario	96	100	103	107	110	114	117	121	125	129
Manitoba	10.136	10.504	10.973	11.393	11.8129	12.284	12.757	13.23	13.704	14.178
Saskatchewan	7.3783	7.6479	7.9915	8.2992	8.60757	8.9535	9.3001	9.6474	9.9954	10.344
Alberta	60.299	62.898	66.14	69.122	72.144	75.518	78.939	82.405	85.918	89.477
British Columbia	25.545	26.51	27.733	28.834	29.9407	31.18	32.425	33.675	34.931	36.191

OFF-ROAD

No substitutions

Personal Income	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	348	427	487	530	561	583	598	611	624	638	654	673	695	719	747	778	813
Newfoundland	7.0031	8.7056	10.041	11.0475	11.819	12.41	12.857	13.265	13.676	14.111	14.592	15.144	15.767	16.44	17.21	18.053	18.996
Prince Edward Island	1.2694	1.5497	1.7554	1.89677	1.9928	2.055	2.0909	2.1186	2.145	2.1736	2.2075	2.2499	2.3005	2.3557	2.4217	2.4949	2.5781
Nova Scotia	7.8329	9.4902	10.668	11.4402	11.928	12.207	12.327	12.396	12.455	12.525	12.624	12.77	12.958	13.169	13.435	13.736	14.087
New Brunswick	10.123	12.294	13.853	14.8902	15.562	15.964	16.158	16.286	16.403	16.534	16.705	16.937	17.227	17.548	17.945	18.391	18.905
Quebec	161.11	195.42	219.93	236.111	246.47	252.52	255.28	256.99	258.52	260.27	262.63	265.95	270.18	274.88	280.77	287.39	295.06
Ontario	158	189	212	227	237	243	246	249	252	257	262	269	277	287	298	310	324
Manitoba	16.89	20.68	23.493	25.4601	26.828	27.746	28.315	28.775	29.219	29.695	30.247	30.919	31.708	32.565	33.576	34.693	35.955
Saskatchewan	11.82	14.785	17.158	18.9947	20.446	21.602	22.519	23.378	24.25	25.176	26.196	27.355	28.657	30.065	31.667	33.425	35.387
Alberta	89.869	113.36	132.68	148.13	160.81	171.34	180.13	188.59	197.29	206.56	216.76	228.27	241.17	255.17	271.05	288.53	308.06
British Columbia	41.552	50.712	57.424	62.03	65.151	67.162	68.317	69.2	70.041	70.951	72.036	73.397	75.025	76.802	78.93	81.291	83.975

OFF-ROAD

With Consumption Substitutions

Personal Income	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Rest of Canada	76	94	109	120	129	137	142	147	151	156	162	168	175	183	193	202	213
Newfoundland	1.5294	1.9135	2.2438	2.49737	2.7133	2.9115	3.0481	3.1862	3.3038	3.4444	3.6084	3.7739	3.9633	4.177	4.4385	4.6789	4.9677
Prince Edward Island	0.2772	0.3406	0.3923	0.42878	0.4575	0.4821	0.4957	0.5089	0.5182	0.5306	0.5459	0.5607	0.5783	0.5985	0.6246	0.6466	0.6742
Nova Scotia	1.7107	2.086	2.3841	2.58617	2.7385	2.864	2.9224	2.9774	3.009	3.0575	3.1218	3.1822	3.2572	3.3458	3.465	3.5601	3.684
New Brunswick	2.2108	2.7023	3.0957	3.36604	3.5728	3.7453	3.8306	3.9119	3.9627	4.0361	4.1308	4.2205	4.3301	4.4584	4.6282	4.7665	4.9439
Quebec	35.185	42.954	49.148	53.3748	56.584	59.244	60.52	61.728	62.454	63.533	64.944	66.275	67.913	69.84	72.412	74.484	77.162
Ontario	42	51	58	63	67	70	72	74	75	78	80	83	86	90	94	98	103
Manitoba	3.6885	4.5455	5.2501	5.75547	6.1592	6.5096	6.7127	6.9114	7.0589	7.2486	7.4797	7.7051	7.9702	8.2738	8.6595	8.9914	9.4029
Saskatchewan	2.6735	3.3656	3.971	4.44708	4.8615	5.2488	5.5291	5.8154	6.0674	6.3647	6.709	7.0601	7.4603	7.9113	8.4584	8.9719	9.5845
Alberta	19.626	24.917	29.649	33.4859	36.918	40.198	42.704	45.297	47.662	50.422	53.601	56.885	60.621	64.832	69.905	74.779	80.563
British Columbia	9.0979	11.175	12.866	14.0584	14.996	15.797	16.237	16.664	16.964	17.364	17.859	18.337	18.907	19.563	20.409	21.122	22.017

OFF-ROAD

No substitutions

Personal Income	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	850	891	934	979	1026	1077	1130	1185	1244	1304
Newfoundland	19.991	21.086	22.234	23.435	24.6889	26.043	27.45	28.909	30.467	32.051
Prince Edward Island	2.6645	2.7601	2.8582	2.9586	3.06107	3.1711	3.2825	3.395	3.5138	3.6302
Nova Scotia	14.449	14.854	15.266	15.682	16.1025	16.555	17.007	17.456	17.931	18.385
New Brunswick	19.436	20.028	20.632	21.245	21.8654	22.533	23.203	23.872	24.578	25.26
Quebec	302.98	311.83	320.83	329.97	339.191	349.12	359.06	368.96	379.42	389.47
Ontario	339	355	371	389	408	428	448	470	492	515
Manitoba	37.27	38.72	40.215	41.751	43.3237	45.014	46.732	48.475	50.321	52.141
Saskatchewan	37.471	39.768	42.193	44.748	47.4335	50.345	53.393	56.578	59.996	63.506
Alberta	328.98	352.11	376.76	402.96	430.78	461.11	493.18	527.04	563.63	601.68
British Columbia	86.763	89.847	93.013	96.252	99.5536	103.1	106.69	110.31	114.14	117.88

OFF-ROAD

With Consumption Substitutions

Personal Income	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Rest of Canada	227	241	257	274	291	310	330	350	372	395
Newfoundland	5.3289	5.6927	6.1065	6.5466	6.98913	7.4819	8.001	8.5218	9.0928	9.6895
Prince Edward Island	0.7103	0.7452	0.785	0.8265	0.86655	0.911	0.9568	1.0008	1.0487	1.0975
Nova Scotia	3.8517	4.0103	4.1927	4.3809	4.55845	4.7561	4.9571	5.1459	5.3515	5.5581
New Brunswick	5.1811	5.4072	5.6664	5.9348	6.18984	6.4735	6.763	7.0371	7.3355	7.6366
Quebec	80.766	84.188	88.116	92.177	96.021	100.3	104.66	108.77	113.24	117.74
Ontario	109	116	122	130	138	146	155	164	174	184
Manitoba	9.935	10.454	11.045	11.663	12.2644	12.932	13.621	14.29	15.018	15.763
Saskatchewan	10.345	11.12	12.002	12.946	13.9069	14.98	16.118	17.273	18.545	19.884
Alberta	87.695	95.064	103.48	112.57	121.949	132.47	143.75	155.36	168.22	181.9
British Columbia	23.188	24.32	25.611	26.957	28.2548	29.696	31.177	32.602	34.152	35.73

%