

Alcohol Pricing and Public Health in Canada: Issues and Opportunities

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Tim Stockwell Director, Centre for Addictions Research of BC 31 January 2006 While the price of alcoholic beverages has been identified as a major determinant of the extent of alcohol-related problems, alcohol taxes have rarely been used in any systematic way to achieve public health and safety objectives. This paper examines the operation of alcohol taxes in Canada from a health perspective, and identifies a number of opportunities for protecting the health and safety of the population through '10(r)16(o)10(u)10(g)10(h)10()10(')6slwa30 i /GS0 C20()10(9d)6slwa30 i /GS0 C20()10(9d)6slwa30 i

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from liver cirrhosis (Hope, 2005). This discussion paper starts from the perspective that there is unlikely to be much public or political will for substantial increases in alcohol taxes in Canada at the present time, even though they would achieve significant public health and safety benefits. Instead, the focus will be principally on the possibilities of redistributing existing alcohol taxes in ways that may promote public health and safety without significantly increasing the overall level of taxation. Furthermore, the primary focus will be on redistribution of those taxes */* */* the existing major beverage categories of beer, wine and spirits so as not to favour any one producer group over any other. The case for harmonizing taxes across major beverage groups for the growing market of lower strength products (mostly up to 7% alcohol by volume) will, however, be discussed.

Like many other countries, alcohol taxes in Canada are a complex tangle of rates and rules that have developed over many decades through a patchwork of decisions at all levels of government. Alcohol taxes provide an important source of and abuse, as well as reduced alcohol-related violence and crime. In Ontario, increasing the price of alcohol through alcohol taxes and pricing policies has been found to have a significant effect in reducing the number of alcohol-related vehicle and traffic incidents (Adrian et al, 2001). Gruenewald et al (2000) analyzed time series data across all 51 US states, examining the links between price changes and alcohol-related crashes. A negative relationship was found between these two variables for all but two states. There is also strong evidence that young people and high-risk drinkers are especially responsive to price changes (Cook et al, 2002; Chaloupka et al, 2002). Not only

occasions, is necessary if price and tax policies are to have public health benefits. It need not be the case, however, that this also implies a reduction in the overall volume of alcoholic beverages is required for these benefits to occur. The example of the success of reduced alcohol content beers in Australia since the late 1980s will be discussed later in this report. Beers with an alcohol content of between 2.5% and 3.8% by volume now constitute a substantial proportion of the Australian beer market following a number of federal and state tax reductions for these beverages (Stockwell and Crosbie, 2001). In contrast, beers of this strength constitute a very minor part of the Canadian market

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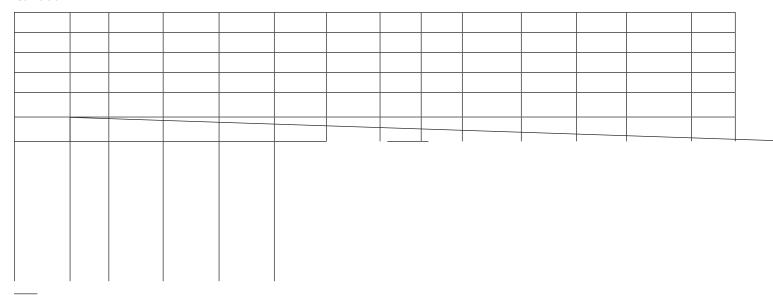
Federal Excise Duties on Alcohol							
Beverage	Stated Rate						
Spirits	\$11.066 per litre of absolute ethyl alcohol						
Spirit (not more than 7% absolute ethyl alcohol i.e. coolers)	\$24.59 per 100 litres of spirits						
Spirit Special Duty on imported spirits	\$0.12 per litre of absolute ethyl alcohol						
Beer							
More than 2.5% absolute ethyl alcohol	\$27.985 per 100 litres						
More than 1.2% but not more than 2.5% absolute ethyl alcohol	\$13.990 per 100 litres						
Not more than 1.2% absolute ethyl alcohol	\$2.591 per 100 litres						
Wine							
Not more than 1.2% absolute ethyl alcohol by volume	\$2.05 per 100 litres						
More than 1.2% and up to 7% absolute ethyl alcohol by volume (i.e. coolers)	\$24.59 per 100 litres						
More than 7% absolute ethyl alcohol by volume	\$51.22 per 100 litres						

In most cases, beers sold in Canada are between 4% and 6% alcoholic strength, wines between 10% and 14%, and spirits between 38% and 45%. However, increasingly there are examples of products across these major beverage varieties with

the same strength, notably pre-mixed spirits and wine-based 'coolers'. Table 3 compares the ways in which excise duty affects these different beverage categories when the alcohol content is the same, with examples chosen from 3.5% to 15%.

"Mark-ups" are basically the profit margins on individual beverages once the costs of manufacture, distribution and sale, as well as other taxes, are subtracted from the final retail price. As shown in Table 1, this category of taxation contributes almost half of all the alcohol taxes collected in Canada. This form of revenue is not always adjusted to keep pace with the cost of living, nor does it usually distinguish between high and low alcohol content (see Tables 6 and 7 below).

Table 5: Overall Characteristics of Alcohol Taxes and Markup Structures for Provincial/Territorial Governments in Canada



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and also tax non-Canadian (imported) products higher than Canadian products. Also, some provinces and territories combine flat taxes/markups and ' r + ' + ' taxes/markups to develop overall tax/markup rates. Finally, explicit or implicit minimum "social reference" or "floor" prices exist in all jurisdictions except Alberta, Quebec, Northwest Territories, Nunavut and the Yukon. Minimum prices apply to alcohol sold in government and private liquor stores (where these are permitted) and also to alcohol brought into Canada from other countries.

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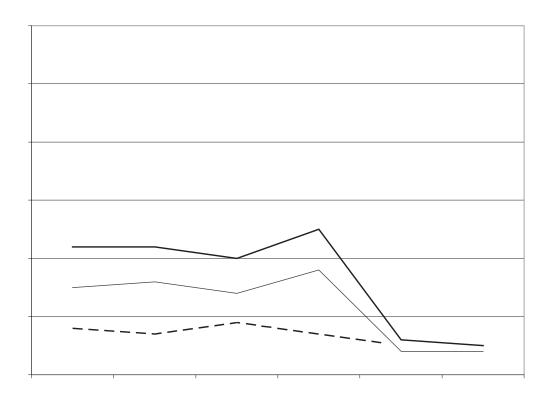
The "mark-ups" in alcohol monopoly liquor stores in several jurisdictions are applied to the wholesale price, along with other special levies. The mark-up enables substantial profits to be made after costs of sale and distribution are met, which then becomes government revenue. Tables 6 and 7 below depict the mark-ups h, ' r for a range of different strength alcoholic beverages selected from two liquor stores, one in BC and one in Ontario.

These are complex to estimate as there are many different levies to take into account. The selected beverages were chosen only on the basis of beverage strength, with an attempt to choose a popular variety in each category and also consistency across the two sites. The stores were those conveniently located in builtup areas. The concept of the "standard drink" is used in these tables for assessing equivalents in taxation rates between different beverage categories and for beverages of different strength. The concept of a "standard drink" is used in many countries to help people understand how much alcohol they are consuming, and is used in Canada for health promotion purposes (e.g. Bondy et al, 1999) and also in the conduct of alcohol consumption surveys. It is based on the idea that usual "units" of beverage such as a glass of 12% wine, a bottle of 5% beer and a measure of 40% spirits all contain roughly the same amount of alcohol. In Canada, this is estimated to be 13.6 grams or 17.2 mls of ethyl alcohol.

Table 6: Examples of minimum mark-ups applied to different strength alcoholic drinks in a Liquor Store in Victoria, BC

Beverage	Brand Name	% Alcohol	\$ Retail	\$ Mark-ups	\$ Mark-up per SD
-		Alcohol	Retail	iviark-ups	per 3D

A close inspection of Tables 6 and 7 shows there is some evidence of price advantages created by lower mark-ups for wine below 7%, beer below 4% (though curiously not below 1%), and for



Figures 1 to 3 show that the most common pattern is for taxation per standard drink to be inversely related to alcohol beverage strength. There is only one major exception: a 7% spirit-based cooler has a lower rate of taxation than some higher strength beverages. This latter result is a function mainly of the lower rate of excise on these drinks and the fact that they are also cheaper to produce than higher strength distilled spirits. Looking at the main types of tax, only excise duties for spirits maintain the tax rate per standard drink as beverage strength increases (see dotted line in Figure 3 above).

This is in fact due to the major reliance on sales taxes (GST and PST) that are unrelated to alcohol content, and also because excise duty for beer and wine is calculated at a 'flat rate' that is quite unrelated to alcohol content within large ranges of percent alcohol content by volume.

Specific examples identified in BC were a 22% strength sherry is taxed at only \$0.13 per standard drink, while a 5% wine-based cooler is taxed at \$0.44 per standard drink (\$0.17 and \$0.40 for similar drinks in Ontario). For beer, a strong beer of 8% sold in BC has a tax of \$0.20 per standard drink, compared with \$0.46 per standard drink for a reduced strength beer (3.5% alcohol content) and an estimated \$0.64 per standard drink for

a 2.5% strength beer (\$0.23, \$0.51 and \$0.65 for equivalent drinks in Ontario). The same situation applies for spirits, with the exception of those with 7% alcohol by volume or less (i.e. spirit coolers). When different categories of beverage with similar strength are considered, there is an enormous variety of total tax

b) there is a marked price incentive to choose very light beer (0.5% by volume); c) very strong and reduced-alcohol beer are both taxed at the same rate per litre of beverage; and d) spirits is the only category of beverage for which there is a close linear relationship between alcohol content and rate of taxation per litre of beverage. Clearly, this last outcome is a result of both the high rate of exci1itr

to the tax rates on spirits and alcoholic sodas in 2002/2003 have already made substantial impacts on the more acute forms of alcohol-related harm (Hope, 2005). As was the case in Australia's Northern Territory, more chronic forms of alcohol-caused mortality did not respond immediately to changes in policy, but there is every reason to believe that over time they will shift, based on reduced levels of consumption (Chikritzhs et al, 2005). The US Center for Science in the Public Interest has documented the major decline in beer taxes in the US in recent decades through a failure to index these taxes to the cost of living (http://cspinet.org/booze/taxguide/040802BeerReport.pdf). They find that those states which permit the lowest taxes tend to be those with the highest sales of beer per capita (and vice versa), and also are more likely to have a budget deficit.

It may or may not be possible to update federal excise duties in Canada to catch up with the lost ground since this was last done. This would require at least a 30% increase in federal excise taxes on beer and spirits to match the rise in CPI since

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Health Canada, 2005. The situation is unlikely to be helped by the availability of cheaper alcohol on some First Nations reservations as a result GST exemptions - and some provincial or territorial sales tax exemptions as well. Alcohol sold on these lands (whether by First Nations people or other Canadians) would always include excise duty since that is paid on wholesale prices from government-owned distributors. Seeking to reverse the hard-won constitutional right of First Nations peoples of certain federal tax exemptions on products sold on reservations may not be a viable option. Instead, it is recommended that local options for raising revenue from the sale of alcoholic beverages be explored with First Nations representatives, both to reduce consumption of alcohol and to provide additional funding for much needed treatment and prevention services to this vulnerable population group. As discussed above, there are already at least four First Nation groups based in BC that have the constitutional right to raise their own taxes on these GSTexempt products. The extent to which this is applied to alcoholic products could not been determined while preparing this paper. This is a special example of the more general proposal, provided later, of earmarked taxes on alcohol for prevention, treatment and research. It is also consistent with the success of such a strategy in an Australian jurisdiction with a high Aboriginal population (Chikritzhs et al, 2005). Consistent with other recommendations discussed in this report, if consideration were given to creating new taxes collected by First Nations people for alcohol products sold on their land, it is recommended that a "volumetric" tax be used rather than a "flat" or ' < 4" since this provides the most protection against low-priced, highstrength alcohol products.

Responsibility: First Nation councils and band leaders

A related recommendation is that consideration be given to tax exemptions on alcoholic beverages that are provided to chronic alcoholics in "wet shelters" in Canada. Wet shelters are hostels or day centres where homeless people with long-term alcohol dependence are provided with controlled amounts of alcohol at regular intervals because they are unable to maintain abstinence. Evaluations of this strategy have indicated improvements in health and general functioning (Crane and Warnes, 2005). If policies are introduced which render high-strength cheap alcoholic drinks more expensive, then there may be a greater need for such services for this group of people, and tax exemptions would reduce the costs of running these wet shelters and provide incentives for their expansion in Canada.

 $\textbf{Responsibility:} \ \ \textbf{Federal, provincial and territorial governments}$

 $\begin{array}{l} \hbox{$U$-Vin and U-Brew operations in BC and Ontario provide some of the cheapest alcohol per standard drink in Canada. These facilities are a uniquely Canadian tradition. It is not known to \\ \end{array}$

what extent people who use these facilities are more or less likely than other drinkers to use the product to excess. Research might be commissioned to investigate this. It is questionable whether the sole requirement that the customer add yeast to the mixture early on in the process is sufficient justification for making such cheap alcohol virtually tax-free. A comprehensive revision of the Canadian alcohol taxation system should arguably include additional taxation on these products.

Responsibility: Provincial governments of BC and Ontario

Objective 3: Provide incentives for the manufacture, marketing and consumption of lower strength alcoholic beverages

As shown clearly in Tables 3 to 7 and Figures 1 to 3 above, the net effect of all alcohol taxation in Canada results in a situation where incentives for customers to choose lower alcohol beverages are mostly absent, and at best inconsistently applied.

The recommendations below are not based on any actual or perceived disparities between taxation of beer or wine and spirits. The tables presented above show very clearly that distilled spirits are mostly taxed at a much higher rate than is beer or wine per litre, per standard drink, and as a percent of price. One exception, however, is in the growing category of alcoholic beverages with the strength of up to 7% alcohol by volume, in which spirit and wine-based drinks are slightly advantaged over similar strength beer in terms of rates of excise duties. A case can be made for justifying a high rate of taxation on very high alcohol content beverages such as distilled spirits with a strength between 40% and 80%, but this is not the basis for the options put forward for consideration below. There is, for example, evidence for an increased preference for spirits among people with alcohol dependence (Klatsky et al, 1990), and closer links between per capita consumption of spirits and liver cirrhosis than other beverages (Roizen and Fillmore, 1991). Klatsky et al (1990) studied correlates of wine, spirits or beer preference among 53,172 white men and women in a US prepaid health plan. A preference for wine was more likely to be expressed by women, light drinkers, young or middleaged people, non-smokers, people with higher education, and those who were free of symptoms or risk of illness. Persons who prefer spirits were likely to be men, heavier drinkers, middleaged or older, less educated, and afflicted with symptoms of or risk factors for major illnesses. Persons who prefer beer were likely to be younger, male, and intermediate between wine and spirit drinkers on levels of consumption and health. Furthermore, an analysis of patterns of hazardous alcohol use reported in Australia's 2001 National Household Drug Survey found that distilled spirits was the beverage variety with the highest proportion of use on hazardous drinking days (78%), compared with regular-strength beer (69%) and table wine (54%) (Stockwell and Donath, 2003). The criterion used here was whether consumption took place on the day in which more

incentives for the consumption of lower-strength products within each of the major beverage categories in Canada.

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One administratively efficient method of creating price incentives for lower-strength beverages would simply be to define alcohol excise taxes in terms of litres of pure ethanol rather than litres of beverage. That is, convert flat and ' r r' r' taxes to volumetric taxes. This would at a stroke create a positive linear relationship between alcohol content and rate of federal excise taxation within each beverage category. It is also possible that different tiers of tax rates could be set for beverages with different alcohol contents within each major beverage category. Thus, the rates for beer, for example, could build on the current tax incentives for the consumption of very low alcohol products by adding a new tier from above 2.5% to 3.8% or below. In a similar way, excise concessions could be made for lower-

- Adlaf, E.M., Begin, P., & Sawka, E. (Eds.) (2005). Carrier or had a control of the control of th
- Adrian, M., Ferguson, B.S. and Her., M.(2001). Can alcohol price policies be used to reduce drunk driving? Evidence from Canada. Substance Use and Misuse, 36(13);1923-1957.
- Alvarez, Y., Burbidge, J., Farrell, T. and Palmer, L. (1992). Optimal Taxation in a Life-Cycle Model.

- Brady, M. (2000). Alcohol Policy Issues for Indigenous People in the United States, Canada, Australia and New Zealand.
- Bruun, K., Edwards, Lumio, M., Mäkelä, K., Pan, L, Popham, R., Room, R., Schmidt, W., Skog, O-J., Sulkunen, P. and Österberg, E. (1975).
- Catalano, P., Chikritzhs, T., Stockwell, T.R., Webb, M., Dietze, P. and Rohlin, C. (2001). The characteristic form of the control of the cont
- Chaloupka, F.J., Grossman, M. and Saffer, H. (2002). The effects of price on alcohol consumption and alcohol-related problems.
- Chaloupka, F.J., Grossman, M., and Saffer, H. (1998). The effects of price on the consequences of alcohol use and abuse. 14:331-46.

Loxley, W., Toumbourou, J. and Stockwell, T. (2004).

Beverage	Brand Name	% Alcohol					

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