

Comments to the Cannabis Administration and Opportunity Act

The Tax Foundation is pleased to submit comments on the cannabis excise tax provisions of the Cannabis Administration and Opportunity Act (CAOA). Tax Foundation is a nonpartisan, nonprofit research organization that has monitored fiscal policy at all levels of government since 1937.

As a Section 501(c)(3) nonprofit, nonpartisan organization, we take no position on any pending legislation, nor do we take any position on descheduling of cannabis.

Introduction

Over 40 percent of the U.S. population lives in states where adult-use (21 and older) recreational marijuana can be legally accessed, and a large majority of voters support federal cannabis reform.¹ Despite this general support, it is no easy task to actually deschedule cannabis. While simply removing marijuana from the Controlled Substances Act (CSA) may seem easy enough, the implications of descheduling for existing state markets will be enormous.² Currently, all state markets are isolated, because no products can legally cross state borders. Passing CAOA would change that by creating a national market where, for instance, cannabis grown in Oregon or California can be sold nationwide. Given the federal prohibition currently in place, states can freely discriminate against interstate commerce. Descheduling would mean that state laws can no longer do so, as it would violate the Dormant Commerce Clause.

These comments focus on recreational or adult-use cannabis.³ In 2019, recreational use was estimated to make up about 60 percent of the market but is expected to grow to closer to 75 percent by 2023.⁴ In the recreational market, the product split is fairly even between flower-based products and infused products/concentrates.

¹ Megan Brenan, "Support for Legal Marijuana Inches Up to New High of 68%," Gallup, Nov. 9, 2020, https://news.gallup.com/poll/323582/support-legal-marijuana-inches-new-high.aspx.

² See generally Ulrik Boesen, "Are States Ready for Federal Cannabis Legalization?" RealClearPolicy.com, Apr. 29, 2021, https://www.realclearpolicy.com/articles/2021/04/29/are_states_ready_for_federal_cannabis_legalization_774877.html; and Robert A. Mikos and Scott Bloomberg, "Legalization Without Disruption: Why Congress Should Let States Restrict Interstate Commerce in Marijuana," Vanderbilt Law Research Paper 21:33 (Aug. 23, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3909972.

³ Any discussion over whether the market for and consumption of medical marijuana too often resembles those of the market for recreational marijuana is better left to regulation—not tax policy—except to say that medical marijuana, if not consumed for medical purposes, should be taxed like recreational marijuana.

⁴ Ibid.

TABLE 1. State Tax Rates on Recreational Cannabis July 1, 2021

State	Tax Rate		
Alaska	\$50/oz. mature flowers; \$25/oz. immature flowers; \$15/oz. trim, \$1 per clone		
Arizona	16% excise tax (retail price)		
California	15% excise tax (levied on wholesale at average market rate); \$9.65/oz. flowers & \$2.87/oz. leaves cultivation tax; \$1.35/oz fresh cannabis plant		
Colorado	15% excise tax (levied on wholesale at average market rate); 15% excise tax (retail price)		
Connecticut	0.00625 per milligram of THC in flower; 0.00275 per milligram of THC in edibles; 0.009 per milligram of THC in other cannabis products		
Illinois	7% excise tax of value at wholesale level; 10% tax on cannabis flower or products with less than 35% THC; 20% tax on products infused with cannabis, such as edible products; 25% tax on any product with a THC concentration higher than 35%		
Maine	10% excise tax (retail price), \$335/lb. flower; \$94/lb. trim; \$1.50 per immature plant or seedling; \$0.30 per seed		
Massachusetts	10.75% excise tax (retail price)		
Michigan	10% excise tax (retail price)		
Montana	20% excise tax (retail price)		
Nevada	15% excise tax (fair market value at wholesale); 10% excise tax (retail price)		
New Jersey	up to \$10 per ounce, if the average retail price of an ounce of usable cannabis was \$350 or more; up to \$30 per ounce, if the average retail price of an ounce of usable cannabis was less than \$350 but at least \$250; up to \$40 per ounce, if the average retail price of an ounce of usable cannabis was less than \$250 but at least \$200; up to \$60 per ounce, if the average retail price of an ounce of usable cannabis was less than \$200		
New Mexico	12% excise tax (retail price)		
New York	\$0.005 per milligram of THC in flower; \$0.008 per milligram of THC in concentrates; \$0.03 per milligram of THC in edibles; 9% excise tax (retail price)		
Oregon	17% excise tax (retail price)		
South Dakota (a)	15% excise tax (retail price)		
Vermont	14% excise tax (retail price)		
Virginia	21% excise tax (retail price)		
Washington	hington 37% excise tax (retail price)		

Note: Washington, D.C. voters also approved recreational marijuana, but the city has not been able to implement a market due to its relationship with the federal government.

(a) Legal proceedings surrounding legality of ballot measure, which legalized recreational marijuana, ongoing. Tetrahydrocannabinol (THC) is the main psychoactive compound and is generally used to define potency of the marijuana product, even though there are other compounds in the plant which may influence the effects on the user. Source: State statutes.

CAOA would deschedule cannabis, impose a federal excise tax, and instruct federal agencies to develop regulations. The bill includes an excise tax with a rate of 10 percent of removal price (price when leaving the cultivator) in the first year, increasing to 25 percent in the fifth year. After the fifth year, the tax would be levied at a rate of 25 percent based on the average price in the previous federal fiscal year. The House of Representatives also has a bill, the Marijuana Opportunity Reinvestment and Expungement (MORE) Act, which would also deschedule and tax marijuana. The House bill has a similarly designed tax, but at lower rates.

Since Colorado began to offer licenses for cultivation and sale of cannabis, states have developed a wide variety of cannabis excise taxes. The majority rely on price-based (ad valorem) taxes, but a few impose weight- or potency-based taxes (see Table 1, above).

Descheduling would have a profound positive effect on the marijuana industry operating in states which have already legalized use—either medically and/or recreationally—by normalizing income tax treatment, opening access to capital, and permitting interstate commerce in cannabis.⁷

Existing businesses would benefit from descheduling by no longer being subject to Section 280E of the Internal Revenue Code, enacted in 1982 to deny the deduction of business expenses to those selling drugs on Schedules I and II of the CSA. While intended to stop illicit sellers from deducting expenses like guns and yachts used in smuggling operations, the IRS applies it to state-authorized marijuana retailers, which hurts taxpayers trying to comply with the law and creates a competitive advantage for the illicit operators that Section 280E was enacted to penalize.

This particular section of the tax code limits the deductions businesses can take when calculating their income tax liability. Traditional businesses can deduct ordinary expenses such as rent, marketing, utility costs, and payroll, but marijuana businesses are limited to deducting cost of goods sold (COGS). Cultivators have had an easier time than retailers as more expenses are directly associated with COGS. The unfavorable treatment of state-legal businesses has resulted in retailers selling marijuana experiencing effective tax rates well above 70 percent.

Repeal of 280E was estimated in 2017 to lower federal receipts as much as \$5 billion over 10 years according to the Joint Committee on Taxation.⁸ In 2021, with significantly more businesses than in 2017, that number is likely to be higher. It should be included in any assessment of 280E that a repeal (and normal access to banking) is likely to increase taxpayer compliance by existing companies, and that the taxable legal market itself is likely to grow. A report from the Treasury Inspector General for Tax Administration found significant compliance issues and underreporting of income under

⁵ Ulrik Boesen, "Less Should be MORE with Federal Cannabis Taxation," Tax Foundation, May 28, 2021, https://www.taxfoundation.org/more-act-federal-taxation-of-recreational-marijuana/.

⁶ Ulrik Boesen, "A Road Map to Recreational Marijuana Taxation," Tax Foundation, June 9, 2020, https://www.taxfoundation.org/recreational-marijuana-tax/.

⁷ Limited restrictions on interstate commerce in CAOA are unlikely to severely impact interstate trade.

⁸ Joint Committee on Taxation, Letter to Sen. Cory Gardner, Dec. 1, 2017, https://newtax.files.wordpress.com/2018/12/370531229-Senator-Gardner-280E-Score-12-04-2017.pdf.

the current system. Were a bill passed to deschedule marijuana at the federal level without a subsequent federal tax, compliant marijuana businesses would receive an effective tax cut.

The Schedule I status of cannabis has also meant that many banks decline to offer their services to the industry out of fear they may be charged with money laundering.

Excise Tax Design Considerations

Levying a federal excise tax on recreational cannabis to internalize externalities associated with consumption can be legitimate if the tax is well designed. However, designing such a tax will require careful considerations of trade-offs. Unlike other widely used consumer products, cannabis use has been practically prohibited for almost a century (since the Marihuana Tax Act of 1937)—yet there are millions of users living in the country today.

So far, 18 states have legalized recreational cannabis in defiance of federal law.¹⁰ All of these states have designed independent regulatory and taxation frameworks for insulated markets. A new federal tax must try to avoid excessive interference in well-established state systems, although some impact is inevitable.¹¹

If the purpose of federal reform is to decriminalize the sale and use of marijuana (and not simply an attempt to establish a new revenue source),¹² then policy design should support legal businesses. Incidentally, according to the Congressional Budget Office, revenue from general tax sources like the corporate income tax and individual income tax as well as cost reductions could be as high as or higher than revenue from a federal excise tax.¹³

While regulatory policy design may be as important as or more important than tax design, a new tax should at least attempt to avoid contributing additional complexity to an already complicated situation. So far, federal agencies have not interfered with the recreational cannabis markets in the states. CAOA changes that by designating Alcohol and Tobacco Tax and Trade Bureau (TTB) and Food & Drug Administration (FDA) to develop rules and regulations to govern the cannabis market. The product requirements and processes developed by these agencies could dramatically change the market conditions. If, for instance, FDA imposes a cannabis product authorization scheme similar to the Premarket Tobacco Product Application (PMTA) requirements in place for tobacco products, many small businesses would struggle. Such a process is both exceedingly expensive and time-consuming.¹⁴ In 2019, FDA estimated that a single PMTA for nicotine-containing liquid would

⁹ Treasury Inspector General for Tax Administration Office of Audit, "The Growth of The Marijuana Industry Warrants Increased Tax Compliance Efforts And Additional Guidance," Mar. 30, 2020, https://www.treasury.gov/tigta/auditreports/2020reports/202030017_oa_highlights.html.

¹⁰ Voters in South Dakota and Washington, D.C. passed ballot measures to end prohibition on cannabis. In South Dakota, the courts are considering the legality of the measure, and in Washington, D.C., the federal government has thus far blocked implementation.

¹¹ The implications connected to the Dormant Commerce Clause alone will severely impact state regulations.

¹² These are not mutually exclusive effects, but a desire to decriminalize sale and use of marijuana would urge lawmakers to err on the side of lower taxes and fees.

¹³ Congressional Budget Office, "Cost Estimate, H.R. 3884, the MORE Act of 2020," Dec. 4, 2020, https://www.cbo.gov/system/files/2020-12/hr3884.pdf.

¹⁴ U.S. Food & Drug Administration, "Premarket Tobacco Product Applications," Aug. 24, 2021, https://www.fda.gov/tobacco-products/market-and-distribute-tobacco-product/premarket-tobacco-product-applications.

average \$131,643 and a PMTA for electronic cigarette devices would average \$466,563.15

As a result of the changes to the operating environment, it is important that states have the time and opportunity to address regulatory or tax legislation, which may cause problems after federal descheduling.

Interstate commerce will make tax collection more complicated for all states, but several states could be uniquely exposed to the effects of federal reform. For instance, some states levy taxes on cultivators without offering exemptions for products exported, and under a federal framework that allows interstate sales, those taxes could hurt the states' competitiveness by increasing costs for in-state cultivators. For the majority of states that apply ad valorem taxes at retail level, a federal ad valorem tax imposed before retail would compound and partially result in tax pyramiding, since the federal tax would be embedded in the sales price taxed by the state (see effects in Table 2).

At the same time, the success of the reform depends on competitive and, importantly, readily available alternatives to illicit products. Moreover, the changes needed to adjust state-level taxes to a reality with interstate commerce are fairly simple—states already handle federal taxes on products like alcohol and tobacco. Hence, a moderate timeline should be established to allow for states and businesses to adjust, but such a timeline should not impede the creation of a normalized national marketplace.

The best historical comparison to cannabis descheduling is the end of alcohol prohibition in 1933. After Prohibition, lawmakers were presented with a challenge very similar to the one discussed here: to design a tax (and regulatory framework) that would allow legal operations to take back market shares from illicit operations while encouraging temperance.¹⁶

In 1933, during a hearing in the House of Representatives Committee on Ways and Means, lawmakers discussed taxation levels of liquor in the post-Prohibition era. They concluded that a "drastic price competition by the legal industry will be necessary in the earlier post-Prohibition period while the illegal industry is still organized and well financed."¹⁷ However, it was also concluded that price parity between illegal and legal products would result in the gradual decline of illegal products, as it did.¹⁸ The efforts following Prohibition proved successful, and tax revenue grew from 2 percent of total federal receipts in 1933 to 13 percent of total federal receipts by 1936.¹⁹

¹⁵ U.S. Small Business Administration, Office of Advocacy, "FDA Seeks Comments on Premarket Tobacco Product Applications Proposed Rule," Oct. 1, 2019, https://advocacy.sba.gov/2019/10/01/fda-seeks-comments-on-proposed-pmta-and-recordkeeping-requirements/.

¹⁶ On December 10, 1933, *The New York Times* published an article asking 10 questions unanswered by the repeal of Prohibition. The questions were: What shall be the role of the Federal Government with reference to liquor regulation? Is the present system of control under the codes desirable? How does the Federal Government propose to protect the dry states as required under the Twenty-first Amendment? What system should be set up for regulation of the liquor traffic? Shall the liquor traffic be a state monopoly? Can the liquor business be kept out of politics? How shall the rate of taxation on liquor be determined? How can the speakeasy and the bootlegger be put out of business? How shall the return of the saloon be prevented? How can temperance be promoted? See R.L. Duffus, "Ten Questions Left Unsettled by Repeal," *The New York Times*, Dec. 10, 1933, 166.

¹⁷ United States Congress House Committee on Ways and Means, "Tax on Intoxicating Liquors," Dec. 11-14, 1933, 309, https://www.google.com/books/edition/Hearings/dkbVAAAAMAAJ?hl=en&gbpv=0.

¹⁸ Ibio

¹⁹ Excise taxes played a much more important role for the federal government in the 1930s than they do today. See Donald J. Boudreaux, "Alcohol, Prohibition, and the Revenuers," Foundation for Economic Education, Jan. 1, 2008, https://www.fee.org/articles/alcohol-prohibition-and-the-revenuers/.

Tax Rate

Lawmakers designing excise taxes for recreational marijuana will have to balance two opposing consequences of tax rates. High rates may limit adoption by minors and current non-users, but at the same time, they may also impair competitiveness of the legal market. Low rates may beat the illicit market more easily but could also increase consumption among current non-users and minors. Moreover, it is important that the tax regime raises enough revenue to cover the costs associated with funding cannabis-related programs.

In CAOA, the proposed tax rate will grow from 10 percent of removal price (cost at producer level or removal from bonded premises) in the first two years to 25 percent of removal price in the fifth year. The tax also applies to illegally imported or otherwise unlawfully removed products.

Although ad valorem taxation is simple, it is neither neutral nor equitable. Furthermore, such a design harms consumer choice and product quality as it incentivizes manufacturers and retailers to reduce prices to limit tax liability. It also incentivizes downtrading, which is when consumers shift from premium products to cheaper alternatives. Downtrading effects do not reduce harm and have no relation to any externality the tax is seeking to capture. Finally, ad valorem taxes risk resulting in volatile revenue generation. Interstate commerce, access to capital, and normalized federal income tax treatment are highly likely to result in lower costs for cannabis producers, and an ad valorem tax would suffer if the price of cannabis plummets as a result. As such, the longevity of an ad valorem system remains uncertain as, according to a report from the Congressional Research Service, the price per ounce may fall dramatically following descheduling.²⁰

Levying an ad valorem tax applied before retail also results in difficulties for vertically integrated businesses that must calculate a taxable value, as there is no transaction. A few states tax at wholesale, and to offset this issue of valuation, Colorado and Nevada levy their ad valorem tax based on a fixed rate (adjusted at different intervals) and weight. Although structured as an ad valorem tax, applying a fixed price essentially converts these taxes to a weight-based tax (similar to the design in CAOA in the sixth year). At the federal level, the transfer pricing issue is well-known for cigar taxes, which is also based on price before the retail level. According to one Government Accountability Office report, cigar manufacturers lower manufacturers' sales prices to limit their tax obligation. This practice increases enforcement costs.²¹ Levying an ad valorem tax on retail sales is simpler because there is a taxable event with a transaction, allowing for simple valuation. A retail level federal tax would, however, markedly increase the number of taxpayers, which could also increase enforcement costs.

While the proposed federal rates start at the lower end, they quickly become substantial. Since all states with recreational sales already tax either cultivation, wholesale, or retail sales, the federal government should err on the side of lower tax rates. Overtaxing cannabis could result in a competitive advantage to illicit sales, which are prevalent in most states—even in states that offer a licensed market.

²⁰ Jane G. Gravelle and Sean Lowry, "Federal Proposals to Tax Marijuana: An Economic Analysis," Congressional Research Service, Nov. 13, 2014, 2, https://www.fas.org/sgp/crs/misc/R43785.pdf.

²¹ United States Government Accountability Office, "Large Disparities in Rates for Smoking Products Trigger Significant Market Shifts to Avoid Higher Taxes," April 2012, 34, https://www.gao.gov/assets/gao-12-475.pdf.

The task of setting the federal tax rate is complicated in that many states have already established markets with high tax rates. Some of these states—particularly California—already struggle converting illicit consumption to the licensed market. While one rate may work for a few states, it could have detrimental effects in markets where rates are already high. It is crucial that federal lawmakers consider the impact of high taxes in high-tax states. If not, federal reform risks reversing progress achieved in those states.

The following table illustrates the impact that a 25 percent federal excise tax could have on state rates.

TABLE 2.

Federal Cannabis Tax Would Significantly Increase Tax Burden and Retail Prices

Effective State Tax Rates with or without Federal Tax by State

State	Current Effective State Tax Rate	Effective Tax Rate with Federal Tax	Tax Rate Increase with Federal Tax	Retail Price Increase with Federal Tax
Alaska	23%	27%	17%	13%
Arizona	24%	36%	31%	20%
California	30%	39%	24%	18%
Connecticut (a)	27%	32%	17%	15%
Colorado	24%	32%	25%	20%
Illinois	27%	37%	26%	20%
Maine	21%	29%	26%	17%
Massachusetts	20%	31%	36%	20%
Michigan	16%	27%	41%	20%
Montana	23%	34%	33%	20%
Nevada	25%	34%	24%	20%
New Jersey (b)	24%	30%	21%	15%
New Mexico	20%	31%	36%	20%
New York (a)	27%	34%	19%	16%
Oregon	20%	31%	36%	20%
South Dakota	21%	33%	34%	20%
Vermont	23%	34%	32%	20%
Virginia	30%	41%	27%	20%
Washington	43%	54%	20%	20%

Note: Calculation based on average market price (\$1,309 per pound) in Colorado from July 1, 2021. Prices assumed to be uniform nationwide. Assumed tax is passed to consumer. Markup assumed at 80 percent. Tax assumed included in markups between production and retail. Only state-managed taxes included.

(a) 20% THC assumed.

(b) \$30 tax burden per ounce assumed. Source: State statutes, author calculations.

The figures above show the significant impact of adding a new layer of taxation, but even then, it does not tell the whole story. In some states, localities levy additional taxes on cannabis businesses that go well beyond the state-managed taxes. In California, for instance, localities can levy gross receipts taxes on all cannabis businesses. In addition to state taxes, local gross receipts taxes and local excise taxes can easily compound to make licensed sales uncompetitive.

By way of example, in Calaveras County, California, a grower must pay \$5 per square foot of registered canopy area and \$70 per pound of flower. Manufacturers and retailers pay a 7 percent gross receipts tax. This is all in addition to the state taxes of \$9.65 per ounce of flower for cultivators, 15 percent retail excise tax, and state and local sales taxes (only the three latter taxes are included in the figure in Table 2). Altogether, the tax burden in California easily eclipses 40 percent—before applying a federal tax.

Perhaps in acknowledgment of the impact of high tax burdens, CAOA offers a credit for qualified domestic manufacturers (a system also applied in alcohol taxation). This credit amounts to 50 percent of an applicable amount each year. This amount grows from \$2 million in the first year to \$5 million in the fifth year. Who exactly may qualify for the credit is not entirely clear, as the term "qualified domestic manufacturer" is not defined in the bill.

Cannabis products, like other heavily taxed and regulated products, are valuable commodities for smugglers—both casual and organized. We know from the tobacco market that high tax discrepancies between jurisdictions and product bans drive smuggling. In Massachusetts, a state ban on flavored tobacco has been driving a significant increase in smuggling, and in states with high tobacco tax rates, smuggling is a major issue.²²

Finally, excise taxes on cannabis are regressive. By itself, the fact that they have regressive effects is no argument against levying them—a user-pays system or the internalization of meaningful externalities can be good policy—but the effect does illustrate the importance of not relying on regressive excise taxes for general fund revenue. It also underscores that trying to maximize revenue generation from excise taxes can carry adverse effects. A federal excise tax on cannabis should not be levied in an effort to raise general fund revenue.

Tax Base

Separate from the rate, choice of tax base can affect product development. For instance, taxing by price could drive down prices as consumers and businesses look to lower their tax liability. Taxing based on weight could encourage use of high potency products. Taxing based on THC content could complicate tax collection and add significant costs to both tax collectors and industry.

That being said, it is unfortunate that the bill relies on price as a tax base, as prices share no association with the negative externalities (harm) associated with consumption. Rather than levying the tax on price, lawmakers should use a specific tax base: weight and potency (THC-based). Even though the tax eventually incorporates an element of potency and weight, the rate will still be determined based on sales prices.

In the sixth year, products will be taxed differently based on whether THC content can be measured

See Ulrik Boesen, "Massachusetts Flavored Tobacco Ban Has Severe Impact on Tax Revenue," Tax Foundation, Jan. 19, 2021, https://www.taxfoundation.org/massachusetts-flavored-tobacco-ban/; and Ulrik Boesen, "Cigarette Taxes and Cigarette Smuggling by State, 2018," Tax Foundation, Nov. 24, 2020, https://www.taxfoundation.org/cigarette-taxes-cigarette-smuggling-2020/.

with sufficient certainty. THC-measurable products will be taxed based on grams of THC. For products where measurements are not possible, products will be taxed per ounce. For nonmeasurable products, the rate will be 25 percent of the prevailing sales price of cannabis flowers, and for measurable products, the rate will be 25 percent of the prevailing sales price of THC. This could mean that the THC-measurable category will continue to expand as testing capabilities develop. Products considered drugs are exempt from taxation.²³

It is less than ideal to change the tax base after five years. Businesses will have built systems to comply with the first system and will then be forced to change when the system changes. There could be substantial pressure from the business community to extend the purely price-based tax design ahead of year six, even though weight- and potency-based taxes represent a superior design.

It is a positive element of the proposed tax that highly potent products would be more expensive and yield more revenue, reflecting higher societal cost associated with more potent products. By including the weight component, the levy would also respect the different harm profiles of smoking a little versus a lot of cannabis. Neither weight nor potency are perfect, but both are substantially better proxies than price for internalizing the externalities. However, a simpler way to achieve this without the need to reflect last year's prices is shown here.

TABLE 3. **Proposed Structure for Recreational Marijuana Tax**

Product	Design
Smokable Plant Material	Specific per ounce
Edibles and Concentrates	Specific by milligrams of THC content

Note: Testing for THC in plant material may still need time. Thus, a tax could be established purely on weight for now. Source: Author's definitions.

The example in Table 3 aims to simplify the tax treatment of cannabis by dividing the market into two main groups: smokable (combustibles) and edibles and concentrates (non-combustibles). Potency testing is a concern in organic plant material such as cannabis flower, but it is much simpler in products made from concentrates. Moreover, taxing THC in products made from concentrates uses a better proxy for externalities than price. To illustrate this, consider two bars of chocolate with similar amounts of THC. One is made with cheap cocoa powder, and one is made with expensive real chocolate. An ad valorem tax would result in a higher tax on the expensive products despite the identical harm profile. A potency tax would impose an equal tax burden on both products.

Another of the positive elements of quantity-based tax design is revenue stability. The effective rate will fluctuate as price moves but the revenue collected per gram will be rather stable. As a result, regardless of expected price swings, the federal government will raise almost the same amount per gram, making it easier to forecast revenue and plan spending.

²³ To be tax-exempt, drugs will generally require FDA approval. Currently, only one cannabis-derived product has such approval. See U.S. Food & Drug Administration, "FDA and Cannabis: Research and Drug Approval Process," Oct. 1, 2020, https://www.fda.gov/news-events/public-health-focus/ fda-and-cannabis-research-and-drug-approval-process.

In Colorado, for instance, from 2014 to 2019, the weighted average price of a gram of cannabis flower declined from \$10.96 to \$4.53, an average 16.0 percent year-over-year decrease. The same is true to varying degrees for edibles and concentrates.²⁴ Combined with an increase in potency, the price per dose of THC has declined significantly.²⁵

Using THC as a tax base is not without issues, however. It assumes that THC content is the best proxy for potency and therefore the best measure of externalities related to marijuana consumption. This is an area that should be studied further. There are hundreds of cannabinoids in marijuana and the understanding of the "formula for potency" is nowhere near complete. Even with a THC focus, there may be a need to levy one rate on edibles and another of concentrates to account for different and more potent absorption mechanisms. For instance, this year New York and Connecticut passed tax systems where edibles are taxed four times higher than concentrate.²⁶

For any tax system to work properly, it is paramount that good tax definitions are developed. Product development in cannabis is fast, and more is uncovered about cannabis compounds every day. By way of example, Delta-8 THC, a byproduct of hemp, is potentially legal in states where hemp is legal.²⁷ The tax implications, however, remain unclear. CAOA uses a definition of cannabis which exempts hemp. Since Delta-8 THC is derived from hemp, such products could potentially avoid taxation—creating an unhealthy competitive advantage over Delta-9 products:

"(B) The term 'cannabis' does not include— "(i) hemp, as defined in section 297A of the Agricultural Marketing Act of 1946;"

"(2)(A) The term 'cannabis product' means any product made or derived from cannabis that is intended for consumption or applied to the body of man or other animals, including any component of such product."²⁸

Definitions may be a greater challenge with cannabis taxes given the vast amount of product types available on the market, from pre-rolled joints to sparkling water, and the yet unknown products to come. Any tax system should either be nimble enough or be updated frequently enough to capture new products as they enter the market.

²⁴ MPG Consulting, "2019 Regulated Marijuana Market Update, Prepared for: Colorado Department of Revenue," Oct. 19, 2020, 17, https://www.colorado.gov/pacific/sites/default/files/2019%20Regulated%20Marijuana%20Market%20Update%20Report%20Final.pdf.

²⁵ Ibid, 20.

²⁶ Ulrik Boesen, "New York Governor Proposes THC-based Tax on Recreational Marijuana," Tax Foundation, Jan. 21, 2021, https://www.taxfoundation.org/new-york-marijuana-tax/.

Hemp was legalized by the 2018 Farm Bill. See David Bienenstock, "Hemp Is Finally Legal. Let's See if It Can Save the World," Leafly, Dec. 12, 2018, https://www.leafly.com/news/politics/hemp-legalization-in-the-farm-bill-of-2018-history-politics.

^{28 &}quot;Cannabis Administration and Opportunity Act," 129-130, https://www.democrats.senate.gov/imo/media/doc/Cannabis%20Administration%20and%20 Opportunity%20Act.pdf.

Revenue Allocation

Revenue from excise taxes should be allocated to cover societal costs related to consumption. This means, to cite a few examples, health costs related to smoking, road maintenance costs associated with driving, and costs related to enforcing bans of driving under the influence and regulating the sale of alcohol. For cannabis taxes, the revenue raised should be sufficient to cover the costs of the cannabis-related programs, and it should not be diverted into non-related spending programs.

CAOA appropriately allocates revenue generated by the excise tax to the Opportunity Trust Fund, which is partially tasked with offsetting negative externalities associated with prohibition of cannabis and substance abuse. Some of the spending priorities are likely to stretch the definition of negative externalities, and, given the high rate, it is important that potential excess revenue is not allocated to unrelated spending. In addition to limiting use of excise taxes to raise general revenue, the federal government should also remain cautious when forecasting excise tax revenue. A well-established excise tax levied on quantity is generally a stable revenue generator, even in recessions. However, newer categories of excise taxes, such as cannabis, tend to be more volatile.

Conclusion

Taxes will play an important role in the success or failure of federal cannabis reform. Since the federal government is late to the party, it should proceed with caution when imposing new taxes. Many states have already developed tax structures which leave little room for a federal tax.

Nevertheless, there is legitimate reason to levy a federal tax. Such a tax should be based on quantity, it should be levied at a low rate, and the revenue should be exclusively allocated to cover cannabis-related expenses.

In summary, an excise tax on cannabis should be based on the following principles:

- Tax rates should be low enough to allow legal markets to undercut, or at least gain price parity with, the illicit market.
- The tax should be designed to offer stable revenue in the short term regardless of potential price declines.
- The tax should raise enough revenue to fund marijuana-related spending priorities and cover societal cost related to consumption.

It is also uncertain what happens to the medical markets. Currently, medical products are not approved by the FDA and thus cannot be prescribed by doctors—instead, doctors recommend use. Regulatory and tax treatment of these products would mirror those of recreational cannabis unless they have approval from the FDA. Only one cannabis-derived product currently has such an approval.

Finally, significant work remains to be done. The bill leaves certain questions to two federal agencies, the FDA and the TTB. The processes developed by FDA will be especially important for the future of recreational cannabis. Processes similar to PMTA could be an immense burden on the industry and would likely be too expensive for small businesses—almost certainly an unintended consequence. Furthermore, interstate commerce will radically change the operating environment for states and existing businesses.