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 access to accurate, timely, and straightforward information that allows them to understand the effects of current and proposed tax policies with an emphasis on tax-incidence analysis.
ITEP research published 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 tax structures.
  • Including NEW data!

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

• A quick look at income tax deductions under 280E

• Is potency a viable tax base?

• Explaining the California experience

• Policy recommendations for states
Tax Revenue from Cannabis Sales Exceeds $1 Billion Per Year
Data for states with legal recreational sales

- Projected Excise and Sales Tax Revenue
- Actual General Sales Tax Revenue
- Actual Excise Tax Revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>State and Local Sales and Excise Tax Revenue (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$82.6</td>
</tr>
<tr>
<td>2015</td>
<td>$302.0</td>
</tr>
<tr>
<td>2016</td>
<td>$589.7</td>
</tr>
<tr>
<td>2017</td>
<td>$834.0</td>
</tr>
<tr>
<td>2018</td>
<td>$1,309.7</td>
</tr>
<tr>
<td>2019</td>
<td>$1,600.0</td>
</tr>
</tbody>
</table>

Source: ITEP analysis and estimates based on state revenue data in seven states with legal sales of recreational cannabis (Alaska, California, Colorado, Massachusetts, Nevada, Oregon, and Washington). Data are reported for calendar years. Figure does not include revenue raised through gross receipts taxes, license fees, income taxes, or other levies. Includes data published through July 25, 2019.
Excise Tax Revenue from Cannabis Rivals Alcohol Revenue in States with Legal Retail Sales of Cannabis

<table>
<thead>
<tr>
<th>Product</th>
<th>Revenue (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer and Wine</td>
<td>$304.2</td>
</tr>
<tr>
<td>Cannabis</td>
<td>$1,057.9</td>
</tr>
<tr>
<td>Beer, Wine, and Spirits (combined)</td>
<td>$1,158.1</td>
</tr>
<tr>
<td>Tobacco</td>
<td>$3,368.6</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) throughout 2018. Massachusetts is excluded because sales did not begin until November 2018. Data are reported for calendar year 2018. General sales taxes are excluded, partly because states do not typically report the general sales tax yield associated with beer, wine, spirits, and tobacco. Other revenue sources such as gross receipts taxes, license fees, or income taxes are also excluded.
Per Capita Cannabis Excise Tax Revenue By Month Since Start of Tax Collection

Source: Institute on Taxation and Economic Policy (ITEP) analysis of state revenue reports and U.S. Census population data. Revenue data include state and local excise taxes applying exclusively to cannabis. 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 reported monthly, with California's quarterly reports being the only exception. Includes data published through July 25, 2019.
Average Annual Growth Rate for Cannabis Excise Tax Revenue

Revenue Collections Tend to Grow Fastest in Early Years as Legal Market Becomes Established

- Year 1 - Year 2: 158%
- Year 2 - Year 3: 55%
- Year 3 - Year 4: 29%
- Year 4 - Year 5: 12%

State-Level Tax Structures Applying to Recreational Cannabis

PRICE-BASED EXCISE TAXES
- Colorado
- Oregon

WEIGHT-BASED EXCISE TAXES
- Alaska
- Illinois
- Michigan
- Massachusetts
- Nevada
- Washington

STATE-LEVEL GENERAL SALES TAXES
- California
- Maine

Source: ITEP analysis of information reported by state revenue offices. Note that legal sales have yet to begin in Illinois, 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. Note also that Illinois considers the potency of smokeable extracts when determining the price-based tax rate that will be applied.
Advantages of Price Taxes and Weight 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 erosion from dramatic price cuts that are underway and sure to continue.
• No tax cut for people buying in bulk, or employees receiving discounts.
• Familiar structure as it’s consistent with how excise taxes are typically levied (tobacco, alcohol, and motor fuel).
• Certain administrative advantages.
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 and $7.94.

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 Oregon), 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 price 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, abnormal bud, etc.).

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 10 states with legal recreational sales administer their taxes using a weight-based method (AK, CA, and ME have true weight taxes, while CO and NV partly administer price-based taxes using weight-based methods)
Other major excise taxes always include a quantity-based component

- 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 taxes. But quantity-based tax rates form the foundation of their excise tax systems.
Advantages of Price Taxes and Weight Taxes

**Price-Based**
- Slightly higher rates on more potent products and/or premium products.
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**Weight-Based**
- Immune to revenue erosion from dramatic price cuts that are underway and sure to continue.
- No tax cut for people buying in bulk, or employees receiving discounts.
- Consistent with how excise taxes are typically levied (tobacco, alcohol, and motor fuel).
- Certain administrative advantages.
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 over time:
   • Banking access will improve
   • Cannabis industry will receive tax deductions for more of their routine expenses
   • Interstate movement of product will be allowed
5. State restrictions adding to cost are likely to be loosened over time:
   • Licensing rules (How many stores? What types of stores? And where?)
Cannabis Tax Revenue Growth in Colorado Masks Major Market Changes: Increases in Quantity Sold, but Decreases in Price (and Tax Dollars) Per Unit Sold

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

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 June 2017 to June 2019

<table>
<thead>
<tr>
<th>Category</th>
<th>Change in Quantity Sold</th>
<th>Change in Dollar Value Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usable Cannabis</td>
<td>113%</td>
<td>18%</td>
</tr>
<tr>
<td>Concentrates and Extracts</td>
<td>209%</td>
<td>69%</td>
</tr>
<tr>
<td>Edibles and Tinctures</td>
<td>129%</td>
<td>66%</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

<table>
<thead>
<tr>
<th>Product</th>
<th>Price Per Pound ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis, pre-legalization</td>
<td>$3,712.00</td>
</tr>
<tr>
<td>Cannabis, legal market</td>
<td>$2,222.60</td>
</tr>
<tr>
<td>Tobacco (cigarettes)</td>
<td>$227.35</td>
</tr>
<tr>
<td>Earl Grey Tea (Davidson's)</td>
<td>$14.61</td>
</tr>
<tr>
<td>Hops</td>
<td>$5.50</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>$2.04</td>
</tr>
<tr>
<td>Lettuce</td>
<td>$1.21</td>
</tr>
</tbody>
</table>

Institute on Taxation and Economic Policy (ITEP). Cannabis consumers in Washington State are limited to buying one ounce per day. To calculate the hypothetical retail price that consumers would eventually pay for a full pound, ITEP scaled up Headset’s March 2019 estimate that a gram of retail cannabis costs $4.90. The pre-legalization price in this chart comes from PriceOfWeed.com, which reported a July 2014 average price 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:
  - June 2017 = 66%
  - June 2019 = 54%

- The shift toward extracts will push the market toward larger, and ultimately cheaper, grow operations because these products require large amounts of biomass and it’s less important that each plant be top-notch. Quantity > quality in the production process.
- Traditional smokable cannabis, by contrast, generally needs to be tended to more carefully to yield a high-quality final product fit to be sold as-is.
Federal tax on cannabis (280E) is driving up prices. Will it last?

26 U.S. Code § 280E. Expenditures in connection with the illegal sale of drugs

No deduction or credit shall be allowed for any amount paid or incurred during the taxable year in carrying on any trade or business if such trade or business (or the activities which comprise such trade or business) consists of trafficking in controlled substances (within the meaning of schedule I and II of the Controlled Substances Act) which is prohibited by Federal law or the law of any State in which such trade or business is conducted.

(Emphasis added)
280E, continued

• What’s deductible?
  • Cost of goods sold: farming expenses, price retailer pays farmer, state and local tax, etc.
• What’s not?
  • Selling expenses: wages and benefits for retail personnel, rent and utilities at retail location, legal and accounting services, marketing expenses, etc.
• Big changes to 280E seem likely under federal legalization.
  • Included in the MRRA, STATES Act, MORE Act.
• Some of the consequences of changing 280E:
  • For states: Potential twofold hit to revenue collections.
    • 280E is equivalent to at least a 5% tax (maybe much more) embedded in current prices. Absent 280E, prices will fall and that will impact state revenues in states with price-based taxes.
    • If your state hasn’t decoupled from 280E already, this may trigger a state income tax cut as well.
  • For federal government: Legalization without a robust excise tax would be a revenue loser. That’s not what most people envision regarding legalization’s impact on the budget.
  • For the public: Advertising becomes tax deductible, likely leading to more ads.
    • To address parents’ concerns: federal government could continue to deny deductions for marketing expenses (not just advertising but also branding, consumer behavior studies, etc.).
Potency: Another Tax Base Option?

• **Pro:** Theoretically appealing. If your main concern is the intoxicant itself, why not tax it directly?

• **Con:** Administrative challenges, especially for raw plant material.
Does Illinois levy a potency tax? Not really.

- How the Illinois system is usually described:
  - 10% tax on smokable products if THC is at or below 35%
  - 20% tax on anything “not intended to be smoked”
  - 25% tax on smokable products if THC is above 35%

- Translation: This is a price-based tax with rates varying by product category.
  - **10% tax on smokable plant material**
    - About half the market.
    - Raw plant material never exceeds 35% THC so actual potency does not matter under this tax.
  - **20% tax on non-smokables** (edibles, tinctures, ointments, etc.)
    - Potency (i.e. milligrams of THC) must be reported on label but is not used for tax purposes.
  - **25% tax on smokable extracts** (dabs, hash, oils, etc.)
    - Extracts are almost always above 35% potency.
    - In theory, IL tax “cliff” could encourage 34.9% dabs. But customers say “ideal” is ~70%.
What would a true potency tax look like?

• Price would not matter.

• Tax rate would be a flat amount per milligram of THC.

• Easier to implement for extracts, which are relatively uniform in potency throughout.
  • This includes both extracts that are intended to be smoked, and those that are used to make edibles, tinctures, etc.

• Harder to implement for raw, smokable plant material since THC content varies so much depending on which part of a plant/bud is tested.
  • Possible first step: Tax by weight but use potency as reported by seller to administer an alternative minimum tax.
    • E.g., if tax is greater of $2/gram of bud or $10/gram of stated THC... then only cannabis above 20% THC would be affected by potency minimum tax.

• No state has a true potency tax yet. Canada is in the process of implementing one only for extracts, not raw plant material.
But are taxes really to blame?

Effective tax rates on cannabis retail sales along the West Coast:

46.33%  
Washington State  
(assuming average local rate)

32.25%  
California  
(Orange County)

20.00%  
Oregon  
(Portland)

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

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

2. There aren’t enough legal stores open yet.
   - Compare 620 retail stores in CA vs. 562 stores in CO (1/6th CA’s population) or 650 in OR (1/9th CA’s pop.)
   - 80 percent of municipalities have banned brick and mortar stores. Home delivery may help meet demand there.
   - In many of the other municipalities, there’s a backlog of people wanting to open stores. Slow approval processes.

3. The supply chain faces problems, which reduces product selection and drives up prices.
   - 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 consumed 2.5 million.

5. Lax enforcement against illegal businesses.
   - Head of CA Bureau of Cannabis Control admits state must “step up” and “get more aggressive”
   - Federal DEA spokesman says “We’ve got our hands full with the opioid epidemic to be honest”
   - NYTimes: “businesses that list themselves as churches and advertise marijuana as a kind of sacrament”
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 fine add-ons 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 enactment of a permanently low rate of tax. Consider automatic, gradual phase-in of tax rates instead, so that taxes can be low as legal industry gets its footing but will rise as market matures and prices come down.

5. Earmarking of revenue should be done sparingly and should be limited to causes with a direct relation to cannabis.
Read more: www.itep.org/taxing-cannabis/

Or let’s talk about it: carl@itep.org