RULE 52.2 - FORM 52.2

CERTIFICATE CONCERNING CODE OF CONDUCT FOR EXPERT WITNESSES

Court File No. T-577-20

FEDERAL COURT

BETWEEN:

CANADIAN COALITION FOR FIREARM RIGHTS, RODNEY GILTACA, LAURENCE KNOWLES, RYAN STEACY, MACCABEE DEFENSE INC., WOLVERINE SUPPLIES LTD., AND MAGNUM MACHINE LTD.

Applicants

and

ATTORNEY GENERAL OF CANADA and CANADA (ROYAL CANADIAN MOUNTED POLICE)

Respondents

CERTIFICATE CONCERNING CODE OF CONDUCT FOR EXPERT WITNESSES

I, Eugene Beaulieu, having been named as an expert witness by the Applicants, certify that I have read the Code of Conduct for Expert Witnesses set out in the schedule to the Federal Courts Rules and agree to be bound by it.

Dated 9th day of September, 2020.

Eugene Beaulieu, Professor
Department of Economics
University of Calgary
Department of Economics
2500 University Drive
Calgary, AB T2N 1N4
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FORM 80A - Rule 80
AFFIDAVIT

Court File No. T-577-20

FEDERAL COURT

BETWEEN:

CANADIAN COALITION FOR FIREARM RIGHTS, RODNEY GILTACA, LAURENCE KNOWLES, RYAN STEACY, MACCABEE DEFENSE INC., WOLVERINE SUPPLIES LTD., AND MAGNUM MACHINE LTD.

Applicants

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ATTORNEY GENERAL OF CANADA and CANADA (ROYAL CANADIAN MOUNTED POLICE)

Respondents

APPLICATION UNDER sections 18 and 18.1 of the *Federal Courts Act*, RSC 1985, c F-7.

AFFIDAVIT

I, Eugene Beaulieu, Professor, of the City of Calgary in the Province of Alberta, SWEAR THAT:

1. I am a Professor of Economics in the Social Sciences Department of the University of Calgary. I obtained my Ph.D. in Economics at Columbia University in 1997. I have worked broadly in the areas of public policy, political economy, and economic development for over 20 years. I am an empirical economist. My research and expertise focuses on the impact of policy changes on individuals, firms and industries.

2. I am aware of the Application filed in Court File No. T-577-20 ("**Application**") regarding the May 1, 2020 Order in Council SOR/2020-96 (the "**Order in Council**") which made the *Regulations Amending the Regulations Prescribing Certain Firearms and Other Weapons, Components and Parts of Weapons, Accessories, Cartridge Magazines, Ammunition and Projectiles as Prohibited, Restricted or Non-Restricted*, SOR/2020-96 (the "**Regulation**"), and regarding certain things done by the Royal Canadian Mounted Police ("**RCMP**"), including through the Specialized Firearms Supports Services Unit

("**RCMP SFSS**"), in relation to the Firearms Reference Table ("**FRT**") as described in the Application. I am also aware of the *Order Declaring an Amnesty Period (2020)*, SOR/2020-97 (the "**Amnesty Order**") with respect to the Regulation.

3. I was asked by the Canadian Coalition for Firearm Rights to provide a written opinion about the macroeconomic impact of the new Regulation on the firearms industry in Canada and the Canadian economy.

4. I understand that my duty is to assist the Court, and I am not an advocate for any particular party. My opinion is independent and unbiased. It is based upon my own observations and expertise.

5. Attached to my Affidavit as **Exhibit "A"** is my report, "Impact assessment of recent policy changes to firearms regulation in Canada" ("**Report**"), setting out my research and conclusions. A copy of my *curriculum vitae*, which outlines my professional experience, academic qualifications and author contributions, is attached to my Report at Schedule A.

SWORN BEFORE ME at the City of Calgary, in the Province of Alberta, this 9th day of September, 2020.

A Commissioner of Oaths in and for the Province of Alberta

Matthew Scott
Student-at-Law

Eugene Beaulieu

This is **Exhibit "A"** referred to in the Affidavit of Eugene Beaulieu, sworn before me this 9th day of September, 2020.

A Commissioner of Oaths in and for the
Province of Alberta

Matthew Scott
Student-at-Law

Impact assessment of recent policy changes to firearms regulation in Canada

Professor Eugene Beaulieu
September 9, 2020

Author Biography

I am the author of this Report and a Professor in the Department of Economics at the University of Calgary and the Scientific Director of the International Trade and Policy Program at The School of Public Policy. I came to the University of Calgary in 1997 after completing my PhD in Economics at Columbia University in New York City. Before pursuing a doctorate at Columbia, I worked as an economist for the Government of Kenya and the Bank of Canada. I am an empirical economist and my research focuses on the impact of policy changes on individuals, firms and industries. My main area of focus is in the field of international economics where I examine the impacts of international trade policy changes. I publish widely in economics and public policy journals. I work broadly in the areas of public policy, political economy, and economic development. I currently teach Microeconomics to undergraduates and in the Executive MBA program, and I teach graduate seminars in international trade policy and its implications. I have also taught Econometrics applying statistics to economic measurement and policy questions.

In addition to an extensive publication record, I testified as an empirical economist expert witness in the Court of Queen's Bench of Manitoba in *Manitoba Federation of Labour et al v The Government of Manitoba*, 2020 MBQB 92. I have held numerous research grants and awards including the Petro-Canada Young Innovators Award, a Killam Resident Fellowship, and the Norman Robertson Fellowship at the Canadian foreign affairs office. I have been a visiting scholar at Carleton University, University of Western Australia, Canadian Foreign Affairs and Statistics Canada. I am a regular commentator in the press where I have published in outlets such as the New York Times and the Financial Post. I am the founder of the annual Rocky Mountain Empirical Trade Conference in Banff and the founder of the Canadian International Trade Study Group – a network of trade economists. I volunteer my time in the non-profit sector. I am the Past-Chair of the Board of a large arts organization, and the Co-Chair of Hearts Out – an annual gala that has raised over $1,000,000 to support the arts and youth in Calgary. My curriculum vitae is attached at Schedule A.

Scope of work

On May 1, 2020, the minority Liberal government invoked an Order-in-Council (OIC) amending the regulation that classifies firearms in Canada. The OIC prohibits the purchase, sale, transport, import, and use of 11 types of firearms that the OIC describes as "assault-style firearms." Initially this added approximately 1,500 firearms to the list of prohibited firearms. The OIC also prohibits all current and future variants of these firearms, and therefore introduces some uncertainty about what firearms are prohibited. Since the OIC, the RCMP has classified over 200 more specific types of firearms as prohibited.

On June 28, 2020, I was engaged by the Canadian Coalition for Firearm Rights to provide my opinion of the macroeconomic impact of the regulatory changes made by the OIC on the firearms industry in Canada and the Canadian economy. This report provides my opinion.

In this report, I provide an economics impact assessment of the OIC policy change on the firearms industry in Canada and the Canadian economy, and my opinion about the macroeconomic impact of the new regulation on the hunting, sport shooting and firearms manufacturing and retail industries in Canada, including the economic impact on shooting sports clubs/associations, retailers and wholesalers, wildlife/conservation associations, sporting goods and shooting sports industry, small businesses, and gun ranges, and job losses in affected communities. This report also examines the cost of implementing and administering the new regulations.

My report is structured as follows: first I present an overview of the key findings of the report; next I present a brief overview of the regulatory changes established by the OIC; third I present the methodology employed; fourth, I provide an analysis of the size and economic impact of the firearms industry in Canada and how it has evolved over time; fifth, I examine the impact of the OIC on the industry; and finally, I provide my conclusions.

The key findings of this report:

1. As the OIC banned approximately 1,500 types of firearms that were previously legal including all current and future variants, and the RCMP has subsequently expanded the list of affected firearms by 200-320 types, approximately 90,000-150,000 firearms became prohibited on or after May 1, 2020, affecting an estimated 72,000 firearm owners.
2. There were 1,164,197 firearms registered in Canada in 2018 and this number has increased every year but one since 2006, representing an increase of 79%. There are about 2.2 million people with a gun licence in Canada which is a 15% increase from approximately 1.9 million licence holders in 2011. There were 2.7 million Canadians participating in hunting and sport shooting in 2018. This represents over 7% per capita and over 9% of those who are 20 years old or older. More Canadians legally own guns and participate in hunting and sport shooting than they do in the next most popular sport in Canada, which is golf.
3. Total expenditures on firearms and ammunition was $2.3 billion in Canada in 2018. Canadian hunting and sport shooters spent an estimated $8.5 billion on hunting ($5.9 billion) and sport shooting ($2.6 billion) in Canada in 2018. This spending supported 4,442 businesses related to firearms in Canada.

4. Economically, hunting and sport shooting has a significant impact on the Canadian economy. In 2018, the full economic footprint from hunting and sport shooting in Canada was $2.9 billion in labour income and almost 50,000 full time equivalent jobs, and $5.9 billion in total impact on GDP. It also raised $961 million in provincial government revenue.
5. This economic contribution is crucial for many remote communities and provides important job opportunities. It supports hundreds of small and medium-sized businesses from coast to coast to coast.
6. Based on an assessment of the impact of the OIC on sales by Wolverine Supplies Ltd ("**Wolverine**"), I assume that the impact of the OIC could be a decline in sales of firearms across Canada at around 21% to 33%. That is, spending and economic production in the firearms industry in Canada could decline between $1.8 billion and $2.8 billion as a result of the OIC. If we focus on the economic impact of the policy change it will have an impact of reducing GDP by between $1.2 billion and $1.9 billion, with a decline in labour income of $592-$930 million and a decline in employment of between 9,980 and 15,682 full time equivalent jobs. Provincial tax revenue will decline by $288.9 million to $454 million.
7. The Minister of Public Safety, The Honourable Bill Blair, recently stated it could cost up to $600 million, assuming a buyback of about 250,000 firearms, with an average value of about $1,500 each.

Overview of firearms regulation in Canada

On May 1, 2020, the minority government invoked the OIC amending the regulation that classifies firearms in Canada. The OIC prohibits the purchase, sale, transport, import, and use of 11 types of firearms that the OIC describes as "assault-style firearms" and were previously legal to possess with a licence. Initially this added approximately 1,500 firearms to the list of prohibited firearms. Following the OIC, the RCMP began making amendments to the Firearms Reference Table ("FRT"), changing the classification of specific firearms from either "non-restricted" or "restricted" to "prohibited" and thereby creating additional uncertainty over what firearms will be affected by the new regulations. The RCMP has classified over 200 more firearms as "prohibited", retroactive to May 1, 2020.

It is not entirely clear how many models of new guns have been and will be classified as "prohibited" by the RCMP since the OIC was passed on May 1, 2020. According to Snyder (2020), there are reports that the RCMP added 320 new firearms, but the National Post could only confirm that an additional 200 firearms were added. There is uncertainty about which firearms have been made illegal by the OIC and the RCMP, and this uncertainty is undoubtedly affecting legal gun owners, as well as retail and wholesale businesses.

The Federal Government has stated that it will implement a buyback program for the newly prohibited firearms. The details of the buyback program are yet to be released. Owners of the newly prohibited firearms have an amnesty period to protect them from criminal liability arising from the new regulations (see Pinkerton and Naumetz (2020)).

An important consideration on the economic impact of the OIC is that the newly prohibited firearms were previously legally used by individuals for hunting or sporting purposes. These firearms were also previously stocked and sold by retailers and wholesalers and legally imported or were manufactured in Canada. The regulatory change will affect retailers and wholesalers who

have stocked the newly prohibited guns and are now unable to sell them. According to a report by the CSSA about 90% of sporting arms products are imported into Canada (mostly from the United States) and the Canadian supply chain operates with long lead times. The sudden change in regulations on May 1, 2020 and the subsequent additions to the FRT means that Canadian firearms distributors, wholesalers and retailers are left with millions of dollars in inventory that they cannot sell.[1]

The OIC includes a statement which indicates that more firearms not listed in the OIC will be added to the list of prohibited firearms in the future, however there is a lack of clarity about how this will be done and what affected firearm owners may expect. The OIC states that:

> *"There is also a risk that affected firearms owners may elect to replace their firearms with models unaffected by the ban, causing a market displacement. This risk may be mitigated by adding additional makes and models to the list of prohibited firearms in the future."*
>
> (*Source:* OIC, page 65 of the Order in Council, second last paragraph).

As noted by Pinkerton and Naumetz (2020), 2.2 million people in Canada hold firearms licenses. The Regulation will affect an estimated 90,000-150,000 restricted guns that have become prohibited and will affect an estimated 72,000 firearm owners. According to the Gazette, the Government undertook consultations with provinces and territories, municipalities, Indigenous groups, law enforcement, community organizations, and industry in 2018 to 2019 about potentially banning handguns and "assault-style" firearms. From the report on engagement (House of Commons):

> A ban would impact lawful owners rather than criminals: The most cited reason for opposing a ban is, according to several stakeholders, it does not effectively target the illicit firearms market or reduce crime; rather, it impedes and punishes lawful owners who use firearms for a variety of legitimate purposes, such as sports and target shooting. This view was particularly strong among shooting sports clubs/associations, retailers and wildlife/conservation associations. Instead, some suggested greater focus on addressing gang violence, especially in large cities like Toronto.

My report analyses the impact of the OIC on the lawful users of firearms for legitimate purposes such as hunting and sport shooting, and the broader impact on the firearms and related industries.

Methodology

The first step is to measure the number of licensed firearm users in Canada and by province and then estimate the number of participants in hunting and sport shooting in Canada. Data from Statistics Canada and the Commissioner of Firearms are employed to determine the number of licensed firearm owners and the number of firearms that are registered in Canada. Then survey data was used from Statistics Canada, the 2012 Canadian Nature Survey (2012) and the Conference Board of Canada for estimates on the number of participants in hunting and sport shooting in Canada and by province.

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[1] Note that this is a one-time impact that is hard to measure and beyond the scope of this report. See Snyder (2020)

The next step is to estimate the total expenditure on these activities in Canada based on survey data from the Conference Board. Although it is useful to know total expenditure on hunting and sports shooting, it is also important to understand the wider economic impact of this activity. The economic impact of hunting and sport shooting in Canada is based on a research report carried out by the Conference Board of Canada. There are three types of economic impact that are typically identified in this type of analysis: direct, indirect, and induced impacts. The total expenditure reported does not measure the economic impact on the economy because it includes inputs into the making of products. The direct impact includes only the value added of firms directly involved in the hunting and sport shooting industry and is measured by the wages and salaries paid to workers and the profits generated directly in hunting and sport shooting. This is the largest impact from the economic activity of hunting and sport shooting and is directly attributed to the sales in that industry (direct impact). The direct impact is measured as the wages paid to those directly employed in the sector and the profits generated directly from that activity directly attributable to hunting and sport shooting.

The direct economic impact of spending associated with hunting and sport shooting activities ripples through suppliers, employees, and the wider economy. The direct impact of the industry generates demand for intermediate inputs or goods and services further down the supply chain. The supply chain or intermediate goods and services are known as the indirect effects of the activity. In other words, the indirect impact is the impact attributed to changes in the expenditures of businesses that supply the goods and services to the firms and businesses directly serving hunters and sport shooting. This is the economic impact that the sector's normal operations generate in the form of demand for inputs from other industries (indirect or supply-chain impact).

Finally, there are spillover effects, or induced impact, which occur when employees and business owners of directly and indirectly affected firms spend their earnings and profits elsewhere in the economy. In addition, there are income and profits generated by these activities that will be spent again elsewhere in the economy (induced impacts). The induced impact is the impact attributed to the purchase of all the goods and services that were sold as a result of the workers who spend their wages and salaries buying goods and services (groceries, gasoline, haircuts, etc.), which were earned as a result of both the direct and indirect impacts. In other words, it measures the changes in the economy due to the spending habits of employees who work for the entity and the employees who supply the entity, as well as any others who financially benefit from the entity.

The industry's total economic footprint, or total impact, is the sum of the direct, indirect, and induced effects. In the analysis below I present the total expenditures generated by hunting and sport shooting and then the total impact of the activity. The Conference Board does not present the direct impact, the indirect impact and the induced impact separately for hunting and sport shooting so this report will present the total impact with all three types of impact added together. The total impact of hunting and sport shooting is presented in terms of the following indicators: gross domestic product (GDP), labour income, employment (total jobs, and number of full-time equivalents), and provincial taxes. There is no available measure of federal taxation generated by hunting and sport fishing.

After considering the number of people involved in legal firearm use in Canada and presenting the numbers of registered firearm owners, the numbers of registered firearms, the number participating in hunting and sport shooting, the expenditures on these activities and the total economic activity generated by these activities – I examine the impact of the OIC. To measure

the overall economic impact, I use evidence based on the projected impact of the OIC on a major Canadian firearms retailer, Wolverine. Prior to employing the projections from the impact on Wolverine, I conducted an extensive search of the academic literature examining the impact of gun laws on the gun industry, but there is a dearth of scientific studies examining gun regulations on the gun industry. RAND (2020) also conducted an extensive search of the scientific literature on the impact of gun regulations and found no studies providing conclusive evidence of the impact of firearms regulations on the firearms industry. There are studies on the impact of gun regulations on violent crime, but even in this case, RAND (2020) concluded that scientific research on the effects of gun policies is sparse and often inconclusive. With respect to impacts of gun regulations on hunters and sport shooters, or gun industry outcomes, RAND (2020) concludes that "we found no studies examining the effects of any of the 18 policy types on officer-involved shootings or on hunting and recreation outcomes, just two studies examining how the policies affect defensive gun use, and relatively few studies evaluating effects of the policies on gun industry outcomes."

Since there is no scientific empirical evidence on the impact of gun regulations on gun industry outcomes, I employ direct evidence of the impact of the OIC on a Canadian retailer (Wolverine) and then apply the magnitude of the impact to the industry.

The economics of hunting and sport shooting in Canada

Hunting and sport shooting are popular recreational activities in Canada. They are also important cultural traditions that can provide an important source of sustenance.[2] These activities have been growing in popularity in Canada in recent years and make significant contributions to Canada's economy across a range of industries from retail and wholesale trade to tourism. Sales of firearms are just a small part of the industry which also includes purchasing ammunition, equipment related to hunting and shooting, memberships in shooting clubs, licensing, and tourism services such as conservation and hunting outfitters, or increased spending hotels and restaurants. According to the GunBlog (2020, https://thegunblog.ca/facts-stats/):

> *Guns are one small part of shooting and hunting. You also need ammunition, bags, cases, locks, safes, ear and eye protection, cleaning supplies, targets, sights and scopes, holsters, slings, extra cartridge magazines and other parts and accessories. Add range membership, course tuition, match fees, hunting permits, insurance, fuel, plus money for coffee, restaurants and hotels, etc. It can be quite a personal investment.*

This quote from GunBlog (2020) focuses on the personal investment that is involved in hunting and sport shooting. My report measures the impact that these activities have on the economy - the direct, indirect and induced impacts. Hunting and sport shooting impact the Canadian economy through the supply chain as the directly affected firms purchase goods and services from their suppliers. The firms and workers in these industries and the supply-chain contribute to the national economy and their impacts are even more pronounced in remote communities - either rural or northern. A recent study by the Conference Board of Canada measured the overall economic value of hunting and sport shooting in Canada. This report draws from data provided

[2] Evidence on the important recreational aspect of hunting and sport shooting as well as the strong connection to tradition and hunting as a source of sustenance is presented in the 2012 Canadian Nature Survey and is also highlighted in the Hill+Knowlton Report (2019), Canadian Heritage (2013) and The Conference Board (2019).

by the Commissioner of Firearms, from Statistics Canada and estimated economic impacts from the Conference Board to examine the economic impact of the hunting and sport shooting industry in Canada.

First, consider the number of firearms that are registered in Canada. Figure 1 shows the number of firearms that were registered to individuals or businesses from 2006 to 2018. As of December 31, 2018, there were 1,164,197 restricted or prohibited firearms registered to individuals or businesses in Canada and this number has increased every year but one since 2006. The data are not reported prior to 2006 and the most recent data are in the December 31, 2019 report issued by the Commissioner of Firearms which includes data on the number of firearms registered to the end of 2018. As can be seen in Figure 1, the total number of firearms registered in Canada increased steadily since 2006 from about 651,000 in 2006 to almost 1.2 million registered firearms in 2018. The growth in the total number of registered firearms came from the growth in restricted firearms while the number of registered prohibited firearms remained relatively steady at around 200,000.[3] Table 1 presents the same data in tabular form with the registration numbers and the percentage change in registrations by year. As reflected in Figure 1, the number of registered firearms increased every single year from 2006 to 2018 with the exception of 2008-09 during the Great Recession. The average annual increase in firearms registrations was 5% between 2006 and 2018 representing an increase of 79% in the number of firearms registered over the period. As seen in Figure 1 and in Table 1, the growth in firearms registrations was even higher from 2012 to 2018 than it was from 2006 to 2011. In fact, firearms registrations grew 2.8% on average in the earlier period and 7.2% on average over the most recent six year period.

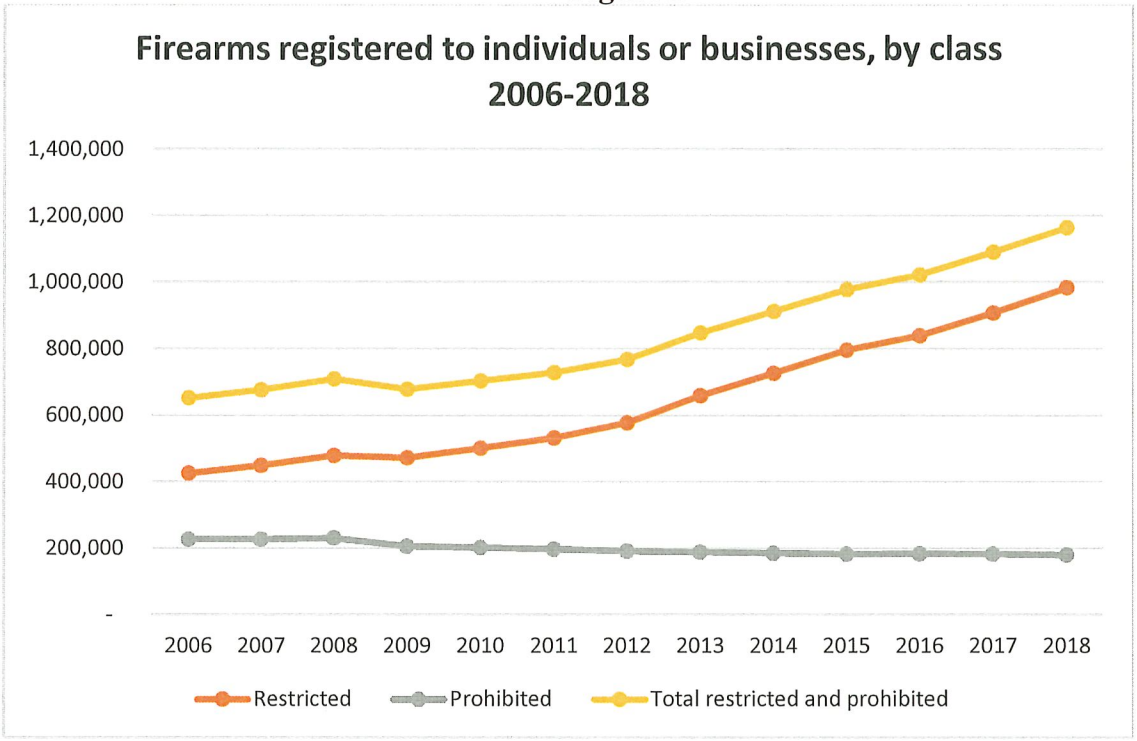
Figure 2 presents the number of firearms licences registered in Canada from 2011 to 2018 as reported by the Commissioner of Firearms. As with numbers of firearms, the number of licenses has increased every year since 2011. As seen in Figure 2, there are about 2.2 million people who currently hold a gun licence in Canada which is a 15% increase from approximately 1.9 million licence holders in 2011. The number of licences has increased by about 2% on average since 2011.

These are sizable numbers. To put these numbers in perspective, Table 2 breaks down the most recent data on licenses (2018) by province and shows the number of licensed gun owners per capita. The almost 2.2 million registered gun owners in Canada (2,183,827) represents almost 6% of the Canadian population. Since 99.6% of licensed gun owners in Canada are over 18, a better comparison is the number of licensed gun owners relative to the population over 18, which is about 7.5% of that demographic. That is the national average. Most gun licenses are held in Ontario (616,489) followed by Quebec (500,058) and Alberta (316,791). However, the per capita numbers show a very different pattern with only 4.6 licenses per capita in Ontario and over 19% in the Yukon, 15% in Newfoundland and Labrador, 13% in the Northwest Territories and 10% in Nunavut. Saskatchewan gun license holders represent 9.5% per capita and Alberta and Manitoba are 7.4% and 6.7% respectively. Quebec and British Columbia are close to the national average

[3] According to sub-section 84(1) of the Criminal Code, all firearms can be categorized into one of three classes: Non-restricted firearms - typically shotguns and rifles; Restricted firearms - predominantly handguns; and Prohibited firearms - mostly certain handguns and fully automatic firearms. According to the Commissioner of Commissioner of Firearms report, all restricted and prohibited firearms in Canada must be registered and these are the data reflected in Figure 1.

of 6%. This distribution of licensed gun owners across provinces reflects an important aspect of legal gun ownership in Canada – on a per capita basis, most licensed gun owners are in more rural areas of the country. Although the provincial breakdown is suggestive of the rural-urban differences in the pattern of firearm ownership, there is evidence on the rural-urban split on firearm ownership in Canada reported by the Department of Justice (2020). More people in rural areas own firearms than in urban locations. The Department of Justice reports that 37.3% of respondents from small towns own a firearm compared to 2.8% in communities with populations over one million. According to Block (1998) those living in small towns are also more likely to own long guns (36%) than those living in large cities (1.2%).

Figure 1



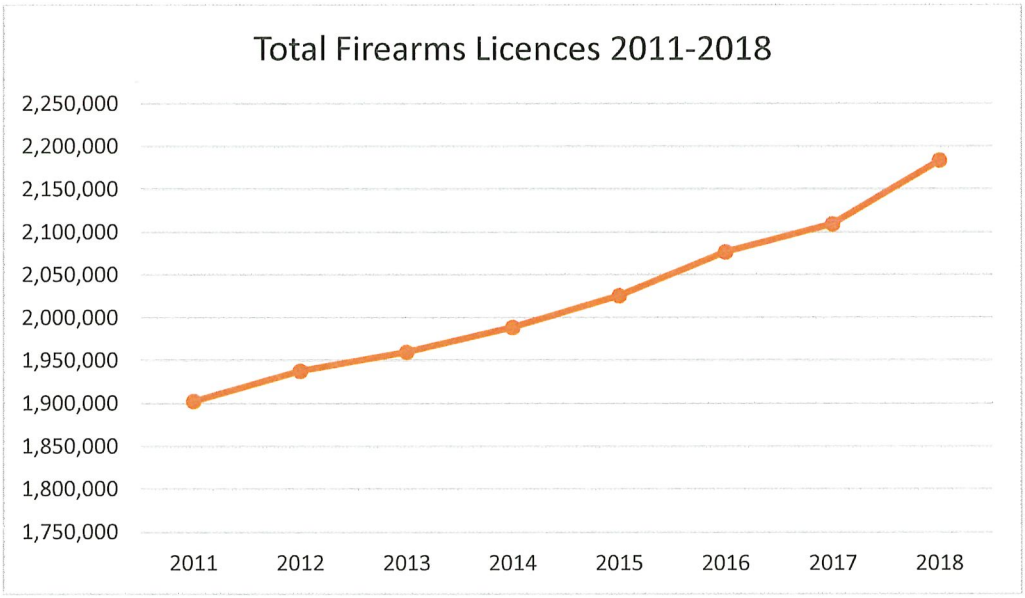
Source: Commissioner of Firearms reports from 2006-2019

Table 1

Firearms registered to individuals or businesses, by class, 2006 to 2018							
Year	Restricted	Percentage Change	Prohibited	Percentage Change	Total	Percentage Change	Total Percentage Change
2006	425,379		226,616		651,995		
2007	448,922	5.5%	226,951	0.1%	675,873	3.7%	
2008	478,487	6.6%	230,583	1.6%	709,070	4.9%	
2009	471,718	-1.4%	206,088	-10.6%	677,806	-4.4%	
2010	501,079	6.2%	201,999	-2.0%	703,078	3.7%	
2011	531,735	6.1%	197,024	-2.5%	728,759	3.7%	
2012	576,847	8.5%	190,910	-3.1%	767,757	5.4%	
2013	659,387	14.3%	188,552	-1.2%	847,939	10.4%	
2014	726,705	10.2%	185,793	-1.5%	912,498	7.6%	
2015	795,854	9.5%	182,493	-1.8%	978,347	7.2%	
2016	839,295	5.5%	183,333	0.5%	1,022,628	4.5%	
2017	907,362	8.1%	183,068	-0.1%	1,090,430	6.6%	
2018	983,792	8.4%	180,405	-1.5%	1,164,197	6.8%	79%

Source: Commissioner of Firearms reports from 2006-2019

Figure 2



Source: Commissioner of Firearms reports from 2011-2019. Data on number of firearms licences are not reported prior to 2011.

Table 2

Individual Firearms Licenses in Canada and by Province (2018)					
Province or Territory	PAL Licenses	Minors	Total Licenses	Population	Total Licenses Per Capita
Alberta	314,816	1,975	316,791	4,307,110	7.4%
British Columbia	300,801	974	301,775	4,991,687	6.0%
Manitoba	90,562	545	91,107	1,352,154	6.7%
New Brunswick	69,962	149	70,111	770,633	9.1%
Newfoundland and Labrador	76,400	402	76,802	525,355	14.6%
Northwest Territories	5,926	29	5,955	44,541	13.4%
Nova Scotia	3,076	836	3,912	959,942	0.4%
Nunavut	3,904	4	3,908	38,396	10.2%
Ontario	612,754	3,735	616,489	14,322,757	4.3%
Prince Edward Island	6,348	15	6,363	153,244	4.2%
Quebec	499,995	63	500,058	8,390,499	6.0%
Saskatchewan	110,247	326	110,573	1,162,062	9.5%
Yukon	7,662	49	7,711	40,476	19.1%
Total	2,174,725	9,102	2,183,827	37,058,856	5.9%

Source: Commissioner of Firearms reports from 2011-2019. Population data are from Statistics Canada https://www150.statcan.gc.ca/n1/pub/91-215-x/2018001/sec1-eng.htm

The numbers are even more impressive if we look at the activities of legal firearm owners and consider the numbers of hunters and sport shooters in Canada. Recall that firearm license data reported in Figure 2 and Table 2 represent a license to own legal firearms but do not permit hunting or shooting. The best data on these activities are presented in Table 3. Hunting participation data are based on administrative hunting licensing data reported by each province. Hunting licenses are issued provincially and territorially, and the provinces and territories have different administrative rules which can make it challenging to estimate the number of hunters. For example, in many provinces a single card is required by all hunters whether they hunt for one or for many species, but in Manitoba, for example, a separate license is required for each species. In Manitoba, a single hunter may have multiple hunting licenses. The Conference Board estimated the number of hunters using licensing data, survey data and population statistics, however there is no administrative data on sport shooting in Canada because there is no specific licensing requirement to participate in sports shooting. The Conference Board estimated participation in sport shooting based on the survey data they collected. The estimated numbers are reported in Table 3.

As seen in Table 3, the Conference Board estimates that there were 1.3 million hunters in Canada in 2018 and 1.4 million sport shooters – for a total of 2.7 million participants in these two activities. Note that some hunters are also sport shooters so the total of 2.7 million would double count those that engaged in both activities.

Although the methodology is different and the population demographics are not directly comparable, Statistics Canada (2016) does provide a count of hunters and trappers in Canada that is consistent with the data reported in Table 3. Statistics Canada reports that the number of Canadians 15 years and older participating in hunting and trapping was 1.8 million in 2016, or 5.9 % of that demographic. Statistics Canada does not report the number participating in sport shooting. The 2012 Canadian Nature Survey estimates that 2.1 million Canadians 18 years old and older representing 8 % of that demographic group participated in hunting or trapping in 2012. If anything, the Conference Board data on participation in hunting and sport shooting are conservative estimates and are at the low end of other studies estimating participation in these activities.

Table 3

	Estimated number of Participants 2018			Spending 2018 ($ millions)		
	Hunters	Sport Shooters	Total	Hunting	Sport Shooting	Total
Newfoundland and Labrador	41,464	51,575	93,039	$ 191.3	$ 93.1	$ 284.4
Prince Edward Island	1,739	5,418	7,157	$ 5.2	$ 9.4	$ 14.6
New Brunswick	62,717	44,656	107,373	$ 252.7	$ 91.6	$ 344.3
Nova Scotia	46,551	57,605	104,156	$ 222.3	$ 124.4	$ 346.7
Quebec	300,000	320,699	620,699	$ 1,368.0	$ 497.0	$ 1,865.0
Ontario	426,000	369,430	795,430	$ 1,961.0	$ 705.0	$ 2,666.0
Manitoba	49,339	61,111	110,450	$ 238.1	$ 91.0	$ 329.1
Saskatchewan	77,348	48,487	125,835	$ 262.0	$ 60.0	$ 322.0
Alberta	124,650	213,936	338,586	$ 593.0	$ 429.0	$ 1,022.0
British Columbia	106,114	221,052	327,166	$ 593.0	$ 455.0	$ 1,048.0
Yukon	4,436	3,877	8,313	$ 27.6	$ 3.9	$ 31.5
Northwest Territories	18,022	3,783	21,805	$ 113.0	$ 9.6	$ 122.6
Nunavut	15,536	2,249	17,785	$ 62.3	$ 3.3	$ 65.6
Total	1,273,916	1,403,877	2,677,793	$ 5,889.5	$ 2,572.3	$ 8,461.8

Source: The Conference Board of Canada (2019) and author's calculations

As seen in Table 3, Ontario has the most hunters and sport shooters in Canada followed by Quebec, then Alberta and British Columbia. The distribution of hunters and sport shooters across provinces is similar to the distribution of gun licenses, so Ontario is near the bottom in per capita terms with the more rural provinces and territories leading the way on a per capita basis. Overall, there were about 2.7 million participants in hunting and sport shooters in Canada in 2018. As with licences, the numbers of hunters and sport shooters are large and this is particularly evident when considering the per capita numbers. This represents over 7% per capita and over 9% of those who are 20 years old or older. Overall in Canada there are estimated to be more sport shooters (1.4 million) than there are hunters (1.3 million) but this pattern is reversed for some provinces such as Ontario, New Brunswick and in the north, where the number of hunters greatly exceeds the number of sport shooters.

How does Canadian gun ownership and participation in hunting and sport shooting activities compare to Canadian participation in sports? As we have seen, gun licensing in Canada has increased 15% from 2011 to 2018. On the other hand, according to the most recent data from Statistics Canada the national participation rate of Canadians in sports for those aged 15 years and older has gone in the other direction and declined 19% from 1992 to 2010. According to the General Social Survey (GSS) Time-Use survey, 7.2 million or 26% of Canadians aged 15 and older participated regularly in sport in 2010. Although due to measurement challenges and data availability, it is difficult to make a direct comparison of sport participation to gun ownership and hunting and sport shooting, we can see that gun ownership and hunting/sport shooting involves more Canadians than the most popular participation sports in Canada. According to Canadian Heritage (2013), in 2010, 1.5 million Canadians (or 5.2% of those 15 years and older) participated in golf - the most popular participation sport in Canada, followed by 1.2 million in hockey (4.4 %) and 981,000 in soccer (3.5 %). As we saw in Figure 2, 1.9 million Canadians held gun licences in 2011 representing 7.2 % of the population 20 years or older in 2011. As we saw above, gun ownership has increased 15% from 2011 to 2018, and in 2018 it represented 7.5% of the population 20 years old or older. Although we don't have sports participation data after 2010, we do know that sports participation trended downward from 1992 to 2010. While it is difficult to make direct comparisons due to how the data are presented, it is clear that more Canadians legally own firearms and participate in hunting and sport shooting than they do in the next most popular sport in Canada, which is golf.

Table 3 presents data on the number of participants in hunting and sport shooting and also provides estimates of spending on these activities from the Conference Board of Canada. To get a sense of how participation in hunting translates into spending, hunting requires that participants go out into nature. According to the 2012 Canadian Nature Survey, on average, Canadian adults who participated in hunting or trapping spent approximately 24 days per year doing so within 20 km of their homes, and approximately 20 days per year participating further afield. There is no official or administrative data on spending related to these activities, so the Conference Board included questions about the level of spending on these activities in their survey of a representative sample of 25,571 respondents. Based on the survey they estimated aggregate spending by activity and across provinces.

As reported in Table 3, Canadian hunting and sport shooters spent an estimated $8.5 billion on hunting ($5.9 billion) and sport shooting ($2.6 billion) in Canada in 2018. Although more people participated in sport shooting than in hunting in Canada, expenditures on hunting is much greater than expenditures on sport shooting. As with the number of participants, Ontario spent the most on the two activities ($2.7 billion) followed by Quebec ($1.9 billion) and over $1 billion was spent in Alberta and British Columbia respectively.

The survey broke down expenditures into different categories such as fuel, travel, major purchases, firearms and ammunition and other.[4] However, the more detailed expenditure data by type of expenditure lumps together all the expenditures for fishing and trapping along with hunting and sport shooting. The data do not break down expenditure type for only hunting or sport shooting but we do know from the survey that those participating in fishing, hunting,

[4] According to the Conference Board estimates, total spending on fishing, hunting, trapping and sport shooting was $18.8 billion, with $10.3 billion spent on fishing, $5.9 billion spent on hunting, $2.6 billion (14 %) spent on sport shooting and $131 million (1 %) spent on trapping.

trapping and sport shooting spent a total of $18.9 billion dollars in 2010, and that $8.3 billion (44 %) was spent on major purchases, $3.1 billion was spent on travel, about $2.3 billion was spent on fuel, and $2.3 million was spent on firearms and ammunition collectively.[5] Table 4 presents the expenditures on firearms and ammunition by province and the national total of $2.3 billion. As with the numbers on licensing, hunting and sport shooting, Ontario leads the county in spending a total of $666 million on firearms and ammunition, followed by Quebec at $487 million and then British Columbia ($342 million) and Alberta ($314 million). It is important to know the magnitude of expenditures on firearms and ammunition but it also very important to understand how the expenditure impacts the economy. We want to understand how expenditures related to hunting and sport shooting affect the economy directly, indirectly and through induced impacts.

Table 4

Spending on Firearms and Ammunition 2018 ($ millions)	
Newfoundland and Labrador	$ 81
Prince Edward Island	$ 7
New Brunswick	$ 91
Nova Scotia	$ 111
Quebec	$ 487
Ontario	$ 666
Manitoba	$ 87
Saskatchewan	$ 65
Alberta	$ 314
British Columbia	$ 342
Yukon	$ 5
Northwest Territories	$ 21
Nunavut	$ 14
Total	$ 2,290

Source: The Conference Board of Canada (2019)

The substantial expenditures related to hunting and sport shooting translate into businesses that supply hunters and shooters. Table 5 presents data on the number of businesses related to hunting and shooting. According to the Commissioner of Firearms, spending on firearms and ammunition supported 4,442 businesses related to firearms in Canada in 2018 (not including carriers and museums). A business, museum or organization that manufactures, sells, possesses, handles, displays or stores firearms or ammunition must have a firearms business licence. Of the 4,442 firearms businesses in Canada licensed under the Firearms Act, 2,004 were licensed to

[5] The data do not provide a separate breakdown of expenditure on firearms and ammunition – just the total amount.

only sell ammunition. There were approximately 1,400 shooting ranges licensed under the Firearms Act and the Shooting Clubs and Shooting Ranges Regulations in 2018.

Table 5

Valid Business Licenses 2014-2018					
License Purpose	**2014**	**2015**	**2016**	**2017**	**2018**
Business License	4,641	4,522	4,495	4,478	4,442
Ammunition Only	2,345	2,117	2,026	2,022	2,004

Source: RCMP (2019) "2018 Commissioner of Firearms report"

Based on the data from the registration and licensing of firearms and participation in hunting and sport shooting, and the survey data on spending habits of those involved in these activities, the Conference Board estimated the total impact of hunting and sport shooting. The largest impact from the economic activity is directly attributed to the sales in that industry (direct impact) which is measured as the wages paid to those directly employed in the sector and the profits generated directly from that activity. That is, firms such as retailers directly serve demand from hunters for guns and ammunition, among other supplies. Hunters purchase goods and services from outdoor activity retailers and generate demand for lodging and food services. This is known as the direct impact of the industry and it generates demand for other goods and services down the supply chain or, what are known as intermediate inputs and support services. The supply chain or intermediate goods and services are known as the indirect effects of the activity. Finally, there are spillover effects when employees and business owners of directly and indirectly affected firms spend their earnings and profits elsewhere in the economy. The direct economic impact of spending associated with hunting and sport shooting activities ripples through suppliers, employees, and the wider economy. In addition to direct impacts, the Conference Board estimated the economic impact that the sector's normal operations generate in the form of demand for inputs from other industries (indirect or supply-chain impact). Furthermore, there is income and profits generated by all these activities that will be spent again elsewhere in the economy (induced impacts). The industry's total economic footprint, or total impact, is the sum of the direct, indirect, and induced effects.

The Conference Board estimates the full impact the industry has on the economy by using economic models to determine the impact that the activity of one industry has on the wider economy. This is called the economic footprint of the industry. The Conference Board used standard economic models to calculate these impacts, starting from the expenditure data that I have already discussed in this report. The Conference Board contracted Statistics Canada to do simulations using input-output models to estimate the full economic impact of hunting and sport shooting. The input-output models quantify the purchases that an industry makes of other industries as inputs (supply-chain impacts) and also the expenditures on final goods generated by the labour income and profits from this activity. The simulation allowed them to estimate the induced impacts from the direct and supply-chain effects that reflect the spillover effects when employees serving the hunting and sport-shooting economy, including those working in supply chain-related industries, spend their earnings. For example, hunting expenditures include hunting

equipment, transportation, fuel, food, and lodging. The companies that serve these needs pay wages and suppliers, hold inventory, etc., and all of these activities, in turn, pay employees who then spend their paychecks on a wide range of goods and services.

When examining the total economic footprint of the hunting, sport-shooting, trapping, and fishing economy through its direct, supply-chain, and induced impacts the Conference Board concludes that retail trade accounts for almost one-quarter of the total GDP contribution. However, the Conference Board also finds that other industries are impacted by these activities such as manufacturing. Most of the impact in manufacturing is in transportation equipment manufacturing, in hand tools and other metal product manufacturing, and in petroleum and coal product manufacturing. The service industries that are most impacted include accommodation and food services, as well as finance, insurance, and other related services.

The Conference Board does not report the direct, indirect and induced impacts of each activity separately; however it does provide estimates of the sum of direct, indirect and induced impacts separately for hunting and sport shooting. The total direct, indirect and induced economics impacts – or total footprint – of hunting and sport shooting activities are reported in Table 6. In 2018, hunting contributed $4.1 billion in GDP to the Canadian economy and sport shooting contributed $1.8 billion in GDP to the economy for a total of $5.9 billion which is about 0.3 % of total Canadian GDP. As seen in Table 6, the full economic footprint from hunting and sport shooting in Canada was $2.9 billion in labour income and almost 50,000 full time equivalent jobs in 2018.

Table 6

Direct, indirect, and Induced Economic Impacts 2018					
	Spending ($ m)	GDP at market price ($ m)	Labour Income ($ m)	Employment, full time equivalent	Provincial Tax Revenue ($ m)
Hunting	$ 5,889.5	$ 4,063.9	$ 1,949.4	33,001	$ 960.8
Sport Shooting	$ 2,572.3	$ 1,804.5	$ 870.0	14,521	$ 415.0
Total	$ 8,461.8	$ 5,868.4	$ 2,819.4	47,522	$ 1,375.8

Source: The Conference Board of Canada (2019)

Tables 7 and 8 present the total economic footprint of sport shooting and hunting respectively, broken down by province, and also presents the estimated impact on provincial tax revenue. First consider the impact of sport shooting. Sport shooting is a sport with participation from men and women, youth and adults, and at competitive and recreational levels. There are sport shooting events in various international sporting events including the Olympics, commonwealth games, and pan-am games. There are rifle, pistol, and shotgun events at various levels throughout communities in Canada. Canadians have won nine medals in sport shooting in the Olympics. Team shooting events were going to be included in the postponed Tokyo Olympics for the first time since the 1924 Olympics held in Paris. Sport shooting membership has become gender equal for the first time, with both males and females demonstrating a growing interest in sport shooting. There are also para-shooting events with rifles and pistols. These competitions are economically important because athletes must pay fees, hire coaches, register their equipment, and pay to travel to competitions. Both competitive and recreational sport shooters belong to gun

clubs across the country and pay fees to use facilities and safely store guns.[6] Table 7 quantifies the impact of sport shooting broken down by province.

There are other disciplines within sport shooting that take place at smaller competitions throughout Canada. These competitions often take place in rural areas across the country and these communities greatly benefit from the competitors and spectators staying at hotels, shopping, and eating in their towns. For example, a three day sport shooting competition in Salmon Arm sees over 100 competitors spend three days in the town for its yearly competition. There are an estimated 1,400 shooting ranges across the country that see both firearm owners and non-firearm owners participating in target shooting. These participants are given safety lessons, and they rent guns, buy ammunition, and pay for the use of the range.[7]

Table 7

Spending and Total Economic Impact of Hunting 2018					
	Spending ($ m)	GDP at market price ($ m)	Employment, full time equivalent	Labour Income ($ m)	Provincial Tax Revenues ($ m)*
Newfoundland & Labrador	$ 191.3	$ 90.8	607	$ 37.3	$ 26.9
Prince Edward Island	$ 5.2	$ 4.7	47	$ 2.0	$ 1.2
New Brunswick	$ 252.7	$ 134.3	1,289	$ 60.3	$ 39.5
Nova Scotia	$ 222.3	$ 115.2	1,063	$ 47.0	$ 32.5
Quebec	$ 1,368.0	$ 1,064.0	9,718	$ 518.0	$ 282.6
Ontario	$ 1,961.0	$ 1,412.0	11,056	$ 688.0	$ 334.4
Manitoba	$ 238.1	$ 138.8	1,167	$ 60.6	$ 35.2
Saskatchewan	$ 262.0	$ 156.0	1,224	$ 68.0	$ 34.0
Alberta	$ 593.0	$ 443.0	2,937	$ 220.0	$ 66.3
British Columbia	$ 593.0	$ 428.0	3,493	$ 212.0	$ 96.6
Yukon	$ 27.6	$ 10.0	73	$ 5.2	$ 1.4
Northwest Territories	$ 113.0	$ 47.8	260	$ 23.1	$ 7.0
Nunavut	$ 62.3	$ 19.3	67	$ 7.9	$ 3.2
Total	$ 5,889.5	$ 4,063.9	33,001	$ 1,949.4	$ 960.8

Source: The Conference Board of Canada (2019)
* does not include federally collected taxes

Not surprisingly, the biggest economic impact of sport shooting in Canada is in Ontario with a GDP of $1.96 billion, followed by $1.37 billion in Quebec, and $593 million in both Alberta and British Columbia respectively. These four provinces have the largest impacts on GDP, jobs, labour income, and provincial tax revenue of all the provinces and territories. A similar picture emerges from the impact of sport shooting across the provinces as seen in Table 7. Total spending is lower for sport shooting than it is hunting (see Table 8), at $2.6 billion with an

[6] See McLachlan et al (2020)
[7] See McLachlan et al (2020).

impact on GDP at $1.8 billion, an impact on employment 14,521 full-time equivalent jobs, labour income at $870 million and provincial tax revenue of $414 million.

Table 8 takes a closer look at the economic impact of hunting. The first column of Table 8 repeats the total spending on data from Table 3 and a total of $5.9 billion was spent on hunting in Canada in 2018, with a $4.1 billion total (direct, indirect and induced) impact on GDP, $1.9 billion in labour income and 33,001 full-time equivalent jobs. It also raised $961 million in provincial government revenue. The Conference Board does not break down the contribution of hunting to federal tax revenues for hunting separately. It does report that the estimated total impact of all four activities (hunting, sport shooting, trapping, and fishing) on provincial government revenue was $3.1 billion and the total impact on federal government revenue was $3.0 billion – for a total government revenue impact of $6.1 billion for all four activities. The Conference Board does not report the federal government revenue for hunting or sport shooting separately. However, it does the report total impact of firearms on provincial government revenue as we discuss below.

Table 8

Spending and Total Economic Impact of Sport Shooting 2018					
	Spending ($ m)	GDP at market price ($ m)	Employment, full time equivalent	Labour Income ($ m)	Provincial Tax Revenues ($ m)*
Newfoundland & Labrador	$ 93.1	$ 44.2	296	$ 18.2	$ 13.1
Prince Edward Island	$ 9.4	$ 8.5	85	$ 3.7	$ 2.2
New Brunswick	$ 91.6	$ 48.7	468	$ 21.9	$ 14.3
Nova Scotia	$ 124.4	$ 64.5	595	$ 26.3	$ 18.2
Quebec	$ 497.0	$ 386.0	3,531	$ 188.0	$ 102.7
Ontario	$ 705.0	$ 508.0	3,975	$ 247.0	$ 120.2
Manitoba	$ 91.0	$ 53.1	446	$ 23.2	$ 13.5
Saskatchewan	$ 60.0	$ 36.0	282	$ 16.0	$ 7.8
Alberta	$ 429.0	$ 321.0	2,127	$ 160.0	$ 48.0
British Columbia	$ 455.0	$ 328.0	2,680	$ 163.0	$ 74.1
Yukon	$ 3.9	$ 1.4	10	$ 0.7	$ 0.2
Northwest Territories	$ 9.6	$ 4.1	22	$ 2.0	$ 0.6
Nunavut	$ 3.3	$ 1.0	4	$ 0.4	$ 0.2
Total	$ 2,572.3	$ 1,804.5	14,521	$ 870	$ 415

Source: The Conference Board of Canada (2019)
* does not include federally collected taxes

The evidence from the Conference Board is consistent with an earlier study on hunting in Canada. According to the 2012 Canadian Nature Survey, Canadians directly spent approximately $1.8 billion on hunting and trapping in 2011. The survey did not break down the expenditures between hunting and trapping but we know from the Conference Board Report that hunting is about 2/3 of the total and trapping is about 1/3. The $1.8 billion reported in the Canadian Nature Survey is about 5% of the total $40.4 billion that Canadians spent on nature related activities and

contributed to nature conservation efforts in 2011. The Nature Survey also presents evidence consistent with the Conference Board on how the $1.8. billion is spent: transportation (36%), accommodation (8%), food (15%), and equipment, fees and supplies (41%).

The Nature Survey presents evidence connecting hunting and trapping to nature conservation and finds that waterfowl hunting contributes $327 million each year to the Canadian economy. This important connection of hunting to nature conservancy was emphasized by the Report of the Standing Committee on Environment and Sustainable Development (2015) which reports that a representative from Wildlife Habitat Canada explained that the economic contribution from waterfowl hunters cannot easily be replaced by spending on other nature-related activities: "the average waterfowl hunter spends nearly seven times the daily expenditure of a birder."

Overall, 2.2 million Canadians have licenses to purchase and own firearms in Canada and 2.67 million Canadians participate in hunting and sport shooting. Together these activities generated an economic footprint with a GDP of $5.9 billion in 2018, almost 50,000 full-time equivalent jobs, $2.9 billion in labour income, and $1.38 billion in provincial government revenue. The impact of hunting and trapping reported by the Standing Committee on Environment and Sustainable Development is even larger than this. According to that report, "The total contribution that licensed hunting and trapping make to the Canadian economy is much larger than the $1.8 billion figure spent directly on hunting and trapping." According to a representative of Environment Canada, "hunting, fishing, and trapping activities contribute approximately $14 billion to the Canadian economy each year."

The Report of the Standing Committee on Environment and Sustainable Development (2015) also heard testimony that the guides and outfitters in the hunting industry generate another $1 billion. The Report goes on to further support the results from the Conference Board study by concluding that the purchase of goods and services associated with hunting and trapping impacts on many sectors of the economy and generates economic prosperity. This economic contribution is crucial for many remote communities and according to the Report, recreational hunting and fishing tourism alone injects over $1 billion annually into the economy, provides job opportunities, and supports hundreds of small and medium-sized businesses from coast to coast to coast.

In summary, the economic contribution of hunting and sport shooting in Canada is significant. It is important to understand that this impact is disproportionately more pronounced in rural and remote communities. According to the Report of the Standing Committee on Environment and Sustainable Development chaired by Harold Albrecht (2015): "The contribution of hunting and trapping to the Canadian economy is significant, especially to communities which may have limited employment opportunities, particularly Aboriginal and remote communities."

The impact of gun policies and regulation on the industry

I have shown the importance of hunting and sport shooting to those directly involved in these activities and the significant economic footprint these activities directly have on retail and wholesale trade, travel services and tourism in Canada. Moreover, the indirect and induced footprint is even larger and most of the economic footprint is in rural and remote areas.

There are no studies on the economic impact of gun control laws on the firearms industry in Canada. It is prudent and common practice to consider the economic costs and benefits of changes in government regulations. However, after an extensive search of the literature and

reports on firearms legislation, there no comprehensive, or systematic studies examining the economic impact of firearms legislation in Canada. The costs borne by the gun owners and the general taxpayer can be estimated but there are no studies that do this. Research by the Department of Justice supports this conclusion. The Department of Justice provides an extensive and comprehensive literature review of the impact of firearms regulation in Canada but does not include any studies on the costs of the regulations on gun owners or the firearms industry. All of the literature focuses exclusively on whether firearms regulation affects crime and/or the impact of legislation on various measures of gun violence. They do not consider the economic costs of changing the rules and regulations.

In order to assess the impact of a regulation change on an industry, we need to know the size of the industry and we need to estimate the impact on the industry based on the best evidence of how a regulation will impact the industry. I have already analyzed and documented the size of the firearms industry in Canada and provided the most recent data on gun registrations, hunting activity, and sports shooting activity.

Based on the evidence from Statistics Canada and the analysis by the Conference Board, I estimate that there are 47,868 jobs in Canada involving the distribution or retailing of ammunition, firearms, and hunting supplies, and in supplier and ancillary industries connected with the firearm market. The hunting and sport shooting industry is estimated to generate $8.5 billion in sales revenue annually. In 2018, Canadians spent $2.3 billion on firearms and ammunition. There were 1,164,197 firearms licensed in Canada in 2018, nearly 80% more than the number licensed in 2006.

I have been provided with reliable evidence that the sales of a Canadian retailer, Wolverine, are projected to decline by 21% to 33% because of the OIC. Based on these projections I have extrapolated this decline to the impact on sales in the industry overall, and to the overall impact on the economy based on the analysis presented above. Table 9 reports these results.

Table 9

Impact of OIC on Firearms Industry in Canada			
	Current values (2018)	Predicted impact: 21% decline	Predicted impact: 33% decline
Spending ($ b)	$ 8.5	$ 1.8	$ 2.8
GDP at market price ($ b)	$ 5.9	$ 1.2	$ 1.9
Labour Income ($ m)	$ 2,819.4	$ 592.1	$ 930.4
Employment, full time equivalent	47,522	9,980	15,682
Provincial Tax Revenue ($ m)	$ 1,375.8	$ 288.9	$ 454.0

Based on the projected impact on Wolverine, total spending in the firearms industry in Canada could decline between $1.8 billion and $2.8 billion as a result of the OIC policies. If we focus on the economic impact of the policy change, it will have an impact of reducing GDP by between $1.2 billion and $1.9 billion, with a decline in labour income of $592.1-$930.4 million and a

decline in employment of between 9,980 and 15,682 full time equivalent jobs. Provincial tax revenue will decline by $288.9 million to $454 million.

Cost of buy-back

With respect to anticipated costs of the buyback program, there is quite a bit of uncertainty and there have been a number of cost estimates put forward. Some aspects of the buy-back program that will potentially affect the program cost include: the amount of compensation per gun; the rate of compliance (number of guns turned in); administration costs of running the program, including human resources, operating costs; disposal and destruction; loss of wages for those employed in manufacturing roles; and, the cost of educating the public about the ban. It would also be important to determine how the program would be funded – whether that be from 'regular' or new purpose-based taxes.

The Government of Canada costs will be managed through federal government budget setting processes and may not yet have been established; if established the information may not yet be in the public domain. The Public Safety Departmental Plan for 2020-21 does not show any specific costs for initiatives including, but not limited to, license verification, eligibility, or vendor record-keeping. There may be cost savings associated with ending or adjusting current programs and practices which would also need to be taken into account in determining the overall cost of new rules and programs.

To determine the costs of the buyback program and how it could be run, it appears that the Government of Canada is looking at a range of options. On August 12, 2020, Public Safety Canada posted a tender notice to procure professional services, (https://buyandsell.gc.ca/procurement-data/tender-notice/PW-20-00923212) for a Compensation Model and Program Design Options for a Potential Buyback Program for Recently Prohibited Firearms (202101502). It appears that costs will be available once a provider is selected.

The Minister of Public Safety, The Honourable Bill Blair, has stated it could cost up to $600 million for the buyback program, assuming a buyback of about 250,000 firearms, with an average value of about $1,500 each.[8] Until the details of a buy-back program are announced, it is too early to reliably estimate the cost of such a program.

Conclusions

This report provides an economics impact assessment of the OIC policy changes on the firearms industry in Canada and the Canadian economy. More specifically, this report contains my opinion about the macroeconomic impact of the new regulation on the hunting, sport shooting and firearms manufacturing and retail industries in Canada. It examines the economic impact on the industry/sport, including the impacts on shooting sports clubs/associations, retailers and wholesalers, and wildlife/conservation associations, and examines the impact on the shooting sports industry. The report examines the impact of the ban on small businesses and gun ranges and job losses in affected communities. The report also examines the cost of implementing and administering the new regulations.

[8] See Harris (2019).

As a result of the OIC, 90,000-150,000 restricted firearms became prohibited affecting an estimated 72,000 firearm owners. Using the most recent data from Statistics Canada and the Commissioner of Firearms I showed that the firearms industry in Canada is large and growing.

- There were 1,164,197 restricted or prohibited firearms registered in Canada in 2018 and this number has increased every year but one since 2006, representing an increase of 79%.
- There are about 2.2 million people with a gun licence in Canada which is a 15% increase from approximately 1.9 million licence holders in 2011. There were 2.7 million Canadians participating in hunting and sport shooting in 2018 representing over 7% per capita. More Canadians legally own guns and participate in hunting and sport shooting than they do in the most popular sport in Canada, which is golf.
- The economic impact of the industry is significant. Total expenditures on firearms and ammunition was $2.3 billion in Canada in 2018. Canadian hunting and sport shooters spent an estimated $8.5 billion on hunting ($5.9 billion) and sport shooting ($2.6 billion) in Canada in 2018.
- This spending supported 4,442 businesses related to firearms in Canada. Economically, hunting and sport shooting has a large impact. In 2018, the full economic footprint from hunting and sport shooting in Canada was $2.9 billion in labour income and almost 50,000 full time equivalent jobs, $5.9 billion in total impact on GDP. It also raised $961 million in provincial government revenue.
- The economic contribution of hunting and sport shooting is crucial for many remote communities and provides job opportunities, and supports hundreds of small and medium-sized businesses from coast to coast to coast.
- The OIC is projected to result in a decline in sales of 21 % to 33 % to Wolverine. Based on this, spending in the firearms industry in Canada could decline between $1.7 billion and $2.7 billion as a result of the OIC.
- The economic impact will reduce GDP by between $1.2 billion and $1.9 billion, with a decline in labour income of $592.1-$930.4 million and a decline in employment of between 9,980 and 15,682 full time equivalent jobs. Provincial tax revenue will decline by $288.9 million to $454 million.
- There is a broad range of the expected cost of the buy-back program. Minister Blair recently stated it could cost up to $600 million, assuming a buyback of about 250,000 firearms, with an average value of about $1,500 each. Until the details of a buy-back program are announced, it is too early to reliably estimate the cost of such a program.

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Curriculum Vitae *July 2019*

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EDUCATION

1997	Doctor of Philosophy, Economics, Columbia University.
1996	Master of Philosophy, Economics, Columbia University.
1988	Master of Arts, Economics, Carleton University.
1987	Bachelor of Arts (Honours), Economics, University of Manitoba.

POSITIONS HELD

ACADEMIC APPOINTMENTS

Director	2012-present, International Economics Program, School of Public Policy
Professor	2011-present, The University of Calgary, Department of Economic
Associate Professor	2003-2011, The University of Calgary, Department of Economics
Assistant Professor	1997-2003, The University of Calgary, Department of Economics
Visiting Professor	2010, University of Western Australia
Visiting Professor	2004-5, Carleton University, Department of Economics
Visiting Scholar	2004-5, Department of International Trade Canada
Teacher and Assistant	1992-7, Program in Economic Policy (PEPM) Columbia University

OTHER APPOINTMENTS

Executive Council	2013-2016, Canadian Economics Association
Advisor	2014-2016, Canada West Foundation, Western Trade & Investment Council
Chair	2014-2017, Faculty of Arts Student Appeals Committee, University of Calgary
Chair	2016-2017, Hiring Committee, Department of Economics
Founder/Organizer	2010-present, Rocky Mountain Empirical Trade Conference, Banff Alberta
Editorial Board	2011-present, University of Calgary Press
Editorial Board	2005-2012, Canadian Foreign Policy
Editorial Board	2009-present, FREIT Forum for Research on Empirical International Trade
Member	2007-2013, Advisory Committee on International Trade, Statistics Canada
Editor	1999-present, On-line Research Papers on Political Economy: RePEc (Research Papers in Economics) http://lists.repec.org/mailman/listinfo/nep-pol
Scientific Advisor	2006, Country Indicators for Foreign Policy, Carleton University
Organizer	2006, Empirical Investigations in International Trade (EIIT), Banff Alberta
Deemed Employee	2004-present, Statistics Canada
Advisor	2001-4, Academic Advisory Council for Deputy Minister of DFAIT, Ottawa
Director	2000-5, Research Unit on Public Policy, University of Calgary
Advisor	2000-4, Steering Committee on International Relations Program, U. of Calgary
Senior Fellow	2004-present, Fraser Institute
Economist	1990-92, Bank of Canada, International Department
Economist	1989-90, Kenya Long Range Planning Project (CIDA funded)
Research Assistant	1988-9, Carleton University, Department of Economics

HONOURS/AWARDS/FELLOWSHIPS

RESEARCH

2018	Social Sciences and Humanities Research Council of Canada, Knowledge Synthesis Grant: Understanding the future of Canada-UK trade relationships
2009	Social Sciences and Humanities Research Council of Canada, Public Outreach Grant
2008	Social Sciences and Humanities Research Council, Research Development Initiatives
2007	Social Sciences and Humanities Research Council of Canada, Standard Research Grant
2004/05	Norman Robertson Fellowship, Department of International Trade Canada
2003	Killam Resident Fellowship
2002	Social Sciences and Humanities Research Council of Canada, Standard Research Grant
1998	Donner Foundation Grant for Studies of Civil Society, Co-investigator
1997	Petro Canada Young Innovators Award
1995	Center for the Social Sciences Fellowship, Columbia University
1992/97	Columbia University Graduate Fellowship

TEACHING

2016	Outstanding Supervisor Award, University of Calgary
2001	Department of Economics Superior Teaching Award
2001	Nomination for Student Union Teaching Award, Fall 2001

RESEARCH INTERESTS

International Economics; International policy/relations; International finance; Public Economics; Economic Development; Labor Economics.

RESEARCH

JOURNAL ARTICLES

Beaulieu, Eugene and Denise Prévost (2020) "Subsidy Determination, Benchmarks and Adverse Inferences: Assessing 'benefit' in US – Coated Paper (Indonesia)" World Trade Review, forthcoming. Working paper version available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3489245

Beaulieu, Eugene and Mustafa Zaman (2019) "Do Subnational Trade Agreements Reduce Trade Barriers? Empirical Evidence from Canadian Provinces," Canadian Public Policy. Volume 45 Issue 1, March 2019, pp. 1-15. https://doi.org/10.3138/cpp.2018-002

Jen Baggs, Eugene Beaulieu, Loretta Fung and Bev Lapham (2016) "Exchange Rate Movements and Firm Dynamics in Canadian Retail Industries," *Review of International Economics*, 24: 635–666. doi:10.1111/roie.12229

Beaulieu, Eugene and Jevan Cherniwchan (2014) "Tariff Structure, Trade Expansion and Canadian Protectionism from 1870-1910," *Canadian Journal of Economics.* February 2014. Volume 47, No. 1.

Beaulieu, Eugene and Debayan Pakrashi (2012) "Do WTO Members Employ Less Child Labour?" *Indian Growth and Development Review*. Vol. 6, No. 1. 2013. pp. 148-160.

Baggs, Jen, Eugene Beaulieu and Loretta Fung (2012) "Permanent Effects of Transitory Exchange Rate Shocks," *Contemporary Economic Policy.* 2013 May. pp. 1-17.

Beaulieu, Eugene, Michael Bennaroch and Jim Gaisford "Intra-Industry Trade Liberalization: Why Skilled Workers Are More Likely To Support Free Trade," *Review of International Economics*, Volume 19, Issue 3, pp. 579–594, August 2011.

Fung, Loretta, Jen Baggs and Eugene Beaulieu, "Plant Scale and Exchange Rate Induced Productivity Growth," *Journal of Economcs and Management* Strategy, Volume 20, No. 4, Winter 2011. p. 1197-1230.

Baggs, Jen, Eugene Beaulieu and Loretta Fung "Are Service Firms Affected by Exchange Rate Movements," *Review of Income and Wealth*, June 2010, Volume 56, Issue Supplement, S156–76.

Baggs, Jen, Eugene Beaulieu and Loretta Fung "Firm Survival, Performance, and the Exchange Rate," *Canadian Journal of Economics* Volume 42, No. 2 May 2009. p. 393-421.

Beaulieu, Eugene, Yatawara, Ravindra A. and Wei Guo Wang "Who Supports Free Trade in Latin America?" *World Economy*, Vol. 28 Issue 7 pp. 941-59, July 2005.

Beaulieu, Eugene and Magee, Christopher "Campaign Contributions and Trade Policy: New Tests of Stolper-Samuelson." *Economics and Politics.* Vol. 16 No. 2, pp. 163-87, July 2004.

Beaulieu, Eugene, Bennaroch, Michael, and Jim Gaisford, "Trade Barriers, Learning, and Wage Inequality in a North-South Product-cycle Model with an Endogenous Skill Decision." *Journal of Economic Development*, Vol. 75, Issue 1, pp. 113-136, October 2004.

Beaulieu, Eugene "Factor or Industry Cleavages in Trade Policy: An Empirical Analysis of the Stolper-Samuelson Theorem," *Economics & Politics.* Vol. 14 No. 2, pp. 99-132, July 2002.

Beaulieu, Eugene "The Stolper-Samuelson Theorem Faces Congress," *Review of International Economics*. Vol. 10 No. 2, pp. 337-54, May 2002.

Beaulieu, Eugene and Gaisford, Jim. "Labour and Environmental Standards: the "Lemons Problem" in International Trade Policy," *World Economy*. Vol. 25 No. 1, pp. 59-78, January 2002.

Beaulieu, Eugene and J. C. Herbert Emery. "Pork Packers, Reciprocity and Laurier's Defeat in the 1911 General Election," *Journal of Economic History*. Volume 61; December 2001; Number 4. 1082-1100.

Beaulieu, Eugene "North American Integration and Plant Closures in Ontario," *Canadian Foreign Policy*. Vol. 8, No. 2 Winter 2001. pp. 23-38.

Hester, Annette and Beaulieu, Eugene. "Trade Agreements in the Americas: Regionalism Converging to Globalization," *The Estey Centre Journal Of International Law And Trade Policy*. Vol. 1, Issue 2, pp. 108-36. 2001.

Beaulieu, Eugene "The Canada-U.S. Free Trade Agreement and Labour Market Adjustment in Canada," *Canadian Journal of Economics*, Vol. 33, No. 2, pp. 540-63, May 2000.

Schembri, Lawrence and Beaulieu, Eugene "The Construction of Capital Stock Estimates at the Establishment Level: A Canadian Example," Journal of Economic and Social Measurement. pp. 55-70. 1990.

PEER REVIEWED POLICY ARTICLES

Beaulieu, Eugene and Dylan Klemen (2019) "Trade Policy Trends: Chinese Protectionism: Restriction on Canola Imports from Canada," March 20, 2019 https://www.policyschool.ca/authors/beaulieu-eugene/

Beaulieu, Eugene (2018) "North American Free Trade Under Attack: Newsprint is Just the Tip of the Iceberg," SPP Research Paper Volume 11:15 May 23, 2018, https://ideas.repec.org/a/clh/resear/v11y2018i15.html

Beaulieu, Eugene and V. Balaji Venkatachalam (2018) "NAFTA Renegotiations: An Opportunity for Canadian Dairy?," SPP Research Paper Volume 11:10 March 2018, https://ideas.repec.org/a/clh/resear/v11y2018i10.html

Beaulieu, Eugene and Dobson, Wendy (2015) "Why Delay the Inevitable: Why the AIIB Matters to Canada's Future" School of Public Policy: Communique Vol. 7, Issue 2, April 2015, http://www.policyschool.ucalgary.ca/?q=content/why-delay-inevitable-why-aiib-matters-canadas-future

Beaulieu, Eugene and Song, Yang (2015) "What Dependency Issues? Re-examining Assumptions about Canada's Reliance on the U.S. Export Market" School of Public Policy: Communique Vol. 8, Issue 3

January, 2015, http://www.policyschool.ucalgary.ca/?q=content/what-dependency-issues-re-examining-assumptions-about-canadas-reliance-us-export-market

Beaulieu, Eugene (2014) "The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," School of Public Policy: Research Paper Vol. 7, Issue 16, June 2014, http://policyschool.ucalgary.ca/?q=content/impact-foreign-investment-restrictions-stock-returns-oil-sands-companies

Beaulieu, Eugene (2013) "Canada-Korea Free Trade: A Watershed in Economic Integration with Asia," School of Public Policy: Communique, Vol. 4, Issue 3, 2012 November, Page 1-14, http://policyschool.ucalgary.ca/?q=content/canada-korea-free-trade-watershed-economic-integration-asia

Beaulieu, Eugene (2012) "The Comprehensive Trade Agreement with India: What's in it for Canada (Or India For That Matter)?" School of Public Policy: Communique, Volume 4, Issue 3, 2012 November, From Page 1, To Page 14, http://policyschool.ucalgary.ca/?q=content/comprehensive-trade-agreement-india-whats-it-canada-or-india-matter

Beaulieu, Eugene "Has North American integration resulted in Canada becoming too dependent on the United States?" *Policy Options*. Vol 28 Issue 9 p. 97-102, October 2007.

BOOKS

Beaulieu, Eugene, Jim Gaisford and Jim Higginson, *Interprovincial Trade Barriers in Canada: How Far Have We Come? Where Should We Go?* (The Van Horne Institute, Calgary Canada) November 2003.

BOOK CHAPTERS

Beaulieu, Eugene (2019) "From Auto Pact to NAFTA: The Evolution of Economic Thought from Nobel Prize to Canadian Trade Policy, in Mark S. Bonham editor The History of Canada-U.S Trade Negotiations. Canadian Business History Association. www.cbha-acha.ca p. 93-114

Beaulieu, Eugene C. "The Economics of Foreign Investment." in J. Anthony VanDuzer and Patrick Leblond, eds, International Investment Policy: Law, Economics, Political Science and Management (Routledge: forthcoming 2019). p. 1–35.

Beaulieu, Eugene (2015) "La estrategia de política internacional canadiense basada en evidencias," in Dávalos, Elisa (*Ed*). Tendencias económicas emergentes en América del Norte. México, CISAN-UNAM, 2015. P 117-141.

Beaulieu, Eugene, Liliana Mez Gonzalez and Raymond Robertson (2010) "Trade and Labor Markets in the Three NAFTA Countries," in Ch 2, pp 41-69

Beaulieu, Eugene "The Economics of Trade Liberalization," Chapter 10, Edited by Hassan Bougrine and Mario Seccareccia edited *Macroeconomic Analysis: Competing Views*. (Emond Montgomery Publications) June 2009.

Beaulieu, Eugene, V. Dehjia, O. Zakhilwal "International Trade, Labour Turnover, and the Wage Premium: Testing the Bhagwati-Dehejia Hypothesis for Canada," in: E. Dinopoulos, P. Krishna, A. Panagariya, and K. Wong (eds), Trade, Globalization, and Poverty: Papers in Honor of Jagdish Bhagwati, Routledge, 2008. p. 62-83.

Beaulieu, Eugene and Herbert Emery "Stay the Course or Find a New Path? Canada's Reliance on the U.S. as an Export Market," in John M. Curtis and Aaron Sydor edited *NAFTA@10*. Minister of Public Works and Government Services Canada 2006.

"Trade in Services," Chapter 14 in William A. Kerr and James D. Gaisford edited *Handbook of International Trade Policy* (Edward Elgar Publisher). p. 482-96, 2006.

"Trade and Wages," Chapter 45 in William A. Kerr and James D. Gaisford edited *Handbook of International Trade Policy* (Edward Elgar Publisher). p. 150-62, 2006.

Beaulieu, Eugene, Shenji Chen and Erica Pohjola "The Determinants of Canadian Direct Investment Abroad," in John M. Curtis and Dan Ciuriak edited *Trade Policy Research 2005*, Minister of Public Works and Government Services Canada, Ottawa. p. 107-148, 2006.

"The Political Economy of North American Integration, Labour Market Adjustments and Plant Closures in Canada," in Richard G. Harris and Thomas Lemieux edited Social and Labour Market Aspects of North American Linkages. 2005. With Chris Joy.

"Trade in Services," Chapter 6 in William A. Kerr and James D. Gaisford edited *Trade Negotiations in Agriculture* (University of Calgary Press, 2005). With Shenjie Chen.

"Regional Trade Agreements in the Americas: Converging to Globalization," Chapter in Globalization 2000: Convergence or Divergence? In Axel Hulsemeyer edited Globalization in the Twenty-First Century (Palgrave Macmillan, 2003). With Annette Hester.

"Déja vu all over again: The Role of Trade and Labour Mobility for Canada's Economic Performance," Comments forthcoming in *North American Linkages: Opportunities and Challenges for Canada* edited by Richard Harris University of Calgary Press, Calgary. 2003.

Beaulieu, Eugene "*What is Money? The Economics of Money from Aristotle to Robert Mundell*," in Geraldine Chimirri-Russell edited *Money/L'Argent*. Catalogue of an Exhibit held at The Nickel Arts Museum, Provincial Museum of Alberta and the Royal Ontario Museum. 47-62. 2000.

"The Stolper-Samuelson Theorem: Evidence from Congressional Voting Patterns on CUSTA, NAFTA, and GATT," in Juan Manuel Villasuso and Rafael Trejos Solorzano edited *Comercio e Integracion en Las Americas,* Conference proceedings from I Coloquio Academico de las Americas, 1998/03/12.

Beaulieu, Eugene and Hester, Annette. "Regional Trade Agreements in the Americas: Converging to Globalization," Chapter in *Globalization 2000: Convergence or Divergence?* Forthcoming.

Amano, Robert, Beaulieu, Eugene and Lawrence Schembri, "Trade Hysteresis: Theory and Evidence for Canada," in The Exchange Rate and the Economy: Proceedings of a conference at the Bank of Canada 22-23 June 1992. pp. 403-69. Bank of Canada, 1993.

STUDIES/WORKING PAPERS (AND WORK IN PROGRESS)

Eugene Beaulieu and Denise Prévost "Subsidy Determination, Benchmarks and Adverse Inferences: Assessing 'Benefit' in US – Coated Paper (Indonesia)," *Robert Schuman Centre for Advanced Studies Research Paper No. RSCAS 2019/76* Posted: 19 Nov 2019. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3489245

"Model Uncertainty in Foreign Direct Investment: Greenfield versus Mergers and Acquisitions." Joint work with Iyanuoluwa Odebunmi. Working Paper.

"Foreign Direct Investment, Global Value Chains, and Taxation," Eugene Beaulieu and Bev Dahlby

"Do Canada's Investment Treaties Promote Investment Abroad?" Eugene Beaulieu and Kelly O'Neill

"Do interprovincial trade agreements facilitate interprovincial trade flows? Empirical evidence from Canada," with Mustafa Zaman

"Proceed with Caution? State-Owned Enterprises and the Need for a New Approach to Investment Policy" Eugene Beaulieu

"The State of Canada's International Trading Relationships" Eugene Beaulieu and Yang Song

"International Technology Diffusion via Goods Trade: Theory and Evidence from China," University of Calgary Working Paper 2016-38 Eugene Beaulieu and Shan Wan https://ideas.repec.org/p/clg/wpaper/2016-38.html

"NAFTA Re-negotiations are an opportunity to fix Canadian Dairy once and for all," joint with V Balaji Venkatachalam and Philip Rasmussen.

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," Eugene Beaulieu and Matthew Saunders

"Proceed With Caution? State-Owned Enterprises and the Need for a New Approach to Investment Policy" Eugene Beaulieu

"The State of Canada's International Trading Relationships" Eugene Beaulieu and Yang Song

"The Political Economy of Canadian Trade Policy from 1881 to 1925," with Daryck Riddell.

"Why are women more protectionist than men?" With Michael Napier. University of Calgary Manuscript 2009.

"Are Mexican, Canadian, and U.S. Workers Complements or Substitutes?" With Raymond Robertson and Liliana Meza González

"Do Taxes Matter for Firm Location? Evidence from Canadian Provinces," With Kenneth J. McKenzie and Jean-François Wen.

"Asymmetries in Exchange Rate Effects on Firm Survival in North America," With Jen Baggs and Loretta Fung. University of Calgary Working Paper, 2007.

"Why Doesn't Canadian Foreign Direct Investment Flow to Poor Countries?" with Shenjie Chen.

"The Variety Effects of Trade Liberalization," with Shenjie Chen.

Beaulieu, Eugene, Vivek H. Dehejia and Hazrat-Omar Zakhilwal "International Trade, Labour Turnover, and The Wage Premium: Testing The Bhagwati-Dehejia Hypothesis For Canada," CESifo *Working Paper No. 1149*

Eugene Beaulieu, Michael Benarroch and James Gaisford (2004) "Intra-Industry Trade Liberalization, Wage Inequality and Trade Policy Preferences," Department of Economics, University of Calgary Discussion Paper 2004-06. http://econ.ucalgary.ca/research/WP-2004-06.pdf

Beaulieu, Eugene, Kenneth J. McKenzie, Jimmy Stéphane Vu, & Jean-François Wen (2004) "Effective Tax Rates and the Formation of Manufacturing Enterprises in Canada," March 2004, Fraser Institute Digital Publication. http://www.fraserinstitute.ca/admin/books/files/EffectiveTaxRates.pdf

NEWSPAPER ARTICLES AND MEDIA

"President Trump Should Not Renegotiate Nafta," **New York Times** The Opinion Pages: Room for Debate. January 30, 2017, 3:33 am https://www.nytimes.com/roomfordebate/2017/01/30/new-terms-for-nafta-7/president-trump-should-not-renegotiate-nafta

"Takeover rules hurting Canadian oil," **BNN** June 13, 2014. http://www.bnn.ca/Video/player.aspx?vid=381287

"Interprovincial Trade Barriers in Canada," CBC TV: **The Lang and O'Leary Exchange**, May 29, 2014. http://www.cbc.ca/player/News/Business/ID/2460806827/

"South Korea Trade Deal," **BNN**, Mar 12, 2014. http://www.bnn.ca/Video/player.aspx?vid=333679

"With Nafta, Everyone Benefited From a Larger Economy," **New York Times** November 24, 2013 http://www.nytimes.com/roomfordebate/2013/11/24/what-weve-learned-from-nafta/with-nafta-everyone-benefited-from-a-larger-economy

"Don't expect much from Indian mission" **Financial Post** | 02/11/12 9:28 PM ET http://opinion.financialpost.com/2012/11/02/dont-expect-much-from-indian-mission/

Panel debate: "Building Markets," **Alberta Prime Time**, CTV Studio, Calgary, 2013 June, 30 minutes. http://www.albertaprimetime.com/Stories.aspx?pd=5208

Numerous radio and TV interviews on Canadian Trade Policy, TV and Radio stations and by phone

Mullins, Mark and Beaulieu, Eugene "Ontario Tax Policy Strangles Business," Appeared in the **Financial Post**, March 3, 2004

CBC Program ***Ideas***, Response to Environmental Catastrophe, Panelist, 2004

Bob Mills 1 Hour Television Program, Red Deer Alberta. May 16, 2002.

CBC **Learn at Lunch**, June 12, 2002.

CBC **Eye opener**, June 20, 2002.

Beaulieu, Eugene "Landry Fabricates History", article featured in the **Financial Post**, April 7/2001

UNPUBLISHED THESIS

"The Political Economy of Trade Policy in the United States and Canada: Political Cleavages and the Labor Market," Columbia University, 1997/05/15. Advisor: Jagdish Bhagwati

INVITED PRESENTATIONS/LECTURES

"Model Uncertainty in Foreign Direct Investment: Greenfield versus Mergers and Acquisitions." Joint work with Iyanuoluwa Odebunmi. Working Paper. Presented at University of Calgary, School of Public Policy. June 20, 2017.

"Model Uncertainty in Foreign Direct Investment: Greenfield versus Mergers and Acquisitions." Joint work with Iyanuoluwa Odebunmi. Working Paper. Presented at Fudan University, Shanghai China. June 12, 2017.

"Renegotiating NAFTA: The Implications and Opportunities for the Canadian Petrochemical Industry," 2017 CERI Petrochemical Conference, *New Game, New Rules: Global Opportunities and Challenges for Canadian Petrochemicals,* held on June 4-6 2017 in Kananaskis Alberta

"Air Power and Sovereignty in the Canadian Economy," invited presentation to 2017 Air Power Symposium Themes in 21st Century Sovereignty and the Future RCAF. Ottawa April 21, 2017.

Invited Speaker, "Globalization versus Isolation: What is Canada's Role in an Increasingly Isolationist World?" Alberta International Development Office (AIDO) Speaker Series event in partnership with the Canadian International Council (CIC). March 2017. Calgary.

Inviter Speaker: "NAFTA - Cooperation or conflict?" by the Latin American Research Centre, University of Calgary. March, 2017.

"International Technology Diffusion via Goods Trade: Theory and Evidence from China," University of Calgary Working Paper 2016-38 Eugene Beaulieu and Shan Wan presented at Shanghai University of Finance and Economics (SHUFE) Shanghai, China, February, 2017. https://ideas.repec.org/p/clg/wpaper/2016-38.html

"Implications for Canada's natural resources in a re-negotiated NAFTA," April 26, 2017 Natural Resources Canada. Ottawa – via video conferencing.

"International Technology Diffusion via Goods Trade: Theory and Evidence from China," University of Calgary Working Paper 2016-38 Eugene Beaulieu and Shan Wan presented at Nankai University Tianjin, China, June, 2016. https://ideas.repec.org/p/clg/wpaper/2016-38.html

"Foreign Direct Investment, Global Value Chains and Taxation," invited presentation to the Global Affiars Canada Symposium on FDI, June 16, 2016. Ottawa.

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," San Diego State University, October 16, 2014

Economics Lecture: "The World Financial Crisis and the Canadian Story," San Diego State University, October 16, 2014.

Chair of Session, Atlantik-Bruecke Conference "Future of Energy", Banff and Fort McMurray, Alberta. September 17-20, 2014.

Roundtable Participant, "James A. Richardson Discovery Roundtable: Building on Strength: The Infrastructure Challenge," Winnipeg Chamber of Commerce Conference Centre. Sept 11, 2014.

Member, "Western Trade and Investment Policy Council," Canada West Fondation, Winnipeg, Manitoba. September 11, 2014.

"Overview of CETA: Implications for Canada," Global Petroleum Show for International Relations, Government of Alberta. June 12, 2014.

"CETA a new generation trade agreement: Lessons from NAFTA," The Comprehensive Economic and Trade Agreement (CETA) Conference at the University of Victoria. May 6, 2014.

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," Unirule, Beijing China. June 25, 2014.

Panellist Plenary Session "New Challenges for Trans-Regionalism in the Asia-Pacific," Korea and the World Economy Conference. Sungkyunkwan University, Seoul South Korea. June 19-22, 2014.

Roundtable, "Adapting Canadian Trade Policies to New Global Realities," Institute for Research on Public Policy. Rideau Club, Ottawa. June 16-17, 2014.

"NAFTA impacts on Canada," presented at "NAFTA at 20: Effects on the North American Market," sponsored by the Federal Reserve Bank of Dallas, U.S International Trade Commission, and Foreign Affairs, Trade and Development Canada. Houston, Texas. June 5-6, 2014.

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," Athabasca Energy, Paper Presentation. May, 2014.

Briefing, Department of Energy, Government of Alberta. Edmonton. May 2, 2014

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," Laricina Energy, Paper Presentation. April, 2014.

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," Rotary Club of Calgary West; The Italian Club, Calgary. March 14, 2014.

Panel Presentation "Foreign Direct Investment from Chinese and Asian Investors: Dancing with the Dragon," For Blakes. Calgary Petroleum Club, January 2014.

Conference Participant "The NAFTA Promise and the North American Reality: How to Narrow the Gap," American University, School of International Service. Washington DC. October 31-Nov 1, 2013.

Chaired and Organized sessions for the International Trade Study Group, CEA June 2013 HEC Montréal.

Testimony on Canada-India Trade Agreement: International Trade Committee on Dec. 11th, 2012: http://openparliament.ca/committees/international-trade/41-1/59/professor-eugene-beaulieu-1/

"Permanent Effects of Transitory Exchange Rate Shocks," With Jen Baggs and Loretta Fung, Eastern Economics Association Conference, NY, 2011 February.

"Trade diversification," CISAN and UNAM, UNAM Mexico, 2011 April.

"The Restrictiveness of Canada's Trade Policy: 1880-1910," With Jevan Cherniwchan, Asia Pacific Economics and Business History, Canberra Australia, 2012 February

"Exchange Rate Movements and Firm Dynamics in Canadian Retail Industries," With Jen Baggs, Loretta Fung and Bev Lapham, Eastern Economics Association Conference, NY, 2013 May

"How Costly Was Canadian Protectionism: 1875-1910?" Globalization and the Making of Canada Conference, June 8, 2010. Adelaide, University of Western Australia.

"Intra-provincial trade," Forum of the Federations: Conference on Internal Trade, February 1, 2010. Toronto, Ontario.

"The Political Economy of Canadian Trade Policy from 1881 to 1925," Globalization and the Making of Canada Conference, January 29-30, 2010. Waterloo, Ontario.

"The Restrictiveness of Canada's Trade Policy: 1880-1910," Globalization and the Making of Canada Conference, January 29-30, 2010. Waterloo, Ontario.

"Are Service Firms Affected by Exchange Rate Movements," Comparative Analysis of Enterprise Data 2009 Conference, October 2-4, 2009. Tokyo, Japan.

"Why are women more protectionist than men?" Empirical Investigations in Trade and Investment, Keio University, Tokyo Japan. March 19-21, 2009.

"Are Service Firms Affected by Exchange Rate Movements," Eastern Economic Association, New York, New York. February 2009.

"Plant Scale and Exchange-Rate-Induced Productivity Growth" Empirical Investigations in Trade and Investment, Keio University, Tokyo Japan. February 7-9, 2008.

"Are Mexican, Canadian, and U.S. Workers Complements or Substitutes?" Empirical Investigations in International Trade Conference, Estes Park, Colorado, October 2008.

"Why are women more protectionist than men?" University of Toronto, September 2008.

"Why are women more protectionist than men?" University of Victoria, October 2008.

"Plant Scale and Exchange-Rate-Induced Productivity Growth," University of Manitoba, February, 2008.

"Exchange rate effects on manufacturing firms in Canada," Wilfrid Laurier University, February 2007.

"Labour market adjustment in the context of globalization," Conference on Labour Markets and Globalization, Human Resources and Skills Development Canada. July 2007

"Firm Survival, Performance, and the Exchange Rate," Bank of Canada Seminar, June 2005.

"The HOV Model and Trade Policy Preferences," University of British Columbia, Sauder School of Business and Department of Economics, Seminar March 2004.

"Intra-industry trade liberalization: why skilled workers in most countries resist protectionism," Carleton University, October 2003.

Panelist: SSHRC and Conference Board of Canada Roundtable, Ottawa, Canada, (March 2003)

"Making Canada the Destination of Choice for Internationally Mobile Resources," Presentation to Industry Canada's Roundtable on IMRs. Ottawa, September 2002.

"Now That Our Fiscal House is in Order Where's the Payoff? Is there a link between the value of the Canadian dollar and our current tax/fiscal policy?" Presentation to the Business Centre for Tax Research, Conference Board of Canada. April, 2002.

"The Political Economy of North American Integration, Labour Market Adjustments and Plant Closures in Canada,"North American Linkages Conference, Montreal, November 2002.

"Trade in Goods and Services: Is the border still relevant?" Presentation to "Borderlines Conference" Calgary, 2002.

"The G8 and the Global Economy," Presentation to Conference on G8 Summit, Calgary 2002.

"Déja vu all over again: The Role of Trade and Labour Mobility for Canada's Economic Performance," Invited comments for the conference *North American Linkages: Opportunities and Challenges for Canada* sponsored by Industry Canada and Centre for the Study of Living Standards, Calgary. June 2001.

"Labor Market Adjustments in Canada, the United States and Mexico to NAFTA," Invited paper presented at *NAFTA - Unresolved Issues: Dispute Resolution, Environment, Labor, and Transportation*, University of Denver College of Law. March 30, 2001

"Increased NAFTA Integration: Consequences For FTAA and Multilateral Processes," Invited paper at the *Institute for Research on Public Policy*. Toronto, June 7-8, 2001

"Campaign Contributions and Trade Policy: New Tests of Stolper-Samuelson," Department visit to University of Alberta. Fall 2001.

"Canada in the World Economy," Lecture presented to visiting students from Chile, Faculty of Management, 1998-2002.

"The Economics of International Trade and the Environment," Lecture prepared for International Trade and The Environment EVDS 683.62. September 2000 and 2001

"The NAFTA Experience," Prepared Lecture, North American Graduate Student Exchange Program, May 1999

CONFERENCE PAPER PRESENTATIONS

"Model Uncertainty in Foreign Direct Investment:Greenfield versus Mergers and Acquisitions." Joint work with Iyanuoluwa Odebunmi. Working Paper. Presented at Nankai University, Tianjin China. June 12, 2017.

"Do Foreign Investment Treaties Affect Greenfield Investment?" Joint with Kelly O'Neill. Canadian Economics Association Conference. Ottawa, June 2016.

"International Technology Diffusion via Goods Trade: Theory and Evidence from China," University of Calgary Working Paper 2016-38 Eugene Beaulieu and Shan Wan. 80th International Atlantic Economic Conference, Boston October, 2015. https://iaes.confex.com/iaes/80am/webprogram/Session4883.html

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," Global Innovation Economic Congress-2014, Dalian China. June 25-30, 2014.

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," Korea and the World Economy Conference. Sungkyunkwan University, Seoul South Korea. June 19-22, 2014.

"The Impact of Foreign Investment Restrictions on the Stock Returns of Oil Sands Companies," Canadian Economics Association. May 29-June 1, 2014. Vancouver.

"The Magnitude and Cost of Canadian Protectionsim: 1870-1910," Canadian Economics Association June, 2011 Ottawa.

"Exchange Rate Movements and Firm Dynamics in Canadian Retail Industries," RMET, May, 2011 Banff.

"Evidential based Canadian international policy strategy," UNAM Mexico April, 2011.

"Exchange Rate Movements and Firm Dynamics in Canadian Retail Industries," Eastern Economic Association, New York, New York. February 2011.

"The Magnitude and Cost of Canadian Protectionsim: 1870-1910," Adelaide

"Exchange Rate Movements and Firm Dynamics in Canadian Retail Industries," The John Deutsch Institute, Queen's University. Kingston, Ontario.

"Why are women more protectionist than men?" Empirical Investigations in Trade and Investment March 19-21, 2009 Keio University, Tokyo Japan.

"Are Service Firms Affected by Exchange Rate Movements?" Eastern Economic Association Meetings. New York City. February, 2009.

"Are Mexican, Canadian, and U.S. Workers Complements or Substitutes?" Empirical Investigations in International Trade, October 10-12, 2008 Estes Park, Colorado.

"Exchange-Rate Movements and Service Sector Firms" Business and Labor Market Analysis Division, Statistics Canada, Ottawa. May 2008.

"Plant Scale and Exchange-Rate-Induced Productivity Growth," Statistics Canada: Annual Socio-economic Conference. Ottawa 2008.

"The Gender Gap in Support for Trade Liberalization," Domestic Preferences and Foreign Economic Policy Conference. Princeton University. April 18-19, 2008.

"Plant Scale and Exchange-Rate-Induced Productivity Growth" Empirical Investigations in Trade and Investment February 7-9, 2008 Keio University, Tokyo Japan.

"Asymmetries in Exchange Rate Effects on Firm Survival in North America," Canadian Economic Association Meeting, June 6-8, 2008. University of British Columbia.

"International Trade: Wages and Employment in the Three NAFTA Countries," PIERAN, El Colegio de México. December 2007.

"Plant Scale and Exchange-Rate-Induced Productivity Growth" Canadian Economic Association Meeting, June 1-3, 2007. Dalhousie University, Halifax.

"The Variety Effects of Trade Liberalization," Waterloo Conference on Empirical Trade, November 2006.

"The Variety Effects of Trade Liberalization," Western Economics Association Meetings, San Diego California. Spring 2006.

"Firm Survival, Performance, and the Exchange Rate," Empirical Investigation in International Trade, Purdue University, Fall 2005. With Jen Baggs and Loretta Fung

"The Variety Effects of Trade Liberalization," Spring 2005 Midwest International Economics and Economic Theory meetings will be held April 22-24, 2005 at Vanderbilt University in Nashville.

"The Variety Effects of Trade Liberalization," Canadian Economics Association, Hamilton, Spring 2005.

"International Trade, Labour Turnover, and The Wage Premium: Testing The Bhagwati-Dehejia Hypothesis For Canada," Fall 2004 Midwest International Economics and Economic Theory Meetings will be held November 5-7, 2004 at Washington University in St. Louis, MO.

"Political Economy of Trade in the Americas," Canadian Economics Association, Toronto, Spring 2003.

"Trade and Wages: A Non-Stolper-Samuelson Explanation, Theory and Evidence," Canadian Economics Association, Ottawa, Spring 2003.

"Trade Policy and Politics in the 1911 and 1988 Canadian General Elections," Canadian Economics Association, Calgary, Spring 2002.

"Effective Tax Rates in Canadian Provinces," Canadian Economics Association Calgary, Spring 2002

"Intra-industry Trade Liberalization: Why Skilled Workers in Most Countries Resist Protectionsim," Canadian Economics Association Calgary, Spring 2002

"Intra-industry Trade Liberalization: Why Skilled Workers in Most Countries Resist Protectionsim," Saskatoon Economics Meetings, Saskatoon, September, 2002.

Beaulieu, Eugene and Magee, Christopher "Campaign Contributions and Trade Policy: New Tests of Stolper-Samuelson," Empirical Investigations in International Trade. Fall, 2001.

Beaulieu, Eugene, Bennaroch, Michael, and Jim Gaisford "Intra-industry Trade Liberalization: Why Skilled Workers in Most Countries Resist Protectionsim," Midwest International Economic Meetings. Fall, 2001.

Beaulieu, Eugene and Magee, Christopher "Campaign Contributions and Trade Policy: New Tests of Stolper-Samuelson," Western Economics Association Meetings. July, 2001.

Beaulieu, Eugene "North American Integration and Plant Closures in Canada," Conference on New Perspectives in Canadian Foreign Policy, Carleton University. Spring 2000.

Beaulieu, Eugene and Hester, Annette. "Regional Trade Agreements, Country Risk and Foreign Direct Investment in Latin America," Midwest International Economic Meetings Fall 1999, and Canadian Economic Association meetings Spring 2000.

Hester, Annette and Beaulieu, Eugene. "Trade Agreements in the Americas: Regionalism Converging to Globalization," Conference on Globalization 2000: Convergence or Divergence? 1999/09/25.

Beaulieu, Eugene and Emery, J. C. Herbert. "The Role of Reciprocity in the 1911 General Election," 1999 Canadian Economic History Meeting, Department of Economics, Guelph.

Beaulieu, Eugene "The Stolper Samuelson Theorem: Evidence from Congressional Voting Patterns on CUSTA, NAFTA and GATT," Canadian Economics Association Meetings, 1998/05/28.

Beaulieu, Eugene "The Economics of Indifference: The Role of Reciprocity in the 1911 General Election and the Implications for Green's Puzzle," presented at the Conference on Regions in Canadian Growth: A Gathering in Honour of Alan Green, Kingston, Ontario. 1998.

Beaulieu, Eugene "The Impact of the Maquiladoras on the Border Region," presented at *Mexico's Maquiladoras: Myths and Realities* conference at the University of Calgary, March 1999.

Beaulieu, Eugene "North American Integration and Plant Closures in Canada: Evidence from Media Accounts 1982-1997" presented at the University of Calgary and the University of Manitoba, October 1998.

Beaulieu, Eugene "CUSTA and NAFTA: On the Road to Free Trade of the Americas?" presented at North American Summer School for Advanced Management. University of Calgary, May, 1998.

Beaulieu, Eugene "Job Displacement, Human Capital and the Wage Distribution," presented at the Canadian Economics Association Meetings, May 1995. With Michael Cragg.

Beaulieu, Eugene "The Effects of Exchange Rate Movements on Investment in Canadian Manufacturing," presented at the Canadian Economics Association Meetings, May 1992.

Beaulieu, Eugene and Dan Johnson "The Price Elasticity of Foreign Demand for Kenya's Export," Long Range Planning Department, Technical Paper 90-11. 1990.

Beaulieu, Eugene and Dan Johnson "Kenya's Export Performance, 1971-1986: A Constant Market Share Analysis," Long Range Planning Department, Technical Paper 90-10. 1990. With Dan Johnson.

Beaulieu, Eugene "Structural Change in Kenya, 1971-86," Kenya Long Range Planning Department, Technical Paper 90-09. 1990.

Beaulieu, Eugene and Sylvester Damus "Effective Protection in Kenya, 1967-1986," Kenya Long Range Planning Department, Technical Paper 89-13. 1989.

Schembri, Lawrence and Eugene Beaulieu "The Canada-U.S. Free Trade Agreement and the Bilateral Exchange Rate," Conference on Global Disequilibrium, McGill University, May 17-19. 1989.

Teaching Highlights

UNIVERSITY OF CALGARY

International Trade: undergraduate and graduate
Open Economy Macroeconomics: undergraduate
Managerial Economics, Executive MBA
Energy Economics, Global Energy Executive MBA
Macroeconomics: undergraduate
Econometrics: undergraduate
Statistics for Economists: undergraduate
International Relations Seminar on Trade Policy: undergraduate and graduate

KAZAKHSTAN MINERAL TAXATION ACADEMY (JUNE 2000)

Intensive course on microeconomics and taxation

COLUMBIA UNIVERSITY: WORLD BANK PROGRAM IN ECONOMIC POLICY MANAGEMENT (1994 –97)

Statistics for Economists, Graduate; Math for Economists, Graduate (School of International Affairs); Introduction Econometrics; Data Analysis and Computer Applications for Economists

GOVERNMENT OF KENYA: LONG RANGE PLANNING PROJECT (1989-1990)

Seminars on: data management; the construction and use of input-output tables; and policy analysis

GRADUATE SUPERVISION

Iyanu Odebunmi, MA Thesis, "Determinants of GFI and M&A: BMA approach to Model Uncertainty," Completed April 2017.

Jahangir Alam, PhD Committee, Completed Oct 2017, "Three papers on trade and economic growth."

Oliver Ho, MBA Thesis Supervisor, "Law Firm Mergers Among Canadian Law Firms: The Effect on Lawyer Retention," September 2016.

Naima Farah, PhD Committee, University of Calgary (Graduated 2017) *Trade and the environment.*

Shan Wan, PhD Supervisor, University of Calgary (Completed 2016) *Entrepreneurship and trade.*

Mustafa Zaman, PhD Supervisor, (2014 ongoing) *Internal trade and price differences.*

Yuan Wen, PhD Committee, University of Calgary (Completed 2015) *Trade and the environment.*

Jesse Tweedle, PhD Committee. Ongoing.

Dylan Klemen "Canadian Anti-Trade Sentiment and Free Trade Agreements," School of Public Policy MA, Supervisor. Completion date expected Sept 2017.

Brittney Whittaker "The digital economy," School of Public Policy MA, Supervisor. Completion date expected Sept 2017.

Karen Bibiana Guzmán Vanegas "Joining the labour force: Colombia's challenges reintegrating the ex-combatants of the Revolutionary Armed Forces of Colombia (FARC-EP)" School of Public Policy MA, Supervisor. Completion date expected Sept 2017.

Yang Yang, "An Essay on Bilateral Relations and Trade Between Canada and China" School of Public Policy MA, Supervisor. Completed 2016.

Sian Jones "Express Entry as a hybrid model of economic immigration policy: Lessons from Australia's Skill Select," School of Public Policy MA, Supervisor. Completed 2016.

Gianfranco Terrazzano "Incentives, Opportunities, and Unintended Consequences: An Economic Perspective on the African Charter and Canada's Foreign Policy Objectives," School of Public Policy MA, Supervisor. Completed 2016.

Philip Rasmussen, MA Supervisor. "Canadian Supply Management: Dairy and the Trans-Pacific Partnership," Completed 2015.

Lindsey Garner-Knapp, "Impact of Subnational trade offices on trade and investment," School of Public Policy MA, Supervisor. Completed 2015.

Kelly O'Neill "Institutions and International Investment," School of Public Policy MA, Supervisor. Completed 2015.

Brian McCann "The International Economics of Corruption: Using International Trade as a Policy Instrument to Reduce Corruption in Developing Nations," School of Public Policy MA, Supervisor. Completed 2015.

Fatih Yilmaz, PhD Committee, Completed 2014. *Papers in finance, taxation and international trade.*

Jevan Cherniwchan, PhD Committee, Completed 2013. *Essays in trade and the environment.*

Chendong Li, MA Completed, (September 2013) *International borders and price differences.*

Yvonne Smith, MA 2010, *A melting iceberg: the impact of distance on international trade and the effect of a new Arctic trade route on trade patterns.*

Shan (Victor) Jiang, PhD 2010, *Hetergeneous Firms and Exporter Performance.*

Olena Ivus PhD Committee, Completed 2009, *International Trade and Industrial Organization.*

Ryan Scholefield, MA 2009, *Evaluating the Softwood Lumber Agreement.*

Debayan Pakrashi, MA 2009, *Does Membership in International Organizations Affect Incidence Of Child Labour?*

Lora Popa, MEc, 2005 *International integration and social values.*

Carol Lau, PhD 2005, *Essays in International Trade*, Supervisory Committee.

Nikoo Sarvghad-Moghaddam, MEc, 2003 *International trade gravity models.*

Eddie Ng, MA 2003, *Political economy of trade policy in Canada.*

Daryck Riddel, MA, 2003 *Political economy of trade policy in Canada.*

Dora Irsa, MA 2002 *Political economy of trade policy in the former Soviet Union.*

Pawel Swisterski, MA 2002 *A Constant Market Share Analysis of OECD Export Performance.*

Aditya Wali, MEc 2001, *International trade and foreign investment in India.*

Palo Kralovic, MEc 2001, *Trade, Geography and the Border Region of United States and Mexico.*
Chris Joy, MA 2001, *Trade and labour markets in Canada, The United States and Mexico.*
Paul Hartzheim, MA 1999, *Causes of the Rapid Growth in Canadian Junk Bonds.*
Annette Hester, MA 1999, *Trade Policy and Energy Development in Latin America.*

GRADUATE EXAMINATION COMMITTEE

Hankook Kim PhD External Examiner, University of Toronto. September 2008.
Bo Chen PhD External Examiner, Simon Fraser University. October 2008.
Lucia Vojtassak PhD 2006, *Natural Resource Economics and Industrial Organization.*
Teeluck Lutchmeesingh MEc, 2006, *FDI in Trinidad.*
Robert Chiew MA, 2004.
Timothy Hugh Cowan MA, 2004.
Andrea Natasha Laroiya MEc, 2004,
Kate Winterbourne, Master of Laws 2002 *Constitutional and International Trade Law Challenges to Provincial Regulation of Water Exports*, Examination Committee.
Jagat Virk, MA, 2002, *Inflation, Welfare and Monetary Aggregation Issues,* Examination Committee.
Jimmy Vu, MA, 2002, *Effective Tax Rates on Marginal Costs: Trends and Impact on Firm Location in Canada*, Examination Committee.
Omar Zhakiwal, PhD *Trade and Wages*, Thesis Committee Carleton University, 2001.
Christina Carnovale, MA 2001, *Purchasing power parity and frequency domain filtering.*
Shawn Lawson, MA 1998 *Essay on Trade Theory.*
Rob Dulik, MEc 1998.
Alan Laws, MEc 1998.
Elizabeth Wallace, MEc 1998.

PROFESSIONAL ACTIVITIES

Founder, Principal Organizer: Rocky Mountain Empirical Trade Conference Annual Academic Conference, Banff. Held annually in May, 2008-present.

Founder, Chair: Canadian Trade Study Group 2011-present.

Founder, Principal Organizer: Trade Experts Roundtable Ottawa, Annual Meeting, 2012-present.

Chair/Co-Organizer: Alberta – U.S. Trade Summit May 02, 2017

Co-Organizer: Trade Experts Roundtable: The New Security Dimension of Global Commerce, Thursday, March 23, 2017

Principle Organizer/Chair: Labour Market Policy for a Vibrant Canadian Future. February 25, 2016

Co-organizer: Inter-American Relations in the Age of Trump, Joint with SPP, Latin American Studies Group, and CCA Friday, March 03, 2017

Co-organizer: June 18, 2015 Ottawa The Trans-Pacific Partnership and Beyond: Advancing Canadian Trade and Investment in Asia

Organizer: FDI Canada Forum 2015 Saskatoon, Joint with Rainmaker. Tuesday, September 22, 2015

Advisory Committee: "CKFTA Seminar Steering Committee," Government of Alberta, September 2014-present.

Principal Organizer: "The Asian Ship Is Sailing: What Canada Needs to Do to Get On Board," Vancouver, November 26, 2013.

Principal Organizer: "Proceed With Caution? State-Owned Enterprises and the Need for a New Approach to Investment Policy" Conference, Calgary, December 10-11, 2013.

Organizer, "Globalization and the Making of Canada" Conference, Guelph Ontario, 2010

Organizer, "How Access to Firm-Level Data Informs Public Policy," John Deutsch Instititute. 2010.

Organizing Committee: "Trilateral Borders Conference 2014" Phoenix Arizona, Annual Conference, March 17-18, 2014.

Organizing Committee: "Emerging Markets & Mounting Tension: Doing Business in the Face of Potential Conflict in the Indo-Pacific," March 11-12, 2014.

Organizing Committee: "The Revenge of Geography: The Coming Global Crisis," March 12, 2014. Calgary, Alberta.

Local organizer: Canadian Economics Association meetings, Calgary Spring 2012

REFEREE

Journals: American Economic Review; Journal of International Economics; Economics and Politics, Canadian Journal of Political Science; Review of Economics and Statistics; Journal of International Economics; Canadian Journal of Economics; Journal of International Development and Trade; Canadian Public Policy
Other:
SSHRC Grant Application
Reviewed James Gerber, International Economics Addison-Wesley Educational Publishers Inc.

OTHER ACTIVITIES

Calgary Youth Singers: Non-profit organization with an annual budget of approximately $1 million. A music and performance education program for singers aged 3 1/2 years to adult, incorporating choreography, costuming and musical theatre.

Board of Directors:	Fall 2003-present
Past-Chair of the Board:	July 2014-present
Co-Chair of the Hearts Out Gala:	July 2014-present
Chairman of the Board:	January 2008-June 2014
Chair – Capital Campaign	June 2008-July 2013
Treasurer:	July 2005 – 2008

Calgary Girls Hockey: Assistant Coach (2007/08) - 2012
Calgary Folk Music Festival: Volunteer, Production Security 1999-2011
Calgary Economics Association: Executive Council. 2013-2016.

Schedule B: References

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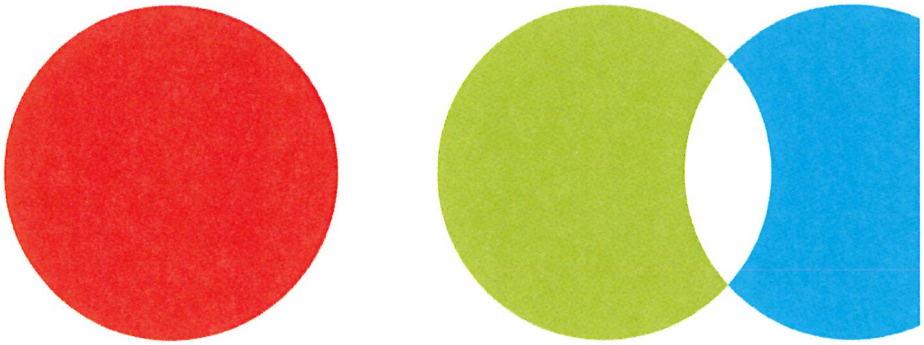
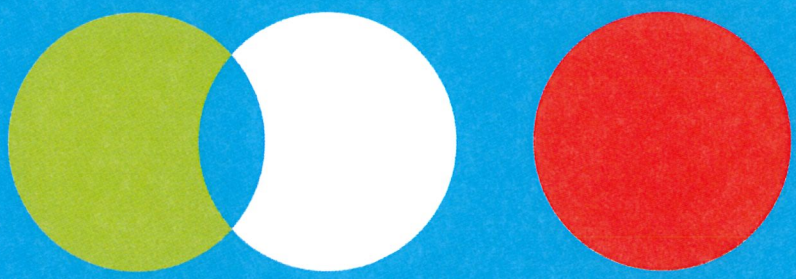
The Conference Board of Canada



The Economic Footprint of Angling, Hunting, Trapping and Sport Shooting in Canada

Presented to:
Ontario Federation of Anglers and Hunters and the Canadian Sporting Arms and Ammunition Association

Prepared by:
The Conference Board of Canada



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Ducks Unlimited Canada
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Freedom Ventures
Fur Institute of Canada
Korth Group
Manitoba Wildlife Federation
New Brunswick Wildlife Federation
Newfoundland and Labrador Wildlife Federation
North American Hunting Supplies
North Sylva Co.
Northwest Territories Wildlife Federation
Nova Scotia Federation of Anglers and Hunters
O'Dell Engineering
Ontario Federation of Anglers and Hunters
Ontario Fur Managers Federation
PEI Wildlife Federation
Saskatchewan Wildlife Federation
Shimano
Stoeger Canada
Trigger Wholesale Inc.
Wolverine Supplies
Yukon Fish and Game Association

Table of Contents

Executive summary

Canada offers a wide variety of opportunities for outdoor enthusiasts with its vast wilderness and abundance of rivers and lakes. Angling (fishing), hunting, and trapping are popular recreational activities across the nation, and, for many, they are also an important part of culture, tradition, and personal identity, as well as a source of sustenance. Sport shooting, or target shooting, which is also primarily a recreational activity, has been gaining popularity in recent years. All four activities—fishing, hunting, trapping, and sport shooting—play a significant role in Canada's economy across a broad range of industries.

Not only do these activities affect retailers who directly serve those who participate in them—such as specialty stores and tourism-related service providers—they also have an impact on a broad range of industries through the supply chain when these directly affected firms purchase goods and services from their suppliers, who, in turn, purchase goods and services to meet their needs, and so forth. Finally, all the employees of these firms and businesses that are directly affected and affected through the supply chain spend their earnings and profits, and this spending affects the wider economy. These are the induced impacts. The direct, supply-chain, and induced impacts together are the overall contribution to national economic activity—that is, the total economic footprint.

This study quantifies the total economic footprint of fishing, hunting, trapping, and sport-shooting activities in Canada. The Conference Board of Canada administered a survey to gauge spending on each of the four activities in 2018. In total, there were 25,571 survey respondents. Data on their reported spending habits and data on the total number of anglers, hunters, trappers, and sport shooters in each of the provinces and territories were used to compute the spending on the four activities. In total, an estimated $18.9 billion was spent in 2018 on fishing, hunting, trapping, and sport-shooting activities. More than half of this total spending was on fishing-related activities. Not surprisingly, most of the spending was in the two largest provinces, Ontario and Quebec.

The direct impact of spending associated with the four activities as well as how that direct economic impact ripples through to suppliers and the wider economy was estimated to arrive at the total impact. The total economic footprint of fishing, hunting, trapping, and sport shooting was $13.2 billion in 2018. This represents a substantial 0.6 per cent of national gross domestic product (GDP). The economic activity generated by these activities supported just under 107,000 jobs and generated $6.4 billion in labour income. There were also notable fiscal benefits—in 2018, the four activities together generated $6.1 billion in federal and provincial government revenues.

Among the four activities, fishing leaves the biggest footprint. Three million people across the country fish, and in 2018, $10 billion was spent on fishing alone. This spending contributed $7 billion to total GDP, supported an estimated 58,000 jobs across the country, and generated $3.5 billion in labour income.

While recreation is the primary motivation for participating in all four activities according to the survey respondents, one-quarter of those who hunt also do so for food or sustenance. There are 1.3 million hunters in Canada. Hunting spending totalled $5.9 billion in 2018. The resulting contribution to GDP was $4.1 billion. Hunting supported 33,000 jobs and generated just under $2 billion in labour income.

There are just under 45,000 trappers in Canada. Ontario and Alberta accounted for 43 per cent of total national expenses related to trapping in 2018. In total, $131 million was spent on trapping in Canada last year. The impact of trapping on GDP was $91 million, supporting 738 jobs and generating $44 million in labour income.

Shooting sports have become increasingly popular over the years, as evidenced by increased firearms licence and ammunition sales. An estimated 1.4 million people in Canada partake in sport shooting, and a total of $2.6 billion was spent on this activity in 2018. This spending boosted GDP by $1.8 billion, supported 14,000 jobs, and generated $868 million in labour income.

Introduction

With over two million lakes and rivers,[1] 30 per cent of the world's forest,[2] and a vast terrain, Canada is home to a variety of opportunities for outdoor enthusiasts. Angling (or fishing), hunting, and trapping are an important part of Canadian heritage and continue to be popular activities across the nation. These activities are often recreational; however, for many, they are also part of family tradition, as well as a source of income and sustenance. Canada is also considered among one of the top fishing and hunting destinations in the world. Sport shooting, also generally a recreational activity and part of tradition for many, has seen its popularity grow in the past several years.[3] All four activities—fishing, hunting, trapping, and sport shooting—contribute to the Canadian economy across a broad range of industries.

This report describes the economic footprint of these activities in Canada. The impact is quantified on a wide range of economic indicators including spending, gross domestic product (GDP), employment, labour income, and federal and provincial government revenues. The analysis focuses on the ripple effects that spending associated with these activities has on the Canadian economy.

In this study, we determine the economic activity directly attributed to the fishing, hunting, trapping, and sport shooting, or the direct impact, as well as the indirect or supply-chain impact, which reflects the economic impact of these activities' demand for inputs from other industries. We also assess the induced impacts of these activities, which reflect how earnings and profits affect the spending of employees and businesses in the wider economy.

The report is organized as follows:

- The **Methodology** section describes how the results were computed.
- The **Survey results** section presents the results of the custom survey the Conference Board created to gauge spending by activity for each province.
- The **Economic footprint results** section quantifies the direct impact of the fishing, hunting, trapping, and sport shooting economy as well as the aggregate economic footprint. This section also describes the economic footprint by activity.
- The **Provincial and territorial snapshots** section presents the overall economic impact of the four activities for each of the provinces and territories as well as the impacts by activity.
- The **Summary** section presents final insights on how fishing, hunting, trapping, and sport shooting affect the Canadian economy, focusing largely on the number of jobs created and the aggregate effect on Canadian GDP.

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[1] Canadian Wildlife Federation, *Lakes & Rivers*.
[2] Sustainable Forest Management in Canada, *Overview—Canada's Forests*.
[3] Environment and Climate Change Canada, *Study to Gather Information on Uses of Lead Ammunition and Their Non-Lead Alternatives in Non-Military Activities in Canada*.

Definitions

Gross domestic product (GDP) is used to measure production in a region during a specific period. There are various ways to calculate GDP, though the concept of value added is arguably the most intuitive.

Value added (or net output) is established for each industry by calculating the difference between total revenue and the sum of expenses for intermediate parts, materials, and services used in the production process. Calculating the value added for all industries in a region will yield the GDP for that region.

GDP at market prices represents the value of GDP as paid by final consumers. It includes taxes but excludes subsidies on imports. GDP at market prices is our preferred measure of GDP. GDP at market prices measures spending and income in an economy and is more easily understood than GDP at basic prices which measures the value created at each stage of production. Where possible this report refers to GDP at market prices. GDP at basic prices is used to describe the direct impact and impacts by industry as these values are not available at market prices.

GDP at basic prices is equivalent to GDP at market prices minus taxes and subsidies on products. Industry level detail is only available at basic prices. Direct economic impacts are measured using GDP at basic prices.

Direct impact measures the value added to the economy that is directly attributable to spending on fishing, hunting, trapping, and sport-shooting activities.

Indirect impact (or supply-chain impact) measures the economic effects that the direct-impact firms generate within the economy through their demand for intermediate inputs and support services. These purchases of goods and services from suppliers make up the supply chain.

Induced impact results when employees and business owners of the direct and indirect impact firms spend their earnings and profits. These purchases lead to more employment, wages, income, and tax revenues, and their impact can be felt across the region.

Economic footprint (or economic impact) is defined as the fishing, hunting, trapping, and sport-shooting economy's overall contribution to national economic activity. It includes the direct, indirect, and induced impacts.

Methodology

Calculating an economic footprint involves estimating the full impact an industry has on the economy by using economic models to help us understand how changes in the activity of one industry can have wider repercussions.

The largest impact is the economic activity directly attributed to an industry (direct impact), which comes largely in the form of wages paid to those directly employed in the sector and the profits generated. In addition, a sector's normal operations will generate demand for inputs from other industries (indirect or supply-chain impact), while some of the income and profits generated by all these activities will be spent again elsewhere in the economy (induced impacts).

To calculate these impacts, we needed first to determine how much is spent on these activities in Canada. Given that this information is not collected by standard surveys administered by Statistics Canada, we created and distributed our own survey to assess this spending. (See Appendix A for the questions asked in the survey.) A total of 25,571 respondents completed the survey. Representation was strong across all activities and in each province and territory.

Respondents by activity

Note: Numbers do not add to total completed surveys because respondents had the option of selecting participation in more than one activity.

The survey responses were cleaned to remove significant outliers, and the results were aggregated into average spending in the following categories: fuels, travel, major purchases, firearms and ammunition, and other spending.

With average spending on the four activities determined, the next step of this analysis was to determine how many people participate in these activities each year. For anglers, we have data on the number of fishing licences, and that provided a base for the number of people who fish in each province. However, some provinces do not require licences for youth or people aged 65 or older, and so using just the licence data would underestimate the number of anglers. It was assumed that spending for youth to fish would be reflected in the spending answers of adults, and therefore, youth were not added to our total number of anglers. For seniors, we used our survey data to calculate provincial shares of those 65 and over who fished compared with those

under 65 and scaled up the licence data by that ratio to derive an estimate of the total number of anglers in each province.

For hunters, many regions issue a single card or licence that is required by all hunters, whether they hunt for one or many species. Where this information is available, we used that as an estimate of the number of people who hunt in each province. In Manitoba, the total number of hunting licences sold was used to estimate the number of hunters, which could be an overestimate, because a single individual might buy separate licences for white-tailed deer and wild turkeys, for example. In Nova Scotia, our estimate of hunters is based on the number of deer licences sold. In Newfoundland and Labrador, hunters are estimated using the number of small game licences sold. The number of hunters in New Brunswick was estimated by adding deer and small game licences to moose hunting licences. The number of trappers in each province was assumed to be equal to the number of trapping licences. No information was available for hunters and trappers in Nunavut. To estimate this data, we assumed that the proportion of people who hunt and trap in Nunavut is that same as in the Northwest Territories. We then calculated the share of people who hunted and who trapped in the Northwest Territories and applied that to the population of Nunavut to derive our estimates.

One drawback of relying on licence data to estimate the number of participants in fishing, hunting, and trapping is that it does not include Indigenous peoples who do not require a licence to participate in those activities.

There is no official registry containing estimates of the number of people who sport shoot. Therefore, we had to estimate the number of people sport shooting in each province. We started with the number of firearms licences in each province and worked under the assumption that people obtained a firearms licence either to hunt or participate in sport shooting. We then turned to our survey data to obtain information on the share of respondents who hunted and did sport shooting, those who participated in sport shooting but not hunting, and those who hunted but did not sport shoot. We then took the sum of those who partook only in sport shooting plus those who did both over the sum of those who hunted, did sport shooting, or did both to calculate the share of our sample who were likely to have a firearms licence for sport-shooting purposes. We then applied that share to the total number of firearms licences to derive an estimate of the number of sport shooters.

Based on our analysis, we estimate that a total of 2.97 million Canadians fished, 1.27 million hunted, 45,000 trapped and 1.4 million participated in sport shooting. (See Table 1.)

Table 1
Estimated number of participants in each activity

Province/territory	Anglers	Hunters	Trappers	Sport shooters
Newfoundland and Labrador	111,003	41,464	2,189	51,575
P.E.I.	6,344	1,739	116	5,418
New Brunswick	54,391	62,717	1,983	44,656
Nova Scotia	55,696	46,551	1,500	57,605
Quebec	667,252	300,000	7,319	320,699
Ontario	1,101,957	426,000	9,232	369,430
Manitoba	156,575	49,339	7,457	61,111
Saskatchewan	167,672	77,348	4,761	48,487
Alberta	359,420	124,650	4,775	213,936
B.C.	273,094	106,114	3,500	221,052
Yukon	9,440	4,436	551	3,877
N.W.T.	6,359	18,022	752	3,783
Nunavut	790	15,536	648	2,249
TOTAL	**2,969,993**	**1,273,916**	**44,783**	**1,403,877**

Sources: The Conference Board of Canada; Commissioner of Firearms 2017 Report; 2015 Recreational Fishing Survey; various provincial/territorial licensing agencies and/or affiliates.

With information on how many people participate in an activity and what their average spending is, we were able to calculate total spending in each activity in each province and territory. We then contracted Statistics Canada to perform a simulation of its interprovincial input-output model. This simulation estimated the direct economic impact of spending associated with these four activities as well as how that direct economic impact ripples through suppliers, employees, and the wider economy.

While the input-output simulation provides a detailed account of the flow of spending through the sectors of the economy, we used The Conference Board of Canada's macroeconomic model of the Canadian economy to generate additional impact estimates, particularly for detailed government revenues not available through Statistics Canada's input-output model.

Survey results

The Conference Board of Canada administered a survey to collect information on spending habits related to fishing, hunting, trapping, and sport shooting in each of the provinces and territories. The survey, administered in the spring of 2019, asked respondents about their spending habits over the past year. As noted earlier, there were a total of 25,571 respondents. The distribution of respondents across each of the provinces and territories is shown in Table 2.

Table 2
Number of survey respondents by province and territory

Province/territory	**Respondents**
Newfoundland and Labrador	79
P.E.I.	35
New Brunswick	270
Nova Scotia	247
Quebec	1,408
Ontario	7,442
Manitoba	997
Saskatchewan	9,998
Alberta	3,246
B.C.	1,674
Yukon	121
N.W.T.	34
Nunavut	20
TOTAL	**25,571**

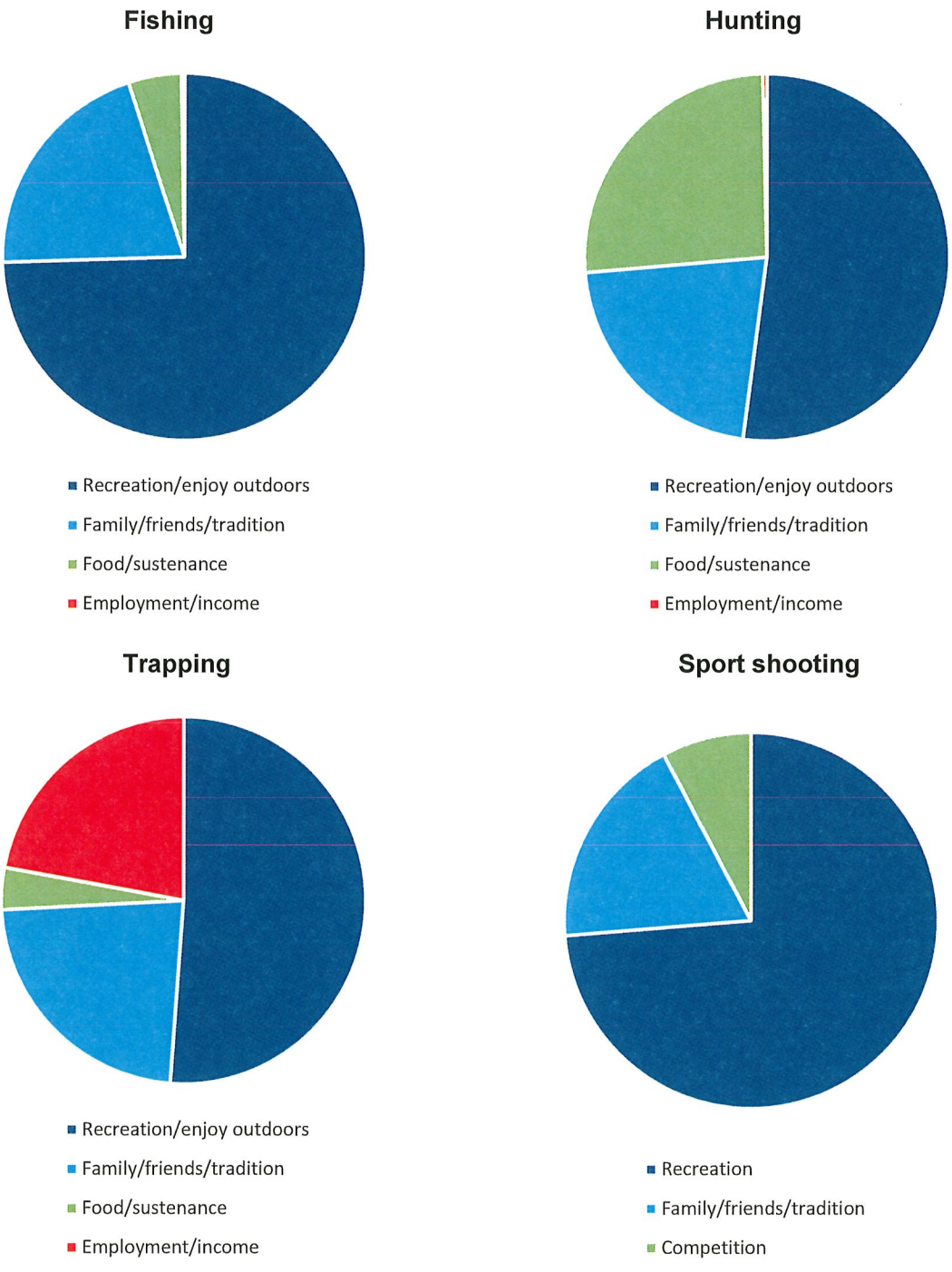
Source: The Conference Board of Canada.

The purpose of the survey was to gauge spending habits of anglers, hunters, trappers, and sport shooters in order to figure out how much they spend, on average, pursuing these activities. Based on the structure of the survey, the impacts discussed in this report are specific to those associated with this spending and the supply-chain and induced impacts that result from this spending. As a result, some impacts are not captured in these results. For example, we focused on the recreational industry. Therefore, we did not include spending figures for those who fish or hunt for their jobs.

For the trapping industry, we included spending for those who undertake the activity for employment purposes, since it is such a large part of the industry. Our analysis of the trapping industry includes just the spending and resulting economic impacts of that spending. It does not include any impacts related to the value of the furs that result from trapping.

For most of the respondents, the primary motivation for participating in the activities is for recreation or enjoying the outdoors. (See Chart 1.) Just under three-quarters of respondents who fish and participate in sport shooting do so for recreation. "Family/friends/tradition" is the second most popular reason for fishing, trapping, and sport shooting; food or sustenance is the second most popular motivation for hunting. Over 20 per cent of respondents who trap do so for employment or income.

Chart 1
Motivation for participating in activities (share of respondents)



Source: The Conference Board of Canada.

Table 3 shows the spending by activity in each of the provinces and territories based on our survey results as well as the total spending across the country. In total, $18.9 billion was spent in 2018 on fishing, hunting, trapping, and sport-shooting activities. More than half of the total spending was on fishing-related activities. Not surprisingly, the greatest share of spending was in the two largest provinces, Ontario and Quebec.

Table 3
Total spending on fishing, hunting, trapping, and sport shooting, 2018 ($ millions)

Province/territory	Fishing	Hunting	Trapping	Sport shooting	TOTAL
Newfoundland and Labrador	264	191	4	93	553
P.E.I.	17	5	0.3	9	31
New Brunswick	113	253	4	92	462
Nova Scotia	162	222	6	124	515
Quebec	2,215	1,368	13	497	4,092
Ontario	3,835	1,961	39	705	6,539
Manitoba	523	238	12	91	865
Saskatchewan	618	262	12	60	952
Alberta	1,313	593	17	429	2,352
B.C.	1,159	593	15	455	2,222
Yukon	45	28	3	4	79
N.W.T.	37	113	3	10	163
Nunavut	3	62	2	3	70
TOTAL	**10,304**	**5,889**	**131**	**2,573**	**18,896**

Source: The Conference Board of Canada.

The survey included questions about the amount of spending on gas and other fuels, travel and travel services, and other expenditures related to each of the four activities in order to arrive at a breakdown of spending on different items. This breakdown for each province and territory is shown in Table 4. Fuel expenses include any spending on fuel used while doing the activity or to travel to a destination for the activity. Travel expenses include vehicle rentals, accommodation, food, and airfare. Major purchases include any significant asset that it is not purchased every year or on a regular basis, such as boats or trailers. Firearm and ammunition expenses are specific to hunting and sport-shooting activities. "Other" includes any additional spending on goods or services directly related to the activity. Numerous expense items fall under this category, including licences, leases, gear, memberships, and training courses.

Table 4

Spending on fishing, hunting, trapping, and sport shooting, by expense item, 2018 ($ millions)

Province/territory	Fuel	Travel	Major purchases	Firearms and ammunition	Other	TOTAL
Newfoundland and Labrador	66	77	248	81	82	553
P.E.I.	3	5	12	7	5	31
New Brunswick	49	66	182	91	73	462
Nova Scotia	48	63	207	111	87	515
Quebec	468	789	1,719	487	629	4,092
Ontario	755	1,084	3,079	666	956	6,539
Manitoba	129	150	372	87	127	865
Saskatchewan	138	164	466	65	119	952
Alberta	329	280	1,037	314	391	2,352
B.C.	279	352	883	342	365	2,222
Yukon	13	10	41	5	10	79
N.W.T.	20	27	71	21	24	163
Nunavut	15	8	20	14	13	70
TOTAL	2,313	3,075	8,337	2,290	2,881	18,896

Source: The Conference Board of Canada.

Economic footprint results

Direct impact

Fishing, hunting, trapping, and sport-shooting activities directly contributed $5 billion in economic activity to the Canadian economy in 2018. (See Table 5.) This direct contribution measures the wages and salaries and profits of firms providing goods and services in fishing, hunting, trapping, and sport-shooting activities.

These firms had employment of over 66,000 full-time equivalent jobs nationwide. This employment figure includes everyone who works in retail services related to the four activities. It also includes those who work in the hospitality industry (which includes lodging and food services) that supports tourist-related spending associated with the activities. The fishing, hunting, trapping, and sport-shooting economy directly generates about $3.5 billion in labour income among Canadians.

Table 5
Direct economic impact of Canada's angling, hunting, trapping, and sport-shooting economy, 2018

Key economic indicators	
GDP at basic prices ($ billions)	5
Labour income ($ billions)	3.5
Employment, full-time equivalent	66,271

Sources: The Conference Board of Canada; Statistics Canada.

Supply-chain impact

While the direct impact captures the economic benefits directly attributed to the fishing, hunting, trapping, and sport-shooting economy, this represents a fraction of the full economic impact of these activities. The supply-chain, or indirect, impacts measure the benefits associated with intermediate inputs from other industries. Mining, oil and gas extraction, and metal manufacturing are just some of the industries that feed into the fishing, hunting, trapping, and sport-shooting economy. Adding the supply-chain impacts to the direct impacts shows that the industry contributed $10.6 billion to Canadian GDP in 2018 (measured at market prices, which measures all the spending in an economy) and supported close to 90,000 jobs. (See Table 6.)

Table 6

Direct and indirect economic impacts of Canada's fishing, hunting, trapping, and sport-shooting economy, 2018

Key economic indicators	
GDP at market prices ($ billions)	10.6
Labour income ($ billions)	5.3
Employment, full-time equivalent	89,821

Sources: The Conference Board of Canada; Statistics Canada.

Total economic impact

In addition to the direct and supply-chain impacts, there are induced impacts that reflect the spillover effects when employees serving the fishing, hunting, trapping, and sport-shooting economy, as well as those working in supply chain-related industries, spend their earnings. For example, angler expenditures include fishing equipment, transportation, fuel, food, and lodging. The companies that serve these needs stock up on inventory, pay bills, and pay wages, and all of these activities, in turn, pay employees who then spend their paychecks on a wide range of goods and services. The industry's total economic footprint, or total impact, is the sum of the direct, indirect, and induced effects.

The total contribution of the fishing, hunting, trapping, and sport-shooting economy to Canada's GDP was $13.2 billion in 2018 or 0.6 per cent of total GDP (measured at market prices). Spending on these activities supports jobs throughout the country. The increase in economic activity resulting from this economy supported just under 107,000 jobs and generated $6.4 billion in labour income. (See Table 7.)

Table 7

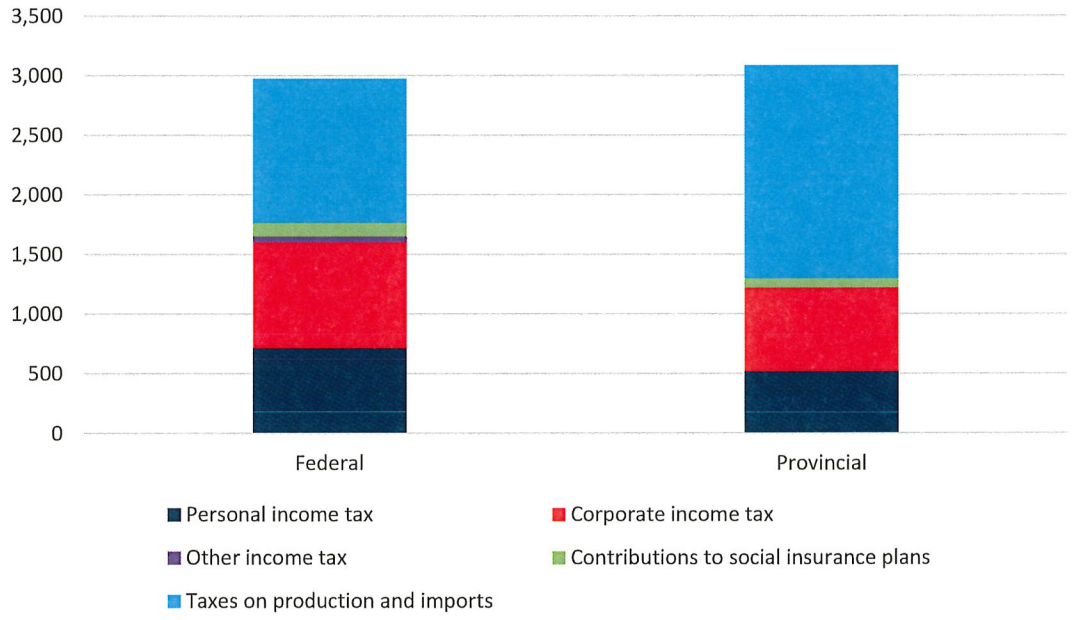
Direct, indirect, and induced economic impacts of Canada's fishing, hunting, trapping, and sport-shooting economy, 2018

Key economic indicators	
GDP at market prices ($ billions)	13.2
Labour income ($ billions)	6.4
Employment, full-time equivalent	106,895
Government revenues ($ billions)	6.1
Federal government revenues	3.0
Provincial government revenues	3.1

Sources: The Conference Board of Canada; Statistics Canada.

The direct, supply chain, and induced effects associated with these activities also have significant fiscal impacts. Fishing, hunting, trapping, and sport-shooting activities generated a total of $6.1 billion in additional revenues for the federal and provincial governments in 2018. Chart 2 shows the federal and provincial tax revenue breakdown. The largest share of tax revenues come from taxes on production and imports.

Chart 2
Federal and provincial tax revenues from fishing, hunting, trapping, and sport-shooting activities, 2018
($ millions)



Source: The Conference Board of Canada.

Fishing, hunting, trapping, and sport-shooting activities boost GDP in a number of industries through their direct, supply chain, and induced impacts. Table 8 shows the total economic footprint of these activities on the broad range of industries affected by them. Retail trade accounts for almost one-quarter of the GDP contribution. However, a variety of other industries also see notable boosts because of the economic footprint of these activities. Manufacturing accounts for $1.6 billion of the total GDP impact, with most of that in transportation equipment manufacturing, hand tools and other metal product manufacturing, and petroleum and coal product manufacturing. Accommodation and food services accounts for $1 billion, while finance, insurance, and other services accounts for $1.1 billion.

Table 8

Fishing, hunting, trapping, and sport-shooting economic footprint by industry (total direct, indirect, and induced impacts in 2018, $ millions)

Sector	GDP at basic prices
Total GDP (basic prices)	**10,434**
Total goods sector	**2,269**
Agriculture and forestry	114
Fishing, hunting, and trapping	5
Mining	250
Utilities	180
Construction	138
Manufacturing	1,582
Petroleum and coal product	233
Cutlery, hand tools, and other fabricated metal product	267
Transportation equipment	495
Food	136
Other manufacturing	451
Business services	**7,909**
Wholesale and retail trade	3,425
Wholesale trade	924
Retail trade	2,501
Transportation and warehousing	441
Information and cultural	254
Finance, insurance, and real estate	1,126
Owner occupied dwellings	492
Professional, scientific, and technical services	459
Accommodation and food	1,021
Other services	691
Public Sector	**256**

Sources: The Conference Board of Canada; Statistics Canada.

Total impact by activity

Table 9 breaks down the total economic footprint by each of the four activities. Not surprisingly, fishing and hunting have the biggest economic footprint given that Canadians spent the most participating in these activities. In 2018, spending on fishing activities and supplies alone contributed $7 billion to total GDP, supported an estimated 58,000 jobs across the country, and

generated $3.5 billion in labour income. Hunting had a total impact on GDP of $4.1 billion and supported 33,000 jobs. The impact of trapping on GDP was $91 million, supporting 738 jobs. Sport-shooting expenditures contributed $1.8 billion to GDP and supported 14,000 jobs.

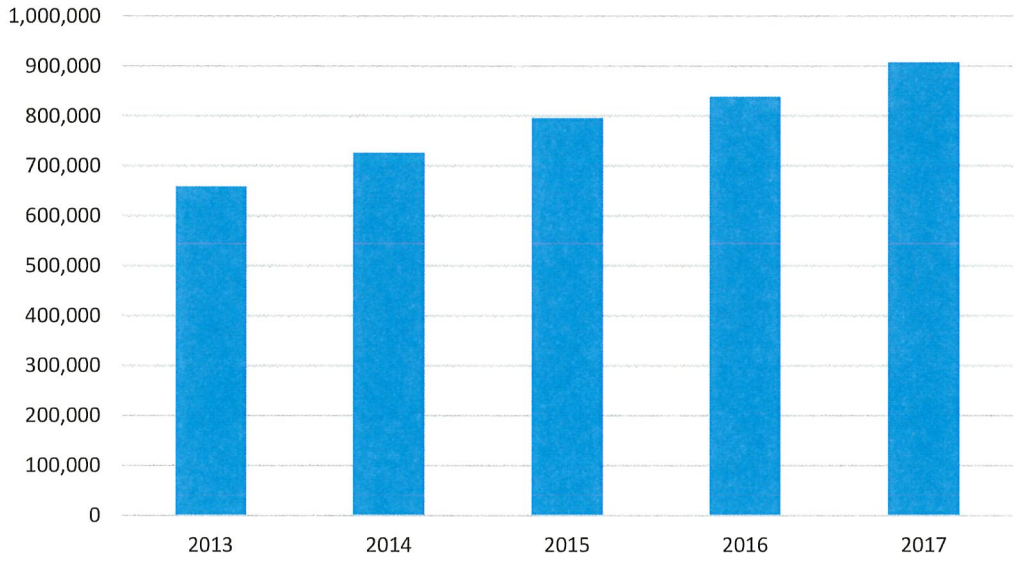
Table 9
Direct, indirect, and induced economic impacts by activity, 2018

Key economic indicators	Fishing	Hunting	Trapping	Sport shooting
GDP at market prices (C$ millions)	7,222	4,128	91	1,803
Labour income (C$ millions)	3,478	1,988	44	868
Employment, full-time equivalent	58,288	33,313	738	14,555

Sources: The Conference Board of Canada; Statistics Canada.

The increase in the number of registered firearms over the past few years may be a sign of the growing popularity of sport shooting.[4] Between 2013 and 2017, the number of individuals or businesses with restricted registered firearms grew by almost 40 per cent.[5]

Chart 3
Number of restricted firearms registered to individuals or businesses



Source: Royal Canadian Mounted Police.

[4] Elizabeth Thompson, "More than a million restricted, prohibited guns in Canada."
[5] Royal Canadian Mounted Police, *Commissioner of Firearms 2017 Report*.

Provincial and territorial snapshots

Each of the provinces and territories total spending on fishing, hunting, trapping, and sport shooting along with the resulting economic footprint of these activities are summarized in Table 10. Predictably, Ontario and Quebec, the two largest provinces, spend the most and, consequently, experience the largest boost to GDP, jobs, and labour income among all the provinces and territories.

Table 10
Total spending on and economic impact of fishing, hunting, trapping, and sport shooting, 2018
($ millions)

Province/territory	Total spending ($ millions)	GDP ($ millions)	Employment, full-time equivalent	Labour income ($ millions)	Provincial tax revenues* ($ millions)
Newfoundland and Labrador	553	263	1,755	108	78
P.E.I.	31	28	285	12	7
New Brunswick	462	246	2,357	110	72
Nova Scotia	515	267	2,464	109	75
Quebec	4,092	3,182	29,076	1,550	846
Ontario	6,539	4,709	36,872	2,295	1,115
Manitoba	865	504	4,237	220	128
Saskatchewan	952	566	4,445	245	124
Alberta	2,352	1,758	11,655	875	263
B.C.	2,222	1,603	13,091	796	362
Yukon	79	29	209	15	4
N.W.T.	163	69	375	33	10
Nunavut	70	22	75	9	4
TOTAL	**18,896**	**13,245**	**106,895**	**6,378**	**3,088**

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

The spending per activity in each of the provinces along with the economic footprint is discussed below.

Newfoundland and Labrador

Given that just over 20 per cent of the population in Newfoundland and Labrador partakes in recreational fishing, it is not surprising that fishing expenses make up almost half of the total spending on the four activities in the province. The GDP of the province is boosted by $262.5 million, or 0.8 per cent of its total GDP, thanks to the fishing, hunting, trapping, and sport-shooting economy, which supports over 1,700 jobs in the province.

Table 11
Spending and total economic impact by activity in Newfoundland and Labrador, 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	264.2	191.3	4.5	93.1	553.2
GDP at market prices ($ millions)	125.4	90.8	2.1	44.2	262.5
Employment, full-time equivalent	838	607	14	296	1,755
Labour income ($ millions)	51.6	37.3	0.9	18.2	108.0
Provincial tax revenues* ($ millions)	37.2	26.9	0.6	13.1	77.9

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

Prince Edward Island

A little over half of the total spending on the four activities in P.E.I. is on fishing, while sport shooting accounts for 30 per cent of spending. Sport shooting supports 85 jobs in the province, and fishing accounts for 150 of the total 285 jobs supported by the fishing, hunting, trapping, and sport-shooting economy. In total, the four activities contribute $28 million to P.E.I.'s GDP (or 0.4 per cent).

Table 12
Spending and total economic impact by activity in P.E.I., 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	16.5	5.2	0.3	9.4	31.4
GDP at market prices ($ millions)	15.0	4.7	0.3	8.5	28.4
Employment, full-time equivalent	150	47	3	85	285
Labour income ($ millions)	6.5	2.0	0.1	3.7	12.4
Provincial tax revenues* ($ millions)	3.8	1.2	0.1	2.2	7.3

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

New Brunswick

Among the four activities, hunting accounts for over 50 per cent of spending in New Brunswick and boosts GDP by $134 million, supporting over 1,200 jobs. Over 68,000 residents in New Brunswick have firearms licences, which represents 10 per cent of the population in the province. Overall, spending on the four activities totalled $462 million in 2018, supporting over 2,300 jobs and contributing $245 million to GDP (or 0.7 per cent of the province's total GDP).

Table 13
Spending and total economic impact by activity in New Brunswick, 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	113.5	252.7	4.1	91.6	461.9
GDP at market prices ($ millions)	60.3	134.3	2.2	48.7	245.5
Employment, full-time equivalent	579	1,289	21	468	2,357
Labour income ($ millions)	27.1	60.3	1.0	21.9	110.2
Provincial tax revenues* ($ millions)	17.8	39.5	0.6	14.3	72.3

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

Nova Scotia

As is the case in neighboring New Brunswick, hunting accounts most of the spending on the four activities in Nova Scotia, followed by fishing. The two activities together support over 1,800 jobs. Overall, spending on the four activities totalled $515 million in 2018, boosting GDP by $267 million (which is 0.6 per cent of the province's GDP) and supporting over 2,400 jobs.

Table 14
Spending and total economic impact by activity in Nova Scotia, 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	162.2	222.3	6.3	124.4	515.3
GDP at market prices ($ millions)	84.1	115.2	3.3	64.5	267.0
Employment, full-time equivalent	776	1,063	30	595	2,464
Labour income ($ millions)	34.3	47.0	1.3	26.3	109.0
Provincial tax revenues* ($ millions)	23.7	32.5	0.9	18.2	75.3

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

Quebec

Spending in Quebec on fishing, hunting, trapping, and sport shooting totalled $4.1 billion in 2018. This supported 29,000 jobs, contributed $3.2 billion to GDP, or 0.7 per cent, and generated $1.55 billion in labour income in the province. Fishing and hunting expenditures account for almost 90 per cent of total spending on the four activities. Anglers and hunters in Quebec make up just over 20 per cent of the national total.

Table 15
Spending and total economic impact by activity in Quebec, 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	2,215	1,368	13	497	4,092
GDP at market prices ($ millions)	1,722	1,064	10	386	3,182
Employment, full-time equivalent	15,735	9,718	91	3,531	29,076
Labour income ($ millions)	839	518	5	188	1,550
Provincial tax revenues* ($ millions)	457.6	282.6	2.7	102.7	845.5

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

Ontario

With $6.5 billion in spending in 2018, Ontario's fishing, hunting, trapping, and sport-shooting economy contributed $4.7 billion to the province's GDP, or 0.6 per cent, and supported 36,900 jobs. As is the case in Quebec, fishing and hunting expenditures account for almost 90 per cent of total spending on the four activities. Ontario has 37 per cent of all anglers in the country, while the province's hunters make up 33 per cent of the national total. Ontario also has the highest share of trappers, at 21 per cent, as well as the highest share of recreational sport shooters, at 26 per cent of the national total.

Table 16
Spending and total economic impact by activity in Ontario, 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	3,835	1,961	39	705	6,539
GDP at market prices ($ millions)	2,761	1,412	28	508	4,709
Employment, full-time equivalent	21,622	11,056	219	3,975	36,872
Labour income, ($ millions)	1,346	688	14	247	2,295
Provincial tax revenues* ($ millions)	654.0	334.4	6.6	120.2	1,115.3

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

Manitoba

A total of $865 million was spent on fishing, hunting, trapping, and sport-shooting activities in Manitoba in 2018, with close to two-thirds of the spending going toward fishing expenses and almost one-third of the spending on hunting. This total spending left an economic footprint of over $500 million, which is 0.7 per cent of the province's GDP, and supported over 4,200 jobs. Twelve per cent of Manitoba residents have fishing licences, so it is not surprising that fishing left the biggest economic footprint among the four activities.

Table 17
Spending and total economic impact by activity in Manitoba, 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	523.2	238.1	12.2	91.0	864.6
GDP at market prices ($ millions)	305.0	138.8	7.1	53.1	504.0
Employment, full-time equivalent	2,564	1,167	60	446	4,237
Labour income, ($ millions)	133.1	60.6	3.1	23.2	219.9
Provincial tax revenues* ($ millions)	77.4	35.2	1.8	13.5	127.9

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

Saskatchewan

As is the case in neighbouring Manitoba, in 2018, two-thirds of spending in Saskatchewan on the four activities went toward fishing, while almost 30 per cent of the spending was on hunting. A total of $952 million was spent on fishing, hunting, trapping, and sport-shooting activities that year, contributing $566 million to the province's GDP, or 0.7 per cent, and supporting over 4,400 jobs. Fishing had the biggest economic impact, supporting almost 2,900 jobs and generating $159 million in labour income. In Saskatchewan, over 167,000 residents, or 14 per cent of the province's population, have fishing licences.

Table 18
Spending and total economic impact by activity in Saskatchewan, 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	618	262	12	60	952
GDP at market prices ($ millions)	367	156	7	36	566
Employment, full-time equivalent	2,885	1,224	54	282	4,445
Labour income, ($ millions)	159	68	3	16	245
Provincial tax revenues* ($ millions)	80.2	34.0	1.5	7.8	123.6

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

Alberta

A total of $2.35 billion was spent on fishing, hunting, trapping, and sport-shooting activities in 2018, contributing $1.8 billion to Alberta's GDP (0.5 per cent), supporting 11,700 jobs, and generating $875 million in labour income. As in most of the provinces, fishing accounts for the largest share of expenditures in Alberta. Spending on hunting and sport shooting in the province is also relatively high, accounting for 25 per cent and 18 per cent of total spending, respectively, in 2018. Both hunting and sport shooting are popular activities in Alberta. Over 300,000 people living in the province have firearms licences, which is 14 per cent of the national total.

Table 19

Spending and total economic impact by activity in Alberta, 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	1,313	593	17	429	2,352
GDP at market prices ($ millions)	982	443	13	321	1,758
Employment, full-time equivalent	6,506	2,937	85	2,127	11,655
Labour income, ($ millions)	488	220	6	160	875
Provincial tax revenues* ($ millions)	146.9	66.3	1.9	48.0	263.1

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

British Columbia

Like Alberta, fishing makes up most of the spending in B.C. on the four activities combined, though spending on both hunting and sport shooting is also high. In total, $2.2 billion was spent on fishing, hunting, trapping, and sport-shooting activities in the province in 2018. This spending boosted B.C.'s GDP by $1.6 billion (0.5 per cent), supported over 13,000 jobs, and generated almost $800 million in labour income. Just under 290,000 people living in B.C. have firearms licences, and 16 per cent of the nation's sport-shooting recreationalists come from the province.

Table 20

Spending and total economic impact by activity in B.C., 2018

	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	1,159	593	15	455	2,222
GDP at market prices ($ millions)	836	428	11	328	1,603
Employment, full-time equivalent	6,830	3,493	88	2,680	13,091
Labour income, ($ millions)	415	212	5	163	796
Provincial tax revenues* ($ millions)	188.8	96.6	2.4	74.1	361.8

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

The territories

Hunting is a large part of Indigenous culture and tradition and plays an important role in subsistence. In Nunavut, 86 per cent of the population is Indigenous, and in Northwest Territories, the share of the Indigenous population is 51 per cent. Comparatively, Yukon's Indigenous peoples make up a lower share of the territory's population, at 23 per cent.[6] Spending on hunting is relatively high in all three territories, particularly in Nunavut and N.W.T., making up 69 and 89 per cent, respectively, of total spending on all four activities in the two territories. In Yukon, fishing is more popular and accounts for over half of the spending, while hunting makes up 35 per cent of the total. Among the territories, in 2018, N.W.T. had the highest spending on fishing, hunting, trapping, and sport shooting combined, at $163 million, followed by Yukon with $79 million and Nunavut with $70 million in total spending. This spending supported 659 jobs in the territories and left an economic footprint of $120 million, or 1.1 per cent of the total territorial GDP.

[6] Statistics Canada, *Census Program Viewer, 2016 Census*.

Table 21

Spending and total economic impact by activity in the territories, 2018

Yukon					
	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	45.0	27.6	2.8	3.9	79.2
GDP at market prices ($ millions)	16.4	10.0	1.0	1.4	28.9
Employment, full-time equivalent	119	73	7	10	209
Labour income, ($ millions)	8.5	5.2	0.5	0.7	14.9
Provincial tax revenues* ($ millions)	2.3	1.4	0.1	0.2	4.1

Northwest Territories					
	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	37.2	113.0	3.4	9.6	163.3
GDP at market prices ($ millions)	15.7	47.8	1.4	4.1	69.0
Employment, full-time equivalent	85	260	8	22	375
Labour income, ($ millions)	7.6	23.1	0.7	2.0	33.3
Provincial tax revenues* ($ millions)	2.3	7.0	0.2	0.6	10.1

Nunavut					
	Fishing	Hunting	Trapping	Sport shooting	Total
Spending ($ millions)	2.6	62.3	1.7	3.3	70.0
GDP at market prices ($ millions)	0.8	19.3	0.5	1.0	21.7
Employment, full-time equivalent	3	67	2	4	75
Labour income, ($ millions)	0.3	7.9	0.2	0.4	8.8
Provincial tax revenues* ($ millions)	0.1	3.2	0.1	0.2	3.6

* Provincial tax revenues include the taxes collected by each province—they do not include federally collected taxes.
Sources: The Conference Board of Canada; Statistics Canada.

Summary

Fishing, hunting, trapping, and sport shooting are recreational activities that are an important part of Canadian culture and tradition and leave a notable economic footprint. Directly affected firms include retailers that serve those taking part in these activities, such as fishing, hunting, and trapping stores and other outdoor activity retailers, as well as lodging and food service providers, like restaurants. In addition to the value added that is directly attributable to these activities, there are economic effects that directly affected firms generate within the economy through their demand for intermediate inputs and support services. Finally, there are spillover effects when employees and business owners of directly and indirectly affected firms spend their earnings and profits elsewhere in the economy.

The Conference Board estimates that the four activities combined directly contributed $5 billion to the Canadian economy in 2018. When including the supply-chain and induced impacts, the total economic footprint of the fishing, hunting, trapping, and sport-shooting economy was valued at $13.2 billion in 2018. This increase in economic activity supported almost 107,000 jobs and generated $6.4 billion in labour income. The direct, indirect, and induced effects associated with these activities also had notable fiscal implications, generating a combined $6.1 billion in federal and provincial tax revenues in 2018.

Many industries are affected by the fishing, hunting, trapping, and sport-shooting economy through its direct, supply-chain, and induced impacts. Retail trade accounts for almost one-quarter of the total GDP contribution. However, a variety of other industries also profit thanks to the economic footprint of these activities. Manufacturing sees notable benefits, with most gains in transportation equipment manufacturing, in hand tools and other metal product manufacturing, and in petroleum and coal product manufacturing. Services industries that also experience a large economic impact include accommodation and food services as well as finance, insurance, and other related services.

Appendix A: Survey questions

The Conference Board of Canada administered a confidential survey to collect information on spending habits related to fishing, hunting, trapping, and sport shooting. The survey questions are listed below.

Descriptive Stats

Q1
What is your province or territory of residence?

- Newfoundland and Labrador
- Prince Edward Island
- New Brunswick
- Nova Scotia
- Quebec
- Ontario
- Manitoba
- Saskatchewan
- Alberta
- British Columbia
- Yukon
- Northwest Territories
- Nunavut

Q2
Which category below includes your age?

- 17 or younger
- 18–24
- 25–34
- 35–44
- 45–54
- 55–64
- 65 or older

Fishing

Q3
Have you spent time fishing over the past 12 months?

- No
- Yes

Q3A
What is your primary motivation for fishing?

- Recreation/Enjoy outdoors
- Family/Friends/Tradition
- Employment/Income

- Food/Sustenance

Q3B
How many days did you go fishing during the past year? Please answer with a number such as 2 or 40.

The following questions ask about the type of fishing expenditures you made over the past year.

Q3C
How much did you spend on gasoline and other fuels to go fishing over the past year? Include in this estimate spending on gasoline, diesel, propane, naphtha, etc., used while fishing and spending on fuel to travel to a destination for fishing.

Please enter a number value rounded to the nearest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q3D
How much did you spend on travel and travel services for the purpose of fishing over the past year? Included in this category are expenditures specific to a fishing trip such as vehicle rentals, accommodation, food, airfare, fishing charters and fishing guide services. Exclude amounts spent on fuel for travel to a destination.

Please enter a number value rounded to the nearest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q3E
What percentage of this travel spending was outside your province of residence?
- 0%
- 1–20%
- 21–40%
- 41–60%
- 61–80%
- 81–100%

Q3F
Which province/territory did you spend the majority of your out-of-province travel expenditures?
- Newfoundland and Labrador
- Prince Edward Island
- New Brunswick
- Nova Scotia
- Quebec
- Ontario
- Manitoba
- Saskatchewan
- Alberta
- British Columbia
- Yukon
- Northwest Territories

- Nunavut

Outside of Canada

Q3G
During the past year, have you purchased a boat, canoe, kayak, motor, trailer or something similar (a significant asset not purchased every year/on a regular basis) primarily for fishing?

- No
- Yes

Q3H
How much did you spend to purchase a boat, canoe, kayak, motor, trailer or something similar for fishing?

Please enter the value rounded to the nearest dollar. If you spent $5,000, enter 5000.

Q3I
How much did you spend on other products/services directly related to fishing over the past year? Included in this category are licences, gear (such as rods, reels, tackle, bait, electronics, safety equipment) and any other expenditures not covered in the previous questions.

Please enter a number value rounded to the nearest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Hunting

Q4
Have you spent time hunting (not including trapping) over the past 12 months?

- No
- Yes

Q4A
What is your primary motivation for hunting?

- Recreation/Enjoy outdoors
- Family/Friends/Tradition
- Employment/Income
- Food/Sustenance

Q4B
How many days did you spend hunting during the past year? Please answer with a number such as 2 or 40.

The following questions ask about the type of hunting expenditures you made over the past year.

Q4C
How much did you spend on gasoline and other fuels to go hunting over the past year? Include in this estimate spending on gasoline, diesel, propane, naphtha, etc., used while hunting and spending on fuel to travel to a destination for hunting.

Please enter a number value rounded to the nearest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q4D
How much did you spend on travel and travel services for the purpose of hunting over the past year? Included in this category are expenditures specific to a hunting trip such as vehicle rentals, accommodation, food, airfare or hunting guide services. Exclude amounts spent on fuel for travel to a destination.

Please enter a number value rounded to the nearest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q4E
What percentage of this spending on travel was outside your province of residence?
- o 0%
- o 1–20%
- o 21–40%
- o 41–60%
- o 61–80%
- o 81–100%

Q4F
Which province/territory did you spend the majority of your out-of-province travel expenditures?
- o Newfoundland and Labrador
- o Prince Edward Island
- o New Brunswick
- o Nova Scotia
- o Quebec
- o Ontario
- o Manitoba
- o Saskatchewan
- o Alberta
- o British Columbia
- o Yukon
- o Northwest Territories
- o Nunavut
- o Outside of Canada

Q4G
During the past year, have you purchased a boat, canoe, ATV/UTV, trailer, property or something similar (a significant asset not purchased every year/on a regular basis) primarily for hunting?
- o No
- o Yes

Q4H
How much did you spend during the last year purchasing a boat, canoe, ATV/UTV, trailer, property or something similar?

Please enter the value rounded to the nearest dollar. If you spent $5,000, enter 5000.

Q4I
How much did you spend on ammunition, firearms/bows and optics directly related to hunting over the past year?

Please enter a number value rounded to the closest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q4J
How much did you spend on other products/services directly related to hunting over the past year? Included in this category are licences, leases, gear (such as hunting-specific clothing, knives, game calls, treestands/blinds, attractants, bait/mineral/foodplots, decoys, cameras, meat processing, etc.) and any other expenditures not covered in the previous questions.

Please enter a number value rounded to the closest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Trapping

Q5
Have you spent time trapping over the past 12 months?
- o No
- o Yes

Q5A
What is your primary motivation for trapping?
- o Recreation/Enjoy outdoors
- o Family/Friends/Tradition
- o Employment/Income
- o Food/Sustenance

Q5B
How many days did you trap during the past year? Please answer with a number such as 2 or 40.

The following questions ask about the type of trapping expenditures you made over the past year.

Q5C
How much did you spend on gasoline and other fuels for the purpose of trapping over the past year? Include in this estimate spending on gasoline, diesel, propane, naphtha, etc., used while trapping and spending on fuel to travel to a destination for trapping.

Please enter a number value rounded to the nearest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q5D
How much did you spend on travel and travel services for the purpose of trapping over the past year? Included in this category are trapping specific expenditures on vehicle rentals, accommodation, food, airfare, or other travel expenditures. Exclude amounts spent on fuel for travel to a destination.

Please enter a number value rounded to the nearest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q5E
What percentage of this spending in the last year was outside your province of residence?

- o 0%
- o 1–20%
- o 21–40%
- o 41–60%
- o 61–80%
- o 81–100%

Q5F
Which province/territory did you spend the majority of your out-of-province travel expenditures?

- o Newfoundland and Labrador
- o Prince Edward Island
- o New Brunswick
- o Nova Scotia
- o Quebec
- o Ontario
- o Manitoba
- o Saskatchewan
- o Alberta
- o British Columbia
- o Yukon
- o Northwest Territories
- o Nunavut
- o Outside of Canada

Q5G
During the past year, have you purchased a canoe, boat, motor, snowmobile, ATV, sleigh or something similar (a significant asset not purchased every year/on a regular basis) primarily for trapping?

- o No
- o Yes

Q5H
How much did you spend during the last year purchasing a canoe, boat, motor, snowmobile, ATV, sleigh or similar item?

Please enter the value rounded to the nearest dollar. If you spent $5,000, enter 5000.

Q5l
How much money did you spend on other products/services for trapping over the past year? Include the following type of expenditures: licences, gear (such as traps, snares, stretching/skinning boards, chainsaw, firearms, ammunition, bait, building materials, tanning, tools/knives, etc.) and trapline improvements.

Please enter a number value rounded to the closest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Sport Shooting

Q6
Have you spent time sport shooting over the past 12 months?
- o No
- o Yes

Q6A
What is your primary motivation for sport shooting?
- o Recreation
- o Family/Friends/Tradition
- o Competition

Q6B
How many times have you gone sport shooting over the past year?

Please answer with a number such as 2 or 40.

The following questions ask about the type of sport-shooting expenditures you made over the past year.

Q6C
How much did you spend on travel and travel services for the purpose of sport shooting over the past year? Included in this category are expenditures on vehicle rentals, accommodation, food, airfare, or other travel expenditures specifically to partake in sport shooting.

Please enter a number value rounded to the nearest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q6D
What percentage of this spending in the last year was outside your province of residence?
- o 0%
- o 1–20%
- o 21–40%
- o 41–60%
- o 61–80%
- o 81–100%

Q6E
Which province/territory did you spend the majority of your out-of-province travel expenditures?

- Newfoundland and Labrador
- Prince Edward Island
- New Brunswick
- Nova Scotia
- Quebec
- Ontario
- Manitoba
- Saskatchewan
- Alberta
- British Columbia
- Yukon
- Northwest Territories
- Nunavut
- Outside of Canada

Q6F
How much money did you spend on firearms and ammunition for the purpose of sport shooting over the past year?

Please enter a number value rounded to the closest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

Q6G
How much money did you spend on other sport-shooting products/services over the past year (excluding travel and firearms and ammunition)? Include in this answer spending on memberships, training courses, safety equipment, targets/clays or any other supplies directly related to sport shooting.

Please enter a number value rounded to the closest dollar; if you spent $150, enter 150. If you did not spend anything, enter 0.

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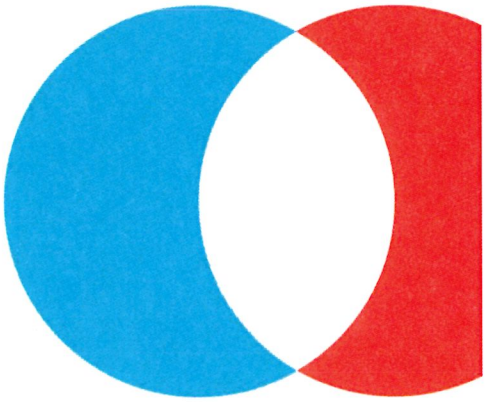

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