Washington CannaBusiness Association

ECONOMIC IMPACT ANALYSIS



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High Peak Strategy LLC

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EXECUTIVE SUMMARY

In the nine years since the passage of Initiative 502 in 2012, the state's cannabis industry has worked to uphold a safe, highly-regulated, and quality-controlled market that supports economic opportunity and tax revenues for the State of Washington and its citizenry. The findings from this report illustrate how, with the right policies and regulatory framework, Washington can continue to reduce the illicit marketplace and strengthen the opportunity in regulated cannabis as a source of economic vitality for the next ten years of legal cannabis.

Adult Use Cannabis is Large and Growing

Washington's cannabis industry is large, increasing, and a significant contributor of jobs, income, and tax revenues to the State of Washington economy. In 2020, there were more than 1,600 unique businesses holding 2,795 cannabis licenses.

These operations—from growers, processors, transporters, labs, and retailers—directly employed **11,330 workers** and generated more than **\$1.4 billion in business revenues**. Between 2016 and 2020, employment among adult use cannabis-licensed businesses increased by 79%, or at a compound annual growth rate of 16%. **Total wages and supplemental benefits** paid out by cannabis businesses summed to **\$465.4 million**.

Adult Use Cannabis Businesses Drives Economic Growth

The positive economic impacts of cannabis extend to upstream and downstream businesses associated with cannabis operations and the spending of cannabis business-based income on household consumption.

Combined, the total statewide economic impact of adult use cannabis businesses in 2020 included 18,360 jobs, \$876.5 million in labor income, and \$2.7 billion in business revenues. For every 10 jobs in the cannabis industry, another six (6) are supported in other industries, such as grocery stores, restaurants, and entertainment venues. Each dollar directly generated in the adult use cannabis industry in Washington can be tied to 13 jobs across the state across multiple sectors of the economy.

Which in Turn Drives Tax Revenues

Cannabis businesses help drive tax revenues that fund public services at the state and local levels. In 2020, adult use cannabis directly generated **\$660.8** million in state excise taxes and state and local sales taxes. After adjusting for inflation, cannabis-related state taxes increased at a compound annual growth rate of 23% between 2015 and 2020. Between 2019 and 2020, cannabis excise and sales taxes increased by \$141.2 million, or 27.2% Cannabis businesses pay retail and wholesale business & occupation taxes (B&O) and, to a lesser extent, utility, and various other state taxes and fees. In 2020, the total tax impact of these activities (direct, indirect, and

WACA Cannabis Econ Analysis **induced) summed to an estimated \$695.4 million** (or \$34.7 million in taxes in addition to consumer-paying excise and sales taxes on cannabis).

Social Equity in Regulated Marketplace

Multiple states, including Washington, are in the midst of evaluating and establishing cannabis policy that reflects racial disparities in regulated cannabis. It is impossible to discuss the economic contributions and impact of the regulated cannabis industry without acknowledging the devastation caused by the "War on Drugs" in communities of color. Concerns regarding inequitable outcomes in Washington's industry are the subject of policy deliberations by the legislature's Social Equity in Cannabis Task Force. While this economic analysis does not specifically detail economic outcomes by demographic or impacted community, interviews with stakeholders engaged in the social equity work directly informed this report.

State Regulations Need to Be Reviewed to Evaluate Effects on Industry Growth

Current state regulations on adult use cannabis adversely impact business scalability. If and when federal legalization occurs, current rules and regulations will hinder the competitiveness of Washington's in-state cannabis businesses. Businesses in other states are often not subject to the same limits, such as a residency requirement for ownership, restrictions on business structure, and the current low limit on licenses for retailers. Oregon and Colorado—two states that once had restrictive residency requirements on cannabis licenses—have both repealed these rules in recognition of the unnecessary limits these rules place on in-state businesses.

Washington's Cannabis Excise Tax is the Highest in the U.S. and Helps Sustain the Illicit Market

Washington's excise tax rate on adult use cannabis of 37% is by far the largest such tax in the U.S. Washington also has one of the highest sales tax rates in the country. Combined, Washington adult use cannabis consumers pay an average tax rate—including the excise tax and state and local sale tax—of 46.2%. On the margins, this high tax rate may be pushing some consumers to purchase their cannabis products from the unregulated, untaxed, illicit market.

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INTRODUCTION

In 2012, Washington voters approved ballot initiative 502, which allowed for the legal production, sale, and consumption of recreational cannabis. Since then, the industry has grown at a rapid pace, with the number of active producer and processor licenses surpassing 1,300 in state fiscal year 2020 (Washington State Liquor and Cannabis Board, 2020, p. 13). These businesses span across the entire supply chain of recreational cannabis, from growers, processors, testing laboratories, transporters, and retail operations. This extensive value chain directly generates more than a billion dollars in business revenues and supports employment and income across the state. Taxes generated from these activities fund government services and play an important and increasing role in Washington state's general fund.

This study provides a quantitative assessment of the size, breadth, geographic scope, and economic impacts of the regulated cannabis industry in Washington state. The report also compares Washington's existing tax and regulatory policies on adult use cannabis with other states.

Findings will be used to highlight the significant and expanding role of the cannabis industry in Washington's economy and advocate for policies to support ongoing vitality of the industry in the state.

Data and Methods

This report leverages quantitative and qualitative sources and materials. These include, but are not limited to, data on production, sales, and licenses published by the Washington State Liquor and Cannabis Control Board, U.S. Bureau of Labor Statistics and Washington State Employment Security Department employment and wage data, gross business income and tax data from the Washington State Department of Revenue, and business data from the U.S. Census Bureau. Data summaries were conjoined with interviews, research in other states, reports, and news stories, among other sources.

Organization of Report

The remainder of this report is organized as follows:

- **Direct industry activities**. Jobs, income, revenues, production, and other leading indicators of the cannabis in Washington, including, when possible, breakouts by industry segment.
- **Economic and fiscal impacts**. Additional jobs, income, business sales, and tax revenues supported through upstream business-to-business transactions and household consumption.
- Activities and policies in other states. Review of policies, regulations, and scale of recreational cannabis industry in other states.
- Summary and conclusions. Review of key findings and takeaways.

CANNABIS INDUSTRY SALES, JOBS, AND INCOME

The recreational cannabis industry is an organized supply chain. At its foundation are growers, including many farming operations in Central and Eastern Washington. Some growers also have processing operations, whereas others sell their raw product to separate businesses for processing. Due to rules enacted by the Washington State Liquor and Cannabis Board (LCB), businesses or individuals cannot possess both a retail license and a producer and/or processor license. However, in the vast majority of cases, businesses own both a producer and processor license. This allows growers to capture more of the value of their cannabis product, including the value-added created from packaging, rolled joints, edibles, and other types of consumer products.

Licenses and Business Operations

According to LCB data, as of August 2021, there are 2,271 active producer and processor licenses, 11 transporter licenses, and 502 retail licenses (**Exhibit 1**). There were also an additional 11 licensed testing labs. These 2,795 active licenses are held by 1,601 unique businesses, based on 9-digit unified business identifier codes.

Of the 502 active licenses, as of August 2021, 464 reported sales in calendar year 2021. This was slightly down from 474 in 2020 and 467 in 2019 (Washington State Liquor and Cannabis Board, 2021).

Exhibit 1. Cannabis Licenses and Businesses by Category of Activity, Washington State, August 2021

| Category | Businesses | Licenses |
|---------------------|------------|----------|
| Producer/Processor* | 1,158 | 2,271 |
| Transporter** | 9 | 11 |
| Retail | 423 | 502 |
| Lab | 11 | 11 |
| Total | 1,601 | 2,795 |

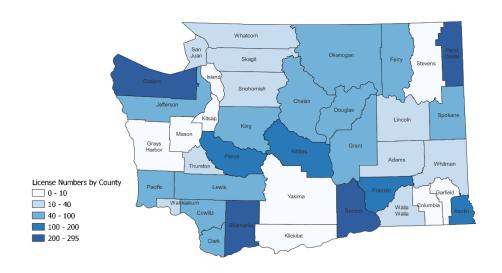
Spokane County was home to the largest number of active producer and processor licenses in the state in 2021, with 259. This was followed by Okanogan, Snohomish, and Grant counties (**Exhibit 2** and **Exhibit 3**).

¹ Active licenses in LCB data include those listed as either "Active (Issued)" and "Pending (Issued)."

Exhibit 2. Producer and Processor Licenses, Washington State, by County, August 2021

| County | Licenses |
|--------------------|----------|
| Spokane | 259 |
| Okanogan | 241 |
| Snohomish | 182 |
| Grant | 172 |
| King | 148 |
| Pierce | 132 |
| Thurston | 123 |
| Whatcom | 113 |
| All other counties | 901 |
| Total | 2,271 |

Exhibit 3. Total Licenses, All Types, by County, August 2021

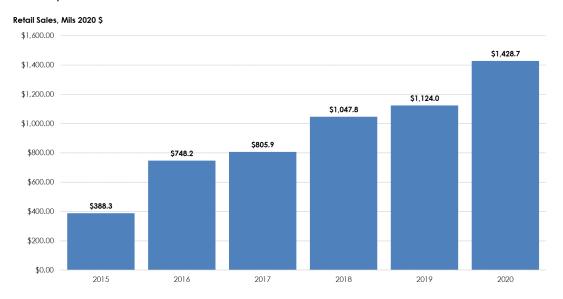


In addition to cannabis license holders, there are numerous businesses providing necessary goods and services for the production, processing, and sale of cannabis products. These include hydroponic systems, grow lights, irrigation and water supplies, generators and electricity, growing accessories, soil amendments and nutrients, electricity, packaging materials, pest management, and various ingredients for edible products. Many of these supplies are available and purchased from vendors in Washington state, supporting additional jobs and income.

Business Revenues

In calendar year 2020, there were 474 active cannabis retail licenses reporting sales. Combined total sales among these retailers summed to nearly \$1.43 billion (**Exhibit 4**). In inflation-adjusted terms (2020 \$), retail sales between 2015 and 2020 grew 268%, or at a compound annual growth rate of approximately 30% per year.

Exhibit 4. Cannabis Retail Sales, Washington State, 2015-2020, Mils 2020 \$

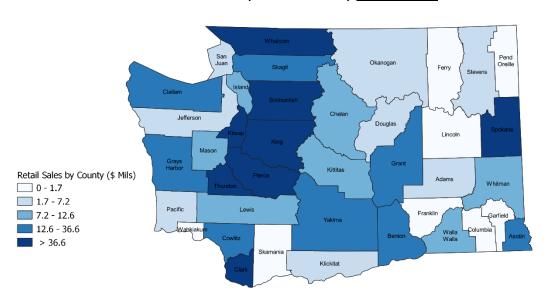


The largest source of retail sales is King County. In fiscal year 2020, King County retailers transacted \$340.5 million in sales of recreational cannabis products (**Exhibit 5** and **Exhibit 6**). This was followed by Pierce (\$159.5 million), Spokane (\$135.0 million), and Snohomish counties (\$134.1 million).

Exhibit 5. Largest Counties for Cannabis Retail Sales, <u>Fiscal Year</u> 2020

| Total Sales, FY 2020 |
|----------------------|
| Mils \$ |
| \$340.5 |
| \$159.5 |
| \$135.0 |
| \$134.1 |
| \$74.3 |
| \$62.9 |
| \$41.4 |
| \$40.4 |
| \$34.0 |
| \$28.8 |
| \$215.2 |
| \$1,266.2 |
| |

Exhibit 6. Cannabis Retail Sales, All Counties, Fiscal Year 2020



In addition to the retail sector, sales are transacted throughout the supply chain, from producers to processors, and processors and producer/processors to retail operations. According to interviews with cannabis industry stakeholders, after factoring in discounts, retail cannabis products typically sell for 250% the wholesale cost purchased from processors, inclusive of state and local taxes. Based on this ratio, of the more than \$1.4 billion in retail sales (sans taxes) earned in the retail sector in 2020, an estimated \$833.8 million of these sales went to processors and producers. The retail sector generated net realized earnings of \$528.6

million, used to cover wages, rent, federal taxes, and other business costs, as well as net profits (**Exhibit 7**).

Exhibit 7. Estimated Distribution of Cannabis Final Retail Sales by Segment, Calendar Year 2020 (mils \$)

| Segment | Net Earnings Mils \$ | Share |
|-----------------------------|-------------------------|-------|
| Business earnings | · | |
| Retail Sector | \$594.9 | 29% |
| Producer/processors | \$833.8 | 40% |
| Subtotal, business earnings | \$1,428.7 | 69% |
| State and local taxes | | |
| State excise taxes | \$528.6 | 25% |
| State sales tax | \$91.8 | 4% |
| Local taxes | \$35.3 | 2% |
| Subtotal, taxes | \$655.8 | 31% |
| Total spending, consumers | \$2,084.5 | 100% |

Sources: Washington State Liquor and Cannabis Board (2021); Washington State Department of Revenue (2021); High Peak Strategy LLC (2021). Notes: a) estimates reflect share of sales for medicinal purposes (\$16.2 million) and thus exempt from state and local sales taxes; b) a weighted average local sales tax rate of 2.5% was used to compute local sales tax payments, as reported by the Washington State Department of Revenue.

Employment and Wages

In 2020, cannabis businesses directly supported 11,330 jobs across the state, including both covered workers and the self-employed (**Exhibit 8**). Producers and processors, including businesses with one or both types of licenses, employed nearly 5,800 workers, followed by retailers with 5,050 employees. Between 2016 and 2020, cannabis business employment has grown nearly 80%, or a net increase of more than 5,000 workers statewide.

The average raw wage across all segments in 2020 was \$31,300 per worker (Washington State Employment Security Department, 2021), or an estimated \$37,600 including supplemental benefits. Total wages and salaries disbursed in the cannabis industry summed to \$354.6 million, or \$425.6 million inclusive of supplemental benefits.

Exhibit 8. Cannabis Business Employment by Segment, 2016-2020 (calendar years)

| Category | 2016 | 2017 | 2018 | 2019 | 2020 |
|----------------------------|-------|-------|-------|--------|--------|
| Producer/Processors | 3,730 | 5,030 | 5,040 | 5,160 | 5,760 |
| Labs and Transporters | 70 | 90 | 120 | 120 | 120 |
| Retailers | 2,300 | 3,370 | 3,990 | 4,620 | 5,050 |
| Subtotal, Covered Workers | 6,100 | 8,490 | 9,150 | 9,900 | 10,930 |
| Est. self-employed workers | 220 | 310 | 330 | 360 | 400 |
| Total workers | 6,320 | 8,800 | 9,480 | 10,260 | 11,330 |

Source: Washington State Employment Security Department (2021).

ECONOMIC IMPACTS

Cannabis businesses further support economic activity through upstream business-to-business transactions (indirect effect) and spending of cannabis and supplier worker earnings on household goods and services (induced effect). These two effects are measured as additional revenues, jobs, and income, and combined are referred to as "total economic impacts." These impacts are based only on those purchases—by businesses and employees—made within Washington state; the remainder are treated as imports, either domestic or foreign, and do not spur additional economic activity in the state.

In 2020, the licensed cannabis businesses directly generated \$1.4 billion in sales and employed 11,330 workers with total wages of \$465.4 million (**Exhibit 9**). These estimates include the combined activities of both employer businesses and the self-employed.

Exhibit 9. Cannabis Industry Direct Impacts, 2020 (mils \$)

| | laba | Income | Revenues |
|-----------------------|--------|---------|-----------|
| Category | Jobs | Mils \$ | Mils \$ |
| Producer/Processors | 6,120 | \$239.6 | \$833.8 |
| Labs and Transporters | 130 | \$6.1 | \$13.2 |
| Retailers | 5,080 | \$219.8 | \$594.9 |
| Total | 11,330 | \$465.4 | \$1,441.9 |

Sources: Washington State Liquor and Cannabis Board (2021); Washington State Department of Revenue (2021); Washington State Employment Security Department (2021); High Peak Strategy LLC (2021).

The cannabis industry is a supply chain, with producers of cannabis raw goods, processors who convert these raw materials into consumer goods, the transport of these wholesale goods to retailers, and final sale of cannabis products to consumers. Examples of cannabis business purchases include lighting, HVAC systems, packaging materials, and soil treatments. Retailers rent or purchase their facilities and pay for various professional services, including marketing, accounting, and legal.

In this study, we model the gross margins generated among retailers, excluding the cost of goods. Using this method, we treat almost the entire ecosystem of licensed cannabis operations as "direct." (We do discount revenues generated among producer goods sold to processors to avoid double-counting.)

In 2020, the cannabis industry supported an estimated **18,360 jobs** across the state, either through direct, indirect, or induced impacts. This jobs impact was associated with nearly **\$2.7 billion in total business sales** and \$868.9 million in labor income, including wages and supplemental benefits (**Exhibit 10**). Each direct job in the cannabis sector is associated with a total of 1.6 jobs across the state economy (18,360 total jobs \div 11,330 direct jobs). Or, put differently, for every 10 jobs in the cannabis sector, an additional six (6) jobs are supported through either indirect or induced effects across the state. Each dollar in direct sales in the cannabis industry is associated with 12 jobs across the state economy, including through direct, indirect, and induced effects.

Exhibit 10. Cannabis Industry Total Economic Impacts, 2020 (mils \$)

| | Direct | Indirect | Induced | Total |
|------------------------|-----------|----------|---------|-----------|
| Employment | 11,330 | 2,080 | 4,950 | 18,360 |
| Labor Income (mils \$) | \$465.4 | \$134.1 | \$277.0 | \$876.5 |
| Output (mils \$) | \$1,441.9 | \$470.0 | \$807.2 | \$2,719.1 |

Sources: Roberts and Beyers (2021); High Peak Strategy LLC (2021).

FISCAL IMPACTS

State government tax revenues collected from consumer retail sales in 2020 included \$528.6 million from the cannabis excise tax and an additional \$91.8 million in state sales tax and \$40.3 million in local sales taxes (**Exhibit 11**), according to the Washington State Department of Revenue (2021). After adjusting for inflation, cannabis-related state taxes increased at a compound annual growth rate of 23% between 2015 and 2020 (**Exhibit 12**). Between 2019 and 2020, cannabis sales taxes increased by \$141.2 million, or 27.2%.

Exhibit 11. Cannabis Excise Tax and Additional State Sales Tax, Calendar Years 2015-2020, mils 2020 \$



Source: Washington State Liquor and Cannabis Board (2021); Washington State Department of Revenue (2021); U.S. Bureau of Economic Analysis (2021); High Peak Strategy LLC (2021).

Exhibit 12. Cannabis Excise Tax and Additional State Sales Tax, Calendar Years 2015-2020, mils 2020 \$ and Percent Change

| Тах Туре | 2015 | 2020 | CAGR |
|-----------------|---------|---------|-----------|
| iux iype | 2013 | 2020 | 2015-2020 |
| Excise Tax | \$188.6 | \$528.6 | 22.9% |
| State Sales Tax | \$33.1 | \$91.8 | 22.6% |
| Local sales tax | \$12.7 | \$40.3 | 26.0% |
| Total | \$234.3 | \$660.8 | 23.0% |

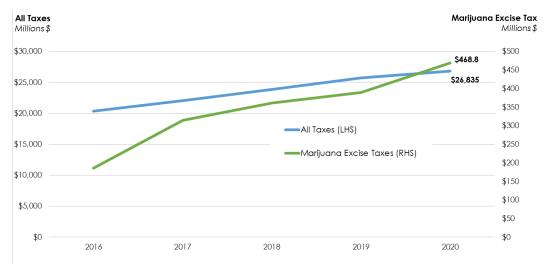
Source: Washington State Liquor and Cannabis Board (2021); Washington State Department of Revenue (2021); U.S. Bureau of Economic Analysis (2021); High Peak Strategy LLC (2021).

Between fiscal years 2015 and 2020, cannabis excise tax revenues grew 152%, or at a compound annual growth rate of approximately 26% per year (**Exhibit 13**). By comparison, overall state taxes over this period increased 32%, while retail sales taxes increased 27%.

In addition to consumer-based taxes (i.e., sales and excise taxes), the cannabis industry supports additional state tax revenues through upstream and downstream business activities supported through direct, indirect, and induced activities. Cannabis businesses pay retail and wholesale business & occupation taxes (B&O) and, to a lesser extent, utility and various other state taxes and fees. Business sales supported by indirect and induced

activities in turn generate additional state taxes.² In 2020, the total tax impact of these activities (direct, indirect, and induced) summed to an estimated **\$695.4 million** (or \$34.7 million in taxes in addition to consumer-paying excise and sales taxes on cannabis).

Exhibit 13. Cannabis Excise Tax and Overall State Tax Collections, Fiscal Years 2016-2020 (nominal \$)



Source: Washington State Department of Revenue (2020).

POLICIES AND GROWTH IN OTHER STATES

Washington was the first state to legalize adult use cannabis, but it has since been joined by 10 other states that allow for the sale of adult use cannabis, with another eight that have passed laws that will legalize adult use cannabis sales in the near future. In fact, there are only five (5) states that continue to treat cannabis as an illegal substance in all forms (DISA, 2021).³

In 2020, nationwide cannabis sales reached \$17.5 billion (Yakowicz, 2021). Among similarly sized states to Washington, Colorado reported \$2.2 billion in sales, while Oregon sales reached \$1.1 billion. By comparison, according to the Washington State Liquor and Cannabis Board, in fiscal year 2020 (ending June 30, 2020) Washington cannabis retailers sold slightly less than \$1.3 billion.

State cannabis policies shape the size, breadth, and contours of the industry. Policies include how recreational cannabis is taxed—at the consumer and production levels—the number of allowable licenses, the cost of acquiring a license, permitted consumer products, conditions for ownership, allowance or prohibition of vertical integration. **While Washington was a first mover in**

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² Property taxes constitute another important source of state and local tax revenues supported by the cannabis industry. However, property taxes on cannabis are not readily available and thus not included in this study.

³ Seven states maintain cannabis possession and use as illegal in all forms, but two (Nebraska and North Carolina) have decriminalized it.

the legalization of recreational cannabis, in the view of many businesses interviewed for this study, it has since fallen behind other states in areas of regulation and taxes to support the statewide industry.

Stakeholders have raised concerns that, in the future event of federal legalization, Washington's existing tax and regulatory regimes may put its in-state cannabis businesses at a competitive disadvantage vis-à-vis businesses from states with alternative policies. Washington's significantly higher tax rate relative to other legal marketplaces were also discussed in relation to the scope of the illicit marketplace, which persists in direct competition with the regulated and taxed marketplace. This section reviews these policies in other states and identifies areas for potential state policy reform upgrading to the support the industry.

"Going first" gave Washington a head-start in implementing a legal cannabis marketplace, but early adoption includes hard-learned lessons since the passage of Initiative 502. Regulations and statutes that now govern the legal marketplace, the ballot measure and initial rulemaking, were silent on policies concerning social equity. Observant of this omission, subsequent successful legalization efforts in other states have codified social equity into the marketplace while Washington plays catch-up on its approach. While more difficult to quantify than the current shortcomings of the tax and regulatory regimes in Washington, the lack of an effective social equity program to better distribute the economic opportunity of the legal marketplace should be noted.

Tax Policies

The most common form of taxation on adult use cannabis is an excise tax. As of 2021, there are 11 states that allow sale of adult use cannabis, with another eight that have passed laws that will legalize adult use cannabis sales in the near future (**Exhibit 14**).

Exhibit 14. States with Legal Recreational Cannabis Sales, Existing or Planned, and Applicable Tax Rates

| State | Excise Tax | Estimated Additional State and Local Sales Tax | Status |
|------------------|-------------------------------------|--|-------------------------------|
| Alaska | None | 1.8% | In effect |
| Arizona | 16% | 8.4% | In effect |
| California | 15% | 8.7% | In effect |
| Colorado | 15% | 7.7% | In effect |
| Illinois | Based on product and THC level, | 8.8% | In effect |
| | excise tax between 10% and 25%. | | |
| Maine | 10% | 5.5% | In effect |
| Massachusetts | 10.75% | 6.3% | In effect |
| Michigan | 10% | 6.0% | In effect |
| Nevada | 10% | 8.2% | In effect |
| Oregon | 17% | None | In effect |
| Washington | 37% | 9.2% | In effect |
| States that have | e passed measures but have not enac | ted full recreational legalizat | ion yet |
| Connecticut | 10-15%, based on THC amount and | 9.35% | 2022 |
| | product type. | | |
| Montana | 20% | None | 2022 |
| New Jersey | \$42 per ounce | 6.6% | 2022 |
| New Mexico | 12% | 8.0% | 2022 |
| New York | 9% | 8.5% | 2022 |
| South Dakota | 15% | 6.4% | Passed but challenged in |
| | | | courts. Uncertain start date. |
| Vermont | 14% | 6.2% | 2022 |
| Virginia | 21% | 5.3% | No sooner than 2024 |

Sources: Bieber (2021); Washington State Department of Revenue (2020); Nguyen (2021); Federation of Tax Administrators (2021); Levinson (2021); National Cannabis Industry Association (2021); Cammenga (2021); State of Connecticut (2021); Marijuana Policy Project (2021).

In Washington state, cannabis retail sales are subject to a state excise tax and state and (when applicable) local sales tax. Washington applies both the highest excise tax and state sales tax to cannabis retail sales among legalized states, meaning that sales are subject to the highest total tax rate of any legal cannabis market in the United States. Washington's excise tax of 37% is 17 percentage points higher than the next closest state, Montana, which has yet to implement legalization (beginning January 2022). Washington's statewide sales tax of 6.5% is the 9th highest in the country, behind California's 7.25% and seven other states between 6.63% and 7.0%. Factoring estimated local sales tax, Washington moves up to 4th highest, at 9.23% (Cammenga, 2021). In fiscal year 2020, Washington ranked second, behind only California, for state taxes from recreational cannabis sales (

Exhibit 15).

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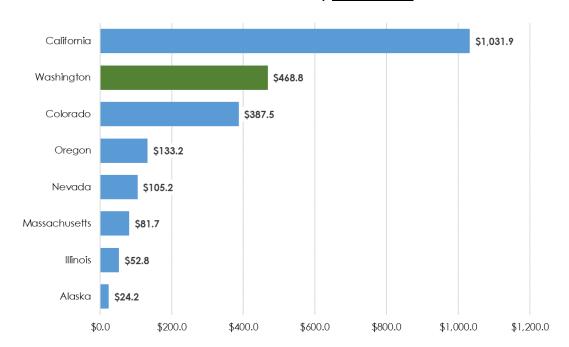


Exhibit 15. Cannabis State Tax Revenues, Fiscal Year 2020

Sources: Bieber (2021); Washington State Department of Revenue (2020).

Regulations on Business Structure, Number of Licenses, and Fees

Many other states that have legalized adult use cannabis have less restrictive rules on business ownership and structure. Washington does not allow vertical integration between growers, processors, and retail/dispensaries (Washington does allow integration between growers and processors, but not with retailers). These rules were based on the model of liquor in Washington state, which similarly prohibits producers to distribute their product. All remaining states, either having already legalized or scheduled to legalized recreational cannabis, allow some degree of vertical integration or specifically require it (e.g., Massachusetts, New York, and New Mexico).⁴

Residency Requirements for License Ownership

Washington state law (RCW 69.50.331) requires that cannabis business applicants have resided in Washington state for at least six months prior to being issued a license (Washington State Legislature, 2012). This requirement effectively precludes investment in the state cannabis industry from outside investors, including private equity, venture capital, the selling or transfer of a cannabis business—either in whole or as an equity—and mergers and acquisitions. Restricted sources of investment inhibit the scalability of many cannabis businesses in the state, many of which have

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⁴ California does allow vertical integration, though, according to the National Cannabis Industry Association, the details "are complicated" (National Cannabis Industry Association, 2021).

plans for growth but have difficulties in raising capital to finance expansion. According to some interviewees, these limits also adversely impact the valuations of these businesses, and resultingly may hinder the growth of retirement savings for business owners.

Washington is not the only state with a residency requirement. Some, but not all states, impose some limitations on transfer of ownership based on residency. These include Alaska, Michigan, Montana,⁵ Vermont, New Mexico, and Connecticut. In Massachusetts, the majority of microbusiness members or executives and all craft marijuana cooperative members must have resided in the state for 12 months prior to application. For social equity licenses, all applicants must be residents for at last 12 months (Massachusetts Cannabis Control Commission, 2018; Howell, 2019).

States without Residency Requirement or Have Repealed Residency Requirements

There are no residency requirements in Arizona (other than for the 26 licenses reserved for social equity), California, Nevada, and Illinois. Oregon and Colorado, both of which originally imposed a residency requirement, have since repealed this rule.

Oregon originally required 51% of a cannabis business to be owned by instate residents of at least two years, but repealed this rule in 2016 after recognizing the adverse impact of this restriction on the industry's ability to raise capital (Schroyer, 2016). In Colorado, the law was updated in 2018 to allow non-resident ownership, but with a cap of 15 owners for these businesses; businesses with no outside owners can have an unlimited number of shareholders (Colorado Secretary of State, 2018). In 2020, the state passed legislation that went further and completely removed all residency requirements for business owners and employees (State of Colorado, 2020). The decision to repeal the residency requirement was largely driven by the understanding that such action will help encourage out-of-state investment in the industry (Marijuana Business Daily, 2020).

New York, which will begin legal adult recreational sales in 2022, has not specified a residency requirement. California, Nevada, and Illinois all do not impose a residency requirement, though in the case of Illinois there is residency requirement for social equity licenses.

Cost of a License

The price of a license will vary by state and in some cases by category of business activity within the cannabis supply chain. The license fee in Washington state is low relative to many other states, with a uniform cost of \$1,381 for either a retail, processor, or grower license. Several other states charge both higher licensing fees and different pricing levels per type of license. For example, Michigan license fees for growers range from \$4,000 to

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⁵ Rules in Montana are still being finalized. According to Initiative 190, passed by ballot initiative in November 2020, operator licenses may only be allocated to Montana residents (MJBizDaily, 2020).

\$40,000, based on scale of production, while processors are subject to a single license fee of \$40,000 and for retailers, transporters, and compliance facilities a fee of \$25,000 (State of Michigan Marijuana Regulatory Agency, 2021).

In New York, adult use cannabis licensing fees are still being decided. However, if they follow the same licensing process and fees as applied to medical cannabis, the single license price for retailers, growers, and processors would cost \$210,000 (non-refundable deposit of \$10,000 and a refundable deposit of \$200,000) (Mary Jane Marketer, 2021). In Illinois, the price of a retail license is \$30,000, but \$200,000 for cultivators and processors. Massachusetts, which first enacted legal adult use cannabis in 2016, growing licenses range between \$625 and \$25,000, with retailer and processor licensing fees of \$5,000. Colorado charges \$1,800 for either a retailer or processor license, and between \$1,800 and \$7,000 for a grower license (National Cannabis Industry Association, 2021).

Number of Licenses

In Washington, the Liquor and Cannabis Board (LCB) is not currently issuing new licenses, though there is no statutory rule or quota setting a ceiling on the number of cannabis businesses in the state. However, cannabis retail licenses that were forfeited, revoked, or cancelled by the LCB, or licenses that have not been issued but remain within the existing quota, can be issued to new applicants who social equity criteria (Washington State Legislature, 2020).

Some states have implemented ceilings on the number of licenses, either in total or for each category of cannabis business. Arizona has a hard limit on total licenses (130) set formulaically by the number of pharmacies and medical cannabis dispensaries per county (Arizona Department of Health, 2021; National Cannabis Industry Association, 2021).⁶ In Michigan, the allowed number and issuance of licenses is determined at the local municipal level (State of Michigan Marijuana Regulatory Agency, 2021).

In Illinois, limits were established in two phases. In the first phase, up to 75 new dispensary licenses, 40 processor licenses, and 40 craft grower licenses were permitted in 2020. By the end of 2021, an additional 110 new dispensary, 60 craft grower, and 60 processor licenses can be issued (State of Illinois, 2020). Several other states have no upper limits. These include Alaska, which as of 2021 has issued 70 retail licenses and 148 grower licenses. California is a regulatory outlier among states that have legalized

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⁶ According to the Arizona law: "the state will issue no more than one marijuana establishment license per 10 pharmacies; issue no more than two marijuana establishment licenses in counties that contain no registered nonprofit medical marijuana dispensaries; issue no more than one marijuana establishment license in counties with one nonprofit medical marijuana dispensaries; and issue 26 licenses, notwithstanding the other limits, to entities qualified under the Social Equity Ownership Program."

adult use cannabis; currently, cannabis licenses are only determined at the county or city levels.

LIMITS ON SCALABILITY OF WASHINGTON STATE CANNABIS BUSINESSES

Businesses interviewed for this study expressed several common concerns regarding both the current regulatory and tax policy regime in Washington state for recreational cannabis and constraints stemming from the still-illegal federal status of recreational cannabis. Key to greater resiliency in a rapidly evolving cannabis industry and market is the ability to scale, first through access to capital and then either horizontally (e.g., expanding the number of retail outlets) or vertically (e.g., owning operations up or down the supply chain). A common theme expressed among interviewees was the adverse effect existing Washington state statutes and rules are placing on the ability of Washington state businesses to scale. Interviewees also emphasized the impact rules have on the ability of in-state firms to export industry knowhow and grow within the in-state market.

These constraints on scalability inhibit the prospect of Washington-based firms growing in sizes similar to those in other states. For example, Illinois is home to several large multi-state operators, including Cresco Labs, with nationwide employment 2,900 workers as of September 2021 (New Cannabis Ventures, 2021) and Green Thumb Industries, with over 3,000 employees in operations across 14 U.S. markets (NCV Newswire, 2021).

This section delineates constraints on growth highlighted by interviewees due to existing Washington state rules as well as additional business constraints inhibiting scalability.

Washington State Rules

A salient theme across all these concerns was the effect existing rules may have on limiting cannabis business competitiveness with other, out-of-state producers and processors following a possible federal legalization in the near future. According to interviewees, existing rules limit the ability of these businesses to scale either vertically or horizontally and distort pricing within the supply chain through an excessively high excise tax.

Specific rules cited by cannabis businesses include:

Limits on Business Structure

Unlike in other states, Washington cannabis businesses are unable to integrate their supply chain vertically, linking retail and production/processing operations.⁷ A more immediate comparison is the in-

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Many states prohibit vertical integration in the alcohol sector. For instance, in California, alcohol industry operators cannot be involved in more than one "tier" of the industry, meaning that suppliers and importers cannot be wholesalers, wholesalers cannot be retailers, retailers cannot be suppliers, and vice versa (Strike

state wine industry, which has grown to the second largest in the U.S. and generates billions of dollars in economic activity through wine grapes cultivation, wine production, distribution and sale, and wine tourism. Current rules allow for wineries to grow and use their own grapes, process wine onsite, and conduct retail sales direct-to-consumer either on-premises, online, or through wine clubs, as well as through self-distribution and third-party contracts.

Businesses are also limited to five (5) retail operations licenses. This constrains horizontal growth and expansion in existing substate markets where no moratoriums exist. Some interviewees expressed the need to expand the cap for retail licenses but without increasing the total number of licenses. Expanding the number of allowable retail licenses per owner would allow some consolidation within the industry.

Ownership limited to Washington state residents

Current rules prohibit the transfer of ownership (all or in part) to a non-Washington state resident. This rule extends to investment funds and private equity, whose investment members must all be state residents for at least six months.

Access to capital is a significant constraint on growth for many cannabis firms. There are only four financial institutions in Washington state that provide credit lines and lending to cannabis businesses, often at rates higher than those offered in the much more competitive space for non-cannabis businesses. Lack of access to these more traditional avenues for capital raising hinders a cannabis business's ability to invest in new equipment, facilities, and expand operations. In many other states, firms are allowed to raise funds through private equity, venture capital, other sources originating from outside the state. In many instances, less constraining rules in other states allow multistate operators, such as Curaleaf, to invest in cannabis operations, which infuse often needed outside capital to help grow production and processor operations.⁸

High cost of excise tax

The current excise tax of 37% is significantly higher than any other state with a similar excise tax. There is an upper limit on price for many consumers; the excise tax, included in the final sale price of a cannabis product, thereby crowds out profits earned among retailers, processors, and

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Kerr & Johns, 2011). According to Michigan state law, "[t]he legislature further finds that vertical integration of the alcoholic beverage industry is contrary to this state's interest in protecting public health and safety of Michigan residents and leads to anticompetitive behavior by beverage alcohol suppliers" (Michigan Liquor Control Commission, 2021, pp. 2-8). Illinois law, section 6-4-5 (2021), prohibits the "ownership interests in a distributor, importing distributor, manufacturer of beer, or non-resident dealer."

⁸ Many of the multistate operators (MSO) are publicly traded on Canadian exchanges. These IPOs raise capital to reinvest in U.S. operations. Washington businesses are generally unable to access this capital.

producers. Producers, at the bottom of the supply chain and akin to many other forms of agriculture, are price-takers, and unable to pass on these reduced revenues further up the supply chain. As a result, prices earned on raw cannabis product are much lower than other states.

Competing with the illicit market

This issue raises additional concerns among license-holders. In the current and near-term, the excise tax may encourage persistence of the illicit cannabis market. Some consumers continue to shop in the illicit market for similar products at a more affordable price without the excise tax (and sales tax). The persistence of the illicit marketplace also undermines the success of the legal marketplace of prohibiting minors from purchasing cannabis products while also posing a safety risk created by untested, garage-made, cannabis mimics. At the other end of the supply chain, non-licensed producers can earn a higher price per ton of cannabis by selling directly to consumers or other illicit outlets. In 2020, according to estimates by New Frontier Data, the U.S. illicit cannabis market was worth \$66 billion, more than three times the size of the legal market. While most of these illicit sales were in states that have not yet fully decriminalized cannabis, there is still a sizable market in states that have legalized recreational cannabis; in California, estimated illicit sales were nearly double the size of the legal market (Franklin, 2021).

A second, longer-term concern raised by retailers is the impact of the excise tax on availability of supply. In the event of a federal legalization and enforcement of interstate commerce, many growers and processors will have the option to sell their output to retailers outside the state whose sales are subject to a much lower excise tax, or none at all. This may induce a shortage of supply. Right now, consumers enjoy a wide spectrum of choices for cannabis products sold at retail outlets. The current high tax paid by consumers, combined with the potential for future higher-yielding sales for growers and processors in other states, may result in reduced consumer options in Washington state.

Additional Business Constraints

In addition to the above state rules, there are structural constraints, inherent in the ambiguous legal status of cannabis under current federal law. These include banking, lack of access to large common carriers, and itemizing business costs.

Early in the industry's growth, businesses were not able to work with financial institutions, and thus forced to work entirely in cash. Developments in recent years have led to the formation of cannabis lines of business among four financial institutions in Washington state: Timberline Bank, Sound Credit Union, Salal Credit Union, and Numerica Credit Union. Cannabis businesses are now able to cover payroll, equipment purchases, and other business expenses using checks and ACH.

These banks also offer personal finance for cannabis employees, such as car loans and mortgages. However, the limited number of financial institutions willing to bank with cannabis businesses and workers results in slightly higher interest rates for these borrowers compared with non-cannabis businesses.

Another key challenge—but one that can be resolved with federal legalization—is the inability under federal law to write off business costs other than the cost of goods. Most businesses are able to deduct various business costs from their federal corporate income tax obligations, such as payroll, computer and internet expenses, rent, marketing, utilities, and insurance. Cannabis businesses, still treated as an illegal form of commerce under federal law, must instead complete form 280e each year when filing federal taxes. Under 280e, businesses pay tax on gross profit (not net income), and can only expense product acquisition costs, i.e., cost of goods.

SUMMARY AND CONCLUSIONS

Washington's cannabis industry is large, growing, and a significant contributor of jobs, income, and tax revenues to the State of Washington economy. In 2020, there were more than 1,600 unique businesses holding 2,795 cannabis licenses. These operations—from growers, processors, transporters, labs, and retailers—directly employed 11,330 workers and generated more than \$1.4 billion in business revenues. Adult use cannabis industry direct employment was already equal to nearly a third (30%) of covered employment in the food processing sector and 22% higher than beverage manufacturing. Between 2016 and 2020, employment among cannabis licensed businesses increased by 79%, or at a compound annual growth rate of 16%. Total wages and supplement benefits paid out by cannabis businesses summed to \$465.4 million.

The positive economic impacts of cannabis extend to upstream and downstream businesses associated with cannabis operations and the spending of cannabis business-based income on household consumption. Combined, the total statewide economic impact of adult use cannabis businesses in 2020 included 18,360 jobs, \$876.5 million in labor income, and \$2.7 billion in business revenues. For every 10 jobs in the cannabis industry, another six (6) are supported in other industries, such as grocery stores, restaurants, and entertainment venues. Each dollar directly generated in the adult use cannabis industry in Washington can be tied to 13 jobs across the state across multiple sectors of the economy.

Cannabis businesses in turn help drive tax revenues that fund public services at the state and local levels. In 2020, adult use cannabis directly generated \$660.8 million in state excise taxes and state and local sales taxes. After adjusting for inflation, cannabis-related state taxes increased at a compound annual growth rate of 23% between 2015 and 2020. Between 2019 and 2020, cannabis sales taxes increased by \$141.2 million, or 27.2%. Cannabis businesses pay retail and wholesale business & occupation taxes (B&O) and, to a lesser extent, utility, and various other state taxes and fees. In 2020,

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the total tax impact of these activities (direct, indirect, and induced) summed to an estimated \$695.4 million (or \$34.7 million in taxes in addition to consumer-paying excise and sales taxes on cannabis).

Despite the size and economic contributions of the adult use cannabis industry, state regulations are limiting the continued growth of the industry. Current rules constrain the ability of cannabis business to scale operations, primarily through limits on capital raising and integration horizontally and vertically. Businesses in other states are often not subject to the same limits, such as a residency requirement for ownership. Oregon and Colorado—two states that once had restrictive residency requirements on cannabis licenses—have both repealed these rules in recognition of the unnecessary limits they place on in-state businesses.

Washington's excise tax rate on adult use cannabis of 37% is by far the largest such tax in the U.S. Washington also has one of the highest sales tax rates in the country. Combined, Washington adult use cannabis consumers pay an average tax rate—including the excise tax and state and local sale tax—of 46.2%. On the margins, this high rate may be pushing some consumers to purchase their cannabis products from the unregulated, untaxed, illicit market.

In the nine years since the passage of Initiative 502 in 2012, adult use cannabis has created a safe, regulated market that creates economic opportunity and tax revenues for the State of Washington and its citizenry. The findings from this report illustrate how, with the right policies and regulatory framework, Washington can continue to leverage and nurture this industry as a source of economic growth now and into the future.

APPENDIX

Appendix A. Businesses and Stakeholders Interviewed for this Study

| Interviewee | Affiliation |
|---------------------------|--------------------------------------|
| Andy Brassington | Evergreen Herbal |
| Anzhane Slaughter | Social Equity in Cannabis Task Force |
| Becca Burghardi | NWCS |
| Caitlein Ryan | Cannabis Alliance |
| Gary S. Kaminsky | ATACH |
| Joseph DuPuis | Doc & Yeti |
| Joy Hollingsworth | Social Equity in Cannabis Task Force |
| Max Hsiao | CannaPort Logistics |
| Micah Sherman | Raven |
| Paige Berger/Brandon Park | Hygge Farms |
| Rob McKinley | Grow Op Farms |
| Russ Rosendal | Salal Credit Union |
| Scott Atkison | Zips |
| Shannon Vetto | The Evergreen Market |
| Wendy Hull | Fairwinds |

Appendix B. Summary of Data Sources

This report makes intensive use of multiple data sources. These include the following:

- Washington State Liquor and Cannabis Board. Licenses by business and type; retail sales by license; business location and characteristics by license; unified business identifier codes by license holder.
- Washington State Employment Security Department. Custom employment and wage aggregations for multiple years based on UBI codes per cannabis license type.
- Washington State Department of Revenue. Custom gross business income aggregations for multiple years based on UBI codes per cannabis license type; adult cannabis excise tax, cannabis-tied state and estimated local sales taxes; overall state taxes.
- Washington State Office of Financial Management. Economic impacts estimated through use of the Washington State Input-Output Model.

Appendix C. Input-Output Modeling Explanation

Input-output modeling is a technical approach that estimates additional spillover effects of a modeled direct economic activity through two mechanisms: 1) upstream, supplier chain business-to-business transactions, referred to as "indirect" effects; and 2) the spending of employment-based income earned among workers in direct and indirect activities on household goods and services, referred to as "induced." Together, the sum of direct, indirect, and induced impacts is referred to as the "total economic impact" All impacts are measured in jobs, labor income (wages & salaries plus supplemental benefits), and business output, or what is more commonly described as sales or revenues.

Input-output models are static models that measure a discrete single-period change in the economy, e.g., the increase or decrease in aerospace sales. The direct impact being modeled is called final demand, and may represent or be composed of household consumption, investment, exports, and government spending. In the case of the cannabis industry in this analysis, only the gross margins of retail are used for economic impact modeling, with the cost of goods distributed among businesses upstream, allowing us to treat the production, processing, and retail of cannabis in its entirety as a direct activity.

The Washington State Input-Output Model is the primary analytic tool for this analysis. This model is based on an input-output table that is developed to characterize the inter- and intra-industry transactions and final demand of the Washington state economy.

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