

Barriers to scale: the effect of regulations on entrepreneurial strategies in a nascent industry

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Abstract

Purpose – This paper aims to discuss the effect of Canada's regulatory framework on the strategies of entrepreneurial businesses during the first phase of legalization of the recreational cannabis industry. Decriminalization of cannabis required a host of regulatory changes at the federal, provincial and municipal levels. Each province developed legal markets independently, differentially impacting entrepreneurial strategies. This paper describes the value chain that emerged in the first phase of the nascent industry, focusing on the actions of the businesses.

Design/methodology/approach – The authors develop a qualitative narrative analysis using government publications, press articles (especially from the business press) and personal communications of industry insiders speaking in public settings. The paper includes four short case studies to illustrate the emerging value chain of the nascent industry.

Findings – The study's findings highlight the effect of regulatory frameworks on entrepreneurial strategies. We find that public policies had a significant impact on entrepreneurs and startup strategies. Inter-jurisdictional differences limited expansion into different provinces, with implications for regional economic development. Achieving public policy goals was delayed as a result of regulatory challenges that impacted industry development.

Practical implications – The authors' findings show enterprises may develop growth strategies that comply with regulations when participating in nascent industries, but they must cope with extra risks, capital costs and uncertainty. The analysis also illustrates the value of engaging in government-industry collaboration to improve emerging regulatory frameworks.

Originality/value – The originality of this research consists of the detailed description of the first phase of Canada's legalized recreational cannabis industry and the insight gained into the dynamics of nascent industries.

Keywords Uncertainty, Industry, Policy, Entrepreneurial opportunity

Paper type Research paper

1. Introduction

On October 17, 2018, the purchase and sale of recreational cannabis products became legal across Canada with the enactment of the Canadian *Cannabis Act*. The legalization of recreational cannabis was a direct result of policy directives by the Federal government to provide a path for consumers to purchase healthier cannabis products and to reduce the illicit black-market trade in illegal cannabis in Canada. Due to the difficulty of creating entrepreneurial strategies for a nascent industry when regulations are being developed, both policy outcomes had mixed results in the early stages of legalization.

The legalization of recreational cannabis in Canada provides an interesting case study of how government regulation and business strategies often co-emerge and influence each other. The process did not always go smoothly. The government regulations are complex due to Canada's constitutional separation of responsibilities between federal and provincial



governments, creating thirteen different versions of regulation for the distribution and retail sale of recreational cannabis. In addition to the regulations, provincial governments also differed in the manner and speed of implementation. The result is a comparative case study that will offer opportunities for academic inquiry and entrepreneurial insight for many years; in this paper, we use the example of the recreational cannabis industry to examine how government regulations affected different aspects of the business environment in nascent industries, and how provincial differences required entrepreneurs to develop different business strategies to comply with disparate regulations, with varying levels of success. We believe these are not only important in this case but also transferable to other industries.

The paper is organized as follows. In [Section 2](#), we begin with an overview of our research design and methodology and introduce the concept of coevolution of regulations and business strategies. [Section 3](#) provides background and overview of the purpose of legalizing recreational cannabis products in Canada and describes the early-stage Canadian recreational cannabis industry, the regulatory framework for recreational cannabis and how the industry and regulatory frameworks evolved. [Section 4](#) delineates the various provincial regulatory frameworks, discussing how they affected the development of the legal cannabis market in each province and how differences impacted entrepreneurial strategies. In [Section 5](#), we describe the component parts of the industry's supply chain, describing how each was impacted by regulations. In [Section 6](#), we provide four short case studies to illustrate the strategic perspectives of firms from several vantage points within the industry supply chain. The case studies explore the interactions between entrepreneurial strategies and government regulations in the industry, illustrating both the constraints companies experienced and the creativity they deployed to build successful businesses. We conclude in [Section 7](#) with an overview of our findings of the negative impact of provincial bottlenecks and constraints on the success of companies, the need for change in regulations and implementation and the transferable lessons learned from this case that might apply to other nascent industries. We also raise questions for future research.

2. Methodology

Following the legalization of adult-use recreational cannabis sales in Canada, the academic community saw a surge in interest. However, the academic literature on the emerging industry was scant. To analyse the interaction between emerging policy and markets, we conducted a mixed-methods approach combining qualitative content analysis of academic and other literature and analysis of StatsCan data to investigate the development of the nascent market for recreational cannabis in Canada. We conducted a content analysis of public discourse, incorporating grey literature, news reports and insights from industry stakeholders gleaned from unstructured interviews with them.

Despite limited literature, various research forums, articles and courses have emerged to explore the regulatory process, most of it stemming from public policy, law and public health disciplines. A special issue of *Canadian Public Administration* in 2019 covered topics such as excise taxes ([Bird et al., 2019](#)), provincial policy variations ([Train and Snow, 2019](#)), policy development shifts ([Wesley and Salomons, 2019](#)), regulatory transformation ([Wesley, 2019](#)) and optimal pricing ([Childs and Stevens, 2019](#)). This emerging literature resonated across various disciplines, including public health ([Haines-Saah et al., 2019](#); [Watson et al., 2019](#); [Myran et al., 2023a, b](#)), law ([Habibi and Hoffman, 2017](#); [Koutouki and Lofts, 2018](#)) and interdisciplinary studies. Notably, Potter and Weinstock's edited volume *High Time: The Legalization and Regulation of Cannabis in Canada* (2019) offered insights from practitioners and scholars. Additionally, a 2021 special issue of the *Journal of Canadian Studies* delved into the industry's sociological and legal dimensions.

Yet, while there has been robust development of scholarly literature in these disciplines, the same cannot be said for entrepreneurship and management sciences. We found surprisingly little research from the perspective of business, in striking contrast to the extensive and insightful publications of public health, political science and legal researchers. In order to get a sense of the research landscape, we systematically searched business databases for peer-reviewed articles related to cannabis in Canada. We employed standardized search terms in several bibliographic databases (EBSCO Business Source Premier, ABI Business Premier Collection). The ABI Business Premier Collection yielded 36 relevant articles after filtering for peer-reviewed content, while EBSCO Business Source Premier provided 15 articles focused on business aspects since 2017. However, upon closer examination, these articles primarily addressed legal, taxation and accounting issues rather than strategy, business model development or entrepreneurship. Overall, the available literature on cannabis-related business in Canada was limited.

Therefore, we turned to other sources to understand the development and dynamics of this industry. Our methodology involved engaging with knowledgeable stakeholders, reviewing grey literature from conferences and other sources and examining media coverage. Using a mix of standardized search terms, we reviewed the major Canadian business press and news outlets to develop a database of articles related to the nascent industry. We then performed content analysis on those articles, coding them into major themes that formed the basis for understanding industry dynamics. We identified several promising outlets for further research in the form of qualitative interviews with industry stakeholders, and we invited industry professionals into courses designed to explore entrepreneurial strategy in new industries. We found those interactions valuable and followed up with those individuals to develop several in-depth case studies. The case studies were initially developed from conversations with industry professionals about their experiences in the emerging industry, we conducted unstructured interviews with them, triangulated and validated their observations with other data from StatsCan and popular media and developed short cases, four of which are presented in this study. In developing the cases we integrated the perspectives of these sources to create portraits (Lawrence-Lightfoot and Davis, 2002) aiming to shed light on the dynamics of the recreational cannabis market and provincial regulation, illustrating a co-evolutionary process of market development.

At the same time, we also engaged in a systematic analysis of available data from Statistics Canada to plot the overall development of the nascent recreational cannabis industry, and we systematically analysed the national and provincial legislation that created and shaped the legal cannabis market. Those data are presented in the present study and form the foundation for our understanding of the initial phases of the emerging industry. We explored the geographic differences in provincial approaches to regulation in an earlier study (de Koning and McArdle, 2021) here, we evaluated that data to determine the effects of implementing those regulatory frameworks on various components of the industry supply chain. We posit that viewing these data through a coevolution lens yielded interesting perspectives and that this mixed methodology contributes to and extends existing theories of coevolution in the context of emerging industries, particularly in the cannabis sector.

2.1 Coevolution as a research frame

Coevolution, originally rooted in natural sciences, describes the simultaneous adaptation of entities and their environment (Ehrlich and Raven, 1964). As one entity evolves, the other adjusts, creating interdependencies. This mutual evolution illustrates how changes in one entity prompt responses in another. Applied to management sciences, coevolution theory explains the evolving relationship between companies and their environments (McKelvey, 2002; Pacheco *et al.*, 2014). While extensively used in various industries (Haveman and Rao,

1997; Lampel and Shamsie, 2003; Volberda and Lewin, 2003), its application to the legalized cannabis industry remains limited. Nicholas *et al.* (2021) explored business strategy development in Colorado's recreational cannabis market, focusing on regulatory differences. In a previous study, we (2021) examined the coevolution of the Canadian cannabis industry across provinces, considering regulatory impacts on market dynamics.

This paper examines how emerging regulations across jurisdictions impact business strategies in the cannabis supply chain and the broader industry. A coevolutionary lens illustrates how regulatory barriers often spur entrepreneurial innovation as firms develop strategies to navigate them. In Alberta, licensed producers (LPs) capitalized on their ability to sell to the provincial wholesaler, AGLC, by facilitating access for craft producers. In Saskatchewan, unique transportation regulations prompted an Ontario firm to create a third-party compliant delivery service for retail stores, with the potential to scale to other provinces as regulations evolve. These examples highlight how regulatory constraints foster creative solutions. As successful strategies emerge, regulations are likely to evolve as provinces learn from each other, prompting entrepreneurs to adapt and scale their approaches nationwide.

3. Background and overview

3.1 Purpose of legalizing recreational cannabis products in Canada

In Canada, the regulation of cannabis follows a familiar pattern. Like alcohol, cannabis was legal and largely unrestricted when the nation of Canada was formed through confederation in 1867. Cannabis was prohibited in 1923 under the Opium and Narcotic Drug Act (Hewitt, 2004). Several iterations of regulation occurred between 1923 and 2000, when the Canadian Supreme Court recognized medical cannabis use as a constitutionally protected right, leading to the development of regulations (Parker, 2000). This paved the way for the modern cannabis market, characterized by the emergence of LPs and evolving regulations. By 2018, recreational cannabis use became legal nationwide, marking a significant shift after 77 years of prohibition and 18 years of strict regulation. This evolving regulatory landscape reflects changing societal attitudes and individual rights in Canada.

3.1.1 Recreational or medical: two-path regulatory model based on classification of use.

Canadian regulation of cannabis production, sale, possession and use is different depending on how the use is classified. Legal use can either be medical, legalized in 2001, or recreational, legalized in 2018 (Rohr, 2021). Regulation of medical cannabis is exclusively the jurisdiction of the federal government (Cannabis Act, 2018, p. 158). Medical use of cannabis is regulated by Health Canada (Wadsworth *et al.*, 2020). Initially, the regulations only allowed individuals to grow their own cannabis; they were expanded in 2013 to allow for the development of a legal manufacturing industry and businesses stepped in (Bandosz and Wilczek, 2021).

Under the pre-2018 regulatory framework, legal medical cannabis production was limited to LPs authorized by the federal government and registered in a public database maintained by Health Canada (Canada, 2016). The sale of cannabis products was direct from LP to the consumer, delivered via Canada Post (Canada, 2016). While licensed medical professionals are permitted to advertise their services and prescribe cannabis products, there are strict prohibitions on advertising placed on LPs and retail stores (Cannabis Act, 2018). Despite the legalization of recreational cannabis in Canada, the regulatory framework for medical cannabis has been intentionally maintained at the federal level (Canada, 2016).

3.1.2 Three-level framework for government regulation of the adult-use recreational cannabis market.

In contrast to the federally controlled and regulated medical cannabis market, regulation of the Canadian recreational cannabis market is operationalized at three levels – Federal, Provincial and Municipal. In Canada, the Constitution Act of 1867 delineates the powers of government within a federalist framework (Field, 1992). Section 91 of the Constitution Act (1982) provides that the federal government has jurisdiction over the

regulation of trade and commerce, while §92 of the act establishes jurisdiction over property and civil rights in the provinces. That jurisdiction has been construed to extend over the regulation of matters of contract (Hogg, 2007). Municipal powers are delegated from provincial governments and generally include jurisdiction over local land use, zoning and licensing issues.

The *Cannabis Act* established the legal framework for the sale of adult-use recreational cannabis products throughout Canada (Potter and Weinstock, 2019). Much of the regulation of the adult-use recreational cannabis market (including control over production, product tracking and advertising) builds on the medical cannabis foundation, as the regulatory infrastructure already existed. Notably, the *Cannabis Act* was largely silent as to justice concerns related to indigenous peoples and communities or restorative justice for individuals with criminal records (Owusu-Bempah, 2021), freezing those with criminal records out of the legal market. Each province or territory has the authority to regulate retail sales, some of which have been delegated to municipal governments. Some communities opted to prohibit cannabis stores (Hall, 2019). Table 1 details the nature and scope of regulatory control exercised at each level of government.

Each provincial or territorial government has approached the regulation of the adult-use recreational cannabis market within its borders differently. Some employ a government-operated model, others have established a private market model, and some have taken a hybrid approach, blending the two. As a result, what has emerged within the regulatory framework has been a collection of separately organized early-stage provincial or sub-national, markets employing different approaches to market regulation within an industry emerging from a prohibition-focused regime into a regulation-focused regime. It is one of the only contemporary examples of a newly emerging market within a mature and developed economic system where wide regulatory disparity among sub-markets might exist.

3.2 Early-stage Canadian cannabis market

Since the enactment of the *Cannabis Act* in 2018, cannabis has been big business in Canada. Our focus in this paper is on the first phase of legalization (approximately October 2018 until the end of the first quarter of 2020, the “early stage”), with some discussion in this section of how the market matured into 2023.

The policy goals of legalizing recreational cannabis products were to alleviate health and safety concerns related to consumers purchasing unregulated products and to reduce the illicit black market’s grip on the industry. According to Statistics Canada, in 2017 (the year prior to legalization of recreational cannabis) Canadians consumed an estimated 773

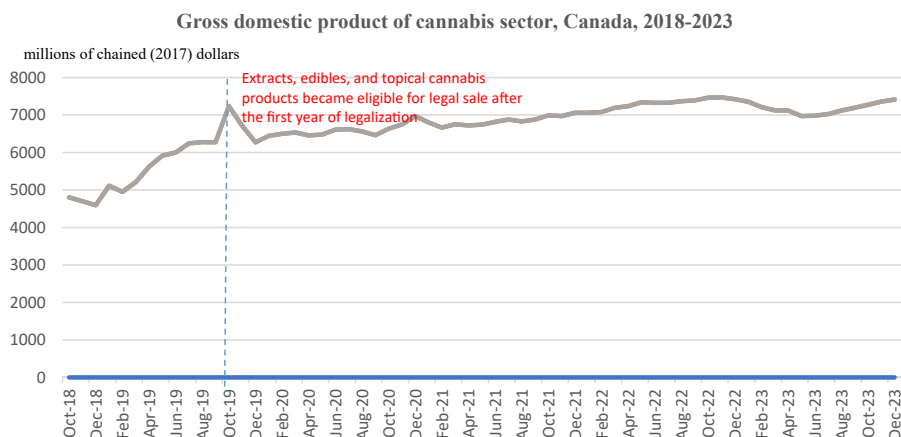
Table 1.
First phase of market
operations: division of
regulatory roles and
responsibilities

Activity	Federal	Provincial	Municipal
Possession Limits	X		
Trafficking	X		
Advertising and Packaging	X		
Medical Cannabis	X		
Seed-to-sale tracking system	X		
Production (cultivation and processing)	X		
Distribution and Wholesale		X	
Retail Sales Model		X	
Retail Locations and Rules		X	X
Regulatory Compliance	X	X	
Land Use/Zoning		X	X
Taxation	X	X	X

metric tons of cannabis, with licensed, legal cannabis accounting for 56.5 tons (7.0%) of that total (Irigoyen, 2019). In 2018, over 5 million Canadians reported using cannabis products, with over 2 million using cannabis at least once a week (Statistics Canada, 2021c). Notably, by the close of the first year of legalization, only 28% of Canadian cannabis users (1.4 million Canadians) reported obtaining all of their cannabis from a legal source (Statistics Canada, 2019a). Those figures suggest that there was substantial room for growth as the percentage of new first-time users grew or consumers of illegal products converted to making legal purchases. The number of consumers also grew in the initial phase of legalization, according to combined data collected during the second and third quarters of 2019, there were 578,000 new users of recreational cannabis, representing approximately 10% of the total current consumer market (Statistics Canada, 2019a); 26.8% of 2019 cannabis revenue was generated in the 25 to 34 age bracket (McGrath, 2022). In the first 12 months of operation, the legal cannabis market generated \$907 million in retail sales (George-Cosh, 2019). At the end of 2019, the market was expanded to include edible products, extracts and topical products (McGrath, 2022). Figure 1 depicts the total gross domestic product of the Canadian cannabis sector.

The data in Figure 1 are sourced from Statistics Canada and include measures of GDP contribution from both the legal and illegal sectors (Statistics Canada, 2024b). The industry represents 0.5% of the Canadian national economy (Statistics Canada, 2024a). The data suggest a rapid period of growth relative to GDP as the industry to support a legal market began to scale over the first year, then a sustained period of slower growth during 2023 as the market reached a point of maturity.

As the market moved out of phase one, Canadian consumers purchased \$2.9 billion of legal recreational cannabis in 2020 and an estimated \$6 billion in the legal and illegal market combined (Statistics Canada, 2024a). One of the policy goals for legalization was to move consumer purchases from the illegal to the legal market, but regulatory bottlenecks hampered business development in the legal market (de Koning and McArdle, 2021). As noted in greater detail in Section 3.3, although the industry grew during that timeframe, it took the better part of two years for that shift to occur (Statistics Canada, 2024a).



Note(s): The dotted line refers to an imported change to the Cannabis Act, initiated on October 17, 2019, which made extracts, edibles, and topicals cannabis products eligible for legal sale

Figure 1.
Gross domestic
product of cannabis
sector, Canada,
2018–2023

In this analysis, we organize our review of the Canadian cannabis industry into four components: LPs, wholesale distributors, retail sales outlets and related or ancillary businesses. As the majority of end-user consumer purchases of recreational cannabis were made through retail stores, data on the total sales of retail stores from 2018 to 2022 provides insights into the market. Those data are presented in [Figure 2](#).

[Figure 2](#) illustrates that retail sales of legal cannabis began to grow during the second half of 2019 and moved toward maturity in 2020. As discussed in more detail in [Sections 3.2](#) and [3.3](#) and illustrated by [Figure 4](#) in [Section 3.2](#), this is likely due to a slow start to the regulatory approval process of retail stores during the first phase of legalization, as well as difficulties related to estimating wholesale production requirements.

The Canadian cannabis production industry is segmented across five major product categories: adult-use flowers, adult-use oils, other (edibles, vapes), medical oils or medical flowers. From October 2018 to 2019, only flower and oil sales were legal, edible cannabis products were legalized at the close of 2019 ([Irigoyen, 2019](#)). As [Figure 3](#) illustrates, the majority of cannabis products consumed in Canada are flowers and oils.

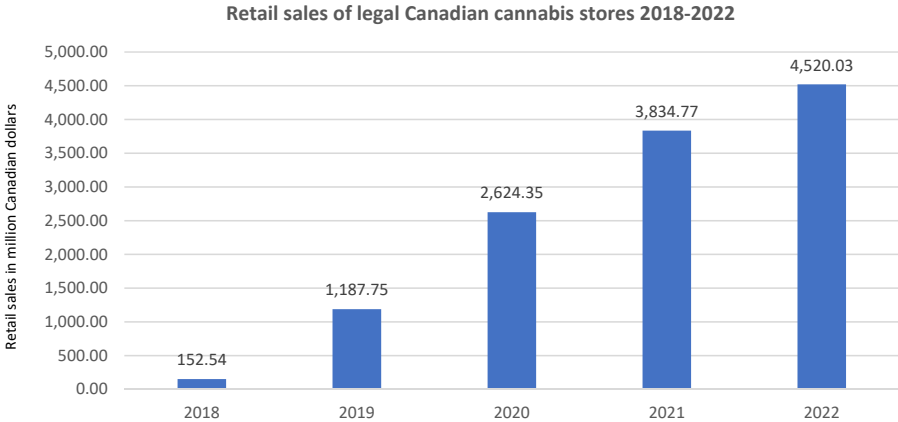
[Figure 3](#) illustrates that as the legal market began to scale after the initial phase of legalization, consumption of flower and oil products grew in a relatively stable pattern consistent with that growth, while sales related to the other categories (edibles and vapes) grew more rapidly. This might suggest a shift in consumer tastes and preferences, as well as the adoption of product innovation within the industry.

3.3 Export and market limitations

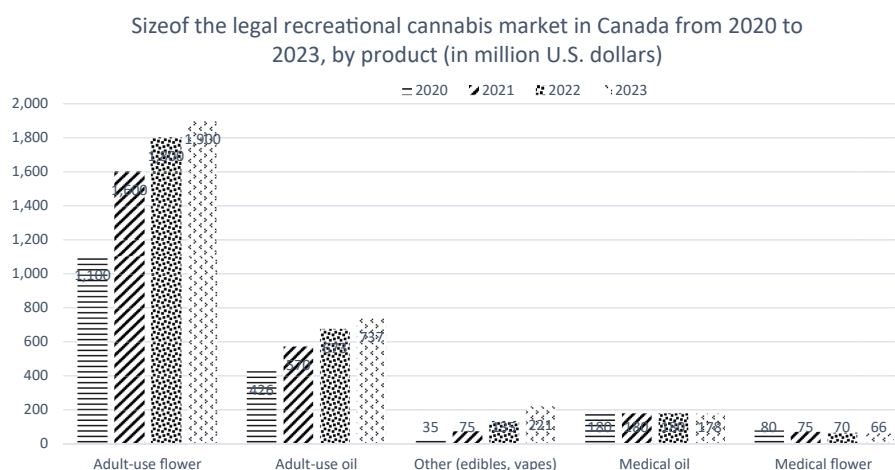
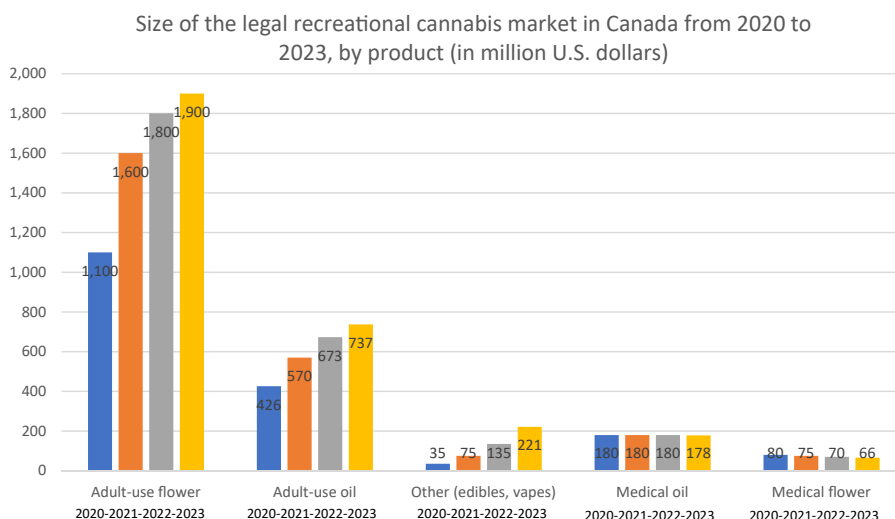
On the product side, the Canadian cannabis industry primarily caters to a domestic market, due to significant restrictions on exports due to the operation of international law ([Fandl, 2021](#)). Should those treaties be renegotiated, Canada’s LPs are positioned to have a significant first-mover advantage on the world export market; they in fact already exported products to Germany, South America and other markets for medical or research purposes ([Hawryluk, 2019](#)). However, they were unable to export recreational cannabis products across country borders. As more nations move toward legalizing cannabis use, it is possible that treaties and trade agreements limiting exports will be renegotiated, opening that market.

Export limitations place significant restrictions on the ability of LP firms to capitalize on research and development innovation, for example, by export domestically produced

Figure 2.
Retail sales of legal
Canadian cannabis
stores 2018–2022



Source(s): Statistics Canada



Source(s): Statista, Prohibition Partners

Figure 3.
Size of the legal
recreational cannabis
market in Canada from
2020 to 2023, by
product (in million US
dollars)

products to satisfy potential external market demand (Subramaniam, 2019a). These restrictions were largely a result of the history of cannabis regulation within Canada, as the nation is a signatory to several drug treaty regimes (Fandl, 2021; Bandosz and Wilczek, 2021). Yet, the value of Canadian firms' intellectual property is significant. While constrained by treaty obligations regarding the export of recreational cannabis products, Canadian LPs are devising internationalization strategies. Some have invested in offshore production or established domestic operations in jurisdictions where cannabis laws are evolving, leveraging their expertise and intellectual property without violating export restrictions (Kearney, 2017). However, barriers persist, particularly in the North American market due to US federal regulations banning recreational cannabis. Although Canadian firms can export to the US medical and research sectors, restrictions hinder broader market access (Cox, 2021). The North American market is not limited to the USA. In June 2021, the Supreme Court of

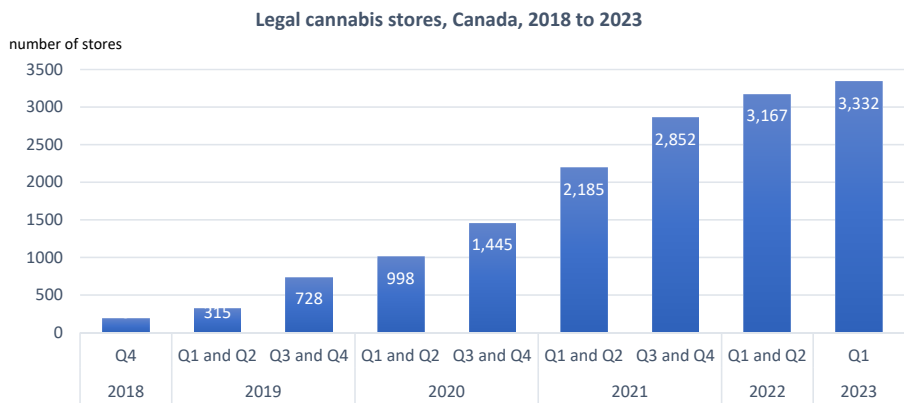


Figure 4.
Legal cannabis stores,
Canada, 2018 to 2023

Notes(s): Counts are subject to multiple revisions and may include e-commerce only entities. Q3 and Q4 2022 estimates are not available

Source(s): Statistics Canada, Business Register

Mexico held that the county’s ban on recreational cannabis cultivation and use was unconstitutional and regulations to establish a legal market by the Mexican legislature are under development (Camberos-Barraza *et al.*, 2023). As a result, there is speculation that regulations to export cannabis across North America will be part of future treaty negotiations (George-Cosh, 2021a). Should treaty regimes be modified, the ruling may open the door for Canada’s LPs to have a robust North American export market. For now, LPs primarily focus on the domestic market, tailoring entrepreneurial strategies and operations to forecasted opportunities within Canada’s domestic market.

In addition to export limitations, scaling entrepreneurial strategies in the adult-use recreational cannabis market proved to be challenging, as firms seeking to enter the industry needed to contend with wide regional differences across Canada’s 13 provinces and territories. These are discussed in greater detail below.

4. Provincial regulatory framework for cannabis products in Canada

While the Federal Cannabis Act created the legal market for cannabis, Canada’s constitutional system of federalism provides that each of the 13 provinces and territories has substantial responsibility for the regulation of the market. Aspects that fall under provincial jurisdiction include organizing the wholesale market, authorizing and licensing retail sales, setting the minimum age for legal purchase and use and controlling the distribution of cannabis products within their respective jurisdictions (Cannabis Act, 2018). In addition, municipal governments exercise regulatory control over the market via land use, zoning and business license requirements.

4.1 Overview of provincial regulatory frameworks

The implementation of regulation and emergence of provincial and territorial markets have unfolded very differently depending on the degree of participation each provincial government chose to undertake within the market.

Provinces had a mandate to be open nationwide in October 2018 and developed their regulations simultaneously with each other and the federal government’s own legislation. In each case, provinces had to determine (1) whether to play an active role in the market beyond

serving as a regulator, (2) whether to allow brick-and-mortar retail sales, (3) what the minimum age to purchase or consume cannabis products should be and (4) whether to allow in-home cultivation of cannabis plants. The legislative process mirrored the socio-political makeup of each province, but because Canada was the first country with a federalist system of government to legalize cannabis, those efforts were not informed by the examples of other nations.

Unlike the development of state-level markets in the US context, the development of Canadian markets was not hindered by considerations about how to operationalize banking or payment systems or whether capital could be raised via equity markets or through traditional bank loans (Baker, 2020). Therefore, the policy-making process could centre on concerns regarding seed tracking, regulating production, advertising and public safety at the federal level; and on the governance of the wholesale, retail and ancillary markets at the provincial level.

There are three regulatory models in operation for the recreational cannabis market in Canada: a government-operated model (Quebec, Nova Scotia, New Brunswick, Prince Edward Island, Northwest Territories), where the government is the sole supplier of recreational cannabis products; a private market model (Saskatchewan), where the government has taken the role of a regulator, but not as a market participant; and a hybrid approach (British Columbia, Alberta, Manitoba, Ontario, Newfoundland, Yukon, Nunavut), where the two models are blended and where the government takes control of and participates in some aspect of the market. Table 2 details the regulatory models by province:

As Table 2 demonstrates, the provincial approaches to regulation were somewhat regional in nature. The system in western Canada largely mirrored the regulatory system for alcohol sales, approving relatively large numbers of retail licenses. Ontario had a model similar to Alberta but strictly regulated the number of licenses issued, as did Newfoundland and Labrador (Somos, 2019). Quebec and the Maritimes largely had tight government market

	Wholesale	Brick and mortar retail	Online retail	Minimum age	Grow your own
British Columbia	Government	Hybrid (Government and Private)	Government	19	4 plants
Alberta	Government	Private	Government	18	4 plants
Saskatchewan	Private	Private	Private	19	4 plants
Manitoba	Government	Private	Private	19	Not Permitted
Ontario	Government	Private	Government	19	4 Plants
Quebec	Government	Government	Government	18	Not permitted
New Brunswick	Government	Government	Government	19	4 plants
Nova Scotia	Government	Government	Government	19	4 plants
P.E.I.	Government	Government	Government	19	4 plants
Newfoundland and Labrador	Government	Private	Government	19	4 plants
Yukon	Government	Hybrid (Government and Private)	Government	19	4 plants
NWT	Government	Government	Government	19	4 plants
Nunavut	Government	Hybrid (Government and Private)	Hybrid (Government and Private)	19	No restriction

Source(s): Provincial legislation

Table 2.
First phase of market
operations: regulatory
framework by province

control and the government was the sole supplier of recreational cannabis products to consumers. The territories had a mixed approach to regulatory frameworks, with the Northwest Territories resembling the approach favoured in the Maritimes, while Nunavut and Yukon mirrored the regulatory framework adopted by British Columbia.

4.2 Effects of regulation on overall provincial market sales

The choices that governments make in constructing structures to govern a new industry and regulate its activities and market have a significant impact on the overall shape and development of that industry. Governments choose particular regulatory schemes and these regulations in turn frame the way firms identify and assess business opportunities and how they conceptualize and develop entrepreneurial strategy. Regulatory frameworks in existing industries provide a stable and predictable landscape that new firms encounter; those firms develop strategies for intersecting with the industry conscious of the regulatory landscape. Established regulations both mirror and shape customary usage and practice within an industry and set the norms for activity within them. In mature industries, private firms have the ability to influence the evolution of regulations through lobbying, industry associations and other established business-government networks. In new industries and markets, the creation of both nascent regulatory frameworks and nascent business strategies often occurs simultaneously and those efforts typically do not have the benefit of prior industry knowledge, experience or a predictable sense of the market. In addition, the relationship ties between industry and government are often not developed. That was certainly the case in the Canadian cannabis market, where a mature government – business – stakeholder ecosystem did not exist.

As a result of the simultaneous development of enabling legislation and regulations for the recreational cannabis industry, provincial markets across Canada faced significant delays in opening for business. In particular, the development of a robust wholesale supply chain, the creation of a system for the approval and issuance of retail store licenses and the development of clear and market-oriented regulations for ancillary businesses impacted the ability of the industry to fully unfold in the first phase of operation. Significant ambiguities, such as the timing of regulatory approvals, whether finished goods would be available to be supplied to and sold through provincial wholesalers and a fragmented patchwork of municipal zoning regulations and business license approvals all had negative consequences for the market.

This section illustrates the impact of regulation on the initial market in three tables. [Table 3](#) details the number of brick-and-mortar retail outlets on a provincial level and references the provincial population at the same time. [Table 4](#) organizes sales data from the first year of market operations by province and calculates each province's percentage of overall market share. [Table 5](#) illustrates the growth in the retail store ecosystem from December 2019 to April 2020. [Figure 4](#) details the growth in retail stores from October 2018 until March 2023, when the industry was more mature.

There were 535 brick-and-mortar retail recreational cannabis stores across Canada in December 2019. The uneven distribution of retail stores illustrates the impact of provincial regulation on the market. Alberta, Saskatchewan and Manitoba were provinces which chose a less restrictive regulatory approach to issuing retail licenses, resulting in a higher ratio of retail outlets to population. As a result, the market was relatively well-served in its initial stages. By comparison, both Ontario and Quebec deliberately restricted the issuance of licenses and the number of retail stores, resulting in a low ratio of retail stores to population, indicative of underserving potential consumer demand. Geographic considerations also impacted the development of markets. The Maritimes have smaller overall populations that are highly concentrated within small city metropolitan areas and they chose to operate government-run retail stores ([Bissett, 2019](#)). Comparatively, the Prairie provinces have

	Population (Q3 2019 est.)	Number of brick and mortar retail outlets (Dec 2019)	Population per retail outlet	Provincial percentage of national population	Provincial percentage of retail outlets
British Columbia	5,071,336	91	88,971	13.5%	17.0%
Alberta	4,371,316	255	24,837	11.6%	47.7%
Saskatchewan	1,174,462	37	33,556	3.1%	6.9%
Manitoba	1,369,465	27	59,542	3.6%	5.0%
Ontario	14,566,547	18	606,939	38.8%	3.4%
Quebec	8,484,965	34	471,387	22.6%	6.4%
New Brunswick	776,827	21	36,992	2.1%	3.9%
Nova scotia	971,395	13	74,723	2.6%	2.4%
P.E.I.	156,947	5	39,237	0.4%	0.9%
Newfoundland and Labrador	521,542	25	20,059	1.4%	4.7%
Yukon	40,854	3	10,214	0.1%	0.6%
NWT	44,826	6	7,471	0.1%	1.1%
Nunavut	38,780	–	–	0.1%	0.0%
Total	37,589,262	535	92,357	100%	100%

Source(s): Statistics Canada

Table 3.
First phase of market
operations: population,
number of retail
outlets, sales data and
percentage of market
share by province as of
Q4 2019

	Population (Q3 2019 est.)	Number of brick and mortar retail outlets (Dec 2019)	B&M sales (\$) Oct 2018– Sep 2019	Sales per capita (\$)	Sales per retail outlet (\$)	Provincial percentage of market share
British Columbia	5,071,336	91	49,659,000	10	545,703	5.5%
Alberta	4,371,316	255	195,740,000	45	767,608	21.6%
Saskatchewan	1,174,462	37	38,165,000	32	1,031,486	4.2%
Manitoba	1,369,465	27	56,103,000	41	2,077,889	6.2%
Ontario	14,566,547	18	216,807,000	15	12,044,833	23.9%
Quebec	8,484,965	34	194,865,000	23	5,731,324	21.5%
New Brunswick	776,827	21	37,905,000	49	1,805,000	4.2%
Nova Scotia	971,395	13	65,805,000	68	5,061,923	7.3%
P.E.I.	156,947	5	15,216,000	97	3,043,200	1.7%
Newfoundland and Labrador	521,542	25	30,615,000	59	1,224,600	3.4%
Yukon	40,854	3	4,216,000	103	1,405,533	0.5%
NWT	44,826	6	2,737,000	61	456,167	0.3%
Nunavut	38,780	–	–	0	–	–
Total	37,589,262	535	907,833,000	24	1,696,884	100%

Source(s): Statistics Canada

Table 4.
First phase of market
operations: number of
retail outlets by
population, sales data
and percentage of
market share by
province

relatively larger populations distributed across a significantly larger land area and they chose to develop a private retail store network. A larger number of retail store operations, particularly in Alberta, reflect both the realities of provincial geography as well as a more pro-private enterprise mindset.

As the data presented in [Table 4](#) suggest, the relatively diffuse nature of Alberta's brick-and-mortar retail store network served the market fairly well in phase one, as per-capita and total sales in Alberta were quite high relative to other provinces. Per-capita

Table 5.
First phase of market
operations: growth in
retail store ecosystem:
December 2019–
April 2020

	Population (Q3 2019 est.)	Number of brick and mortar retail (Dec 2019)	Provincial percentage of market share (December 2019)	Number of brick and mortar retail (April 2020)	Provincial percentage of brick and mortar retail (April 2020)
British Columbia	5,071,336	91	5.5%	177	20.8%
Alberta	4,371,316	255	21.6%	436	51.4%
Saskatchewan	1,174,462	37	4.2%	42	4.9%
Manitoba	1,369,465	27	6.2%	30	3.5%
Ontario	14,566,547	18	23.9%	52	6.1%
Quebec	8,484,965	34	21.5%	41	4.8%
New Brunswick	776,827	21	4.2%	20	2.4%
Nova scotia	971,395	13	7.2%	12	1.4%
P.E.I.	156,947	5	1.7%	4	0.5%
Newfoundland and Labrador	521,542	25	3.4%	25	2.9%
Yukon	40,854	3	0.5%	5	0.6%
NWT	44,826	6	0.3%	5	0.6%
Nunavut	38,780	–	–	0	0.0%
Total	37,589,262	535	100%	849	100%

Source(s): Statistics Canada

data from Saskatchewan and Manitoba suggest that their local markets were also relatively well-served. Ontario and Quebec have higher overall sales numbers, yet their per capita sales are quite low; this likely reflects an undersupply of retail outlets and inadequate distribution of those outlets through both provinces. Per capita numbers are quite high in the Maritimes, Newfoundland and the territories, reflecting the unique characteristics (relatively small populations, a relatively large number of stores related to population and a government monopoly on all sales) of these relatively small regional markets. In British Columbia, both total sales and per capita sales numbers suggest that the legal market was underserved by the number of retail outlets. Further, the development of those markets lagged in the first year of operations and the existence of a well-established black- and grey-market for recreational cannabis likely delayed the conversion rate of customers purchasing from those outlets to licensed ones. Concerns regarding the conversion of customers from the black market are echoed across Canada (Potter and Weinstock, 2019).

Provincial markets demonstrated growth potential during this period: Ontario, Alberta and Quebec led retail sales in the first year of legal operation, accounting for over 60% of total Canadian sales (Statistics Canada, 2019b). Yet, the small number of retail stores in Ontario and Quebec relative to population suggests that the market was underserved and permitting delays in Alberta suggests that there was room for growth there as well. Consumer prices for cannabis averaged \$7.00 per gram in 2018, while producer prices (cost of goods sold) averaged \$4.58 per gram (Statistics Canada, 2021d). In the third quarter of 2019, Canadian households reported spending \$1.4 billion on cannabis (Statistics Canada, 2021b). By the second quarter of 2021, that number had grown to over \$2 billion, with sales in the legal market overtaking the black market (Statistics Canada, 2021a).

Table 5 depicts the change in the number of retail stores within each province between December 2019 and April 2020 and suggests that provincial markets had begun to scale at the beginning of 2020. That process continued, particularly in British Columbia, Alberta, Ontario and Quebec and the ecosystem became more robust. To illustrate the rapid growth that occurred once the industry matured out of the initial phase, the landscape of the total retail store infrastructure across Canada from 2018 until 2023 is depicted in Figure 4.

Figure 4 further depicts the landscape of retail store expansion across Canada. Retail operations were mainly concentrated in Alberta during 2018 and 2019 and only in 2020 did the number of stores across Canada begin to scale upward. As the industry moved out of the initial phase of legalization and into a more mature cycle, the data indicate that retail store expansion across Canada in 2022 and 2023 began to stabilize, suggesting a more robust network of retail locations for Canadian consumers. Had license approval regulations and processes been more streamlined, the expansion of retail store locations likely would have occurred much earlier, resulting in the earlier achievement of the twin policy goals of improving consumer health and safety and reducing consumer dependence on the illicit black market.

4.3 Effects of regulation on legal/illicit market

The nature of regulatory development in the market had a negative effect on achieving an important policy goal of legalization – the shift in consumer sales from unlicensed retail suppliers to licensed retail suppliers. The *Cannabis Act* established the legal framework for the sale of adult-use recreational cannabis products throughout Canada (Potter and Weinstock, 2019). A primary legislative intent behind the *Cannabis Act* was a focus on public health and safety, with a particular focus on youth (Haines-Saah et al., 2019). Shifting consumer consumption from the illicit black market of unlicensed retail suppliers to a regulated legal market of licensed cannabis stores was a key legislative imperative. Yet, that shift occurred much more slowly than intended.

As Table 6 notes, Canadian household consumption of recreational cannabis products did not shift from the illegal to the legal market until the third quarter of 2020 – two years after legalization and well after phase one had ended. The shift began gradually and legal sales did not gain traction until well into the latter part of 2019. These data are consistent with the notion that retail store expansion across Canada, as illustrated in Figure 4, was a necessary first step in creating a robust and mature network of viable alternatives to the illegal market. As discussed in Sections 4 and 5, the delays associated with effecting a shift toward the legal industry are largely the result of regulatory choices that constrained multiple components of the industry, including an undersupply of licensed retail outlets across Canada, delays and moratoriums on license approvals in several provinces and a host of problems on the wholesale supply side due to miscommunication and miscues between provincial wholesalers and approved suppliers.

5. Regulatory effects within the adult-use recreational cannabis industry

From the perspective of participants who are businesses, the cannabis industry has four major components: LPs, wholesale distributors, retail sales outlets and related or ancillary businesses. Each is discussed in turn below.

5.1 Licensed producers

A LP is an individual or firm that possesses a government license to grow, harvest, dry, trim, cure and package cannabis. In Canada, a federal license is required to cultivate, process and sell cannabis for medical or non-medical purposes. An entity seeking to become a LP of cannabis products can apply for a variety of different license types based on the type of business opportunities they wish to pursue (Cannabis Regulations, 2018, pp. 6–37). Those licenses are maintained in a public database by Health Canada (Canada, 2016). LPs in Canada remain primarily under Federal government regulation, with a tightly controlled market.

LPs face significant regulatory constraints, with a limited market for their finished products, selling to around 13 provincial wholesalers. Wholesale distribution operates as a

	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021
Legal Cannabis	\$175	\$301	\$365	\$408	\$456	\$537	\$626	\$827	\$919	\$935	\$1,170
Illicit Cannabis	\$1,190	\$1,033	\$978	\$935	\$890	\$851	\$816	\$784	\$761	\$749	\$660
Total	\$1,365	\$1,334	\$1,343	\$1,343	\$1,346	\$1,388	\$1,442	\$1,605	\$1,680	\$1,684	\$1,830
Percent Legal	12.82%	22.56%	27.18%	30.38%	33.88%	38.69%	43.41%	51.75%	54.70%	55.52%	63.93%
Percent Illicit	87.18%	77.44%	72.82%	69.62%	66.12%	61.31%	56.59%	48.85%	45.30%	44.48%	36.07%

Source(s): Statistics Canada, Table 36-10-0124-01, updated November 29, 2022

government monopsony and monopoly in all provinces except Saskatchewan (de Koning and McArdle, 2021). Accordingly, LPs mainly sell their products in bulk to a small number of wholesale distributors in the adult-use recreational market, who then have the power to sell products to retail entities which they regulate and approve. Not all LPs are authorized in every province, leading their production decisions to be dictated by anticipated demand from provincial wholesalers. Government-managed wholesale distributors only approve a select number of producers, affecting wholesale supply dynamics. Export opportunities are heavily restricted and limited to medical use and research.

The first years of legalization had many challenges as provincial wholesale distributors became established and the regulatory framework was implemented. The impact of those challenges was different at various stages of market development. In the initial phase of the market, LPs built capacity for sales to provincial wholesalers and dealt with production delays and supply shortages that impacted their ability to bring products from seed to market, a production process that takes 18–24 weeks (Ligaya, 2018). There were further delays due to LPs not having access to government-mandated excise stamps because the sole authorized government supplier of excise stamps manufactured them without the glue necessary to adhere to saleable products (Subramaniam, 2018).

As supply production delays were resolved at LP facilities and they began to scale operations to meet anticipated market demand estimates, a second phase of market bottleneck emerged as provincial wholesalers were not adequately prepared to accept and distribute high volumes of bulk cannabis products. Provincial wholesalers faced delays due to multiple factors. Firstly, they needed time to develop internal processes, hire and train staff and negotiate contracts. Additionally, forecasting product demand without reliable consumer data led to the asymmetry between LPs' production strategies and wholesalers' purchasing decisions. Moreover, variations in provincial market models affected LPs' strategies, compounding delays.

Health Canada tracks all cannabis products from seed to sale through the Cannabis Tracking and Licensing System, mandated by the Cannabis Act (2018, pp. 81–83). This system sheds light on implementation delays and bottlenecks. By September 2019, the volume of unfinished inventory of dried cannabis held by Canadian LPs had tripled since January 2019. Finished inventory, ready for sale and stored at provincial wholesalers and LPs' warehouses, was nearly five times the amount sold in August 2019. These records indicated a significant oversupply, possibly due to a lack of sufficient retail outlets (Subramaniam, 2019c). Consequently, many LPs reduced prices, adjusted earnings forecasts, cut profits and downsized staff (Rendell, 2020). Additionally, unsellable stock was disposed of.

5.2 Wholesale suppliers and distributors

Each of Canada's provinces and territories had the autonomy to establish their own frameworks for the distribution of recreational cannabis products, resulting in four primary distribution models during the initial stages of the market. In the first model, exemplified by Quebec, New Brunswick, Nova Scotia, P.E.I. and NWT, the government monopolized the recreational cannabis market, overseeing both wholesale and retail operations. In the second model, employed in Alberta, Manitoba, Ontario and Newfoundland, the government managed wholesale distribution but permitted private sector entities to operate retail stores. The third model, adopted in B.C., Yukon and Nunavut, involved government-managed wholesale operations alongside a hybrid retail model, allowing both governmental and private sector entities to establish retail stores. Saskatchewan, in the fourth model, regulated a private market at both wholesale and retail levels, deviating from government-controlled approaches seen elsewhere. Except for Saskatchewan, each province or territory retained

control over wholesale distribution, deciding which LPs to contract with to supply cannabis products, contracting with only a few LPs to meet demand for various cannabis products. Provincial crown corporations facilitated government control over the market, dictating regulatory frameworks and supplier contracts. However, the provinces' management of wholesale distribution encountered criticism for delays in establishing a stable recreational market, particularly in provinces with private retail businesses. In response, modifications were made to the regulatory model. Ontario, for instance, announced a shift towards a hybrid wholesale model in late 2019, allowing private-sector companies to participate. Similarly, New Brunswick sought proposals to license a private firm to operate the provincial supply chain exclusively, indicating a willingness to adapt to market demands.

5.3 Brick-and-mortar retail operations

The brick-and-mortar retail segment constitutes a vital aspect of the cannabis industry. In certain provinces, a government-operated store model, akin to existing alcohol retail operations, monopolized the market. Meanwhile, in provinces permitting private-sector retail, a mix of chains and independent stores emerged. Regardless of scale, substantial capital was essential, with the licensing process demanding time and financial commitment. Entrepreneurs had to navigate complex regulations, secure compliant locations and undergo extensive renovations, including security upgrades. Pre-legalization, many operated smoke shops, but few transitioned to licensed retail, likely due to licensing hurdles or restrictions on individuals with criminal records. Licensed retailers diversified revenue streams by offering paraphernalia alongside cannabis products, a common retail tactic with potential long-term implications for smoke shops. Unlike in the USA, Canadian cannabis regulations prohibit fully integrated companies. Vertical integration, as seen in some provinces like Saskatchewan, offers advantages in consistency and control over price, production and quality. Indigenous entrepreneurs, however, enjoy exceptions, with companies like Westleaf (now Decibel) successfully combining production with retail chains, such as Prairie Records. Moreover, provincial regulations pose challenges to retail chains, limiting strategies like joint merchandising and stock management. For instance, in Alberta, restrictions on inter-store product transfers hindered inventory management, impacting product mix and consumer confidence. These regulatory hurdles influence business models, especially in regions like the Prairies, where geographic constraints add further complexity to retail operations.

5.4 Ancillary businesses and services

An ecosystem of supporting businesses emerged alongside the developing cannabis industry, aiding other participants in navigating regulations. Highly regulated industries often foster a robust network of ancillary businesses, filling gaps where direct development is restricted. Early on, certification programs for employees in LP facilities emerged, covering production processes and compliant product handling. Additionally, there was a demand for consumer education, leading to the popularity of cannabis sommelier certification programmes. Federal advertising regulations posed challenges for marketing cannabis products and retail stores, prohibiting various approaches (Phillips, 2021). Despite restrictions, ancillary businesses found ways to navigate these regulations, such as targeted digital marketing and leveraging social media influencers. Similarly, federal packaging regulations mandated specific details for consumer cannabis products, limiting branding opportunities (Bissett, 2019). Unlike in the USA, Canadian regulations prioritized public safety, requiring unappealing tetrahydrocannabinol (THC) warning symbols larger than brand images (Geiger-Oneto and Sprague, 2020). This constrained LPs' ability to establish brand identities, prompting innovative marketing strategies focusing on product

quality. Beyond these, ancillary businesses encompass event management, online content compliance, delivery services and other creative ventures. Despite limited capital, entrepreneurs found avenues to contribute to the industry's growth. Overall, these ancillary businesses played a crucial role in supporting and expanding the cannabis market while navigating regulatory constraints.

6. Regulatory barriers to early-stage entrepreneurs: four stories

In this section, we describe four perspectives of businesses from different vantage points in the supply chain: A wholesaler, an ancillary business, aLP and a retail store chain. These stories, or “portraits,” (Lawrence-Lightfoot and Davis, 2002), illustrate how regulations affected entrepreneurs entering the recreational cannabis market and how much nuance was required to adapt to the details of regulations. We start this section by describing how one government wholesaler survived the first phase of legalization; we then discuss three businesses that began operations at the start of legalization. Together they show how businesses and governments adapted to the extensive regulatory guidelines and limitations, were able to establish competitive advantage based on their past experiences and resources and co-evolved as the industry became established.

6.1 Alberta's wholesale ordering system: AGLC

In the first year of adult-use recreational cannabis sales, Alberta's government agency was barely able to cope with the demands of the new market. Alberta Gaming, Liquor and Cannabis (“AGLC”), a crown commercial enterprise and agency, already controlled wholesale distribution of liquor in public-private arrangements from a single warehouse in Edmonton, including physical distribution of products from smaller firms such as craft breweries. The cannabis distribution was not integrated into the liquor distribution system, however, because new processes were required to comply with federal and provincial regulations. Arrangements for secure and climate-controlled warehousing, logistics and IT systems for sales and inventory management had to be developed; the facilities needed to be secured and constructed; and staff needed to be hired, assigned and trained. Despite the lack of experience with wholesale distribution of cannabis products or the industry, AGLC personnel responded to the challenge as best they could in the short time available (S. Decker, personal communication, October 2019).

The initial AGLC cannabis wholesale distribution system is illustrative of problems other provincial wholesalers faced. AGLC contracted with a limited number of approved LPs to deliver products directly to the warehouse and fulfil weekly orders placed by AGLC. AGLC inventoried the cannabis, shelved it and then sold products to the retail stores. Delivery of the cannabis was direct to each store and provincial regulations prohibited companies from transferring stock between their stores or returning excess product to AGLC (French, 2018). Product quality control was also part of AGLC's mandate. AGLC reserved the right to return stock that did not meet quality levels or was past a certain age. In the initial stage of the market, some LPs shipped both new stock and older stock stored before legalization in anticipation of demand. AGLC first made returns later in phase one, as the stock reached its due dates, causing a shock in the supply chain, including product shortages at times in the study period.

After launching, several challenges emerged. In the public media, discussions centred on whether there was enough supply for the recreational market, the quality of cannabis available, whether the higher prices for recreational use would leave medical users without supply and whether pricing differences between the legal and illegal markets would discourage consumers from shifting to the legal market (Kauffman, 2019). The last point was exacerbated by the province's decision to place a moratorium on new retailer licenses for

several months issued while AGLC fixed their operational challenges and left consumers to the relative ease of sourcing cannabis products on the black market. In the dealings of the legal supply chain, however, more practical issues affected the operations and merchandising strategies of retail companies. Shortly after the first retail stores opened, AGLC's cannabis inventory management and online ordering systems collapsed. The causes could have been problems maintaining steady stock levels or perhaps the ordering system was not properly linked to other systems. What was clear was that AGLC distribution reverted to spreadsheets and emails (S. Decker, personal communication, October 2019).

As a temporary fix, AGLC sent out an Excel spreadsheet to each retail store by email every Thursday, listing the products available by producers, product, brand and package sizes. When printed in landscape format with a small font on legal paper, the spreadsheet was about 10 pages long. The Excel spreadsheet listed all the product inventory levels, order unit size, maximum order allowed per store (limits were placed on some products to "share" product across the whole market) and other details. Some products guaranteed a minimum delivery, if selected; some products had maximum order sizes. Each store owner or manager would then fill in the Excel spreadsheet with their order and email it back to AGLC. AGLC compiled the orders and figured out how to allocate the stock to the stores, often shipping less than stores requested, as there was no real-time inventory control. Arguably, AGLC was trying to support the retail stores by ensuring everyone had some inventory to sell, but optimizing actual orders to available inventory using a largely manual system was difficult. The stores then received their shipment and hoped they had enough product to sell to customers (S. Decker, personal communication, October 2019). By the end of the first year of legalization, AGLC's systems were functioning reliably, but they continued to limit the number of approved suppliers.

6.2 Same-day delivery service: pineapple express delivery

Pineapple Express Delivery offered a legally compliant recreational cannabis delivery service in Manitoba and Saskatchewan. Each province had the authority to determine whether customer delivery was available; initially, only two provinces developed regulations governing delivery services. The company contracted with licensed retailers for same-day delivery to their customers. Buyers purchased products directly from the cannabis retailer, and once the transaction was paid, the retailer contacted Pineapple Express for delivery. Most non-cannabis delivery services in Saskatchewan relied on contract drivers who worked as needed, but that option was not available. To ensure public safety, provincial regulations require that drivers be paid employees of the firm, not contract drivers, and that drivers verify customer ID before handing over the product (Petrow, 2019). The service also allowed for the secure transfer of products between stores, unlike other provinces' regulations that forbade inter-store product transfers. These regulatory mandates prevented the adoption of a typical retail delivery model and created strategic challenges around cost management and staffing.

A few details are worth noting in the Pineapple Express model. Saskatchewan and Manitoba regulations both allowed retail stores to conduct online sales as part of their license. But the provinces interpreted regulations about app-based sales differently. Pineapple Express operated in both jurisdictions by providing a focused delivery service and left the e-commerce platforms to other auxiliary service businesses. In Saskatchewan, regulators interpreted federal law to prohibit third-party platforms from advertising prices and conducting sales; in Manitoba, the interpretation simply limited third-party platforms or apps from selling products (Kessler, 2019). As a result, app usage was operationalized very differently in two adjacent provinces, which made app design and scalable implementation very difficult. For example, in Manitoba, Super Anytime, Inc. ("Super") developed an

e-commerce app to help customers search available inventory across a range of stores and then engaged delivery fulfillment by Pineapple Express ([Boozer Delivery Inc., 2019](#)). Super was allowed to show customers available products and pricing across a range of retailers, and based on selection “matched” the retailer and Pineapple Express for pickup and delivery to the customer. This reflected the business models familiar to many consumers who shop for convenience items, such as food delivery (e.g. Skip the Dishes) or transportation (e.g. Uber and Lyft). By comparison, Saskatchewan prohibited the use of an app for placing orders and restricted advertising products and prices via apps. Instead, customers searched inventory at individual stores’ websites, selected same-day delivery at checkout on the store’s e-commerce platform and the store then contacted Pineapple Express to effect delivery. Once again, the challenges inherent in managing two very different provincial regulatory frameworks impacted entrepreneurial strategies.

Pineapple Express was not able to expand nationally in the adult-use recreational cannabis delivery market due to regulations restricting delivery from brick-and-mortar retailers. However, regulatory changes in Ontario and Alberta at the end of the first phase provided opportunities for expansion ([Subramaniam, 2019d](#)). In Alberta, proposed regulations to allow app-based ordering services to offer same-day delivery ([George-Cosh, 2020](#)) also provided strategic opportunities for retailers and ancillary businesses to consider expansion into other provincial markets. Pineapple Express’ CEO pointedly observed that the delivery model in the store-to-consumer market seemed to be key to cutting into black market activity by competing effectively on quality and fast delivery ([Subramaniam, 2019b](#)), a competitive advantage that black-market retailers enjoyed. Provincial regulatory frameworks prohibiting delivery services perhaps contributed to delays in realizing a shift from the black market to the legal one.

6.3 Artisanal producer market: Boaz Pharmaceuticals

Boaz Pharmaceuticals produced cannabis bud products for the medical and recreational markets and also extracted cannabis oils. The firm was launched by an engineer who turned his entrepreneurial sights on cannabis in the middle of a successfully rising career in the oil and gas industry. He first pursued his curiosity about the industry by earning a certificate in cannabis cultivation during his time off. He then studied the industry prospects, developed a business plan, found deep-pocketed investors and launched his operations in the Calgary area (D. Izaak, personal communication, November 2019). As it turned out, experience in oil and gas engineering was well suited to the systems design and regulatory compliance requirements for becoming an LP. Careful planning, the ability to design complex electrical, HVAC and sensor systems and the patience and skill to analyse regulations gave Boaz’s team a competitive advantage. Boaz was able to get its license much faster and cheaper than industry norms, with minimal use of consultants and lawyers ([Dormer, 2018](#)).

From a strategic perspective, efficiently dealing with the stages of licensing was a significant advantage, because creating a compliant and viable facility was a costly investment with no ROI while awaiting approvals. Costs partially stemmed from the challenges of growing plants indoors, with light, ventilation and watering systems to grow healthy plants and avoid mould and contamination. But the bigger cost was security. Federal regulations reflected fears that black market operators would try to steal harvests, putting employees’ lives at risk. Security cameras covered every square inch indoors and outdoors, the property was securely fenced, sensors tracked movement around and above the buildings, visitors were screened and only bullet proof glass was used for windows. All these costs could only be recouped when cannabis was harvested, so reducing the time to complete forms, respond to regulators’ questions about the facilities and demonstrate compliance was a source of competitive advantage.

Boaz started by partnering with a large LP which had approvals to export products to foreign medical use markets, an example of strategic adaptation by a new venture to regulatory barriers. At the same time, they worked on getting licensed for both medical and recreational sales. Each one of these elements required careful evaluation of federal and provincial regulations to meet needs for compliance and develop a competitive advantage appropriate to a relatively small, privately owned company. For example, LPs were required to publish THC and cannabidiol (CBD) scores on product packages derived from analysis conducted at independent third-party laboratories. As the market emerged and grew, it quickly became clear that the market wanted more THC and was not interested in CBD-dominant products. Producers were responsible for sending samples to the labs for analysis; predictably, some producers sent cherry-picked samples that resulted in optimistic scores. By comparison, Boaz sent samples that were average for their harvests, which resulted in scores that tended to be lower relative to other firms. They hoped that positive user experiences above expectations based on the THC scores would result in word of mouth promotion and build a stronger brand image and competitive advantage. This strategy worked – on Reddit and other community platforms users praised Boaz products and suggested a higher “real” score than provided on the label (D. Izaak, personal communication, November 2019). This reputation allowed Boaz to charge a quality premium and build a loyal customer base, despite restrictions on advertising, marketing and packaging labels.

Once Boaz was approved to supply to AGLC, they strategically partnered with other local “craft” producers, providing a channel to overcome the barriers created by ALGC’s restricted number of LPs contracted as suppliers. Boaz’s competitive advantage allowed them to augment their product lines and range with output from select craft producers who shared their values while expanding the revenue stream for the company. Questions around co-branding strategies still needed to be resolved as of December 2019, but Boaz believed that helping the market for craft and high-end products would expand the overall demand for premium products (D. Izaak, personal communication, November 2019). The company continues to evolve with regulatory changes.

6.4 Regulatory impact on retail strategy: NewLeaf cannabis

NewLeaf Cannabis (“NewLeaf”) is an example of a firm that developed and launched entrepreneurial strategies long before legalization to build a retail chain for recreational cannabis, with the goal of going public and/or having a trade exit. The founders knew location was key for retail success, and they began to sign long-term prime location leases in anticipation of legalization. With provincial and municipal regulations still being developed, the company speculated what restrictions might be imposed under land use regulation, such as proximity to schools and parks, similar to rules for liquor stores. The company was well funded, however, and built a strong portfolio of locations in several provinces, including Ontario, Alberta and Saskatchewan (J. Holmgren, personal communication, November 2019).

By the time October 17 arrived, NewLeaf had a clearer view of the regulatory situation. Launch in Ontario was delayed by political changes; in Alberta and Saskatchewan, NewLeaf began obtaining licenses and renovating stores to comply with stringent and expensive federal and provincial regulations. For example, regulations required installed vaults to store inventory every night, requiring an early infusion of capital to acquire and construct compliant retail space. In addition, to prepare their marketing, brand and merchandising strategy, they had to integrate both safety regulations designed to protect employees and harm reduction strategies designed to protect consumers and youth/children. NewLeaf developed detailed operational manuals to ensure consistent training and processes across the chain, leveraging the knowledge of an executive hired from a top Canadian retailer. By

employing these strategies, NewLeaf successfully launched the retail chain in Alberta and Saskatchewan immediately after legalization and grew the company by opening new stores at a steady pace (S. Decker, personal communication, October 2019).

Looking more closely at the context of NewLeaf's strategy provides helpful nuance. For consumers, the licensing process meant that storefronts with cannabis-sounding names stood empty for months. Meanwhile, the owners completed the required renovations, applications and inspections before being given a license to operate as cannabis retailers. The cost of good retail locations typically was very high, so in practice, the process favoured larger companies with deep pockets who could afford to pay the rent and upgrade the facilities, regardless of how many months they waited for approvals. When Alberta put a moratorium (Kauffman, 2019) on new retail licenses shortly after legalization, the cost of waiting rose even more. By Fall 2019, NewLeaf demonstrated that their strategy was effective as they had opened six new stores in two months, solidifying market share gains (S. Decker, personal communication, October 2019).

NewLeaf also recruited top talent to create a strong branding strategy, targeting 30-plus professionals. Their target market was reached through a coherent strategy of location, storefront, product mix, marketing and staffing. Federal advertising regulations followed the principle of harm prevention and Canadians' worries about children, youth and addiction underscored the rules. Stores and marketing could not associate cannabis with activities that were 'exciting' (e.g. sports), literary figures attractive to children (e.g. themes of Star Wars or Alice in Wonderland) or images of people (e.g. celebrities). Store interiors could not be visible from the outside, yet the logo and covered storefront somehow needed to capture the target market's attention. Accordingly, NewLeaf decided on a clean, modern look that appealed to professionals and ensured their budtenders (cannabis specialists) were well-trained in cannabis and customer service. Their on-line presence echoed the clean design look, using few images. Their social media marketing professionals found ways to reach target customers without actually advertising products or violating federal regulations, showing how creative entrepreneurs could be when challenged by regulation.

NewLeaf showcased remarkable agility in swiftly adapting and effectively deploying entrepreneurial tactics, owing to their strategic insight, patient capital and adept executive leadership. Despite navigating a dynamic regulatory landscape, they excelled in managing ambiguity and political risks, outperforming many industry counterparts. By adeptly steering through evolving regulations, they maintained flexibility and adjusted tactics accordingly. Nonetheless, the company encountered persistent challenges endemic to the retail sector, primarily stemming from regulatory constraints. For example, the fact that AGLC fulfilled product orders at the individual store level and not to a central company purchasing department was challenging. In a typical retail environment, store managers tweak the product mix to fit their local customer base, using product transfers from other stores to manage inventory and fulfil customers' wants; in Alberta, NewLeaf did not implement a typical retail chain strategy. Additionally, unreliable order fulfilment prompted stores to over-order hoping to just get enough product and include off-strategy products that did not fit the preferred mix for their customers, compromising the desired brand image. In a differently regulated market, a retail store would normally return the product to the wholesaler or transfer the product to other stores in the chain. Note that these challenges were not faced in their Saskatchewan operations, but the size of the market in that province limited the opportunities for growth.

The experiences of NewLeaf and other retailers in the first phase of legalization impacted regulations, resulting in changes in provincial regulations after the first few years. For example, Alberta's regulations allowed storefronts to be open and interiors visible, for the safety of employees and NewLeaf was able to transfer product between stores.

7. Practical implications and lessons learned

Detailed case examples underscore the nuanced approach required by enterprises. In conclusion, we analyse broader themes arising from this industry analysis, shedding light on regulatory policy development for nascent industries and offering observations and recommendations.

Canada's regulation of the recreational cannabis market offers a compelling case study of the coevolution of government regulation and business strategies. Entrepreneurs faced challenges navigating thirteen distinct regulatory frameworks, hindering the deployment of trusted business models and cross-border scalability. The case examples underscore the nuanced approach required by enterprises. We conclude the paper by analysing broader themes arising from this industry analysis, shedding light on regulatory policy development for nascent industries and offering observations and recommendations.

In this discussion, we explore how regulation shapes the development of enterprises in Canada's recreational cannabis industry, with potential insights applicable to other emerging industries. We structure our analysis around three key themes: the impact of public policies on economic agents' behaviour; the effects of interjurisdictional differences; and the effectiveness of regulatory frameworks in achieving public policy objectives.

7.1 Public policies and behaviour of economic agents

The Canadian cannabis industry underscores the vital role of government-industry collaboration in shaping regulatory frameworks. Unlike mature industries with established networks and associations, nascent industries face barriers due to the absence of such structures. This absence hampers policy developers' understanding of industry dynamics and restricts the alignment of entrepreneurial strategies with emerging regulations. For instance, the slow growth of licensed firms in British Columbia highlights this challenge. Moreover, the disconnect impedes the co-evolution of regulatory frameworks and entrepreneurial strategies, as nascent industries lack sufficient sales volume and market data. Consequently, regulators struggle to adapt swiftly to industry dynamics, while industry players face challenges in advocating for regulatory changes. That creates several barriers. Firstly, it limits the ability of policy developers creating regulatory structures to fully understand industry and market dynamics, as they do not have access to their industry counterparts to assess whether regulatory approaches are feasible, likely to be effective or tailored to achieve desired results. The example of the slow growth of licensed firms in British Columbia illustrates this point. Secondly, it limits the ability for entrepreneurial strategies to develop consistent with emerging regulatory structures, as the inherent uncertainty of a newly developed regulatory framework places significant economic risk on entrepreneurial actors seeking to be first movers in an emerging industry. Capital must either be patient, to establish a market presence ahead of regulations enabling the industry to begin operations, or it must be nimble, in order to quickly move into a newly established market. The experiences of private firms looking to become retailers in both Ontario and Alberta illustrate this point. Thirdly, the disconnect does not allow regulatory frameworks and entrepreneurial strategies to co-evolve.

Moreover, the disconnect impedes the co-evolution of regulatory frameworks and entrepreneurial strategies, as nascent industries lack sufficient sales volume and market data. Consequently, regulators struggle to adapt swiftly to industry dynamics, while industry players face challenges in advocating for regulatory changes.

7.2 Interjurisdictional differences and their effects

The Canadian cannabis industry also illustrates the value of interjurisdictional collaboration in developing regulatory frameworks. The differences between provinces were a significant

barrier to growth. Divergent public policy goals and time constraints during legalization impeded collaboration, creating barriers to scalability. For instance, not all provinces permitted private retail businesses, limiting investment incentives. Moreover, successful business models in one province couldn't easily expand to others. Thus, a successful retail concept developed in Saskatchewan, such as a small chain of themed stores offering a curated selection of products for in-person or delivery sales, could not be replicated in adjoining provinces (e.g. Manitoba or Alberta). Additionally, lack of collaboration on typical business strategies, like stock transfer between stores or ordering from wholesalers, complicated cross-provincial scaling efforts.

7.3 Efficacy of regulatory frameworks to achieve public policy goals

The data revealed significant consumer demand for cannabis products that legal retail outlets struggled to meet due to delays in licensing and opening stores, as well as challenges in wholesale operations, such as the AGLC. These delays hindered industry expansion and regional economic development. Companies with patient capital and strategic flexibility fared better, while others faced difficulties or closure, as seen with NewLeaf and Boaz Pharmaceuticals. Regulatory delays also limited potential customers for ancillary businesses, particularly in provinces with retail license moratoriums. Moreover, government-run retail strategies in some provinces resulted in inadequate store numbers and locations, allowing the black market to persist.

Regulatory delays also significantly hindered the achievement of a key public policy goal: reducing black-market cannabis sales in Canada. Despite efforts such as seed-to-sale tracking and high consumer demand for legal products, it took nearly two years for the legal industry to surpass illicit sales. This delay had adverse effects on public health, safety and resource allocation, contradicting objectives to decrease crime and enhance public safety.

Health and safety goals were also impacted by delays. Clearer communication between wholesale operations and producers, expedited issuance of private retail licenses, faster opening of government retail stores and collaborative development of regulations with industry feedback could have hastened the attainment of health and safety objectives. Additionally, improved information sharing among provinces and quicker adaptation to industry dynamics would have accelerated industry growth. Delays stemming from crown corporations' lack of profit motive, consumer uncertainty about product availability and inefficiencies in ordering systems exacerbated the situation. Inadequate regulations not only prolonged the persistence of the black market but also hindered tax revenue collection, as every dollar spent on the black market was a substantial loss of tax revenue to federal and provincial governments.

7.4 Insights and conclusions

Analysis of the Canadian recreational cannabis industry sheds light on how regulatory environments shape firms' models and strategies. Firstly, structural and operational delays in retail licensing and product distribution hindered consumer access, delayed market maturation and exacerbated structural inequity among entrepreneurs. These delays, common in emerging industries, necessitate careful consideration by both regulators and businesses. Secondly, provincial regulatory differences constrained entrepreneurial options, limiting profitability and operational capacity. This highlights the challenges faced by businesses operating in jurisdictions with varied regulations. Thirdly, the market did not scale as quickly as consumer demand warranted, which prolonged consumers' reliance on the black market, undermining policy objectives and tax revenue potential. These regulatory and implementation challenges significantly impacted both businesses

and governments, delaying the attainment of policy goals. The timing issues may be unique to the emergence of a new industry due to legalization, distinct from new industries based on new technologies or resources, but nonetheless could be a factor in many emerging industries. We conclude that the viability of some regulatory frameworks and the ability of firms to develop workable and scalable business models will likely be a concern in many emerging industries (see [Table 7](#)).

Many questions remain as the industry matures and as regulations and business models coevolve, fueling ongoing interest and research. This is especially true as other nations move toward legalizing and regulating the cannabis industry. Canada’s experience offers transferable lessons across both national and industry borders. The Canadian example is important not only within the cannabis industry but also as an example of the impacts new regulatory environments have on developing industries. These lessons are also transferable to other nascent industries (e.g. pharmaceuticals, innovative financial industries, nanotechnology), in contrast to the dynamics of established industries. Nascent industries may be born of innovations (e.g. blockchain leading to cryptocurrencies) or legalization (e.g. cannabis, psychedelics, gambling in some jurisdictions), yet common features of the coevolution of regulation and development can be observed. Further research in this area is warranted.

Themes	Reasons	Impacts	Recommendations
Structural and operational delays	Provincial wholesalers were not ready to begin operations LPs could not adequately anticipate demand at the beginning of the production cycle Retail licenses were delayed as a result of inadequate approval systems	Natural market development and expansion was hindered, frustrating producers, retailers and consumers	Policymakers should align efforts to regulate new industries with reasonable timeframes to allow markets to develop and expand and communicate more proactively with industry representatives to determine whether regulations and implementation timetables are feasible
Provincial differences in regulation	Provinces developed regulatory frameworks simultaneously in order to comply with the federal mandate	Firms were unable to develop strategy in a typical manner, as what worked in one province was not legal in another	Policymakers should move to harmonize interjurisdictional regulations so that entrepreneurial strategies can develop more holistically
The market did not scale quickly	Delays in retail license approvals and delays in providing adequate product stock, impacted the abilities of firms to expand	The public policy goals of (1) shifting consumption from the black-market to regulated businesses and (2) providing safe and regulated products to consumers, were significantly delayed	Policymakers should consider the impact of operational and logistic delays related to regulation on both industry expansion and achievement of policy goals
Regulatory frameworks may not be viable	Provincial frameworks were developed without adequate give and take with industry participants, resulting in a mismatch between regulatory policy and practical realities	Regulatory policies need revision. The experience of some provinces having difficulty in the wholesale role, in particular, warrants a closer look	Policymakers should revisit existing regulatory frameworks on a regular basis, to ensure that those frameworks are operationally and economically viable

Table 7.
Summary of themes, reasons, impacts and recommendations

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