



**Canadian Centre on Substance Abuse**

... Working to reduce alcohol- and drug-related harm

**Centre canadien de lutte contre l'alcoolisme et les toxicomanies**

... œuvrer à la réduction des méfaits liés à l'alcool et aux drogues

# **Analysis of Beverage Alcohol Sales in Canada**

## **Alcohol Price Policy Series, Report 2 of 3**

November 2012

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## **Alcohol Price Policy Series**

Levels and Patterns of Alcohol Use in Canada (Report 1)

Analysis of Beverage Alcohol Sales in Canada (Report 2)

Price Policies to Reduce Alcohol-Related Harm in Canada (Report 3)

Alcohol Price Policy Series: Reducing Harm to Canadians (Policy Brief)

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## About the Alcohol Price Policy Series

This series of three reports provides context and evidence to support the implementation of the price policy recommendations contained in the [National Alcohol Strategy](#) (NAS). It is most relevant for analysts and decision makers, both inside and outside government, with interest in the topic of alcohol pricing policy:

- The first report presents a summary of data on the levels and patterns of alcohol use in Canada, focusing on trends in risky drinking from 2003 to 2010.
- The second report discusses the economic and governmental context of retail alcohol sales by providing, among other things, a comparison of the direct revenue and costs of alcohol at the provincial/territorial level with the latest available data (2002–03).
- The third report summarizes the evidence on the effectiveness of price policies for reducing alcohol consumption and alcohol-related harm and costs, and presents information on alcohol pricing policies from six provinces.

## Executive Summary

Beverage alcohol presents a paradox in terms of its benefits and costs to Canadians. Governments earn substantial revenue from the sale of alcohol and use these funds to provide goods and services to the population. At the same time, risky alcohol consumption is associated with substantial health and social harm that cost billions of dollars each year.

This report discusses the governmental and economic context of alcohol sales in Canada, focusing on factors related to the dual role government plays as both supplier and regulator of alcohol. Salient findings from this report include:

- The majority of jurisdictions (eight of the 13 provinces and territories) allow sales of alcohol from privately operated liquor stores. This makes the management of alcohol pricing more complicated than it was in the past when full government retail monopolies were the norm (Table 1).
- Most government liquor authorities report to ministries of finance or economic development. This arrangement means that fiscal imperatives may overshadow health and safety costs when making decisions about the supply of alcohol, including decisions about alcohol pricing (Table 1).
- From 2002 to 2008, the prices of wine and spirits sold in Canadian liquor stores did not keep pace with inflation. Furthermore, since 2009, the prices of beer, wine and spirits sold in liquor stores all trended below inflation (Figure 2).
- Provincial and territorial governments increased their direct revenue from the control and sale of alcohol approximately 20% between 2002 and 2011 (Figure 3). Corresponding trends in alcohol-related social costs are unavailable because of lack of data.
- The social costs of alcohol are divided into direct and indirect costs. According to CCSA's *Costs of Substance Abuse in Canada* study, the total direct and indirect costs of alcohol in Canada were estimated to be \$14.6 billion in 2002.
- A comparison of direct revenue and direct costs of alcohol for 2002–03 indicate that direct costs exceed direct revenue in most jurisdictions (Table 6).

The governmental and economic context of beverage alcohol sales in Canada is complex because of a number of factors, not the least of which is the central role provincial and territorial governments play in both supplying alcohol and responding to risky use. The economic downturn of 2008–09 resulted in budget deficits in most jurisdictions. Under these challenging fiscal circumstances, careful consideration of both the costs associated with alcohol misuse and the revenue derived from alcohol will be important to government finance departments as they attempt to balance their budgets.

Of particular note is the fact that the three price policy recommendations in the National Alcohol Strategy (indexing prices to inflation, pricing on alcohol content, implementing minimum prices) have the potential to both reduce alcohol-related consumption and increase alcohol-related revenue when taxes and markups are based on a percentage of price. In fact, this outcome has been validated by the experience of Saskatchewan, where minimum price and other policy changes implemented in April 2010 decreased alcohol consumption by 135,000 litres of ethyl alcohol and increased revenue by \$9.4 million.

This report shows that both the revenue and costs associated with alcohol are substantial, and that in most jurisdictions direct alcohol-related costs exceed direct revenue. Currently, only information on direct revenue from the control and sale of alcohol are assembled and published annually. Provincial and territorial governments should regularly assess the social costs of alcohol and include this information in their efforts to manage the sale of beverage alcohol in Canada.

## 1. Introduction

The social and economic benefits and costs of beverage alcohol present an interesting paradox to Canadians. On one hand, governments earn substantial revenue from the sale of alcohol and use these funds to provide a wide range of goods and services to the population. On the other, risky alcohol consumption is associated with substantial health and social harm that cost those same governments billions of dollars each year in health and enforcement (Rehm, Baliunas, Brochu, Fischer, Gnam, Patra, Popova, Sarnocinska-Hart & Taylor, 2006).

International research verifies that reducing the economic availability of alcohol is one of the most effective ways of addressing alcohol-related harm and costs (Babor, Caetano, Casswell, Edwards, Giesbrecht, Graham, et al., 2010). A recently published systematic review strongly confirms that raising and maintaining alcohol prices is effective for reducing alcohol consumption at the population level (Wagenaar, Salois & Komro, 2009). Other research shows that curtailing alcohol consumption through price policies can reduce important health and social harm such as alcohol-related disease and injuries, violence, crime, traffic crashes, sexually transmitted diseases and low birth weight (Sen, 2003; Markowitz, 2005; Wagenaar, Maldonado-Molina & Wagenaar, 2009; Wagenaar, Tobler & Komro, 2010; Zhang, 2010).

This evidence led to the inclusion of three alcohol price policy recommendations in Canada's National Alcohol Strategy (NAS) in 2007: indexing prices to inflation so that products do not become cheaper over time relative to other goods; setting prices based on alcohol content to provide incentives for the consumption of lower alcohol content beverages; and implementing minimum prices to remove sources of inexpensive alcohol often favoured by young adult and other risky drinkers (NASWG, 2007). These policies seek to reduce the economic availability of alcohol and thereby reduce consumption, harm and costs.

The central role provincial and territorial governments play in the management of alcohol allows for significant control over the factors that influence alcohol consumption and harm. For example, most provincial and territorial liquor authorities have independent authority to set retail alcohol prices, and do so to serve a variety of goals ranging from revenue generation to the protection of public health. While these goals may sometimes be at odds, emerging evidence and practice from Canada and elsewhere suggests that the price policies recommended in the NAS can simultaneously reduce alcohol consumption and increase alcohol-related revenue when taxes are linked to prices. This represents a potential “win-win” scenario for governments.

This report discusses the economic and governmental context of alcohol sales in Canada, focusing on factors related to governments' dual role as supplier and regulator of alcohol. It begins by reviewing the governmental and economic context of retail alcohol sales, summarizing the basic regulatory structures of alcohol sales across Canada. It then compares changes in alcohol prices with changes in inflation before discussing beverage alcohol's broad economic benefits and social costs. Subsequently, the report develops a comparison of direct alcohol-related revenue and direct social costs at the provincial/territorial level. The report concludes by calling on governments to regularly assemble information on alcohol-related costs so this information can be meaningfully included in decisions affecting the supply of beverage alcohol in Canada, including those related to pricing.

## 2. Background

### 2.1 Governmental context

All provinces and territories in Canada maintain government monopolies over the wholesale distribution of alcohol. And with the exception of Alberta, all are the dominant retailers of alcohol in their respective jurisdictions.<sup>1</sup> Within this basic structure of government control, however, there is substantial variation in how jurisdictions manage alcohol distribution. For example, some jurisdictions allow sales from private liquor stores while others operate full government retail monopolies. Table 1 describes the basic regulatory structure of alcohol sales for all jurisdictions in Canada.<sup>2</sup>

The majority of jurisdictions (eight of the 13 provinces and territories) use mixed systems involving both private and government outlets to distribute alcohol. Three jurisdictions (Prince Edward Island, New Brunswick, Northwest Territories) have exclusive government monopolies while one jurisdiction (Alberta) is wholly private. The majority of government agencies responsible for retail alcohol sales report to finance or economic development ministries; the exceptions are British Columbia, Alberta, Saskatchewan and Prince Edward Island.

Reporting to ministries of finance is not problematic because finance departments have a mandate to consider both revenue and costs in their analyses of provincial and territorial budget matters. However, because the social costs of alcohol are not regularly drawn together in a systematic way, it is challenging for this information to be factored into decisions regarding the supply of alcohol. This means that alcohol-related health and safety costs may not receive the same level of attention as alcohol-related revenue in decisions involving alcohol.

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<sup>1</sup> Alberta fully privatized retail alcohol sales in 1994. However, the Government of Alberta still maintains a monopoly at the wholesale level and all private alcohol retailers are licensed and regulated by the Alberta Gaming and Liquor Commission.

<sup>2</sup> Nunavut's alcohol distribution system is unique and therefore not included in Table 1. Its system operates out of two government-owned warehouses. Most alcohol retailers import their products directly from producers and ship them through a government liquor warehouse where taxes and government markups are applied.



**Table 1: Regulatory structure of alcohol sales, Canadian provinces and territories, 2011**

Jurisdiction	Organization of retail liquor sales	Government department to which liquor retailer reports	Government department to which liquor regulator reports
NL <sup>3</sup>	Mixed public/private system	Ministry of Finance	Ministry of Finance
PEI	Exclusive government monopoly	Ministry of Innovation and Advanced Learning	Ministry of Innovation and Advanced Learning
NB	Exclusive government monopoly	Ministry of Finance	Ministry of Public Safety and Solicitor General
NS	Mixed public/private system <sup>4</sup>	Ministry of Finance	Department of Labour and Workforce Development
QC	Mixed public/private system	Ministry of Finance	Ministry of Public Safety
ON	Mixed public/private system <sup>5</sup>	Ministry of Finance <sup>6</sup>	Ministry of Attorney General
SK	Mixed public/private system <sup>7</sup>	Saskatchewan Liquor and Gaming Authority <sup>8</sup>	Saskatchewan Liquor and Gaming Authority
MB	Mixed public/private system <sup>9</sup>	Ministry of Finance	Ministry of Finance
AB	Wholly private	Treasury Board and Ministry of Finance	Treasury Board and Ministry of Finance
BC	Mixed Public/Private System	Ministry of Energy and Mines	Ministry of Energy and Mines
YT	Mixed public/private system	Ministry of Economic Development	Ministry of Economic Development
NWT	Exclusive government monopoly	Ministry of Finance	Ministry of Finance

Sources: Compiled by author.

<sup>3</sup> Newfoundland and Labrador is the only jurisdiction in Canada that directly produces alcohol for consumption under a brand name: *Newfoundland Screech*.

<sup>4</sup> Nova Scotia opened a few specialty wine stores in 2003 and commissioned a study of their operations in 2007. Subsequently, provincial liquor regulators made the decision to allow the private wine stores to operate for five more years with a second evaluation of effects on revenue to take place in 2012 to determine if they should continue operating.

<sup>5</sup> Ontario technically has a mixed system because its 450 Beer Stores operate privately under a partnership among Labatt, Molson and Sleeman Breweries. It also licenses specialty wine outlets connected to grocery stores, and allows sales from on-site winery and distillery stores that are privately owned and operated.

<sup>6</sup> In Ontario, only the LCBO reports to the Ministry of Finance. All other outlets (e.g., Beer Stores and winery outlets) report to the Alcohol and Gaming Commission of Ontario.

<sup>7</sup> Saskatchewan allows approximately 440 privately owned hotels in the province to sell all forms of alcohol for off-premise consumption and also has a small number privately operated specialty wine stores.

<sup>8</sup> As a Treasury Board Crown Corporation, the Saskatchewan Liquor and Gaming Authority does not report to a government ministry.

<sup>9</sup> Manitoba allows 267 privately owned hotels to sell beer and coolers for off-premise consumption and also has a small number of privately operated specialty wine stores.

## 2.2 Economic Context

### 2.2.1 General economic climate

The Canadian economy is recovering from one of the most significant economic recessions since the Great Depression. Although Canada was sheltered from the worst of the global economic crisis, beginning in August 2008 the real national gross domestic product (GDP) declined over 10 consecutive months, losing 3.7% of its total value (Statistics Canada, 2011a). Further, the economy experienced a rare period of deflation with the national Consumer Price Index (CPI)<sup>10</sup> declining 0.95% between June 2008 and June 2009. This economic downturn had strong negative effects on personal and household income. It also created serious budget problems in many provinces and territories, with deficits projected for most jurisdictions for the next several years. Indeed, nine of 13 provincial and territorial jurisdictions are forecasting budget deficits in 2012–13, ranging from a high of \$15.3 billion in Ontario to a low of \$75 million in Prince Edward Island. Under these challenging fiscal circumstances, careful consideration of both the revenue derived from alcohol and the costs associated with alcohol misuse will be important as government planners attempt to re-balance their budgets.

### 2.2.2 Alcohol prices and inflation

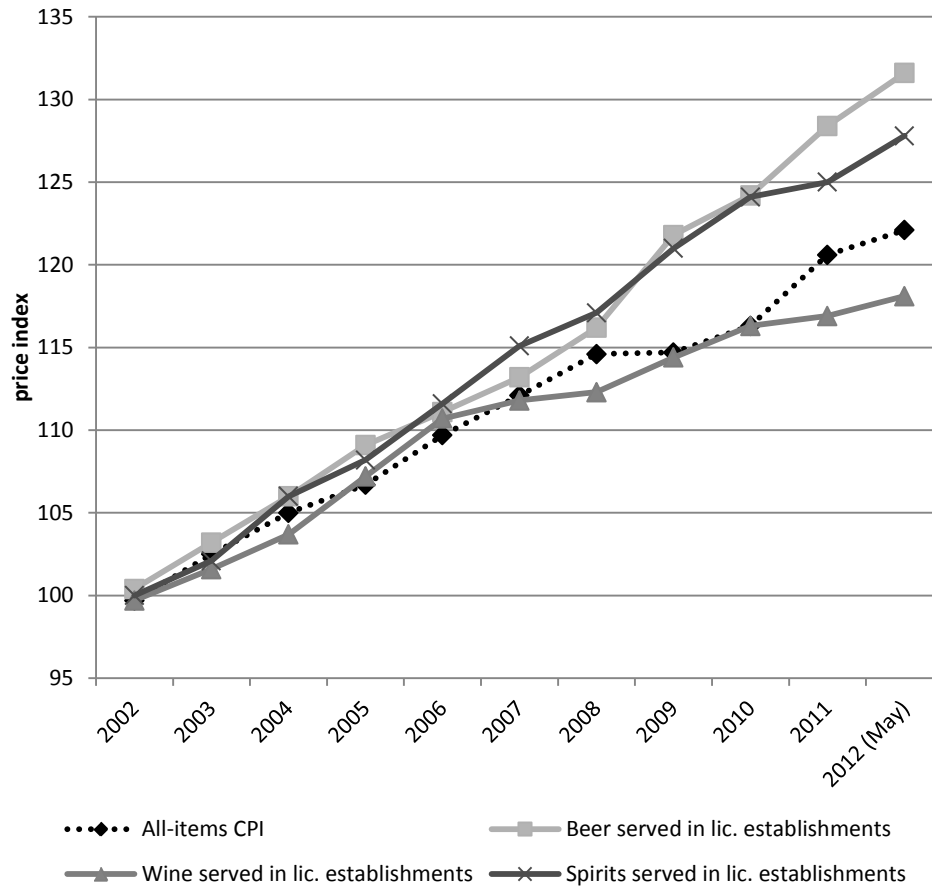
A second economic factor relevant to current alcohol price policy is the relationship between alcohol prices and the prices of other goods. Given that maintaining the price of alcohol is one of the most effective means of controlling consumption and, by extension, harm and costs (Wagenaar et al., 2009; Babor et al., 2010), it is important that prices do not erode over time because they do not keep pace with inflation. If alcohol prices become cheaper relative to other goods in the marketplace, their ability to protect public health and safety diminishes because their real (effective) price declines.

Data from Statistics Canada show that since 2002 the prices of beer, wine and spirits have largely kept pace with inflation for alcohol sold in licensed establishments, although wine has not kept pace in the last two reporting periods. However, the prices of spirits and especially wine have not kept pace with inflation for alcohol products sold from liquor stores. In addition, since the economic recession of 2008–09, the prices of beer, wine and spirits sold from liquor stores have declined relative to the prices of goods in a basket of standardized consumer goods (Figures 1 and 2).

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<sup>10</sup> The Consumer Price Index is the official government measure of general inflation in the economy. It measures consumer purchasing power by comparing current costs of goods and services to those of a selected base year.

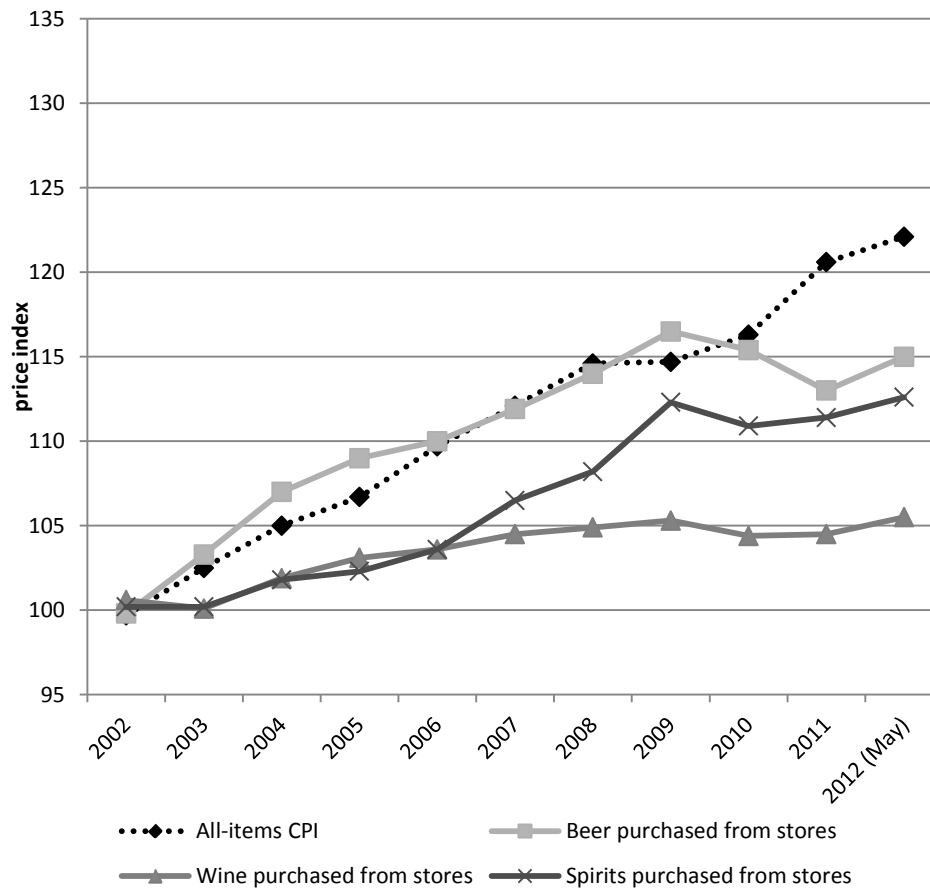
**Figure 1: Price indices of beer, wine and spirits sold in bars, clubs and restaurants compared with the Consumer Price Index, Canada, 2009 basket, 2002 price base year<sup>11</sup>**



Source: Statistics Canada, 2011a.

<sup>11</sup> Figures 1 and 2 depict changes in prices over time compared with the prices of goods in standardized “basket” of consumer goods. 2002 is the “base” year for these charts. A price index of 110 indicates that a good costing 100 dollars in 2002 would cost 110 dollars in a later year.

**Figure 2: Price indices of beer, wine and spirits sold in liquor stores compared with the Consumer Price Index, Canada, 2009 basket, 2002 price base year**



Source: Statistics Canada, 2011a.

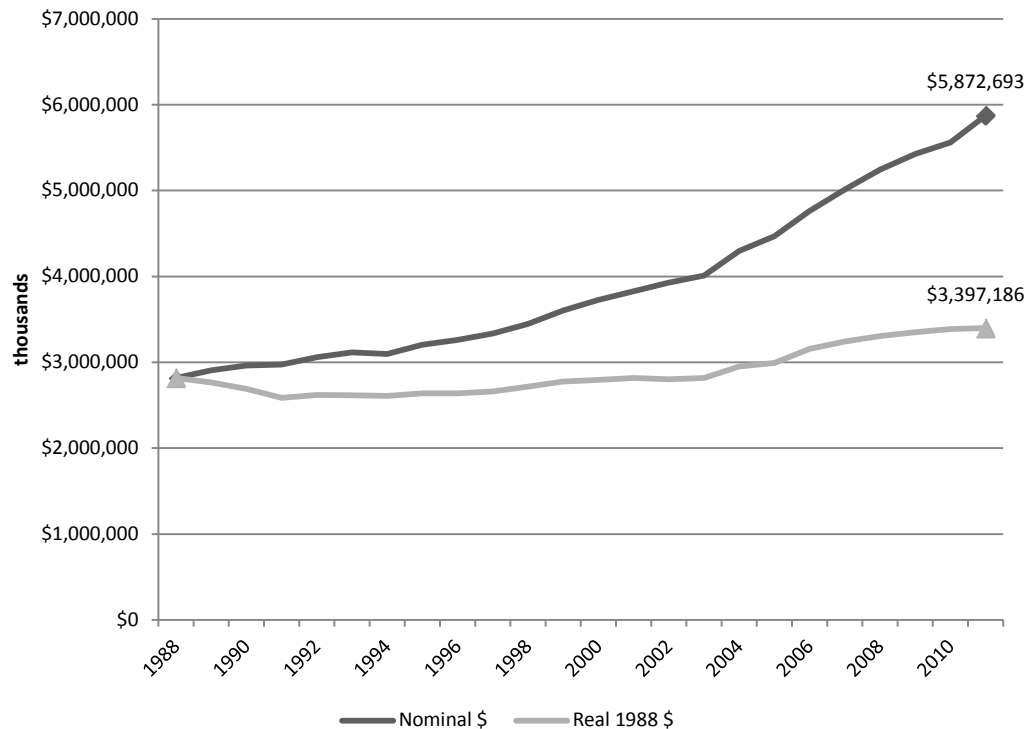
### 3. Economic and Fiscal Benefits of Alcohol

In total, Canadians spent \$20.3 billion on alcoholic beverages in FY 2010–11 (Statistics Canada, 2012). The production and sale of alcohol contributes to the Canadian economy in several ways, including providing employment in direct alcohol production and allied industries (e.g., hospitality, transportation). The production and sale of alcohol also generate substantial revenue for federal and provincial governments, both from sales taxes and markups applied directly to alcohol products as well as from income and other taxes derived from alcohol-related economic activities. For example, the production and sale of beer generated an estimated \$4.33 billion in payroll, municipal and other non-commodity taxes in 2007 in Canada (Brewers Association of Canada, 2009). However, governments only report direct revenues from the control and sale of alcohol on an annual basis. Therefore, the following discussion of fiscal benefits will focus on revenue to governments from direct sources.

All provincial and territorial jurisdictions in Canada maintain wholesale monopolies on alcohol distribution. In addition, governments in all jurisdictions except Alberta play a dominant role in retail sales. These arrangements generate substantial revenue for governments and also contribute to alcohol being sold in a socially responsible way (Kendall, 2008). Total direct net revenue to

provincial and territorial governments (excluding most sales taxes) from the control and sale of alcohol was \$5.87 billion across Canada in FY 2010–11 (Statistics Canada, 2012). Direct net provincial/territorial revenue from the sale of alcohol increased 108% between 1988 and 2011, growing from \$2.82 billion to \$5.87 billion in nominal terms (i.e., not corrected for inflation). When corrected for inflation, however, the growth in revenue shrinks to 21% from \$2.82 billion in 1988 to \$3.40 billion in 2010 (Figure 3).<sup>12</sup>

**Figure 3: Net income of provincial/territorial liquor authorities from the control and sale of alcoholic beverages, Canada, 1988–2011**



**Sources:** Statistics Canada, 2012, 2011b, 2010, 2009, 2008 and subsequent annual reports. Real value calculated using Bank of Canada online inflation calculator at: [www.bankofcanada.ca/rates/related/inflation-calculator](http://www.bankofcanada.ca/rates/related/inflation-calculator).

**Note:** These numbers exclude revenue from most provincial sales taxes.

These data indicate that net direct revenue to provinces and territories from alcohol decreased from \$2.81 billion to \$2.80 billion in real terms (-0.054%) between 1988 and 2002. From 2003 to 2011, however, real direct revenues increased 21% from \$2.82 billion to \$3.40 billion. Thus, in recent years, provincial and territorial governments have increased their real revenue from alcohol substantially.

<sup>12</sup> Correcting for inflation means that all revenues are reduced to the value they would have in the base year (in this case, 1988).

## 4. Social Costs of Alcohol<sup>13</sup>

Alcohol use is linked to significant health and social problems such as death, disability, illness, domestic abuse, violent crime, intentional and unintentional injuries, suicide and others (Butt et al., 2009). Alcohol-related health and social harm derive largely from three properties or effects of consumption: toxicity, intoxication and dependence. Studies suggest that slightly greater alcohol-related social costs are associated with acute effects (e.g., toxicity, intoxication) than chronic, long-term use (e.g., dependence) (Single, Robson, Rehm & Xie, 1999). This is because a comparatively large number of Canadians drink beyond the daily recommended levels at least occasionally. Although their overall individual risk of harm is less than people who drink in risky ways more regularly, these moderate-risk drinkers contribute substantially to overall harm because there are so many more of them. This is the “prevention paradox” that is explained in greater detail in the first report in the alcohol price policy series.<sup>14</sup>

The measurable toll that risky alcohol use exacts on Canadians is substantial when factored across the entire population (Tables 3, 4 and 5).<sup>15</sup> There are also a host of psychosocial harms related to risky alcohol use that are very difficult to measure in any reliable way. That being said, a portion of the health and social costs associated with alcohol can be systematically assessed through methods developed in Canada and elsewhere (Single et al., 2003). Using best available methods, researchers in Canada estimated that the social costs of alcohol totalled \$14.6 billion in 2002 (Rehm et al., 2006). The measurable social costs of alcohol fall into two major categories: indirect costs and direct costs.

### 4.1 Indirect costs

Indirect alcohol-related costs are those derived from productivity losses such as those owing to disability or premature death associated with problematic drinking. When a person dies or becomes unable to work because of an alcohol-related condition, illness or injury, the economic contribution that he or she might have made to Canadian society is reduced or eliminated, representing a cost to society as a whole. The calculation of indirect costs is dependent on a variety of assumptions and is therefore open to interpretation and discussion. Using best available information and methods, researchers estimated the indirect costs of alcohol for Canada for 2002 as shown in Table 2.

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<sup>13</sup>The most current data on the costs of alcohol in Canada come from CCSA’s *Cost of Substance Abuse in Canada* study, which was published in 2006 using 2002 data (Rehm et al., 2006). Given the limited nature of data on alcohol-related costs, the analysis presented in this report uses data from 2002–03, which is the most current available.

<sup>14</sup>For examples of research into the prevention paradox as it applies to alcohol, see: Weitzman & Nelson, 2004; Spurling & Vinson, 2005; Rossow & Romelsjö, 2006; Poikolainen, Paljärvi & Mäkelä, 2007; and Kuendig, Hasselberg, Laflamme, Dappen & Gmel, 2008.

<sup>15</sup>It is important to note that there are marked differences in the types of harm experienced by various segments of the population. For example, acute alcohol-related harm such as injury, traffic fatalities, alcohol-involved violence and alcohol poisoning are much more common among youth and young adults. Chronic alcohol-related harm such as certain types of cancer, liver cirrhosis and alcohol dependency (alcoholism) are more common among middle-aged and older adult drinkers.

**Table 2: Indirect costs of alcohol, Canada, 2002**

Causes of Lost Productivity	Cost (\$)
Long-term disability	6,163,900,000
Short-term disability (days in bed)	15,900,000
Short-term disability (days with reduced activity)	23,600,000
Premature death	923,000,000
<b>Total:</b>	<b>\$7,126,400,000</b>

Source: Rehm et al., 2006

## 4.2 Direct Costs

Direct alcohol-related costs include public expenditures on enforcement, health care and other functions (e.g., prevention, research). Alcohol is unique among psychoactive substances used in Canada because its associated enforcement and health costs are nearly equivalent, indicating that alcohol is as much a concern to public safety as it is to public health (Thomas & Davis, 2009).

### 4.2.1 Direct enforcement costs

Although it is difficult to conclusively determine when alcohol plays a causal role in criminal behaviour, research from Canada suggests that a substantial proportion of crimes, charges and prison sentences directly or indirectly involve alcohol and other drugs (Pernanen, Cousineau, Brochu & Sun, 2002). The field research conducted by Pernanen et al. was used in CCSA's *Costs of Substance Abuse in Canada* study to estimate alcohol-attributable fractions for specific crimes, charges and prison sentences for all jurisdictions in 2002 (Table 3).

**Table 3: Alcohol-attributed crimes, charges and prison sentences, Canada, 2002**

Enforcement cost	Number	Percent of all crimes/charges	Cost (\$)
Alcohol-attributed crimes	761,638	30.4%	1,898,760,000
Alcohol-attributed charges	205,594	35.8%	513,070,000
Alcohol-attributed prison sentences (provincial + federal)	28,162	N/A	660,400,000
<b>Total:</b>			<b>\$3,072,230,000</b>

Source: Rehm et al., 2006

### 4.2.2 Direct healthcare costs

One accepted method for estimating alcohol-related healthcare costs is using alcohol-attributable fractions (AAFs). This approach uses epidemiological data to estimate the proportion of specific disease conditions caused by risky drinking, then combines this with cost data to approximate healthcare costs attributable to alcohol misuse. For some conditions, such as alcohol-caused liver disease, the AAF is 100%. For other conditions, such as stomach cancer, the proportion is much less. Using these methods, the CCSA *Costs of Substance Abuse in Canada* study (Rehm et al., 2006) created estimates of total alcohol-related healthcare costs for all jurisdictions in Canada (Table 4).<sup>16</sup>

**Table 4: Alcohol-attributed healthcare costs, Canada, 2002**

Alcohol-attributed healthcare cost	Cost (\$)
Acute care hospitalizations	1,458,600,000
Psychiatric hospitalizations	19,600,000
Inpatient specialized treatment	754,900,000
Outpatient specialized treatment	52,400,000
Ambulatory care services (physician fees)	80,200,000
Family physician visits	172,800,000
Prescription drugs	767,600,000
<b>Total:</b>	<b>\$3,306,200,000</b>

Source: Rehm et al., 2006

### 4.2.3 Other direct costs

The CCSA *Costs of Substance Abuse in Canada* study also includes estimates of other direct costs associated with alcohol use, including those for prevention and research as well as administrative costs for transfer payment programs such as worker compensation. These costs totalled an estimated \$118.8 million in 2002 (Table 5).

**Table 5: Alcohol-related direct costs for prevention, research and transfer payment programs, Canada, 2002<sup>17</sup>**

Alcohol-related direct cost	Cost (\$)
Direct costs for prevention and research	53,000,000
Administrative costs for transfer payments	65,800,000
<b>Total:</b>	<b>\$118,800,000</b>

Source: Rehm et al., 2006

<sup>16</sup>The CCSA *Cost of Substance Abuse in Canada* study factored estimates of lives saved by moderate alcohol use into its calculations. As a result, the estimates for alcohol represent total net costs to the healthcare system.

<sup>17</sup>The CCSA *Cost of Substance Abuse in Canada* study included costs that are not necessarily borne by governments such as those related to fire damage, traffic accidents and losses associated with the workplace (e.g., employee assistance programs). While these additional direct costs are substantial (an estimated \$996.1 million for 2002), they are not costs normally incurred by governments so they are not included here.



Combining these estimates of direct enforcement, healthcare and other alcohol-related social costs for Canada reveals that total direct costs to all federal/provincial/territorial governments were an estimated \$6.5 billion in 2002.

## 5. Revenue-cost Analysis of Alcohol

Comparisons of total benefits and total costs are difficult to make because of serious gaps in information on both sides. For example, it is not feasible with current methods to calculate the value of the various psychosocial benefits associated with the responsible use of alcohol across the population. It is possible, however, to develop meaningful comparisons of the benefits and costs of alcohol by focusing on direct revenue and direct costs at the provincial/territorial level (Table 6). This comparison is useful because it is drawn from reliable estimates and includes the benefits and costs most relevant to government budgetary considerations.

Table 6 indicates that three Atlantic provinces enjoy small surpluses in regards to direct revenue and costs of alcohol ranging from \$27 per capita in Prince Edward Island to approximately \$18 per capita in Nova Scotia and Newfoundland and Labrador in 2002–03.<sup>18</sup> The rest of the provinces and territories, however, have deficits ranging from \$13 per capita in Manitoba to \$563 per capita in Nunavut. Across all provinces and territories there is a \$1.15 billion overall deficit based on this comparison of direct revenue and costs to governments.<sup>19</sup>

**Table 6: Alcohol-related direct costs for prevention, research and transfer payment programs, Canada, 2002<sup>20</sup>**

	Total Direct Revenue	Enforcement Costs	Healthcare Costs	Other Direct Costs <sup>21</sup>	Total Direct Costs	Revenue Minus Costs	Population (2002)	Deficit / Surplus Per Capita
BC	\$852,004,100	\$359,170,000	\$550,981,434	\$15,700,000	\$925,851,434	(\$73,847,334)	4,141,272	(\$17.83)
AB	\$541,312,000	\$275,120,000	\$406,850,630	\$11,800,000	\$693,770,630	(\$152,458,630)	3,113,586	(\$48.97)
SK	\$202,001,220	\$100,620,000	\$118,221,767	\$3,800,000	\$222,641,767	(\$20,640,547)	1,011,808	(\$20.40)
MB	\$219,844,600	\$116,440,000	\$113,905,497	\$4,300,000	\$234,645,497	(\$14,800,897)	1,150,848	(\$12.86)
ON	\$2,025,853,996	\$1,276,440,000	\$1,160,104,734	\$45,700,000	\$2,482,244,734	(\$456,390,738)	12,068,301	(\$37.82)

<sup>18</sup> It is interesting to note that the eastern provinces have comparably higher prices (including minimum prices) for alcohol than the other provinces (see data on New Brunswick in Appendix I in the third report in this series). Also, Prince Edward Island has an additional sales tax on alcohol products, which may partially explain the surplus from alcohol in that province.

<sup>19</sup> The federal government applies sales and excise taxes on beverage alcohol, which totalled an estimated \$2.095 billion in 2002–03. Factoring direct revenue to the federal government from alcohol into this analysis indicates there is a \$941 million surplus from beverage alcohol at the national level.

<sup>20</sup> As mentioned previously, the CCSA *Cost of Substance Abuse in Canada* study included an estimated \$996.1 million in additional direct costs. However, as these costs are not normally incurred by governments, they are not included here.

<sup>21</sup> Total other direct costs include only those borne directly by governments. These include costs for prevention and research, workers compensation, and social welfare and other programs. Costs normally incurred by private individuals and firms (e.g., those associated with traffic accidents or losses in the workplace) are not included here.

<b>QC</b>	\$1,007,111,325	\$724,410,000	\$650,762,680	\$28,200,000	\$1,403,372,680	(\$396,261,355)	7,455,208	(\$53.15)
<b>NB</b>	\$138,094,320	\$56,440,000	\$120,804,282	\$2,900,000	\$180,144,282	(\$42,049,962)	756,652	(\$55.57)
<b>NS</b>	\$196,454,440	\$78,090,000	\$97,258,752	\$3,600,000	\$178,948,752	\$17,505,688	944,756	\$18.53
<b>PEI</b>	\$26,921,200	\$10,200,000	\$12,444,607	\$500,000	\$23,144,607	\$3,776,593	139,913	\$26.99
<b>NL</b>	\$113,910,240	\$40,350,000	\$62,186,245	\$2,000,000	\$104,536,245	\$9,373,995	531,595	\$17.63
<b>YT</b>	\$6,890,000	\$11,090,000	\$2,427,080	\$200,000	\$13,717,080	(\$6,827,080)	29,924	(\$228.15)
<b>NWT</b>	\$19,819,000	\$18,780,000	\$6,408,139	\$200,000	\$25,388,139	(\$5,569,139)	41,503	(\$134.19)
<b>NU</b>	\$1,813,000	\$14,010,000	\$3,876,706	\$100,000	\$17,986,706	(\$16,173,706)	28,715	(\$563.25)
<b>Total:</b>	\$5,352,029,441	\$3,081,160,000	\$3,306,232,553	\$119,000,000	\$6,506,392,553	(\$1,154,363,112)	31,414,081	

## 6. Discussion and Implications

The information presented above demonstrates a number of salient points regarding the governmental context of beverage alcohol sales in Canada. First, the structure of alcohol sales is changing as the majority of jurisdictions have moved toward distribution systems that allow sales from private liquor stores. This makes control over the sale of alcohol and alcohol pricing more complicated than it was in the past when full government retail monopolies were the norm.

Second, the majority of liquor authorities in Canada report to ministries of finance or economic development (Table 1). Given that no jurisdiction regularly assembles information on the social costs of alcohol, revenue considerations may overshadow health and safety costs when it comes to decisions about the control and supply of alcohol. To create a reporting structure more conducive to balanced decision making on alcohol price policies, the provinces and territories should regularly assess the social costs of alcohol and consider having their liquor authorities report to departments of public safety as Alberta did in 2006.<sup>22</sup>

The economic context relevant to the management and sale of alcohol includes the fact that, because of the economic downturn of 2008–09, most provincial and territorial jurisdictions are experiencing serious budget shortfalls. Under these circumstances, reducing alcohol-related harm and costs and increasing alcohol-related revenue could help address current fiscal imbalances.

Leading the way with this approach is the Saskatchewan Liquor and Gaming Authority (SLGA). In April 2010, the SLGA introduced significant price policy changes, some of which aligned with those recommended in the National Alcohol Strategy. The explicit goal of these policies was to decrease alcohol-related harm and costs in the province (Personal communication, Director, Planning and

<sup>22</sup> It is interesting to note that per capita alcohol sales have been declining in Alberta since 2006–07 when the regulation of alcohol sales was moved to the Ministry of Public Security (see Figure 7 in the first alcohol price policy report in this series. As of spring 2012, the Alberta Gaming and Liquor Commission now reports to the Treasury Board and the Ministry of Finance.

Research, Saskatchewan Liquor and Gaming Authority). These price policy changes contributed to a decrease in consumption of 135,000 litres of ethyl alcohol and a \$9.4 million increase in revenue from alcohol in 2010–11 (Saskatchewan Liquor and Gaming Commission, 2011).<sup>23</sup>

A second economic factor relevant to alcohol sales is that the prices of beer, wine and spirits sold in liquor stores across Canada have not kept pace with inflation (Figure 2). Given that maintaining the price of alcohol is one of the most effective means of controlling consumption and alcohol-related harm and costs (Babor et al., 2010), it is important that prices do not erode relative to other goods over time because their ability to protect public health and safety diminishes. It should be noted that alcohol prices lagging behind inflation partially result from the administrative discretion that liquor authorities have to set prices in their jurisdictions. This circumstance reinforces the call in the National Alcohol Strategy to index alcohol prices (including minimum prices) to inflation to ensure their ability to protect public health over time.<sup>24</sup>

A third economic point relevant to alcohol sales is that all jurisdictions except Nova Scotia, Prince Edward Island, and Newfoundland and Labrador had deficits when the direct revenue from alcohol was compared to direct health and social costs for 2002–03 (Table 6). This means that for most jurisdictions in Canada, the use of beverage alcohol appears to generate a net loss to government.

Of particular note on this point is the fact that the three price policy recommendations set out in the National Alcohol Strategy have the potential to both reduce alcohol-related costs and increase alcohol-related revenue.<sup>25</sup> Indeed, experiences in Saskatchewan verify that the price policy recommendations in the NAS can reduce consumption (and presumably also harm) while at the same time increasing revenue from alcohol (Saskatchewan Liquor and Gaming Commission, 2011).<sup>26</sup>

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<sup>23</sup> The majority of the increase in government revenue recorded for FY2010/11 in Saskatchewan came from a substantial increase in markups for beer with a small proportion attributable to changes in minimum prices for spirits, wine and coolers. Government revenue from minimum pricing policies will increase most when the government has a full retail monopoly and when markups (taxes) are based on price (*ad valorem* taxation).

<sup>24</sup> A related point is that if liquor authorities are required by legislation to raise prices to keep pace with inflation (as they are currently in Ontario), it can lessen the backlash that often occurs when *ad hoc* announcements of price increases are announced to the public (personal communication, Assistant Deputy Minister, Department of Finance, Government of Ontario).

<sup>25</sup> This is because the recommendations made in the NAS will reduce overall alcohol consumption and because the price elasticity of demand for alcohol is less than one. A price elasticity of less than one means that a unit increase in the price of alcohol will lead to a less than unit decrease in consumption as long as other factors, such as disposable income, remain constant. This fact assures that government revenue will increase when the price of alcohol increases, within reasonable limits. There are, of course, functional limits to how high prices for alcohol can go without creating unintended consequences. For example, Canada's experience with tobacco control policy shows that illegal black markets can result if prices increase so much that the cost of obtaining the product outside of the legal supply system is substantially less than the cost of obtaining the product through legitimate sources.

<sup>26</sup> Governments should pay particular attention to the form of taxation when enacting these policies as different forms of taxation will provide differing amounts of revenue to government. Markups based on a percentage of prices (*ad valorem* taxes) will provide the most additional revenue while taxes based on volume of beverage (flat taxes) will provide the least additional revenue.

## **7. Conclusion**

The governmental and economic context of beverage alcohol sales in Canada is complex because of a number of factors, not the least of which is the central role that provincial and territorial governments play in both the supply of alcohol and its regulation. As the above analysis suggests, the revenue and costs associated with beverage alcohol are substantial. However, only data on the direct revenue from the control and sale of alcohol are collected and published annually. Governments across Canada should begin regularly collecting and reporting on the social costs of alcohol to better inform efforts to manage the sale of alcohol in Canada.

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