Strategic Assessment of Wine Business in Nova Scotia

06 August 2024

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EXECUTIVE SUMMARY

A Successful & Flourishing NS Grape and Wine Sector

Nova Scotia is an emerging cool-climate wine region, barely half a century old in comparison to mature wine regions where wineries date back to 1000 AD. Lessons from these successful wine regions demonstrate that a thriving grape and wine sector requires wine businesses of varying sizes that implement a variety of business models.

The Context

This study was commissioned in the wake of a high-profile controversy over appropriate support for the two business types. The goal is to provide decision-makers with the necessary data to develop evidence-based plans for investment in Nova Scotia's grape and wine sector.

This report provides a Strategic Assessment of the Grape and Wine Sector in Nova Scotia with particular attention to a comparison of two types of wine producers: Farm Wineries (FW) and Commercial Wine Bottlers (CWB) to answer two questions:

1. How does supporting CWB negatively impact FW?
2. How, and on what basis, should the province equitable apportion levels of support to the grape and wine sector?

These two questions framed and focused the studies and analyses contained in this report.

Competition

The Farm Wineries and Commercial Wine Bottlers compete in two separate domains. At the sector level there is competition for attention within the political and governmental spheres. Within the regulated marketplace there is competition at the product level.

Broadly, FW and CWB businesses compete with other government priorities for finite resources. Within the sector, grape growers, FWs, and CWBs compete for those self-same resources as well as share of attention in the public sphere. Government support to the sector must avoid tilting market dynamics in favour of one type of stakeholder over another.

At the product-level, competition between FW and CWB remains relatively moderate from a price perspective, and only for certain products within their overall product offerings. Both FWs and CWBs also compete with imported wines, or competitive international-domestic blend (IDB) producers, especially in the value-price band. Currently, competition for wine experiences is only between farm wineries and is mitigated by coopetition activities and the opportunities for growth within the domestic (e.g., provincial) and export (e.g., out-of-province) markets.

However, competition is likely to increase between FWs and those CWBs attempting to fulfill increasing consumer demand for convenience in single serve portions, new flavour experiences associated with the range of RTDs (e.g., wine cocktails, mixed cocktails, wine spritzers, mixed wine and cider), or the convergence on single serve or large format packaging to reduce costs and meet demand.

Option Analysis

A Ways-and-Means approach presents a menu of WTO-compliant options and potential courses of action that can be taken to support a successful and flourishing grape and wine sector. Fair and equitable alternative support mechanisms for stakeholders are proposed. When thoughtfully deployed, these options will support long-term growth for the sector.

Framing Questions and Recommendations

1. How does supporting CWB negatively impact FW?

   At this time, support to CWB will not materially impact FWs, if combined with appropriate efforts to leverage, develop, and clearly identify the Nova Scotia Wine Brand for consumers.

2. How, and on what basis, should the province equitable apportion levels of support to the grape and wine sector?

   We recommend that the current programs designed to assist Nova Scotia wine businesses as they compete with larger producers from outside our jurisdiction be maintained:

   Under the *Farm Wine Support Program*, a direct payment of 50% of the markup, which is equivalent to the previous support under Emerging Wine Region Program (EWRP).

   Under the *Commercial Bottler Support Program*, a direct payment of 7% of the markup, which is equivalent to previous support under the NSLC's Commercial Wine Policy (e.g., preferred markup of 120%).

   Further equitable support should be based on:

   The economic contribution of each type of wine business, currently apportioned at Farm Winery (65%) and Commercial Wine Bottlers (35%) as represented by the Economic Impact Analysis; and

   Investment in Nova Scotia-grown inputs.

Conclusion

While the business models and operational value-added activities of Farm Wineries are distinct from those of Commercial Wine Bottlers, and while their product offerings are based on different principles, both the Farm Wineries and Commercial Wine Bottlers contribute to and serve the consumer market in the province. By offering a broad selection of wines from across the price spectrum, value-priced through premium, their collective efforts are contributing to the maturing of a wine market in the province. A striking accomplishment in a relatively short period of time when compared to the historical development in other Canadian wine regions.

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PART I – INDUSTRY OVERVIEW

A brief history of wine in Nova Scotia

The early French settlers to Nova Scotia brought their notions of culture and beverage with them. For the French, 'the vine' was as ubiquitous in gardens as peas and carrots, and wine was enjoyed with meals – including the 'water wine' (diluted wine) shared with children as an accompaniment to meals. Thus, in all likelihood, the settlers brought grapevines with them. The first record of vine planting in Nova Scotia, however, was by French Apothecary, Louis Hébert (1611) in the area of what is now known as Bear River (a later anglicization of Hébert). Evidence of whether this plant material was imported from France or was indigenous grapes[i] collected in Hébert's travels to what is now called New Brunswick (or Maine) is speculative; there are no conclusive records.

A few years later, then Governor of Acadia, Isaac de Razilly, had grapes planted in LaHave (1633) which were used to make sacramental wine served in 1635.

With the Treaty of Utrecht (1713) the British took over Acadia and deported the Acadian people in the Great Upheaval (Le Grand Dérangement) from 1755-1763. With the Acadians went any growing records, expertise in growing grapes, and the cultural interest in winegrowing.

By the mid-1800s, grapes had been re-established in Nova Scotia. However, these were table grapes which were exported to the delight of the inhabitants of New England, where they notably won prizes in State Fairs.

The temperance movement was firmly established with the first Temperance Society in Canada, in Montreal (1827) and by 1842 about 10% of Canada's population held memberships in temperance organizations. The push for temperance resulted in Nova Scotia going 'dry' during the period from 1901 to the end of WWI.

Canada adopted the Importation of Intoxicating Liquors Act in 1928, which governed interprovincial transportation and international importation of beverage alcohol. This Act gave provinces authority to control imports to their jurisdictions. Consequently, in 1933, Nova Scotia adopted a system of government sale and control of alcohol[ii], establishing the Nova Scotia Liquor Commisions (NSLC - now Nova Scotia Liquor Corporation). The mandate of this new organization was to ensure that Nova Scotians were prevented (protected) from over-consuming.

Studies of potential for grape growing by Kentville Research Station started in 1913, and culminated in the declaration, in 1971, that it was not feasible to grow wine grapes in commercially viable quantities in Nova Scotia[iii]. A few years later, Nova Scotia wine pioneer, Roger Dial, refuted this conclusion both in academic literature[iv] and by planting the 'first' wine grapes along with table grape grower and business partner, Norman Morse, in Grand Pré. Dial thus set the current-day Nova Scotia grape and wine sector in the Annapolis Valley in motion

concurrent with the Jost family planting along the Northumberland Strait (1978). Grand Pré Wines Ltd (Dial and Morse) released Nova Scotia's first commercial vintage in 1980; the first listing of a Nova Scotia wine in the NSLC.

Grape & Wine Development Timeline

Since that time, the Nova Scotia Grape and Wine Sector has seen significant growth with many accompanying milestones. A few of the many noteworthy accomplishments of the sector are highlighted in the following timeline:

1965 – Andres Wines (now Andrew Peller Limited) invests in Abbey (Abby) Winery in Truro.

1982 – Grape Growers Association of Nova Scotia (GGANS) established (by Roger Dial and Walter Wurher).

2002 – Winery Association of Nova Scotia (WANS, now WGNS) established.

2004 – Retail sales estimates of Nova Scotia wine range from $5 - $8 million and WANS creates and adopts standards for 'Nova Scotia' wines.[v]

2005 – Lobster claw logo adopted to indicate that the contents of the bottle were 100% NS-grown grapes; could be used by wineries with membership in WANS. This was an initial attempt to develop a Nova Scotia wine brand, in acknowledgement that provenance is one of the most important features of a fine wine.

2007 – Preferential markup on NS wines sold through the NSLC goes to 43% versus 100-200% for imported wines (with the adoption of Emerging Wine Region Policy).

2012 – Official launch of Nova Scotia's first appellation wine, Tidal Bay (showing that winegrowers recognize the importance of regional branding and of circumscribing terroir).

2014 – Lieutenant Governor's Award for Excellence in Nova Scotia Wines instituted for deserving Nova Scotia grown wines.

2015 – Commercial Wine Policy adopted as a 3-year pilot project, reducing the NS CWB markup from140 to 120% .

2018 – Canada (Nova Scotia) and Australia agreed to the elimination of EWRP by June 30, 2024 to circumvent a World Trade Organization (WTO) challenge.

2023 – EWRP elimination was begun in a phased implementation.

2024 – Commercial Wine Policy and EWRP eliminated.

As the sector has expanded, and expertise in growing and making wine have increased, Nova Scotia wines have accordingly seen international recognition for their quality. A few highlights of the numerous awards and accolades earned by Nova Scotia wine follows:

1980s – Grand Pré Wines Michurinetz-based Cuvée d'Amur wins gold at International Wine & Spirit Competition, NY and silver at competition in Bristol, England.

2011 – L'Acadie Vineyards's Prestige Brut becomes the first Nova Scotia – and only Canadian – wine to medal at the 9th International Effervescents du Monde.[vi]

2015 – L'Acadie Vineyards's 2010 Prestige Brut Estate Zero Dosage awarded a Silver Medal score at Effervescents due Monde, Dijon, France.[vii]

2016 – Avondale Sky wins 6 silver and 2 gold medals at Tasters' Guild International Wine Competition.

2018 – Benjamin Bridge wine served at Canada House in London.[viii]

2024 – Gina Haverstock of Jost Vineyards recognized with the Winegrowers Canada Karl Kaiser Canadian Winemaker Award (first Nova Scotian & first female recipient).

2024 – Blomidon 2021 Chardonnay awarded 95 points for Gold Medal by Decanter.

This level of international recognition by the world's premier wine organizations and associated competitions is emblematic of the success and continued development of Nova Scotia's grape and wine sector.

Trends in Beverage Alcohol

Despite their inherent differences, there are two consistent trends world-wide trends across all beverage alcohol categories. First, a large consumer segment is moving away from mass-produced products in favour of craftsmanship and artisanal production. Second, consumers are decreasing the volume of alcohol purchased and selecting more expensive options in a trend labelled *premiumization*[ix].

Wine - International

Global production has varied widely as dramatic events related to climate change have either served to suppress or increase grape harvests. In the North American context, fires in British Columbia and California, for example, have wiped out huge swaths of vineyard acreage. Record low temperatures in BC and NS have also dramatically reduced production and decimated many vineyards. At the same time, in other regions, extraordinarily favourable growing conditions have led to overproduction, resulting in mandated removal of vineyard acreage in countries such as France[x] and Australia.[xi] The International Organization of Vine and Wine (OIV) reports that global vineyard surface area has been reduced for each of the 3 previous years due to vineyard removal in major growing regions[xii].

Wine consumption, overall, has also decreased and is forecast to continue decreasing through 2029[xiii]. In 2023, consumption was at its lowest level since 1996: "That's equivalent to around 800 million fewer bottles being uncorked around the world [than in 2022]."[xiv] Although consumption of wine has decreased, there are shifts in consumption within the wine category. Overall, still wine is the most popular wine type, followed by sparkling wine, and then fortified wine.[xv] Consumer preferences have moved away from red wine toward sparkling, white, and rosé. In fact, sparkling wine consumption has tripled since 2002.[xvi] White and rosé wines now account for more than half of global consumption[xvii]; although sparkling wines are often included in the white wine category. The US is the biggest consumer of white wine with a 65% increase in consumption between 2000 and 2021; Italy consumes the second-largest amount of white, but consumption has been stable. France is the biggest consumer of rosé, but the UK has seen the fastest rise in consumption[xviii].

Alcohol-free and low alcohol (NOLO) wines are another consumer trend that is consistent with health and wellness concerns that drive such movements as dry January/February. Belief that moderate drinking is good for health has fallen from 22% in 2001 to 10% in 2024, with 52% of those in the 18-34 age group believing that moderate drinking is detrimental to health[xix] (US data). There are generational differences in choosing to reduce alcohol consumption. Leading the way is Gen Z, 51% of whom report reducing alcohol consumption. Millenials are 47%; Gen X 34%; Boomers 36%. Dry January and February participation is also the strongest amongst Gen Z (46%) compared with Millenials (20%), Gen X (19%), and Boomers (7%).

This NOLO movement has gained sufficient traction that entire retail outlets in some jurisdictions are now devoted exclusively to no-alcohol wines and many bars are offering no-alcohol options by-the-glass as well.

These changes in consumption are variously attributed to economic imperatives, health, or wellness concerns[xx]. Consumers in the lowest category of household income are the most likely to report reducing alcohol consumption. As explained in the recent 2024 BMO Wine Market Report: "With the total market likely to remain flat or decline slightly and consumers at their limit for price increases, wineries need to take steps now to proactively protect their business in the coming year and foreseeable future." (BMO, p. 23)

Another trend in wine consumption is reduced sugar. Retailers in adjacent jurisdictions (e.g., ANBL, SAQ, and others) now indicate residual sugar (g/l) on the shelf tag and report that new listings must be 0g/l.

As consumers search for healthier options, organic and sustainable wines have become increasingly popular. Biodynamic and vegan options are also sought by increasing numbers of consumers.

Finally, premiumization has taken hold as consumers spend more per bottle and buy fewer bottles overall (as reported by both Wine Enthusiast and Decanter). As the BMO report notes: "While the fight for market share will be challenging, the wine industry remains supported by loyal consumers who are still purchasing high-quality wines at premium prices." (BMO, p. 23)

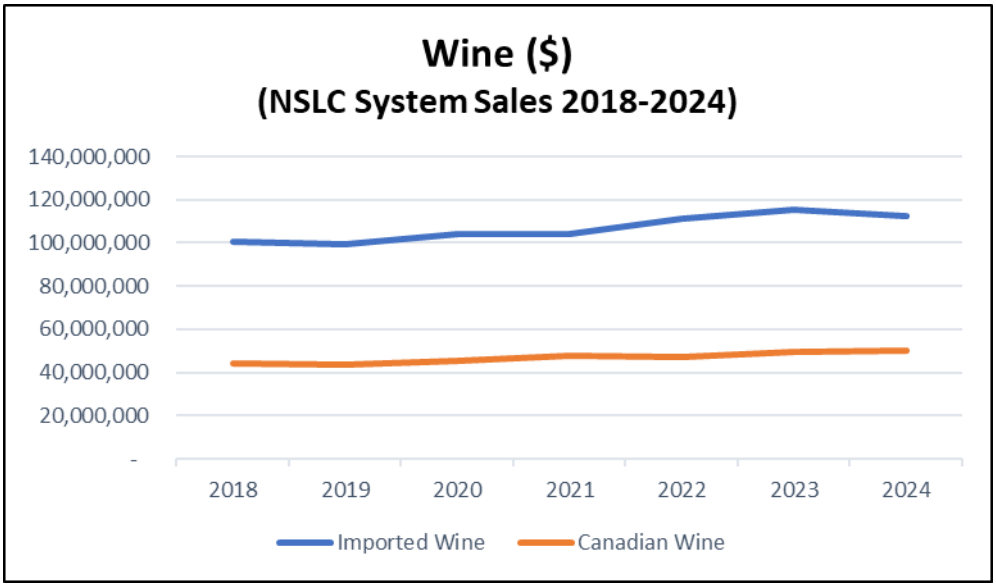
Wine – Canada

In Canada, wine represents 31.3% of beverage alcohol sales[xxi]. Canada leads North American countries in wine consumption, with 14.7% share of total alcohol volume across the continent.[xxii] Wine consumption levels vary quite dramatically by province, with the highest per capita consumption in Quebec and British Columbia. Both of these Provinces have long histories of growing and consuming wine, dating back to early Roman Catholic priests who encouraged the planting of vineyards. Quebec, with the highest per capita consumption, is also more culturally aligned with Europe, where wine drinking is part of the fabric of everyday life rather than considered a special occasion activity.

Wine – Nova Scotia

The world's leading wine regions work to protect the provenance, identity, and styles of their wines (e.g., appellations such as Champagne or Bordeaux). Wine grown, vinified, and bottled by Farm Wineries in Nova Scotia falls into one of two categories, based upon the proportion of Nova Scotia grape content: *Nova Scotia wine* has a minimum of 85% Nova Scotia grape content with the remaining proportion coming from somewhere else in Canada; *Wines of Nova Scotia* has 100% Nova Scotia grape content. Despite this lack of labelling clarity and transparency for Nova Scotia consumers, sales continue to increase. For the fiscal year ending on March 31, 2024 the NSLC reports that sales of Nova Scotia wine increased by 1.7% to $22.2 million. However, sales of imported wines still dramatically exceed total sales of Canadian wines in the NSLC system (See Figure 1).

Figure 1.[xxiii] *Sales of Wine 2018-2024*



The market share of sales of Imported versus Canadian sourced (grown or bottled) wine remained relatively stable at 31% and 69% respectively.

Nova Scotians consume 1.8 standard glasses of wine per week for every person over the legal drinking age (Statista). This equates to approximately 1 standard bottle (750 ml) of wine every 3 weeks per person (1.8 x 5-ounce standard wine serving = 9 oz or 266 ml per week) or 17.3 bottles of wine per year.

Wine tourism

Most visitors to wineries dwell close enough to the wine region for an excursion/day trip. This is true the world over, whether the wine region is in the New or Old World and irrespective of whether the wine region is famed or emerging. Napa and Sonoma, for example, draw mostly on San Francisco (62% were day trip visitors in 2018[xxiv]); Niagara depends on visitors from the Greater Toronto Area; wineries in European countries draw families for weekend visits; and the visitors to *Nova Scotia Wine Country* in the Annapolis Valley predominantly arrive from Halifax. These tourists often include an overnight stay as part of a long weekend. Although the duration tends to be short, the effects ripple out into the community as wine tourists spend in the area at local restaurants, accommodations, shops, and bars.

Data from the 2022-2023 Tourism Nova Scotia Visitor Exit Surveys shows that 7% visited a winery during their trip. When compared to other visitors to the Province, tourists who visit a winery are less likely to be from Atlantic Canada; more likely to travel as a couple; and more likely to have engaged in outdoor activities, cultural activities, and indulged in local cuisine. These visitors were more likely to tour Nova Scotia during peak summer months and stayed almost twice as long as other visitors (10.5 versus 6 nights). They also had an average per-travel expenditure of 42% more than visitors overall. While these are clearly valuable tourists to the

province, these measurements are insufficient to afford a full analysis of the economic impact related to their wine tourism motivation and activities.

A long-term study (over a decade) with wine tourists on the (Wolfville) Magic Winery Bus brings further clarity to understanding wine tourism in the province and the potential economic benefits. In general, Nova Scotia wine tourists indicate an interest in wine, but don't consider themselves knowledgeable, despite being experienced wine drinkers (70% report drinking wine for more than 10 years).

Those completing the Magic Winery Bus survey are predominantly female (80%), aged 45 – 64 years. These tourists tend to have higher than average incomes and are educated to the post-secondary certificate level or above (55% have Bachelor's degrees or above). Most have been drinking wine for more than 10 years and are married/common-law with no children under 19 living at home.

Over the duration of the study, overnight stays (versus day trips) have steadily increased, accompanied by increased spending in the Wolfville area.

Beer – International

Worldwide, beer sales are shrinking, however, the number of beer drinkers is increasing as the beverage becomes culturally accepted in traditionally non-beer drinking countries. While beer consumption is shrinking overall, craft beer consumption is increasing in concert with the desire for more artisanal and locally produced products across all beverage alcohol categories. The NOLO movement is influencing beer consumption as well, with non-acoholic beer products growing in both sales and volume; growth that is expected to continue through 2029.[xxv]

Beer - Canada

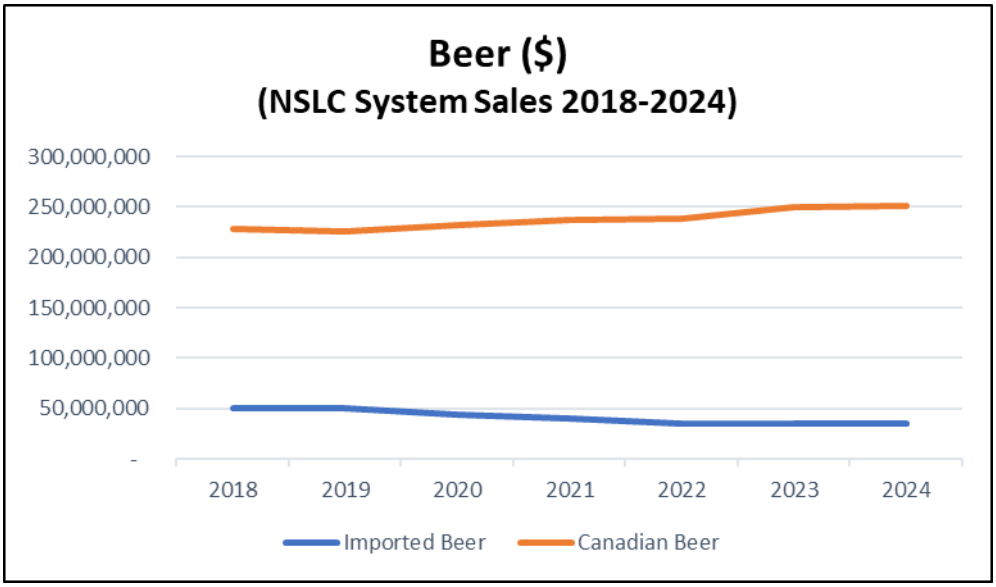
Total beer sales in Canada have decreased since 2009. In 2011, per capita sales of beer was 80.2 litres, compared to 62.1 litres in 2023. Regular beer (4.1% – 5.5% ABV) is the most popular, representing 680.09 litres in 2023 (Statista). Although overall beer consumption in Canada is shrinking, as with the rest of the world craft beer is gaining in popularity (and market share) relative to mass-produced/corporate beer.

Beer – Nova Scotia

By both sales and volume, beer is the most popular form of beverage alcohol in Nova Scotia, representing $30.3 million in sales for 2023 – 2024. Consistent with International trends, the craft beer category in Nova Scotia is also growing its share of market against mass-produced beer.

While overall beer sales at the NSLC have declined by 3% since 2018, purchases of Nova Scotia craft beer have increased by 136% (see Figure 2). It is important to note that, unlike most mass-produced beer, NS Craft brewers often sell directly to consumers and licensees, which is not reflected in the NSLC System Sales reported here. The presence of craft breweries has increased in the province; the Craft Brewers Association of Nova Scotia was established in 2011 and now lists 46 members on its website.

Figure 2. Sales of Beer 2018-2024



The sales of beer during this period saw market share move from Imported Beer to Canadian Beer which increased from 82% to 88%.

Spirits - International

Unlike wine and beer, spirits sales have grown in the period from 2012 (157.72 million litres) to 2022 (193.6 million litres). In addition to the trends toward premiumization, craftmanship, and artisanal production seen across all beverage alcohol categories, consumers in this category also seek unique and innovative flavours along with organic and natural ingredients. Since RTDs are often spirits-based, they are sometimes classed as spirits, so differences in inter-jurisdictional category definitions can make comparisons challenging.

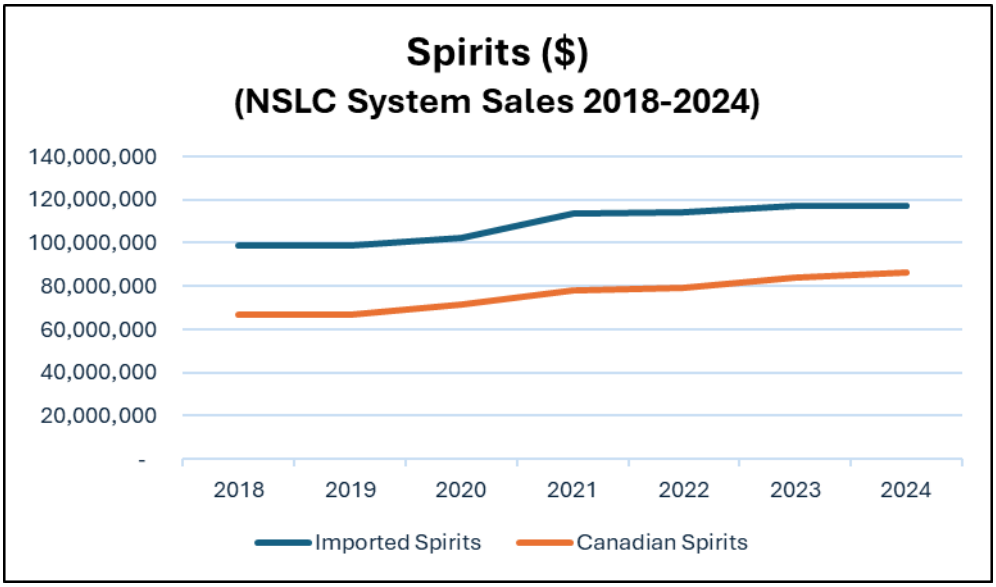
Spirits - Canada

Spirits trends in Canada tend to mirror the international trends, with many consumers expressing interest in craftsmanship and artisanal production. As whisky surges internationally, it remains a strong seller in Canada as well. Tequila has enjoyed an explosion in popularity over the last decade. Spirits sales, by overall market share, have remained relatively stable since 2004[xxvi] while spending has shifted within the category (e.g., preferring tequila over some other products).

Spirits – Nova Scotia

Spirits in Nova Scotia are consistent with international trends, as overall spirit sales have seen minor growth in the post-COVID market and a slight movement of share from imported to Canadian spirits.

Figure 3. Sales of Spirits 2018-2024



Post-COVID sales of Canadian Spirits saw an increase in market share against Imported Spirits, moving from 40% to 42%.

Cider and Ready-to-Drink (RTDs)

Hard cider has enjoyed a resurgence due to its gluten-free nature, artisanal production, and connection with tradition and 'natural' production (see Appendix C for a thorough discussion of Cider). However, quantifying cider and RTD trends can be challenging to assess due to RTD category inconsistencies across jurisdictions. For instance, Statistics Canada aggregates cider and RTD data into one category. In some reports, Statista combines cider, perry (pear cider), and rice wine. However, popular press and NSLC sales data provide insights.

Cider – International

Cider is often conveniently packaged as a single-serve beverage, which offers the convenience of an RTD combined with straightforward ingredients and lower alcohol of a wine. These characteristics are especially appealing when consumers are economically challenged, looking for healthier options and more natural ingredients. An historic beverage (see section on Cider), cider has enjoyed a resurgence in the past decade, but seems to have plateaued overall. While craft cider overall continues to grow, consumer interest in flavoured ciders is declining.[xxvii]

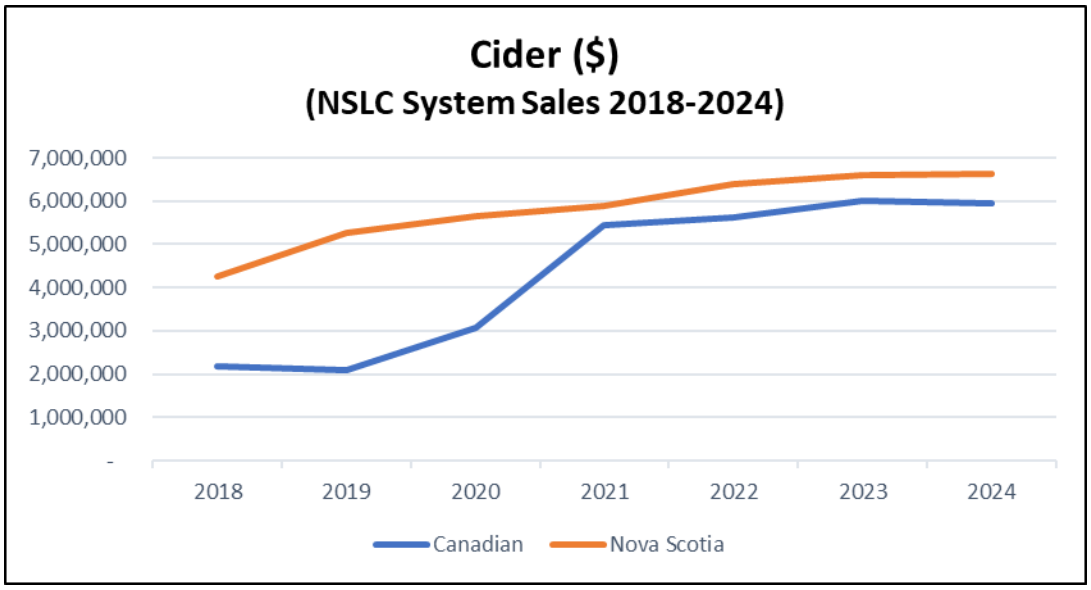
Cider – Canadian

Consistent with International trends, cider has experienced dramatic sales growth. Canadian sales were $128.02 million in 2012 and rose to $282.96 million in 2023[xxviii].

Cider – Nova Scotia

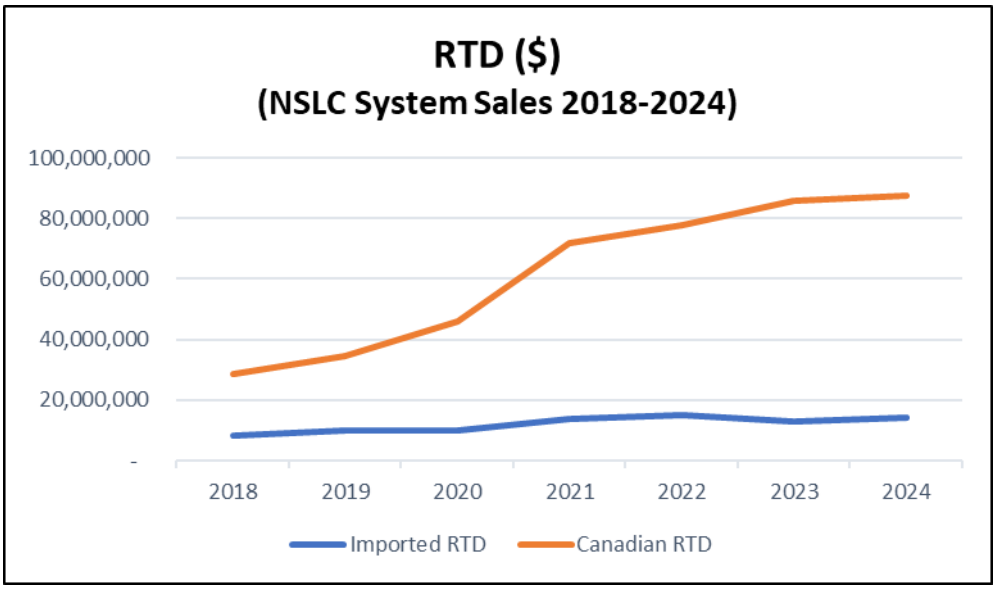
The Nova Scotia Liquor Corporation lists six types of cider: traditional, flavoured, mead, wine-infused cider, spirit-infused cider, and other. Nova Scotia cider has seen strong growth of 56% over the period (see Figure 4).

Figure 4. Sales of Cider 2018-2024



The Ready to Drink category has enjoyed dramatic increases in sales internationally, nationally, and provincially. In Nova Scotia, Ready to Drink is defined as "beverage alcohol products that are produced with the purpose of being consumed as purchased such as coolers and pre-mixed cocktails excluding beverage alcohol already defined as beer, wine, spirits, cider, and/or mead."[xxix] Since 2019, sales of Nova Scotia produced RTDs have grown by 927%. Many speculate that this popularity has been based upon convenience, economic challenges that make the price of a single serving appealing, and the challenges of COVID-19 restrictions that saw people consuming cocktails at home.

Figure 5. NSLC Sales of RTD 2018-2024



RTD sales grew exponentially throughout the period. The category saw a growth of 173% overall, while Canadian RTDs' saw a 204% growth, moving from 77% to capturing 86% share by 2024.

Conclusion

International and National trends in Beverage Alcohol sales are largely mirrored in Nova Scotia. The preference for craftsmanship and artisanal production is seen in the growth of locally produced wine, beer, spirits, RTDs, and cider. Based on NSLC sales data, premiumization also seems to be occurring (although in the absence of consumer data some of this shift could be attributed to price increases). The consumer desire for low sugar and low alcohol products, as well as white and sparkling wines, offers an opportunity for Nova Scotia winegrowers, since the terroir lends itself to producing these wine styles. Moreover, relatively low per capita consumption of wine overall and low market share of NS wine in comparison to that of local wine in mature wine regions offer opportunities for Nova Scotia winegrowers to capture more of the local market. Strong market share at home has been seen as a prerequisite for export success in established wine regions.

PESTLE ANALYSIS

PESTLE Analysis Framework

PESTLE analysis is a strategic framework used for analyzing the external macro-environmental factors that may impact an industry or organization. The origins of the PESTLE analytics can be traced back to Harvard in the 1960s and 1970s when the concept of framing studies using Economic, Technical, Political, and Social factors (ETPS) was first introduced. The ETPS acronym was later colloquially transformed into the acronym PEST. The PEST framework was later expanded to include Legal and Environmental factors, thus evolving into the contemporary PESTLE framework.

Conducting a Strategic Assessment PESTLE analysis facilitates:

Identifying Opportunities and Threats: By examining external factors, it can identify opportunities for growth and potential threats that could impact industry markets and operations.
Strategic Planning: It provides a comprehensive overview of the macro-environment, aiding in long-term strategic planning and decision-making.
Risk Management: Understanding external factors helps in anticipating risks and developing strategies to mitigate them.
Market Analysis: PESTLE assists in understanding market dynamics and the broader economic landscape, enabling more accurate market analysis and forecasting.
Adapting to Change: By staying informed about external changes, industries can adapt more quickly and effectively to maintain competitiveness.

PESTLE analysis has become an integral part of strategic management and business planning and has been adopted for use by various industries and academic institutions as a standard tool for environmental scanning and strategic assessment. PESTLE analysis is widely used in both the public and private sectors and has become a fundamental component of strategic planning, market research, and risk management.

The PESTLE framework considers:

Political Factors: These include government policies, political stability or instability, tax policies, trade restrictions, and tariffs. Political factors can impact the regulation and deregulation of industries, government spending, and foreign trade policies. Understanding these factors permits navigation of the political landscape and anticipates changes that could affect industry markets and operations.

Economic Factors: These factors encompass economic growth, interest rates, exchange rates, inflation rates, and unemployment levels. Economic factors affect purchasing

power and cost of capital. By analyzing economic conditions industries may forecast market trends, manage financial performance, and make informed investment decisions.

Social Factors: These include cultural norms, demographic trends, population growth rates, age distribution, and lifestyle changes. Social factors influence consumer needs and market sizes. Understanding these factors helps industry generate products and services and marketing strategies to meet the evolving preferences and behaviors of various target audiences.

Technological Factors: These cover technological advancements, innovation, research and development (R&D) activity, automation, and technological awareness. Technological factors can drive innovation, improve efficiency, and create new opportunities. Industry needs to stay abreast of technological trends to maintain competitive advantage and optimize operations.

Legal Factors: These include laws related to employment, health and safety, consumer protection, and intellectual property. Legal factors ensure that industry operates within the framework of the law and avoid legal pitfalls, ensures compliance, and protects intellectual property.

Environmental Factors: These encompass environmental regulations, climate change, weather conditions, and ecological considerations. Environmental factors are increasingly important for sustainability (economic and environmental). Analyzing these helps mitigate environmental risks, compliance with regulations, and adoption of sustainable practices.

The PESTLE outputs in this study are bounded by the application of the following criteria: an appropriate level of analysis; focus on stakeholders' interest; currency and relevancy of PESTLE factors, and evaluation of risk. Finally, factors are identified and viewed through the lens of differences between the business models of Farm Wineries and Commercial Wine Bottlers. The PESTLE analysis is presented in Table 1.

Table 1. PESTLE Output

Factor	Observations
Political	Governments (both Federal and Provincial) have supported the development of the grape and wine sector in the province since its inception. Contemporary support to the sector continues in various forms across a variety of government departments and programs. Controversy with government policy or decision making without resolution, public and lobby concerns over the current uncertainty with respect to government support to the sector will likely only increase in intensity. Government actions that are not perceived by the public and by industry as being grounded in the differential needs of industry actors will continue to generate public and industry pressure on government for change. Support options that are not perceived as commensurate with the scale, form, and type of economic contributions, by industry stakeholders and lobbies will continue to generate controversy and subsequent public and industry pressures on government for change. Potential for other beverage producers with similar operations (e.g., mass-produced beer) to vocally seek similar considerations or accommodations. Uncertainty over future policies and support by government (such as the current issue) fosters tentativeness in the market. This results in institutional lenders perceiving more risk in the sector which can restrict capital availability and investment. Consequently, they, along with private investors or those wishing to enter the sector, are less likely to assume risk, provide capital, or enter the sector. Current market instability is reducing entrepreneurial interest and constraining institutional investment throughout the sector. Uncertainty in the sector may also serve to motivate sector exit.

	Trade Agreements: Tariffs and trade agreements impact both the import and export of wine into the region. Favorable agreements can open new markets for export, while trade barriers can restrict access. Current response to the WTO Arbitration has forced the government to act to remain in compliance. Future actions will need to be trade compliant. Inter-government relations: Stability of relations with key input sourcing countries ensures a steady supply of raw materials. Trade agreements with these countries need to be monitored and maintained to minimize value chain risk and for compliance. For BA, interprovincial trade barriers create an environment where export is not only international but also within Canada. Reducing barriers to sales in other provinces will help to facilitate wider distribution of Nova Scotia-produced wines and other BA. Regulatory Compliance: Small wineries often face significant internal regulatory compliance costs related to production, labeling, and marketing. This increases in the case of export. Import Regulations: Import tariffs and quotas on wine and grape juice can affect cost structures and supply chains. Favorable import policies can reduce costs and help to ensure consistent supply. Corporate Regulations: Large wineries must navigate complex corporate regulations, including labor laws and environmental regulations that may transcend political and geographic boundaries.
Economic	Funding and Investment: The absence of long-term holistic approaches to sector support strategically constrains sector development. As wine is a global commodity, those countries or regions who provide multi-point and strategic investments and support enable their domestic producers to thrive domestically and effectively compete in selected markets on an international basis. In the case of Canada as a domestic market this also includes differentials in provincial levels support and inter-provincial trade issues. Access to capital: in small or developing wine markets access to capital can be limited, making it challenging to expand operations or invest in new technology to achieve scale. Input Prices: Any fluctuations in grape prices will have a greater impact on smaller wineries competing based on differentiation and the use of specific varietals. Additionally, the smaller margins of these wineries creates added pressure should inputs fluctuate.

	Agricultural inputs are also subject to greater risks from weather events or climate change impacts. Smaller wineries reliant on local/regional supply of agricultural inputs are at greater risk than larger wineries whose scale permits importation of agricultural inputs from external markets. Global Supply Chains: CWBs can more easily source grapes and juice from multiple countries, hedging against local economic fluctuations, cushioning the impact of local fluctuations in levels grape production, or damage and loss to local supply. The ability to pivot to new suppliers globally, or to benefit from global gluts in agricultural inputs, reduces risk. The ability to capitalize on agricultural inputs whose cost to produce has already been subsidized in another market/country yields a cost advantage over producers who use domestic-only inputs. Cost of Production: Rising costs of inputs and requisite labour, water, and energy can pressure profit margins for smaller operations more so than larger wineries. Economies of Scale: Larger operations benefit from economies of scale, reducing per-unit costs and ensuring consistent product characteristics across large production volumes. The regulated Nova Scotia market has a natural cap as the population can only afford to spend so much on the consumption of alcoholic beverages. Market Diversification: Economic stability in multiple markets helps buffer against downturns in any single region. Larger wineries are more able to develop distribution channels in foreign markets and navigate the transaction costs associated with importing inputs or exporting product. Inflationary Conditions and Consumer Spend: In the Canadian economy reduce consumption overall. Relatively low prices from scaled processes and larger volumes provide a hedge against economic downturns by leveraging consumer desires for lower priced products. This has a more prominent impact on small or less efficient winery operations than larger ones. Economic Impact and Contribution: The agricultural basis of Farm Wineries means that they are operated in rural areas. They are labour-intensive organizations with strong ties to the communities around them. These ties are both quantitative and qualitative in nature. The quantitative impacts of Farm Wineries have a broader impact across communities due to the nature of local supply chains.

	Tourism: Wine tourism can be a significant revenue draw for both wineries, local businesses, and rural communities. Farm Wineries rely on direct sales through cellar doors and the provision of service and hospitality operations as additional revenue channels/streams. Brand Recognition: Large wineries and CWBs benefit from marketing expertise that can help to build brand recognition. While smaller wineries can foster loyalty and brand recognition on a local basis, they are usually resource constrained in terms of marketing reach and expertise.
Social	Culture and Heritage: The embedded nature of small wineries, usually located within smaller rural communities, contributes to the social and cultural fabric of the region. This increases the potential for tourism locally and regionally. Consumer Preferences: Increasing demand for organic and locally-sourced products benefits small wineries with local supply chains or those emphasize these sustainable practices. This form of demand is increasing which is likely to benefit smaller rather than larger scale wineries. Natural and Organic: Increasing consumer demand for these forms of products will benefit smaller wineries over larger operations without agricultural input operations. Local Products: Increasing consumer demand for and loyalty to local products is expected to continue to grow. This will benefit smaller wineries over larger operations without agricultural input operations. Changing Demographics: Requirement for adapting to changing consumer demographics and their preferences. The global shift in beverage alcohol consumption patterns, such as the rising interest in low-alcohol or non-alcoholic wines, presents a challenge to the sector. Corporate Social Responsibility: Wineries will need to reduce their environmental impacts and maintain a positive public image through sustainable practices and social initiatives. Environmental pressures from the public and responses by all levels of government will continue. In the short term this will favour smaller agriculturally based wineries over larger operations that are separated from agricultural input operations. In the middle to longer term larger wineries and CWBs are more likely to have the capital capability of responding to imposed environmental

	imperatives through technical innovation in production processes or in choosing to source from international markets with environmental regulations which doffer from Federal or Provincial regulations.
Technological	Innovation: Limited resources can make it difficult for smaller operations to adopt new technologies used in viticulture and vinification operations. Larger operations are less constrained in this regard. Advances in Technology: Large wineries and CWBs can more easily invest in new technologies, such as machinery for new packaging formats, and leverage these advances across their production, distribution, and marketing operations. Automation: Automation in production processes reduces labor costs and increases efficiency. However, automation is capital intensive and presents barriers for adoption by smaller Farm Wineries. Research and Development: Significant investment in R&D for new product development and improving production methods presents a challenge to smaller wineries. Sustainable Practices: Advances in sustainable agriculture technologies can improve efficiency and product quality. Digital Marketing: Social media and online channels permit wineries greater access to consumers. Increasing expectations associated with modern, mobile technologies by consumers will act to pressure wineries to adopt them.
Legal	Trade Laws: Compliance with international trade laws and standards, including import/export regulations, is more likely to impact smaller wine businesses with fewer resources than larger ones. Very few NS Farm Wineries export their wines (either interprovincially or internationally) at this time. Environmental Regulations: International, federal and provincial environmental regulations are expected to increase. This will increase administration costs for wineries. Compliance Costs: Legal compliance with local, national, and international regulations can be difficult to navigate and administratively is financially costly. Farm Wineries must rely to a greater extent on government support.

	Intellectual Property: Protecting trademarks and geographical indications (e.g., appellations) is crucial for all wineries and for wine regions. Labour Laws: Compliance with labor laws, including wages and working conditions, is essential. This is a greater burden for smaller wineries with labour-intensive operations which require greater levels of administration.
Environmental	Climate Change: Farm wineries with localized inputs in their value chains are particularly vulnerable to the impacts of climate change, such as changing weather patterns and extreme weather events. This means that securing local agricultural inputs is an overriding imperative for farm wineries without the flexibility or resources to permit pivoting to external input sources. Events such as a Polar Vortex have a lasting impact beyond annual crop damage. While the Polar Vortex that happened in February 2023 dramatically reducing harvests for that year, the impacts will persist for some time. It is likely that it will take at least 5 years to return to full production as vineyards recover or are replaced. Sales impacts on the 2023 vintage will begin to be felt in spring 2024 with the earliest releases of the latest vintage. For wineries who intended to use 2023 crops to produce traditional method sparkling wines, the impact could be felt for 10 years or more. Grape growers and farm wineries with vineyards operations or who source from local suppliers are therefore at much more at risk from climate change. CWBs may pivot to externally sourced supply of grape inputs. Sustainability: Increasing emphasis on sustainable farming practices by both the public and by government will impact the agricultural component of wineries and their suppliers. This will likely add additional more cost pressures than CWBs, to due to the nature of their value chains and input supplies. Environmental Footprint: All wineries will be increasingly pressured to manage the environmental footprint of the operations. Adopting sustainable practices with regard to water usage, wastewater management, waste handling, and energy needs will be greater for CWBs. Water Usage: Unlike many other wine regions, irrigation for grape input production has rarely been needed in Nova Scotia so far. Yet the climatic anomalies associated with climate change offer little assurance that this will always be the case. Moreover, responsible use of water is of increasing concern both from environmental and

	consumer perspectives, with wineries in some regions signaling their responsible use of water resources in their public relations and marketing.

Conclusion

The PESTLE analysis reveals distinct challenges and opportunities for the grape and wine sector in Nova Scotia. Challenges include factors which impact the sector overall or differentially impact Commercial Wine Bottlers or Farm Wineries. Compliance with international trade agreements or the constraints of inter-provincial trade may have deleterious impacts on both Farm Wineries and Commercial Wine Bottlers. For example, both face competition with imported wines, and both have to manage the barriers to entry into other provincial markets. Both Farm Wineries and Commercial Wine Bottlers are affected by the overall economic conditions, whether at national or provincial levels, as they come to affect consumer spending behaviours.

There are also factors which may differentially affect Farm Wineries or Commercial Wine Bottlers across the domestic, national, and global beverage alcohol markets. The value-added activities central to the business models of the Commercial Wine Bottlers allows them to internationally source and leverage the lower cost of grape production found in mature wine growing regions. Or, to use their mature distribution networks to develop markets and facilitate sales within the domestic national market. Circumstances which cannot be taken advantage of by Farm Wineries due to the nature of their core business model; production of local wines, or because of limited managerial capacity, wherein they face significant issues with regulatory and economic hurdles in exporting beyond the provincial market.

Climate Change is another factor that poses differential risk to Farm Wineries and Commercial Wine Bottlers. While the overall trend towards global warming may provide a heat-benefit to Farm Wineries in terms of an increase in grape production yields, or the improved viability of grape varietals, it is also accompanied by increased volatility in weather patterns and the experience of adverse weather such as the increased frequency of hurricanes or Polar Vortex events. Unlike Commercial Wine Bottlers who can more easily mitigate this risk through a pivot to sourcing inputs from unaffected regions, Farm Wineries reliance on local inputs expose them to greater risks from Climate Change induced adverse weather events.

On the other hand, the differences in business models between Commercial Wine Bottlers and Farm Wineries means that the Farm Wineries are more likely to benefit from in-province consumer preferences for local wines than those products offered by Commercial Wine Bottlers. Also, again unlike Commercial Wine Bottlers, Farm Wineries may develop tourism experiences offerings which allows them an additional sales channel for their wine as well as to capture supplementary hospitality and service revenues from the tourist market.

The PESTLE analysis surfaces the major common challenges facing both Farm Wineries and Commercial Wine Bottlers. It also highlights the differential impacts of factors in the operating environment as a function of the variations found in the value-added operations characteristic of their business models. Differences which become manifest factors when analyzing the operational environments, the dynamics of the competitive landscape, or in determining the

outcomes for Farm Wineries or Commercial Wine Bottlers in terms of support to the grape and wine sector by government. These factors are discussed in more detail in the sections which follow.

The Nova Scotia Beverage Alcohol Market

The legal drinking age (19 and older) population in Nova Scotia is approximately 872,421[xxx]. Within the Canadian context, Nova Scotia's per capita consumption of beverage alcohol is 96.1 litres, sitting midway between the highest Canadian per capita consumption (Yukon at 143.9 l/person) and the lowest (Nunavut at 75.4 l/person).

Market Entry

High Barriers: Regulatory oversight contributes to market stability by preventing harmful practices and ensuring a level playing field for beverage alcohol (and cannabis) sales. While the regulatory environment can be challenging for businesses, it provides a stable framework within which they can operate. This stability benefits consumers and businesses by reducing market volatility and ensuring consistent quality and safety standards. In the beverage alcohol market, entry barriers for smaller or less capitalized firms are significant due to regulatory oversight. This includes stringent licensing requirements, production regulations, distribution controls, and compliance with public health and safety standards. Potential entrants must navigate a complex web of legal requirements to operate, which limits the number of new competitors and ensures that only well-capitalized and compliant businesses can enter the market. This means that more established and/or larger firms possess an inherent advantage over smaller firms attempting to enter.

Consumer Protection and Pricing

Regulations in the beverage alcohol market include strict consumer protection laws aimed at ensuring product safety, preventing underage drinking, drinking in moderation, and minimizing alcohol-related harms. Regulations mandate clear labeling, quality standards, and restrictions on advertising and public relations, thus ensuring that consumers are well-informed and protected.

Prices in the beverage alcohol market are set or heavily influenced by government regulations, such as minimum pricing policies, excise and social responsibility taxes, and price control mechanisms such as mark-ups. Pricing controls are primarily leveraged to meet social responsibility mandates for curbing excessive consumption and to protect public health. While controls also prevent predatory pricing which may serve as additional protection for consumers, controls also constrain or restrict profit margins for producers and retailers, licensees, or specialty retail outlets. Consequently, pricing controls exert significant influence over producers' decisions as controls may either promote or constrain competition based upon price or differentiation at the product and brand levels.

Innovation and Pace

Constrained: Regulatory compliance in the alcohol market can slow down the introduction of new products and technologies. For example, new alcoholic beverages or formulations may require extensive testing and approval processes. While this ensures consumer safety, it can delay market entry of innovative products. Additionally, innovation in the beverage alcohol space may outpace the regulator's ability to respond to the demand for new products by consumers or the introduction of new product categories by producers.

Basis of Competition

Competition in the beverage alcohol market is focused on quality, provenance, brand reputation, and regulatory compliance rather than solely on price. Further, established wine businesses with strong regulatory understanding and compliance capabilities may dominate specific market segments. Established firms with strong regulatory knowledge have an advantage, and the market is less likely to experience intense price wars due to price controls (e.g., social reference price) and high entry barriers. Additionally, as the regulator is also the primary retailer, product pricing and product categorization by the regulator impacts the positioning of products in terms of their price (e.g., price banding) and positioning in relation to other products (e.g., price categorization). Moreover, the activities of a provincial Liquor Board can have direct impacts on competition in the market. For example, in Ontario, the shareholder has mandated that the LCBO take prompt action to increase market share for VQA wines[xxxi]

Market Stability

The regulated nature of the beverage alcohol market contributes to its stability. Regulatory oversight prevents harmful practices, ensures consistent quality and safety standards, and provides a predictable framework for businesses to operate within.

Competition in the Nova Scotia Beverage Alcohol Market

General

In 2018, Nova Scotia saw sales totaling $661,491,846 in beverage alcohol categories (there were no recorded sales of cannabis in 2018 nor RTD sales for 2018-2019). NSLC sales comprised 94.6% of total sales with producer direct sales through other channels at 5.4% (consumers, licensees, etc.). By 2024, Nova Scotia saw sales totaling $947,409,853 (now including cannabis sales in addition to beverage alcohol).

Between 2018 and 2024, Nova Scotia saw beverage alcohol and cannabis sales grow by 43% overall; with a 40% growth in NSLC sales and 105% growth across all other channels. Sales growth was largely driven by the introduction of legalized cannabis and the growth in RTD sales by NS producers (see Figure 6).

Figure 6. Total Sales BA & C 2018-2024

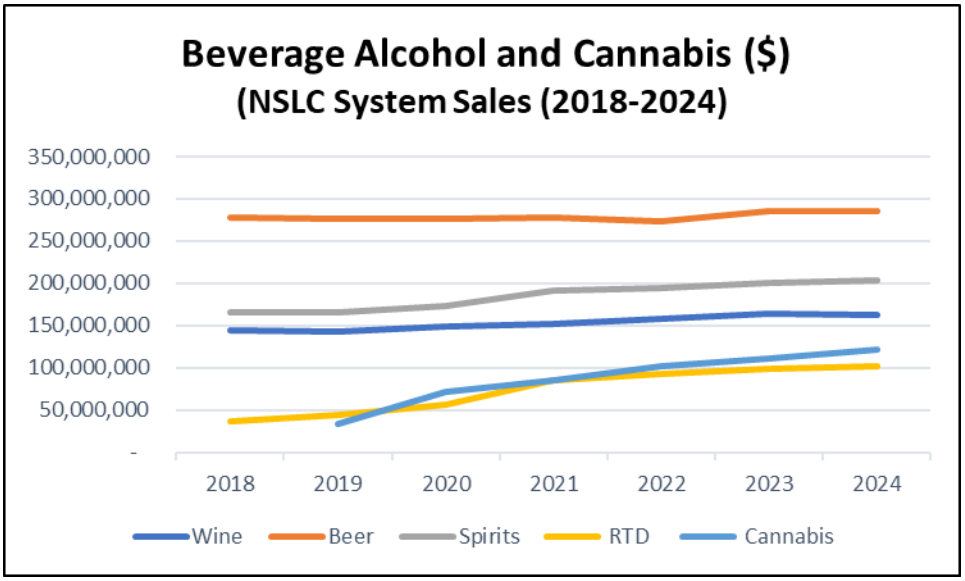


Figure 6a. Share of Sales BA & C 2018-2024

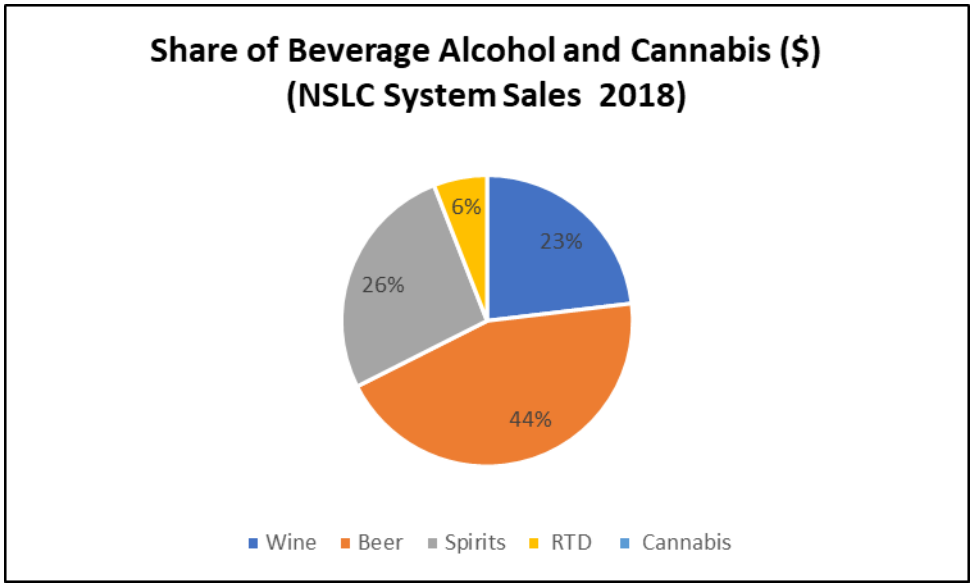
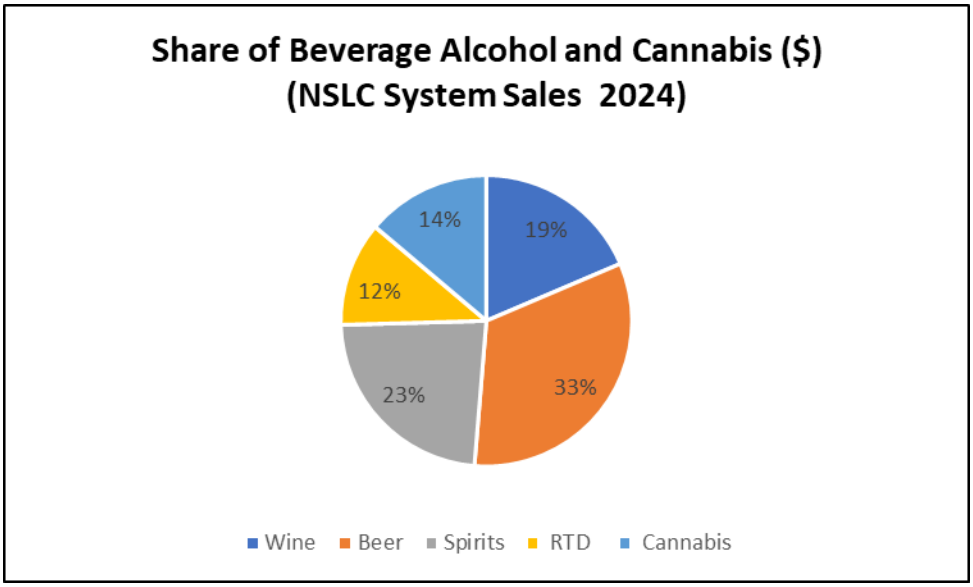


Figure 6b. Share of Sales BA & C 2018-2024



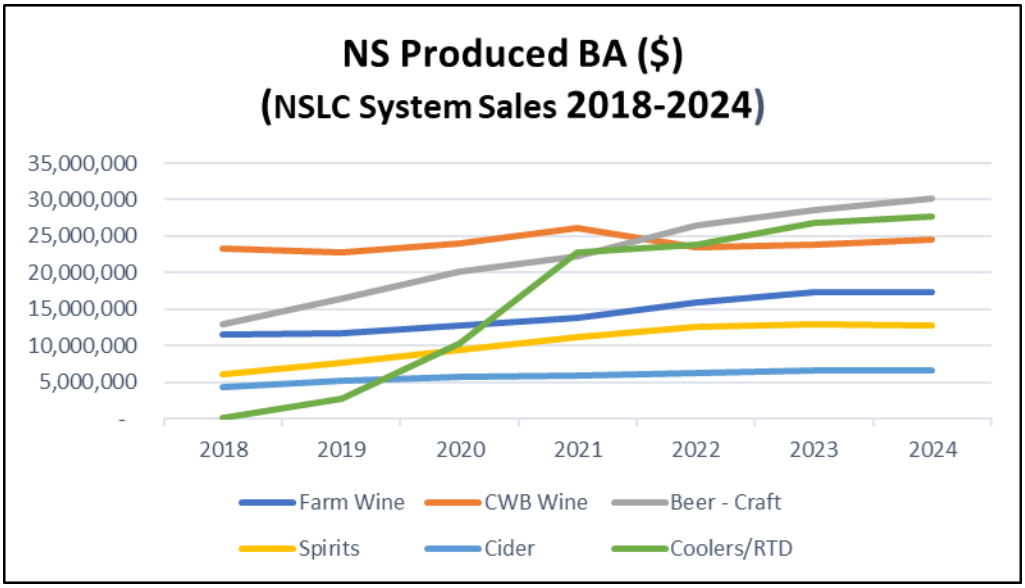
The introduction of cannabis sales in 2019 and the significant growth in RTDs throughout the period saw a major shift in share of sales between 2018 and 2024. The top three categories of BA in 2018; beer, spirits, and wine with a combined share of 94% (2018), saw their share of sales reduced to 75% by 2024. Although sales growth in BA overall was 20%, without RTD sales growth it was limited to 11%. The 3% increase in overall BA volumes by 2024 was largely driven by RTD since the total volume of beer, wine and spirits saw a drop of 8%.

It is likely that the market standing of beer, wine and spirits was reduced, in part, by the growth of RTD sales. Other likely factors for change of share include the effects of inflation and price increases, increasing health consciousness, demographic impacts on consumption and sales, and the premiumization trend (e.g., purchasing less BA but when purchasing choosing a premium BA product). Though the growth in RTD sales had almost trebled during this period to double their market share, RTD growth was eclipsed by cannabis sales which captured nearly 14% of sales by 2024 (see Figure 6B). While it is likely that there is some correspondence between the increased cannabis sales and the observed shift in BA sales, currently there is no data available to determine the actual relationship between the two (see Appendix B).

Wine - International

Across all the beverage alcohol categories Nova Scotia produced beverage alcohol saw a 106% growth rate in NSLC sales between 2018 and 2024. The Largest growth was in the Coolers/RTD category which saw an exponential growth of 927% in sales. This was followed up with Craft Beer at 136%, Spirits at 114%, Cider at 56% and Nova Scotian Farm Winery products at 50% and CWB wines at 5%.

Figure 7. Nova Scotia Beverage Alcohol Sales.



For Nova Scotia produced beverage alcohol, share of sales was greatest for the Coolers/RTD category, which experienced a 19% gain in share, moving from 4% in 2019 to 23% in 2024. Minor gains were mirrored for Craft Beer, moving from 22% share to 25%, while the share for Spirits held relatively steady throughout, gaining less than half a percent. Decline in share included cider, moving from 7% to slightly less than 6%, while wines saw the greatest decline in share. CWBs dropped from a 40% share to 21%, while Farm Winery products lost just over 5% share, a decline from 20% in 2018 to closing out the period with a 15% share of the overall NSLC sales of beverage alcohol (see Figures 8 and 9).

Figure 8. Share of NS Produced BA 2018

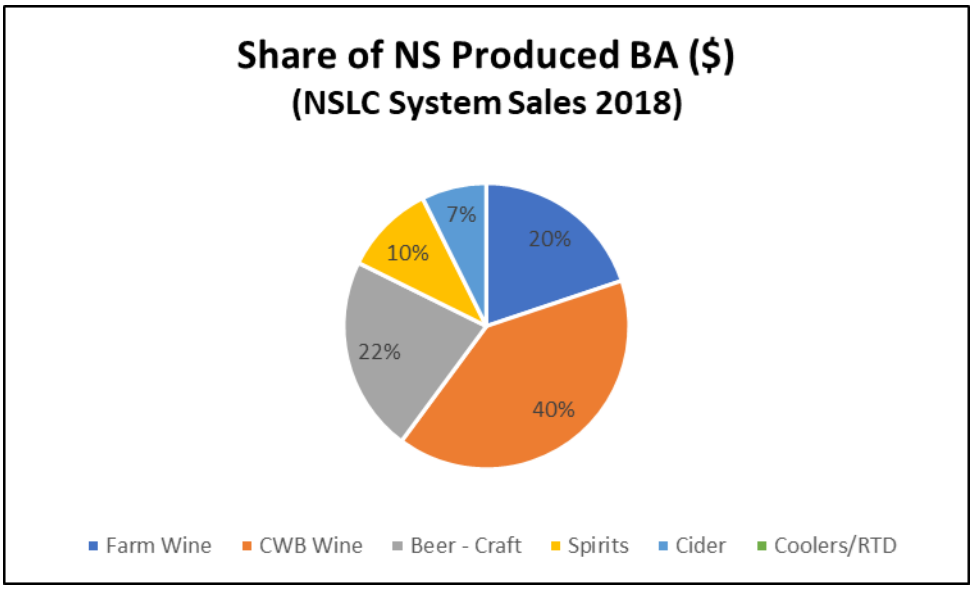
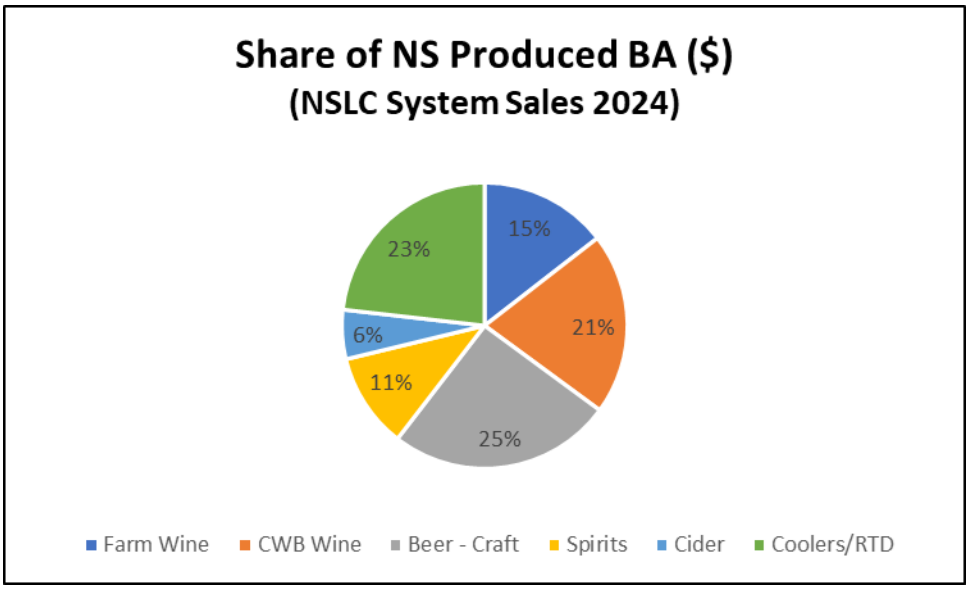


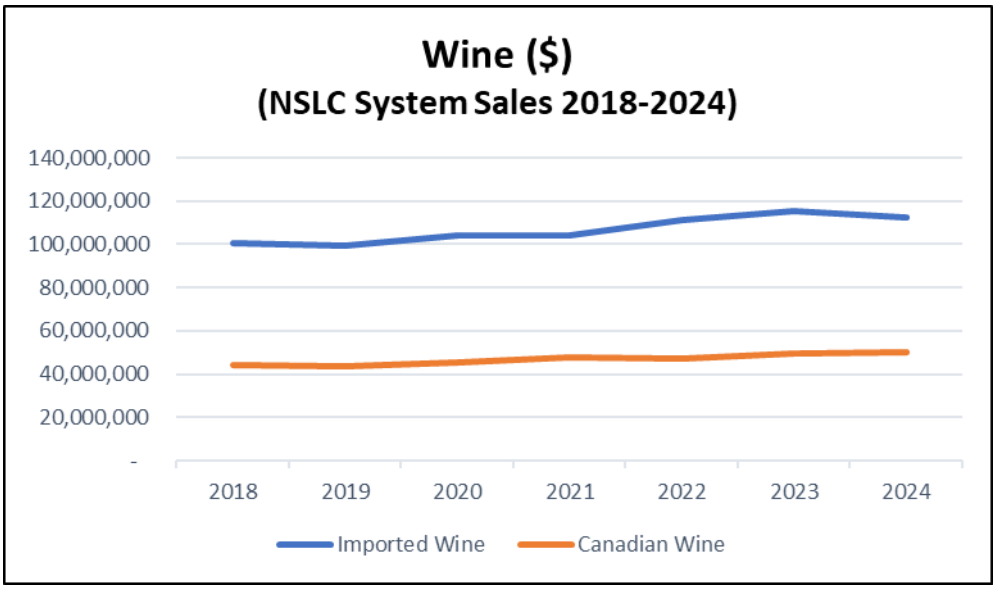
Figure 9. Share of NS BA 2024.



Wine

The NSLC outlets, licensees, and agency stores saw a 13% increase in sales throughout the reporting period even while the volume of product sold had declined by 4% during the same period (see Figure 10)

Figure 10. Wine Sales 2018-2024



Within-category market share saw Imported Wines remain dominant, with a category split of 69% to 31% in 2018 for Imported over Canadian wines respectively. Imported wines lost less than half a percentage point share to Canadian wines by 2024 (See Figure 11).

Figure 11. Share of Wine Sales 2018

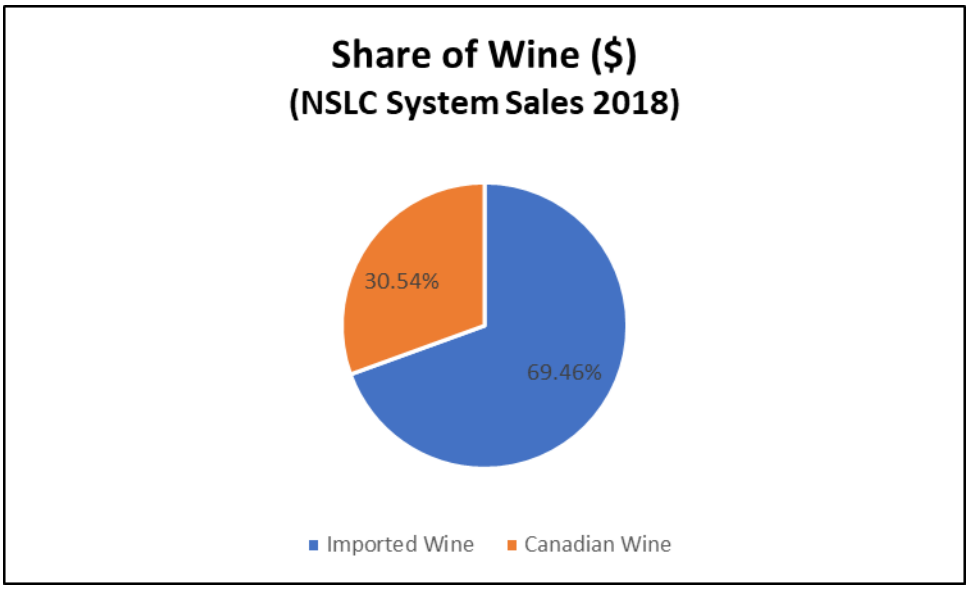
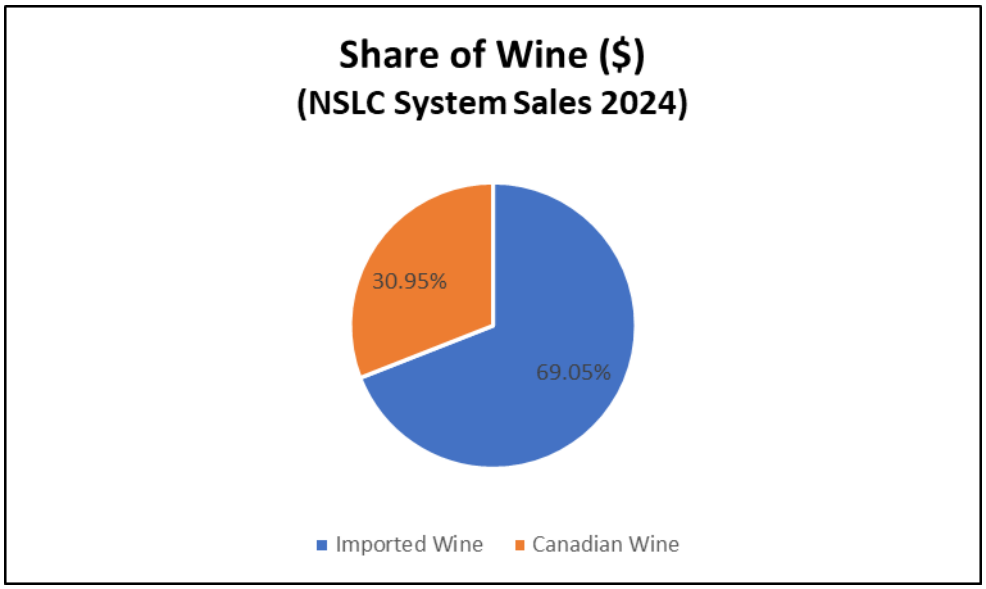


Figure 12. Share of Wine Sales 2024



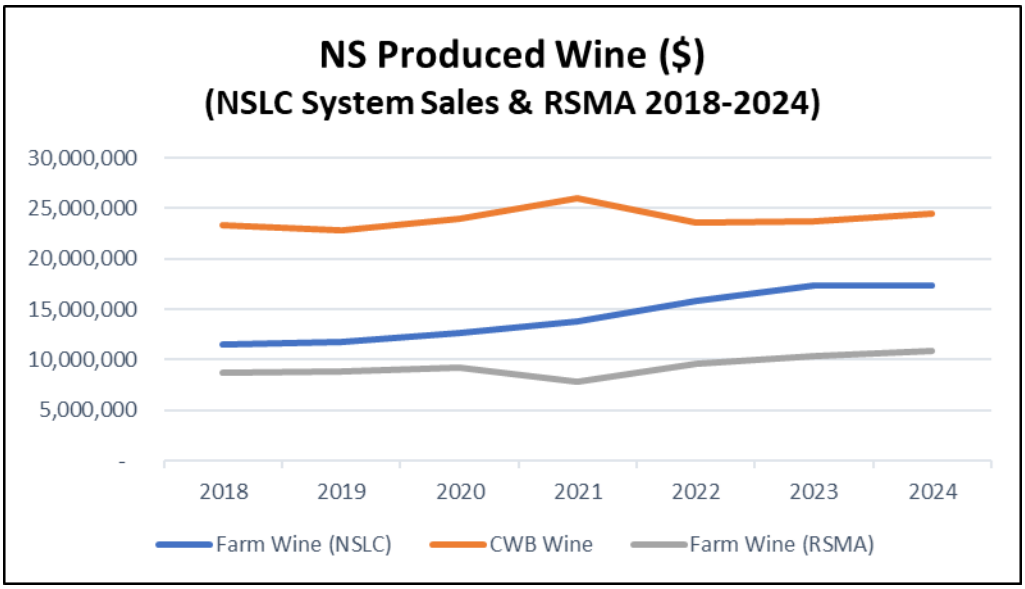
Nova Scotia: Farm Wineries (including fruit wines) and Commercial Wine Bottlers

The overall picture for wine sales in the NSLC between 2018 and 2024 was relatively stable During the reporting period, NSLC sales revenue for wine grew overall by 13%, with Imported (12%) and Canadian (14%) wines both seeing similar rates of growth in sales. However, despite the overall stability of wine sales, the category saw considerable change for wines produced in Nova Scotia. There was a significant in-category shift in the dynamics of wine sales between the Farm Wineries and the Commercial Wine Bottlers.

Though the COVID pandemic shifted on-site retail sales to the NSLC stores due to COVID health mandated closures and restrictions of retail establishments, sales post-COVID saw a reversal of this trend when people returned to socializing at hospitality and service providers. Farm Winery products sold at the NSLC grew by 50% in sales and 30% in volume. CWB product saw sales growth at the NSLC at a much slower rate of only 5% with an accompanying decline of 6% in volume sold.

However, the balance dynamic of Nova Scotia produced wine is of even greater contrast when Direct Sales by Farm Wineries are accounted for (See Figure 13). As noted above, the Farm Winery sales at the NSLC grew by 50%, with additional Direct Sales growth of 25%. The Farm Wineries saw a combined sales increase (NSLC and Direct) of 40% while CWBs retained only a 5% growth during the same period.

Figure 13. NS Wine 2018-2024



In 2018, CWBs held just over half of the share of sales revenue for Nova Scotia wines sold at 54%. For Farm Wineries their 46% share of sales revenue was split between the NSLC sales at 26% and 20% for their Direct Sales (see Figure 14). By 2024 CWBs share of sales had dropped to 47%, with Farm Wineries splitting an 8% gain in share between NSLC (33%) and Direct (21%) sales (See Figure 15).

Figure 14. Share of NS Produced Wine 2018.

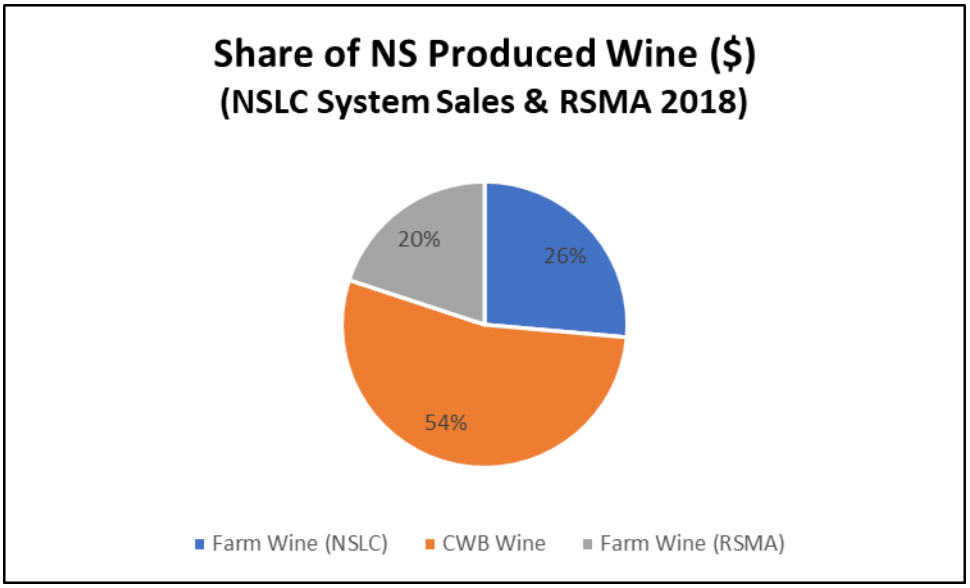
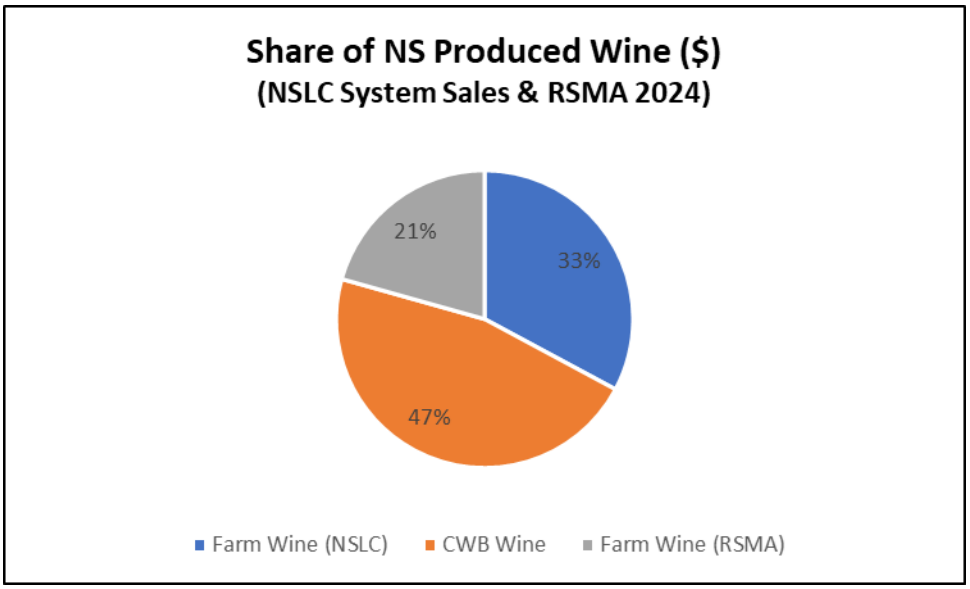
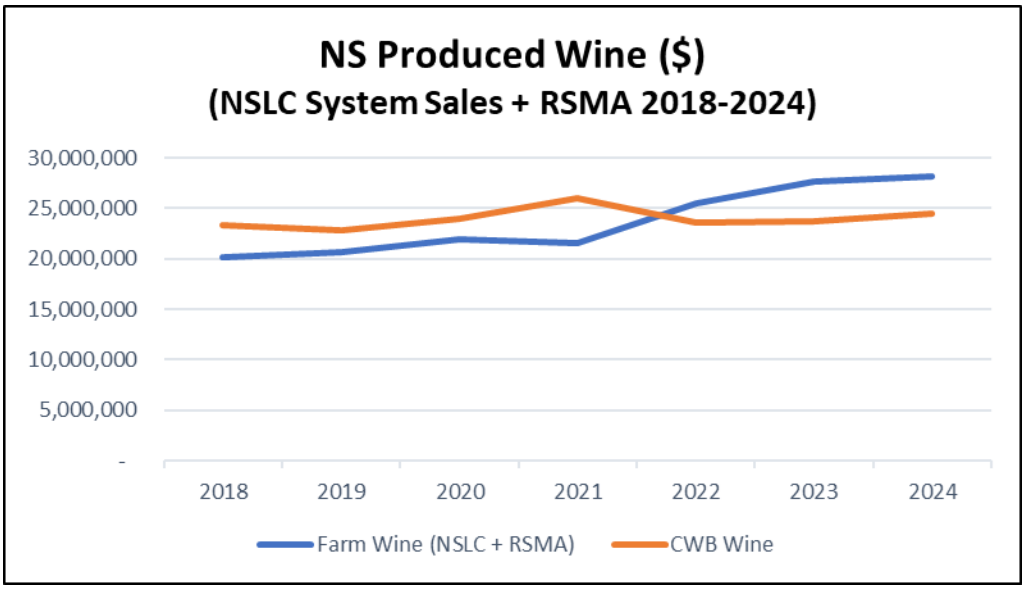


Figure 15. Share of NS Produced Wine 2024.



The gradual increase of combined NSLC and Direct Sales revenue for farm wine products meant that Farm Winery sales revenues exceeded those of the CWBs for the first time in 2022 (see Figure 16).

Figure 16. Sales of Wine FW and CWB 2018-2024



Market share for Farm Wineries increased from 46% in 2018 (see Figure 17) to 53% in 2024 (See Figure 18).

Figure 17. NS Produced Wine Share of Sales 2018.

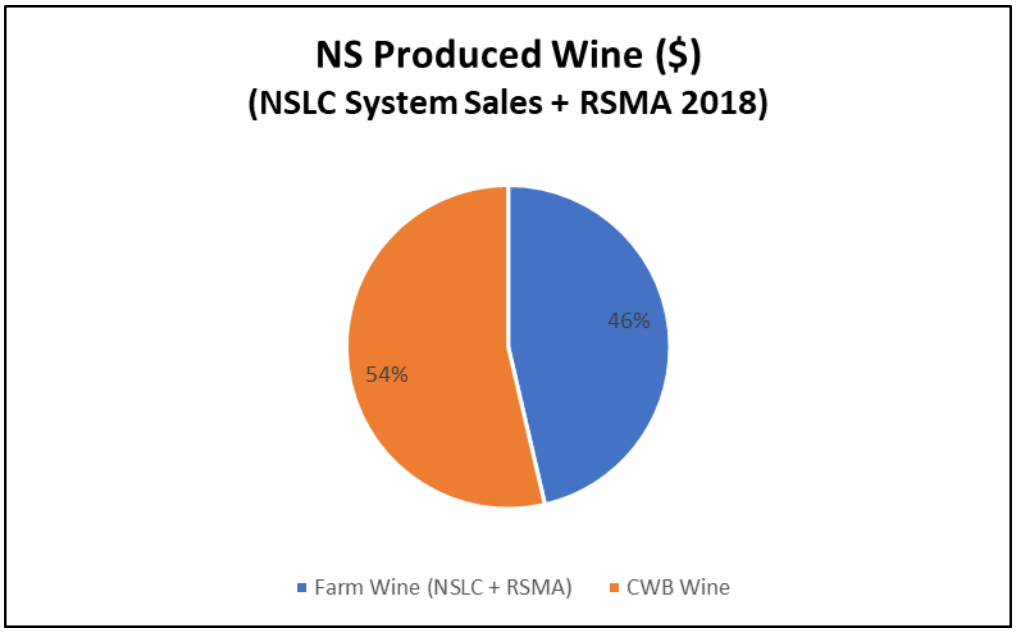
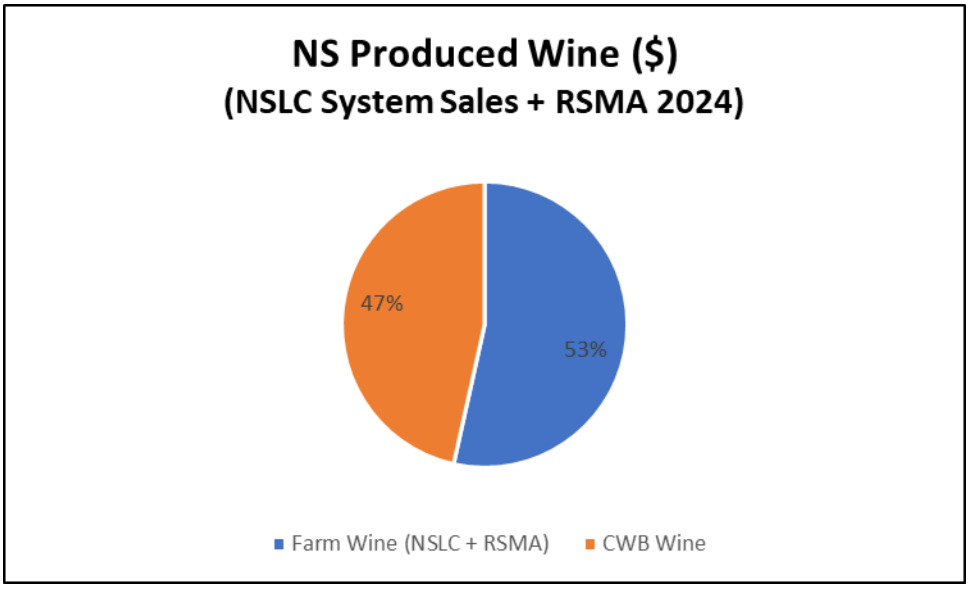


Figure 18. NS Produced Wine Share of Sales 2024.



Wine in the Nova Scotia Market - Conclusions

This report uses data from NSLC sales, data reported to the NSLC (e.g., RSMA sales reports from Farm Wineries), and survey data collected for this study (aggregated from respondents). While the results of the analysis presented above suggest that the beverage alcohol sales and volumes mirror the observations made in other studies on the current state and trends in global

beverage alcohol and wine markets they should be interpreted with caution for several reasons. These include assumptions concerning the relationships between sales volume and revenues with consumer behaviour; a related lack of direct consumer data on beverage and alcohol consumption; the consistency of data and its organization for analytic purposes; and finally, drawing inferences about the health of the grape and wine sector.

Data and Consumption: Using reported alcohol sales revenues and volumes to determine consumption behaviors presents several issues. First, sales data may be influenced by various factors such as: changes in pricing, both at the product level and between product categories; differential taxation regimes associated with the retail sale of alcohol which may shift sensitive to price; and retail operations and promotional activities which may skew understanding of preferences and distort consumptions patterns on a local or regional basis. Further, differences in socio-economic status and purchasing power may also affect sales. As the consumer population is relatively heterogenous, other factors such as variations in alcohol consumption due to age, gender, and cultural preferences are not accounted for. Finally, sales revenue does not account for alcohol produced within the regulated market but outside of the reporting structure, including home distilling or brewing, u-vint operations, and illicit consumption. Therefore, data should be used for economic and sector operational purposes. At such, this data should be limited to broad indicators of consumption rather than for understanding behavioural patterns of consumers. Data needed for a direct and thorough understanding of consumer behaviour was not collected – nor available from other sources – for this report.

Lack of Direct Consumer Data: In the absence of direct consumer data, sales and volume are used as proxies. As noted above, however, this indirect method can cloud understanding of consumer behaviour. Sales and volume data can mask shifts in consumer spending within categories, for example. Moreover, reliance on this approach can lead to false assumptions such as segmenting consumers by price band; an erroneous choice, however, because wine spending is occasion specific. Increased importance and formality of the occasion inspires higher spending than more informal and personal consumption. Statista reports that Canadian consumers may spend 38% more for a bottle of wine to be given as a gift than for a bottle to be consumed with an informal meal at home[xxxii]. Thus, it is not appropriate to assume a direct relationship between sales or volume with consumption. Direct consumer research is necessary for an accurate assessment of consumption patterns.

Data Consistency: Inconsistently applied categories and other data variations pose challenges both within the Province and in comparing results to those from other studies or regions. Discrepancies between producer descriptions of products and NSLC-assigned product categories make calculation and interpretation challenging or impossible when comparing producer data with NSLC data. Similarly, category assignments differ between NSLC and other organizations that evaluate sales. For example, the RTD category in NSLC data sometimes contains cider; in other instances, cider is its own category. Cider is grouped with Perry and Rice Wine in some Statista reports and is included with RTDs in Statistics Canada data. Category definitional issues reach even further with some reports that consider non-alcholic soft drinks (such as Coca Cola)

to be RTDs. Likewise, wine sometimes shifts categories: wine coolers are RTDs but canned wine and wine-style beverages are categorized as wine. Accounting for all of these inconsistencies is challenging and means that data analysis and interpretation must be conducted with great care and that assumptions should be carefully examined.

Drawing Inferences: Neither the data nor this analysis should be considered as the equivalent of an 'audit' of the economic health of the grape and wine sector or individual wine businesses within it. Though the confidentiality protocols put in place for this study mean that the detailed data collected from individual grape growers and wineries cannot be divulged, winery performance within the sector ranged widely and was observed to be economically heterogeneous in terms of firm size and performance. For example, there have been recent shifts in ownership/management structures for several wineries (e.g., sale of winery, intergenerational transfers), and there are two wineries whose operational status remains in doubt. Therefore, because of the nature and form of the data collected, and the analytic methods used in this report, the results cannot be used to determine the financial health or business performance of any one individual winery, neither can there be a corresponding assessment of the financial health of the grape and wine sector be made without a corroborating audit-based study using different data.

Conclusions

While it is possible to describe the overall market and competitive landscape in terms of value chain activities and the differentiation versus cost orientation of the two operational business models (e.g., Farm Wineries vs. CWBs), a full analysis at the product level was not possible based upon supplied data and in the absence of consumer studies. It is, however, possible to conclude that despite the farm winery orientation of differentiation and wine experience offerings - and the CWB focus on cost and price point segmentation – there is an overlap in a few product offerings within the NSLC Mainstream price band.

COMPETITION BETWEEN FARM WINERIES AND COMMERCIAL WINE BOTTLERS

The Farm Wineries and Commercial Wine Bottlers compete in two separate domains. Within the regulated marketplace there is competition at the product level. At the sector level there is competition for attention within political and governmental spheres.

The product level competition between farm wineries and CWB remains relatively moderate, and only for certain products within the overall product offerings. However, there is also competition in the context of other wine products in the NSLC. Price competition between both Farm Wineries and CWBs with Imported wines or competing IDB producers – an area beyond the scope of this study, should be explored further (See Appendix E).

At the experience level, competition for wine experience is between Farm Wineries only. Even then there are several Farm Wineries working together to provide a unique wine experience (e.g., the Magic Wine Bus offering in Wolfville) which is a coopetition activity amongst participating wineries.

However, competition is likely to increase between Farm Wineries and CWBs should they both attempt to expand product offerings to fulfill increasing consumer demand for convenience wine and wine-based products. Particularly for single serve portions, new flavour experiences associated with the range of RTDs (e.g., wine cocktails, mixed cocktails, wine spritzers, mixed wine and cider), or the convergence on large format packaging (e.g., 1.5 litre bottles, 3 litre bags, 4 litre bag-in-box) to reduce costs and meet consumer demand.

Competition in the Market Domain

At the level of individual product offerings, Farm Wineries and Commercial Wine Bottlers compete within the overall context of regulated beverage alcohol sales in the province. From a demand perspective, Farm Wineries and Commercial Wine Bottlers must both compete against imported wine products while simultaneously competing for consumer attention for their own products. There is an additional layer of competition which takes place within the market affecting Farm Wineries, Commercial Wine Bottlers, and Imported Wine Products. This additional layer arises from consumer choice between wine versus other forms of beverage alcohol (e.g., cider, RTDs, etc) as trends change and mature over time.

While Farm Wineries and Commercial Wine Bottler products are targeted at different primary customer segments, we have note that there is some overlap due to consumer behaviour and purchasing motivations. Therefore, despite differences in production levels and pricing of wine product, there are several factors that may lead to competitive overlap.

Consumption Motivation: Consumers who regularly purchase wine for daily consumption may choose value-priced large-format packaged wines for reasons of cost and convenience.

However, they may also choose to purchase more mainstream or premium priced wines for special events, celebratory occasions, or for gifting.

Consumer Education and Expertise: While value-priced wines may serve as entry-points for novice wine drinkers, as these consumers increase their engagement with wine from educational, social, or cultural perspectives, they may shift their consumption behaviour and begin exploring the diversity of farm wines on offer in the market.

Consumer Demographics: Age, education, and income levels have all been found to be related to wine purchasing and consumption behaviour. As consumer lifestyles evolve across these variables, consumption of wine and purchasing behaviour tends to move from value-priced to premium wine products.

Support for Local: When given a choice, consumers are often motivated by a desire to support local businesses through their purchasing of local products and services. This has been a growing trend for Nova Scotia wine. However, determining which wines are grown in Nova Scotia can be quite difficult for consumers due to the ambiguity surrounds 'Nova Scotia wine' and 'Wines of Nova Scotia' designations. Further, FW producers do not consistently identify the provenance of the grape content in the vessel. Moreover, consumers seeking value-priced wines are unable to quickly determine which come from Nova Scotia CWBs versus producers from outside the province. Support for local wine businesses (both FW and CWB) could be increased through better clarity in labelling.

Competition in the Political and Governmental Domains

While related, these two spheres can be conceptually separated. The political domain is the reserve of elected officials who normatively must respond to expressed public concerns. The governmental domain is the policy and regulatory arm and is simultaneously both influenced by – and influences – the political sphere. Consequently, quite often, public concern becomes political concern, which may in its own turn become policy. As is evidenced by the commission of this study of the grape and wine sector, the recent public outcry at the perceived inequity in financial support to Farm Wineries versus Commercial Wine Bottlers demonstrates a degree of competition for attention and governmental/departmental support.

In this domain there is also competition between the wine sector and other economic sectors for both political attention and related financial support from government. Thus, Farm Wineries and Commercial Wine Bottlers compete against other industries as well as one another. However, due to the differences in the nature of the operational business models, this competition varies as a function of intra-governmental differences in terms of areas of responsibility and policy, such as urban versus rural, or health versus beverage alcohol sales. Consequently, politicians and governments may create perceptions of winners and losers through policy decisions and the allocation of government support. A circumstance where risk of public censor for decisions may be reduced, though not eliminated, when government uses evidence-based approaches to yield what are perceived to be more equitable decisions.

Market Regulation

The NSLC, as a regulator of the province's beverage alcohol market, controls what products are available, their pricing, and their distribution. The NSLC, as a retailer, makes decisions on which local, national, and international products to stock in which store and how to promote them. Thus, the normal dynamics of supply and demand, competition and consumer choice do not apply. Instead, the choice restrictions of a regulated market influence demand by controlling access, pricing, advertising, product variety, and consumer perceptions. While an unregulated market operates on the principles of supply and demand with minimal interference, a regulated market actively shapes consumer perception, behavior, and demand through various forms of control and intervention. This means that while an NSLC emphasis on local products can, for example, foster a demand for locally produced alcohol over imported brands, it also means that in the absence of local products, the demand for beverage alcohol will be met by imported alternatives.

Restrictions on shelf-space or the number of SKUs, for example, can inhibit product innovation. Minimum volume requirements can make it difficult for producers with limited production volume to sell their product through the NSLC network of retail outlets. By contrast, the production volume of CWBs is more suited to NSLC standards and requirements. The NSLC's central warehouse and distribution system offer wide reach across the province with 110 corporate stores and 62 agency stores (representing approximately 1 store for every 6, 155 Nova Scotians) is a significant benefit for producers who list their wines.

PART II – ECONOMIC ANALYSIS AND IMPACTS

General

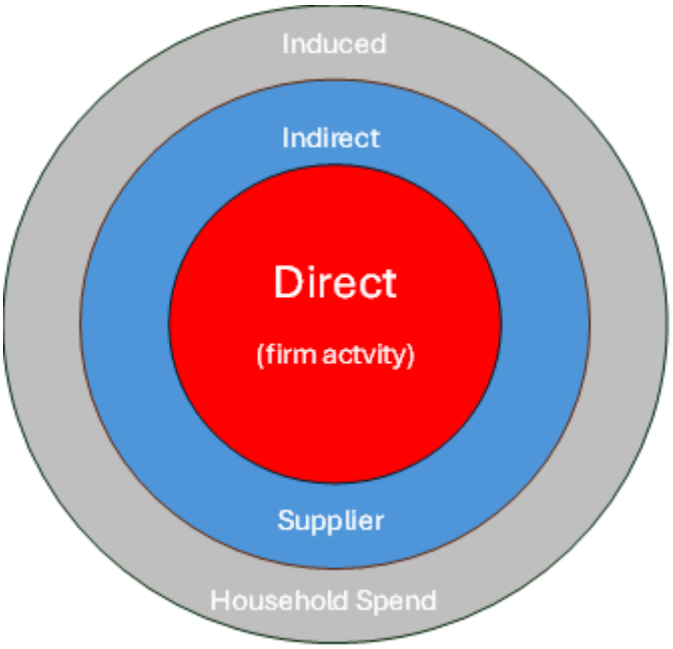
Understanding the contributions of business or sectors to an economy is generally done using an Input-Output (IO) analysis. IO analyses are used to investigate the economic impacts of business activities by determining how activities in one sector affect the broader economy. IO models trace the flow of goods and services through industries/products in an economy from producers to intermediate and then final consumers. In the wine sector, for instance, an IO model can help measure the economic impacts of existing wineries, or it can be used to analyze and estimate the impacts of changes arising from an increase in grape purchasing by wineries, or changes resulting from an increase in the number of wineries operating within the sector.

The output of IO models is divided into three economic components: direct effects; spinoff effects (indirect + induced); and total impact (see Figure 19). Direct impacts are the immediate effects of the wine industry itself. Direct impacts can be assessed for indicators such as revenue (gross output), valued added (GDP), compensation of employees, employment, business operating surplus and government tax revenue. For wineries, direct impact reflect revenues earned and income generated solely from the production of wine.

Indirect impacts are the economic activities from industries in the supply chain selling to wineries; for example, when wineries purchase more grapes, bottles, machinery, and other supplies for their operations. These purchases economically benefit suppliers in sectors like agriculture, manufacturing, and logistics.

These suppliers, in turn, may need to increase their own production or hire more workers to meet winery input needs. Induced impacts stem from the economic effects of the consumer expenditures by employees in the wine and indirect sectors as they spend their labour income on goods and services like housing, food, and entertainment (consumer spending). This spending generates further production, employment and income creating a ripple effect from wineries that spreads out and benefits a wide range of business and industries. The total economic impact is the sum of the direct and the two spinoff impacts.

Figure 19. Economic Impact Component



By capturing these direct, indirect, and induced impacts, IO models provide a comprehensive picture of how business activities in the wine sector contribute to the overall economy's production. The outputs of an IO model are normatively presented in the following categories.

GDP (Gross Domestic Product): The total value of goods and services produced in the economy, representing the sum of all value added across industries.

Labour Income: Total compensation to employees, including wages, salaries, and benefits.

Employment in Full-Time Equivalents (FTE): Number of jobs created or supported, standardized to equivalent full-time positions.

Government Tax Revenue: Taxes collected by the government, including income tax, sales tax, and other forms of taxation. In this analysis, only revenues from personal income taxes (on employee compensation) and sales taxes are estimated. NSCL net income from wine sales is considered outside this analysis.

Economic Impact Analysis Using IO Models

An economic impact analysis using an IO model is constructed in a three-step process. In the first step, primary data is collected on industry inputs, outputs and final demand (e.g., the project surveys). Other secondary data (e.g. NS Department of Agriculture) and other relevant statistics

are also sourced (e.g., Department of Finance and Treasury Board Economics and Statistics Division or other government agencies such as Statistics Canada).

In the second step the IO model is constructed. This step creates a model which identifies what multipliers are used in the model. Multipliers are based upon the economic relations between the various industries in the economy (e.g., suppliers and producers). They are usually level specific reflecting the economic structure of a regional or national economy. Once the model has been created, it is populated with relevant inputs (e.g. revenues, expenditures, persons employed, source of inputs, etc.). In the final step the impacts are calculated to derive the derive the direct and spinoff (indirect and induced) effects.

There are two critical steps that must be taken in conducting an economic analysis to ensure that results accurately reflect the economic activities and conditions being assessed. The first is to ensure that the linkages used are valid. The second is to ensure that the appropriate multipliers are being used within the model. In the former instance there are generally accepted practices for conducting economic impact studies where confidence in the results can be assured. In the latter case, the correct IO multipliers need to be used.

Generally Accepted Practices

There are normalized approaches to conducting an economic impact analysis consisting of best practices which are designed to produce consistent and comparable results needed for evidence-based policy decision making. The economic analysis for this project followed generally accepted practices as described below (excluding Sensitivity Analysis).

Define the Scope of the analysis:

- Clearly define the boundaries of the analysis, including what constitutes direct, indirect, and induced impacts.
- Specify the geographic area of interest (e.g., provincial, national).

Use Reliable Data Sources:

- Ensure data consistency and reliability across different datasets used in the analysis (e.g., survey versus global averages).

- Utilize accurate and up-to-date I-O tables from reputable sources such as national statistical agencies (e.g., NSIOM, Statistics Canada,).

Conduct a Counterfactual Analysis:

- Consider counterfactual scenarios to determine what would have happened in the absence of economic activities.
- Assess whether the economic activity would have occurred anyway or if it is genuinely attributable to the firm or sector.

Avoid double-counting impacts by excluding economic activities that would have taken place regardless of the firm's or sectors' presence.

Inclusion of Relevant Costs and Revenues:

Include only those costs and revenues that are directly attributable to the firm/sector's activities.

For indirect and induced impacts, ensure that the linkages to the firm/sector activities are clear and justifiable.

Use Standard Multipliers and Models:

Apply standardized multipliers from I-O models to estimate indirect and induced impacts.

Use recognized economic modeling software and frameworks (e.g., NSIOM) to maintain consistency and comparability.

Consider economic leakages, which are expenditures that leave the defined geographic area (e.g., imports, out-of-province spending).

Adjust multipliers to reflect the local retention of economic activity.

Sensitivity Analysis:

Conduct sensitivity analyses to understand how changes in assumptions or inputs affect the results.

Identify key variables that have significant impacts on the outcome and test different scenarios.

One of the limitations of IO Models is that they are linear models, so any changes to assumptions has only directly proportional impact on results.

Linkages and Multipliers

While there are various IO model templates used to conduct economic impact studies (e.g., IMPLAN, RIMS II, or the U.S.'s BEA model), the economic impact of Farm Wineries and Commercial Wine Bottlers on the Nova Scotian economy was conducted using the Nova Scotia Input-Output Model (NSIOM). The NSIOM is a standard model used by the Nova Scotia government to ensure that estimates across different sectors and industries yield comparable, consistent, and reliable estimates of the impact of economic activities. The current NSIOM is based upon the structure of the 2017 economy and for this assessment all values are assumed to be in 2022 dollars. The methodology section of this report details the workshare between the Project Team and the Province to complete the analysis.

IO Included Activities

The NSIOM analysis in this report accounts for the differences that exist in the operational business models and value-added activities of Farm Wineries and Commercial Wine Bottlers. These differences may be distinguished in both quantitative and qualitative terms. Quantitatively, economic impacts may be differentiated though inputs used and their source (in-

province sourcing, out-of-province sourcing), the operations of wine production (value-added activities associated with converting inputs to outputs), and finally, product and service outputs. Economically, while Farm Wineries and Commercial Wine Bottlers produce wine, they employ dissimilar value-added activities which yield different input-output configurations associated with the production and sale of their wines.

For example, on the input side of the equation, while both Farm Wineries and Commercial Wine Bottlers use the juice from grapes as an agricultural input, Farm Wineries normally source their inputs from local grape growers and their own vineyards. Commercial Wine Bottlers usually have no vineyards of their own and because the operate at distinctly different production scales, when these scales exceed the local supply of inputs, Commercial Wine Bottlers give priority to sourcing grape juice (or its transformed form – wine) based upon availability and price from non-domestic sources. Similarly, on the output side of the equation where wine is a product of value-added activities, Farm Wineries produce wine but also may produce wine experiences (tastings, tours, educational or gustatory events) as additional value-added service offerings whereas Commercial Wine Bottlers do not. Therefore, while both Nova Scotian Farm Wineries and Commercial Wine Bottlers' make wine, how that wine is made results in economically quantitatively separate and qualitatively distinct contributions to the Nova Scotian economy.

Generic Winery Business Models: Operational and Value-Added Activities

The different types of data to be used within the IO model were identified as a function of the similarities and differences in the Farm Winery and Commercial Wine Bottlers' business models and operational activities (see the Study Methodology section). Generic descriptions of operational processes and linkages are detailed in the sections which follow. They are also depicted generically in Figure 20.

Farm Wineries: Successful farm winery business models are focused on the quality, provenance, and authenticity characteristics associated with consumer perception of local wines throughout their wine growing and wine making processes. In viticulture, these wineries often adopt sustainable and organic practices such as hand-harvesting, minimal chemical use, or biodynamic farming to enhance the quality of their grapes. Oenology practices at farm wineries are usually meticulous, involving close monitoring of fermentation processes, the use of natural yeasts, and small-batch fermentations to preserve the unique characteristics of the grapes. The wine making process is mostly artisanal in nature, with a focus on traditional methods, like aging in oak barrels, to add complexity and depth to the wine. Blending is carefully done to highlight the characteristics of local terroir and promote the unique flavors of each vintage. For packaging, farm wineries often use high-quality materials and aesthetically pleasing designs that are designed to reflect the winery's linkage to the local region through brand and heritage elements. Marketing and sales are personalized, with a strong emphasis on direct-to-consumer channels such as wine clubs, on-site tastings, and local events, as well as leveraging storytelling and authenticity to build a loyal customer base. These value-added activities collectively enhance the wine's quality, uniqueness, and appeal, driving higher price points and customer loyalty. By

their very nature, Farm Wineries are labour intensive wine businesses intimately linked with vineyard terroir and local agriculture.

Commercial Wine Bottlers: The value-added activities at the core of Commercial Wine Bottlers are designed with a focus on efficiency and scalability needed to produce large volumes of finished wine at competitive prices. In viticultural terms, these producers usually source grapes, juice, or wine from multiple regions, often internationally, to ensure a consistent and cost-effective supply of inputs. Oenology practices are streamlined and technologically advanced, utilizing commercial yeasts and continuous fermentation processes to manage large batches of wine production efficiently. The wine making process is highly mechanized, with large stainless-steel tanks used for fermentation and aging to maintain uniformity of product characteristics. Blending is a crucial step, aimed at achieving consistent flavor profiles across vast quantities of wine by mixing different batches and sometimes even different vintages. Packaging is efficient and designed for large-scale distribution, often involving bulk packaging formats such as bag-in-box or large PET containers for cost-effectiveness as large format packaging also reduces shipping and handling costs. Marketing and sales strategies for bulk wine producers focus on broad market reach, supplying to large retailers, private label brands, and export markets. These producers often use economies of scale in advertising and distribution to position their products as affordable and reliable, ensuring wide availability and consistent quality for consumers. The value-added activities in bulk wine production are geared towards maximizing efficiency, consistency, and market penetration, enabling competitive pricing and broad accessibility. Commercial Wine Bottlers have value-added operations which are capital intensive, relying on technology and scale. Because of input sourcing, in the Nova Scotia context, local agricultural linkages are weak or non-existent compared to Farm Wineries.

If these generic Farm Winery and Commercial Wine bottler business models are positioned as exemplary anchors along a continuum, the primary differences between them are threefold. In the first instance, the form, type, and strength of linkages to requisite inputs required for operations. Forward and backward linkages of Farm Wineries are more strongly tied to local sources than those of the Commercial Wine Bottlers. Second, the configuration and balance of labour and capital in the value-added operations used to produce wine. The value-added activities of Farm Wineries tend to be more labour intensive while those of Commercial Wine Bottlers are more equipment intensive. Finally, the operational activities of Farm Wineries associated with the delivery of wine product and experiences are broader than Commercial Wine Bottlers. Farm Wineries operationally engage in service and hospitality and retail activities while Commercial Wine Bottlers do not. Along the continuum between these generic 'ideal' business models, there are wine business models that combine elements usually associated with either or both anchor models.

Hybrid Models: In wine businesses, hybrid models are, to lessor or greater degrees, distinct from the core business models of either an individual Farm Winery or a Commercial Wine Bottler as described above. Hybrids adopt or link elements or characteristics of both farm winery and commercial wine bottling operations. Hybrids models may blend the uniqueness of individual

farm winery operations with the advantages of scale by, for example, centralizing the packaging of wine products from individual wineries at a centralized commercial bottling facility. Other business synergies (e.g., marketing, sales channels, etc.) are also possible in hybrid models.

There is no standard form of a hybrid since wine business ranges across a continuum where their core value-added activities operate more like those of a Farm Winery or those of a Commercial Wine Bottler. As all wine businesses evolve and adapt to the conditions found in their operating environment, hybrid models also tend to be very context specific models. That is, while all successful wine regions have a diversity of wine businesses, the variations to be found in any one region is a function of the age and maturity of both the region and the wine business itself as well as other factors. The variations in hybrid forms are the result of both internal and external factors. The ultimate form taken by any one hybrid model results from the interplay of endogenous factors; choices made by the owner operator concerning business model and value-added operational selections, and exogenous factors such as externally imposed regulatory constraints. As the operating environment varies from region to region and jurisdiction to jurisdiction, hybrid models also vary.

Variation from endogenous factors may result from differences in business motivation and the associated choices made concerning value-added activities needed to achieve desired market or product differentiation and positioning. For example, an owner/operator may choose a business model that is artisanal in nature, grounded in the notion of terroir and the use of local organic inputs, to produce small production runs of high-value products. Yet, at the same time, the artisanal business model may participate on a collective basis with other similar wine businesses, to achieve efficiencies of scale through sharing a technical resource (e.g., mobile bottling equipment).

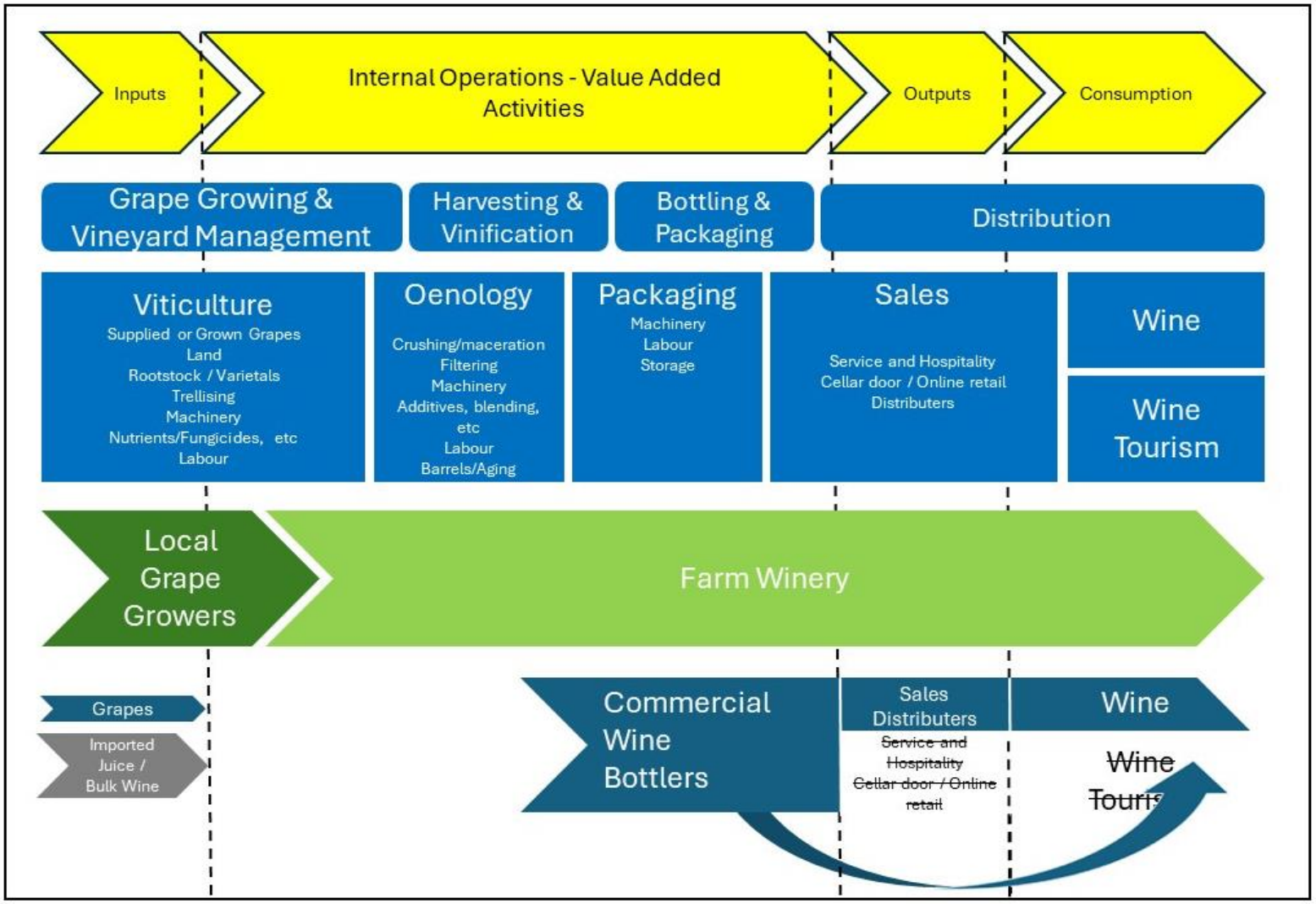
Similarly, for exogenous factors, while a wine business may operate on Farm Winery principles, due to the regulatory regime that the wine business is subject to, e.g., permissive use of non-local grape inputs, the hybrid model may also import grape juice or wine, and blend product in a manner more akin to the value-added operations of a Commercial Wine Bottler. Thus, hybrid forms can vary at the intersection of internal and external factors where operational choices and regulatory enablers/constraints operate.

Other variations may be a function of financial and legal frameworks that determine the form that a wine business may take. For example, differences in wine businesses that are privately or publicly held. Or wine businesses that are legally defined as corporate or conglomerate forms where they have ownership or operating control of other subsidiary wine businesses. For example, a large corporate wine business may own multiple wineries whose subsidiary business models are more like a farm winery model producing terroir driven premium products. Simultaneously, they may also own a subsidiary wine business whose business model is fundamentally premised on value-added activities designed to optimize efficiency and reduce production costs, e.g. a commercial bottling facility used to produce International Domestic Blends for mainstream or value-priced consumers.

In the Nova Scotia context, the government, which regulates the production, manufacture, and sale of wine, defines wine business forms as farm winery or winery. Farm wineries make wine from grapes or other Nova Scotia agricultural produce (e.g., fruit wines). A winery is a manufacturer of wine or wine-based RTD products which may or may not contain Nova Scotia agricultural produce (e.g., International Domestic Blend wines).

Most wine businesses in the province tend to be positioned towards the Farm Winery anchor of the wine business model continuum. These wine businesses produce wine within a regulatory framework which sets standards on the provenance of grape content, and which carefully controls the categorization of wines; accordingly, the categories of Wines of Nova Scotia (100% NS grapes) and Nova Scotia Wine (at least 85% NS grapes). Other wines that do not meet these criteria and which contain greater amounts of imported inputs may also be blended and bottled by either Farm Wineries or Commercial Wine Bottlers. However, while some farm wine businesses import grapes or juice from outside of the province, the pre-dominant value-added activity of their business model operations is premised on the use of local grapes.

Figure 20. Generic Business Model Value Add Activities: Farm Wineries vs Commercial Wine Bottlers



Study Methodology

Data Used

Primary Sources: Primary data used in the analyses in this study were obtained through a combination of in-person and online interviews; documentation provided by relevant stakeholders: both public and private actors operating within the sector; and site visits to several beverage alcohol retail establishments (NSLC, SAQ, and Specialty Stores). Additional primary data for analysis was compiled from Canadian sources at both the Provincial and Federal levels. This included relevant Federal and Nova Scotia Government legislative, policy, and regulatory documentation. Documentation was also provided by the NSLC on beverage alcohol and cannabis sales for the period 2018-2024, the Department of Agriculture provided information on farm winery licenses and grape production, and Perennia on services provided to sector actors. Primary data for comparison and option analysis of support mechanisms for the grape and wine sectors were collected from government publications and industry associations in the United States, the United Kingdom, Australia, and New Zealand.

Surveys: The survey used in this study was designed to collect data needed to estimate the economic impacts of actors in the grape and wine sector in Nova Scotia. Stakeholder lists of grape growers, farm wineries, and commercial wine bottlers were sourced through the Nova Scotia Departments of Agriculture, Finance, and the Nova Scotia Grape Growers and Wine Growers Associations. An initial list of data inputs needed for the Economic Impact Analysis was sourced from the Nova Scotia Department of Finance and Treasury Board. Survey development then focused on gathering data from interviews with these stakeholders and other subject matter experts. The survey questions were focused on capturing the broadest range of measures necessary to accurately reflect the associated value-added activities of both Farm Wineries and Commercial Wine Bottler operations and those measures needed to ensure an accurate accounting of the economic contribution made by each to the provincial economy.

Data which the survey captured included up-stream measures such as provenance and cost of inputs (e.g., source and amount, fertilizer, purchased equipment and services), operational measures such as production levels (e.g., 9-liter equivalents, service and hospitality), and downstream measures (e.g., sales and exports). The survey was administered to participating grape growers, farm wineries, and commercial wine bottlers in early June. The sample response rate represented a significant majority of potential participants, providing confidence in the representativeness of the data collected for analysis.

Secondary Data Sources

Secondary data used in the analyses were sourced from various governmental, academic, and market reference works. Secondary reference data from public actors included prior economic studies of the Nova Scotian and national Canadian grape and wine sectors, several economic and strategic assessments of wine regions in Canada, the United States, and internationally, and data from Statistics Canada and Statista. Additional academic data on strategic or competitive

assessment of grape and wine operations, studies focusing on small and medium grape and wine operations, wine tourism, and research on the relationship between cannabis and beverage alcohol consumption were also collected. Finally, numerous market studies from well-known reputable industry sources provided additional information on context and trends in the global beverage alcohol and grape and wine sectors. Primary and secondary data were used in both contextual and factual instances throughout the analyses and are cited accordingly.

Data Collection

This process commenced with interviews with relevant stakeholders (field notes only, no meetings were recorded via audio or video). Interviews were conducted with the following groups/persons/representatives.

Farm Wineries

11 farm wineries represented through synchronous meetings (in-person or online)
Numerous email exchanges and phone conversations
12 economic impact study surveys returned

Grape Growers

2 in-person interviews
6 participants in hybrid roundtable session (3 online, 3 in-person)
12 economic impact study surveys returned
Numerous email exchanges and phone conversations

Commercial Wine Bottlers

2 synchronous interviews (online)
2 economic impact study surveys returned
Numerous email exchanges and phone conversations

Numerous meetings with other stakeholders

Farm Winery Working Group
Deputy Minister of Finance
Director – Policy and Fiscal Planning
Executive Director – Fiscal Policy, Economics and Budgetary Planning
NSLC – Senior VP – Corporate Affairs
NSLC – Director – Insights and Strategy
NSLC – Senior Financial Analyst
NS Department of Agriculture – Executive Director, Policy and Corporate Services

Data Processing

As individual surveys were received, they were anonymized to protect the confidentiality of survey respondents. The survey data was then aggregated to ensure that individual respondents could not be identified nor proprietary financial or operational data disclosed. Aggregate data was then sent to the Director of Economics & Statistics, Nova Scotia Department of Finance and Treasury Board for further processing.

Analyses

Sector context and competitive analysis were conducted using PESTLE and standard business strategy methodologies as informed by the Project Team's professional knowledge of the grape and wine sector. Economic Impact Analysis was conducted in two phases: modeling and interpretation. Economic modelling using the survey data was conducted by the Director of Economics & Statistics, Nova Scotia Department of Finance and Treasury Board using their standard economic models. Interpretation of the modeling results was completed by the Project Team.

Input-Output Modeling

"The Nova Scotia Input-Output (I-O) Model is used for economic impact analysis. Economic impacts are divided into three components: direct; spinoff; and total impacts. Direct impacts are those that result directly from the company's value-added activity in the Nova Scotia economy. Spinoff impacts are the sum of indirect impacts (due to inter-industry transactions) and induced impacts (caused by household spending of labour income). Total impacts are the sum of direct and spinoff impacts. The current version of input-output model is based on 2017 economy structure.

The direct impact on provincial government revenue, comprised of personal income and sales taxes, is estimated from wages, salaries and benefits to be paid by the company and from a personal income and consumption tax template developed by the Department of Finance and Treasury Board. Spinoff provincial government revenues are also estimated from spinoff wages and salaries and from the tax pro forma developed by the Department of Finance and Treasury Board, including personal income taxes, HST and commodity taxes by average Nova Scotia household. Tax revenue impacts do not include provision for provincial taxes paid on corporate profits. All values are assumed to be in 2022 dollars."[xxxiii]

Economic Impact Analysis Results

The Nova Scotia Finance and Treasury Board uses a similar approach and methodology as the Federal government and other provinces, and other industry consultants. The Nova Scotia Input Output Model (NSIOM) is consistent with the impacts estimated by these other organizations. A GDP-based approach is the method used by the NS FTB using the NSIOM. The underlying structure of the model is updated regularly using data taken from Statistics Canada and is independently reviewed to ensure its accuracy. A description of the variation of the results of this study from previous studies is included at the end of this section.

Summary of Results

A conservative estimate of the direct GDP generated by Farm Winery operations for 2022 in Nova Scotia is $ 26.95 million dollars with additional GDP of $ 6.29 million generated by hospitality and retail services at farm wineries. The total direct and spinoff GDP of Commercial Wine Bottlers operations was $17.63 million.

The economic impact of Commercial Wine Bottlers to the provincial economy is approximately one half of the total GDP contribution made by the Farm Wineries at $33.24 million. Farm Winery operations have stronger forward and backward linkages since Farm Wineries spend almost three times as much on Nova Scotia sourced inputs as do the Commercial Wine Bottlers; $2.72 for the former as compared to $1.00 for the latter.

Economic Impact Comparison: Farm Wineries and Commercial Wine Bottlers

The results of the economic impact analysis are presented in the tables as distribution totals. They are presented in this format to protect the confidentiality of the business data collected in the surveys submitted by the Commercial Wine Bottlers. As there are only two Commercial Wine Bottler operations, simple aggregation of results is insufficient to protect confidentiality of operational data that could be used for competitive purposes. Therefore, by prior agreement with the participants, only distributions in comparison to Farm Wineries by economic impact categories are presented in this report.

The tables below present the economic impacts for Farm Wineries and Commercial Wine Bottlers as distributions of the total impact of the grape and wine sector on the Nova Scotian economy. Table 2 presents economic impact summaries for wine making operations only while Table 3 includes the associated hospitality services and retail impacts of farm wineries in addition to their wine making operations.

Table 2. Distribution of Economic Impacts – Wine Production Only

		Farm Wineries	Commercial Wine Bottlers
GDP at basic prices	Direct	48.0 %	52.0 %
	Total (direct + indirect +induced)	60.5 %	39.5 %
Labour Income	Direct	79.7 %	20.3 %
	Total (+ indirect +induced)	82.6 %	17.4 %
Employment (FTEs)	Direct	88.8 %	11.2 %
	Total (+ indirect +induced)	87.8 %	12.2 %
Government tax revenue*	Direct	79.6 %	20.4 %
	Total (+ indirect +induced)	82.5 %	17.5 %

*Personal income taxes and HST, not taxes/margins on beverage alcohol sales

Table 3. Distribution of Impacts – Wine Production plus Hospitality and Retail

		Farm Wineries	Commercial Wine Bottlers
GDP at basic prices	Direct	53.9 %	46.1 %
	Total (+ indirect +induced)	65.3 %	34.7 %
Labour Income	Direct	83.6 %	16.4 %
	Total (+ indirect +induced)	85.4 %	14.6 %
Employment (FTEs)	Direct	91.5 %	8.5 %
	Total (+ indirect +induced)	90.3 %	9.7 %
Government tax revenue*	Direct	83.4 %	16.6 %
	Total (+ indirect +induced)	85.3 %	14.7 %

*Personal income taxes and HST, not taxes/margins on beverage alcohol sales

Variation from Prior Economic Impact Analyses

Variation in economic impact analysis can result from differences in the decisions used to determine the scope of the study; the various assumptions and application of counterfactuals used in determining backward and forward inter-sectional linkages between businesses/sectors; the sources of data used for inputs; and the type of IO Model and IO multipliers that are used to compute results.

Model Linkages and Counterfactuals: Decisions on inter-business or inter-sectoral relations should be subjected to realistic scenario-counterfactual logic to determine relevant forward and backward linkages. Counterfactuals must be realistic and plausible, as unrealistic assumptions can lead to inaccurate assessments of economic impact. For example, relying on linear relations or proportional logics may be inconsistent with the actual economic relationships. So, the assumption that a business whose outputs represents 30% of second business's inputs does not

mean that if the first business ceases operations that 30% of revenue, employment, or other operational aspects in the receiving business would be reduced accordingly. If the first business doubled its output, and this was accepted by the second business, this does not mean that revenue, employment, or operations would also double. Similarly, without hard data measuring actual tourist spending at an attraction, it is not appropriate to assume that a because 10% of the visiting tourist population to a region visit one site amongst others, that 10% of the total tourist spending in the region may be attributable directly to that one site. Decision logic must also carefully consider the issue of substitution when addressing consumption patterns and spending. The increase in price or decrease in availability of one product does not necessarily mean economic activity responds similarly. Consumers may simply substitute instead, chicken for beef, cannabis for spirits, etc.

Sources of Data: Economic modeling is a function of the validity of the data that IO models use. The most accurate results are those impact studies that use actual data sourced from industry respondents at the time the modeling is being done. Modeling that uses longitudinally collected data by organizations whose role is to collect such data (e.g. Statistics Canada) is usually considered valid. The use of averages or proportions in economic modeling is subject to a variety of factors that can detract from their representatives and thus may produce less realistic results.

IO Model: Different IO Modeling approaches will yield different results (e.g., IMPLAN vs RIMS II vs NSIOM) as will using different multipliers (e.g. generic national vs regional specific). The most accurate impact assessments use IO models specifically designed to represent the economic structure of the locality in which the study is conducted.

Accounting for Wine Tourism

Wine tourism is a form of special interest tourism which intertwines the charm of winery visits with the service and hospitality operations of a winery. This form of tourism attracts visitors who are eager to explore scenic vineyards, learn about the winemaking process, and taste various wines made on-site. The influx of tourists boosts the winery's direct sales and enhances the winery's brand visibility. Additionally, wine tourism activities may stimulate the local economy by increasing demand for nearby accommodations, restaurants, and other attractions. In essence, wine tourism not only enhances the economic viability of wineries through direct sales and brand loyalty but also fosters a broader economic impact by supporting local service and hospitality businesses. However, accurately determining the economic impact of wine tourism is highly data dependent due to the heterogeneity of wine tourist behaviours. Data on wine tourists in Nova Scotian is insufficient for rendering an accurate estimate of the contributions of wine tourism at this time.

Wine Tourist Types

Wine tourism attracts a diverse range of tourists, each with distinct spending habits and motivations. While the research literature proposes several different categorization models, they

tend to converge on a common market segmentation. Enthusiasts, often wine connoisseurs, seek deep engagement with the wine-making process and exhibit high spending habits, purchasing premium wines and participating in exclusive tours and tastings. Novice Tourists are casual visitors or beginners interested in learning about wine; their spending is moderate, focusing on entry-level wines and basic experiences. Hedonic Tourists are drawn to the leisure and social aspects of wine tourism rather than exclusively the wine, often spending generously on luxury accommodations, gourmet meals, and entertainment. Finally, Local Explorers are regional visitors who make frequent but shorter and lower-cost visits, often purchasing wines for daily consumption rather than premium collections.

Wine tourism (sometimes called oenotourism) is variously considered a under the umbrellas of Gastronomy Tourism, Cultural Tourism, Agritourism, Ecotourism, and Rural Tourism. Cultural Tourists prioritize the cultural and historical aspects of wine regions, with their spending often directed towards heritage tours, local crafts, and mid-range wines. Eco-Tourists focus on sustainable practices within wineries and vineyards, spending moderately on organic wines and eco-friendly experiences. Overall, spending habits vary significantly based on the tourists' motivations, with Enthusiasts and Hedonic tourists contributing the most economically to wine regions.

Wine Tourism Data

Nova Scotia Tourism: Data collected by Tourism Nova Scotia through exit surveys administered to those who have visited from outside the province does not have sufficient resolution to effectively categorize the visiting tourist population by wine tourist type, nor to determine the portion of tourist spend which can, with any degree of confidence, be attributed to wine tourism activities. Asking a visitor to the province whether they have been to a winery does not establish the importance of wine tourism as a motivation; it only indicates that the winery visit(s) happened.

Wine Tourism and Economic Impact

When conducting an economic impact analysis on wine tourism, counterfactual logic argues that in the absence of wineries in the province, tourists would continue to visit the region and tourist dollars would be spent on other activities. Therefore, in the absence of supporting tourism data on visits and spend, rather than linkages in an IO model, qualitative differences must be considered to determine what impact wine tourism has. Drawing upon wine tourism in other regions, some reasonable assumptions may be drawn concerning the grape and wine sector, wine tourism, and differences between winery types and their configuration within a region.

Economic Impact of Wine Tourism

In Nova Scotia, wineries engage with wine tourism activities differentially. Farm wineries, from their inception under the Farm Winery Policy, are encouraged to engage in tourism. Indeed most, if not all, farm wineries in the province, and even some independent grape growers, have

significantly invested in tourism. They have expanded their service and hospitality and wine experience offerings, in addition to wine production operations, to leverage their ability to directly attract tourists. As the commercial wine bottlers in the province do not engage with tourism, wine tourism is a further dimension of difference in terms of the economic contribution that farm wineries make to the province.

While there is insufficient data to quantify the impact of wine tourism on the Nova Scotian economy, the service and hospitality component of Farm Wineries in this economic analysis is a bellwether. This is demonstrative of an additional and larger economic contribution made by farm wineries although the economic impact on wine tourism remains largely unmeasured in the broader tourism context.

Winery Types and Configurations in Wine tourism

Farm Wineries: In the realm of wine tourism, farm wineries are typically relatively small artisanal producers which provide intimate, personalized hospitality services, emphasizing a deep connection with the vineyard, terroir, and local heritage. Visitors often enjoy guided tours of the vineyard and winery, detailed tastings led by knowledgeable staff, who are sometimes even the winemakers/owners themselves. Service and hospitality include a range of offerings, from standardized wine tours and tastings experiences to bespoke experiences such as wine and food pairings, vineyard picnics, and participation in harvest activities. Farm wineries that offer wine experiences focus on creating memorable, immersive experiences that foster a strong sense of place and loyalty among visitors. These are the types of wine experiences and wine tourism activities offered by many of the farm wineries in Nova Scotia.

Large Wineries: In contrast, some larger wineries, while also engaging in wine tourism, do so on a significantly larger scale. Their facilities might include expansive tasting rooms, educational centers, and large event spaces capable of hosting weddings and corporate events. The hospitality experience is more standardized, focusing on efficient service and broad appeal. While visitors can still enjoy tours and tastings, these experiences are designed to accommodate higher volumes of guests and emphasize the consistency and reliability of the brand. The value-added activities in service and hospitality at small farm wineries are centered on exclusivity and personalized engagement, whereas larger wineries prioritize accessibility and scale, catering to a wider audience. Nova Scotia does not yet have any large wineries that offer wine experiences at a level of scale found in more mature wine regions such as Niagara or Napa Valley.

Winery Clusters: A wine route or winery cluster creates significant synergies for enhancing wine tourism, fostering economic growth, and promoting regional identity. The clustering of wineries and related attractions, such as local restaurants, accommodations, and cultural sites, can create a cohesive and immersive tourist experience. This concentration amplifies marketing efforts, drawing in visitors not only for the wine but also for the unique regional experiences. It encourages collaboration among wineries, leading to shared resources, best practices, and joint events that can attract larger crowds. The clustering effect also boosts local businesses, from hospitality to artisanal crafts, by increasing visitor traffic and spending. Additionally, a well-

promoted wine route enhances regional reputation, creating a sought-after destination for wine enthusiasts, thereby drawing more tourists and subsequently the local economy and investments in infrastructure and services. Overall, the synergy created by a wine cluster supports sustainable tourism development, preserves local heritage, and enhances economic resilience of the surrounding region by generating opportunities for other businesses.

Additionally, when the density of wineries within a geographic cluster becomes a tourist attraction in and of itself, it supports the development of other tourist-based economic activities. For example, the regional cluster of wineries in and around the Wolfville area have served as sufficient motivation for the establishment and operations of several tour businesses who cater specifically to wine tourists. The winery cluster has also served as an additional attraction to already established tourism-oriented tour-based businesses.

As noted previously, the business models and operational activities of Commercial Wine Bottlers remain production focused and do not extend to delivering wine experiences in wine tourism activities.

Comparison with Previous EI Studies

The following section is quoted from the Feedback Response document previously provided to the working groups. This section contains a description of the primary differences between the economic impact analysis conducted for the current study using the NSIOM with those used in other studies conducted previously using other methods (e.g., IMPLAN).

These descriptions are quoted as provided to the authors by the Finance and Treasury Board.

> "In this NSIO analysis, farm wineries and CWBs are treated separately to ensure their economic impacts are reflective of their activities within the wine industry as a whole. All other models represent farm wineries and CWBs as a share of the industry relative to their shares of wine output. The economic impacts in the NSIO exercise are reflective of how either entity allocate their production expenditures in the Nova Scotia economy, essentially creating "new" industries: farm wineries and CWBs. This allows for an accurate understanding of the differences between each industry.
>
> The methodology of the NSIO is consistent with other notable economic impact studies (example: Deloitte Niagara region). Economic impacts are measured on a value-added basis (i.e., GDP) which is the standard used by other Provinces, the Federal government, as well as other notable studies (including the Deloitte study).
>
> IMPLAN results themselves are not disputed and are valid outputs. However, IMPLAN economic impacts assume that all wine production has indirect impacts

that are in the same proportion for all participants in the industry. This means that indirect economic impacts for farm wineries and CWBs would be proportional to their revenues, which is not the case using the methodology of the NSIO described above to capture the differences in local expenditures by each industry participant.

The issue with previous analysis using IMPLAN lies in the representation of the model results. These results have been aggregated with other expenditures, including model inputs. In the study "The Economic Impact of the Wine and Grape Industry in Canada 2019 and 2020" indirect impacts are aggregated with wine revenues, input purchases (example: trucking/warehousing, winery suppliers) which are themselves a part of the indirect impacts. This aggregation double counts economic impacts and mixes units of measure. For example, the study adds wages and salaries to revenue, which is an incorrect way to aggregate economic impacts and is double counting labour income, which is to be paid out of revenues. The NSIO only counts production activities that generate GDP (example: purchases of grapes, agricultural inputs, transportation, marketing, etc.) and avoids double counting (example: revenues from sales of grapes which is unrelated to the income from wine sales) to ensure reported GDP impacts reflect the amount of economic activity that would not take place in the absence of wine production."

PART III – OPTIONS: INVESTMENT FRAMEWORK

Desire: A Successful & Flourishing NS Grape and Wine Sector

The purpose of a strategic analysis is to first determine the current state of the environment and the sector's place within it, and then to develop responses or options for moving from the present state to a desired future state. The methodology employed for this Option Analysis is a principles-based approach. This method draws upon the evidence as presented by: the data collected for this study; our consultation with industry respondents and subject matter experts; and the results of prior analyses contained in this report. Each of these has been informed by the Project Team's understanding of the grape and wine sector in the province and around the world.

The Option Analysis uses a Ways and Means mechanism for presenting the results. Ways are the methods, strategies, or approaches used to achieve a particular goal. It encompasses the various routes or actions that can be taken to reach an objective. For example, in a business context, 'ways' might involve different marketing techniques, production processes, or operational procedures. Means refers to the resources, tools, or instruments necessary to achieve a goal or accomplish an objective. It includes the structural, financial, human, or material resources needed to accomplish an objective. These have been generated from the analyses conducted or generated by consideration of support mechanisms and processes used in other wine jurisdictions. Comparison benchmarking was constrained to those mechanisms that are applicable to - and achievable within - the Nova Scotian context.

As support to the sector is historical in nature, currently underway, and planned or being studied, the actions and options available to the Government and Industry may be narratively categorized into three broad types:

> Sustain Options are programs, processes, or activities currently in-place or underway that are recommended to be continued.
>
> Modify Options are current programs, processes, or activities that should be retained but are recommended to be modified or adjusted in some fashion.
>
> Introduce Options are new programs, processes, or activities whose introduction would support or help build capacity within the grape and wine sector.

The Option Analysis is grounded on the assumption that the Government of Nova Scotia desires a successful and flourishing grape and wine sector now and in future. Options analysis is, therefore, grounded in a set of secondary assumptions that account for the positive contributions attributable to the continued presence of the primary industry actors: grape growers, farm wineries and CWBs. Options must be trade compliant; while these options appear prima facie to be trade compliant, they must past legal screening by trade experts in the provincial government. Finally, those options which will strategically support the sector into the future but also

recognize that government support must be adjusted in accordance with the strength of the sector and commensurate with the contributions of the actors within it.

The desired end state for the grape and wine sector was further broken down into separate enabling objectives. These objectives were derived from the results of the PESTLE, the Economic Impact Modeling, and the Competitive Analyses. Objectives were further informed by comparison of the Nova Scotian grape and wine sectors condition and future potential with other successful grape and wine sectors/regions. This comparison considered the ways/means support by both governments and industry actors and associations in these jurisdictions. Considering the maturity differentials in sector development in other jurisdictions, capacity building was considered a priority in comparison mechanics.

Combined with the Project Team's interactions with Nova Scotian industry representatives and Provincial government subject matter experts, a general synthesis identified the following objectives that would enable stakeholder actions to future-proof and/or enhance the grape and wine sector in the province:

- Sector Stability
- Security of Agricultural Inputs
- Quality Outputs
- Export Market Development
- Nova Scotia Wine Brand Equity
- A Whole of Governments Approach with Industry
    - Role Clarity
    - Administrative Efficiencies
    - Process Efficiencies

Finally, the options are presented in narrative form and are not costed for several reasons. First, it is a principles-based analysis driven by both quantitative and qualitative assessments. This means that options may include elements that can be easily quantified while other elements are not amenable to quantitative measurement. Second, there are options whose implementation activities may scale up or down and whose cost will scale accordingly. Third, are those options where efficacy or success is dependent upon both government and industry stakeholders to effect and where there is insufficient information to estimate their costs in the Nova Scotian context.

Table 4. Options Menu

Objectives	**Options**		
	Sustain	**Modify**	**Introduce**
Sector Stability	Resolve the ongoing issue concerning support programs to farm wineries and commercial wine bottlers.	Financial Support Program Develop a support program that provides support commensurate with the economic impact made by both farm wineries and commercial wine bottlers respectively. Current investment structure does not differentiate between two quite different operations – one highly labour intensive and artisanal, the other capital-intensive and predicated on volume. The form of support should recognize the differences in the production operations between farm wineries and commercial wine bottlers and account for any input subsidy that may already be applied by external jurisdictions (whether on growing or export) on their imported agricultural inputs such as grapes, juice, or wine. Support programs must be compliant with WTO and trade agreements. Compliant mechanisms in other jurisdictions	

		normatively are supported through the agricultural arm of government.[xxxiv]
	Working with industry, develop a benchmarking and environmental scanning framework to inform both practice and policy development.	Develop a Strategic Sector Plan A strategic and long-term governmental approach is essential for developing and supporting a young, still maturing, grape and wine sector. Mature wine regions such as those in Australia, New Zealand, Ontario, or British Columbia no longer rely on ad hoc policy support. They have matured and grown because they have benefited significantly from sustained governmental policy support. Much of their success has been because this support has been continuous across successive administrations. Incorporate an annual data collection and analysis program to gauge and monitor sector health and the effectiveness of government support programs to allow for consistent evidence-based decision making. As part of this effort, adopt the new wine tourism measurement standard that will soon be instituted by the OIV/UNWTO joint committee.

		Policy development should consider end-to-end value chain stability. Policies that include research and development funding, targeted marketing initiatives, and favorable regulatory frameworks are essential. In Australia and New Zealand, governmental support has facilitated innovation in viticulture and oenology, leading to enhanced quality and international competitiveness of their wines and wine products. Similarly, in Ontario and British Columbia, long-term investment in infrastructure, education, and market access has spurred growth, allowing local wineries to thrive and contribute significantly to local economies. By adopting a strategic vision, government can more ably ensure the sustainability and success of the Nova Scotia grape and wine sector, fostering economic development, improving tourism offerings, and enhancing cultural heritage. While scale of support is important, consistency and market expectations concerning the stability of support and its ongoing commitment to investment is perhaps more important.[xxxv]

Security of Agricultural Inputs	Extend the Wine and Grape Industry Development Plan (NSDA). Revive and extend the 2017-2018 Vineyard Expansion Program	Resuscitate and further develop a program to identify potential vineyard sites within the province. Adjust the current crop insurance mechanism such that it uses alternative price data to determine levels of contemporaneous support. Institute a standing disaster relief fund to mitigate against risks and damage to crops from extreme weather events. Extend Perennia-style support or institute a program for access to advanced production technologies which can be accessed collaboratively by farm wineries to increase efficiency (e.g., packaging technology improvements, harvesting equipment).	Strategic orientation so that programs have a minimum operational or investment horizon of 5 years to account for the nature of grape and vineyard development, and the viticultural and Oenological practices of grape growers and Farm Wineries. *(See Strategic Plan)* Institute a dedicated program of support for collaborative initiatives between university researchers, grape growers, and winemakers. Create a center of excellence within a Nova Scotian University. This center could develop ties with like centers in other cool climate wine regions on a regional, national, and global basis.[xxxvi] Minor levels of support may be effective for aligning researchers with industry

			practitioner interest and for leveraging additional support through national programs such as SSHRC and NSERC.
Quality Outputs	Continue to promote and support Tidal Bay and Tidal Bay standards as the province's appellation wine. Continue to support the ALAB – or develop an alternative – facility for beverage alcohol analysis and testing.	Establish a Nova Scotia Wine Authority Wine boards or authorities, whether organized by industry stakeholders or governments, play a crucial role in the development and regulation of successful grape and the wine sectors regions around the world. Nova Scotia policies currently set out several boards and committees (e.g., Farm Winery Industry Development Board, Nova Scotia Wine Standards Committee) that are responsible for standards and monitoring which could be subsumed under a wine authority. Industry-led wine boards benefit from direct insights and expertise from those actively engaged in wine production, ensuring that policies and initiatives are more directly aligned with industry needs. Efficiently governed industry boards can foster a sense of ownership among producers and other stakeholders enabling effective response to sector challenges or quickly adapt to market changes. However, industry boards may face challenges	

		in achieving broad consensus and can sometimes prioritize short-term gains over long-term sustainability. Government-organized wine authorities provide a more structured and impartial framework, which can facilitate long-term planning and equitable resource distribution. Government organized wine authorities often have greater access to public funding and can implement policies that address broader societal goals, beyond those of direct business concerns, such as environmental sustainability or public health. However, governmental wine authorities may be less responsive to immediate industry needs. The nature of governmental administrative processes also means that responsiveness and flexibility of may suffer at the hands of bureaucratic processes. Ideally, a hybrid approach that combines industry expertise with government oversight can leverage the strengths of both models, while simultaneously minimizing their weaknesses. The wine authority should be responsible for appellation development and wine quality standards.[xxxvii] In doing so, the wine authority should provide role clarity and coordination around strategic activities designed to develop and promote the Nova Scotia wine brand.	

Nova Scotia Wine Brand Equity	Leverage and Develop Brand Nova Scotia Establish a government inter-departmental and industry working group to create a regional umbrella brand that promotes tourism and enhances the brand equity of locally produced wine, cuisine, and cultural heritage. The working group should consist of selected industry representatives from the Grape and Wine Sector, related industry associations such as TIANS and Taste of Nova Scotia. Government representation from Tourism Nova Scotia Department of Communities, Culture, Tourism and Heritage and the Nova Scotia Liquor Corporation.[xxxviii] *(see Wine Authority)* *(see Strategic Sector Plan)*

	Working with industry, modify and enhance the Proudly Nova Scotian program to ensure that it provides consumers with additional clarity on what products are considered locally grown and the criteria associated with that classification. Develop retail layouts that market, promote, and emphasize the availability of local wine products. *(see Wine Authority)*		Working with industry, develop labeling standards for indicating product origin and manufacture.
Export Market Development	Export Market Development Grants: Dedicated and ongoing assistance to cover the costs of marketing and promoting wines in international markets. This includes participating in trade shows, conducting market research, and developing promotional materials. Trade Missions and Delegations: Organize trade missions to help wine producers connect with potential buyers and distributors in key export markets. Training and Capacity Building: Workshops, seminars, and training programs help wine producers improve their export readiness. Establish a resource learning center for Market Intelligence and Research: This resource would provide access to market research reports and data to help producers identify emerging trends and consumer preferences needed to develop export strategies. Establish a resource learning center for Regulatory Assistance and Compliance: The resource should consolidate and organize guidance on international trade regulations, labeling requirements, and certification processes to ensure compliance with different market standards. Develop and implement Brand Promotion and Marketing Campaigns to assist in entry to export markets. *(see Nova Scotia Wine Brand Equity)*		

	Promote and enhance the ongoing efforts to enter into agreements for inter-provincial beverage alcohol trade.[xxxix]		
Whole of Governments Approach & Industry	In collaboration with the grape and wine sector map the various 'pain points' experienced by industry when dealing with government departments and regulatory agencies. Based on this mapping, institute a program of administrative and process efficiencies to simplify and reduce transaction costs for the wine and grape sector. Implement internal interdepartmental coordination and collaboration mechanisms to harmonize or eliminate redundant procedures or to capitalize on synergies through data gathering and data sharing to meet collective goals. Streamline interactions with multiple departments through strategic initiatives such as establishing a centralized digital portal where wine producers and grape growers can access all necessary regulatory information, submit applications, or track approvals. Develop a single point of contact for industry and inter-governmental coordination to leverage collaborative opportunities to work with other levels of government and leverage common support opportunities.		

	Work to establish role clarity amongst: NSLC, Department of Agriculture, Industry Associations (WGNS, GGANS), Wine Authority, etc. on issues such as brand development, product placement and positioning, new product development, quality standards.

PART IV - RECOMMENDATIONS

The preceding study of the Nova Scotia grape and wine sector incorporated the results of: a PESTLE analysis identifying factors affecting both Farm Wineries and Commercial Wine Bottlers; an examination of the competitive dynamics between these two models in the Nova Scotia beverage alcohol market; and an Economic Impact Analysis to determine the economic contributions arising from the differentials in the value-added activities of Farm Wineries and Commercial Wine Bottlers. The results of each of these sub-analyses were then synthesized into an Investment Framework to provide a menu of options available for implementation. Solutions which could be co-developed and actioned by the province and sector actors on a forward-looking basis.

Recommendations made in this report are established on the bases of: self-evident assumptions, conclusions which follow from the results of the independent analyses in this study or are cross-analysis conclusions arising from comparisons with practices found in other successful wine regions. The assumptions were confirmed with the province prior to making recommendations.

The primary assumptions underlaying these recommendations include:

a) Current levels of support will not be withdrawn.

b) Effective implementation of decisions arising from the Investment Framework will require a whole-of-industry and whole-of-government approach. That is, the implementation of investment decisions should be co-developed between stakeholders in the grape and wine sector and the provincial government.

c) Co-developed decisions on options to implement and support stakeholders in the sector will be viewed through the lens of ensuring a healthy and thriving grape and wine sector for all stakeholders: Grape Growers, Farm Wineries, and Commercial Wine Bottlers.

Recommendations arising from the analyses include:

a) New investment should be designed to contribute to the long-term development of the province's grape and wine sector through incentivizing the use of provincial inputs. Relatedly, due consideration needs to be given to whether inputs used within the grape and wine sector value-added operations have been previously subsidized by other jurisdictions. If so, support should be offset to account for any prior subsidies.

b) New investment should contribute to the long-term development of the province's grape and wine sector through the promotion of risk mitigation activities. Mitigation strategies will need to be co-developed with sector actors.

c) New investment should be commensurate with the share of economic activity generated in the province.by the Farm Wineries and the Commercial Wine Bottlers respectively.

Framing Questions

Framing questions which guided this report and the analyses contained within it were twofold.

a) How does supporting CWB negatively impact FW?

b) How, and on what basis, should the province equitably apportion levels of support to the grape and wine sector?

Answers to the Framing Questions

In answer to the first question, this study determined that, at this time, competition between Farm Wineries and Commercial Wine Bottlers products is limited to a few products in the mainstream price category of the NSLC. Consequently, provincial support to Commercial Wine Bottlers should not materially impact Farm Wineries if such support meets two conditions. First, that support is combined with work to leverage, develop, and clearly identify for consumers the Nova Scotia Wine Brand. That is, additional efforts are taken to clearly disambiguate for the consumer wine products that are made with Nova Scotian inputs from those which are not.

Second, that support to either Farm Wineries or CWBs is not calculated in a manner wherein it privileges the use of non-local inputs beyond those contained in the standards for Wines of Nova Scotia or Nova Scotia Wines. This will avoid adding an additional level of support for the production of wine using inputs from jurisdictions which previously have subsidized the production, export, or distribution of inputs used to make wine and incentivize the use of local inputs.

In answer to the second question, we recommend that current levels of support are maintained. Specifically, we recommend that that the current programs designed to assist Nova Scotia wine businesses as they compete with larger producers from outside our jurisdiction be maintained:

a) Under the Farm Wine Support Program, a direct payment of 50% of the markup, which is equivalent to the previous support under Emerging Wine Region Program (EWRP).

b) Under the Commercial Bottler Support Program, a direct payment of 7% of the markup, which is equivalent to previous support under the NSLC's Commercial Wine Policy (e.g., preferred markup of 120%).

We recommend that future support to the grape and wine sector should be premised on an investment strategy that is commensurate with the contributions made to the Nova Scotian economy. Thus, as determined by the results of the Economic Impact Analysis, it is recommended that future support and investment be apportioned at 65 percent and 35 percent for Farm Wineries and Commercial Wine Bottlers respectively.

Conclusion

While the business models and operational value-added activities of Farm Wineries are distinct from those of Commercial Wine Bottlers, and while their product offerings are based on different principles, both the Farm Wineries and Commercial Wine Bottlers contribute to and serve the consumer market in the province. By offering a broad selection of wines from across the price spectrum, value-priced through premium, their collective efforts are contributing to the maturing of a wine market in the province. A striking accomplishment in a relatively short period of time when compared to the historical development in other Canadian wine regions.

The brief timeframe, intensive work schedule, and dependency on primary data sourced from participants and stakeholders means that the options in the investment framework is not an all-inclusive set of the ways in which the province and grape and wine sector may work together. Other recommendations have been proposed by both the Farm Wineries and the Commercial Wine Bottlers and these proposals should be part of the ongoing discussions between the province and sector stakeholders when considering the analyses contained in this report.

APPENDIX A: GLOSSARY OF TERMS

Beverage Alcohol (BA) (NSLC, 6.1 Manufacturers and Permit Policy, 2021) – "beer, spirits, wine, cider, mead, or other alcohol produced for consumption. Does not include beverages that contain less than .5% alcohol by volume at 15.5 degrees Celsius." (p. 2)

Commercial Wine Bottler (CWB) – term applied to distinguish the Province's two bottling operations from Farm Wineries for the purposes of current discussions around the replacement of the Emerging Wine Regions Policy (EWRP) per the agreement with Australia.

Farm winery (Nova Scotia Farm Winery Policy, 2007) – "means a winery in Nova Scotia which makes wine from grapes, and/or which makes wine from other Nova Scotia agricultural produce. The winery must be located in Nova Scotia on the principal farm premises. If making grape wine from grapes grown in the Province of Nova Scotia, it must have entitlement to a minimum of 10 (ten) acres of certified vineyard located adjacent to the winery." (p. 2)

> "5.5 A Farm Winery that uses imported grapes or grape product in the manufacture of wine shall do so in combination with Nova Scotia grapes or grape product." (Farm Winery Policy, p. 7)

Farm Winery (NSLC, 6.1 Manufacturers and Permit Policy, 2021) – "A manufacturer for a specific location for the manufacturing of wine or wine based RTD products from Nova Scotia agricultural produce, as defined in the *Nova Scotia Wine Standards Regulations* made under the *Agriculture and Marketing Act,* where the primary business function is to sell packaged product to the NSLC and on to the general public through stores, to licensees, to PWSS [Private Wine and Specialty Stores], or for export.

- In the case of fortified wine, the distilled product shall be distilled by a Manufacturer with an active Distillery permit or purchased through the NSLC." (p. 12)

Non-Grape Farm Winery (NSLC, 6.1 Manufacturers and Permit Policy, 2021) – "A manufacturer for a specific location for the manufacturing of non-grape wine or non-grape wine based RTD products, from Nova Scotia agricultural produce, as defined in the *Nova Scotia Wine Standards Regulations* made under the *Agriculture and Marketing Act,* where the primary business function is to sell packaged product to the NSLC and on to the general public through stores, to licensees, to PWSS, or for export." (p. 12)

International Organization of Vine and Wine (OIV) – This international organization has 50 member states and represents 87% of global wine production and 71% of global wine consumption. The OIV has three central purposes: information, assisting with standardization, and the harmonization of existing practices and standards.

Nova Scotia Liquor Corporation (NSLC) – Provincial Crown Corporation tasked with "the receipt, distribution, regulation and control of beverage alcohol in Nova Scotia" (NSCL Business Plan, 2020-2021, p. 3)

Nova Scotia Wine
Geographic(al) Indication/Indicator (NSGI) – (Nova Scotia Grape Wine Standards, 2005) "means an indication that identifies a wine as originating in a country, or a region or locality of that country, where a quality, a reputation, or other characteristic of the wine is essentially attributable to its geographical origin." (p. 2)

Nova Scotia Wine – (Nova Scotia Wine Standards) "means all wines entitled or required to use the Nova Scotia Geographical Indicator on the Principal Display Panel" (p. 3)

"A wine shall be entitled to use the Provincial designation 'Nova Scotia' on its principal display panel if;

(i) Not less than 85% of the wine's content is derived from grapes grown within the political boundaries of the province of Nova Scotia, and the remaining 15% must be Canadian grown; and
(ii) It meets all standards set out herein." (p. 3)

"**Content requirements for designation as Nova Scotia wine**

16 (1) The Minister may authorize a registered winery to designate a wine as Nova Scotia wine and label the wine in accordance with Section 17 if the wine meets all of the following criteria:

(a) for grape wines,

(i) at least 85% of the wine content in the bottle is derived from grapes grown in the Province,

(ii) 15% or less of the wine content in the bottle is derived from grapes grown outside the Province but within Canada,

(iii) the wine is made from grapes that meet a minimum level of 15°Brix at harvest,

(iv)the wine meets all the requirements of these regulations.

(b) for non-grape wines, 100% of the contents are derived from non-grape wine products grown in the Province.

(2) The Minister may suspend a registered winery's authorization under this Section for an identified crop year or revoke the authorization if the criteria in subsection (1) are not maintained." (from Nova Scotia Wine Standards Regulations, accessed from https://novascotia.ca/just/regulations/regs/amwinestds.htm#TOC3_1 on 04 August 2024)

Principal Display Panel – (Nova Scotia Wine Standards) "means the label normally exposed to the consumer at the point of sale, as defined in 'A Guide To the Consumer Packaging and Labelling Act and Regulations.'" (p. 3)

Nova Scotia Wine Standards Committee – (Nova Scotia Wine Standards) "will make recommendations from time to time to the Nova Scotia Farm Winery Monitoring Committee regarding changes to these standards and such recommendations shall take effect when approved by the Farm Winery Monitoring Committee." (p. 14)

Premiumization – a trend where consumers spend more per bottle and buy fewer bottles overall

Ready to Drink (RTD) – "beverage alcohol products that are produced with the purpose of being consumed as purchased such as coolers and pre-mixed cocktails excluding beverage alcohol already defined as beer, wine, spirits, cider, and/or mead." (p. 3) (NSLC, 6.1 Manufacturers and Permit Policy, 2021)

Retail Sales Markup Allocation (RSMA) (Nova Scotia Farm Winery Policy, 2007) – "means the administration fee charged by the NSLC as an alternative to the NSLC markup on Nova Scotia wine, as defined below, sold direct to customers at the winery's retail store." (p. 4)

Spirits (NSLC, 6.1 Manufacturers and Permit Policy, 2021) – "a potable beverage alcohol obtained from the distillation of an alcohol-containing liquid. Spirits shall be in accordance with CFIA regulations where appropriate." (p. 3)

Wine (NSLC, 6.1 Manufacturers and Permit Policy, 2021) – "means and includes any alcoholic beverage obtained by the fermentation of the natural sugar contents of fruits, including grapes, apples, etcetera, or other alcohol products containing sugar, including honey, milk, etcetera (LCA)

- Wine includes but is not limited to wine coolers, wine based Ready-to-Drinks, table wine, still wine, sparkling wine, and champagne.
- Wine, for the purposes of this policy, also includes fortified wine and other non-grape wines (such as Sake) as approved by the NSLC.
- Although cider and mead fall under the definition of wine for the purposes of the LCA and the Regulations, they are considered separate categories for the purpose of this policy and are defined above." (p. 3)

Winery (NSLC, 6.1 Manufacturers and Permit Policy, 2021) – "A manufacturer for a specific location for the manufacturing of wine or wine based RTD products, where the primary business function is to sell packaged product to the NSLC and on to the general public through stores, to licensees, to PWSS, or for export.

- In the case of fortified wine, the distilled product shall be distilled by a Manufacturer with an active Distillery permit or purchased through the NSLC." (p. 12)

Non-Grape Winery (NSLC, 6.1 Manufacturers and Permit Policy, 2021) – "A manufacturer for a specific location for the manufacturing of non-grape wine or non-grape wine based RTD products, where the primary business function is to sell packaged product to the NSLC and on to the general public through stores, to licensees, to PWSS, or for export." (pp. 12-13)

Wines of Nova Scotia (Nova Scotia Wine Standards Regulations) – "The Minister [of Agriculture] may authorize a registered winery that is authorized to designate wine as Nova Scotia wine under Section 16 to designate the wine as 'Wines of Nova Scotia' if 100% of the wine content is derived from grapes grown in the Province." (from Nova Scotia Wine Standards Regulations, accessed from https://novascotia.ca/just/regulations/regs/amwinestds.htm#TOC3_1 on 04 August 2024)

Appendix B: Cannabis in Nova Scotia

Determining the relationship between beverage alcohol and cannabis remains a challenge. The extant research reveals that cannabis consumption's relationship with beverage alcohol consumption is complex, exhibiting characteristics of both substitution and complementarity depending on various factors such as income, education, and demographics[xl]. Thus, in terms of establishing a clear relationship, the existing research is inconclusive[xli].

In Canada, for medical cannabis, a recent study[xlii] found that rising medical cannabis sales were correlated with slightly lower alcohol sales during for the period 2017-2018. The results of this study agreed with others that found for medical cannabis use there was a corresponding decrease in beverage alcohol consumption[xliii]. However, the motivation for medical versus recreational consumption are different. So of course, motives for patients' choices are likely different than those for recreational consumers.

For recreational consumption, the evidence remains mixed as studies have shown that cannabis can act as a substitute for beverage alcohol in certain contexts. For example, studies find that in some cases, particularly among the younger consumers, cannabis was a substitute and, therefore, led to a decrease in beverage alcohol consumption. Conversely, other studies suggest that cannabis and beverage alcohol may also be complements to one another, especially among certain demographic groups. For instance, university students and young adults often use both substances together[xliv].

However, other studies show that millennials are more inclined to use cannabis and to substitute cannabis for alcohol, driven by perceptions of cannabis being a healthier alternative[xlv]. From an income and education perspective, higher-income individuals and those with higher education levels are more likely to use both cannabis and alcohol in a complementary manner, integrating both into their social and recreational activities. In contrast, lower-income groups might exhibit more substitution effects, using cannabis as a cheaper or perceived healthier alternative to alcohol. Comprehensive literature reviews of academic studies show that where recreational cannabis has been legalized, some households showed increased alcohol purchases, while for others alcohol purchases decreased suggesting the existence of both substitute and complementary usage patterns[xlvi]. A very recent study found that sales of beer declined slightly when cannabis was legalized[xlvii]. However, these results are questionable and could easily be explained by beer consumers switching to other beverage alcohol[xlviii]. Another study that asked consumers about how they chose to moderate alcohol consumption indicated that 4% were switching to cannabis products[xlix].

Understanding the full relationship of cannabis consumption in relation to beverage alcohol consumption remains challenging for several reasons. First, due to the long history of the criminalization of cannabis use, previous studies from consumption perspectives were hampered by its illegal status and the data adversely influenced by the social desirability bias of survey

respondents making access to valid consumption data limited and problematic. Second, previous economic studies of cannabis consumption were hampered by the existence of black - and more recently illicit gray - market sales; a condition that still exists. Third, the growth of access to legalized and regulated cannabis sales has yet to plateau. This would suggest that consumption of cannabis, and its relationship with beverage alcohol, is still evolving and has yet to stabilize into a new social norm.

As the relationship between cannabis and beverage alcohol, whether it is substitutive or complementary, remains indeterminate, the pattern of sales of cannabis and related products within NSLC outlets is likely best explained as a function of two factors. First, new-consumer entry into legal markets and prior-consumer movement away from illicit markets. Second, the growth in availability of geographic access as cannabis products were introduced throughout NSLC outlets since 2018 (see Table 5).

Table 5. Cannabis Outlets in Nova Scotia

Year Outlet Opened	Number of NSLC outlets selling cannabis	Year over Year % Growth in Outlets
2018	9	-
2019	12	33%
2021	24	100%
2022	37	54%
2023	48	30%
2024	49	2%

Appendix C: Cider in Nova Scotia

The history of apple cider making dates back thousands of years, with its origins rooted in ancient civilizations. The earliest records of apple cultivation and cider production can be traced to the Celts in Europe around 55 BCE, who were known for their apple orchards and fermentation techniques. The Romans further refined cider making when they spread apple cultivation across their empire. By the Middle Ages, cider had become a popular beverage in Europe, especially in regions like Normandy and Brittany in France, and the West Country in England, where the climate and soil were ideal for apple growing.

The process of cider making was brought to the New World by European settlers, particularly those from England and France, who established apple orchards in North America. First cultivated by early French settlers as far back as 1633, apples have been grown in the Annapolis Valley for centuries. This region is recognized as Canada's (and possibly North America's) oldest apple-growing area. In colonial North America cider was a staple beverage, often safer to drink than water. The dyke system in the Annapolis Valley, established by the early French settlers, created nutrient-rich soils, and protected the land from the Bay of Fundy's saltwater flooding. By the 19th and early 20th centuries, Nova Scotia had emerged on the world stage as a preferred supplier of apples to Britain, thanks to its climatic and geographical advantages.

Cider making as a modern alcoholic beverage has seen a significant resurgence over the past few decades. In the 20th century, especially in the post-World War II era, cider production declined in many regions due to the rise of beer and wine consumption, changes in agricultural practices, and evolving consumer preferences. However, starting in the late 20th century and continuing into the 21st century, there has been a revival of interest in cider making and consumption. This modern resurgence began in the 1980s and 1990s, driven by a growing consumer demand for craft beverages and artisanal products. The cider movement gained momentum in the 2000s, with a renewed focus on traditional production methods, diverse apple varieties, and innovative flavor profiles. Today, cider is celebrated for its versatility, with craft cideries around the world experimenting with new techniques and ingredients, making it a dynamic and popular choice in the modern alcoholic beverage market.

The Cider Association of Nova Scotia represents nineteen producers who craft their ciders from 100% Nova Scotian fruits. By fermenting the juice of apples without any added fruit or botanical adjuncts, the result is ciders with flavors that range from dry to sweet, typically clean, crisp, and fruity with varying degrees of sweetness and acidity. Perry, a similar beverage, is made from fermented pear juice, with its flavors influenced by the pear varieties used and the fermentation process. Cider makers in Nova Scotia also produce cider blends, experimenting with a variety of fruits, berries, honey, hops, spices, and even wine and spirits, used to create a harmonious balance of flavors while maintaining the underlying cider character. Specialty ciders, which are less common, involve special techniques or production methods and include varieties such as rosé cider, pétillant naturel, low/zero alcohol cider, barrel-fermented or aged cider, traditional method cider, fortified cider, and ice cider. These diverse styles reflect the creativity and innovation ongoing in Nova Scotia's cider-making industry.

While there has been significant growth in cider making and cider-only producers in the province over the last two decades, as evidenced by sales within the NSLC, the nature of cider sales in the province has been complicated by category confusion and change. Cider has alternatively been a separate category on its own, or classified as an RTD. Alternatively, it becomes cross listed in another category (e.g. as an RTD) because its contents, for example vinis cider which is a mix of wine and cider producer positioned as a wine alternative. Cider production and consumption has plateaued in other regions and Nova Scotia is likely to follow this pattern.

Appendix D: Data Considerations

General

Data used in this study was compiled from several sources including stakeholders from across the sector, survey respondents, and various provincial government department and agencies. As was observed in the draft report, at times data from these sources failed to converge to a single solution. The variances were traced, and steps were taken to reconcile observed differences. However, while some of these differences were possible to reconcile after additional work (e.g., working with NSLC data analysts) other data sets still showed variance. Unreconcilable variance was determined to be a function of several issues including differences in data categorization, missing data and the required use of sample-to-population estimates, differences between retrospective self-reports compared to prior third-party records, and period differences between calendar and fiscal year reporting. Reviews have determined that these differences would not materially alter the results of this report.

Beverage Alcohol Data

Data used to describe the Nova Scotia Beverage Alcohol market was sourced from the Nova Scotia Liquor Corporation. Ongoing efforts were made to establish data validity and reconcile differences and errors contained within the first report draft. This meant close work with NSLC data analysts to clarify the data in terms of categories of beverage alcohol (e.g., farm wine versus IDB wines, craft versus commercial spirits, grape provenance etc.). For the final report, while NSLC staff reviewed and approved the summary presentations contained within to ensure they accurately represented the data as provided to the authors, errors or omissions in reporting are the sole responsibility of the report authors.

Other Data

The report also used data sourced from secondary practitioner and academic literatures. This data is cited accordingly.

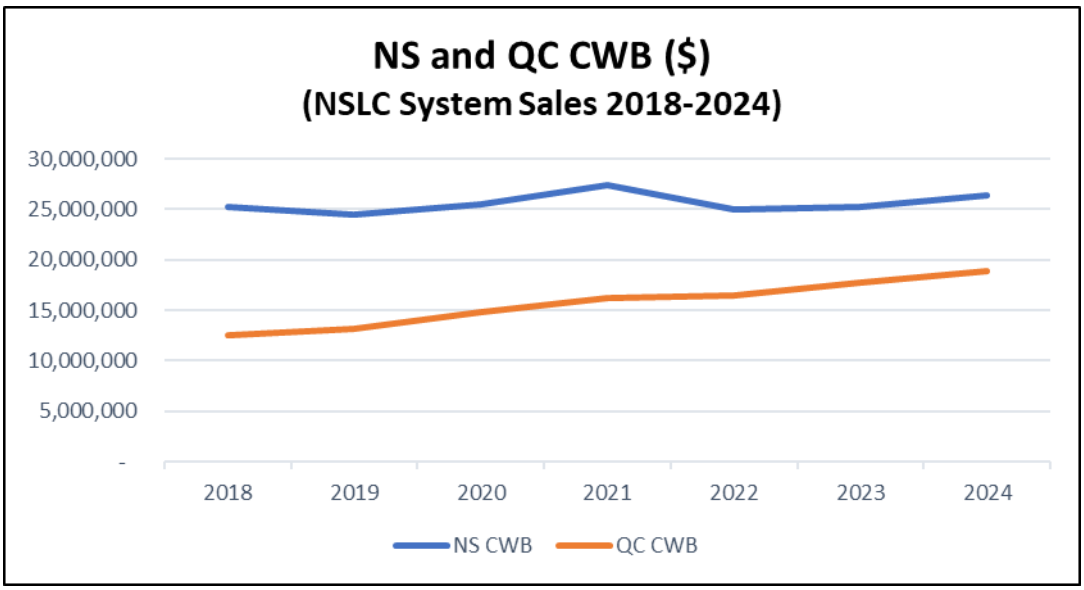
Feedback Response

The authors have attempted to incorporate all three-hundred and thirty-six observations concerning errors or omissions that were received on the draft report. Additionally, the authors have attempted to address the additional sixty-six questions communicated prior to the presentation of the report to both working groups. Though all the feedback provided informed the writing of this report, some of the feedback, while making valid observations or recommendations, was outside the scope of work for this study. It is hoped that these observations and recommendations will continue to be raised within the working groups on a go forward basis.

APPENDIX E: Nova Scotia and Quebec CWBs

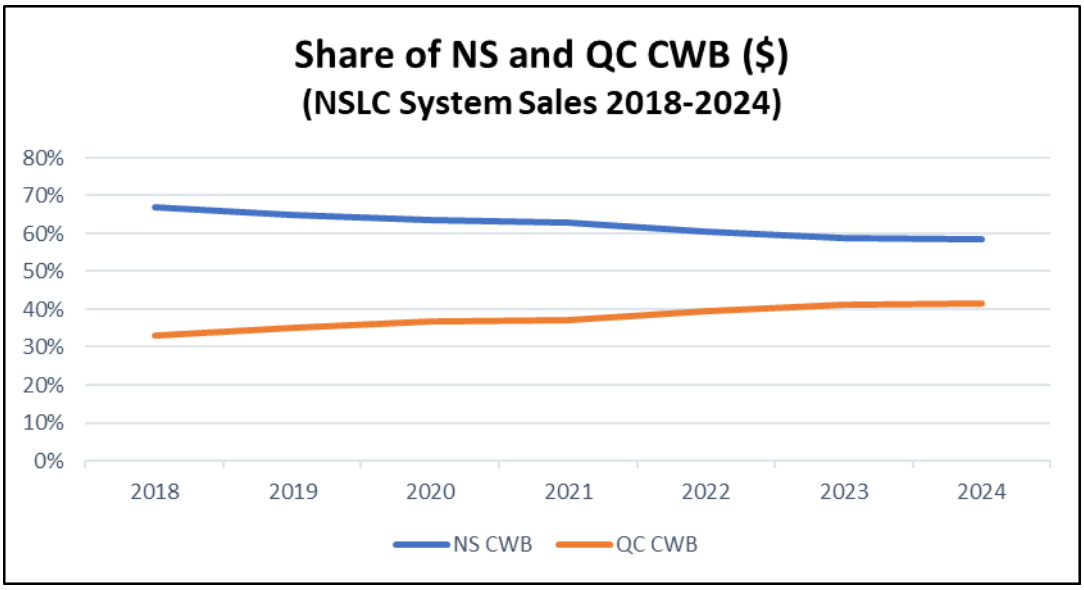
While outside the formal scope of work for this study, and superfluous to the determination of answers to the study's framing question(s), the Commercial Wine Bottlers desired recognition within this report for the competitive pressures they were facing from Commercial Wine Bottler operations located in Quebec. Consequently, the authors worked with NSLC personnel to capture the data necessary to determine the evolution of market dynamics between the two Nova Scotia CWBs and those competitive CWB located in the province of Quebec. Figures 21 through 24 graphically depict the competitive contrast in sales of products of the NS CWB versus QC CWB in the Nova Scotia beverage alcohol market for the period 2018-2024.

Figure 21. NSLC System Sales NS CWB versus QC CWB 2018-2024



Throughout the period, overall NSLC System sales of CWB produced wines recorded an increase of 20%. This increase was comprised of 5% and 51% for Nova Scotia and Quebec sourced wines respectively.

Figure 22. Share of Sales NS CWB versus QC CWB 2018-2024



Throughout the period, overall NSLC System sales of CWB produced wines show a shift in market share from NS CWB produced wines to QC CWB produced wines. NS CWB lost 9% share to QC CWB who gained share moving from 33% in 2018 to 42% by 2024.

Figure 23. Share of Sales NS CWB versus QC CWB 2018

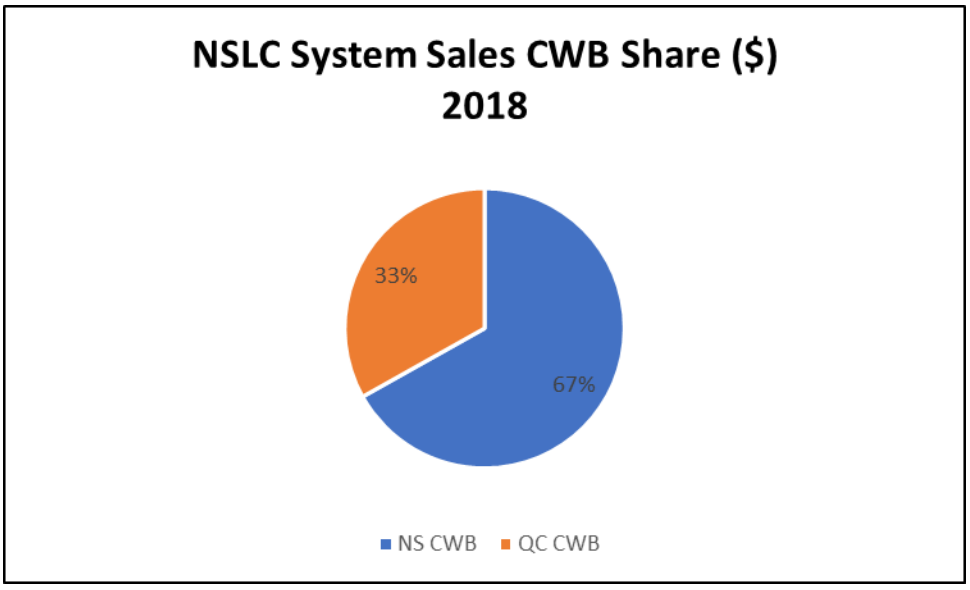
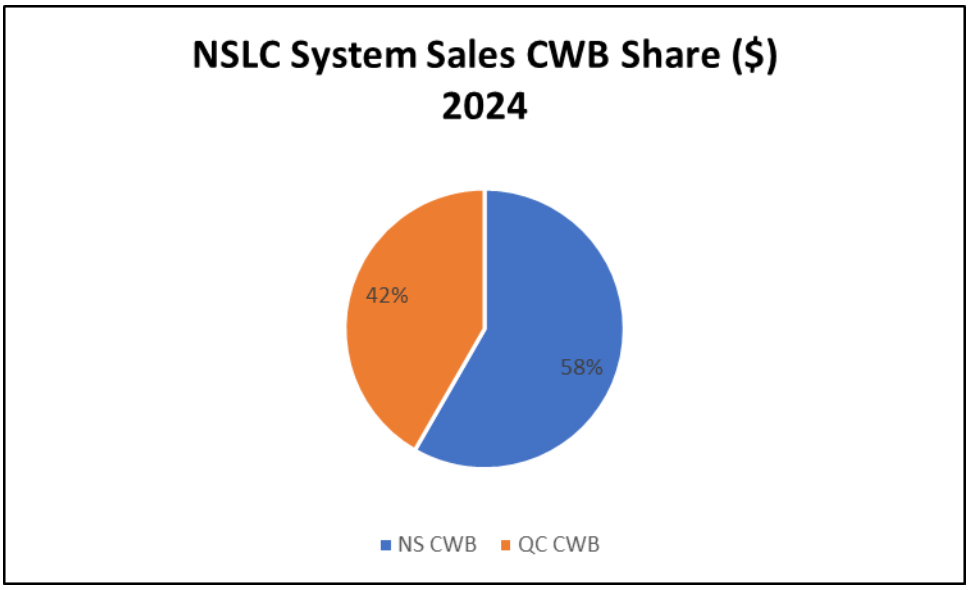


Figure 24. Share of Sales NS CWB versus QC CWB 2024



ENDNOTES

[i] Unlike neighbouring New Brunswick and Maine, there are no indigenous grapes in Nova Scotia.
[ii] The Canadian Encyclopedia (www.thecanadianencyclopedia.ca/en/article/prohibition)
[iii] Bishop, R. F., Craig, D. L., & MacEachern, C. R. (1970). Observations on the Performance of Grape Cultivars in Nova Scotia1. HortScience, 5(3), 154-156.
[iv] Dial, R. L. (1979). Perspectives on winegrowing in Nova Scotia: cold climate problems and potential [Viticulture, Canada]. Vinifera Wine Growers Journal, 6.
[v] Grape Growers Association of Nova Scotia (2009). Nova Scotia Wine Grape Production Guide. AgraPoint, Wines of Nova Scotia, NSCC Kingstec Campus, Nova Scotia Agriculture.
[vi] www.WinesofCanada.com
[vii] www.WinesofCanada.com
[viii] https://wideworldofwine.co/2018/05/18/canada-house/
[ix] Statista. Beer – Worldwide; Cider, Perry & Ricewine – Worldwide. Spirits – Worldwide; Wine – Worldwide.
[x] Politico (2023). Bordeaux bloodbath! France pays winemakers to dig up vines. Accessed from: https://www.politico.eu/article/bordeaux-wine-france-climate-change-uproot-vineyards/ on 06 August 2024.
[xi] Reuters (2024). Australian farmers rip out millions of vines amid wine glut. Accessed from: https://www.cnn.com/2024/03/09/business/australian-farmers-wine-glut-intl-hnk/index.html on 06 August 2024.
[xii] OIV. State of the World Vine and Wine Sector in 2023.
[xiii] Statista. Wine – Worldwide.
[xiv] Ruitenberg, R. (April 29, 2024). World wine consumption falls to 27-year low as inflation hits wallets. Decanter. https://www.decanter.com/wine-news/world-wine-consumption-falls-to-27-year-low-as-inflation-hits-wallets-528189/
[xv] Statista. Wine – Worldwide.
[xvi] Decanter Magazine, April 2024.
[xvii] Ruitenberg, R. (2023). White and rose now account for more than half of global consumption, OIV says, *Decanter*. Accessed from: https://www.decanter.com/wine-news/white-and-rose-now-account-for-more-than-half-of-global-consumption-oiv-says-518861/ on 05 August 2024
[xviii] OIV. Focus OIV 2023 Evolution of World Wine Production and Consumption by Colour.
[xix] 2024 BMO Wine Market Report
[xx] Theiwsr.com
[xxi] Statistics Canada. Alcohol and cannabis sales in Canada, April 2021 to March 2022.
[xxii] Statista.
[xxiii] NOTE: trends are calculated from sales data and should therefore be interpreted in light of price increases; the ration of sales to volume may vary from year to year.
[xxiv] Visit Napa Valley. https://www.visitnapavalley.com/about-us/research/
[xxv] Statista. Beer – Worldwide.
[xxvi] Statistics Canada. Market share by type of beverage and year 2004/2005 to 2021/2022.
[xxvii] Mason, J. (2023). Craft cider grows, while flavoured cider sales wane. The Drinks Business. https://www.thedrinksbusiness.com/2023/04/craft-cider-grows-while-flavoured-cider-sales-wane/
[xxviii] Statista. Cider dollar sales in Canada from FY 2012 to FY 2023 (in million Canadian dollars).
[xxix] NSLC. (2021). 6.1 Manufacturers and Permit Policy.
[xxx] Statistics Canada Population Estimate. Accessed from: https://www150.statcan.gc.ca/t1/tbl1/en/cv!recreate.action?pid=1710000501&selectedNodeIds=1

D4,3D23,3D101&checkedLevels=1D1&refPeriods=20230101,20230101&dimensionLayouts=layout2,layout2,layout3,layout2&vectorDisplay=false on 06 August 2024.

[xxxi] The LCBO ordered to do better on VQA market share at their stores. Accessed from: https://winesinniagara.com/2024/07/ontario-wine-industry-welcomes-suggested-changes-to-grow-market-share/ on 06 August 2024.

[xxxii] Statista. Wine Market in Canada.

[xxxiii] Economic Impact Analysis, Department of Finance and Treasury 25 June 2024. Board Economics and Statistics Division, p. 9

[xxxiv] Wine Australia, https://www.wineaustralia.com/

$40m in support for small producers in Argentina's grape & wine sector: https://www.iadb.org/en/news/argentina-aid-small-wine-producers-idb-support

[xxxv] "Uncork Ontario" Regional Wine Cluster Strategy (uncorkontario.ca)

https://www.wineaustralia.com/whats-happening/one-sector-plan

Australia Wine Authority https://www.agw.org.au/policy-and-issues/australian-grape-wine-strategic-plan/

[xxxvi] https://brocku.ca/ccovi/

https://www.wineaustralia.com/research_and_innovation/search

[xxxvii] https://vqaontario.ca/

https://bcvqa.ca/

[xxxviii] https://www.wineaustralia.com/

[xxxix] https://www.wineaustralia.com/selling

https://www.winegrowerscanada.ca/

[xl] Guttmannova, K. et al. (2016) 'Impacts of changing marijuana policies on alcohol use in the United States'. Alcoholism: Clinical and Experimental Research, 40 (1), pp. 33-46.

[xli] Armstrong, M.J. (2024), Personal Communication, 24 June.

[xlii] Armstrong, M. J. (2023). Relationships between sales of legal medical cannabis and alcohol in Canada. Health Policy, 128(Feb), 28–33.

[xliii] Lucas, P., Boyd, S., Milloy, M.-J., & Walsh, Z. (2020). Reductions in alcohol use following medical cannabis initiation: Results from a large cross-sectional survey of medical cannabis patients in Canada. International Journal of Drug Policy, 86, 102963.

[xliv] Gunn, R., Aston, E. and Metrik, J. (2022) 'Patterns of cannabis and alcohol co-use: Substitution versus complementary effects'. Alcohol Research: Current Reviews, 42 (1).

[xlv] Van Ours, J. and Williams, J. (2007) 'Cannabis prices and dynamics of cannabis use'. Journal of health economics, 26 (3), pp. 578-596.

Williams, J. and Bretteville-Jensen, A. (2014) 'Does liberalizing cannabis laws increase cannabis use?'. Journal of health economics, 36 20-32.

[xlvi] Calvert, C. and Erickson, D. (2021) 'Recreational cannabis legalization and alcohol purchasing: a difference-in-differences analysis'. Journal of cannabis research, 3 1-10.

[xlvii] Mital, S., Bishop, L., Bugden, S., Grootendorst, P., & Nguyen, H. (2024). Association between non-medical cannabis legalization and alcohol sales: Quasi-experimental evidence from Canada, Drug and Alcohol Dependence, Volume 257, 111137.

[xlviii] Armstrong, M.J. (2024), Personal Communication, 24 June.

[xlix] Statista. Wine Market in Canada 2023.