Impaired Judgement:

The Economic and Social Consequences of Liquor Privatization in Western Canada

by David Campanella and Greg Flanagan

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Executive Summary

Retailing of alcoholic beverages in Canada and elsewhere has traditionally been controlled by government agencies, such as liquor control boards. Privatizing this retail sector has been a recurring political issue since at least the early-1990s when the provincial government of Alberta implemented a major privatization scheme, selling off its entire network of publicly-owned and operated liquor retail stores to private businesses. A decade later, liquor retailing in Alberta's western neighbour, British Columbia (BC), also underwent a major ownership shift, although less dramatically, by greatly expanding the allowable number of privately-owned stores while retaining the majority of its public outlets. In contrast, Alberta's eastern neighbour, Saskatchewan, maintains public control of liquor retailing. With the aim of more fully understanding the consequences, if any, of liquor retail privatization, this report assesses the merits of the differing liquor retail ownership models existing in western Canada based on government revenue, prices, and public health.

Economics of Privatization

It is often claimed that private liquor retailers will supply consumers with alcoholic beverages at cheaper prices. To test this hypothesis, this study conducted a small, informal price survey of a few commonly consumed beverages across the three types of liquor (beer, wine, spirits) in Saskatchewan, Alberta, and BC's public and private stores. In contradiction to the claim that privatization leads to less expensive alcohol for consumers, our survey found that BC's private stores almost consistently averaged the highest price out of the four groups, and stores in Alberta the second highest. Overall, the publicly-owned stores in BC had the lowest prices for the items measured, followed by the provincial retailer in Saskatchewan.

Another common argument in support of liquor privatization is the supposed financial benefits to the government of selling its assets (liquor outlets) and reducing its expenditures (operating liquor outlets), while maintaining revenue from a tax on liquor sales. Under privatization, the liquor tax would require different administration. The following report measures whether the effectiveness of the tax in accruing government revenue was affected by ownership shifts in Alberta and British Columbia.

The results were not favourable for Alberta. In 2011, despite having the highest per capita consumption of the three provinces, Alberta had the lowest per capita revenue from liquor sales. Strikingly, the tax revenue generated per litre of alcohol sold in Alberta has declined dramatically in the years since privatization. By not maintaining the 1993 level of tax revenue per litre of alcohol sold, the Alberta government has foregone nearly $1.5 billion dollars. BC has in the past had a higher level of consumption and higher per capita revenue as compared to Saskatchewan. In 2011, consumption rates were nearly the same in these two provinces but BC had more revenue per capita. While BC's tax effectiveness has remained relatively stable over the period under study, it has seen a modest decline since shortly after the provincial government launched its privatization initiative in 2003. In contrast, Saskatchewan's liquor tax effectiveness, although somewhat

lower than in 1993, has been on an upward trajectory since 2004.

Critically, the revenue governments accrue from liquor sales are not a windfall; indeed, the liquor industry is rarely a net earner for governments when the costs of managing alcohol consumption are included in calculations. In Canada, liquor prices are too low to allow governments to recoup all of the costs related to the public health and social consequences of alcohol consumption.

In 2002, with alcohol-related costs brought into the picture, Canadian governments lost between $3.6 and $10.7 billion on alcohol sales; Alberta, between $93 million and $1.1 billion. Researchers estimate that the BC government lost nearly $62 million from liquor sales in 2008 alone. As a wide body of research has found that higher per capita consumption leads to higher rates of alcohol-related social ills, a financially-sound liquor policy that prioritizes the well-being of the public would seek to minimize any cost imbalance by increasing liquor tax revenue and curbing consumption. The Saskatchewan government achieved this goal in 2011, when compared to the previous year higher liquor taxes resulted in $9.4 million of additional tax revenue and a reduction in sales of 135,000 litres of alcohol.

Public Health and Privatization

Research has clearly established a trend that increased access leads to increased consumption which leads to increased public costs and harms. According to the World Health Organization (WHO), the most proven and effective methods for controlling the health consequences of alcohol consumption include limiting the physical availability of alcohol through minimizing the density of retail outlets and the hours of retail operation, as well as restricting the access of minors. Our study found that the retail privatization experience in both Alberta and BC contravene these policy prescriptions. Limiting sales in pursuit of public health through fewer stores, hours of operation, or potential customers runs counter to the profit motive that drives private liquor retailing. A publicly-owned system, on the other hand, has no such incompatibility of incentives.

In the years since privatization began, outlet density in Alberta and BC has increased 73% and 57%, respectively. Saskatchewan, in contrast, has had a reduction in outlet density over a similar time period. Although Saskatchewan consistently had the highest outlet density of the provinces, its population is much more rural and dispersed which would skew the results upward.

Under current regulations, much longer hours of operation exist in Alberta's liquor stores (112 hours) and British Columbia's private stores (83) than in either BC's public stores (69) or provincial outlets in Saskatchewan (74). For instance, liquor stores in Alberta are allowed to remain open until 2 a.m, including on Sunday, a day on which hours of operation are constrained in Saskatchewan and in BC's public stores.

Alberta has a minimum legal purchasing age for alcohol, but the ability of the province's regulators and private retailers to effectively enforce it has been weak. A 2002 internal audit by the Alberta Gaming and Liquor Commission (AGLC) revealed a province-wide compliance rate of only 18%. Later audits document increased compliance, but this has come at a price: the operating expenses of the AGLC have risen, eroding the province's net government revenue. Similar audits performed by the BC government have since 2003 consistently reported a much higher compliance rate in stores that are publicly-owned (63%) rather than privately-owned (25%).

In Alberta and British Columbia, liquor retail privatization has meant high liquor prices but

low government revenue. Further, the increased availability of alcohol and its lax regulation contravene recognized methods for protecting public health. Seeking to boost economic activity by privatizing the liquor industry is a losing game — there are always more costs borne on the general population than the benefits accruing to the government from increased tax revenue, if there is any.

Maximizing social welfare is not achieved through establishing low liquor prices or increased customer convenience. Managing the supply of alcohol, both economically and physically, ensures the greatest level of social welfare, and evidence indicates a public liquor monopoly is institutionally superior to succeed at this objective.

Introduction

The best type of ownership for liquor markets has been a recurring question in Canadian politics for decades. Should the sale of alcoholic beverages be open to private investment with operations guided by the profit motive, as is the case with most other commodities in Canada? Or is it best placed under government monopoly, due to the unique characteristics of alcohol and/or potential economic efficiencies? Most provinces maintain a publicly-owned and operated liquor distribution system, which public health advocates and some economists argue best serves the public interest. In contrast, privatization advocates claim that the introduction of competition among private vendors would bring efficiencies to the market that would benefit consumers through easier access to alcohol as well as improved economic activity.

The most prominent example of liquor privatization in Canada has been in Alberta, where the Progressive Conservative government of Ralph Klein sold the province's network of retail stores and fully ceded the liquor market to private interests over several months in 1993-1994. The governing Liberal party in British Columbia has also implemented a major shift in provincial liquor policy through a process of partial-privatization. Beginning in 2003, BC allowed a large influx of privately-owned stores while curtailing an expansion of publicly-owned stores, with the result that public and private stores now compete in the same market. In recent years, debates over possible privatization initiatives have emerged in other jurisdictions across North America, including Saskatchewan, Manitoba, New Brunswick, Prince Edward Island, Washington, Utah, and Pennsylvania.

Government liquor policy is significant to the economic and social health of a jurisdiction. Alcohol is a major industry in Canada. In the 2011 fiscal year, over 228 million litres of pure alcohol were sold, totalling more than $20.3 billion.[1] Alcohol-related problems cause real stress to both the health care and justice systems. Alcohol can also contribute to a loss of economic productivity. Studies quantifying the social costs of alcohol

consumption have shown them to be quite substantial, and even larger than the direct economic benefits.[2] Considering both the dollars at stake in the liquor industry and the potential impact on social service and productivity, it is clear that misguided liquor policies could have dramatic implications for the public.

The following report examines if and how the type of liquor market ownership affects the public interest, addressing economic costs and benefits on the one hand and public health considerations on the other. To do so, it focuses on three neighbouring provinces with liquor operations that occupy distinct positions on the spectrum from private to public ownership: BC, Alberta, and Saskatchewan. Alberta has for nearly two decades operated a fully-privatized system where the government's role is limited to that of an arms-length regulator. BC has established a partially-privatized liquor market where private and publicly-owned retailers compete in the same jurisdiction. Saskatchewan maintains a system where the government acts as the main retailer of all alcoholic beverages, although in 2009 two private wine retailing stores were allowed to open in the major urban centres of Saskatoon and Regina.

The report is organized according to the two broad topics of economics and public health. The economics section considers the impact of ownership on the shelf prices of various liquor products in the three provinces, as well as the revenue collected by the three provincial governments. Also discussed is the importance of considering alcohol's 'externalities' — the costs borne by those outside of the individual transaction in which an alcoholic beverage is purchased. The public health section provides an overview of the policies available to governments for controlling the harmful impacts of alcohol and the effectiveness of a few key policies across the provinces. This section also incorporates key insights from the academic literature on the direct health impacts of privatization in Alberta and BC.

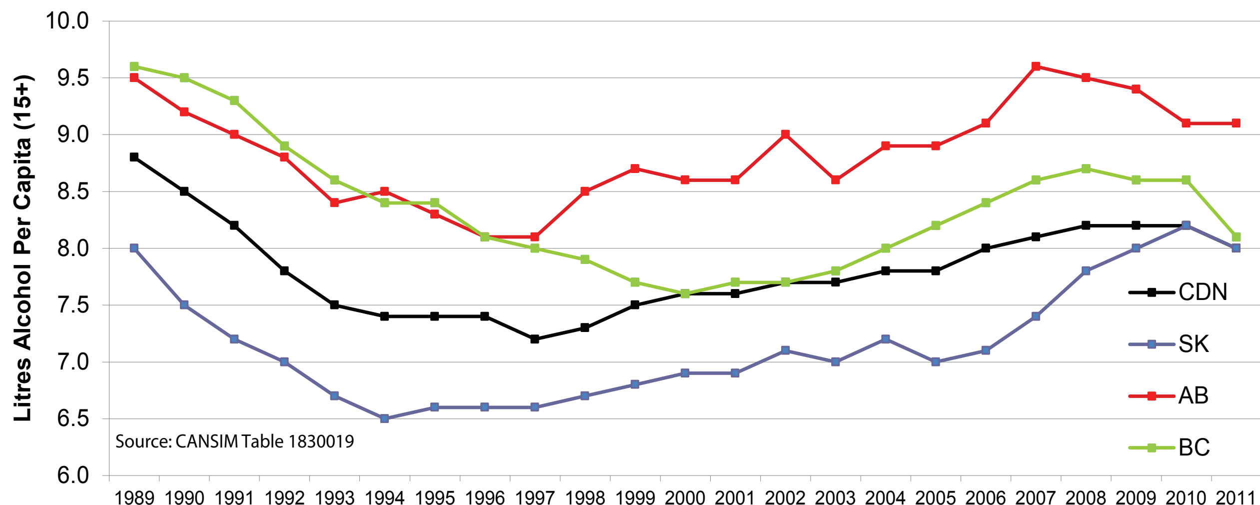
Economics of Liquor Privatization

At the centre of the debate over public versus private ownership in liquor retailing are the issues of price and government revenue. Advocates often claim that privatization will result in lower prices without reducing the government's revenue from sales. While the research is unclear about whether privatization actually results in lower prices, research does show that in general liquor prices tend to be too low under both public and private systems to raise the tax revenue required to compensate for alcohol's externalities. A complete assessment of the economic impact of liquor policies must account for these extra costs imparted onto the public. The effect of liquor retail privatization on prices, government revenue, the externalities of liquor consumption, and market development in a western Canadian context are examined in this section.

Consumption in Western Canada

Alcohol is widely consumed in Canada. The most recent Global Status Report on Alcohol and Health by the World Health Organization (WHO) reported that less than a quarter of the adult population (15 years of age and over) abstained from drinking in the past twelve months. Only one-twelfth (8.3%) of adults have never consumed alcohol in their lifetime.[3] While not among the world's heaviest consumers, Canada's average consumption rate is relatively high.[4] Consumption can be approximated with the sales data collected by Statistics Canada from provincial liquor authorities, although these figures underestimate actual consumption because they do not include homemade and home-brew and other unrecorded sources of alcohol.[5] In 2011, per capita (15 years of age and over) sales of pure alcohol in Canada were 8 litres (Figure 1). While lower than the 2010 level of 8.2 litres, the preceding decade saw a trend of rising per capita sales. This national pattern is evident to varying

Figure 1. Total per Capita Sales of Alcohol (15+)



degrees in the three western provinces. Saskatchewan has until recently remained below the national average while BC and Alberta have had higher than average consumption rates.

Rationale for a Public Monopoly

In most Canadian provinces, the buying and selling of liquor for personal off-premises consumption — the liquor retail market — is largely owned and operated by the provincial government. Provincial liquor control boards were established in the wake of Prohibition's failure to stem excessive alcohol consumption. It was reasoned that public oversight and management of a legal alcohol market would allow for consumption while minimizing the resultant negative social consequences. The rationale was that a regulated liquor market would undercut the illegal booze trade which, under Prohibition, was proving a boon to organized crime. The priority was neither to maximize profits nor consumer convenience, but rather to control production and consumption for the public good. Specifically, restricting supply would promote moderate consumption while also providing government the opportunity to capture the profits generated through liquor retailing. These funds could then be returned to the public through social programs, including those targeting the harms related to liquor consumption.

In economic theory, a market controlled by a sole agent is called a monopoly. Exclusivity over the right to operate grants such an agent tremendous market power, most obviously through the ability to single-handedly set prices. In a regulated liquor market, for instance, the government is able to set prices through a mark-up added to the cost of purchasing alcoholic beverages from producers.

Additionally, monopoly-holders may also enjoy "economies of scale," cost savings that can accrue through efficiencies related to expanded output. Relatively fewer resources may be required to produce relatively more goods. In the liquor retail industry, for instance, a business must expend resources on managing inventories, staffing, finances, advertising, etc., regardless of whether it is small (e.g. 400 items and/or $100 thousand in sales) or large (e.g. 10,000 items and/or $10 million in sales). A business would profit from economies of scale if its expansion led to a reduction in costs relative to output or sales. A single agency controlling a monopoly liquor system likely is better positioned to profit from economies of scale than are firms competing in a private market.

A monopoly can result in a situation unfavourable to the general public when it is held by a private firm motivated to exact large profits by setting high prices. However, when ownership of the monopoly belongs to the state, all of the benefits of the monopoly can be directed toward the public good. In a liquor market, these benefits include the ability to restrict supply, thereby minimizing the harms associated with alcohol use and abuse. Moreover, under a public monopoly, whatever profits are achieved through liquor sales can be used to offset the burdens (such as coping with the alcohol-related harms) liquor consumption places on the public. Additionally, in possession of a monopoly, public bodies maintain the ability to locate liquor stores in a way that accommodates community norms and to limit the sale of especially problematic liquor products in service to community well-being. A private retail system forgoes these public benefits.

Advocates of privatization are often motivated by an ideological sentiment against government-owned operations. They may believe that private interests would run the operations more efficiently or that government responsibilities should be minimized to particular activities.[6] Other critiques of public ownership may centre on the supposed benefits of introducing competition into the industry: an increased number of retailers, reduced costs (largely through

employing a cheaper non-unionized workforce) leading to lower prices, and increased government revenue from higher sales and the elimination of operational expenses.

These general arguments in favour of privatization are especially problematic when applied to alcohol. Advocates feel that privatization would increase market efficiency, presumably leading to lowered prices, which would result in increased sales. But increased alcohol consumption comes with an array of social and economic costs. As detailed below, these costs are substantial. Calculated in monetary terms, they generally outweigh government revenue earned from liquor sales. For this reason, facilitating increased alcohol consumption, though privatization or any other means, is poor public policy. Moreover, evidence from BC and Alberta indicate that a government monopoly is more efficient at operating a liquor retail market than private firms and that government revenues are negatively affected through privatization.

Prices

Only a limited number of publicly-available studies include comparisons of liquor retail prices in Western Canada.[7] In order to better understand the costs to customers in British Columbia, Alberta, and Saskatchewan, a small, non-scientific price survey was conducted. Due to the wide range of prices and available products in the private stores of Alberta and British Columbia, a larger, more comprehensive price study was not feasible.

The price comparison conducted for this report consisted of thirteen commonly purchased items in each of three alcoholic beverage categories: beer (three domestic and two international brands), wine (three red wines and one white wine from three different wineries), and spirits (two whiskeys and two vodkas). While the prices of the selected items in the public stores of British Columbia and Saskatchewan were readily available in the product catalogues of their respective public retailers, prices in the private stores of British Columbia and Alberta were acquired through personally contacting multiple outlets. These outlets included three major chain-stores in Alberta (Co-op, Safeway, and Liquor Depot) and seven stores in BC's urban centre, Vancouver. The prices recorded at the various private stores were then averaged, and the resulting comparison can be seen in Table 1. It should be noted that most of the private outlets contacted in BC did not carry wines available from the province's public stores. Table 2 shows the translation of the price figures in Table 1 into a ranking system, where 1 signifies the lowest price and 4 signifies the highest price.

Table 1. Price Comparison of Select Items

	Prices			
Product	SK Public	BC Public	BC Private (Mean)	AB Private (Mean)
Corona (6B)	$14.29	$12.59	$15.58	$15.01
Molson Canadian (12B)	$22.98	$23.19	$26.85	$25.62
Stella Artois (12B)	$27.99	$27.09	$30.98	$28.30
Miller Genuine Draft (6C)	$13.49	$12.59	$15.35	$13.20
Bud Light (6C)	$12.99	$12.29	$15.15	$13.19
Wolf Blass Red Label	$15.99	$13.59	$22.09	$16.08
Yellow Tail Casella	$12.99	$13.09	$15.15	$13.56
Jacob's Creek Wyndham Estate (Shiraz)	$13.49	$13.09	$16.32	$13.21
Jacob's Creek Wyndham Estate (Chardonnay)	$11.99	$12.09	$15.40	$14.40
Canadian Club	$24.95	$23.85	$26.04	$26.20
Crown Royal	$28.99	$28.09	$31.43	$31.90
Smirnoff Red	$24.95	$25.09	$27.45	$25.74
Absolut Vodka	$25.45	$25.09	$28.60	$27.56
Total	**$250.54**	**$241.73**	**$286.49**	**$263.97**

It is often argued, especially in Alberta, that privatization and the introduction of competition will result in increased efficiencies that will be passed on to consumers in the form of lower liquor prices. The evidence presented in Tables 1 and 2 suggests otherwise. As can be seen in Table 2, the private stores in BC are clearly the most expensive, having a rank of 4 on 11 out of the 13

Table 2. Ranking of Each Market According to Price of Select Items

	Prices (Low to High)			
Product	SK Public	BC Public	BC Private (Mean)	AB Private (Mean)
Corona (6B)	2	1	4	3
Molson Canadian (12B)	1	2	4	3
Stella Artois (12B)	2	1	4	3
Miller Genuine Draft (6C)	2	1	4	3
Bud Light (6C)	2	1	4	3
Wolf Blass Red Label	2	1	4	3
Yellow Tail Casella	1	2	4	3
Jacob's Creek Wyndham Estate (Shiraz)	3	1	4	2
Jacob's Creek Wyndham Estate (Chardonnay)	1	2	4	3
Canadian Club	2	1	3	4
Crown Royal	2	1	3	4
Smirnoff Red	1	2	4	3
Absolut Vodka	2	1	4	3
Rank	**2**	**1**	**4**	**3**

products. Alberta's private system was found to have the second highest prices, having 10 products ranked a 3. BC public stores were found to have the lowest price for most of the products, nine out of 13. Saskatchewan's public monopoly had eight products ranked 2, as well as four rankings of 1 and one ranking of 3. In terms of the cost of the entire basket of products, the same order is found: BC public with lowest prices, followed by Saskatchewan (public), and then Alberta (private) and BC private outlets. The method employed in this price survey accounted for sale prices by recording the shelf price on the day the survey was taken. It should be noted though, that the common practice among private retailers of offering discounts on a range of products means that on any given day a person willing to commit the necessary time and resources to research and travel would likely be able to purchase a particular product for less than the average price. Customers may also choose to make purchase decisions based on whatever discount prices are on offer at their chosen retailer. It is not clear, however, that either of these options dictate a significant volume of purchasing.

In Alberta, when the Progressive Conservative government of Ralph Klein introduced liquor retail privatization, the argument was that this change would bring about supposed benefits to the consumer through lower prices. The price survey conducted for this report suggests that privatization in Alberta has not led to prices cheaper than those on offer in neighbouring provinces. Notably, the findings of this small, non-scientific study are consistent with the findings of more substantial studies investigating similar issues.[8] A recent report from the Centre for Addictions Research of British Columbia, for instance, found that prices in BC's private stores were on average 10-15% higher than in government stores.[9] Additionally, a University of Saskatchewan business professor conducted a thorough comparison of liquor prices in Alberta with those of the Saskatchewan Liquor and Gaming Association (SLGA), finding SLGA prices lower than the Alberta average for 70% of beer products, 76% of spirits, and 86% of wines.[10]

Ultimately, in contrast to the opining of its advocates, privatization in Alberta and British Columbia has led to higher prices in those provinces' private liquor stores, indicating a loss of economic efficiency.

Government Revenue

Government revenue derived from the liquor market is collected through a type of excise tax, or a tax levied on consumption. An excise tax can take the form of either an additional levy per unit of sale or an *ad valorem* tax.

Unit taxes on liquor have been applied on the basis of litres of a product, litres of pure alcohol equivalent, or a complex combination of the two. A unit tax of $4 per 750mL of wine would price a $50 bottle of wine at $54 and the $5 wine at $9.

An *ad valorem* tax is a simple percentage mark-up of landed cost. For example, if the wholesale cost of a bottle of wine was $50, a 100% *ad valorem* tax would increase the retail price to $100. If the wholesale price was $5 then the retail price would be $10 under the same tax.

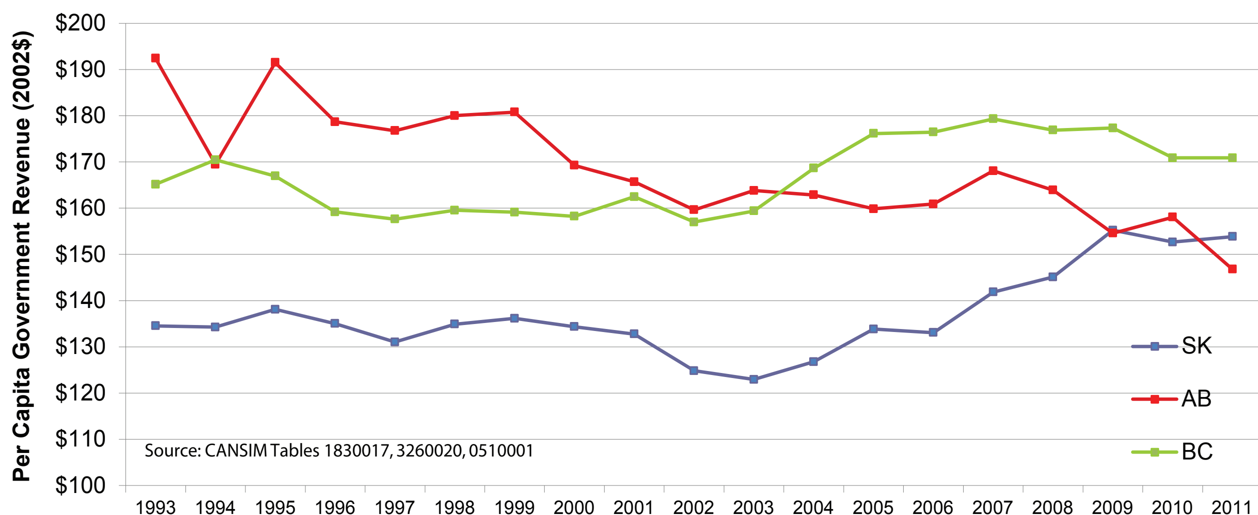
An *ad valorem* tax system is generally the norm under a public monopoly. Saskatchewan operates under an *ad valorem* tax, as does BC, despite the prevalence of private stores. Prior to privatization, pricing in Alberta's liquor market was also determined through an *ad valorem* tax. But in a private liquor market in which retailers set their own retail prices, it becomes practically impossible to administer such a tax. With privatization, Alberta moved to a unit tax based on the volume of product. In the case of beer, alcohol content is also taken into account.[11] Under a revenue neutral policy, the movement to a unit tax requires an increase in taxes (as a percentage) on lower priced products in order to compensate for the reduction in retail price of more expensive (wholesale) liquor products.

The fairness of a unit tax is an issue. Under unit taxes, every consumer pays the same basic amount of tax per litre of alcohol purchased, regardless of the quality and expense of the beverage. While some might consider this fair, others point out that it means consumers of expensive liquor pay a much lower tax relative to the price of their purchases. For instance, in the wine example above, the tax burden for a $54 bottle of wine is 7% of the final price. For a $9 wine, the tax burden is 44%. In effect, a unit tax means that those who can afford to indulge in extravagant alcohol purchases pay relatively less tax on their liquor consumption than the average consumer.

The efficacy of the liquor tax regimes in western Canada is explored in the following figures. An effective tax system will result in high government revenue relative to liquor sales. As noted, Saskatchewan employs an *ad valorem* tax, meaning that the tax revenue derived by the provincial government is based on a percentage mark-up levied on wholesale alcohol costs. The same is true in BC, except the mark-up price is discounted for private stores who are able to determine the final price to consumers. In Alberta, government revenue is the sum of the unit tax rates on the various types of alcoholic beverages sold to the private retailers.

Figure 2 illustrates the per capita government revenue from liquor sales received by each provincial government in constant dollars. Clearly, in the early-1990s, Alberta had by far the most

Figure 2. Per Capita Government Revenue from Alcohol Sales (2002$)

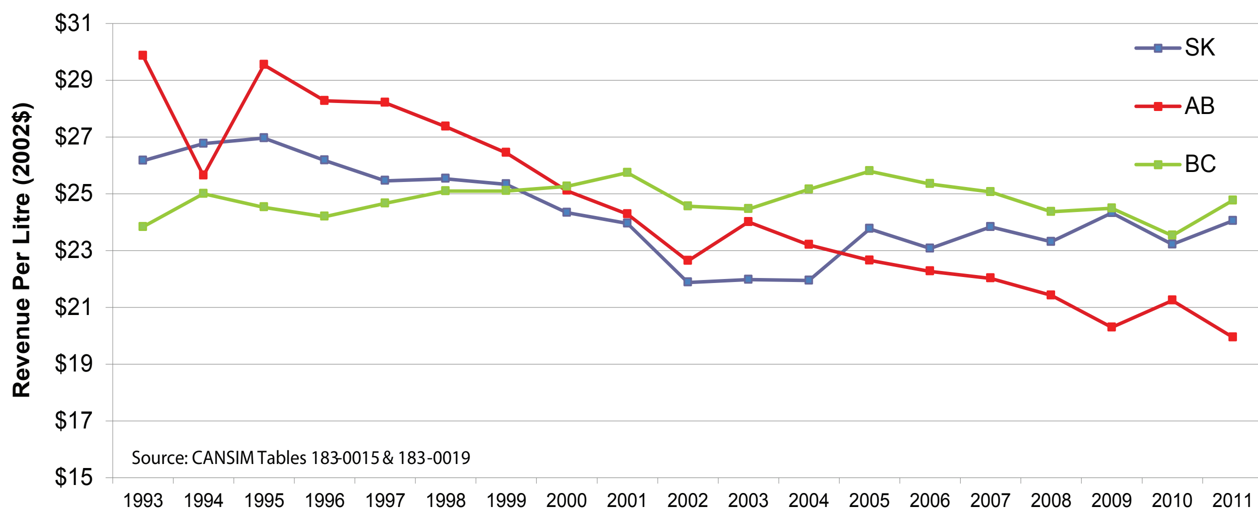


effective tax regime compared to Saskatchewan and BC. However, since privatization in 1993, the effectiveness of Alberta's liquor tax has been declining. It is now the least effective of the three provinces. Both BC and Saskatchewan had more or less level per capita revenue throughout the 1990s, and have seen a sharp increase beginning in the early part of the 2000s. As of 2011, British Columbia has the highest per capita revenue from liquor sales, followed by Saskatchewan and then Alberta.

Perhaps a more accurate method to measure the tax effectiveness of each province is to consider the government revenue obtained per litre of pure alcohol consumed (Figure 3). Quite striking in this graph is the dramatic decline in the tax efficiency of Alberta's liquor industry over the study period. In 1993, the earliest year for which data is available and the year in which the province's retail privatization process began, Alberta led the other provinces in efficiency by a significant margin. Over the nearly two decades since, however, the liquor revenue received by the province per litre of alcohol sold has fallen dramatically. The tax efficiency of BC's liquor industry has remained relatively more stable, although there was a noticeable decline beginning in 2005, shortly after the provincial government implemented its partial-privatization scheme. While tax efficiency in Saskatchewan was the lowest of the three provinces for several years around the turn of the century, it has increased significantly since 2004, although not as high as it was in the early-1990s, and is now similar to BC.

As is evident in Figure 3, high liquor prices in Alberta have not led to high revenues for the provincial government. Upon privatization in Alberta, one of the policy objectives was "ensuring ALCB revenues are maintained at pre-privatization levels."[12] Although what exactly is meant by this statement is unclear, if the goal was maintaining the same level of constant per capita revenue, Alberta has fallen far short. The extent of the failure is summarized in Table 3. The second column states the per capita revenue received by the provincial government from the sale of liquor in constant (2002) dollars beginning in 1993, the year privatization occurred, and for each subsequent year. As Table 3 makes clear, Alberta's per capita liquor revenue fell dramatically following privatization, and the difference between each year and the benchmark year of 1993 is shown in the third column. The last column shows the revenue that would have been earned if the per capita revenue from liquor sales had been maintained at the 1993 level. In total,

Figure 3. Government Revenue per Litre of Alcohol Sold



since privatization the provincial government has foregone nearly $1.5 billion in tax revenue. After a decade of privatization, this sum exceeded $500 million. With an additional $950 million lost in the previous eight years, the amount of revenue lost every year due to privatization is accelerating. Over the same 19 year period, in contrast with Alberta's declining fortunes, per capita liquor revenue has increased in both British Columbia and Saskatchewan, although more dramatically in the latter.

Table 3. Foregone Liquor Revenue in Alberta

Year	Per Capita Revenue (2002$)	Difference from 1993	Population	Foregone Revenue
1993	$192.42		2,667,292	
1994	$169.50	$22.93	2,700,606	$61,914,767
1995	$191.52	$0.90	2,734,519	$2,467,120
1996	$178.69	$13.73	2,775,133	$38,112,207
1997	$176.76	$15.66	2,829,848	$44,327,280
1998	$180.03	$12.39	2,899,066	$35,931,069
1999	$180.79	$11.63	2,952,692	$34,334,185
2000	$169.27	$23.16	3,004,198	$69,565,721
2001	$165.70	$26.72	3,058,017	$81,719,432
2002	$159.65	$32.77	3,128,364	$102,519,565
2003	$163.82	$28.61	3,183,396	$91,062,793
2004	$162.86	$29.56	3,239,471	$95,757,563
2005	$159.87	$32.56	3,322,200	$108,160,189
2006	$160.90	$31.52	3,421,253	$107,851,994
2007	$168.07	$24.35	3,512,691	$85,544,264
2008	$163.92	$28.51	3,591,791	$102,392,486
2009	$154.57	$37.85	3,671,699	$138,966,369
2010	$158.07	$34.35	3,720,928	$127,819,656
2011	$153.84	$38.58	3,779,353	$145,809,857
		Total		**$1,474,256,517**

From the evidence presented so far, it is clear that Alberta's exercise in liquor privatization has resulted in relatively high prices yet relatively low government revenue. Ideally, high prices would indicate high liquor taxes, resulting in substantial revenues that could be directed toward government programs to address alcohol's externalities. But this clearly has not been the case in post-privatization Alberta. Indeed, in 1994, liquor tax rates were actually reduced. Despite the fact that tax rates are not adjusted for inflation and so are subject to continual depreciation, they since have been increased only once, in 2002.

Low taxes are an Albertan staple, and the province's ruling Progressive Conservative party is ideologically opposed to raising taxes. Liquor privatization has introduced a new political actor also interested in maintaining low taxes on alcohol: the private retailer. In their pursuit of maximum profit, private retailers have an economic interest in facilitating higher consumption, which would be impeded by any increase in liquor taxes.[13] Essentially, through privatization, the Alberta government created a new political actor likely to lobby the government for precisely the sort of tax policy to which the government is ideologically predisposed.

Close relations between the Alberta government and private liquor retailers are evident in a number of ways. Premier Ed Stelmach instituted an increase to mark-ups in the 2009 budget, projecting this would result in an additional $180 million in the first year of implementation alone.[14] But Stelmach rescinded on the increase after just three months. The executive director of the Alberta Liquor Store Association (the retail industry's main representative) was quoted as being "extremely pleased" with the decision and admitted to lobbying the government over the issue.[15] A long-time representative of the liquor industry in Alberta, Jim Hansen, has since become one of the seven members of the board of the ALGC, which regulates the province's private retailers.

Political ideology and the economic interests of the retailers suggest low liquor taxes will continue to prevail in Alberta. Left out of this picture, however, is the public interest. High liquor prices without high liquor taxes indicate a loss of public revenue. Currently, the people of Alberta are missing out on as much as $150 million in annual revenue from misguided liquor policies. This revenue could provide substantial funding for public services such as health care that are burdened by alcohol's externalities.

Alcohol's Externalities

Alcohol consumption involves an array of costs not captured in the transaction between retailer and consumer. In economic theory, these are termed externalities. External costs related to alcohol include those associated with lost productivity, health care, and law enforcement. Without due consideration of the broader costs incurred through the consumption of alcohol, it is easy to view increased liquor sales as a source of additional government revenue. In the context of a more complete assessment of the costs of alcohol consumption, the situation can appear quite different. A thorough cost-benefit analysis of a government's alcohol policy depends on the assessment of relevant externalities.

In 2002, the latest year for which calculations are available, researchers estimated that alcohol consumption cost Canadians $14.6 billion per year in social costs, almost twice as much as social costs related to illegal drugs.[16] The Alberta Alcohol and Drug Abuse Commission found alcohol consumption to cost the public $1.6 billion annually.[17] In per capita terms, Alberta had the third highest alcohol-related externalities among the provinces, behind New Brunswick and British Columbia. The province's per capita cost of $527 was significantly above the Canadian average of $463.[18]

As is common practice in estimating the economic cost of illnesses, the studies cited above include in their calculations of externalities the 'indirect costs' to economic production due to workers prematurely exiting the workforce. Although economic disruption due to alcohol-related disabilities and mortalities is real, accurately quantifying the impact to economic production is difficult. Debate continues among academics in the field as to the most appropriate method. The Canada-wide study found that even with these particularly hard-to-measure costs excluded, Canadian alcohol-related externalities still amounted to $7.5 billion in 2002.[19]

Logically, the price of alcoholic beverages would be such that the government revenue collected through sales would at least cover the related social costs. With this benchmark in mind, it appears that liquor taxes in Canada are too low. Nationally, total government revenue from 2002 alcohol sales was $3.9 billion. Recall that related social costs for that year have been estimated at between $7.5 and $14.6 billion. In 2002, simple arithmetic makes clear that government liquor revenue accounted for only 27-52% of the social costs. This means that the liquor trade actually cost Canadians between $3.6 and $10.7 billion in 2002 alone.[20]

In Alberta, the cost of alcohol abuse was found to be $1.6 billion, or $592 million with the exclusion of the hard-to-measure indirect productivity losses. With provincial revenue from 2002 liquor sales totalling $499 million, the liquor market represented a net loss to the province of between $93 million (excluding indirect productivity losses) and $1.1 billion (including indirect productivity losses). In British Columbia, a report for the Provincial Health Officer found that, excluding the productivity loss due to alcohol, in 2002 the province lost nearly $62 million from the sale of alcohol.[21] As sales and consumption have increased in Canada since 2002, the associated costs — and so the overall financial burden on the public — has no doubt increased.

Researchers have sought to separate those costs that generally accompany even a well-regulated liquor market and those that can be eliminated through responsible policy. A recent study found that, if they had been applied to the 2002 situation, six policies designed to reduce alcohol consumption and limit harmful outcomes from drinking could have saved Canada $1 billion, including $230 million in health care savings and $178 million in crime-related costs.[22] In the context of estimates that place 2002 social costs related to alcohol between $7.5 and $14.6 billion, it is clear that, even with responsible policy,

Canadians would continue to shoulder substantial external costs related to alcohol consumption.

So far as retail privatization facilitates greater alcohol consumption or blunts the effectiveness of policy interventions designed to reduce consumption, the social burden of the alcohol market is increased. Indeed, a recent study estimated that if all Canadian provinces privatized their liquor retail sector, consumption would likely increase by at least 10%. Based on 2002 figures, this would mean additional externalized costs of $828 million in total, with $360 million in direct health care and criminality-related expenses alone.[23]

Market Development

A privatized liquor retail market is very likely to evolve into an 'oligopoly', where only a few large corporations dominate and are able to exert monopoly-like power. Local, independent liquor retailers would likely find it difficult to compete. An oligopoly would have the supposed disadvantages of a monopoly, high prices and restricted supply, but lack the major advantage of public ownership, profits that flow in to public coffers. Money that might have been used to compensate for the external costs associated with alcohol consumption would thus line of the pockets of a few large liquor retailers.

In Alberta, market evolution was delayed somewhat by a policy that required alcoholic beverages to be sold in liquor-only, stand alone stores. By restricting sales in food outlets, the policy delayed the ability of the large grocery chains to quickly establish a dominant hold on the retail industry by making it impossible for them to simply begin stocking liquor on their existing shelves. Instead, separate stores had to be built to handle alcohol sales.

But even with this policy, Alberta has seen a substantial increase in the relative presence of large chain stores. For instance, in 2003, only a decade after privatization, chain stores represented 13.5%, or about a seventh, of all retail stores in Alberta. Today, led by the vast and profitable Liquor Stores NA,[24] the percentage share of the chain stores has increased to 28.7%, representing nearly a third of all retail stores in the province (see Table 4). These province-wide figures tend to mask the much greater hold chain stores have in urban centres. Even so, these calculations reveal that the large chain stores have more than doubled their share of Alberta's liquor retailing in less than a decade.[25] As expressed in 2008 by the owner of a small chain of retail stores in Alberta, the province's liquor retail market is one where "[t]he big fish are eating up the little fish."[26]

Table 4. Presence of Large Chain Stores in Alberta's Liquor Retail Sector[27]

Company	Stores (#)	Share of Alberta's Retail Outlets (%)
Loblaws–Real Canadian Liquor Stores	34	2.7
Sobeys–Western Cellars	29	2.3
Calgary Co-Op	21	1.6
Safeway	10	0.8
Costco	9	0.7
Aristocrat	10	0.8
Liquor Town	11	0.9
Crowfoot Wine and Spirits	11	0.9
Solo Liquor Holdings Ltd.	17	1.3
Rocky Mountain Liquor Co.	41	3.2
Liquor Stores NA Ltd.[28]	174	13.6
Total	**367**	**28.7**

If Alberta is indeed moving toward an oligopoly in which a few firms will dominate the market, it is unclear how, from the consumer's perspective, the situation will differ substantially from the public monopoly that was in place prior to privatization. The exception, of course, being that substantially less liquor-tax-derived revenue will be available to compensate for liquor consumption's externalities.

Liquor Privatization and Public Health

As a mind-altering and dependence-producing drug, alcohol contributes to a wide range of social problems. From fetal alcohol spectrum disorder, chronic diseases, and liver cirrhosis to drunk driving, suicide, homicide, domestic violence, and various crimes, alcohol is, according to the World Health Organization (WHO), "a major global contributing factor to death, disease, and injury".[29] Worldwide, alcohol abuse is estimated to cause 2.5 million premature deaths every year, and is the world's leading risk factor for death among adult males.[30] In North America, alcohol consumption has been found to result in a reduction in life expectancy similar in extent to that related to tobacco use and high blood pressure. Reduced life expectancy related to alcohol use is far more pronounced than reductions related to physical inactivity or illicit drug use — even after accounting for the health benefits accruing from moderate levels of alcohol consumption.[31] In general, when accounting for drinking patterns, increased per capita consumption leads to higher levels of alcohol-related harms. Moreover, alcohol consumption levels and patterns influence social cohesion through the relation between alcohol and assault, public disorder, and perceptions of public safety.

Responsible public policy aims to regulate the distribution of alcohol so as to minimize the social harms resulting from its use while generating sufficient government revenue to compensate for the cost of addressing what harms remain.

Decades of international research has led to a clear understanding of the efficacy of various regulatory measures in reducing alcohol-related harms. Alcohol taxes, minimum legal drinking ages, limiting outlet density and hours of operation, and other targeted approaches are widely cited as the policies most capable of controlling alcohol consumption and associated problems.[32]

The extent of the social burden from alcohol consumption and abuse makes the regulation of liquor markets a major public policy issue. Accordingly, the WHO considers alcohol an important topic of study and emphasizes the benefits of government policy designed to prevent alcohol abuse. Similarly, in 2007, the Canadian government commissioned a working group of health experts and federal and provincial bureaucrats to establish a national strategy for addressing the ongoing social and health problems related to alcohol consumption.

The following section describes some of the key policies found to be successful at controlling alcohol-related harms and comments on how privatization can and, in specific cases, has influenced their effectiveness. Additionally, privatization's impact on the Alberta government's ability to regulate the alcohol products available in the province is explored. Finally, some direct evidence of the health implications of privatization in Alberta and British Columbia is considered.

According to the WHO, some of the most effective ways of reducing alcohol-related harms is through policies that regulate liquor's availability, in both the economic and physical sense. Similarly, a major part of Canada's National Alcohol Strategy is to "implement and enforce effective measures that control alcohol availability."[33] Such measures include increasing the

price of alcoholic beverages through imposing higher alcohol taxes, reducing the convenience of purchases through lower retail density and limitations on store hours, and placing the control for such decisions in the hands of government. The WHO has ranked these policies and others in terms of their effectiveness and the quality of evidence that indicates they work (see Table 5).

The WHO also includes public ownership of retailing as an important liquor policy with convincing evidence. Public health organizations in Canada also recognize the importance of a government-owned liquor market.[35] Along with the empirical evidence, a central reason for this conclusion is the absence of the profit-motive in a publicly-owned retail sector. As researchers with the Centre for Addiction and Mental Health state, "[u]nder a privatized system there are strong incentives to deregulate alcohol controls and focus on the business side at the expense of public health and safety considerations." The paper goes on to acknowledge that, while it is theoretically possible to have a private system that places high priority on public health and safety, "the dominance of the profit motive with the potential for business failure means a number of mechanisms work against this possibility in a privately run system."[36] As a result of the profit-motive, other key liquor control policies are eroded, such as restrictions on outlet density, hours of operations, and enforcement of a minimum purchasing age.

Certainly, a public monopoly is not immune to the temptation to achieve greater revenue through increased sales. Indeed, some public health advocates have expressed concern that public monopolies in Canada are increasingly adopting practices that emphasize facilitating sales at the expense of public health objectives.[37] Even in cases where the public system has operated in ways that approximate the privatized market, there are two key differences. First, the mandate

Table 5. Summary of the Evidence of the Effectiveness of Alcohol Policies[34]

Character of Evidence	Evidence of action that reduces alcohol-related harm	Evidence of action that does not reduce alcohol-related harm
Convincing	• Alcohol taxes • Government monopoly of retail sales • Restrictions on outlet density • Restrictions on days and hours of sale • Minimum purchase age • Lower legal BAC levels for driving • Random breath-testing • Brief advice programmes • Treatment for alcohol use disorders	• School-based education and information
Probable	• A minimum price per gram of alcohol • Restrictions on the volume of commercial communications • Enforcement of restrictions of sales to intoxicated and under-age people	• Lower taxes to manage cross-border trade • Training of alcohol servers • Designated driver campaigns • Consumer labelling and warning messages • Public education campaigns
Limited-suggestive	• Suspension of driving licences • Alcohol locks • Workplace programmes • Community-based programmes	• Campaigns funded by the alcohol industry

and policies of a government monopoly are open to public scrutiny in a way that the retailer dynamics that animate a private market are not. Second, should the public deem the government to have acted inappropriately, its mandate and policies are relatively easily amended. For instance, if a government monopoly has disregarded public health in its quest for profit, a public expression of dissatisfaction could lead directly to a change. In contrast, in the context of a private market, the profit motive is inherent and difficult to attenuate.

Examples of the difficulty in successfully serving public ends through a privatized liquor retail market are provided below.

A key determinant of overall alcohol consumption is availability.[38] Availability can be measured both economically (for example, the price of alcohol relative to disposable income) and physically (for example, retail store density and hours of service). Saskatchewan's marked increase in consumption from 2005 onwards coincides with a sharp rise in average income in the province — 18% between 2005 and 2010, compared to 13% in Alberta and 8% in BC.[39] Average consumption in Alberta and BC has trended upward along with the expansion of private retailers. While some research indicates that economic availability is more influential than physical,[40] the overall pattern is clear: if liquor is cheaper and easier to find, more will be consumed.

Economic Availability

Consumers respond to changes in the price of alcohol as they do to changes in the price of any consumer product. That is, a reduction in price leads to increased consumption, and vice versa. Indeed, consumer responses to changes in the price of liquor are found to be consistent across jurisdictions, when controlling for overall consumption levels, beverage preferences and time period. Policies that increase alcohol prices delay the age when young people start to drink, slow their progression toward drinking larger amounts, and reduce their heavy drinking and the volume of alcohol drunk on each occasion. Price increases reduce the harm caused by alcohol, which is an indicator that heavier drinking has been reduced.[41]

To more fully understand the impact of taxes on alcohol consumption, it is important to understand the economic concept of price elasticity. Economic theory includes the Law of Demand, which holds that demand for a good decreases (increases) as the price of that good increases (decreases). Price elasticity allows for a more refined understanding of the relationship between a given commodity's price and its demand by measuring the precise change in demand in response to a change in price. Specifically, price elasticity is the ratio of the percentage change in demand for a good to the percentage change in the good's price. A high value signifies that demand is very responsive to a change in price, whereas a low value means demand in less responsive to a change in price. As such, price elasticity reveals the extent of the Law of Demand's impact for a particular good.

The demand for alcohol is found to be relatively price inelastic, meaning demand is less responsive to price changes. According to a recent meta-analysis of 132 academic studies on elasticities related to alcohol, the median price elasticities for beer, wine, and spirits are 0.36, 0.7, and 0.68, respectively.[42] Another meta-analysis of 112 studies reports similar findings.[43] These figures mean that if the price of items in these categories increased by 1%, demand would fall 0.36% for beer, 0.7% wine, and 0.68% for spirits. Or, if a 10% unit tax was levied on wine that previously cost $10, the new price of $11 would bring a fall in sales of 7%.

The price inelasticity of alcohol means that increasing alcohol taxes can reduce alcohol consumption and associated harms while also

increasing government revenue. If demand for alcohol was price elastic, a small increase in tax would lead to a drastic, unwarranted decline in demand. Alcohol's price inelasticity allows for a moderation of consumption from higher prices, and higher taxes can translate into higher overall government revenue. Continuing with the example above, if a 10% tax leads consumers to purchase 1,000 bottles of $11 bottle of wine, government revenue would be $1,000 ($1 multiplied by 1,000 bottles). If the tax increased to 20% and new price for the wine was $12, sales would decline to 860 bottles but government revenue would more than double to $2,064. Responsible government policy would recognize the social benefit in setting alcohol taxes so that more revenue was collected on a lower volume of sales — reducing the social burden of alcohol consumption while simultaneously raising the necessary revenue to afford the required health and social programs.

Such a policy has been pursued in Saskatchewan. In 2010, the provincial government made changes to its mark-up structure that marginally increased the price of most alcoholic beverages. By the following year, the province reported its first decline in total sales in at least four years while government revenue continued to increase. Specifically, compared to the previous year, the province earned an additional $9.4 million in 2011 despite a decline in sales of 135,000 litres of pure alcohol.[44]

Recent research has shown that the ability of alcohol taxes to reduce consumption is diminished in a privatized market. This is because the full price to the consumer of an alcoholic beverage is more than just the dollar figure. It also includes several other factors such as time and inconvenience. Because a privatized market is generally characterized by a sharp rise in the number of liquor retailers, there is a reduction in the time and inconvenience involved in accessing alcohol. This reduction serves to diminish the influence of a marginal change in the dollar price.[45]

Another price-related strategy to reduce alcohol consumption, and in particular high-risk types of alcohol consumption, is regulating a minimum price below which alcoholic beverages cannot be sold. High-risk drinking and intoxication are fuelled by the availability of inexpensive alcohol. A price floor works to target low-quality, discount products, thereby acting as a deterrent to binge drinking. An empirical analysis of BC's minimum prices on alcohol consumption between 1989 and 2009 found them to be an effective means to control consumption. Specifically, the study found that a 10% increase in the minimum price of each product category reduced spirit consumption 6.8%, wine consumption 8.9%, and beer consumption 1.5%, as well as overall consumption by 3.4%. Although the impact on beer appears negligent, BC's minimum price for beer was set at a level that may have been too low to be effective.[46] Similar studies in Saskatchewan have produced consistent findings.[47]

Alberta is one of the only provinces in Canada without a minimum pricing policy in retail stores. The absence of a regulated price floor allows private liquor retailers to offer certain products at heavily-discounted prices. It is common in Alberta to see advertisements for alcohol products listed at "door-crasher" prices. "Door-crasher" specials feature loss-leaders, products sold below cost in order to bring customers into the store, where they might then purchase other products with larger profit margins.

Physical Availability

What effect, if any, does privatization have on physical availability? The cases of Alberta and British Columbia both show that following major policy shifts toward privatization, the number of liquor outlets rose dramatically. In Alberta, there were 208 government stores in the province prior to privatization in 1993. By January of 2011, there were 1,240 private retail liquor stores.[48] In British

Columbia there were 786 total liquor outlets in 2002, prior to the lifting of the ban on new private stores. By 2011 there were a total of 1,383 liquor outlets,[49] with the vast majority of additional outlets being private stores (Table 6). These examples are typical: two major recent literature reviews have found that liquor retail privatization leads to a substantially higher number of outlets.[50] The story is somewhat different in Saskatchewan. While the province's outlet density is high, likely due to its small, largely rural population, density has decreased over the last nine years.

Another way to manage physical availability is through limiting the open hours of retail stores (Table 7). In Saskatchewan, the government-owned retail stores are open from 9:30am to 9:00pm Monday through Saturday and from 12:00pm to 5:00pm on Sundays. BC's government stores maintain the same hours except they remain closed on Sundays. BC private retail stores are allowed to be open until 11pm. In Alberta, outlets are allowed to remain open from 10:00am until 2:00am. Additionally, whereas Saskatchewan and BC stores remain closed on most holidays, many Alberta stores are open 364 days of the year. The difference becomes clear through a summing of open hours. Government liquor outlets are restricted to 74 hours per week in Saskatchewan and 69 hours per week in British Columbia. Private stores are open for 83 hours per week in BC and 112 hours per week in Alberta. Additionally, Alberta's hours are further extended because of the tendency of retailers to disregard holidays observed elsewhere. Again, the expansion of operating hours in the wake of privatization in Western Canada reflects a trend that has been identified in the wider research literature.

Table 7. Hours of Alcohol Availability per Week in BC, Alberta, and Saskatchewan

Province	British Columbia		Alberta	Sask.
Type	Public	Private	Private	Public
Hours Per Week	69	83	112	74

Retail Store Locations

Physical accessibility of liquor can be directly managed under a public monopoly. In this situation, government is able to decide the number, size, and location of retail outlets in an area. Future population growth, rising demand, or revenue considerations can be incorporated into a comprehensive retailing plan. Government is well-positioned to assess a broad array of factors, including but not limited to profitability, that may bear on the appropriateness of establishing a liquor outlet in a particular community.

In contrast, a private retail system leaves the planning of retail outlets to the discretion of the market. In this situation, physical availability is determined largely by private expectations of profitability. Broader public considerations may be excluded from the equation. The massive expansion of liquor retail outlets in Alberta after privatization has created a long-standing conflict between liquor retailers and community members. From 1993 through to the present, municipalities and neighbourhoods, particularly in major urban centres, have been forced to continually rebuff attempts by developers to site

Table 6. Changes in Physical Availability in BC, Alberta, and Saskatchewan

Province	British Columbia		Alberta		Saskatchewan	
Year	2002	2011	1993	2011	2002	2011
Total # of Stores	786	1,383	803	1,959	761	718
Population	4,076,264	4,573,321	2,667,292	3,779,353	996,801	1,057,884
Retail Density per 100,000	19.3	30.2	30.1	51.8	76.3	67.9
% Increase	**56.83%**		**72.18%**		**-11.10%**	

liquor stores in what were deemed inappropriate places, such as near schools, parks, within residential areas, or too close to other retailers.[51] One particularly egregious situation saw a community organization in Edmonton obliged to undertake a seven-year court battle to stop a company from using a zoning technicality to override the City's bylaw restricting the density of liquor retailers.[52] Certainly, not all communities have the capacity to undertake the sort of battle that may be necessary to ensure liquor sales occur in ways consistent with community values.

Liquor Law Compliance and Enforcement

A privately-owned liquor store, like any other private business, is governed by the profit motive. As at least two Alberta-based liquor store companies have found, selling liquor can be an extremely profitable business.[53] But like any enterprise, liquor retailing carries risks. Less fortunate retailers, those who fail to achieve sufficient profit, run the risk of bankruptcy or buy-out.

Liquor retailing driven by the profit motive can become problematic when it conflicts with regulations designed to minimize the social problems associated with liquor consumption. Canadian society has seen fit to maintain laws intended to make alcohol unavailable to minors and to limit public intoxication. To a private retailer, however, minors and intoxicated individuals are potential customers. The profit motive may encourage private retailers to sell cheaper, illegal sources of alcohol or otherwise skirt laws designed to control its flow. For instance, it was recently revealed that one of the two speciality wine stores operating in Saskatchewan had been importing wine from Alberta in violation of the store's contract to secure its supply from the provincial liquor agency, thereby bypassing measures to ensure provincial taxes were collected.[54] Private liquor retailing creates a conflict between the individual retailer's drive for profits and the broader community's desire to limit liquor availability.

The issue of illegal sales of alcohol to minors reflects some of the problems that can ensue from the privatization of liquor sales. Government documents from Alberta and British Columbia allow us to assess the relation between privatization and sales to minors. Many Albertans, including municipalities and provincial police forces, were concerned that privatization would lead to increased illegal sales to minors. The Edmonton Police Service kept statistics at the time documenting the frequency with which their officers found minors in possession of alcohol. They found that such incidents more than doubled between 1993, the year privatization began, and 1996. The police spokesperson at the time explicitly identified the newly-introduced profit motive as a factor in the increase, explaining that restrictions on sales had been more "comprehensive" under the public system.[55] In 2000, Wayne Henuset, owner of a large-scale chain of liquor stores and Treasurer of the industry's lobby arm, Alberta Liquor Stores Association (ALSA), expressed concerns about widespread violations of the provincial Liquor Act. As this industry-insider put it, "[w]e turn somebody away, but then they find a store that needs money so much they'll sell to anybody — a drunk or a teenager, it doesn't matter…Do you think they can afford to turn away somebody with money to spend? They can't…This is just wrong. You cannot control the industry when that happens."[56] While ALSA refuted the validity of Henuset's assertion, and recognizing that Henuset potentially stood to gain from disparaging the practices of his competition, it is nevertheless striking that a well-positioned private retailer expressed concerns parallel to those put forth by critics of privatization.

Liquor Sales to Minors in Alberta

In jurisdictions with private liquor retailing, governments find themselves caught between the fact, on the one hand, that control of sales in a private market requires stringent enforcement and educational campaigns and the fact, on the other hand, that such measures are expensive and substantially increase the cost of managing the retail industry (and therefore decrease the government's net revenue). The Alberta government found itself in exactly this predicament following its decision to privatize its liquor retail operations. It initially adopted a lax approach toward regulating the province's liquor industry, one that reflected ideological commitment to some key tenets of neoliberalism: industry self-regulation and 'small government.'

Longstanding controversy over liquor sales to minors came to a head in early 2002 when a major news network sent minors undercover to attempt to purchase liquor at five separate retail stores and found that all of the retailers failed to ask for identification. In response, the Alberta Gaming and Liquor Commission (AGLC) sent a letter to all liquor vendors reminding them of their legal obligation to ask all individuals appearing under the age of 25 for identification. The letter referenced the consequences for failure to comply. The AGLC also contracted their own study to determine the level of compliance with liquor laws at Alberta liquor stores. Of 255 liquor stores visited, only 47 required identification prior to alcohol purchase, resulting in an 18% compliance rate. All the major liquor industry associations, including the Alberta Liquor Store Association (ALSA), had been warned in advance of the upcoming audit.[57] Not even advance notice had been sufficient to ensure a respectable rate of compliance. A couple of months later, the same TV network followed up on their story by sending an 18 year old into the same five stores previously visited and found that four once again failed to ask for identification.[58] Considering that over this period the AGLC was officially reporting near-perfect compliance rates in its annual reports,[59] it would appear that the period following privatization was characterized by a persistent failure to recognize or report (or both) widespread disregard for Alberta's liquor laws.

The situation in Alberta may reflect a particularly egregious example of the lax enforcement that may occur under privatization. Indeed, it appears that, post-privatization, the AGLC adopted a minimal enforcement program that was largely reactive, rather than proactive, since investigations were only initiated based on complaints.[60] In a transaction between a profit-seeking retailer and a liquor-seeking minor, what is the likelihood either satisfied participant would choose to file a complaint? Beyond reactive investigations, enforcement efforts appear to have been limited to advertising the obligation of licensees to request identification from anyone appearing under the age of 25. Apparently, the Alberta provincial government was satisfied with industry assurances "that they could ensure liquor was sold in a socially responsible manner including keeping liquor out of the hands of minors."[61]

It was only after the broadcast of embarrassing news stories that the AGLC increased its enforcement efforts. New measures included an extensive educational campaign directed at private retailers, the creation of a new "Social Responsibility" division, the establishment of routine audits to assess compliance, and a much higher overall budget for its liquor operations. According to the AGLC, these new measures worked. After reporting a compliance rate of 23% in 2002, the compliance rate averaged 80% between 2003 and 2006.[62] While any improvement is certainly good news, there is cause here for some scepticism. As the AGLC adopted a system of routine audits, so did it undertake far larger efforts to warn liquor retailers. Indeed, the AGLC continues to inform all

major industry associations and each individual business of the upcoming audit and the months in which it should be expected, which remain the same every year.[63] In the absence of the element of surprise, the AGLC may be assessing the willingness of liquor retailers to respond to a specific warning, rather than the likelihood that minors are able to illegally access alcohol. Clearly, a more robust monitoring system would seek to capture normal, day-to-day behaviour, which would be more likely in the absence of concerted efforts to provide specific and repeated warnings to retailers.

Regardless of their efficacy, these new enforcement measures came with new costs. While specific costs for each program are not available, the AGLC reported higher operating costs related to its liquor operations in the years with improved compliance rates. Indeed, between 2001 and 2006, liquor-related operating expenses at the AGLC increased 59%, despite liquor sales increasing only 29% and the number of private retailers increasing only 12% (Table 8).[64] In comparison, over the five years preceding new enforcement measures, the AGLC's overall operating expenses only increased 4%, from $67 million to $70 million.[65]

Table 8. AGLC's Operating Expenses

Year	Sales ($K)		Retailers		Operating Costs ($M)	
		increase (%)		increase (%)		increase (%)
2001	945,248		1,531		8	
2003	1,085,260	12.90	1,619	5.44	13.9	42.45
2004	1,157,978	6.28	1,665	2.76	15.1	7.95
2005	1,229,457	5.81	1,713	2.80	16.4	7.93
2006	1,326,026	7.28	1,743	1.72	19.3	15.03
Total		28.72		12.16		58.55

Alberta's experiences in controlling alcohol sales to minors highlight a key challenge to enforcing liquor laws under a privatized retail system. In such a system, the profit-motive ensures retailers are driven to maximize their sales. In contrast, community well-being demands that alcohol sales be restricted in order to limit the social harms linked to alcohol consumption. In the context of lax enforcement by a provincial government ideologically disposed to industry self-regulation and small government, a situation conducive to widespread abuses of liquor laws is created. Counteracting this inherent conflict of incentives — maximizing sales while not selling to certain individuals — is possible, but the significant costs related to doing so serve to reduce the government's net revenues derived from alcohol sales.

Liquor Sales to Minors in British Columbia

From the beginning of British Columbia's privatization initiative, the government found serious compliance problems at the province's private retail stores. The British Columbia Liquor Control and Licensing Branch (LCLB) performed five studies from 2003 to 2009, where four "very youthful" adults between the ages of 19 and 22 were hired to anonymously purchase alcohol from all types of liquor stores in order to measure the industry's compliance with the province's requirement that retailers verify the age of any purchaser appearing under 25.[66] Throughout these studies, the privately-owned liquor stores have achieved a maximum compliance rate of only 36% (Table 9). Moreover, the private stores failed to significantly improve their compliance rate over the five year period. In the first year of major privatization, compliance at the private stores was found to be only 15%, and by 2009 was still only 27%.[67] The private-stores averaged a compliance rate of 25%, or 1 in 4, while the government liquor stores averaged 63%. In 2011, the provincial government conducted another study measuring actual sale of alcohol to a minor rather than meeting age identification requirements, and found a much higher compliance rate in the private stores, 82%, and near-perfect compliance in the government liquor stores, 98%.[68]

Table 9. Percentage of BC's Liquor Retailers Compliant with Underage Drinking Laws

Year	Government Liquor Stores (%)	Licensed Retailers (%)	Rural Agency Stores (%)	Other (%)
2003	N/A	15	N/A	N/A
2004	57	27	13	5
2005	60	21	17	14
2008	77	36	24	20
2009	56	27	24	20
AVG	**63**	**25**	**20**	**15**

It is important to note that, with respect to laws prohibiting the sales of alcohol to minors, rates of compliance in BC are not directly comparable to rates of compliance in Alberta. A key difference is that liquor regulations regarding sales to minors in BC are more stringent than those in Alberta. BC's *Liquor Control and Licensing Act and Regulations* requires two pieces of identification to prove an individual is of legal drinking age, whereas in Alberta only one piece is required. LCLB's 2009 compliance sweep recorded the number of retailers who only asked for one piece and found significantly higher compliance rates (64% as opposed to 27% for private retail stores).[69] Moreover, the timing of the compliance sweeps fluctuates in BC and is static in Alberta, taking place at the same time every year. Further, whereas retailers in Alberta have regularly received written prior notification of the upcoming compliance sweeps, no such warnings are given out in BC, as the LCLB recognizes that such checks should be done "on a random basis".[70] Also, the legal drinking age in BC (as with most provinces) is 19 years old, while in Alberta it is only 18 years old.

The BC studies showed that public stores consistently had higher compliance rates than the private stores, often by a margin of 2 or 3 to 1. The public stores had an average compliance rate of 70%, compared to the private stores' average of 35%.[71] This means that, in each of the five years where a comparison is available, public stores more often than not asked for two pieces of identification. In contrast, with the exception of 2011, each year private stores fell significantly short of a 50% compliance rate. At the same time, and leaving aside a slip in 2009, the public stores showed continuous improvement in their performance. The private stores, on the other hand, remained relatively stagnant, failing to significantly improve their compliance rate.

In 2010, the BC provincial government amended the liquor laws to allow the state to hire minors as part of its enforcement strategy. This enabled the LCLB to legally charge offending stores identified during its compliance checks, rather than just remind those stores of their legal duties. Under this new program the LCLB has inspected a quarter of the province's private and public stores. Results to date have confirmed the pattern of private retailers selling liquor to minors more often than publicly-owned stores. Whereas only 2% of public stores failed to turn away the LCLB's undercover minors, 18% of the private retailers went through with the sale (see Table 9). In the case of the public stores, the 2% translates into 1 recorded instance of a sale to a minor, whereas 32 separate cases were identified with private retailers.[72] The report also notes instances where the requirement for identification and/or the likelihood of the customer being a minor was acknowledged by the sales clerk but was disregarded when the undercover minor was unable to present suitable documents.[73] Although it is unclear whether such instances occurred at the single violating public store or at the various violating private locations, it is obviously more likely to have occurred at the latter.

Preliminary results of enhanced enforcement efforts by the BC government indicate substantially improved compliance on the part of both public and private liquor stores. They also indicate that, even in the context of improved behaviour over all, public stores have nevertheless demonstrated a superior ability to uphold

liquor laws prohibiting sales to minors. Private retailers, those motivated by individual profit over public good, have not performed as well.

Liquor Sales to Minors in Saskatchewan

The Saskatchewan Liquor and Gaming Association (SLGA) has recently begun age compliance checks across the province using a similar method as in BC. This represents a change from the prior practice of occasional age compliance sweeps conducted in conjunction with police forces. Results are not yet publicly available.

Listing Policies

Low compliance rates and high enforcement costs are only part of the story of privatized liquor markets. Another aspect is the loss of capacity to regulate which alcoholic products may be sold. The consequences of such a loss were recently highlighted by a policing initiative in Edmonton, Alberta.

Alcohol was at the centre of a recent investigation into street violence in McCauley, a high-crime downtown area.[74] The initiative, called a Neighbourhood Empowerment Team, was jointly undertaken by the Edmonton Police Service and a social worker from the City of Edmonton. At the outset, the Deputy Police Chief noted that, "the research actually indicates the restriction of alcohol in certain areas of a community may, in fact, assist in being able to reduce violence within that community."[75] In McCauley, the Team found that violence was linked to public intoxication, or "over-service", which they linked to the consumption of "high percentage, large volume alcohol." Known colloquially as 'forties' because of the 40 fluid ounces bottles in which they are sold, such products have an alcohol percentage upwards of 7%, reaching as high as 11%. As noted by Kris Anderychuk, the social worker involved in the Team, a single 'forty' contains the same amount of alcohol as seven regular-strength beers (341mL at 5%).[76] 'Forties' could be found in McCauley for around $5.[77] Taking into account the alcohol content and local cost, the McCauley consumer is paying only $0.72 for each beer equivalent. The marketing of such products amounts to a form of "predatory retailing", under which individuals vulnerable to alcoholism are exploited for profit.

Edmonton police publicly announced that, through an appeal to the AGLC, they had sought provincial government support in addressing such 'predatory retailing.' But action to restrict the availability of alcohol was nevertheless deferred to the corporate sector. The culmination of the Neighbourhood Empowerment Team's work in McCauley was the 17 February 2012 announcement by Molson-Coors that the sale of "Black Label", its widely-consumed forty, would be discontinued in Alberta.[78] Removing Black Label from the shelves was certainly a laudable move. It should be noted, however, that while Black Label was the drink of choice for 45% of those found by the Team to be drinking in public,[79] it was not the only such product available in Alberta. According to the AGLC, there are currently 12 similar products on the market in the province.[80] Even without a favoured product, in the absence of effective government regulation, 'predatory retailing' continues.

A producer of several problematic alcohol products, including two of the most popular among those interviewed in McCauley, is a Calgary-based brewing company called Minhas Brewery. On the company's website, the owners praise Alberta's privatized liquor system for allowing easier introduction of new alcohol products. Indeed, since privatization in 1993, the number of liquor products available in Alberta has grown from 3,300 to 15,929 in 2011. Even though the small size of the average retail store means that most carry but a fraction of all available products, the AGLC promotes this

increase as a sign of privatization's success. But does facilitating the introduction of new alcohol products necessarily serve the public interest? A centralized body regulating the liquor supply could potentially guard against the introduction of harmful or exploitative products, such as 'forties.' Society would then be spared the public-health costs related to alcohol abuse. Vulnerable individuals would be protected against 'predatory retailing.' The public good could be favoured over private profit. While Molson-Coors is to be applauded for its decision to consider the public interest along with corporate profits, the fact remains that an array of 'forties' can still be found on Alberta shelves. The Molson-Coors example ultimately better illustrates the many failures, rather than the lone success, of industry self-regulation.

Another outcome of the Team's efforts in McCauley was an educational campaign to inform both vendors and customers about the potency of the high-percentage, large volume drinks, as alcohol equivalency is not included on the products' labels. Called the "1=What?" campaign, efforts included distributing posters and small stickers to be put up in local liquor stores. Of the four local retailers, it is revealing that one chose not to participate out of concern that the materials would dissuade potential customers from making a purchase, which, of course, was precisely the intent of the program.[81]

Even prior to privatization, the Alberta government exhibited an unwillingness to curtail sales in deference to public-health concerns.[82] While the ALCB was responsible for determining which liquor products were available in the province, the official listing policy emphasized economic criteria in deciding whether to list particular products. Sales history and supply potential were stressed. There were no explicitly public health related selection criteria.[83] Alberta has long suffered under a liquor market that, even prior to privatization, failed to consider broad social criteria in decision-making over which products to allow on the province's shelves. Even prior to privatization, profit eclipsed other criteria. While Alberta practices may have brought more products to the liquor stores, offering more choice to consumers, examples of 'predatory retailing' make clear that consumer choice was purchased at an exorbitant social cost.

Measuring the Social and Health Repercussions of Retail Privatization

As gradual incursions of private interests into the liquor market or outright repeals of public monopolies have become more common across North America and elsewhere, the potential role of privatization in aggravating the social repercussions of alcohol abuse has increasingly come under study. Using long-term data on the frequency of certain events associated with alcohol, researchers have sought to determine if there is a significant statistical association between these events and policy decisions favouring privatization or liberalization of liquor controls. Sophisticated statistical models are often employed in order to produce refined and accurate conclusions. To date, such studies focusing on Canada have analyzed suicides, drinking and driving deaths, and alcohol-related deaths, with differing results.

A 2007 study into the effect of liquor privatization on suicide rates in Alberta found a significant relation. The authors characterized privatization as a three-stage process beginning with the opening of private wine stores in 1985 and culminating in the mass-privatization completed by 1994. In conclusion, the authors state, "Each of the three stages of privatization was associated with a significant increase in male and female suicide mortality rates, with the single exception of female suicide mortality rates following the 1994 privatization

event. The majority of these effects were best characterized as temporary, but for males and females the 1985 change was associated with a permanent increase."[84]

An earlier study into the impact of Alberta's privatization on drinking and driving fatalities in the province concluded that there was no evidence of negative repercussions. Study authors asserted that, "privatization of total sales had no significant net effect on the number of fatal traffic crashes in the province."[85] As the authors note, drinking and driving fatalities across Canada had been declining sharply since the 1970's, and Alberta followed this national trajectory. However, other researchers note that over the time-period analyzed in the study, several new anti-drunk driving initiatives were implemented in the province which may have dampened any potential effects of privatization.[86] Further, the major increase in outlet density meant that intoxicated individuals driving to and from a liquor store generally had less distance to travel, which may have diminished the likelihood of being apprehended.

A recently published study on British Columbia's 2003 move to vastly increase the role of private liquor retailers in the province found a link to a significant increase in alcohol-related deaths. Using an advanced statistical analysis, the researchers were able to determine that between 2003 and 2008, every additional private liquor retailer per 1,000 residents aged 15 or over "increased local alcohol-related mortality by 27.5%." Or, put another way, "a 20% increase in private store density increased local alcohol-related mortality by 3.25%."[87] Moreover, the report also found that an increased proportion of private to public liquor retailers was also linked to increased rates of alcohol-related deaths.

These few studies notwithstanding, most academic research into liquor privatization does not include an analysis of public health implications. Nor does most public health research on alcohol focus on retail privatization. However, privatization is associated with increased alcohol consumption, and there is substantial literature on the public health implications of rising consumption levels.[88] Insofar as it is established that privatization leads to increased consumption and that increased consumption leads to public health impacts, it is possible to make some preliminary claims about the public health impacts of liquor privatization.

A major Swedish research project, Canadian Alcohol Experiences and Nordic Perspectives, analyzed the relationship between alcohol consumption in Canada over the second-half of the 20th century and various public health indicators. In total, the research found a general correlation between average per capita consumption and various types of deaths, including those specifically alcohol-induced,[89] those due to liver cirrhosis[90] and accidents,[91] suicides,[92] homicides,[93] as well as overall death rates.[94] The impacts were often quantified in relation to a one litre per capita increase in pure alcohol consumption, so that for Canada, for instance, a one litre increase was found to be associated with a 30% increase in deaths due to alcoholic liver cirrhosis,[95] a 4% increase in suicides,[96] a 1.7% increase in total moralities,[97] as well as an additional 7.8 accidental deaths[98] and 21 homicides for every 100,000 individuals.[99] These studies clearly indicate that alcohol is a major public health concern. Policies that lead to increased consumption levels carry serious repercussions for individuals and society.

Conclusion

Government liquor policy has major economic and social implications. Alcohol is described by the World Health Organization as "a major global contributing factor to death, disease, and injury."[100] Alcohol has affected the lives of countless Canadians in devastating ways. Federal and provincial governments in Canada expend enormous amounts of resources in their attempts to address some of the negative outcomes of alcohol use and abuse. Think, for instance, of longstanding, nation-wide programs to address drunk driving and fetal alcohol spectrum disorder. The public resources invested in managing liquor and its social effects mean that whether one is an alcoholic, a casual consumer, or an abstaining member of the public, alcohol consumption and government liquor policy affect everyone. Even non-drinking Canadians are part of a society that has an alcohol problem.

As a widely and frequently consumed drug, societies around the world have deemed alcohol a substance in need of public control. Prohibition has proved ineffectual, impossible to enforce and likely more costly to society than controlled access. Therefore, the public mandate in the production, distribution, and sale of liquor products is to limit access (both economically and physically), to collect revenues to compensate for the attendant social costs, and to educate the public about the negative consequences of consumption.

The question, then, is how to best to fulfill this mandate. The evidence provided in this study indicates that a public monopoly of liquor distribution provides the most effective mechanism for rationally managing the consumption of liquor. That is, a public monopoly is most capable of maximizing the economic return to the public purse while limiting social harms and their costs. A monopoly provides the greatest efficiencies in distribution, allowing maximum revenues to accrue to government from any pricing policy. A publicly-owned monopoly ensures that the difference between wholesale cost and retail price — profit — goes directly to government coffers. A major example of the benefits of the monopoly system was the recent experience in Saskatchewan, where the provincial government implemented an increase in liquor prices, which simultaneously led to a decrease in consumption and an increase in government revenue. Government can use the profits from liquor sales to offset the extensive social costs generated by alcohol consumption. Moreover, a government monopoly grants the liquor authority full control over product pricing and the number and location of retail outlets. Given that these factors significantly bear on alcohol-related harms, this authority provides government with another mechanism through which to reduce social costs.

As shown in this report, loosening controls on alcohol availability through measures such as retail privatization increases the risk of increased alcohol-related social harms while minimizing government's ability to raise necessary revenue from liquor sales. In Alberta, high prices and low taxes continue to prevail. In Saskatchewan, on the other hand, higher prices have meant more revenue and lower alcohol sales.

The evidence from the privatization initiatives in Alberta and British Columbia shows that in addition to the massive expansion of liquor outlets, private retailers in both provinces have been more inclined to sell liquor to minors, likely due to the inherent conflict of incentives created by the profit motive in a privatized retail system. In

Alberta, responding to the very low level of compliance with the province's liquor laws required a major increase in the operating budget of the provincial regulatory board, and thus a decline in the overall economic efficiency of the market in providing net revenue to the government.

In Alberta and British Columbia, liquor retail privatization has meant high liquor prices but low government revenue. Further, the increased availability of alcohol and its lax regulation contravene recognized methods for protecting public health. Seeking to boost economic activity by privatizing the liquor industry is a losing game — there are always more costs borne on the general population than the benefits accruing to the government from increased tax revenue, if there is any.

Maximizing social welfare is not achieved through establishing low liquor prices or increased customer convenience. Managing the supply of alcohol, both economically and physically, ensures the greatest level of social welfare, and evidence indicates a public liquor monopoly is institutionally superior to succeed at this objective.

Endnotes

1. Statistics Canada. (2012, March 26). *Control and sale of alcoholic beverages. The Daily*. Retrieved from *http://www.statcan.gc.ca/daily-quotidien/120326/dq120326a-eng.htm*.

2. Direct economic benefits, taken to be the net government revenue from the control and sale of alcohol, is published annually by Statistics Canada. Also see Kendall, P.R.W. (2008). *Public Health Approach to Alcohol Policy: An updated report from the Provincial Health Officer*. Victoria, BC: Office of the Provincial Health Officer; Rehm, J., Baliunas, D., Brochu, S., Fischer, B., Gnam, W., Patra, J., Popova, S., Sarnocinska-Hart, A., & Taylor, B. (2006). *The Costs of Substance Abuse Canada 2002*. Ottawa, ON: Canadian Centre on Substance Abuse; Single, E., Robson, L., Xie, X., & Rehm, J. (1996). *The Costs of Substance Abuse in Canada*. Ottawa, ON: Canadian Centre on Substance Abuse.

3. World Health Organization. (2011). Canada. Retrieved from *http://www.who.int/substance_abuse/publications/global_alcohol_report/profiles/en/*

4. World Health Organization. (2011). *Global Status Report on Alcohol and Health*. Geneva: WHO. [p.4].

5. Statistics Canada, 2012.

6. For example, see Let's privatize sale of liquor [Editorial]. (2005, July 27). *Daily Press*, p. A4; The liquor business: What's the goal? [Editorial]. (2012, Feb 24). *The Vancouver Sun*, p.A12.

7. Publicly available studies include Flanagan, G. (2003). Sobering Result: The Alberta liquor retailing industry ten years after privatization. Canadian Centre for Policy Alternatives and Parkland Institute; Consumers' Association of Canada – BC. (2003). Privatization of BC's Retail Liquor Store System: Implications for consumers. Retrieved from *http://www.consumer.ca/1542*.

8. Flanagan, 2003; CAC-BC, 2003.

9. Stockwell, T., Vallence, K., Martin, G., Macdonald, S., Ivsins, A., Chow, C., Greer, A., Zhao, J., Duff, C., Lucas, P., Marsh, D., Michelow, W., & Treno, A., (2010). *The price of getting high, stoned and drunk in BC: A comparison of minimum prices for alcohol and other psychoactive substances*. CARBC Statistical Bulletin #7, Victoria, BC: University of Victoria. [p.4]

10. Boyd, C. (2011, Jan 20). Alberta liquor is not cheaper. *The StarPhoenix*, p.A11

11. Alberta Gaming and Liquor Commission. (2003). *Review of Liquor Mark-up Structure and Related Policies: Findings and recommendations*. Retrieved from *http://aglc.ca/liquor/albertaliquorprivatization.asp*.

12. Alberta Gaming and Liquor Commission. (1994). *A New Era in Liquor Administration: The Alberta experience*. Retrieved from *http://aglc.ca/liquor/albertaliquorprivatization.asp*. [p.42]

13. For a more detailed explanation, see Giesbrecht, N. (2000). Roles of commercial interests in alcohol policies: Recent developments in North America. Addiction, 95 (Supplement 4), S581-S595; Paradis, C., & Sacy, H. (2005). *Do we still need retail alcohol monopolies in the 21st Century? The answer may lie in fulfilling social responsibility by promoting public health*. Montreal, QC: Educ Alcool [p.6]

14. Alberta Treasury Board and Finance. (2009). *Budget 2009: Revenue Outlook*. Edmonton, AB: Author. [p.58]

15. D'aliesio, R. (2009, July 8). Booze tax rollback cheered. *Calgary Herald*, p.A4.

16. Rehm et al, 2006, p.1

17. Alberta Alcohol and Drug Abuse Commission. (2006). *Costs of substance abuse in Canada 2002: Alberta fact sheet*. Retrieved from *http://www.ccsa.ca/eng/priorities/research/CostStudy/Pages/default.aspx*

18. Rehm et al, 2006, p.10.

19. Author calculated from Table.2 in Rehm et al, 2006, p.8.

20. Calculated using data from Rehm et al, 2006, and CANSIM. (2012). *Table 183-0017: Net income of provincial and territorial liquor authorities and government revenue from the control and sale of alcoholic beverages, fiscal*

years ended March 31 [Data file]. Retrieved from *http://www5.statcan.gc.ca/cansim/pick-choisir?lang=eng&p2=33&id=1830017*

21. Kendall, 2008, pp.25, 27.

22. Rehm, J., Gnam, W.H., Popova, S., Patra, J., & Sarnocinska-Hart, A. (2008). *Avoidable cost of alcohol abuse in Canada 2002: Highlights*. Toronto, ON: Centre for Addiction and Mental Health.

23. Popova, S., Patra, J., Sarnocinska-Hart, A., Gnam, W.H., Giesbrecht, N., & Rehm, J. (2012). Cost of privatization versus government alcohol retail systems: Canadian example. *Drug and Alcohol Review*, 31, 4-12.

24. Lamphier, G. (2012, Jan 30). Edmonton Liquor Stores: no boasting, just toasting. *Calgary Herald*, C17.

25. Of course, market share is a more accurate depiction of the dominance of the large chain stores, but unfortunately this information is not readily available.

26. Berenyi, V. (2008, Nov 2). The shakeup at your local liquor store. *Calgary Herald*, A3.

27. Sourced from company websites as of April 2, 2012 , unless otherwise mentioned.

28. Liquor Stores N.A. also has stores in British Columbia (35), Alaska (20), and Kentucky (11) for a total of 240. Liquor Stores N.A. Ltd. (2012). *Management's discussion and analysis of financial condition and results of operations*. Edmonton, AB: Author. [p.2]

29. World Health Organization. (2011). *Global Status Report on Alcohol and Health*. Retrieved from *http://www.who.int/entity/substance_abuse/publications/global_alcohol_report/msbgsruprofiles.pdf*. [p.X].

30. Ibid, p.20.

31. Rehm, J., Room, R., Monteiro, M., Gmel, G., Graham, K., Rehn, N. et al. (2003). Alcohol use. In M. Ezzati, A.D. Lopez, A. Rodgers, & C.J.L Murray (Eds.), *Comparative quantification of health risks: Global and regional burden of disease attributable to selected major risk factors (Vol 1)* (pp.959-1109). Geneva: World Health Organization.

32. World Health Organization. (2011). *Global Status Report on Alcohol and Health*. Retrieved from *http://www.who.int/entity/substance_abuse/publications/global_alcohol_report/msbgsruprofiles.pdf*; Giesbrecht, N., Roerecke, M., & Rehm, J. (2005). *Alcohol and chronic disease: Implications for policies and prevention strategies in Canada (Background Paper for National Alcohol Strategy Working Group)*. Retrieved from *http://www.nationalframework-cadrenational.ca/detail_e.php?mod=2&id_sub=1&id_top_sub=2*; Babor , T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., Grube, J., Hill, L., Holder, H., Homel, R., Livingston, M., Osterberg, E., Rehm, J., Room, R., & Rossow, I. (2010). Alcohol: No ordinary commodity (2nd ed.). Toronto, ON: Oxford University Press.

33. National Alcohol Strategy Working Group. (2007). *Reducing alcohol-related harm in Canada: Toward a culture of moderation*. Ottawa, ON: Health Canada.

34. World Health Organization – Europe. (2010). *European Status Report on Alcohol and Health 2010*. Copenhagen, Denmark: Author. [Table 1.1, p.14].

35. For example, see Canadian Public Health Association. (2011, December). *Too high a cost: A public health approach to alcohol policy in Canada (position paper)*. Ottawa: Author; Centre for Addiction and Mental Health. (2004, January). *Retail Alcohol Monopolies and Regulation: Preserving the Public Interest (position paper)*. Retrieved from *http://govdocs.ourontario.ca/results?fsu=Alcoholic+beverage+industry*; Mothers Against Drunk Driving. (2009, June). *Provincial Liquor Boards: Meeting the Best Interests of Canadians (policy backgrounder)*. Retrieved from *http://www.madd.ca/media/docs/MADD-Canada_Provincial-Liquor-Boards-Paper_August-2012.pdf*; Addictions Ontario, Association of Local Public Health Agencies, Centre for Addiction and Mental Health, Mothers Against Drunk Driving, Ontario Drug Awareness Partnership, Ontario Public Health Association, Parent Action on Drugs, Toronto Public Health (2005, February 25). *Alcohol and Public Health: The Implications of Changes to Ontario's Beverage Alcohol System (submission to the Beverage Alcohol System Review Panel)*. Retrieved from *http://www.faslink.org/OntarioBeverageAlcoholSystemReviewPublicHealthSubmission.pdf*.

36. CAMH, 2004, pp.5-6

37. Examples given as signs of this shifting balance are longer hours of service and more aggressive marketing strategies. See Popova, 2012; Giesbrecht, N. (2000). Roles of commercial interests in alcohol policies: Recent developments in North America. *Addiction, 95 (Supplement 4)*, S581-S595; Her, M., Giesbrecht, N., Room, R., & Rehm., J. (1999).

Privatizing alcohol sales and alcohol consumption: evidence and implications. *Addiction, 94(8)*, 1125-1139.

38. Popova, S., Giesbrecht, N., Bekmuradov, D., & Patra, J. Hours and days of sale and density of alcohol outlets: Impacts on alcohol consumption and damage: A systematic review. (2009). *Alcohol and Alcoholism*, 44(5), 500-516; Gruenewald, P.J., Ponicki, W.R., & Holder, H.D. (1993). The relationship of outlet densities to alcohol consumption: A time series crosssectional analysis. *Alcoholism: Clinical and Experimental Research*, 17, 38-47; Campbell, C.A., Hahn, R.A., Elder, R., Brewer, R., Chattopadhyay, S., Fielding, J., Naimi, T.S., Toomey, T., Lawrence, B., Middleton, J.C., & the Task Force on Community Preventive Services. (2009). The effectiveness of limiting alcohol outlet density as a means of reducing excessive alcohol consumption and alcohol-related harms. *American Journal of Preventive Medicine, 37(6)*, 556-569; Babor , T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., Grube, J., Hill, L., Holder, H., Homel, R., Livingston, M., Osterberg, E., Rehm, J., Room, R., & Rossow, I. (2010). *Alcohol: No ordinary commodity* (2nd ed.). Toronto, ON: Oxford University Press.

39. CANSIM. (2009). Table 202-0101: *Distribution of earnings, by sex, 2009 constant dollars, annual* [Data file]. Retrieved from *http://estat.statcan.gc.ca/cgi-win/cnsmcgi.pgm?regtkt=&C2Sub=&ARRAYID=2020101&C2DB=&VEC=&LANG=E&SrchVer=&ChunkSize=&SDDSLOC=&ROOTDIR=ESTAT/&RESULTTEMPLATE=ESTAT/CII_PICK&ARRAY_PICK=1&SDDSID=&SDDSDESC=*

40. Trolldal, B. (2005). Availability and sales of alcohol in four Canadian provinces: a time-series analysis. *Contemporary Drug Problems, 32(Fall)*, 343-372.

41. Stockwell, T., Leng, J., & Sturge, J. (2006, February). *Alcohol pricing and public health in Canada: Issues and opportunities*. Victoria, BC: Centre for Addictions Research of BC.

42. Gallet, C.A. (2007). The demand for alcohol: a meta-analysis of elasticities. *The Australian Journal of Agricultural and Resource Economics, 51*, 121-135.

43. Wagenaar, A.C., Salois, M.J., & Komro, K.A. (2009). Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1003 estimates from 112 studies. *Addiction, 104*, 179-190.

44. Saskatchewan Liquor and Gaming Authority. (2011). Annual Report 2010-11. Regina, SK: Author.

45. Trolldal, B., & Ponicki, W. (2005). Alcohol price elasticities in control and license stats in the United States, 1982-99. *Addiction, 100*, 1158-1165.

46. Stockwell, T., Auld, M.C., Zhao, J., & Martin, G. (2011). Does minimum pricing reduce alcohol consumption? The experience of a Canadian province. *Addiction, 107*, 912-920.

47. Stockwell, T. (2012, Jan 10). *Does minimum alcohol pricing work? Case studies from Canada* [PowerPoint slides]. Retrieved from *http://www.scottish.parliament.uk/S4_HealthandSportCommittee/Inquiries/2012.01.10_Prof_Tim_Stockwell_-_powerpoint_presentation.pdf*.

48. Alberta Gaming and Liquor Association. (2012, Jan). *Quick facts – Liquor in Alberta*. Retrieved from *http://aglc.ca/pdf/liquor/A_New_Era_in_Liquor_Administration.pdf*

49. Stockwell, T., Zhao, J., Macdonald, S., Pakula, B., Gruenewald, P., Holder, H. (2009). Changes in per capita alcohol sales during the partial privatization of British Columbia's retail alcohol monopoly 2003-2008: A multi-level local area analysis. *Addiction, 104*, p.1828.

50. Mann, R.E., Rehm, J.T., Giesbrecht, N., Room, R., Adlaf, E., Gmel, G., Graham, K., Osterberg, E., Smart, R., & Roerecke, M. (2005). *Alcohol distribution, alcohol retailing, and social responsibility (report submitted to the Beverage Alcohol System Review Panel)*. Retrieved from *http://www.fin.gov.on.ca/en/consultations/basr/camh.html*; Campbell, C.A., Hahn, R.A., Elder, R., Brewer, R., Chattopadhyay, S., Fielding, J., Naimi, T.S., Toomey, T., Lawrence, B., Middleton, J.C., & the Task Force on Community Preventive Services. (2009). The effectiveness of limiting alcohol outlet density as a means of reducing excessive alcohol consumption and alcohol-related harms. *American Journal of Preventive Medicine, 37(6)*, 556-569.

51. Kent, G. (2007, Nov 20). Community urges city to keep lid on liquor. *Edmonton Journal*, B3; Heyman, D. (2000, Aug 3). Critics fear liquor store arrival. *Calgary Herald*, B3; Heyman, D. (2000, Oct 5). Critics want close watch on liquor stores near schools. *Calgary Herald*, B6; Komamicki, J. (2011, Oct 26). Dance studio objects to liquor store next door. *Calgary Herald*, B2; Chambers, A. (1999, Feb 12).

Developers will have their say. *Edmonton Journal*, B4; Gignac, T. (2008, Sep 13). Liquor store bid brings crime fear. *Calgary Herald*, B3; Collins, R. (1999, Jul 21). Liquor store cap urged. *Calgary Herald*, A1FRO; Liquor store near school nixed. (1997, Oct 21). *Edmonton Journal*, B3. Heyman, D. (2000, Feb 11). Liquor store numbers up: Youth club manager wants council to review report. *Calgary Herald*, B1FRO. Seskus, T. (2004, Dec 3). Liquor store, preschool don't mix: alderman. *Calgary Herald*, B8; Parents oppose liquor store. (1996, Mar 15). *Calgary Herald*, B9; Hall, V. (2000, Jan 7). Residents voice liquor store worries. *Edmonton Journal*, B6; Neuman, D. (2011, Oct 3). Town council mulls liquor store options. *The Westlock News*, 5.

52. Ruttan, S. (2007, Oct 5). Community wins battle of bottle. *Edmonton Journal*, B1.

53. Rocky Mountain's profit up. (2011, Nov 26). *Edmonton Journal*, C2; Lamphier, G. (2012, Jan 30). Edmonton's Liquor Stores: no boasting, just toasting. *Calgary Herald*, C17.

54. Warick, J., & Couture, J. (2012, Apr 24). Wine store owner admits violating agreement with SLGA. *StarPhoenix*, A1.

55. More youths caught with booze since liquor stores privatized. (1996, June 19). *Canadian Press Newswire*, n/a.

56. Braid, D. (2000, Apr 7). Liquor vendor wants ban. *Calgary Herald*, B1.

57. Alberta Gaming and Liquor Commission. (n.d.). *Under 25 initiative: Findings and recommendations*, p.4. Retrieved from *http://web.archive.org/web/20070621015217/http://www.aglc.gov.ab.ca/pdf/liquor/Final_Under_25_Report.pdf*

58. *Ibid*, p.5.

59. Alberta Gaming and Liquor Commission. (2001). *Annual Report 2000-2001*. St.Albert, AB: Author, p.36; Alberta Gaming and Liquor Commission. (2002). *Annual Report 2001-2002*. St.Albert, AB: Author, p.39; Alberta Gaming and Liquor Commission. (2003). *Annual Report 2002-2003*. St. Albert, AB: Author, p.62-3.

60. Braid, 2000.

61. Alberta Gaming and Liquor Commission. (n.d.). *Under 25 initiative 2004: Findings and recommendations*, p.2. Retrieved from *http://www.aglc.gov.ab.ca/pdf/social_responsibility/2004_Under_25_findingsrecommendations.pdf.*

62. Alberta Gaming and Liquor Commission. (n.d.). *Under 25 initiative 2008: Findings and recommendations*, p.6. Retrieved from *http://aglc.ca/pdf/liquor/under_25_report.pdf.*; AGLC, *Under 25 2004*, p.7.

63. AGLC, *Under 25 2008*, Appendix 4; AGLC, *Under 25 2004*, Appendix 5.

64. Alberta Gaming and Liquor Commission. (2004). *Annual Report 2003-2004*. St. Albert, AB: Author; Alberta Gaming and Liquor Commission. (2005). *Annual Report 2004-2005*. St. Albert, AB: Author; Alberta Gaming and Liquor Commission. (2006). *Annual Report 2005-2006*. St. Albert, AB: Author; Alberta Gaming and Liquor Commission. (2007). *Annual Report 2006-2007*. St. Albert, AB: Author.

65. Alberta Gaming and Liquor Commission. (1998). *Annual Report 1997-1998*. St. Albert, AB: Author; Alberta Gaming and Liquor Commission. (1999). *Annual Report 1998-1999*. St. Albert, AB: Author; Alberta Gaming and Liquor Commission. (2000). *Annual Report 1999-2000*. St. Albert, AB: Author; Alberta Gaming and Liquor Commission. (2001). *Annual Report 2000-2001*. St. Albert, AB: Author.

66. Carlson, J. (2009, July 14). *Report of the 2008-2009 Liquor Retail Store Compliance Check Project*. Victoria, BC: Ministry of Housing and Social Development, Liquor Control and Licensing Branch, p.7.

67. *Ibid*, p.27.

68. Liquor Control and Licensing Branch. (2011, Nov). *Minors as Agents Program*. Victoria, BC: Author, p.6.

69. Carlson, 2009, p.7

70. *Ibid*, p.28.

71. Author calculated from table in Carlson, 2009, p.27.

72. LCLB, 2011, p.6

73. *Ibid*, p.5.

74. Cummins, J. (2011, Nov 3). Police, community team target street violence, alcohol. *Edmonton Journal*, A4.

75. Ibrahim, M. (2011, Sep 22). Edmonton police eye alcohol restrictions to curb violence. *Calgary Herald*, A5.

76. Andreychuk, K. (2012, Feb 17). *1 = What?* Retrieved from *http://www.transformingedmonton.ca/index.php/2012/02/17/1-what/*

77. Andreychuk, K. (2011, Oct 27). Neightbourhood Empowerment Team (NET) working with McCauley to reduce violent crime. Retrieved from *http://www.transformingedmonton.ca/index.php/2011/10/27/neightbourhood-empowerment-team-net-working-with-mccauley-to-reduce-violent-*

78. Molson withdraws high-alcohol beer from Alberta. (2012, Feb 17). *Edmonton Journal*. Retrieved from *http://www.edmontonjournal.com/Molson+withdraws+high+alcohol+beer+from+Alberta/6171267/story.html*.

79. McCauley Neighbourhood Empowerment Violence Reduction Team. (2012). [Pie chart illustrating preferred brand of alcoholic beverage]. *McCauley interview results*. Retrieved from *http://photos.edmonton.ca/photos/swfpopup.mg?AlbumID=21511946&AlbumKey=mTvCgv*

80. Alberta Gaming and Liquor Commission. (2011). *Annual Report 2010-2011*. St. Albert, AB: Author, p.24.

81. Personal communication with Kris Anerychuk.

82. Trolldal, B. (2005). An investigation of the effect of privatization of retail sales of alcohol on consumption and traffic accidents in Alberta, Canada. *Addiction, 100*, p.668; Zalcman, R.F., & Mann, R.E. (2007). The effects of privatization of alcohol sales in Alberta on suicide mortality rates. *Contemporary Drug Problems, 34/Winter*, 589-609.

83. One of the AGLC's seven criteria for stocking a particular beverage, "Unique Quality of Product", would appear to be able to capture the specific public health concerns of low-quality, low-priced, extra-strong beverages, although whether it could be or was employed to this end is unclear. Alberta Liquor Control Board. (1989, Nov 10). *Listing Policy and Procedures*. St. Alberta, AB: Author, p.1.

84. Zalcman and Mann, 2007, p.601-2.

85. Trolldal, 2005, Effect of privatization on consumption, p.668

86. Zalcman and Mann, 2007, p.602.

87. Stockwell, T., Zhao, J., Macdonald, S., Vallance, K., Gruenewald, P., Ponicki, W., Holder, H., & Treno, A. (2011). Impact on alcohol-related mortality of a rapid rise in the density of private liquor outlets in British Columbia: A local area multi-level analysis. *Addiction, 106*, 768-776. [p.775]

88. Major literature reviews include: Campbell et al, 2009; Giesbrecht et al, 2005; Mann et al, 2005; Her, M., Giesbrecht, N., Room, R., & Rehm, J. (1999). Privatizing alcohol sales and alcohol consumption: Evidence and implications. *Addiction, 94(8)*, 1125-1139.

89. Ramstedt, M. (2004). Alcohol consumption and alcohol-related mortality in Canada, 1950-2000. *Canadian Journal of Public Health, 95(2)*, 121-126.

90. Ramstedt, M. (2003). Alcohol consumption and liver cirrhosis mortality with and without mention of alcohol – the case of Canada. *Addiction, 98*, 1267-1276.

91. Skog, O.J. (2003). Alcohol consumption and fatal accidents in Canada, 1950–98. *Addiction, 98*, 883-893.

92. Ramstedt, M. (2005). Alcohol and suicide at the population level – the Canadian experience. *Drug and Alcohol Review, 24*, 203-8.

93. Rossow, I. (2004). Alcohol consumption and homicides in Canada, 1950-1999. *Contemporary Drug Problems, 31(3)*, 541-559.

94. Norstrom, T. (2004). Per capita alcohol consumption and all-cause mortality in Canada, 1950–98. *Addiction, 99*, 1274-78.

95. Ramstedt, 2004, p.1270.

96. Ramstedt, 2005, p.205.

97. Norstrom, 2004, p.1276.

98. Skog, 2003, p.888.

99. Rossow, 2004, p.552.

100. World Health Organization. (2011). *Global Status Report on Alcohol and Health*, p.X. Retrieved from *http://www.who.int/entity/substance_abuse/publications/global_alcohol_report/msbgsruprofiles.pdf*.

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