States May Be Stuck With Second-Best Marijuana Taxes

by Pat Oglesby

After marijuana is legalized, the costs of producing and selling it will collapse and a windfall economic gain will be up for grabs. Policymakers might allow that gain to go to consumers (encouraging consumption) or to cannabis businesses (encouraging production). Or, through revenue measures, they might direct the gain to society as a whole.

The safest, correctable way to distribute an intoxicant is government monopoly, but the federal government prohibits, at least nominally, the sale of marijuana, so state sales of marijuana would face harsh federal scrutiny. It’s not clear that a work-around, keeping state control over location and price while assigning sales concessions to businesses, would avoid a federal crackdown.

T axing private enterprise, Colorado and Washington style, may be a second-best solution, but the federal government is tolerant of it, so far. Taxation requires choice of a tax base. Taxing by THC potency is theoretically appealing, but unworkable. A price tax base has several pitfalls. Even a weight base is problematic.

Three other legalization models are possible: auctioning licenses, collective farming, and sales by nonprofits.

Because no one really knows how to legalize, flexibility to change course is of the utmost importance. Because monopoly may be the safest and most flexible path, it’s crazy for the federal government to bar it for states — and to treat states worse than profit-seeking marijuana businesses.

I. Controlling a Light but Pungent Weed

Any marijuana legalization model — whether monopoly, tax, or a different option — must result in prices high enough to keep use by youths and drug abusers at a level low enough to be tolerated by the public. But it must use either low prices or enforcement to solve the problem of bootlegging — selling by the illegal sector. Marijuana is easier to bootleg than both alcohol and tobacco.

Several factors make marijuana easier to bootleg than alcohol, another psychoactive intoxicant. First, marijuana is lighter and more compact by value. Second, it’s harder to transport a liquid than a solid. A sloshing liquid can tip over a partially filled, bulk container. A small hole can bring ruin.

Third, processing is more exposed for alcohol than for marijuana. It takes time to distill spirits (which requires observable heat), ferment wine, or brew beer. Marijuana processing is simple and portable. Fourth, consumers understand that moonshine liquor can kill them. Bootlegged marijuana may contain more mold and pesticides than a regulated product, but will not cause instant death. Thus, bootlegged marijuana is more marketable than bootlegged liquor.

However, other factors can make marijuana harder to bootleg than alcohol. Marijuana tends to be pungent, making it easy to find. Corn and other raw materials for beverage alcohol are legal as they grow in the field. Law enforcement and investigation do not begin until after harvest. Contraband marijuana must be hidden while it grows. For outdoor operations, aerial surveillance is a threat. For indoor operations, excess electricity consumption can tip off law enforcement. Marijuana takes months to grow, and the grower must hide it the entire time.

1Decriminalization, removing penalties for possession while retaining penalties for distribution, does not generate revenue, and it is also not legalization.

Marijuana is easier to bootleg than tobacco, another plant that people smoke or consume by mouth, though marijuana is more pungent while it grows. Marijuana’s light weight and low bulk make it easier to hide. Second, tobacco is notoriously difficult to grow. Some marijuana grows easily: Primitive strains, at least, have the nickname weed. Thus, marijuana is harder to control and easier to bootleg. Third, the process of converting sticky fresh tobacco into a consumable form requires either air-drying, which takes a long time, or artificial heating. Law enforcement may detect both processes. Post-harvest processing of agricultural marijuana is simpler than that of tobacco, leaving less time and opportunity to be detected.

II. Government Monopoly

In Uruguay, which legalized marijuana last year, the government will be the sole seller of retail marijuana. Government monopoly is highly problematic for bootleggers and the most flexible and robust legalization model overall.

A. Advantages of Monopoly

The best reason to choose marijuana monopoly over a private enterprise model is that governments get only one chance to set up a monopoly. A country or state can easily switch from government monopoly to a private model, but not the other way around, as private businesses would have a powerful and valid complaint. Having a Plan B is safer than betting all on Plan A.

Moreover, a public seller can tweak prices more quickly than a legislature can change tax rates, making it easier to battle bootleggers in the inevitable price war. A state monopoly also limits the profit motive for marijuana distribution. As John D. Rockefeller said about liquor, as Prohibition ended: “Only as the profit motive is eliminated is there any hope of controlling the liquor traffic in the interests of a decent society. To approach the problem from any other angle is only to tinker with it and to ensure failure.”

Public monopoly offers more regulatory control. A former mayor of Juarez, Mexico, Hector “Teto” Murguía said that “if you want to end the violence and the corruption [selling marijuana] creates, . . . you only need to turn the business over to governments.”

Also, monopoly offers more stable, long-term control. As the marijuana industry matures, it can be expected to gain power and seek tax cuts — as the U.S. alcohol industry has done (if only by watching unindexed dollar-denominated taxes erode through inflation). The public may also favor marijuana monopoly. At least it did in my state of North Carolina, in a Public Policy Polling conducted in March 2013, by 58 percent to 19 percent (with 23 percent having no opinion). Finally, a government monopoly tends to maximize net revenue generally. That is, government gets more of the proceeds from monopoly than from any other scheme.

B. Disadvantages of Monopoly

First among monopoly’s disadvantages is the flip side of the final advantage noted above: A government that benefits from sales of undesirable goods tends to become compromised in its opposition to them. The more money for government, the greater the push to tolerate those products. Monopoly’s revenue advantage over taxes becomes a disadvantage as government condones harm. Second, private industry is ordinarily more consumer friendly than a state monopoly, though consumer friendliness does not appeal to members of the public that oppose marijuana. Third, state monopoly can lead not only to inefficiency and waste but also to conflicts of interest, sweetheart deals, and corruption. In North Carolina, for instance, a state monopoly on liquor for off-premises consumption has proved prone to embarrassing scandal.

Fourth, putting government into the monopoly business may seem more provocative to treaty partners than tolerating private sellers. By analogy, in the United States, legalizing states are not selling marijuana themselves. That way, they avoid directly violating federal law. Because of federal illegality, no U.S. state laboratories perform tests on marijuana and no state is thinking of hiring cashiers to sell it. The federal government is in effect scaring states directly into a more dangerous form of legalization. To benefit from monopoly, U.S. states might need to implement the kind of work-around described below.

C. Implementing Monopoly

State monopolies face dangers of corruption and cronyism. Those dangers might be addressed by transparency and division of power. Presumably, a board would set policy and hire employees. Members of that board could be controlled by short terms of office, perhaps nonrenewable. Appointees to the board could be named by members of different branches of government as an additional means of diffusing their power.

5The work of Robin Room could be a starting point for more thinking about monopoly for marijuana. See, e.g., Room, “Why Have a Retail Alcohol Monopoly?” paper presented at International Seminar on Alcohol Retail Monopolies (Aug. 2001).

6Given the complexity of tax law, new U.S. tax statutes that override, or, less euphemistically, violate, tax treaties now and then are noticed mainly by insiders.


8In a typical U.S. state, members of a seven-member board could be named by seven different individuals: the governor, lieutenant governor, chief justice of the state supreme court, and leaders of the majority (Footnote continued on next page.)
State monopoly might best extend to only the retail level. The marijuana industry has developed a wide variety of products or strains with different characteristics. Uruguay may cede this product differentiation advantage, however. President José Mujica has said that the marijuana sold in Uruguay would be cloned to reproduce the same genetic code, which would give the plants a clear identifier for tracking.9 This would be similar to going to a government liquor store and being able to buy only one brand of bourbon whiskey — no gin, rum, vodka, rye, tequila, or Scotch. The bootlegger can provide wider product choice, which is a competitive advantage.

A government liquor monopoly that provides more choice for consumers has been implemented in many countries, especially Scandinavian countries, and in 17 U.S. states, including North Carolina. That model allows private firms to supply a product to a state monopsony (sole buyer), which is also a retail monopoly. Customers may then choose from a wide variety of competing products.

To address the unique U.S. problem of federal marijuana prohibition, a state could assign possession and the functions of producing and selling to contractors.10 The state could still set prices, fix locations, and restrict advertising. Constitutionally, that plan may be no more provocative than the local marijuana taxes collected in Oakland, California, since 2010, and the state excises collected in Colorado this year. If a work-around were tried, it might give the federal government room to allow the same deference to states that it extends to regulated businesses. It would be ironic for federal policy to treat state governments worse than cannabis businesses and to reject the safest, most sensible form of legalization.

III. Taxing Private Enterprise: What Base?

Colorado and Washington, along with many localities where medical marijuana is legal, collect excise taxes from private companies that sell marijuana. While a complete examination of the issues involved in the taxation of marijuana sold by private enterprise would exceed the scope of this article, below is a brief discussion of the tax base and other issues.

What base should be used to measure and tax marijuana? Possible bases for marijuana taxes include weight, potency, percentage of sale price, number of plants, production area square footage, or abnormally high electricity use that is associated with indoor growing. All but the first two, weight and potency, are already used for taxing marijuana in the United States, but weight and potency are likely to prove the most useful in the long run. Two or more tax bases may be used simultaneously.

A. Potency

For marijuana, "ideally, the tax rate per ounce should be proportional to THC potency."13 Potency is a rough proxy for the tax base of the U.S. federal alcohol tax scheme. The federal tax on liquor is directly proportional to alcohol content.14 The federal scheme taxes hard liquor at a higher rate per ounce than in its less powerful competition. The tax on wine is linked to potency, too. Only the tax on beer, $18 per barrel of 31 gallons, does not turn on potency.

Potency-based taxation requires chemical analysis. Chemical analysis is easy for beverage alcohol, but impractical for a solid vegetable product. Different labs routinely report wide variances in measured potency (THC content) even from a single marijuana sample.15

For now, even processed marijuana, which at least passes through a liquid or concentrate form, does not yield replicable testing results.16 Technology and openness may one day yield standards and tests accurate enough to serve as a tax base for concentrates. But it’s difficult to imagine that testing will ever be reliable enough to tax unprocessed marijuana by potency. That is why cigarettes are not taxed by tar and nicotine content.

Given potency testing issues, another potential tax system could involve a minimum tax. Jurisdictions could base a minimum tax on stated or claimed weight-adjusted potency (in terms of numerical THC content) in addition to a primary tax based on weight.17 This presupposes that the industry will voluntarily run some rough potency testing or that regulations will require packages to disclose THC content, however inaccurate, as a warning or as ordinary consumer information. In those cases, relatively high THC reports may tend to entice consumers to buy. Taxing stated potency creates a healthy tension for marijuana sellers who look to reap the retail benefits of potency by shopping for a lab that will overreport THC.

But taxing only stated potency could prove unwise. If the industry is not well regulated, shrewd sellers seeking to

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14Alcohol and Tobacco Tax and Trade Bureau, U.S. Treasury Department, “Tax and Fee Rate [Table].” The tax rate is determined by proof gallon, which is the equivalent in alcohol content of a gallon of 100 proof (50 percent alcohol) liquor.
17Beau Kilmer of RAND mentioned that notion to the author. The same idea occurred independently to Professor W. David Ball of Santa Clara Law School.
defeat the minimum tax could deliberately understate THC — and substitute a different claim (3 percent XYZ cannabinoid! The secret ingredient for getting high!). True or false, that claim might lure buyers. So a more prudent approach might be to make a tax on stated potency an add-on, or an alternative minimum, rather than the primary tax.

B. Weight

Weight is an obvious option for the marijuana tax base. Anachronistically, 21 states have laws on the books that tax the sale of marijuana (and other illicit drugs) on the basis of weight, though those gotcha taxes are actually fines. Weight is used to tax cigarette tobacco regardless of the tar and nicotine content. Once moisture content is accounted for, a weight-based tax is relatively easy to impose. A weight-based tax, however, will tend to drive less potent, cheaper product out of the market.

Colorado is collecting a de facto weight tax of $0.62 per gram ($281 per pound) of potent flowers and 10 cents per gram ($44 per pound) of less intoxicating and less valuable trim. Regulators will restate those rates every six months to reflect ongoing market prices. Other pending proposals in U.S. states would follow Colorado’s lead in proposing higher weight-based taxes for flowers than for trim. New York Sen. Liz Krueger (D) has proposed a higher tax rate for potent concentrates (the typical end product that comes from trim) at a rate of $200 per ounce compared with $50 per ounce for plant material.

The easiest marijuana tax question is whether to index currency amounts: The answer is yes. Inflation has caused the U.S. federal beer tax, $31 per 55-gallon barrel, to lose over half its real value since it was last raised in 1990. Indexing would solve that problem by increasing tax rates to account for inflation. Any tax based on weight or potency should be indexed. Indexing is irrelevant when the tax base is a percentage of price, because as prices go up, taxes do too. Indexing is common in the income tax but it is far too rare in excise taxes. Long Beach, California, indexes its square footage taxes on marijuana businesses, which is a good idea.

C. Price Bases

Assuming potency is an ideal tax base except that it cannot be accurately measured, a price base seems superficially appealing. Consumers ordinarily pay more for potent products. So, a tax based on price could be a proxy for one based on potency.

Colorado and Washington are trying to tax only by percentage of price, which is easy and quick. Setting up weigh stations and testing facilities would take time. And that would require more government, of which many in the marijuana community are distrustful. But calculating marijuana taxes as a percentage of price creates the danger that taxes will be both too high and too low. Taxes may be too high at first, as start-up expenses push costs up with resulting upward pressure on pretax prices. Those high prices will be magnified by taxes that rise with the price level. Taxes that are too high open the market to competition from bootleggers, with the pernicious results of low actual collections and continuing illegality.

Later, the prohibition premium — the extra amount illegal sellers charge to compensate for risk of getting caught — will disappear. Then, as efficiency, amortization of start-up costs, and economies of scale drive pretax prices down, price-based taxes will shrink proportionately. A percentage base may be especially problematic for marijuana. Low prices create availability of an intoxicant, which drug policy disfavors, especially for youth and problem users.

Colorado and Washington both tax retail sales by percentage of price: Colorado at 10 percent, Washington at 25 percent. States and localities that impose retail sales taxes generally collect them on sales of legal medical marijuana. Gross receipts, as measured by sales, are the base of a tax on medical marijuana businesses in several California jurisdictions. That tax applies in addition to the regular California sales tax. But retail price may reflect factors other than potency. Those include branding and convenience of the retail location.

18 A tax on the potency that sellers claim (accurate or not) could work like the short-lived minimum tax preference item of book income reported to shareholders — a tax burden for a quantified claim, tangential to the principal tax base, that impresses a company’s stakeholders. The short life of that tax provision may serve as a warning for that proposal: In tax policy, it often makes sense to use tried and true models.

19Milkos, supra note 7, at 258. Those so-called taxes are supplements to enforcement schemes. Some have been found unconstitutional as self-incriminatory.

20IRC section 5701(b)(1) ("On cigarettes, weighing not more than 3 pounds per thousand, [the tax rate is] $19.50 per thousand").


22Colorado Department of Revenue, "Information for Cultivators." Trim is the part of the plant that remains for processing, ordinarily into concentrates, after the potent bud or flowers usually used for smoking are removed.

23See Oglesby, "Laws to Tax Marijuana," supra note 2, at Table 1.

24Those automatic tax cuts resulting from a tax based on sales price provide one unique advantage. This article dwells on the necessity of letting government authorities adjust the tax burden nimbly, so as to respond quickly to competition from bootleggers. If bootleggers cut prices, prices should fall in the legal market to compete. With a price base, a price cut by legitimate operators will result in an immediate tax cut, which will provide a lower after-tax price that will help legal operators fight their price war with bootleggers. Still, that automatic adjustment is a poor substitute for the nimbleness that drug policy needs.

25See Oglesby, "Laws to Tax Marijuana," supra note 2, at Table 1.
A retail price, unlike weight, can be difficult to calculate. For instance, what if the stated, manipulated price is zero? Hotel rooms featuring free marijuana are already popping up in Colorado. Don’t be surprised to see overly expensive e-marijuana vaporizers sold in a package with “free,” highly potent cartridges. Tax free? No. How much is the tax? There is likely to be a disagreement between the state and the retailers. And a retail price base creates opportunities for evasion because retail tax may not be collected. Shoplifting and pilferage by employees evade the tax. So does hijacking of trucks en route to a retail location.

A wholesale price-based tax may be easier to collect than a retail price-based tax, because it is collected earlier in the supply chain. But it requires finding an arm’s-length wholesale price, which can be an issue when a vertically integrated, that is, garden-to-customer business owes the tax. Colorado, whose constitution allows a wholesale tax calculated at 15 percent of price, cannot make that percentage tax work. The state now requires vertical integration most of the time, and permits it in every case. With vertical integration, there is no wholesale sale, so Colorado uses an “average market” price to impose a de facto weight tax of $0.62 per gram ($281 per pound) on potent flowers and 10 cents per gram ($44 per pound) on less intoxicating and less valuable trim. Regulators will restate those rates every six months to reflect ongoing market prices.

Washington also imposes a 25 percent producer tax along with its 25 percent retail and wholesale taxes, but only if the producer and wholesaler are separate. Unsurprisingly, the market seems to be evolving toward integration of the producer and wholesaler, so that tax will rarely be collected.

D. Square Footage or Number of Plants

Some California cities are trying another tax base for marijuana operations: square footage of growing area.

Most of the square footage marijuana taxes are $25 per square foot of indoor operations with grow lights. But Rancho Cordova is more aggressive: It counts grow areas, hydroponic or natural, with an alternate base of number of plants. On indoor operations, the highest rate is the greater of $900 per square foot or $900 per plant. On outdoor operations, the highest rate is the greater of $900 per 12.5 square feet, that is, $72 per square foot, or $900 per plant. Measuring grow areas is more intrusive and less verifiable than measuring business space.

The more targeted square footage tax is not taxing chickens before they hatch, but taxing the size of the coop. A tax on grow areas could target intoxication somewhat better by counting square footage and multiplying by the number of crops produced in a year. This square footage approach seems crude because square footage of a grow area is not tightly correlated with intoxication. But if one can’t tax exactly what needs taxing, a proxy may be necessary.

A square footage tax applies at the very beginning of the supply chain, so it minimizes the problem of pretax leakage. And unlike an excise tax based on weight or potency, it requires little lead time to implement.

IV. Other Tax Issues

In addition to tax base, a host of tax issues can puzzle policymakers. There may be special tax cuts for small businesses, or large ones; environmentally friendly operations might be rewarded, or unfriendly ones taxed more heavily; home growing operations might be tax exempt within limits, as in Colorado, or banned, as in Washington. Marijuana sold to medical patients might escape tax. In Colorado, two months into legalization, 70 percent of marijuana sales escaped all excise taxes on the ground that they went to medical patients. That’s a lot of sick people. Income tax deductions for advertising and marketing might be denied. Penalties for possessing illegally obtained marijuana might be considered.

A collection point or points must be chosen, with an eye toward reducing tax evasion and administration costs. Rates must be set with the understanding that the market is not just fluid but unpredictable. Government must stand ready to react to the market.

V. Options Other Than Monopoly and Taxation

A. Auctioning Licenses

In 2010 Oakland enacted an annual fee of $211,000 for each of four marijuana factories. Other schemes raise revenue through licensing at all levels of commerce. Requiring licenses for everyone in the supply chain conforms with changing international standards for tobacco. Making licenses expensive, or otherwise restricting them, creates potential choke points in the distribution chain. Consumer licenses that would correspond to fees that medical marijuana patients pay have also been suggested. Auctioning licenses could let government share the proceeds of legalization, but licensing can vest powerful businesses with control of intoxicants. Those businesses may become too powerful. An annual license auction could curb that problem. Still, after the first year, the incumbent might be better positioned to outbid others because of intangibles.
developed during the initial license period and operation. A nonrenewable license would address that problem.

As an alternative to banning license renewal, laws could disfavor renewal in favor of new entrants. For instance, an incumbent could have to outbid competitors by a compounding excess — say 10 percent. So the second year, the incumbent would have to pay 110 percent of the next bid; in the third year, 121 percent, and so on. After 10 years, the incumbent would have to bid some 2.5 times (1.1 to the 10th power) the next bid to prevail. That system could disburse licenses and power (if incumbents lose) — or finance spending, allow tax cuts, or reduce debt (if incumbents prevail).

B. Models Forgoing Revenue

Two remaining models would lack a meaningful revenue component. One is putting ownership of the means of marijuana production and distribution in the hands of a collective farm or cooperative, whose members own every-

33If a plan has not been tried in all the history of intoxicants, we might wonder why not and view the plan with skepticism for that reason alone.

34To prevent real parties in interest from disguising themselves through dummy corporations or related parties, rules like those of IRC section 318 would be necessary.

35That is the official California model for medical marijuana.


VI. Conclusion

Some policymakers might seek to legalize marijuana only because of the potential revenue. But it seems wiser to make new revenue a secondary goal, and to consider revenue as a tool, the most powerful tool, of drug policy. However, as marijuana legalization develops, it will surprise us in ways we can’t imagine, and policymakers should treat flexibility as the primary desideratum for any legalization plan. For that reason alone, government monopoly should trump taxed private commerce. But that monopoly approach will not happen unless a state challenges the federal government, or unless the federal government signals a hands-off approach. That federal signal would not only honor states by treating them no worse than private companies, it would allow a safer marijuana experiment to proceed.