

Cannabis entrepreneurship: A guide to core concepts, resources, and research strategies

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Abstract:

The cannabis industry is a complex set of industries involving consumer, medical, and industrial products and services. NAICS classification and government data usually provide limited value to North American researchers supporting cannabis entrepreneurship, particularly since the United States federal government (unlike that of Canada) does not yet recognize the legalization of cannabis. Social equity continues to be one motivation for cannabis entrepreneurship, given this historic targeting of U.S. and Canadian people of color for cannabis-related criminal offenses. Nonprofits and provincial, state, and local governments are now providing support for people of color working in this industry. In addition to government data, proprietary databases, trade associations, consulting firms, and boutique data and analytics firms provide data and analysis to research the cannabis industry and support its entrepreneurs.

Keywords: Canada | Cannabis | Entrepreneurship | Government information | Industry research | Legalization | Marijuana | Research strategy | Resources | Small business | Social equity | United States

Article:

Introduction

For librarians and researchers, the cannabis industry has proven to be both a fascinating and challenging topic of research. The diverse nature of the industry and the rate at which it has expanded due to legalization trends make it a topic of interest. In the United States, the lack of legalization at the federal level results in limited free national data and limited federal support services, the availability of which for most other industries we take for granted. While the

cannabis industry is legal across Canada, how the industry is allowed to operate varies province to province. In both countries, social equity issues and opportunities often motivate cannabis entrepreneurs, and many librarians and researchers are eager to support their efforts.

This article provides strategies and sources to research this complex and protean industry in the U.S and Canada. After describing the nature of cannabis-related products and supply chains, we summarize the legal status of the industry in both countries. Then we outline the social equity context, followed by examples of nonprofits and government agencies supporting equity work. After a discussion of industry classification options for cannabis, we identify research sources available from governments, proprietary databases, trade associations, consulting firms, and boutique data and analytics firms. The article concludes with references and appendices for resource URLs. Resource descriptions and links were current as of June 15, 2022, unless otherwise noted.

This guide was inspired by the Entrepreneurship & Libraries mini-conference, *The Invisible Industry: Resources for Supporting Cannabis Entrepreneurs* (Entrepreneurship & Libraries Conference, 2021). We thank the presenters (whose recordings remain available) and participants for discussing many of these sources and strategies.

Nature of the Cannabis Industry

The plant *Cannabis sativa* produces hemp (defined as <0.3% tetrahydrocannabinol (THC) by dry weight), as well as cannabinoids (>0.3% THC by dry weight) (Toth et al., 2020). The central commodity of the cannabis market is cannabinoids, the chemical compounds active in cannabis, of which the psychoactive THC and non-psychoactive CBD (cannabidiol) are examples (Lee, 2012; Booth, 2004). Only the female *Cannabis sativa* plant contains these compounds (Toth et al., 2020). The male plant is used as industrial hemp to make ropes, sheets, sails, and textiles, among other consumer goods (Allegret et al., 2013). Some U.S. states are encouraging research into and production of industrial hemp (Williams, 2019). This distinction classifies hemp in a different industry than cannabis. This article focuses on the latter.

The cannabis industry is a diverse collection of consumer, medical, and industrial products and services (Parker et al., 2019). A May 2022 search of the top-funded cannabis startups in Canada and the U.S. revealed an array of industry representation in addition to growers and producers, ranging from biotechnology and pharmaceuticals to e-commerce payment and delivery services, consumer electronics, and supply chain management software (CB Insights, n.d.). Both psychoactive and non-psychoactive cannabinoids are used in many medical and recreational products, ranging from flowers for inhalation to candies for ingestion to oils for topical use.

The term appears in market research reports for a much broader range of industries, from ready-to-drink bottled teas (Le, 2021) to pet food ingredients (Frost & Sullivan, 2021) to quality management system software (New, 2022). For example, Figure 1 is one possible supply chain for edible recreational cannabis products, depicting two possible final industries in the chain. Additional industries concerning cannabis include laboratory testing, consulting, marketing services, and legal services.



Figure 1. recreational edible cannabis product supply chain.

Cannabis in the United States

Until recently, cannabis use and possession in the United States was illegal (Comprehensive Drug Abuse & Prevention Act of 1970). However, beginning with California in 1996, states began changing their laws to allow medical and recreational use within their borders. Because cannabis legalization varies by state, information about regulations and oversight must be conducted at the state level. Oversight may require functions of multiple entities within state government, with regulation of various aspects of cannabis cultivation, sales, and licensing for consumers occurring within different state departments, such as health, commerce, agriculture, and public safety, as well as other boards and authorities.

For example, in Ohio, the Medical Marijuana Control Program is operated by the Ohio Department of Commerce, the State of Ohio Board of Pharmacy, and the State of Ohio Medical Board (Ohio Medical Marijuana Advisory Commission, 2022). In the state of Washington, regulation of cannabis and alcohol is within the purview of the Washington State Liquor and Cannabis Board. Most states where cannabis has been legalized will have cannabis control commissions or boards of appointed representatives with their own delegated authority for legal, policy, and budget decisions. Again, these structures are best researched on a state-by-state basis and at the point of need so as to be accurate and reflective of recent legislative and administrative changes. Similarly, cannabis legalization varies among Native American and Alaska Native tribes, although with the added burden of potential federal and state drug enforcement agencies (Centers for Disease Control, 2017).

The lack of legal status of cannabis at the federal level means that cannabis business owners and entrepreneurs cannot fully utilize U.S. governmental services such as the U.S. Small Business Administration (SBA), SCORE (Service Corps of Retired Executives), or Small Business and Development Centers for industry-specific support. This limitation also extends to SBA financial assistance (U.S. Small Business Administration & Office of Financial Assistance, 2019). Additionally, federally-funded entities cannot participate in webinars or seminars on the topic of cannabis-based businesses. Instead, cannabis entrepreneurs have to seek out state government, business groups, and nonprofits for support and guidance. See below for example organizations in these categories.

Despite the limited legal status across the United States, recent figures shared by *MJBizDaily*, the publication arm of MJBiz, one of the largest trade publications covering cannabis business news, showed legal recreational and medical sales of cannabis in the U.S.

market topping \$24 billion in 2021, outpacing 2021 sales of Starbucks in the North American market (Stelton-Holtmeier, 2022).

Cannabis in Canada

Medical marijuana has been accessible in some format since 1999 (Health Canada, 2016, Introduction). Canada legalized recreational and medical marijuana nationally in 2018 with the passage of the Cannabis Act, which places the industry under the purview of Health Canada, and which has been amended since 2018 to include new classes of cannabis such as edibles, topicals, and extracts (Health Canada, 2019, para. 1). The federal government issues licenses for commercial growth and production, analytical testing, as well as import and export, while the provinces and territories determine who, where, and how cannabis can be sold, as well as the minimum age of consumption, legal personal cultivation and possession limits, and permitted areas of public use (Health Canada, 2019, para. 2-3; Health Canada, 2022a, para. 2). Some provinces allow producers to also sell cannabis products (referred to as vertical markets, as depicted in Figure 1), while others do not (Goundar et al., 2021). Legal cannabis products must be clearly marked as such, packaged in plain packaging, and affixed with health warnings and an excise stamp according to the province of sale (Health Canada, 2022c, para. 3). Prescription drugs containing cannabis are subject to the Food and Drugs Act as well as the cannabis regulations (Health Canada, 2019, para. 4).

Canadian industry data is more readily available than in the U.S., even if the policy details and tax structures vary by province (Goundar et al., 2021). The production market alone was valued at CAD\$5.9B and employed 45,804 people as of April 2021 (McGrath, 2021). In 2022, Canada surpassed the Netherlands as the largest exporter of cannabis in the world (Coulton, 2022). Legalization was intended to “displace” the black market for cannabis (Public Safety Canada, 2020, para. 2), and has succeeded to some extent: in 2020, the legal market share surpassed that of the black market, according to household consumption statistics (Statistics Canada, 2022b). In 2021, one report stated illicit sales accounted for nearly 30% of the market (Passport, 2022). The unlicensed “gray market,” which consisted largely of dispensaries and cafes operating on ambiguous legal footing pre-legalization, continues to compete on price as well as on convenience, providing services such as online order and delivery and decorating products and packaging with branding and graphic design not permitted in the legal trade (Ibrahim, 2018).

Cannabis and social equity

In an effort to create more opportunity for minority entrepreneurs in the cannabis industry and help address the racist legacies of both countries’ War on Drugs, U.S. states and local governments with legalized medical or recreational cannabis use as well as the federal government in Canada are creating dedicated social-equity programs. There are also a growing number of special interest and nonprofit organizations assisting minority cannabis entrepreneurs in navigating the complex licensing process of starting and running a legal cannabis operation while working under the ever-shifting laws and regulations related to the legal growing, processing, and selling of cannabis. Therefore it can be intimidating for librarians and researchers, entrepreneurs, community advocates, and governing bodies to know where to start when researching the intersections of social equity and cannabis entrepreneurship.

This section is divided into U.S. and Canadian contexts. The U.S. section includes key terms and concepts to understand when researching inequality and equity work within the cannabis industry. Next is a brief overview of significant social equity programs established in the United States at the state or local level in states that have legalized recreational or medical marijuana, as well as the current status of federal attempts in Canada to contend with the discriminatory legacies of cannabis enforcement. Finally, we have included examples of nonprofit organizations and industry associations in the United States and Canada providing specific support to minority entrepreneurs. These examples provide researchers with further examples of specific strategies used at the federal, state, local, and private level to support minority entrepreneurship in this industry. For resource URLs, please refer to Appendix A: Social equity resources.

Social equity in the United States

With 18 states, two territories, and the District of Columbia permitting the non-medical use of cannabis for adults as of November 2021, this trend toward recreational legalization in the United States has provided a number of new business opportunities for entrepreneurs (National Conference of State Legislatures, 2022). Inequalities around who can be a cannabis entrepreneur persist, complicating cannabis entrepreneurship as one path toward addressing social equity issues, especially for the BIPOC communities directly impacted by the War on Drugs in North America.

People of color have been 3.5 times more likely to be arrested for possession of cannabis, even though racial groups in the United States use cannabis at about the same rates (Harris & Martin, 2021). In states that have legalized the growing and selling of cannabis for medical or recreational use, licensing restrictions often exclude applicants with prior drug-related offenses. Additionally, with the capital costs associated with starting a retail store in a recreational market costing approximately \$300,000 on the low end, historic and systemic injustices related to the access of capital in minority communities and households combined with the limited sources of funding for cannabis-related enterprises continue to be a barrier to entry for would-be minority entrepreneurs (Marijuana Business Daily, 2019). As a result, although gathering data on cannabis founders and business owners remains a difficult and complex task, it comes as little surprise that a 2017 survey conducted by *MJBizDaily* of 389 U.S. cannabis business owners and founders found that only 10% identified as Hispanic/Latino or African American (McVey, 2021).

Key social equity terms

Legacy market: An existing consumer market for the buying and selling of cannabis products that existed in a community prior to legalized-cannabis.

Legacy operation/business: A cannabis-related business that operated in a state prior to legalization of the growing and/or selling of cannabis in that state (Gibson, 2021).

MORE Act: Passed by the U.S. House in April 2022, the Marijuana Opportunity Reinvestment and Expungement Act or the MORE Act (H.R.3617), decriminalizes cannabis in the United States and replaces the statutory references to “marijuana” and “marihuana” with cannabis. This Act also instructs the U.S. “Bureau of Labor Statistics to regularly publish demographic data on cannabis business owners and employees”, makes Small Business Administration loans available to cannabis-related businesses, and creates a trust fund “to

support various programs and services for individuals and businesses in communities impacted by the war on drugs” (Marijuana Opportunity Reinvestment & Expungement Act, 2022, third bulleted point). As of April 2022, the Act entered the U.S. Senate and was referred to the Committee on Finance.

Social equity applicant/license: Social Equity programs are municipal and state-level programs that allow individuals who were either directly affected (via conviction of drug offenses or incarceration) by the War on Drugs or lived in geographic communities impacted by the policies to participate in the cannabis industry in their locality (National Association of Cannabis Businesses, 2022).

War on Drugs: Passed by the United States Congress, the 1984 Sentencing Reform Act and the 1986 and 1988 Anti-Drug Abuse Acts led to mandatory minimums for drug-related, nonviolent offenses. This so-called war has resulted in the United States rapidly developing the highest rate of incarceration in the world (Prison Policy Initiative, n.d.; Rahwanji, 2019). Beyond the trauma of incarceration, communities disproportionately impacted by the War on Drugs continue to exist in a “culture of fear” regarding possession of cannabis, creating another barrier to entry for individuals within these communities exploring entering the legal cannabis industry in their state (Marijuana Business Daily, 2019).

State and local government support

California: Citing the “devastating impact [cannabis prohibition had] on communities across California and across the United States,” the 2018 California Cannabis Equity Act created a grant program that offers cities and counties within the state, financial assistance in setting up social equity programs. (SB-1294 Cannabis: State & local equity programs, 2018, Sec. 2b). These programs are intended to offer access to capital, technical training and regulatory compliance assistance to members of communities negatively impacted by the War on Drugs, and to assist them in entering the multibillion-dollar cannabis industry as either entrepreneurs or employees. The 2018 Act’s stated outcome is to help ensure that California’s cannabis industry is representative of the state’s population. To date, the social equity grant program has awarded approximately \$40 million in equity grants to local governments.

Colorado: In Colorado, both the state and local governments have implemented social equity programs to support communities negatively impacted by the War on Drugs. In 2020, the Colorado Department of Revenue Marijuana Enforcement Division (MED) created a Social Equity Program which provides eligible applicants with the opportunity to participate in the State’s Accelerator Program or apply to independently own and operate a regulated cannabis business license (Social Equity, 2022, “Enabling Legislation”). The Accelerator Program connects the applicant with a MED endorsed “accelerator”—an existing cannabis business. The accelerator provides the applicant with a variety of services and resources which can range from technical assistance to capital support. At a local level, cities such as Denver have created their own social equity programs for cannabis licensing. Denver’s program offers social equity applicants with exclusive licenses related to cannabis cultivation, retailing, and transportation (City & County of Denver, 2022, first paragraph).

Illinois: Under the auspices of the Illinois Department of Commerce and Economic Opportunity, social equity applicants in Illinois Adult-Use Social Equity Program, defined as either individuals with 51% ownership and control who lived in an area disproportionately impacted by cannabis related arrests and incarceration, were arrested, convicted of cannabis

related offenses, or have a parent, child, or spouse arrested or convicted for a cannabis-related offense OR have more than 10 full-time employees impacted by the same criteria - are eligible for technical assistance and individual support for licensing, legal, and loan application assistance as well as incentives for various types- of Illinois commercial cannabis license requirements including reduced feeds, and low-interest loans for starting and running a cannabis-related business (Illinois Department of Commerce & Economic Opportunity, 2022, first and second paragraph).

Maryland: Currently legal for medical-use only, voters in the State of Maryland will have the opportunity to vote on the legalization of recreational adult-use cannabis in November 2022. Under language passed in the revised bill HB837, a Cannabis Business Assistance Fund in the Maryland Department of Commerce would provide financial and technical assistance to minority and women owned businesses entering the industry as well as “grants to Historically Black Colleges and Universities for cannabis-related programs and business development organizations” (Cannabis Reform Act, 2022, p. 6).

Massachusetts: The Massachusetts Cannabis Control Commission oversees two programs whose purposes are to enable “full participation in the marijuana industry by people from communities that have previously been disproportionately harmed by marijuana prohibition and enforcement, and to positively impact those communities” (Equity Programs, n.d., first paragraph). Massachusetts’ Social Equity Program (SEP) prepares applicants who qualify for the Cannabis Control Commission licensing process. There are four SEP “tracks” offered: Entrepreneur, Core, Entry, and Ancillary. These tracks allow applicants to tailor their experiences based on their specific goals for entering the Massachusetts cannabis industry. All tracks offer free technical assistance in addition to a waiver of a number of associated fees such as application fees, and a 50% reduction of the annual license fee. The Certified Economic Empowerment Priority Applicant status allows individuals who meet three out of six criteria to receive priority review and licensing decisions from the Cannabis Control Commission. The criteria for this applicant status include having lived in an Area of Disproportionate Impact (as defined by the Commission’s mandate) for five to 10 years and/or employee or subcontract with (at least 51%) individuals who have a criminal record but can otherwise legally work in a cannabis business.

Michigan: The Michigan Cannabis Regulatory Agency (2022a) provides three major programs that focus on promoting social equity in their state’s cannabis industry: the Social Equity Program, Social Equity All-Star Program, and the Joint Ventures Pathway Program. Like other state programs described here, Michigan’s Social Equity Program (2020, p. 1) dictates that individuals applying should meet several criteria including living or operating in a community impacted by the War on Drugs and/or be convicted of a cannabis-related offense. Depending on the number of criteria met, applicants receive a discount on their application fee ranging from 10% to 40% (Social Equity Program, State of Michigan, 2020, p. 1). The Joint Ventures Pathway Program was created based on the recommendation of the State’s Racial Equity Advisory Workgroup as another avenue to address racial inequities in Michigan’s growing cannabis industry (Michigan Cannabis Regulatory Agency, n.d., first paragraph). The program connects social equity program applicants and participants with established businesses, providing opportunities for business growth and mentorship. The Social Equity All-Star program awards Michigan Cannabis Regulatory Agency (2022b, first paragraph) licensees with either a gold, silver, or bronze award based on their level of demonstrated commitment to social equity commitments within Michigan’s cannabis industry. In addition to these social equity programs,

Michigan’s Cannabis Regulatory Agency provides a number of recorded educational workshops and materials on operating a cannabis-based business in the state, for free through their website.

Ohio: Original to the 2016 law legalizing the medical-use of cannabis, 15% of legal cannabis-related business licenses (cultivators, dispensaries, and processors) were set aside for minority-owned business, however this provision was struck down in 2018 and 2019 by Ohio courts. Proposed legislation in HB 382, introduced in the Ohio House in July 2021, would offer expungement opportunities for individuals with cannabis-related offenses and language encouraging the creation of a plan to support communities disproportionately impacted by cannabis enforcement (The Ohio State University Moritz College of Law Drug Enforcement & Policy Center, 2022). As of April 2022, HB 382 still has not had its first hearing in the Ohio House (Trau, 2022).

Pennsylvania: Medical use of cannabis was legalized in Pennsylvania in 2016 and included a number of social equality provisions, which can be observed in the Department of Health’s (Pennsylvania Department of Health, 2018) permit application for a medical marijuana organization (grower, processors, and dispensaries) which requires applicants to outline diversity practices and goals for specific “point allocations” toward the awarding of limited licenses. Like Ohio, recent proposed legislation looking to legalize adult-recreational cannabis use, include a number of social equity programs similar to what has been outlined in other states here (Cann, 2022).

Industry, nonprofit & corporate support

American industry, nonprofit, and corporate organizations provide social equity resources and support at a national level (no residency restrictions) for cannabis entrepreneurs, particularly entrepreneurs of color. The following were chosen to illustrate the range of available resources for minority entrepreneurs in the industry, from mentorship and education to policy development, advocacy, and legal and marketing support. These organizations were selected based on recommendations from industry experts and information professionals present at The Invisible Industry: Resources for Supporting Cannabis Entrepreneurs mini-conference, and were checked in the nonprofit database GuideStar to ensure organizations were involved both in the cannabis industry as well as in community and economic development.

While these organizations all have a national reach, there are many state-level organizations—industry associations, private business, trade association, and nonprofits—working at the intersection of cannabis and social equity; the California Cannabis Industry Association, The Cannabis Alliance, Cannabis Workers Coalition, Social Equity Owners & Workers Association, and California Urban Partnership Institute for MORE are just a few examples that serve communities on the west coast of the United States. Librarians and researchers are encouraged to explore organizations that focus and/or operate at the state and local level for relevant social equity programs or initiatives in their regional cannabis sector. URLs for these organizations can be found in Appendix A.

Cannaclusive works to “facilitate fair representation of minority cannabis consumers” (Pryor, M. quoted in Shapiro, 2020, para. 2). Founded in 2017, this privately held company provides a free stock photo gallery representing diverse perspectives of cannabis use and conception as well as InclusiveBase a searchable database of cannabis and cannabis culture brands, companies, and products owned and/or operated by women and people of color. Cannaclusive also created The Accountability List, a searchable database listing cannabis brands.

The Hood Incubator is a California-based nonprofit and business accelerator that provides mentorship, advocacy, and workforce development programs to support people-of color working in and starting businesses in the cannabis industry. Self-described as a pipeline for people of color to take full advantage of legalized cannabis, the Hood Incubator is actively working to secure investors to provide an investment fund “targeted specifically toward black and brown cannabis” (Mohan, 2018, para. 7). The Hood Incubator supports affiliates in Chicago, New York, Los Angeles, and Oakland.

Minority Cannabis Business Association (MCBA) is an Oregon-registered nonprofit business league and the first 501(c)6 to specifically focus on the needs of minority cannabis entrepreneurs, consumers, and workforce. The MCBA conducts policy work on cannabis regulation and legalization and serves as a clearinghouse of information for its members on developing a cannabis business and accessing related data and research (Minority Cannabis Business Association, 2021, “Homepage”). MCBA leverages its network to connect and support Black, Indigenous, and People of Color (BIPOC) cannabis entrepreneurs and consumers with brands and businesses that can best support them.

The National Cannabis Industry Association (NCIA) is self-described as one of the “oldest, largest, and most inclusive trade associations representing legal cannabis businesses” (National Cannabis Industry Association, 2022, “About Us” section). In addition to the podcast “NCIA’s Cannabis Minority Report,” which highlights issues related to social equity in the cannabis industry, NCIA also offers various programs and opportunities that highlight members of color in the cannabis industry through their DEI program.

The National Diversity and Inclusion Cannabis Alliance (NDICA) is a 501(c)3 that provides job fairs, expungement clinics, mentoring programs, vocational training, and other services. The ultimate mission of the organization is to reduce barriers to entry into the cannabis market for individuals and communities negatively impacted by the War on Drugs (National Diversity & Inclusion Cannabis Alliance, 2022, first paragraph). With programming in Los Angeles, Detroit, Chicago, and Fresno as well as online, NDICA offers a tiered membership that provides both novice and experienced cannabis and hemp entrepreneurs access to resources.

Our Academy is a volunteer-run, nonprofit (under fiscal sponsorship of SIMA Studios) that supports BIPOC and social equity applicants (SEA) wanting to operate in the cannabis industry through mentorship, networking, and resource support. Based in California, Our Academy provides access to its network of mentors and programs to cannabis entrepreneurs and SEAs across the country. In a 2021 High Times article, Our Academy co-founder Timeka Drew highlighted that a majority of SEAs she interviewed indicated that the “lack of a real network” was their biggest issue to effectively compete in the cannabis marketplace (Says, 2021, “Tackling Legal and Financial Risks” section). Hoping to help fill this gap, Our Academy focuses on connecting BIPOC entrepreneurs with successful, established cannabis-based entrepreneurs, creating networks and lasting mentor-mentee relationships in the cannabis industry.

Social equity in Canada

Federal, nonprofit, and corporate support

While the term “War on Drugs” was not formally in use, Canada’s drug enforcement practices disproportionately impacted minorities and residents of color (Owusu-Bempah, 2021). The Ontario Human Rights Commission (2020) Second interim report on the inquiry into racial

profiling and racial discrimination of Black persons by the Toronto Police Service concludes that between 2013 and 2017, Black people were “4.3 times more likely to be charged with cannabis possession offences than their representation in the general population would predict” even considering that cannabis use among Black people in Canada is similar to that of white people (“Cannabis and drug possession” section). In terms of legal Canadian cannabis company leadership, a 2020 policy brief from the Center on Drug Policy Evaluation at the University of Toronto examining diversity in Canada’s legal cannabis industry found that only 2% of C-suite executives in the 222 organizations surveyed were Indigenous Canadians and 1% were Black Canadians (Maghsoudi et al., 2020).

Like in the United States, individuals with criminal records continue to face additional burdens when trying to enter into the legal cannabis market. Bill C-93, introduced in March of 2019, provided an avenue for an estimated 100,000 – 500,000 Canadians convicted of simple cannabis possession to suspend their related criminal records (Cannabis Amnesty, n.d.). However, information provided to the Canadian Broadcasting Corporation from the Canadian Parole Board indicates that only approximately 500 cannabis record suspensions were issued between August 2019 and October 2021 (Jabakhanji, 2021). The Center on Drug Policy Evaluation policy brief found that “[w]hile there have been some limited initiatives to facilitate greater industry diversity, there is a notable absence of government regulation and adoption of programs that would structurally address the underrepresentation of racialized groups that were disproportionately targeted and punished under prohibition” (Maghsoudi et al., 2020, “What this means for public policy”).

As with Native American tribes in the United States, Canada’s First Nations, Metis, and Inuit peoples have the right to write their own cannabis laws and regulations as it relates to the production, distribution, and sale of cannabis. With a noted lack of programs and regulation at the federal level aimed at creating a more equitable cannabis industry, grassroots organizations such as the National Indigenous Medical Cannabis Association and the Campaign for Cannabis Amnesty continue to provide services, resources, and political pressure to create a more equitable cannabis industry in Canada. In 2021, the Assembly of First Nations requested the Canadian federal government remove regulatory barriers that exclude First Nations’ people, who make up only 5% of Canada’s federal license holders and only 1% of whom have businesses on reservations, from Canada’s legal cannabis marketplace (Lamers, 2021).

Outside of nonprofits and grassroots organizations, Canadian cannabis companies like Aurora Cannabis, Royal City Cannabis, and Thumbs Up Brand have provided monetary and promotional support for social equity campaigns specifically in Canada (Ontario Cannabis Store, n.d.).

Research challenges, strategies, and resources

The lack of federal approval of recreational and medical cannabis inhibits national data collection or access in the U.S. While some industry research companies publish U.S. reports on cannabis industries, illegal commerce is typically not included, thereby excluding states without legalization and leaving the picture incomplete for researchers seeking an accurate market size. The illegal sale of cannabis encompasses a gray and black market that accounts for a significant share of the industry (Euromonitor, 2022). Neither the U.S. Census’ American Community Survey nor the Bureau of Labor Statistics’ Consumer Expenditure Survey includes any questions related to cannabis. NAICS-based datasets covering the United States, such as the Economic

Census and County Business Patterns, have little value when researching cannabis industries. U.S. researchers seeking a national picture must deal with varying state-level regulations and data within the states that have legalized recreational and/or medical cannabis.

Terminology varies based on geography, as Canada and other countries which have adopted legalization have foregone official use of the term “marijuana,” still widely in use in the U.S., in favor of “cannabis,” seen by many as “an alternative and more neutral name for the drug” (Mikos & Kam, 2019, p.1). When selecting keywords for search terms, we recommend including synonyms like “cannabis,” “marijuana,” and optionally “hemp,” which can serve as a catchall term for the plant. At the retail end of the industry, the term “dispensaries” will limit the results from an industry which also includes pharmacies, drug stores, and other retail outlets including e-commerce.

One of the research challenges for cannabis entrepreneurs is defining the specific industry for which research and data are needed (Phillips & Ormsby, 2016). Librarians and researchers often confront the shortcomings of industry classifications like the North American Industry Classification System (NAICS) when researching new and emerging industries, and cannabis is no exception. Coding bodies have historically been slow to update to accurately reflect industry development and change, and have opted not to measure illegal and underground markets and economies (Boettcher, 1999). While NAICS 2022 explicitly aims to improve representation of the “digital economy” (Statistics Canada, 2022c, para. 2), a welcome relief to many technology entrepreneurs and librarians doing market research, distinguishing cannabis from other players in miscellaneous classifications remains a frustration for researchers. Additionally, many databases were still using 2017 codes at the time of writing.

Research resources by source type

Aside from the lack of U.S. federal regulation and data, entrepreneurs, librarians, and researchers can access cannabis industry research resources much in the same way that other new and emerging industries are researched. Industry research takes a broad view that incorporates business sources such as public and private company information, consumer research, government legislation, policy, and statistical information, and third-party financial analysis. Drawing on a range of resource types and sources can provide a more complete picture of the industry. This section focuses on free sources as well as databases available in many North American academic or research libraries. The information provided is based on reviews conducted in May 2022.

Industry classifications

A keyword search for “marijuana” in the NAICS 2022 version (U.S. Census Bureau, 2022) returns four hits (Figure 2). NAICS U.S. 2017 and 2022 codes reflect the liminal legal status of cannabis in that country. For instance, the keywords “Marijuana, grown in an open field” is listed under All Other Miscellaneous Crop Farming (NAICS 111998). Similarly, “Marijuana stores, medical or recreational” is listed under All Other Miscellaneous Store Retailers (except Tobacco Stores) (NAICS 453998). The NAICS U.Statista, 2022 structure moved “Marijuana stores, medical or recreational” to Tobacco, Electronic Cigarette, and Other Smoking Supplies Retailers (NAICS 459991), the only marijuana-related change between the NAICS U.S. 2017 and 2022 codes. For a comparison of NAICS U.S. and Canadian codes and classifications, please refer to

Figure 2. Given the limited value of NAICS codes for this industry, some databases have opted for alternative classifications. Examples are provided below.

Released by Statistics Canada in September 2018, NAICS Canada 2017 Version 3.0 was created primarily to account for new cannabis-related industries in agriculture, manufacturing, wholesale and retail trade (Statistics Canada, 2018). These new classifications may be of interest to those in other countries including the U.S., where similar changes may occur as regulation evolves. Cannabis is disambiguated from sector counterparts by unique six-digit codes that enable researchers to more accurately identify companies and segmentations. However, the Canadian codes, marked with a superscript to denote Canadian class only, are not used by many large company databases, with exceptions noted in individual resource descriptions below.

A keyword search of the NAICS Canada 2017 database produces 15 six-digit codes, five of which are specific to cannabis (Statistics Canada, 2018). The agricultural industries Cannabis Grown Under Cover (NAICS 111412) and Cannabis Grown in Open Fields (NAICS 111995) make no distinction between medicinal or recreational use. Other new codes included Cannabis Product Manufacturing (NAICS 312310), Cannabis Merchant Wholesalers (NAICS 413410), and Cannabis stores (NAICS 453993). The remaining codes reflect the broad extent to which cannabis has integrated into the Canadian economy, from Pharmaceutical and Medicine Manufacturing (NAICS 325410) to Local Messengers and Local Delivery (NAICS 492210). The NAICS 2022 Version 1.0 update produced 14 results, reflecting the discontinuation of Electronic Shopping and MailOrder Houses (NAICS 454110), as described in the introduction of Statistics Canada (2022c).

NAICS U.S. 2022*		NAICS Canada 2022 Version 1.0**	
Code	Classification	Code	Classification
111419	Other Food Crops Grown Under Cover Common keywords: "Marijuana, grown under cover"	111412CAN	Cannabis grown under cover
111998	All Other Miscellaneous Crop Farming Common keywords: "Marijana, grown in an open field"	111995CAN	Cannabis grown in open fields
-	-	312310CAN	Cannabis product manufacturing
424590	Other Farm Product Raw Material Merchant Wholesalers	412410CAN	Cannabis merchant wholesalers

	Common keywords: “Marijuana merchant wholesalers”		
453998	Tobacco, Electronic Cigarette, and Other Smoking Supplies Retailers Common keywords: “Marijuana stores, medical or recreational”	453993CAN	Cannabis retailers

* The NAICS U.S. 2022 codes moved “Marijuana stores, medical or recreational” to *Tobacco, Electronic Cigarette, and Other Smoking Supplies Retailers* (NAICS 459991)

** NAICS Canada 2022 changed “Cannabis stores” to “Cannabis retailers” but codes remain unchanged (NAICS 453993)

Figure 2. NAICS codes for cannabis industries in Canada and the U.S.

Government information resources

U.S. government resources

Information from U.S. federal departments and agencies is limited. In some cases, research on these websites points out what cannot be done or the assistance that cannot be received. However, businesses participating in the cannabis industry where it has been legalized are still required to pay taxes on their income, and the Internal Revenue Service website includes lengthy information on that topic. Additionally, the U.S. Food and Drug Administration and Centers for Disease Control and Prevention include resources and updates pertaining to regulations and public health which may have relevance to researchers depending on their area of focus.

Rather than relying on federal sources of information, researchers can use aggregated resources developed by cannabis organizations or state/ local government associations for a broader picture of legalization in the United States and information about state cannabis laws in one place. Examples include the National Cannabis Industry Association and the National Conference of State Legislatures. States where cannabis has been legalized for recreational and/or medicinal use will have online resources for navigating licensing requirements and regulations.

For US federal and state resource URLs, please refer to Appendix B.

Canadian government resources

The Canadian federal government has compiled legal, health, and business information for commercial and consumer audiences on a one-stop-shop Cannabis portal on the Canada.ca website. As with analogous products such as tobacco and alcohol, regulatory oversight for cannabis is under the domain of Health Canada, but the information provided on the portal comes from a variety of governmental sources. Two main survey products of interest are the annual Canadian Cannabis Survey, which has measured consumer activity and sentiment since

2017 (Health Canada, 2021), and the market data collected under the Cannabis Tracking System, under which federal and provincial medical and recreational license holders submit monthly reports (Health Canada, 2022b, March 24). Both inform the data provided on the Cannabis portal.

On that portal, one section of interest to entrepreneurs looking to enter the industry is the Producing and Selling Cannabis page, which includes a link to the online license application portal, a list of licensed producers and sellers, regulatory and import/export guidelines, fact sheets, publications, and more. Another page of interest is the Cannabis research and data page, which links to 2021 results from an annual Canadian consumer survey on cannabis conducted by Health Canada, as well as health and market data, information on the federal research strategy and grant funding opportunities, and a cannabis statistics hub.

Beginning in January 2018, Statistics Canada crowdsourced cannabis prices based on consumers “last purchase of dried cannabis” (2022a) and made the resulting statistics available online as part of the Cannabis Stats Hub. Released in January 2018, the hub collected statistics on health, justice, economy and prices from survey products such as the Canadian Community Health Survey. The hub has since been archived, but the statistical information is still available in tables listed in Statistics Canada (2022a), or found via keyword search of the Statistics Canada Data portal.

Provinces and territories

Canadian provincial and territorial governments maintain online resources detailing aspects of the industry under their respective jurisdictions, as well as provincial e-commerce sites where applicable.

For Canadian federal and provincial/territorial resource URLs, please refer to Appendix C.

Subscription resources

This section focuses on a typical selection of fee-based resources such as databases commonly found at North American academic or research libraries. For URLs, please refer to Appendix D.

Industry and market databases

Several subscription industry and market databases cover the cannabis industry. While some recent research provides lists of top business databases in academic libraries (Gottfried, 2010; Kim & Wyckoff, 2016), these tend to focus on article databases and company profiles, rather than the industry reports and statistics and private company information that entrepreneurs often seek (C.f. Buschert et al., 2020; Gupta & Rubalcaba, 2022; Liu, 2021; McKeown, 2010, among others). Therefore, we broadened the scope to include specialized resources which addressed these needs, a selection of which can be found at business school or larger public libraries. The following reflect collections accessed in May 2022. The list is limited to databases for which a dedicated Cannabis industry report was available; cannabis may be mentioned in other industry reports by other vendors. Entrepreneurs will need to check with their local academic and public libraries regarding terms of access.

BizMiner: The BizMiner database provides national, regional, and local industry sizing and performance data, while also providing financial benchmarking of industries. Medical Marijuana Stores (NAICS 446110.08) is an 8-digit NAICS code used in BizMiner, with data

from 2,527 establishments as of May 15, 2022. (DataAxle is one source of BizMiner data, so this BizMiner dataset likely reflects classifications made by DataAxle.)

Euromonitor Passport: Euromonitor’s Passport product provides an industry overview via an interactive visual dashboard, as well as analysis and statistics. Industry and market data covers medical, recreational (“adult use”), and CBD categories. Industry benchmarking includes statistics on pricing and format presence in 20 countries in North and South America, Europe, Middle East and Africa, and Australasia. Consumer survey data explores usage and perception by geographic and demographic segmentation. Country reports are updated annually and provide market sizing (in dollars and consumers), brands, cannabinoids, and distribution; as well as production, legislation, distribution, and taxation information, and take into account “illicit” or black-market activity. In May 2022, the latest global results available were for 2021. Analysis tracks the evolution of the industry with a focus on consumer markets.

IBISWorld: IBISWorld’s annually produced reports are useful introductions into what are often target industries for entrepreneurs in business-to-business markets. Reports include industry definitions, key stats such as revenue and segmentation, industry performance drivers and outlook, products and markets, competitive landscape analysis and benchmarking, major players including market share, operating conditions, and key financial statistics including historical performance data and industry ratios (IBISWorld, n.d.-a). Searches for “cannabis” and “marijuana” produce slightly different lists of results, with six core reports including two dedicated industry reports Cannabis Production in Canada (NAICS^{CAN} 11141) and Small Specialty Retail Stores in Canada (NAICS^{CAN} 45399a) and four relevant U.S. specialized industry reports covering “small or new industries...that follow [the] standard report format and complement [the] NAICS collection” including marijuana growing, stores, dispensaries and CBD product manufacturing (IBISWorld, n.d.-b). Ten more reports on peripheral Canadian or American industries contain at least one instance of one or the other search term. At the time of searching (May 2022), the majority of these reports were from 2021; all IBISWorld reports are updated at least annually.

Mintel: Mintel report categories reflect evolving consumer markets, with four U.Statista, 2022 reports on recreational and CBD consumers, as well as health and food and drink markets (as of May 2022). Four 2021 reports focus on CBD (non-psychoactive) industries in the U.S., as well as three reports on packaging, health, and recreational consumer markets. One Canadian 2021 report focuses on food and drink. Mintel reports are updated annually and contain market and consumer as well as product information such as detailed lists of ingredients, and an interactive databook of consumer survey data downloadable in spreadsheet format.

Statista: Statistical aggregator and discovery database Statista produces individual charts as well as “dossiers” on topics including recreational and medical use in Canada and the United States, compiling statistical charts relevant to the topic from social surveys from federal agencies as well as third parties. Introductions include definitions and key figures, making these products function as brief industry reports. Content includes global and U.S. market size, sales and product market share information, as well as production numbers, consumption statistics, and state-by-state sales figures (Statista, 2021). Some data are older than the dossier date of publication; for instance, the 2021 dossier “Recreational cannabis in the U.S.” includes statistical base years ranging back to 2017, while “Medical marijuana in Canada” includes charts from 2015 onward.

Company databases

CB Insights: Absent an industry classification, the best way to access company profiles is via the platform's Expert Collection of 3834 cannabis startups, defined as privately-held companies that "participate in - or service businesses that participate in - the legal cannabis industry" including cannabis, hemp, and all derivatives (Cannabis - Expert Collection), of which 2359 were tagged as U.S.-based and 807 as Canadian companies as of July 2022. The collection of "plant-touching" and "non-plant-touching" businesses range from agricultural producers to clothing companies. Without an industry category, no aggregated investment figures are available via the platform's Industry Analytics tool; however, companies can be segmented via the market map tool, and investor activity can be tracked on a deal, company or investor level via advanced search, building a custom list of comparable companies.

DataAxle Reference Solutions: DataAxle Reference Solutions (formerly ReferenceUSA) provides several unique SIC codes in its U.S. Businesses module, including:

019106 Marijuana Growers/Cultivators (613 hits as of July 27, 2022)

512227 Marijuana Dispensary (4,483)

512227212 Medical (Marijuana Dispensary) (653)

512227217 Recreational (Marijuana Dispensary) (663)

873459 Cannabis: Laboratory Testing (89)

These unique SIC codes are also used in the DataAxle Canadian Businesses database. Here are the number of hits for Canada:

019106 Marijuana Growers/Cultivators (84 hits as of July 27, 2022)

512227 Marijuana Dispensary (526)

512227212 Medical (Marijuana Dispensary) (28)

512227217 Recreational (Marijuana Dispensary) (3)

873459 Cannabis: Laboratory Testing (59)

As a new and fast-growing set of industries, the classification of these establishments in DataAxle's coverage of the industry will certainly evolve as establishments are founded and go out of business. Specialized industry codes might be added or changed.

Mergent Online: Mergent U.S.A and International company databases are searchable by primary SIC, NAICS U.S., or FTSE Russell Industry Classification Benchmark (ICB). For example, international cannabis research, cultivation, and distribution company Tilray is listed as follows:

Marijuana Producers (ICB 20103020)

Medicinals and Botanicals (SIC 2833)

Medicinal and Botanical Manufacturing (NAICS 325411)

As of July 28, 2022, a search on ICB 20103020 produced a list of 74 public companies from around the world focused on cannabis production. NAICS 325411 produced a more diluted list of 1079 public and private companies—of which 109 are Canadian and 128 are U.S.-based—and SIC 2833 resulted in 3463 public and private companies, of which 108 were Canadian and 448 were U.S.-based. Mergent does not make use of the NAICS Canada 2017 version 3.0 codes which would be more useful to the entrepreneur seeking to narrow in on a list of cannabis producers.

Pitchbook: Pitchbook’s industry verticals are groups of companies with shared characteristics that span multiple industries. Their Cannabis vertical includes 5,032 primarily private companies “involved in production, retail distribution, digital media, therapeutics, business solutions, or the development of consumer products related to cannabis. This includes cannabis dispensaries, laboratory testing equipment and services, medical marijuana, cannabinoid-based pharmaceuticals, vaporizers and accessories, cannabis cultivation, and online content and networking related to cannabis.” (Pitchbook, n.d.) Of these, 1,092 were Canadian, 3,222 were American, and the remainder from locations around the world as of August 2022 (Pitchbook, n.d.). Data can be tracked on the company, deal, or investor level. The platform’s market size estimation tool calculates a median size from available reports and analyst sources by year at the global, country, region, or American state level.

PrivCo: PrivCo assigns keywords to the United States private companies it covers, in addition to providing its own taxonomy of industries and sub-industries. “Cannabis” is one keyword available and is assigned to 481 private companies as of July 29, 2022. PrivCo can also be used to identify cannabis-related private companies that have been acquired by holding companies or publicly-traded companies.

Free and open resources

The following resources are freely accessible online. Users might be asked to provide an email address or other data to access the free content. Please refer to Appendix D for URLs.

Consulting firms

We searched the Canadian and U.S. websites for the major consulting firms, including Bain, Deloitte, Ernst & Young, KPMG, McKinsey, and PricewaterhouseCooper, in May 2022. In order to identify relevant industry analysis and reports of use to entrepreneurs, we used the search terms “cannabis” or “marijuana” via the company website search function. If that produced no results, we double-checked using an advanced Google search (e.g., “cannabis site: <https://www.mckinsey.com/ca>”). The four resulting resources, listed below, can be accessed for free. Note: Results such as staff profiles were not included.

Deloitte Canada: Deloitte’s U.S. site is largely silent on the industry, while the Canadian site offers six reports on cannabis industry development, consumer data, recreational cannabis, global markets, technology and others, free of charge.

EisnerAmper: EisnerAmper was the only U.S. result we found. EisnerAmper includes cannabis under manufacturing and distribution industries. The online knowledge center includes over 50 articles and blog posts on the industry from 2019 onward, as well as a May 2022 webinar on the landscape of the cannabis industry. To view, an email address must be provided.

Ernst & Young (E&Y) Canada: The E&Y cannabis portal provides seven free articles with analysis and strategic advice on various aspects of the cannabis industry, dated from 2017 to 2021.

PricewaterhouseCoopers (PwC) Canada: Cannabis is not listed in PwC's U.S. Industries list. In Canada, the consultancy website provides access to 12 free reports on the industry landscape, supply chain management, international markets, mergers and acquisitions, operating models, technology, and other topics.

Industry associations

Industry and trade associations support members through a variety of activities, including advocacy, lobbying, education, research, and funding opportunities. While the following list includes examples of U.S. and Canadian associations, researchers will also find that state and regional organizations provide access to similar data types and business support within a narrower geographic focus. The associations listed below, accurate as of May 24, 2022, were identified through a Google search of cannabis professional associations and a listing on the Cannabis Business Times (2022).

Association of Canadian Cannabis retailers

An industry advocacy group made up of private cannabis retailers mandated to “promote, and advocate for private cannabis retailers to the government at all levels” (Association of Canadian Cannabis Retailers, 2021). The Resources section includes legislation, educational materials, research, and association publications such as briefings and government submissions.

Cannabis council of Canada

The national and international representative of Canada's licensed producers and processors of cannabis. C3's mission is to “promote industry standards, support the development, growth, and integrity of the regulated cannabis industry, and serve as an important resource on issues related to responsible use of cannabis for medical and non-medical purposes” (Cannabis Council of Canada, 2021). The Advocacy section of their website provides links to materials such as the “Not Done Yet Report Card” which contextualizes the industry within Canadian society and economy.

The Cannabis business association

The Cannabis Business Association has supported legalization efforts in the United States since 2007 (The Cannabis Business Association, 2019). The association also advocates for the development of corporate standards and regulatory practices that are in the best interests of all parties, including business owners, workers, and government entities.

Minority Cannabis business association

The MCBA supports American minority cannabis business owners and communities through education and advocacy for fair policy at the federal, state, and local levels (2021). Additionally,

they support community programs such as cannabis conviction expungement clinics and promotion of safe cannabis use.

The National Association of Cannabis businesses

Founded in 2017, the NACB focuses on best practices for the cannabis industry at every level from operators to industry workers and related services (2022). The NACB developed national standards in eleven categories, which have been voted on and approved by members. Most of the approved standards include self-audit checklists.

National Cannabis industry association

An American trade association representing industry operators. The organization lobbies lawmakers in Washington, DC for more favorable cannabis legislation (2022). The News and Resources section of their website includes a blog, podcast, industry reports and webinars.

National Hispanic Cannabis council

Similar to other associations, the NHCC provides advocacy for policies beneficial to the cannabis industry, but with a focus on Hispanic access to business and legal information to grow their cannabis businesses (National Hispanic Cannabis Council n.d.). Some legal research is behind a members-only paywall, but some webinars and a quarterly newsletter are freely available.

Specialized cannabis data and analytics firms

Similar to other emerging industries, cannabis has sprouted a field of boutique data and analytics firms aimed at a clientele of cannabis companies across the supply chain, of which the following are only a selection. The following were found via a web search engine search for “market research cannabis” and “U.S. cannabis market projections” on June 7, 2022. Check their websites for reports, blogs, and other potential sources of free information.

Headset

Headset is a business intelligence platform that uses, in part, retailer point-of-sales information for data collection (Headset, 2022). Registering for Headset Insights Pulse is free. Other levels of subscription service provide access to market information, demographic data, and software for businesses at every stage of cannabis cultivation and sales as well as ancillary services. The Headset blog includes broad overviews of trends in both the United States and Canada.

BDS analytics

BDSA provides market research and research through several products covering consumer profiles, forecasts, pricing analysis, and industry news (BDSA, 2022). The BDSA blog and select briefs and webinars are available for free, while other information requires a paid account and login credentials. While blog posts and free content cover both Canada and the United States, the majority of entries focus on the U.S. primarily.

New frontier data

Founded in 2014, New Frontier Data provides consumer data and industry analysis, with “a neutral position on the merits of cannabis legalization” (New Frontier Data, n.d., “About-us”

section). Free content included on their website include a blog, podcast, newsletters, and select reports available for free download. Other subscription or account-based services and resources include marketing tools, Hemp Business Journal, and portals of consumer and industry data.

Strainprint

Strainprint is a Canadian-based data and analytics firm founded in 2016 with a focus on medicinal use of cannabis (Strainprint, 2022). Products include customized research and information packages and platforms designed for growers, retailers, medical marijuana clinics, and researchers. Free content on their website include their blog and select survey reports on topics including cannabis edibles and the impact of cannabis on sex. Also available for free are databases and listings of cannabis strains and products, symptoms, Canadian retailers, and brands.

Conclusion

Cannabis entrepreneurship provides librarians and researchers all the usual challenges of researching entrepreneurial ideas: the limited support of NAICS coding, a lack of consumer spending and other psychographic data, rapid changes in the competitor base, and a demand for reports and data from expensive vendor databases. Cannabis entrepreneurship also has its special challenges of no U.S. federal support and regulations, and the varying levels of support, regulation, and data from the Canadian provinces and U.S. states. As government regulations continue to evolve and the industry continues to grow, additional resources will become available, and some older resources will fade in usefulness. Yet the growth potential in this industry—and the opportunities for social equity, given the racist legacy of the War on Drugs—should encourage librarians and researchers to actively support our local cannabis entrepreneurs. The authors hope that the background information, strategies, and resources covered in this article will assist in that important work.

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Appendices

Appendix A: Social equity resources

Industry, Nonprofit & Corporate Support for Minority-Owned Business Enterprises in the United States

- The Accountability List <https://docs.google.com/spreadsheets/d/1V0xjGpl4m6mNtC1BKEbtvTfjzm19o3OpZSeqBiFKCh8/edit#gid=0>
- California Cannabis Industry Association
<https://www.cacannabisindustry.org/accountability-report/>
- California Urban Partnership Institute for MORE
<http://www.californiaup.org/institute-for-more.html>
- The Cannabis Alliance <https://thecannabisalliance.us/what-we-do/#social-equity>
- Cannabis Workers Coalition <https://www.cannabisworkerscoalition.org/>
- Cannaclusive <https://www.cannaclusive.com/>
- The Hood Incubator <https://www.hoodincubator.org/>
- InclusiveBase <https://www.cannaclusive.com/inclusivebase>
- Minority Cannabis Business Association <https://minoritycannabis.org/>
- The National Cannabis Industry Association
<https://thecannabisindustry.org/ncias-diversity-equity-and-inclusion-programs/dei-program-mentorship/>
- The National Diversity and Inclusion Cannabis Alliance <https://www.thendica.org/>
- Our Academy <https://thisisourdream.com/our-academy/>
- SIMA Studios <https://simastudios.org/>
- Social Equity Owners & Workers Association <https://www.seowa.org/>
- Industry, Nonprofit, & Corporate Support for Minority - Owned Business Enterprises in Canada***
- Aurora Cannabis Inc - <https://investor.auroramj.com/social-responsibility/>
- Campaign for Cannabis Amnesty - <https://www.cannabisamnesty.ca/>

National Indigenous Medical Cannabis Association - <https://indigenousmedicalcannabis.wordpress.com/>
Royal City Cannabis Co - <https://royalcitycannabis.co/#home>
Thumbs Up Brand - <https://www.thumbsupbrand.com/10-for-good>
Canadian & United States Social Equity - Related Federal Legislation
1984 Sentencing Reform Act - <https://www.congress.gov/bill/98th-congress/housebill/5773>
1986 Anti-Drug Abuse Acts - <https://www.congress.gov/bill/99th-congress/housebill/5484>
1988 Anti-Drug Abuse Act - <https://www.congress.gov/bill/100th-congress/housebill/5210>
Marijuana Opportunity Reinvestment and Expungement Act or the MORE Act (H.R.3617) - <https://www.congress.gov/bill/117th-congress/house-bill/3617>
Parlement of Canada Bill C-93 - https://lop.parl.ca/sites/PublicWebsite/default/en_CA/ResearchPublications/LegislativeSummaries/421C93E
United States Social Equity - Related State Legislation & Programs
2018 California Cannabis Equity Act - https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1294
Colorado Department of Revenue Marijuana Enforcement Division (MED) Social Equity Program - <https://sbg.colorado.gov/social-equity>
Illinois Adult-Use Social Equity Program - <https://www2.illinois.gov/dceo/CannabisEquity/Pages/default.aspx>
Maryland HB837 - <https://mgaleg.maryland.gov/2022RS/bills/hb/hb0837F.pdf>
Massachusetts Cannabis Control Commission - <https://masscannabiscontrol.com/>
Michigan's Cannabis Regulatory Agency - <https://www.michigan.gov/cra>
Ohio HB 382 - https://search-prod.lis.state.oh.us/solarapi/v1/general_assembly_134/bills/hb382/IN/00/hb382_00_IN?format=pdf
Pennsylvania Department of Public Health Application for a Medical Marijuana Organization - <https://www.health.pa.gov/topics/Documents/Programs/Medical%20Marijuana/DOH%20-%20Instructions%20Phase%20II.pdf>

Appendix B. US government resources

Federal government resources

National Cannabis Industry Association and the National Conference of State Legislatures <https://thecannabisindustry.org/ncia-news-resources/state-by-state-policies/>
National Conference of State Legislatures: <https://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>
U.S. Food and Drug Administration <https://www.fda.gov/consumers/consumer-updates/food>
Centers for Disease Control and Prevention: <https://www.cdc.gov/marijuana/>
Internal Revenue Service <https://www.irs.gov/businesses/small-businesses-self-employed/marijuana-industry>
<https://www.irs.gov/businesses/small-businesses-self-employed/marijuana-industry-frequently-asked-questions>

State regulatory resources

Alabama	https://amcc.alabama.gov/
Alaska	https://www.commerce.alaska.gov/web/amco/
Arizona	https://www.azdhs.gov/licensing/marijuana/index.php
Arkansas	https://www.dfa.arkansas.gov/medical-marijuana-commission
California	https://www.bcc.ca.gov/
Colorado	https://cannabis.colorado.gov/
Connecticut	https://portal.ct.gov/cannabis?language=en_US
Delaware	https://dhss.delaware.gov/dhss/dph/hsp/medmarhome.html
Florida	https://www.fdacs.gov/Cannabis-Hemp
Georgia	https://www.gmcc.ga.gov/
Hawaii	https://health.hawaii.gov/medicalcannabis/
Idaho	N/A
Illinois	https://idfpr.illinois.gov/ILCannabis.asp
Indiana	N/A
Iowa	https://idph.iowa.gov/omc
Kansas	N/A
Kentucky	N/A
Louisiana	https://www.ldaf.state.la.us/medical-marijuana/
Maine	https://www.maine.gov/dafs/ocp/
Maryland	https://mmcc.maryland.gov/Pages/home.aspx
Massachusetts	https://masscannabiscontrol.com/
Michigan	https://www.michigan.gov/mra

Minnesota	https://www.health.state.mn.us/people/cannabis/
Mississippi	https://msdh.ms.gov/msdhsite/_static/30,0,425.html
Missouri	https://health.mo.gov/safety/medical-marijuana/index.php
Montana	https://mtrevenue.gov/cannabis/
Nebraska	N/A
Nevada	https://ccb.nv.gov/
New Hampshire	N/A
New Jersey	https://www.nj.gov/cannabis/
New Mexico	https://ccd.rld.state.nm.us/
New York	https://cannabis.ny.gov/
North Carolina	N/A
North Dakota	https://www.health.nd.gov/mm
Ohio	https://medicalmarijuana.ohio.gov/
Oklahoma	https://oklahoma.gov/omma.html
Oregon	https://www.oregon.gov/olcc/marijuana/pages/default.aspx
Pennsylvania	https://www.health.pa.gov/topics/programs/Medical%20Marijuana/Pages/Medical%20Marijuana.aspx
Rhode Island	https://dbr.ri.gov/office-cannabis-regulation
South Carolina	N/A
South Dakota	https://medcannabis.sd.gov/
Tennessee	N/A
Texas	https://www.texas.gov/health-services/texas-medical-marijuana/

Utah	https://medicalcannabis.utah.gov/
Vermont	https://ccb.vermont.gov/
Virginia	https://www.cannabis.virginia.gov/
Washington	https://lcb.wa.gov/
West Virginia	https://omc.wv.gov/Pages/default.aspx
Wisconsin	N/A
Wyoming	N/A
Washington, D.C.	https://abra.dc.gov/page/medical-cannabis-program
Guam	https://www.guamtax.com/ccb/index.html
Northern Mariana Islands	https://www.cnmicannabis.org/

Appendix C. Canadian government resources

Federal government resources

Government of Canada Cannabis Portal

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis.html>

Producing and selling cannabis

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/industry-licenses-applicants.html>

Cannabis research and data

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data.html>

Canadian Cannabis Survey

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/research-data/canadian-cannabis-survey-2021-summary.html>

Cannabis Tracking System

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/tracking-system/monthly-reporting-guide.html#a1>

Statistics Canada Cannabis Stats Hub (Archived):

<https://www150.statcan.gc.ca/n1/encatalogue/13-610-X>

Statistics Canada Tables from Cannabis Stats Hub

<https://www150.statcan.gc.ca/n1/en/catalogue/13-610-X>

Provincial and territorial government cannabis websites and online retail sites

Alberta

<https://aglc.ca/cannabis>

<https://albertacannabis.org/>

British Columbia

<https://www2.gov.bc.ca/gov/content/safety/public-safety/cannabis>
<https://www.bccannabisstores.com/>

Manitoba

<https://www.gov.mb.ca/cannabis/>

Licensed retailers in Manitoba may sell via online stores. There is no government operated retail store.

New Brunswick

<https://www2.gnb.ca/content/gnb/en/corporate/promo/cannabis.html>

<https://www.cannabis-nb.com/>

Newfoundland

<https://www.gov.nl.ca/cannabis/>

<https://shopcannabisnl.com/>

Northwest Territories

<https://www.ntlcc.ca/en/cannabis>

<https://www.releafnt.ca/>

Nova Scotia

<https://novascotia.ca/cannabis/>

<https://cannabis.mynslc.com/>

Nunavut

<https://www.gov.nu.ca/finance/information/liquor-and-cannabis>

Approved agents in Nunavut may sell via online stores. There is no government operated retail store.

Ontario

<https://www.ontario.ca/page/cannabis>

<https://ocs.ca/>

Prince Edward Island

<https://www.princeedwardisland.ca/en/topic/cannabis>

<https://peicannabiscorp.com/>

Quebec

<https://encadrementcannabis.gouv.qc.ca/en/>

<https://www.sqdc.ca/en-CA/>

Saskatchewan

<https://www.saskatchewan.ca/government/cannabis-in-saskatchewan>

Licensed retailers in Saskatchewan may sell via online stores. There is no government operated retail store.

Yukon

<https://yukon.ca/cannabis>

<https://cannabisyukon.org/>

Appendix D. Non-governmental subscription and free resources

Industry databases

BizMiner (<https://www.bizminer.com/>)

Euromonitor (<https://www.euromonitor.com/>)

IBISWorld (<https://www.ibisworld.com/>)

Mintel (<https://www.mintel.com/>)

Statista (<https://www.statista.com/>)

Company databases

CB Insights (<https://www.cbinsights.com/>)

DataAxle Reference Solutions (<https://www.data-axle.com/>)

Mergent Online (<https://www.ftserussell.com/data/mergent-online>)

Pitchbook (<https://pitchbook.com/>)

PrivCo (<https://www.privco.com/>)

Open web resources

Consulting firms

Deloitte Canada <https://www2.deloitte.com/ca/en/pages/consumer-industrial-products/articles/center-for-cannabis.html>

EisnerAmper

<https://www.eisneramper.com/cannabis-hemp/>

Ernst & Young Canada

https://www.ey.com/en_ca/cannabis-canada

PricewaterhouseCoopers Canada

<https://www.pwc.com/ca/en/industries/cannabis.html#publications>

Industry associations

Association of Canadian Cannabis Retailers (<https://accres.ca/>)

Cannabis Council of Canada (<https://cannabis-council.ca/>)

Cannabis Business Association (<https://www.cannabisbusinessassociation.com/>)

Minority Cannabis Business Association (<https://minoritycannabis.org/>)

The National Association of Cannabis Businesses (<https://nacb.com/>)

National Cannabis Industry Association (<https://thecannabisindustry.org/>)

National Hispanic Cannabis Council (<https://nhccouncil.org/>)

Boutique data and analytics firms Headset (<https://www.headset.io/>)

BDS Analytics (<https://bdsa.com/>)

New Frontier Data (<https://newfrontierdata.com/>)

Strainprint (<https://strainprint.ca/>)