Estimating the Effects of Deregulating Wholesale and Retail Markets for Spirits on Government Revenue in Ontario

A Study Commissioned by Spirits Canada[1]

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[1] This study does not reflect any official opinion by the University of Waterloo. The opinions in this study are the independent opinion of the author.

Executive Summary

Recent policy announcements by the Ontario Government confirm further deregulation in the retail market for beer, wine, cider, coolers, seltzers, and other low-alcohol ready-to-drink beverages. However, spirits will only remain for sale at outlets owned by the Liquor Control Board of Ontario (LCBO). Based on publicly available data from Statistics Canada, the results of this study suggest that the Ontario Government would benefit from deregulation enabling the sale of spirits at independent liquor stores, as is the case in Alberta and British Columbia. For example, if Ontario had switched to an "Alberta Style" model, my analysis indicates that the province may have experienced an increase in Net Income (real dollars) from the LCBO of between \$4.8 b. - \$5.8 b. from 2012-2022. In recent years, predicted increases in Net Income would have been around 20% of actual reported Net Income values (in real dollars).

This increase in Net Income could have been used to fund important social programs and other public initiatives. These results are based on significant savings to the LCBO that would occur from reductions in administrative expenses, as retail sales are left to independent stores and government revenue is generated from a wholesale markup, as is the case in Alberta. My empirical results are robust to the inclusion of increases in costs of goods that may occur if the LCBO no longer remains the exclusive purchaser of liquor for Ontario. The cost savings from deregulation are strong enough, that the province should earn a higher Net Income even without a significant rise in liquor sales.

My recommendation is that Ontario allow the establishment of independent retail stores that exclusively sell spirits. However, Ontario does not necessarily have to perfectly mimic the Alberta approach to generate increases in Net Income. Following the hybrid model implemented in British Columbia, with government owned retail stores co-existing with independent liquor outlets, is another possible strategy that should also result in higher per capita Net Income from liquor authorities.

Allowing sales from independent stores should also result in strong economic benefits to local spirits manufacturers who would not be restricted by scarce shelf spacing at LCBO outlets. In this respect, my estimates of the benefits from permitting independent stores to sell liquor are understated, as I do not quantify such economic impacts in this research. Independent stores also imply a greater diversity of choice and the ability to address specific tastes of the many different communities that populate Ontario and have cultural roots from across the world. The elimination of the Master Framework Agreement between the province and The Beer Store (TBS) was a bold policy move, and the Ontario Government should consider further deregulation that improves societal welfare.

I. Introduction

Significant changes are coming in 2026 to Ontario's alcohol markets. In December 2023 the Ontario government announced that by January 1, 2026, beer, wine, cider, coolers, seltzers, and other low-alcohol ready-to-drink beverages will be available for sale at all participating convenience, grocery, and big box stores across the province.[2] Recent media reports confirm that these changes will occur sooner than this date.[3] With respect to beer, there will be no restrictions on package sizes. This is a considerable change from the status quo as twelve and twenty-four packs of beer are currently only available from The Beer Store (TBS), which is owned by three large internationally owned brewing companies. The lifting of caps on the number of grocery stores allowed to sell such products and the entry of convenience and big box retailers to the retail market is also noteworthy. Besides easier access to consumers, there will be price competition for products available through groceries, convenience stores, and big box retailers.[4] The LCBO will be the wholesaler for all retail stores, bars, and restaurants, and be responsible for distribution of products. However, spirits will continue to be available at LCBO outlets.

These changes follow the 2015 Master Framework Agreement (MFA), which came after the publication of the C.D. Howe Institute study I co-authored with Paul Masson. The MFA was signed between the province and TBS and resulted in the LCBO being allowed to sell bottles and cans not exceeding 6 packs.[5] Twelve and 24 packs continued to be only available through outlets owned by The Beer Store. However, consumers were given better access to some products as 450 grocery stores were licensed to sell beer, wine, and cider. Some grocery stores were already allowed to sell

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[2] For further details please see https://globalnews.ca/news/10171555/alcohol-sales-rules-by-province/, accessed April 15th 2024.
[3] See https://www.cbc.ca/news/canada/toronto/alcohol-sales-convenience-stores-ontario-1.7213546, accessed May 24th 2024.
[4] However, products sold through the LCBO will be uniform in prices across its outlets.
[5] Please refer to https://www.ontario.ca/document/alcohol-master-framework-agreement-september-2015 for specific details. Last accessed April 10th 2024.

wines directly to the public and through Agency stores located within their premises. Retail price competition was not permitted.

Hence, the upcoming changes will lead to much improved access to beer, wine, cider, and low-alcohol ready-to-drink beverages, but not for spirits. The LCBO will continue to be the monopoly retailer for such products. It is my opinion that Ontario should move towards a model where spirits are can be sold by independent retail stores. This change should lead to much higher net revenues for the province as it can efficiently earn revenue through a wholesale markup - similar to Alberta - and the elimination of overhead and variable costs required to manage and run LCBO outlets. There is significant evidence that Alberta's completely privately owned system of retail distribution has resulted in higher net government revenues, considerable choices for consumers, and growth in employment opportunities.[6] Ontario could alternatively consider the British Columbia approach of allowing independent stores to co-exist with government owned retail outlets.

Independent retail stores could also lead to higher government revenues if consumers increase purchases because of more convenient locations or better product availability. A key concern from this source of incremental net revenues, is that more buying by consumers will lead to an increase in associated societal harms such as addiction, crime, and impaired driving. However, recent papers do not find a rise in adverse outcomes from an expansion in retail access to liquor. In a 2016 study, I found that more deregulated systems of retail alcohol distribution across six Canadian provinces (from 1993-2011) were not significantly correlated with higher crime rates or increases in injuries and fatalities from traffic accidents. Further, per capita alcohol sales were

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[6] See https://www.fraserinstitute.org/sites/default/files/PrivatizationofLiquorAlberta.pdf and https://www.fraserinstitute.org/article/success-albertas-liquor-store-privatization-lesson-other-provinces. Last accessed April 10th 2024.

not significantly higher in provinces with more deregulated retail alcohol distribution. These findings were based on estimation models from a series of multivariate regression models.[7] Using more recent data, Schwartz et al. (2024) analyze the impacts of the 2015 expansion of retail access in beer, wine, and cider on a variety of alcohol use outcomes employing the 2015-2019 waves of the Canadian Community Health Surveys. Their results are similar to Sen (2016) as they do not find a statistically significant association between the partial alcohol deregulation initiative in Ontario and alcohol use by individuals.[8]

Moving to a retail distribution system for spirits has the possibility of generating more net revenue for the province, independent of any potential increase in sales. This is because of the significant administrative expenses incurred by the LCBO. The LCBO purchases products based on annual (or more frequent) calls, which basically allow different manufacturers/sellers to submit bids. The LCBO then chooses which products to stock based on its assessment of market demand. LCBO store managers also play a role in deciding which products to stock and put on its shelves. Hence, the LCBO has a pronounced role in determining the products that consumers can purchase, which implies more costs in terms of staff time and resources devoted to evaluating market needs. Of course, it is important to acknowledge that being the exclusive purchaser for spirits in Ontario allows the LCBO to obtain lower retail prices (net of taxes) for consumers because of its buying power. On the other hand, the costs of negotiating with manufacturers and determining local supply adds to the considerable expenses of running a configuration of retail outlets.

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[7] The reference for this study is Sen, Anindya (2016). “Is Retail Alcohol Deregulation Correlated with More Crime and Traffic Injuries? Evidence from Canadian Provinces” *Canadian Journal of Criminology and Criminal Justice* 58:2, 251-286.

[8] The citation of this study is Schwartz, N., Smith, B. T., Fu, S. H., Myran, D., Friesen, E. L., & Hobin, E. (2024). The Impacts of Selling Alcohol in Grocery Stores in Ontario, Canada: A Before-After Study. *Journal of Studies on Alcohol and Drugs*, 85(1), 109–119. https://doi.org/10.15288/jsad.23-00113.

In contrast, in Alberta, the province is a wholesaler and does not negotiate with manufacturers/sellers. Manufacturers/sellers can list their products with the provincial wholesaler, and they are paid if their products are purchased by retailers. Hence, the task of determining local demand, along with the risks and costs, are left to the independent retailers. This results in costs that are not shouldered by the government. While consumers do not experience possible efficiencies from the province being a single purchaser, the Alberta system does incentivize competition between manufacturers/sellers if they want their products to be carried by local retailers. If adapted in Ontario, such a strategy should lead to lower prices for consumers and enable a wide array of choice that acknowledges the province's incredibly diverse communities. From a government net revenue perspective, even a system with LCBO outlets and independent stores selling spirits has the potential to lead to higher returns for taxpayers. This is because allowing independent stores to sell spirits will likely result in more government revenue due to the disciplining effects of competition. Specifically, the LCBO will need to find efficiencies in its business model to maintain and increase the social dividend it returns to the province.

As I have stated in previous research, governments have no comparative advantage in selling alcoholic beverages to the public. There is no reason for the province to be a monopolist in the retail distribution of spirits. Ontario's experiences with deregulation have demonstrated that private retailers can enforce age restrictions effectively, and recent research suggests that improved access to retail liquor has not resulted in statistically significant increases in societal harms. This past year, the social dividend from the LCBO to the province has dropped.[9] Further, there has not been a significant increase in such dividends over the past years. The province needs to consider

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[9] See https://toronto.citynews.ca/2024/03/26/ontario-budget-2024-alcohol-cannabis-gas-tobacco-taxes/#:~:text=According%20to%20documents%20tabled%20at,at%20the%20end%20of%20March. Last accessed April 10th 2024.

organizational changes that can result in more productivity, efficiencies and innovation in the marketplace. Economists have amassed considerable evidence that monopolies - especially when run by the government - have limited incentive to find efficiencies and generate innovation in the marketplace. The opportunity cost to the status quo is the lost revenues that the government could have otherwise obtained from privatization and greater consumer choice. Deregulating access to spirits will not only lead to more choice, but also to improvements in the retail experience, greater employment opportunities, and increases in government revenue through a basic markup implemented at the wholesale level.

The remainder of the study is structured as follows. Section II discusses the economic theory of why allowing more retail competition can lead to more government net revenues. Section III notes differences between the retail distribution systems between Alberta, British Columbia, and Ontario, with explanations of how inefficiencies in the current and proposed Ontario models impede the realization of higher net revenues. Section IV contains an analysis of market trends across provinces while Section V reports results from simulations aimed at understanding the effects on Net Income generated by the LCBO from switching to the Alberta approach towards wholesaling and retailing. Finally, Section VI concludes with a summary of key findings.

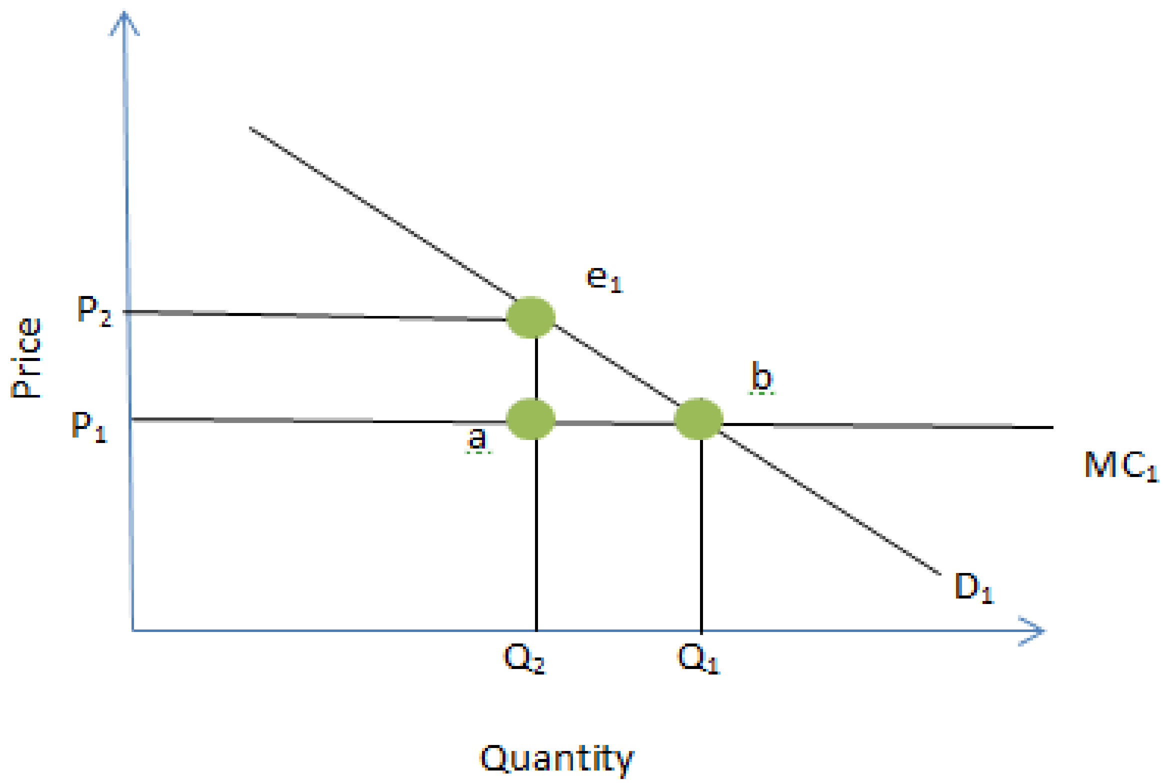
II. Economic Theory

A simple economic model would be useful to further understand the relationship between privatization and provincial revenue through markups. Let us start with the simplest theoretical model, with a downward sloping demand curve. For simplicity, I assume a constant marginal cost of production, implying a horizontal supply curve. Further, I ignore federal and provincial taxes, as the objective is to evaluate the effects of a wholesale markup on spirits.[10] The equilibrium price

[10] Please see http://aglc.ca/pdf/quickfacts/markup_rates_schedule.pdf for further details.

(P_1) and quantity (Q_1) in a competitive market would be given at the intersection between the demand (D_1) and supply curves (MC_1). This is shown in Figure 1. However, given that the retail market in Ontario is a monopoly with respect to spirits, the equilibrium price will be higher at P_2, along with a lower demand (Q_2).[11] The rectangle P_1 P_2 e_1a represents profits from the markup charged by sellers and the LCBO, while the triangle e_1ab is the deadweight loss from markup. In other words, it represents the lost surplus to consumers who would have purchased alcohol at the competitive price P_1– but are priced out of the market at the higher price P_2. On the other hand, society may be thought to *benefit from th*e profits earned by the liquor authority, which are transferred to the provincial government, who then may spend it on various competing needs.

Figure 1. The Effects of a Monopoly Retail Market

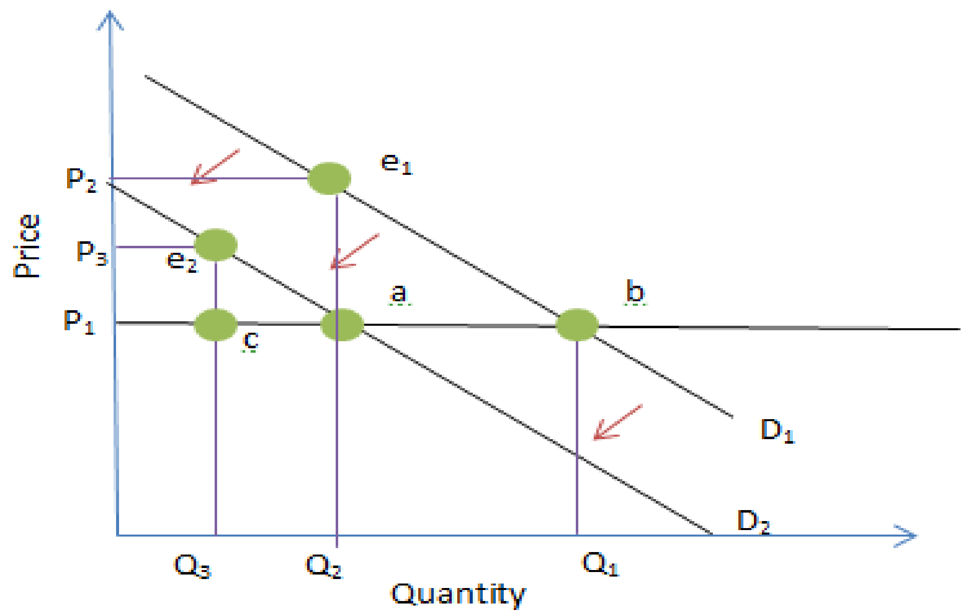


[11] Standard economic theory demonstrates that the price charged by a monopolist is given by the point where the vertical line defined at the intersection of the Marginal Revenue (MR) and Marginal Cost (MC) curves, hits the demand curve. Hence, the profit maximizing price charged by the monopolist is higher than marginal cost.

Some further discussion of welfare and competition is in order. Welfare gains to market participants (consumers and producers) are based on consumer and producer surplus. Consumer surplus is computed as the difference between the maximum consumers are willing to pay for a product, and the market price they end up paying. This is the difference between the demand curve and the market equilibrium price. Analogously, producer surplus is the difference between the minimum producers are willing to accept and what they receive in terms of the market determined price. Competitive markets are efficient because they maximize the sum of consumer and producer surplus. These measures of welfare are routinely used in policy analysis. In fact, they are used by the Competition Bureau of Canada to evaluate welfare impacts resulting from mergers and other types of firm specific conduct. In summary, while higher prices result in lower demand and deadweight loss, from a societal welfare perspective, this could be justified through the corresponding increase in financial resources that could be used towards social assistance programs (for example). This is the argument used by different stakeholders to justify the LCBO's monopoly status.

Now assume that the province decides to increase retail competition by allowing the sale of spirits at retail liquor outlets that will co-exist with outlets owned by the LCBO. To make the model simple, assume that all retailers face similar input prices. However, the overhead organizational costs (such as salaries to management) are higher for the LCBO. On the other hand, independent retail stores must pay a wholesale markup through which the government extracts revenue (as is the case in Alberta). If retail competition is permitted, assume the independent liquor stores can charge lower prices than LCBO outlets. This would result in a downward shift in the demand curve for spirits sold at LCBO stores. In Figure 2, this new demand curve is given by D_2. In most cases, this would mean that the LCBO is forced to charge a lower price for its products. Hence, the margin enjoyed by it also shrinks to rectangle P_1 P_3 e_2 c. In this case, the amount of LCBO profits transferred to the province is reduced.

Figure 2. The Effects of Deregulation on Monopoly Profits



The magnitude of sales made by independent liquor stores is important. If independent stores can offer consumers new products that were previously unavailable, then there is the potential for significant revenue from wholesale markups to be transferred to the province from independent stores, based on the volume of their sales. However, as noted above, an increase in sales is not a necessary condition for increased government revenue from alcohol sales. If the LCBO succeeds in reducing its marginal costs in response to competition from independent liquor stores, it is quite possible that its profits will be comparable to what it earned prior to increased competition. Although its price is lower, and it is selling less of the product, per unit price- marginal cost margins can be higher, if the LCBO succeeds in finding efficiencies. This is in addition to the markup revenue that the province still extracts from independent store sales.

In this respect, it is extremely important to emphasize that the net revenue (and provincial transfer from wholesale markups) earned by independent stores is *not only* from consumers who would have purchased from the LCBO, if it had simply charged a lower price. It is possible that the availability of liquor at convenience stores reduces travel distance and time for consumers, associated with purchases. If the increase in sales generated from the customer segment is non-trivial, then the total markup revenue extracted from independent stores and efficiency seeking LCBO stores may be higher in a more competitive market with independent stores allowed to sell spirits.

III. Differences Across Provinces

Ontario

The production, importation, distribution, and sale of alcohol in Ontario are regulated through the *Liquor Licence Act* and the *Liquor Control Act*. The Alcohol and Gaming Commission of Ontario (AGCO) administers the Liquor Licence Act and a limited number of sections of the

Liquor Control Act. The LCBO administers the bulk of the *Liquor Control Act*, including the importation, warehousing and distribution of alcohol in Ontario.[12] As noted above, the LCBO is a Crown corporation that operates retail stores selling beer, liquor, and wine to the public and to commercial establishments.[13] Until 2015, the sale of beer to retail customers and commercial establishments was conducted mostly through The Beer Store (TBS), with the LCBO playing a smaller role in retail beer sales. Historically, the LCBO has generated significant revenues for the province (precise figures to follow). As discussed, the 2015 MFA led to a considerable expansion in wine and beer through grocery stores. However, the choice of wine in grocery stores is not comparable to available selections in LCBO outlets, and beer can only be sold by grocery stores in smaller packages.

Alberta

Alberta privatized government-owned liquor retail stores in 1993-1994, and only privately owned stores currently sell alcohol. Alberta Liquor, Gaming, and Cannabis (ALGC) is the government agency that administers the *Alberta Gaming, Liquor and Cannabis Act*, and is responsible for associated regulations and implementation of policies. Under this provincial act, ALGC regulates and supervises the warehousing and retailing of liquor in the province of Alberta and relevant pricing policies. Spirits manufacturers set their prices, which is known as the 'invoice price', which reflects their costs and profit margin. To this price, AGLC adds a markup and taxes and fees, which then results in the wholesale price paid by licensees such as liquor stores, bars, and

[12] The production of alcohol is also subject to federal excise licence requirements under the Excise Act for the purpose of federal taxation.

[13] Wine sales are also permitted through onsite stores and there are a limited number of off winery stores that sell the brands associated with the parent firm, but not the products of other domestic or foreign wineries.

restaurants). The specific formula is Wholesale Pricing = Manufacturer Price + AGLC Markup + Container Deposit + Recycling Fees + Federal Duties/Taxes = Wholesale Price paid by Licensees.[14]

A key requirement is that the invoice price charged by manufacturers and hence the wholesale price paid by licensees must be the same for each liquor product (Section 3.8 of AGLC policies). AGLC Alcohol, Gaming, Liquor, and Cannabis (AGLC) collects the markup, which is then remitted to the Alberta government.[15] AGLC provides warehousing and distribution services for all liquor products through Connect Logistics Services. Approved manufacturers/sellers (or their agents) can send their products to Connect Logistics Services, which holds the products until they are sold. Once a product is sold, the payment is made by AGLC to the manufacturer/seller. Neither the Alberta Government nor Connect Logistics Services choose which products to hold in stock. That is up to the discretion of Manufacturers/Sellers.

British Columbia

In British Columbia, the BC Liquor Distribution Branch (LDB) is responsible for purchasing, warehousing and wholesale distribution of liquor to retail stores and licensed establishments selling beverage alcohol (pubs, restaurants, lounges). The LDB operates within the mandate of the *BC Liquor Distribution Act*. Unlike Alberta, British Columbia has government owned liquor stores (run by LDB) in addition to privately owned stores. As is the case in Alberta, neither the BC Government nor LDB choose which products can be sold in the province. If a manufacturer/seller is approved, the manufacturer can submit to register products for listing and

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[14] A figure summarizing the different price/charge components is available here https://aglc.ca/sites/aglc.ca/files/aglc_files/JourneyOfABottle.pdf (last accessed April 8th 2024).

[15] With respect to products that are greater than 60% alcohol by volume, the per litre mark up is $18.33. For product that are greater than 22% and less than or equal to 60% alcohol by volume (less than or equal to 22% alcohol by volume), the corresponding markup is $13.76 ($10.36). Different rates apply for products sold from manufacturing facility and/or farmers' and artisan markets Specific details are available here https://aglc.ca/liquor/about-liquor-alberta/liquor-markup-rate-schedule, last accessed April 7th 2024.

sale through the LDB.[16] Manufacturers are paid directly by the BC Liquor Distribution Branch. Based on information from the LDB website (https://www.bcldb.com/doing-business-ldb/payment-from-ldb) the Wholesale Pricing formula = Manufacturer's Price (includes Cost and Profit Margin) + Container Deposit + Recycling Fees + Federal Duties/Taxes + delivery costs. Hence, a difference between Alberta and BC seems to be an accounting for delivery costs.

As LDB is the exclusive wholesaler, all liquor licensees purchase spirits at the same price.[17] In 2021, the BC government enacted regulation which enabled restaurants, bars, and tourism operators with liquor licences to purchase spirits at the wholesale price set by (LDB), and that were only available to LDB and privately owned retail liquor stores.[18] There is no specific wholesale markup levied on manufacturers by LDB. On the other hand, as in Alberta, retailers have the flexibility to set their own prices if they are consistent with regulations on minimum retail prices established by Liquor Control and Licensing Branch.[19]

Despite British Columbia having a hybrid public/private model, there are similarities with Alberta, in the sense that the province acts as the wholesaler, and the existence of competition at the retail level with respect to all types of liquor. Another key similarity is the ease in which retailers can access a variety of products, which then benefits consumers.[20]

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[16] Please see https://www.bcldb.com/files/Product%20Registration%20Process%20BC%20Producer_Final_August2017.pdf for further details, last accessed April 12th 2024.
[17] Please see https://www.bcldb.com/files/Wholesale_Pricing_FAQ-Wholesale_Customers.pdf for further details, last accessed April 5th 2024.
[18] Refer to https://news.gov.bc.ca/releases/2021PSSG0014-000308, last accessed April 4th 2024.
[19] Effective April 1, 2015, retailers will not be able to sell product below the wholesale price it was purchased at, and prices must also be consistent with the minimum price schedule set by the Liquor and Cannabis Regulation Branch (LCRB).
[20] The corresponding process is quite different in Ontario, the details of which are available here https://www.doingbusinesswithlcbo.com/content/dbwl/en/basepage/home/new-supplier-agent/LCBOProductSubmission.html last accessed April 5th 2024.

The Role of the LCBO

In contrast to Alberta and British Columbia, the LCBO in Ontario plays an active role in determining the products that are sold in the province, and then purchasing them for public consumption. The process begins with the LCBO issuing a Product Call, which may be annual or more frequent. These calls are a result of market assessments done by the LCBO staff members. LCBO staff members then decide which products to purchase based on consistency with the needs articulated in its Product Calls. The Criterion used by LCBO staff include: (1) Price; (2) Value; (3) Packaging; (4) Marketing Plans; and (5) Quality. These steps include compliance assessments with respect to relevant regulation standards on product packaging, chemical components, and quality assurance. If the product passes compliance requirements and is deemed to meet a product need, then the LCBO issues a purchase order for the product. The LCBO is also forthright on the high demand for limited shelf space. Specifically, on its website it is stated;

"If your new product is purchased, it is important that agents stay on top of their product's performance. Since demand for shelf space is so high, products that are not selling to the published Annual Sales, Sell-through or negotiated Targets will be discontinued to make room for others. Let's work together to develop marketing programs that will draw consumer attention to new products and build lasting sales."[21]

[21] Please see https://doingbusinesswithlcbo.com/content/dbwl/en/basepage/home/new-supplier-agent/LCBOProductSubmission.html, last accessed April 20th 2024.

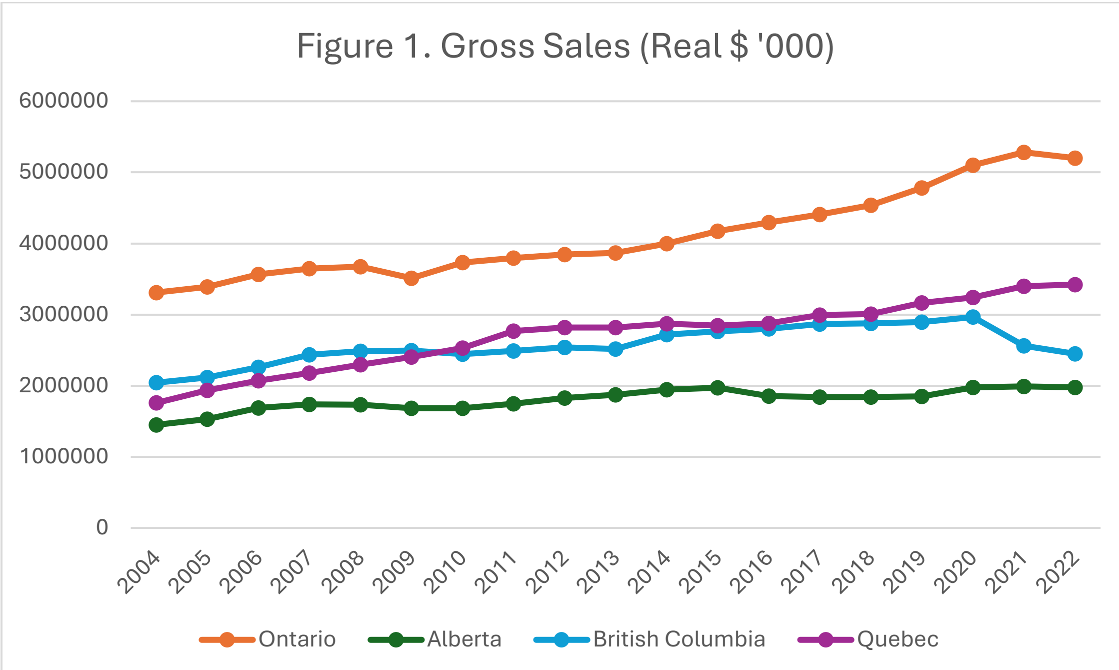
The implication, of course, is that suppliers may face additional marketing expenditures that might not be required in other jurisdictions because of a greater number of outlets and hence, lower constraints on shelf space. That is not to say that sellers do not experience marketing costs in Alberta or British Columbia. However, the lack of adequate shelf space has the potential to result in higher overhead costs that might be passed on to consumers. These costs could further increase with the next stage, that is required to match provincial supply with local demand needs. Specifically, after receiving a purchase order from LCBO, the seller/supplier can approach store managers to carry the product. directly to encourage them to order the product. The LCBO, in fact, has a detailed website (https://www.doingbusinesswithlcbo.com/content/dbwl/en/basepage/home/new-supplier-agent/IntroduceProductToStore.html) which details the steps that sellers can use to convince a store manager to carry their product. Therefore, these are additional costs that must be incurred by a seller, which are attributable to limited shelf spaces in LCBO stores. Further, such costs will be borne more disproportionately by new entrants to the industry as opposed to established players who already have significant brand loyalty.

Given these specific institutional features, it is reasonable to conclude that: (1) allowing more competition through independent stores that sell spirits; (2) eliminating the system of Product Calls; and (3) reducing or eliminating the retail role of the LCBO should result in significant benefits to consumers in Ontario that are currently not available. First, there are the benefits to the government. Consistent with the theoretical model, there is a possibility that more stores will lead to greater sales, which then results in more revenue from wholesale markups. The increase in sales will result from independent stores being able to better respond to local preferences and demand. Independent stores will not be restricted by a possible lack of shelf space, which is the reason behind the Product Call system. Further, competition from independent stores will act as disciplining force on LCBO outlets, forcing the LCBO to seek efficiencies to ensure that its revenue contributions to the province do not significantly fall. At the present, the LCBO does not face such competitive pressures for spirits. Hence, contrary to public belief, allowing independent stores to sell spirits will not result in lower transfers to the government. If done properly, entry by independent stores will quite likely increase government revenues. Independent stores also imply economic benefits in terms of entry by innovative businesses, new jobs, increased economic activity, and associated government revenues.

Second, as noted above, the presence of independent stores implies significant benefits for consumers. Independent stores allow price competition for spirits, and a better diversity of choices for consumers. A recent story by the CBC highlights the difficulties faced by individuals favouring liquor brands from South Asia, in accessing such products from LCBO outlets.[22] The presence of independent stores should result in a better accommodation of local tastes, cultural diversity, and needs of the many different communities that call Ontario home.

[22] Please see https://www.cbc.ca/news/business/south-asian-liquor-lcbo-1.7200750#content, last accessed May 10th 2024.

IV. Empirical Analysis

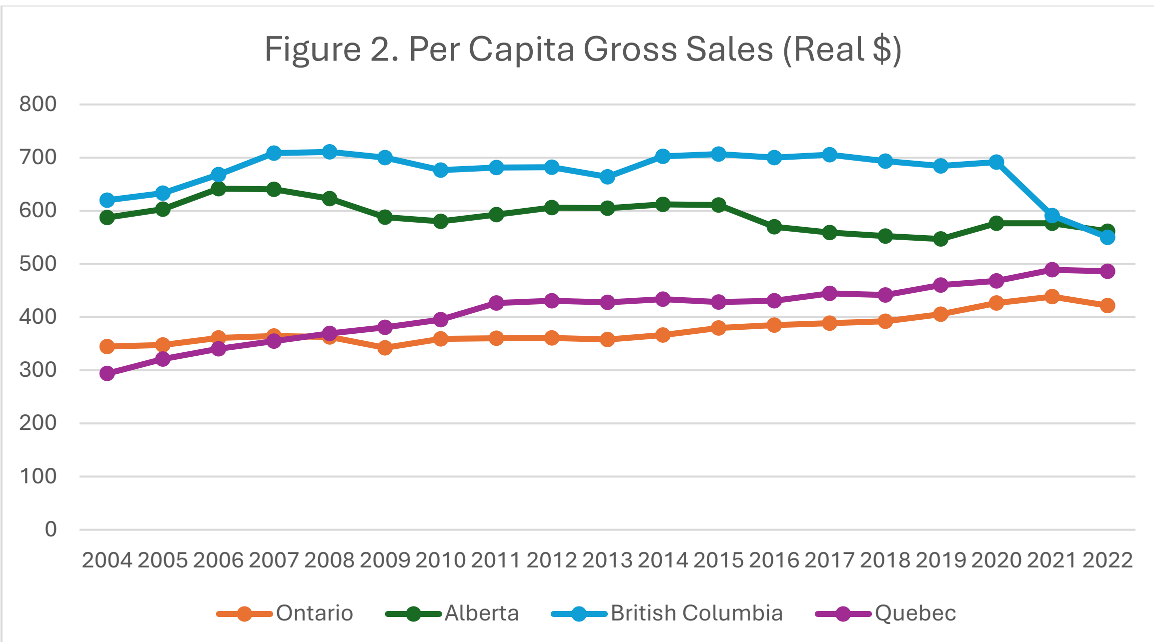


Primary Source: CANSIM Table 10-10-0012-01 (Net income of liquor authorities and government revenue from sale of alcoholic beverages). Data from this table were combined with information on province specific Consumer Price Indices for alcohol from Table: 18-10-0005-01 to produce data in real dollars.

Figure 1 graphs trends in per capita sales (real dollars) of liquor authorities by province.[23] All figures have been adjusted for inflation using consumer price indices from Statistics Canada, and have also been converted into per capita terms, employing population data from Statistics Canada.[24] Unsurprisingly, gross sales are the highest in Ontario and Quebec are the highest. However, gross sales in British Columbia are quite high as well and follow Quebec quite closely except for the last

[23] The Statistics Canada data are for financial years. Instead of reporting data by adjoining years, I report data by the year that has the majority of months. For example, data for the financial year 2012-2013 is considered as "2012" data.
[24] I used data on the number of persons aged 18 and older to construct measures in per capita terms. Another approach would have been to obtain per capita terms based on total volume of sales by liquor authorities. This would have resulted in gross and net income figures with respect to each litre of alcohol sold. However, data on sales volumes are only available for the entire province and not just for liquor authorities (Table: 10-10-0010-01).

few years of the data sample. A possible explanation for the similarity between Quebec and British Columbia gross sales might be if private liquor sales are not reflected in Quebec gross sales data. This is plausible given beer and wine sales through convenience stores. In terms of absolute numbers, gross sales in Alberta are the lowest, relative to Ontario, British Columbia, and Quebec.



Primary Source: CANSIM Table 10-10-0012-01 (Net income of liquor authorities and government revenue from sale of alcoholic beverages). Data from this table were combined with information on province specific Consumer Price Indices on alcohol from Table: 18-10-0005-01 and population from Table: 17-10-0005-01 to produce data in per capita real dollars.

The corresponding per capita figures in Figure 2 present a different picture. Per capita sales are the highest in Alberta and British Columbia. Per capita gross sales are the lowest in Ontario for much of the sample period. The next step is to explore trends in profitability of different provincial liquor authorities, which can be accomplished through studying trends in Net Income. Net Income of provincial liquor authorities is calculated by taking Gross Sales and deducting: (1) discounts; (2)

cost of goods sold; (3) administrative and general expenses; and adding income from other sources, such as licences, permits, and fines. Studying Net Income of liquor authorities allows an exploration of differences in the per capita income (real dollars) that are returned by the liquor authorities to their respective provinces. I do not include revenue from taxes as it is a function of sales and differences in tax structures across provinces. For example, Ontario should generate higher tax revenue from each unit of alcohol sales, because it imposes more taxes.

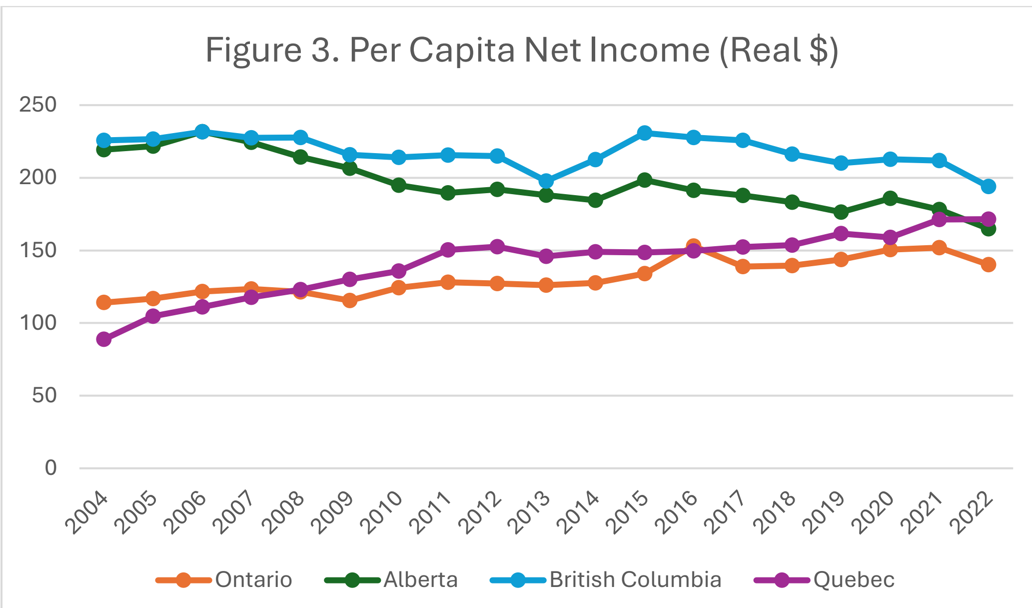
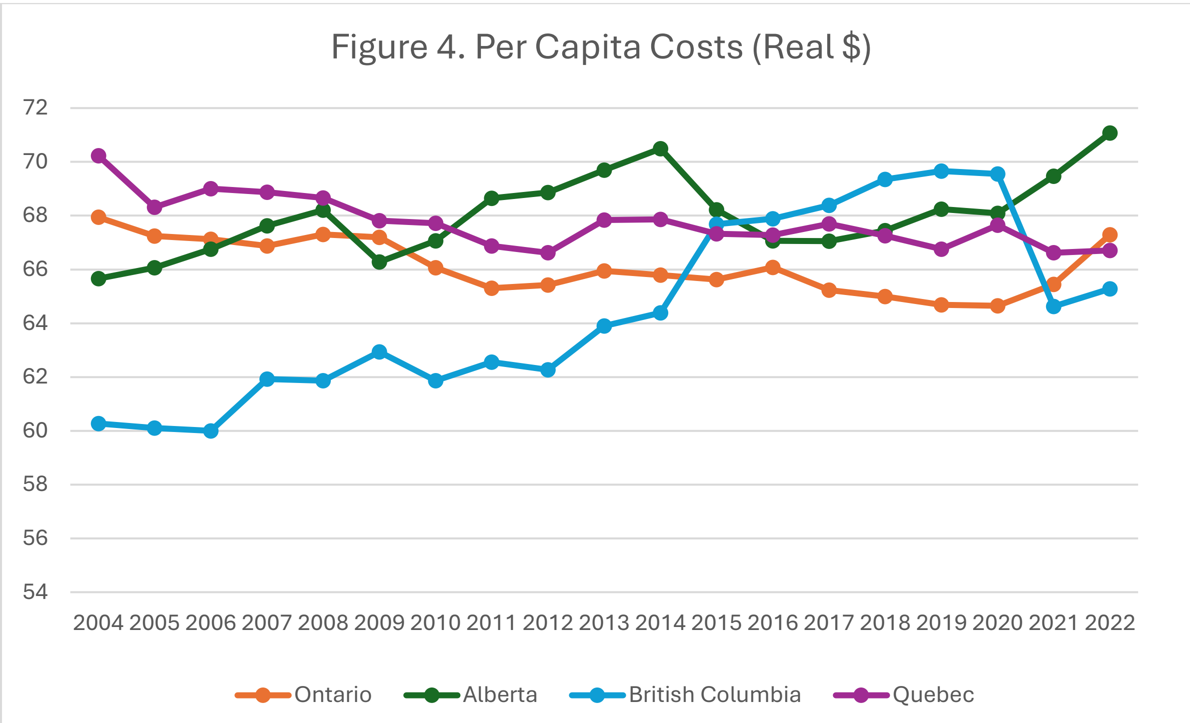


Figure 3. Per Capita Net Income (Real $)

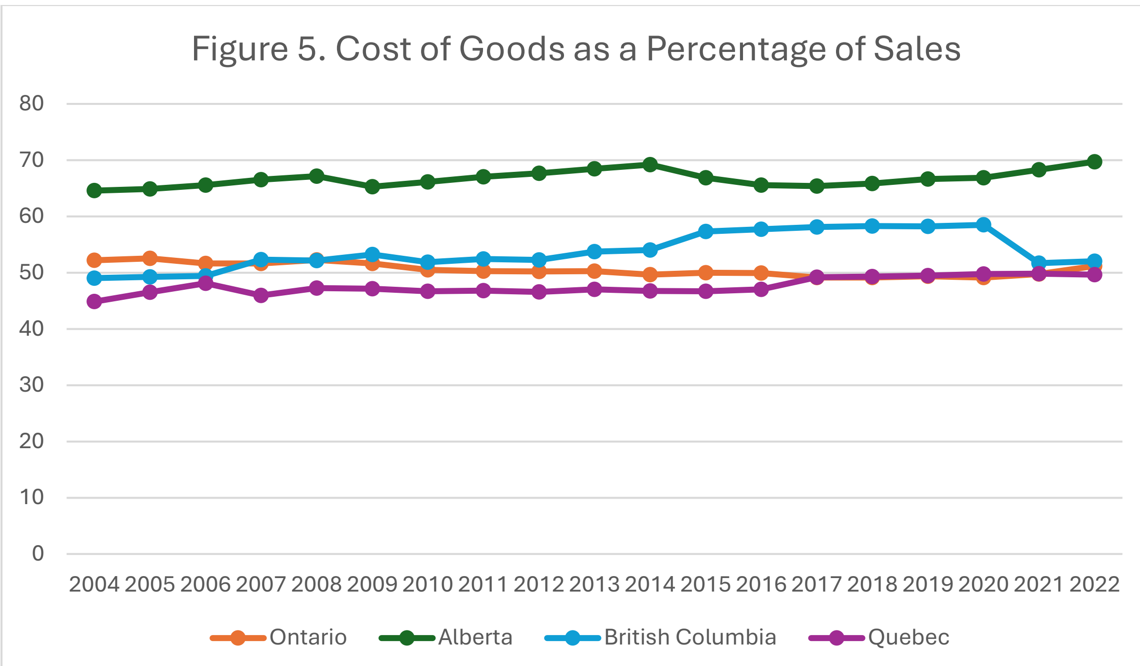
Primary Source: CANSIM Table 10-10-0012-01 (Net income of liquor authorities and government revenue from sale of alcoholic beverages). Data from this table were combined with information on province specific Consumer Price Indices on alcohol from Table: 18-10-0005-01 and population from Table: 17-10-0005-01 to produce data in per capita real dollars.

As can be seen, in terms of Net Income, liquor authorities in British Columbia and Alberta are the highest in per capita terms, with Ontario having the lowest per capita income through most of the sample period. However, the gap between the provinces has narrowed over time. Per capita net income in Alberta has declined while corresponding numbers in Ontario and Quebec have increased. As noted above, per capita net income is obtained after subtracting per capita costs of goods and administrative and other expenses from per capita gross sales (and other minor revenue items such as licenses and fines). Hence, studying trends in costs of good should result in further insights.



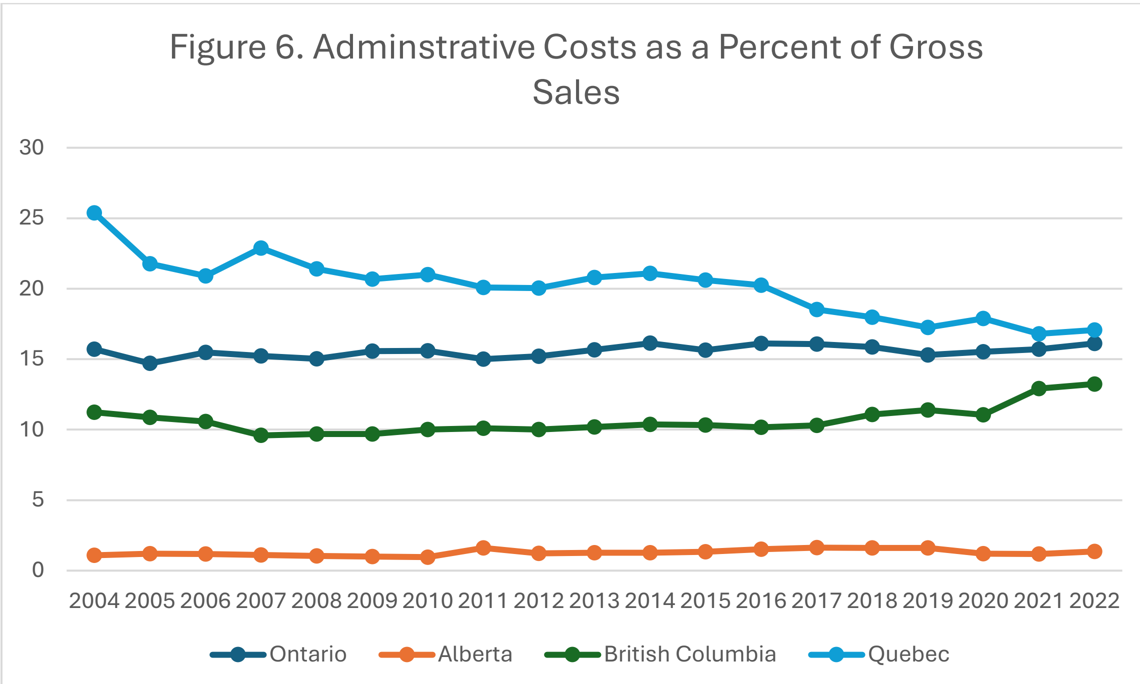
Primary Source: CANSIM Table 10-10-0012-01 (Net income of liquor authorities and government revenue from sale of alcoholic beverages). Data from this table were combined with information on province specific Consumer Price Indices on alcohol from Table: 18-10-0005-01 and population from Table: 17-10-0005-01 to produce data in per capita real dollars.

Figure 4 shows variation in per capita costs (real dollars) of liquor authorities across provinces. Although per capita costs have increased in both Quebec and Ontario since 2019 onwards, per capita costs have remained stable between roughly $64-$69 (in per capita terms) through most of the sample period. Per capita costs rose in Alberta during 2004-2014, and then began to decline from 2018 onwards. In 2022 it had the highest per capita cost figure. British Columbia had the lowest per capita cost figure among all provinces in 2004, but costs rose throughout the data sample until 2020, and in 2022 British Columbia had the lowest per capita costs. What is perhaps more insightful, is trends in the specific components of these per capita costs.



Primary Source: CANSIM Table 10-10-0012-01 (Net income of liquor authorities and government revenue from sale of alcoholic beverages). Data from this table were used to calculate cost of goods as a percentage of gross sales by liquor authorities.

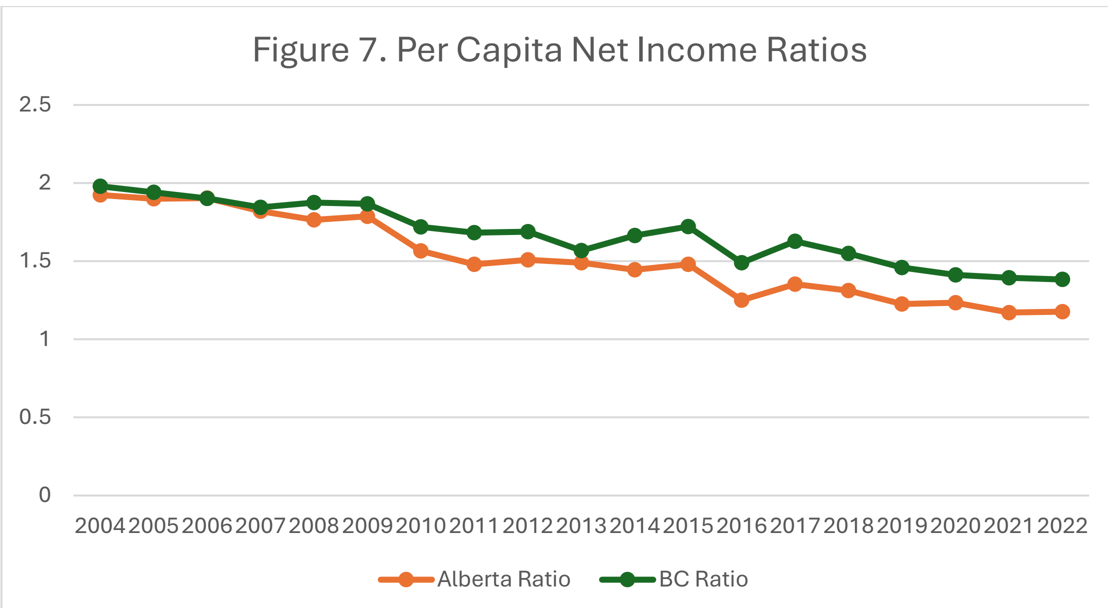
Figure 5 demonstrates that costs of goods as a percentage of sales have been relatively constant through for time for most provinces. The exception is British Columbia which experiences increases from 2013-2020, but then had reductions. The important finding is that cost of goods (as a percentage of gross sales) is significantly lower in Ontario and Quebec relative to Alberta. While it is difficult to identify the causal reason behind this, a likely explanation is the bargaining power of LCBO and SAQ which brings the purchase costs of alcohol down.



Primary Source: CANSIM Table 10-10-0012-01 (Net income of liquor authorities and government revenue from sale of alcoholic beverages). Data from this table were used to calculate cost of goods as a percentage of gross sales by liquor authorities.

The implications from the trends in Figure 6 are intuitive. Administrative expenses as a percentage share of gross sales are the lowest in Alberta, which should be the case, as the province does not operate and manage a retail distribution network. Similarly, the second lowest administrative costs are in British Columbia which has a hybrid system. Ontario costs are lower than in Quebec. However, administrative costs in Quebec have declined significantly over time and by the end of the sample, they were quite comparable to corresponding costs in Ontario. In tandem, the graphical analysis suggests that while having the province be the exclusive purchaser of spirits seems to lead to lower costs of purchases, there are corresponding higher costs in administration. However, these administrative costs are likely driven by the management of retail networks rather than transactions costs associated with bargaining with spirits manufacturers. This inference seems to be the case with British Columbia, which has higher administrative costs than Alberta, but lower than the other provinces.

V. Implications for Ontario



Primary Source: CANSIM Table 10-10-0012-01 (Net income of liquor authorities and government revenue from sale of alcoholic beverages). Data from this table were combined with information on province specific Consumer Price Indices on alcohol from Table: 18-10-0005-01 and population from Table: 17-10-0005-01 to produce data in per capita real dollars.

Figure 7 plots Per Capita Net Income (real dollars) returned by liquor authorities in Alberta and British Columbia as a proportion of corresponding Per Capita Net Income (real dollars) in Ontario. Although this proportion has been declining over time, it has been above 1 for the entire sample. Simply put, existing wholesale and retail structures of alcohol markets in Alberta and British

Columbia return a higher return on a per capita real dollar basis than in Ontario. This section details empirical analysis that sheds some insights on potential increases to Net Income earned by the liquor authority in Ontario if it adapts certain characteristics of wholesale and retail markets in Alberta. I focus on Alberta as this would yield more conservative estimates, since the ratio of Real Per Capita Income is higher between British Columbia and Ontario.

An ideal methodology to estimate the potential benefits of allowing the sale of spirits in private stores would be to pool data across jurisdictions that implement such policies over time, but at different time periods. The existence of several examples would serve as “natural experiments” and allow the researcher to identify the true causal impacts of allowing the private sector to participate in the retailing of spirits. This is because the availability of data from multiple jurisdictions enables the researcher to control for the potentially confounding effects of unobserved factors that are time-specific to a province and which, would result in biased estimates of the effects of enhanced retail access. Similarly, employing data over many years allows the use of methods that can control for the impacts of time-specific shocks that might be attributed to privatization.

Unfortunately, Statistics Canada data are not available for a sufficiently long period to allow such analysis. Perhaps more important is the absence of multiple provinces deciding to engage in significant retail alcohol privatization. Hence, as an alternative, I recommend two empirical methodologies to estimate the amount of “lost Net Income” to the Ontario Government from the current retail structure with respect to spirits. I will first assume a scenario where the only changes to LCBO Net Income from privatization are from the reduction in administrative costs, which would then be borne by independent retailers. This scenario will not assume any increase in per capita gross sales, resulting in conservative baseline estimates. The specific methodology is to take the amount of per capita administrative costs from Alberta and multiply that by population aged 18 years and older in Ontario, yielding a population-based measure of administrative costs. The difference between this estimate and actual administrative costs results in predicted cost savings for the Ontario Government from switching to an “Alberta style” model of spirits retailing. I will test the sensitivity of these results by multiplying the estimates with certain fixed increases to acknowledge that an “Alberta style model” applied to Ontario may have higher per capita administrative costs.

The second approach is to use the same methodology in estimating changes in per capita gross sales that will result from enhanced retail access to spirits and combine that with the results of reduced per capita administrative costs and increases in costs of goods. This will lead to estimates that incorporate increases in sales that should emanate from improvements in retail access, conditioned on the potential loss in bargaining power if the LCBO is no longer the exclusive purchaser for the province. The question is whether the increase in the cost of goods outweigh the growth in retail sales and savings in administrative costs. This approach will allow me to address this possibility. Consistent with my proposed first approach, I will obtain estimates of increases in retail sales and cost of goods by taking the corresponding per capita measures from Alberta and multiplying them by population aged 18 and over in Ontario. All estimates of Net Income are in real dollars.

Table 1. Cost Savings in Administrative Expenses and Growth in Net Income '000 (Real Dollars) for Ontario

Year	(1) Cost Savings in Administrative Expenses	(2) Cost Savings in Administrative Expenses* 1.5	(3) Cost Savings in Administrative Expenses* 2	(4) Cost Savings in Administrative Expenses* 3	(5) Increase in Net Income	(6) Increase in Net Income as Percentage of Actual Net Income (rounded)
2012	506,461.50	467,098.20	427,735.00	349,008.40	682,528.00	50
2013	523,426.30	482,245.60	441,064.80	358,703.30	662,610.40	49
2014	559,889.80	517,489.10	475,088.50	390,287.10	603,120.10	43
2015	563,375.70	518,829.20	474,282.60	385,189.40	701,306.30	48
2016	595,519.90	547,233.20	498,946.50	402,373.10	635,138.40	37
2017	604,684.80	552,973.70	501,262.50	397,840.30	557,248.10	35
2018	616,862.10	565,304.60	513,747.00	410,631.90	493,359.50	31
2019	627,358.60	575,485.00	523,611.30	419,864.00	359,810.30	21
2020	708,359.20	666,922.50	625,485.70	542,612.10	396,961.90	22
2021	747,441.60	706,303.90	665,166.20	582,890.70	296,059.60	16
2022	744,347.00	697,708.30	651,069.70	557,792.50	302,064.30	17
	6,797,726.70	6,297,593.20	5,797,459.70	4,797,192.80	5,690,206.90	

The above table contains results from both approaches (in thousands of real dollars) based on a ten-year period (2012-22). The first column presents estimates with no adjustments in administrative costs. Columns 2, 3, and 4 increase administrative costs by 1.5, 2-, and 3-times actual costs. Column 5 contains estimates of increases in Net Income based on the second approach, with no adjustment in administrative costs and incorporating increases in costs of goods and sales. Column 6 gives the increase in Net Income in Column 6 as a percentage of actual Net Income (real dollars). The bottom row sums up cost savings over years.

Even with adjustments in costs, cost savings to the Ontario Government over a ten-year period would be substantial. Estimates in Columns 3 and 4 (increasing administrative costs by two and three times) imply that moving to an Alberta style system would have saved the Ontario Government between $4.8 b. - $5.8 b. over the sample period. These savings could have been used for social programs and other public initiatives. These findings are consistent with results in Column 5, which yield an estimate of roughly $5.7 b. in Net Income returned to the province. Results in Column 5 indicate a decrease in "lost" Net Income over time, which is probably driven by increases in cost of goods in Alberta as well as limited growth in per capita gross sales. However, even with these restrictive assumptions, my estimates indicate annual increases in Net Income of between roughly $300 m. - $360m. from 2019-2022. This is around 17% of 20% of actual reported Net Income by the LCBO (real dollars).

VI. Conclusion

Consumers in Ontario will soon have considerably expanded choices with respect to purchasing beer, wines, and some other alcohol products. The Ontario Government should now consider permitting the establishment of independent stores that sell spirits. Based on publicly available data from Statistics Canada, my empirical analysis suggests that further deregulation of liquor retailing in Ontario in terms of allowing independent stores to sell spirits, will result in significant public benefits. It is difficult to conclusively say whether an Alberta style approach with a provincial markup at the wholesale level would be better for Ontario than the BC model of government owned retail stores co-existing with independent outlet. However, the results of this study do imply that allowing independent stores has the strong possibility of resulting in higher per capita Net Income for Ontario.

This should not be a surprising result. The administrative costs experienced by the LCBO are high, and reduce the Net Income returned to the province. The province should not be involved in the retailing of alcohol, and this is true for most goods and services. Maintaining retail outlets and associated support services is expensive and a drain on government resources, which could be used for social programs and public goods. Independent stores focused on spirits imply a greater availability of shelf spaces and hence, an availability of more product choices for consumers, which is especially important from the perspective of accommodating the needs of Ontario's culturally diverse communities. This is an important government responsibility, and if there is insufficient space in existing LCBO outlets to meet such needs, then allowing the existence of independent stores meets such obligations. Previous commentaries have noted the significant choices in different types of liquor that Alberta consumers can access.[25]

A common perception is that the LCBO succeeds in ensuring low retail prices of products for consumers by being the only purchaser for the province. However, the results of this research indicate that these savings are not passed on to the consumer as such possible benefits are outweighed by the LCBO's significant administrative and overhead expenses. A public concern associated with the reduction in LCBO outlets is the potential for significant losses in employment opportunities. On the other hand, published research has demonstrated that employment in the liquor industry increased over time in Alberta after privatization, with the growth in the number of independent stores. This should also occur in Ontario if it chooses to allow independent stores.

[25] See https://nationalpost.com/opinion/ivonne-martinez-stop-using-alberta-to-defend-ontarios-liquor-monopoly, last accessed May 18th, 2024.