Taxing Cannabis
Delivered to the NCSL Task Force On State & Local Taxation
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About ITEP

The Institute on Taxation and Economic Policy (ITEP)
• Non-profit, non-partisan research organization
• Federal, state, and local tax policy issues

Mission:
• Ensure elected officials, media, and general public have accurate, timely, and straightforward information that allows them to understand the effects of current and proposed tax policy, with an emphasis on tax-incidence analysis.
ITEP research published in January 2019 takes a deep dive into cannabis taxation:

- Summarizes every state’s cannabis tax structure, tax rates, and revenue earmarking practices.
- Examines every month of tax revenue data reported through January 2019. (Nearly five years of data in Colorado!)
- Summarizes state revenue totals and puts those revenues into context with comparisons to other excise taxes: alcohol and tobacco.
- Explores state revenue trends to offer guidance on the revenue trajectory states can expect if they opt to legalize and tax cannabis sales.
- Calculates the potential yield of cannabis taxes in all 50 states and the District of Columbia, using Washington State’s actual experience as a guide.
- Offers recommendations for achieving sustainable cannabis tax revenues over time.
- Available online at: www.ITEP.org/taxing-cannabis/
What I’ll be talking about today:

• Background on revenue performance and trends, as well as state structures.

• Tax structure debate: Taxing the price vs. weight of cannabis
  • Plus, what lies ahead for cannabis prices?

• Explaining the California experience

• Policy recommendations for states
Figure 5

Cannabis Excise Tax Revenues Expected to Surpass $1 Billion

Data for states with legal recreational sales

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual Tax Revenue (millions)</th>
<th>Projected Tax Revenue (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$54.6</td>
<td>$662.7</td>
</tr>
<tr>
<td>2015</td>
<td>$218.5</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>$461.2</td>
<td></td>
</tr>
</tbody>
</table>

Source: ITEP analysis of state revenue data in six states with legal sales of recreational cannabis (Alaska, California, Colorado, Nevada, Oregon, and Washington) and in Massachusetts. Data for Massachusetts began in November 2018 but the state is not yet reporting tax data. Data are reported for calendar years. Figure does not count sales taxes paid through general sales taxes, gross receipts taxes, license fees, income taxes, or other levies. Revenue projections generally assume that cannabis sales levels reported in November and December of 2018 continue at the level reported in the most recent month for which data are available.
Figure 6

Excise Tax Revenue from Cannabis Rivals Alcohol Revenue in States with Legal Retail Sales of Cannabis

Source: ITEP analysis of state revenue data in six states with legal sales of recreational cannabis (Alaska, California, Colorado, Nevada, Oregon, and Washington). Legal cannabis sales in Massachusetts began in November 2018 but the state is not yet reporting tax data. Data are reported for calendar year 2018. Figure data includes amounts raised through general sales taxes, gross receipts taxes, license fees, or income taxes.
Figure 8

Per Capita Cannabis Excise Tax Revenue By Month Since Start of Tax Collection

Source: ITEP analysis of state revenue reports and U.S. Census population data. Revenue data include state and local excise taxes applied to recreational cannabis sales. Excludes state and local general sales taxes, gross receipts taxes, license fees, income taxes, and other levies. Most of the data in this table are derived directly from the state’s reports with California’s quarterly reports being the only exception.
Figure 9

Average Annual Growth Rate for Cannabis Excise Tax Revenue Collections Tend to Grow Fastest in Early Years as Legal Market Becomes Established

Source: ITEP analysis of state excise tax revenue data. Data represent unweighted averages across states for which sufficient data are available. Growth rates. Year 1-2 growth rate is an average of growth rates in Alaska, Colorado, Oregon, and Washington. Year 2-3 includes Colorado and Washington. Year 3-4 includes Colorado and Washington. Year 4-5 includes only Colorado.
Figure 2

State-Level Tax Structures Applying to Recreational Cannabis

PRICE-BASED EXCISE TAXES
Colorado
Oregon

WEIGHT-BASED EXCISE TAXES
Alaska

STATE-LEVEL GENERAL SALES TAXES
California
Maine
Michigan
Massachusetts
Nevada
Washington

Source: ITEP analysis of information reported by state revenue offices. Note that legal sales have yet to begin in Maine and Michigan. Note also that while Colorado and Nevada’s excise taxes are based mostly on price, the administration of these taxes involves a weight-based component since the weight being sold is multiplied by a statewide average price to calculate the base against which the tax is applied.
Advantages of Price Taxes and Sales Taxes

Price-Based

- Slightly higher rates on more potent products and/or premium products.
- No need for inflation indexing.
- Familiar structure as consumers and lawmakers are accustomed to price-based general sales taxes.
- Certain administrative advantages.

Weight-Based

- Immune to revenue dramatic price cuts underway and sure
- No tax cut for people bulk, or employees discounts.
- Familiar structure as with how excise taxes levied (tobacco, alcohol, fuel).
- Certain administrative
Price-based taxes are not especially good at taxing more potent cannabis at higher rates

Significant increases in potency lead to only small increases in price.

If a gram of cannabis at 10% potency (THC) costs $7.00...

Then a gram of 15% potency is expected to cost between $7.75...

Tax charged rises only slightly despite a 50% increase in potency.

Research by Caroline Weber (University of Washington) and Ben Hansen and Keaton Miller (University of Michigan), shared by Pat Oglesby at the Center for New Revenue.
Tax Administration of Price and Weight Taxes

Advantages of weight-based taxes:
• For distributor-level taxes, it’s much easier to figure out weight as opposed to estimating weight of product transferred within a vertically integrated firm.
• No need to write rules preventing bundling.

Advantages of price-based taxes:
• No need to establish and enforce product categories (bud, trim, abv).

Advantages of distributor-level taxes generally:
• Fewer collection points and fewer entities to audit.
• Establishes a record of product earlier in the process, lessening diversion.

Something to keep in mind: 5 out of 9 states with legal recreational sales collect their taxes using a weight-based method (AK, CA, and ME have true weight-based, while CO and NV partly administer price-based taxes using weight-based methods.
Other major excise taxes always include a quantity-based tax:

- 50 out of 50 states tax cigarettes per pack
- 50 out of 50 states tax motor fuel per gallon
- 50 out of 50 states tax beer per gallon
- 47 out of 47 states tax wine per gallon
  - Three states sell wine through state stores instead of taxing private sales
- 33 out of 33 states tax liquor per gallon
  - 17 states sell through state stores instead of taxing private sales

Sometimes these states add price-based taxes on top of their quantity-based tax rates. But quantity-based tax rates form the foundation of their excise tax system.
Advantages of Price Taxes and Weight Taxes

Price-Based
- Slightly higher rates on more potent products and/or premium products.
- Familiar structure as consumers and lawmakers are accustomed to price-based general sales taxes.
- No need to inflation-index.
- Certain administrative advantages.

Weight-Based
- Immune to revenue dramatic price cuts underway and sure
- No tax cut for people bulk, or employees discounts.
- Consistent with how are typically levied (alcohol, and motor vehicles)
- Certain administrative
Prices will collapse. Here’s why:

1. Business efficiency will improve with experience
2. More businesses will open, improving competition
3. Consumer preferences are shifting toward oils and concentrates, which lend themselves to larger, cheaper growing operations
4. Federal restrictions adding to cost are likely to be loosened
   - Banking access will improve
   - Cannabis industry will receive tax deductions for more of their revenue
   - Interstate movement of product will be allowed
5. State restrictions adding to cost are likely to be loosened
   - Licensing rules (How many stores? What types of stores? And when)
Market Changes:
Increases in Quantity Sold, but Decreases in Price (and Per Unit Sold)

Excise Tax Revenue

$ Millions

2015 2016 2017

$89.0 $143.2 $179.5

Source: Institute on Taxation and Economic Policy (ITEP) compilation of data from the Colorado Department of Revenue, Marijuana Research Laboratory, Boulder, Leeds School of Business. Excise tax revenue for 2017 shown here is lower than reported, as ITEP adjusted these data downward to account for the fact that Colorado increased its excise tax rate in July 2017.
Wholesale Cannabis Prices in Colorado Since Legalization of Recreational Sales

Average Wholesale Market Price of Cannabis Bud, per pound

$2,007 (peak)

$1,876

Source: Colorado Department of Revenue
Quantity of Cannabis Sold in Oregon is Surging, but the Dollar Value of those Sales Hasn't Kept Pace
Comparing February 2018 to February 2019

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Change in Quantity Sold</th>
<th>Change in Dollar Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usable Cannabis</td>
<td>53%</td>
<td>-2%</td>
</tr>
<tr>
<td>Concentrates and Extracts</td>
<td>58%</td>
<td>2%</td>
</tr>
<tr>
<td>Edibles and Trim</td>
<td>48%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Institute on Taxation and Economic Policy (ITEP) review of information compiled by the Oregon Liquor Control Commission.
Price Per Pound of Various Agricultural Products in Washington State

- Cannabis, pre-legalization: $3,712.00
- Cannabis, legal market: $2,222.60
- Tobacco (cigarettes): $227.35
- Earl Grey Tea (Davidson’s): $14.61
- Hops: $5.50
- Tomatoes: $2.04

Institute on Taxation and Economic Policy (ITEP). Cannabis consumers in Washington State are limited to buying one ounce per day. The hypothetical retail price that consumers would eventually pay for a full pound. ITEP scaled up Headset’s March 2019 estimate of $24.70 to the retail cannabis costs $4.90. The pre-legalization price in this chart comes from PriceOfWeed.com, which reported a July 2014 average of $232 per ounce.
Regulations aside, how much could it really cost to grow cannabis?

Consider the following:

- Tomatoes cost $10,000 per acre to grow.
- Cannabis and tomatoes require comparable amounts of effort to grow and harvest.
- Cannabis yields 1,000 pounds per acre, or more.
- Therefore, 1,000 pounds of cannabis could theoretically be grown for just $10,000. The result would be:

$10/lb cannabis

Thanks to Jonathan Caulkins, professor at Carnegie Mellon University, for this example. Much deeper analysis available in: “Considering Marijuana Legalization” and “Marijuana Legalization: What Everyone Needs to Know.”
Market is shifting toward cannabis extracts. This has long-run implications for prices.

A few datapoints:

- **Colorado**, share of cannabis sales (by weight) comprised of smokable plant material:
  - 2014 = 66.1%
  - 2017 = 54.1%

- **Oregon**, share of cannabis sales (by value) comprised of smokable plant material:
  - Feb 2017 = 70%
  - Feb 2019 = 52%

- The shift toward extracts will push the market toward larger, and ultimately more efficient grow operations because these products require large amounts of biomass. It is also important that each plant be top-notch. Quantity > quality in the production of these extracts.

- Traditional smokable cannabis, by contrast, generally needs to be tended to very carefully to yield a high-quality final product fit to be sold as-is.
California made $345 million, not predicted $1 billion from cannabis in 2018

Industry supporters say high taxes, black market to blame.

But are taxes really to blame?
Effective tax rates on cannabis retail sales along the West Coast:

46.32%  
Washington State  
(assuming average local rate)

32.25%  
California  
(Orange County)

Cigarettes:  106% State & Local  
109% State & Local  
40%
What’s actually happening in California?

1. Overpromised short-term revenue gain. A $1 billion tax haul was unrequited.
   • A temptation to avoid in the push for legalization.

2. There aren’t enough legal stores open yet.
   • Compare 620 retail stores in California vs. 562 stores in Colorado, which is one-sixth.
   • 80 percent of municipalities have banned brick and mortar stores. Home delivery may be an alternative.
   • In many of the other municipalities, there’s a backlog of people wanting to open stores.

3. The supply chain faces problems, which reduces product selection and availability.
   • Not enough legal growers. Backlog of 3,300 growers who want licenses but haven’t received them.
   • Strict lab testing requirements are delaying product arrival.

4. California faces one of the most established black markets in the country.
   • Prior to adult-use legalization: growers produced 15.5 million pounds; residents purchased 80 percent from illegal sources.

5. Lax enforcement against illegal businesses.
   • Head of CA Bureau of Cannabis Control admits state must “step up” and “get more serious.”
   • Federal DEA spokesman says “We’ve got our hands full with the opioid epidemic.”
   • NYTimes: “businesses that list themselves as churches and advertise marijuana as a spiritual tool.”
ITEP’s Recommendations to States

1. Don’t oversell the short-term revenue potential.

2. Base the tax at least partly on weight. Price-based taxes are needed, but are unsustainable when taken on their own.

3. Weight-based tax rates should be indexed to inflation.

4. Don’t allow fear of a persistent illicit market to lead to enacting permanently low rate of tax. Consider automatic, gradual phase-in of rates instead, so that taxes can be low as legal industry gets off the ground and will rise as market matures and prices come down.

5. Earmarking of revenue should be done sparingly and should be for causes with a direct relation to cannabis.
Read More:

www.itep.org/taxing-cann