



Forecasting Issues

Lessons From Marijuana Legalization

Agenda

1. Introduction
2. Background
3. Available Data
4. Policy Options
 1. Specific Weight Based
 2. Potency
 3. Price Based
5. Discussion
6. Conclusion

Introduction to TF

The Tax Foundation is the nation's leading independent tax policy nonprofit. Since 1937, our principled research, insightful analysis, and engaged experts have informed smarter tax policy at the federal, state, and global levels. For over 80 years, our goal has remained the same: to improve lives through tax policies that lead to greater economic growth and opportunity



Introduction to TF

- **Simplicity**

Tax codes should be easy for taxpayers to comply with and for governments to administer and enforce.

- **Transparency**

Tax policies should clearly and plainly define what taxpayers must pay and when they must pay it. Disguising tax burdens in complex structures should be avoided. Additionally, any changes to the tax code should be made with careful consideration, input, and open hearings.

- **Neutrality**

Taxes should neither encourage nor discourage personal or business decisions. The purpose of taxes is to raise needed revenue, not to favor or punish specific industries, activities, and products. Minimizing tax preferences broadens the tax base, so that the government can raise sufficient revenue with lower rates.

- **Stability**

Taxpayers deserve consistency and predictability in the tax code. Governments should avoid enacting temporary tax laws, including tax holidays, amnesties, and retroactive changes.

Marijuana in America

- 11 states have legalized adult use recreational marijuana. DC voters have voted to legalize, but implementation is complicated due to the city's relationship with the federal government.
- Currently 7 states have operational markets with taxes levied on cannabis products.
- Current combined state sales tax + excise tax revenues are estimated to be around \$1.5 billion a year.
- According to federal government estimates, 22.2 million Americans have used marijuana in the past month.
- Cannabis is a schedule 1 drug and against federal law, which severely hinders normal business operations.

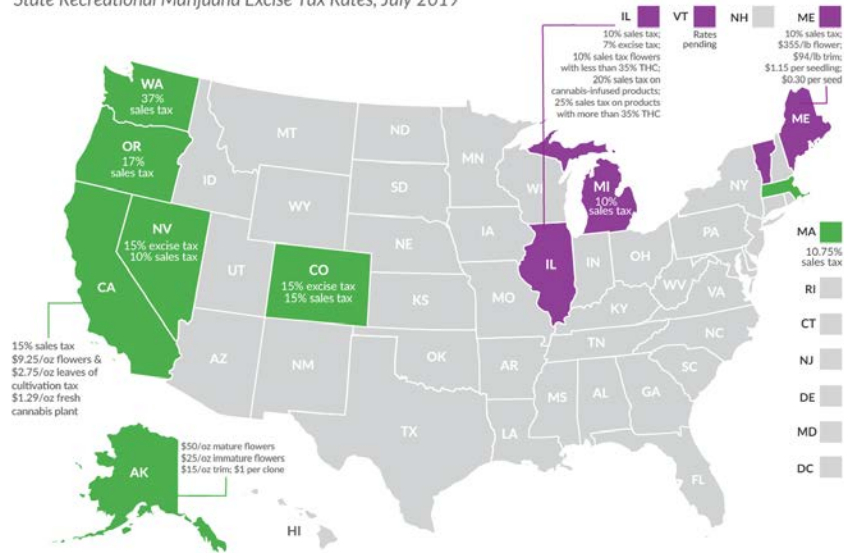
State	Market Start	Tax Structure	Revenue state excise FY2018-19
Alaska		\$50/oz mature flowers \$25/oz immature flowers \$15/oz trim \$1 per clone	\$15.6 million
California		7.5% state sales tax 15% excise tax based on average market rate \$9.25/oz flowers \$2.75/oz leaves cultivation tax \$1.29/oz fresh cannabis plant	\$317 million (preliminary)
Colorado		15% wholesale excise tax based on average market rate 15% state sales tax	\$251.7 million
Illinois	1.1.2020	7% wholesale tax 10% excise tax on flowers with less than 35% THC 20% excise tax on cannabis infused products 25% excise tax on any products with more than 35% THC 6.25% state sales tax	
Maine	3.1.2020	10% state sales tax \$335/lb. flower \$94/lb. trim \$1.5 per immature plant or seedling \$0.3 per seed	
Massachusetts		10.75% excise tax 6.25% sales tax	\$22 million (7 months)
Michigan	11.1.2019	10% excise tax 6% state sales tax	
Nevada		15% wholesale excise tax based on average market rate 10% retail excise tax 6.85% state sales tax	\$99.2 million
Oregon		17% state sales tax	\$102.1 million
Vermont	mid-2021	Pending	
Washington		37% excise tax 6.5% state sales tax	\$362 (FY2017-18)
District of Columbia	unknown	pending	



Current Tax Landscape

How High Are Recreational Marijuana Taxes in Your State?

State Recreational Marijuana Excise Tax Rates, July 2019



Note: Excludes local taxes. CA, IL, MA, ME, MI, NV, and WA levy their marijuana sales taxes in addition to the state sales tax. Colorado and Nevada have an excise tax levied based on the average market wholesale price, which is set by the state Department of Revenue. District of Columbia voters approved legalization and purchase of marijuana in 2014, but federal law prohibits any action to implement it. In 2018, the New Hampshire legislature voted to legalize the possession and growing of marijuana, but did not permit sales. Alabama, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Nebraska, Oklahoma, Rhode Island, Tennessee, and Wisconsin impose a controlled substance tax on the purchase of illegal products.

Source: Bloomberg Tax; state statutes.

■ Current Marijuana Excise Tax
■ Future Marijuana Excise Tax



Prices Drops In Early Days

- In Oregon prices dropped 50% between 2017 and 2018
- In Colorado prices dropped from \$2,007/lb. in 2015 to \$780/lb. in early 2019
- In Alaska prices went from \$4,000/lb. in 2016 to \$2,300/lb. in 2019
- By the end of 2018, the national average price for a pound was \$1,000. In June 2019, these prices were back to \$1,300 according to Cannabis Benchmarks

Sources: Cannabis Benchmark *U.S. Cannabis Spot Index* (September, 2019) <https://reports.cannabisbenchmarks.com/>

Anchorage Daily News *Why the Price of Pot is Dropping Across Alaska* (April 2018) <https://www.adn.com/alaska-marijuana/2018/04/19/why-the-price-of-pot-is-dropping-across-alaska/>

Weedmaps *With Plummeting Cannabis Prices, Alaska's Industry Calls for Tax Relief* (September 2019) <https://news.weedmaps.com/2019/09/with-plummeting-cannabis-prices-alaskas-industry-calls-for-tax-relief/>



Alaska

- Retail sales began in October 2016.
- Alaska is the only state with a purely specific tax structure. At the start of business the excise of \$50/oz equaled 20% tax of the price of \$250/oz. In 2019 those prices had adjusted to around \$145/oz, effectively raising the rate to 35%.
- Growers have lately complained that the rigid structure is hurting their ability to make a profit.

Source: Joseph Henchman, *Marijuana Legalization and Taxes: Lessons for Other States from Colorado and Washington*, Tax Foundation Special Report No. 231 (May 2016)

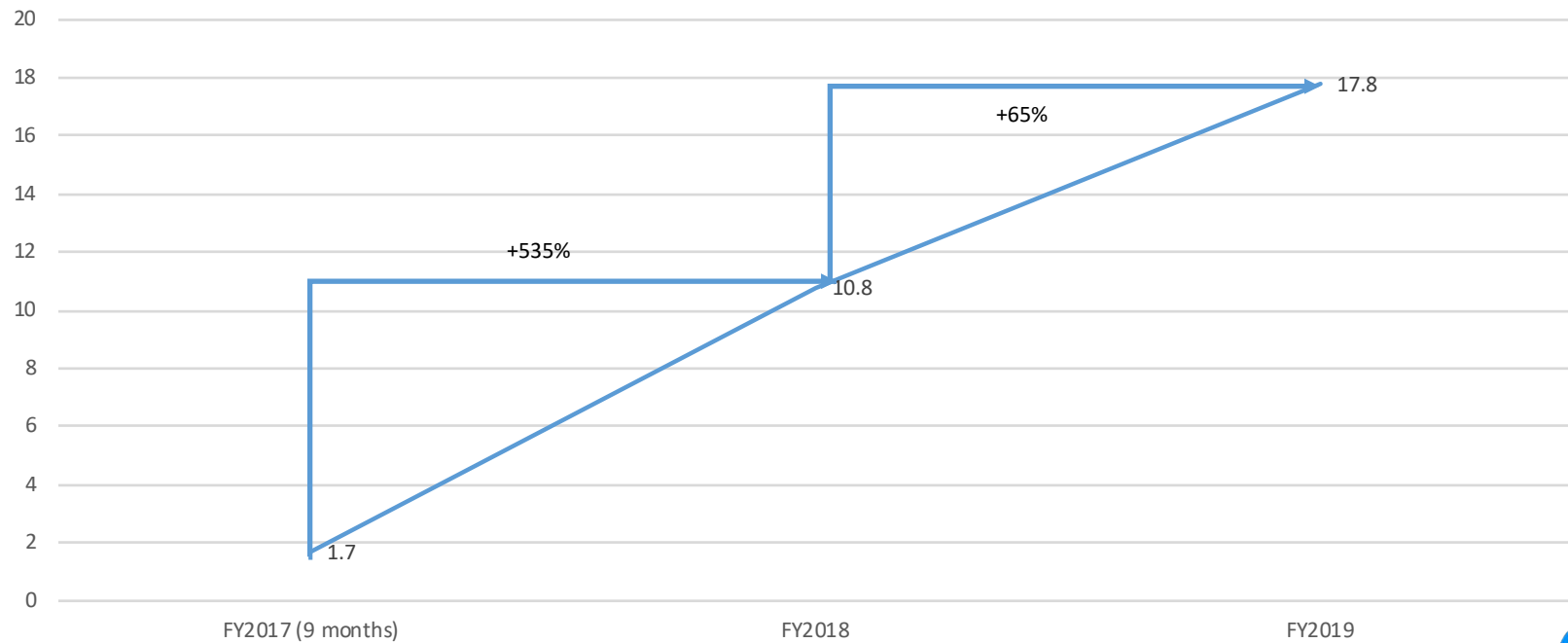
AP, Becky Bohrer, *Alaska's Licensed marijuana growers cite tax concerns* (August 27, 2019) <http://www.startribune.com/alaska-s-licensed-marijuana-growers-cite-tax-concerns/558496162/>



Revenue

The state Department of Revenue estimated state tax revenue between \$5.1 million and \$19.2 million.

Source: Joseph Henchman, *Marijuana Legalization and Taxes: Lessons for Other States from Colorado and Washington*, Tax Foundation Special Report No. 231 (May 2016)



Year to year tax revenue generated by cannabis in Alaska, TF Calculations. Source: Alaska Department of Revenue (September 2019)
<http://tax.alaska.gov/programs/programs/reports/index.aspx?60000>



Colorado

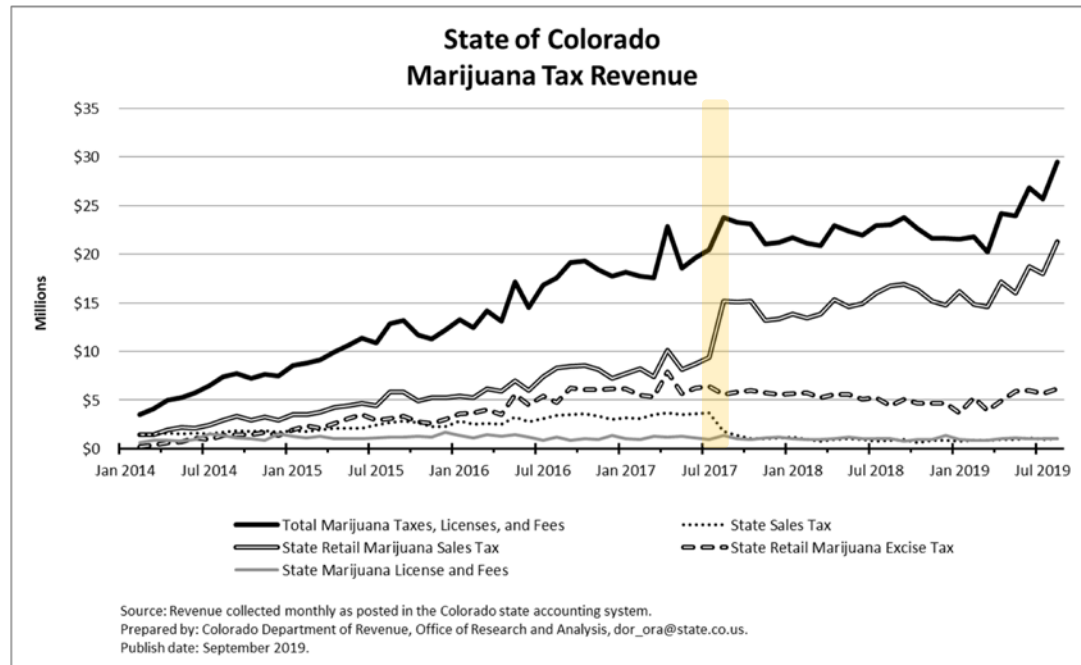
- Retail sale began January 1, 2014
- Collections grew from \$56 million in 2014 to \$113 million in 2015
- Colorado has adjusted their rate in order to maximize returns during price fluctuations. Their original structure with state excise tax of 10% of retail sales and general sales tax of 2.9% was changed to a 15% excise tax of retail sales, while exempting the product from the general sales tax.

Sources: Joseph Henchman, *Marijuana Legalization and Taxes: Lessons for Other States from Colorado and Washington*, Tax Foundation Special Report No. 231 (May 2016)

CPR News *Where Does All The Marijuana Money Go? Colorado's Pot Taxes, Explained* (October 2018) <https://www.cpr.org/2018/10/22/where-does-all-the-marijuana-money-go-colorados-pot-taxes-explained/>



Revenue

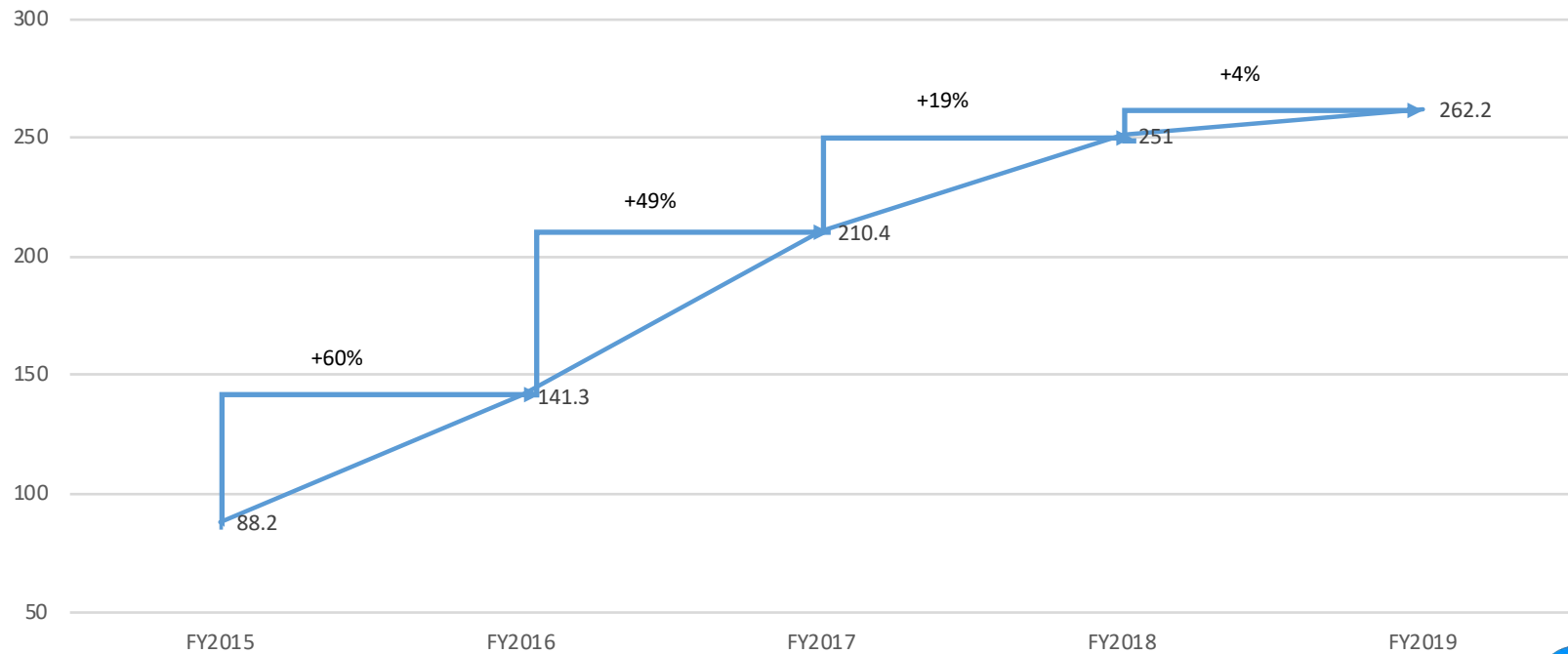


Month-to-month tax revenue generated by cannabis in Colorado. Yellow band denotes a tax change: Starting July 1, 2017 retail marijuana and retail marijuana products are exempt from state 2.9% tax and the retail marijuana sales tax increased to 15 percent — revenue changes were first reflected in August 2017. Retail Sales tax revenues increased from \$9 million in July to \$15.5 million in August.

Revenue

The state Department of Revenue estimated state tax revenue of \$70 million.

Source: Joseph Henchman, *Marijuana Legalization and Taxes: Lessons for Other States from Colorado and Washington*, Tax Foundation Special Report No. 231 (May 2016)



Year to year tax revenue generated by cannabis in Colorado TF Calculations. Source: Colorado Department of Revenue <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data>



Washington

- Sale began July 8, 2014
- Washington collected \$62 million in excise taxes in the first full year of sales. Another \$10 million in state sales tax and 1.3 million in B&O taxes.
- Washington changed the regulation around medical marijuana, which had previously been dubbed “wild west” due to lack of licensing requirements, production standards, health regulation or taxation (beyond the sales tax).
- In July 2015, Washington state changed their tax structure from a more complicated system: 25% on producer sales to processors, another 25% on processors to retailers and 25% on retailer sales. It is now a 37% tax on retail sales. The original system encouraged vertically integrated operations and caused double-taxation for business not set up as such.

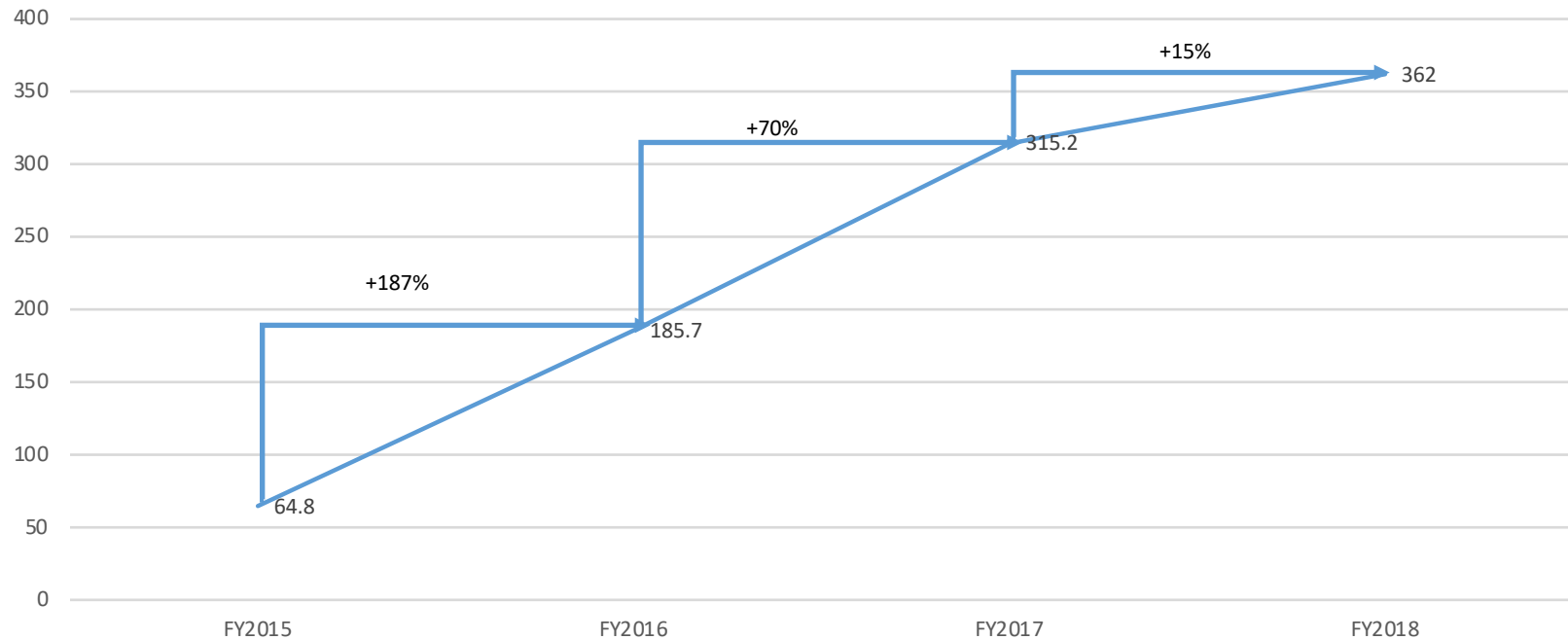
Source: Joseph Henchman, *Marijuana Legalization and Taxes: Lessons for Other States from Colorado and Washington*, Tax Foundation Special Report No. 231 (May 2016)



Revenue

Voters were told legalization could bring in as much as \$1.9 billion over 5 years

Source: Joseph Henchman, *Marijuana Legalization and Taxes: Lessons for Other States from Colorado and Washington*, Tax Foundation Special Report No. 231 (May 2016)



Year to year tax revenue generated by cannabis in Washington, TF Calculations.. Source: Washington State Liquor and Cannabis Board

<https://data.lcb.wa.gov/stories/s/WSLCB-Marijuana-Dashboard/hbnp-ia6v/> & https://lcb.wa.gov/sites/default/files/publications/annual_report/2018-annual-report-web.pdf



Oregon

- Retail sales began on October 1, 2015.
- The measure legalizing marijuana imposed a specific tax on growers, but the legislature replaced it with a 17% excise tax on retail prices because they were worried about the enforceability.
- According to a 2019 study by the Oregon Liquor Control Commission, the production of cannabis was twice as big as the demand. This is largely seen as a result of incentives for many growers to leave the grey/black market

Sources: Source: Joseph Henchman, *Marijuana Legalization and Taxes: Lessons for Other States from Colorado and Washington*, Tax Foundation Special Report No. 231 (May 2016)

Oregon Liquor Control Commission (September 2019)

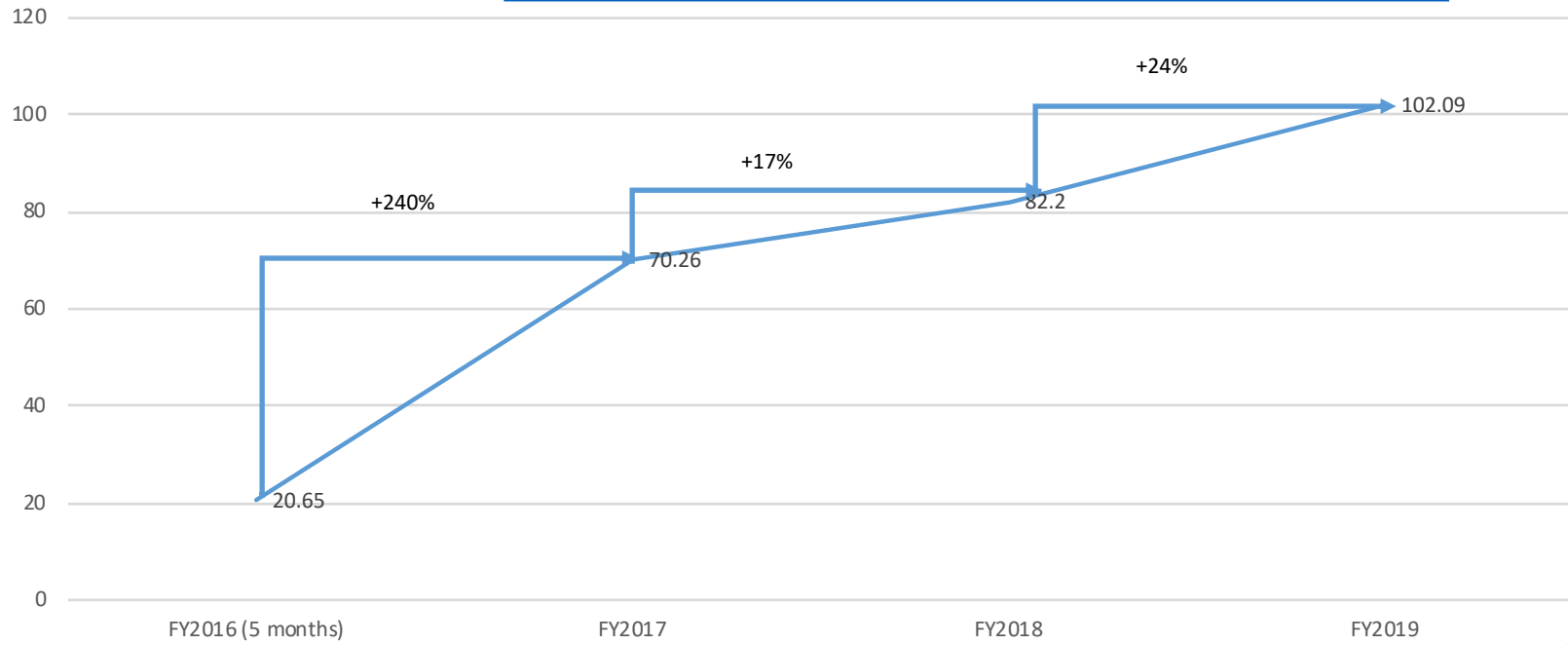
[https://www.oregon.gov/olcc/marijuana/Documents/Bulletins/2019%20Supply%20and%20Demand%20Legislative%20Report%20FINAL%20for%20Publication\(PDFA\).pdf](https://www.oregon.gov/olcc/marijuana/Documents/Bulletins/2019%20Supply%20and%20Demand%20Legislative%20Report%20FINAL%20for%20Publication(PDFA).pdf)



Revenue

The Oregon Liquor Control Commission estimated state tax revenue between \$12 and \$38 million in 2015-17 biennium.

Source: Oregon Liquor Control Commission 2015-17 Budget Request to Implement Recreational Marijuana (April 23, 2015) https://www.oregon.gov/olcc/marijuana/Documents/OLCC2015_17_Budget_Request_Implement_Recreational.pdf



Source: Oregon Department of Revenue (September 2019) <https://www.oregon.gov/DOR/programs/gov-research/Documents/Financial-reporting-receipts-public.pdf>



California

The State estimated \$1 billion in revenue, when the market was in full gear

Source: NPR, Bill Chapel, *California Says Its Cannabis Revenue Has Fallen Short Of Estimates, Despite Gains* (August 23, 2019) <https://www.npr.org/2019/08/23/753791322/california-says-its-cannabis-revenue-has-fallen-short-of-estimates-despite-gains>

- Sales began January 1, 2018.
- California's tax structure is mixed with a specific excise on cultivators and a price-based excise on consumers.
- California raised \$60.9 million in the first quarter of 2018, which has grown to \$144.2 million in the second quarter of 2019.
- California has struggled to raise anything close to the early estimations. Several regulatory issues has hurt the legal market and the very well-established black market has proved a tough competitor for many legal dispensaries.
- The high entry-barriers have resulted in high prices for consumers, who might end up continuing to buy from unlicensed dispensaries. According to a study by Headset, the average item price is \$30.9, double of Washington State's average of \$15.33.

Source: Headset *Price Per Package or Price Per Gram? A Closer Look at Pricing Data* (March 2019) <https://www.headset.io/blog/price-per-package-or-price-per-gram-a-closer-look-at-pricing-data>



Price Examples at \$250 per ounce

State	Tax	Consumer Price	%
Alaska	\$50/oz	\$300	16.6%
California	\$9.25/oz + 15% excise on average retail price + 7.25% sales tax	\$320	27.9%
Colorado	15% on average market wholesale price + 15% excise	\$287.50	15.5%

General State Taxes Are Only One Part

	6.25% state sales tax		
Maine	10% state sales tax + \$335/lb. flower	\$298	19.2%
Nevada	15% wholesale excise tax 10% retail excise tax 6.85% state sales tax	\$336	34.3%
Oregon	17% state sales tax	\$292.5	17%
Washington	37% excise tax 6.5% state sales tax	\$358.75	43.5%

Note: Any local taxes excluded from example. Only excise of flowers/buds calculated

Policy Options

Excise taxes are normally levied in two ways: *Specific* excise taxation, which is based on quantity (weight of product or potency) or *ad valorem*, which is based on price. Of course, there is also the option of mixing the two.

Historically excise taxes are imposed at a specific amount regardless of the price, but most states have chosen the *ad valorem* option for marijuana. The complexity and wide variety of products make an *ad valorem* tax a simpler taxation. Most states have also included marijuana into their state and local sales tax base.

So far, Illinois is the only state that has opted to tax the products based on THC content.

Specific

- Weight-based taxation is an obvious option for taxing marijuana as weight-based taxation is already in use for tobacco products.
- Specific excise taxes have the benefit of being more stable as they are not affected by price changes. Dramatic price changes have been observed in the marijuana market as the market develops.
- Specific taxes are also helpful in establishing a minimum retail selling price.
- In vertically integrated businesses establishing a product value for tax purposes is often more difficult than applying a weight-based excise.
- There is a risk of weight-based taxes pushing low-potency cheaper products out of the market.
- The states that tax weight, differentiate between the flower, which has the highest potency and the other parts of the plant.
- Any low-rate weight-based tax should be indexed to automatically reflect CPI developments.

Potency

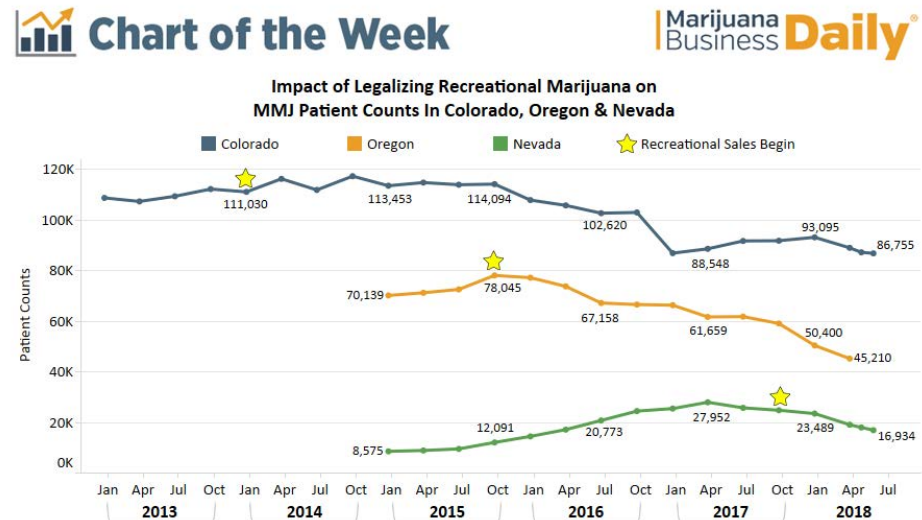
- Potency is a well-established proxy for tax bases in the United States. Alcohol products are taxed in categories based on their potency.
- For marijuana though, testing remains an issue. In a young industry without established standards for testing and high costs, enforcement of a potency-based excise tax could prove very difficult and expensive. Down the line, we can expect standard testing to be developed, which could make a potency-based excise more effective.
- Potency-based taxation has the potential of encouraging consumers to consume larger amounts of less potent product, which might defeat the purpose of the tax.
- Any low-rate potency-based tax should be indexed to automatically reflect CPI developments.

Ad Valorem

- Price-based taxation is the most popular option so far.
- Price can act as an effective proxy for potency given that consumers pay more for more potent products.
- The system is easier to get operational.
- Price-based systems run the risk of being too high in the beginning, where supply is low and too high after a few years, when prices drop significantly.
- Price-based systems are vulnerable to tax avoidance schemes, and lawmakers should be aware of this, when designing the law.
- When applied at wholesaler level, vertically integrated businesses have trouble calculating the value. California's, Colorado's and Nevada's *ad valorem* tax is de facto weight-based taxes, as the % is levied on a weight-based value set by the state.

Remember Medical Marijuana

- In every state, where medical marijuana is sold, it is important to consider, what level it is taxed at.
- In Nevada, the excise tax rate for cultivators of medical marijuana has been increased from 2% to 15% parity to recreational cannabis to allow establishments to hold both a medical and recreational license.
- In California, a host of new requirements and taxes contributed to a decline in the legal market the year following legalization.
- In Washington, the excise tax of 37% was expanded to also include medical marijuana



Source: Oregon Medical Marijuana Program, Colorado Marijuana Enforcement Division, Nevada Division Of Public and Behavioral Health
© 2018 Marijuana Business Daily, a division of Anne Holland Ventures Inc. All rights reserved.

Sources: State of Nevada (September 2019) <http://marijuana.nv.gov/Businesses/Taxes/>

The Economist *The legal cannabis market shrank in California last year* (August 17, 2019) <https://www.economist.com/united-states/2019/08/17/the-legal-cannabis-market-shrank-in-california-last-year>

The Cannabist *Washington state pot law overhaul: Marijuana tax reset at 37 percent* (July 1, 2015)

<https://www.thecannabist.co/2015/07/01/washington-state-pot-law-overhaul-marijuana-tax-reset-at-37-percent/37238/>



Federal Changes?

- Washington, DC might be moving on this issue. Changes to federal law would have massive implications for the tax base in any state with legalized marijuana.
- A vote is possible this week on banking access
- If businesses had access to banking, federal tax deductions and across-state-border business, prices would most likely fall significantly.
- An interstate competition or competing federal taxes could also change the picture.

Source: Marijuana Policy Project: *U.S. Senate Committee to Hold Hearing on Cannabis Industry's Banking Challenges* (July, 2019)
<https://www.mpp.org/news/press/us-senate-committee-to-hold-hearing-on-cannabis-industrys-banking-challenges/>



280E Sample Calculations

Table 1.

Colorado Medical Marijuana Business Tax Bill vs. Similarly Situated Non-Marijuana Business

Category	Marijuana-Related Business	Similarly Situated Non-Marijuana Business
Gross Sales	\$776,772	\$776,772
Cost of Goods Sold	\$435,819	\$435,819
Gross Income/Profit	\$340,953	\$340,953
Cost of Salaries & Wages	\$85,004	\$85,004
Cost of Repairs & Maintenance	\$6,638	\$6,638
Cost of Rent	\$8,325	\$8,325
Cost of Advertising	\$33,915	\$33,915
Cost of Supplies	\$13,195	\$13,195
Other Operating Expense Costs	\$6,729	\$6,729
Total Operating Expenses	\$153,806	\$153,806
Deductible Expenses	\$0	\$153,806
Income Before Taxes	\$340,953	\$187,147
Tax Due	\$102,900	\$56,480
Effective Tax Rate	55%	30%

Table 1 is a Colorado medical cannabis business that paid a 55 percent effective tax rate in 2013 due to section 280E, a tax bill nearly twice as high as a similarly-situated non-marijuana business.

Table 2.

Arizona Medical Marijuana Business Tax Bill vs. Similarly Situated Non-Marijuana Business

Category	Marijuana-Related Business	Similarly Situated Non-Marijuana Business
Gross Sales	\$876,420	\$876,420
Cost of Goods Sold	\$319,386	\$319,386
Gross Income/Profit	\$557,034	\$557,034
Cost of Salaries & Wages	\$417,204	\$417,204
Cost of Repairs & Maintenance	\$4,522	\$4,522
Cost of Rent	\$102,343	\$102,343
Cost of Advertising	\$32,253	\$32,253
Cost of Supplies	\$3,441	\$3,441
Other Operating Expense Costs	\$308,100	\$308,100
Total Operating Expenses	\$867,863	\$867,863
Deductible Expenses	\$0	\$867,863
Income Before Taxes	\$557,034	(\$310,829)
Tax Due	\$189,781	\$0
Effective Tax Rate	(Over 100% - income tax imposed on loss)	0%

Table 2 is a newly-started medical marijuana business in Arizona, incurring many up-front costs as many start-up businesses do while building its revenue. While a non-marijuana business would pay no income tax on their first year loss, the marijuana business with the same income and expenses is handed a \$189,781 tax bill

280E Solutions?

- Some states have decided to give tax relief to counter the federal income tax issue.
- There has been some debate over whether state excise taxes can be considered *cost of goods sold* in relation to federal income tax. The IRS has indicated that state excise can be deducted from *gross income*. Otherwise businesses will have to pay federal income tax on top of state taxes, without being able to take deductions due to federal prohibition and section 280e.

Source: *Potential Tax Relief on the Horizon for the Massachusetts Cannabis Industry* (August 23, 2019) <https://sgllp.com/news/potential-tax-relief-ma-cannabis-industry/>
Internal Revenue Service Office of Chief Counsel, “Taxpayers Trafficking in a Schedule I or Schedule II Controlled Substance – Capitalization of Inventoriable Costs,” Dec. 10, 2014, <https://www.irs.gov/pub/irs-wd/201504011.pdf>
(applying the 1982 version, rather than the current version, of inventory rules to state marijuana retailers to prevent violating section 280E).



Discussion

- It is still early days, and no one has found the perfect system.
- Due to the substantial growth of the first years of legalization, it is difficult to conclude which tax system offers the most stability long term.
- Multiple states made early adjustment to tax structure to accommodate a variety of issues. It is important to stay flexible.
- Sunset clauses can be helpful to force law-makers to revisit tax structure after a few years.
- Resolve health, agricultural, zoning, local enforcement and criminal penalty issues up front.
- Ear-marking should be avoided as revenues are so unpredictable. It might be good politics, but it isn't good policy.
- Price-based system can be up and running quicker and might thus be favored. Retail-level excise also avoids incentivizing vertical integration.

Conclusion

- Prices should be kept at a competitive level in the beginning. Otherwise black/grey market operations might outcompete the legal businesses.
- State revenues tend to grow fast in the beginning and slow down after a few years.
- Taxes on marijuana have not seen their final form yet. They will continue to develop along with the marijuana market.
- Federal law changes will have a massive impact on state revenues.
- Taxes are but a small part of the framework that needs to be discussed, when legalizing marijuana.

TAX FOUNDATION

Ulrik Boesen



Uboesen@taxfoundation.org

@Uboesen 





Thank you

