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Are Sin Taxes Healthy for State Budgets?

Taxes on vices are tempting but unreliable source of revenue

Contents

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Overview

When Kansas lawmakers found themselves facing a projected $900 million budget shortfall in 2017, then-Governor Sam Brownback (R) proposed tax hikes on cigarettes and liquor, among other measures—which would have been the state's second cigarette tax increase in three years. But legislators on both sides of the aisle decided the measures, projected to raise $377 million over two years, did not do enough to address the state's structural budget problems. The Legislature rejected the proposal, instead passing a budget that included over $1 billion in income tax increases directed at improving the state's longer-term fiscal outlook.[1]

Although Kansas lawmakers rejected the tax hikes on alcohol and tobacco, their dalliance with the idea—and their passage of the earlier tobacco tax increase—is indicative of the widespread attractiveness of these taxes on specific behaviors. Since 2000, all but nine states have significantly raised tax rates on cigarettes and other tobacco products.[2] The median state tax on cigarettes has increased more than fourfold—from 34 cents in 2000 to $1.57 in 2017.[3] The circumstances behind the increases vary, but they point to two primary motives: advancing public health by making tobacco use more costly and collecting revenue from those who do not give up the habit.

This is the paradox of sin taxes, the class of taxes that includes tobacco. These extra dollars and cents levied on products and activities considered detrimental to consumers—traditionally tobacco, alcohol, and gambling—are intended to accomplish two contradictory goals: Like all taxes, they generate revenue for the taxing entity, but they also aim to deter the behavior being taxed—which can ultimately negate the first goal.

Indeed, research suggests that higher cigarette prices play a role in curbing smoking.[4] A reduction in smoking is good for public health, but it has been so significant that inflation-adjusted tobacco tax revenue nationwide has waned in recent years despite frequent tax rate hikes. Revenue from tobacco taxes depends on high rates of smoking—which the taxes discourage—making these taxes an unreliable source of long-term revenue, especially for funding recurring budget items.

Research by The Pew Charitable Trusts and the Nelson A. Rockefeller Institute of Government similarly found that state revenue growth from taxes on alcohol and gambling is unlikely to be sustained due to how the products are taxed, changes in demand, and casino competition. In addition to studying state revenue trends for long-standing sin taxes, Pew and Rockefeller analyzed newer taxes on e-cigarettes and recreational marijuana. This report examines trends from 2008 through 2016 and relies on federal and state revenue data, academic and other relevant literature, and interviews with state officials.

The key findings include:

- Revenue from tobacco taxes dropped on average during the study period, with states that did not increase tobacco tax rates recording the most drastic decline. Overall, tobacco tax revenue declined in over half the states.
- Because of greater consumption of alcohol, tax revenue from those products, unlike tobacco, rose over the study period without significant tax hikes. However, the long-term revenue potential of tobacco and alcohol taxes is limited by their shared structure—a tax on the quantity sold, not its value, and thus requires either increased tax rates or increased consumption to generate more revenue.
- While lawmakers are enticed by taxes on gambling, revenue growth from newly legalized casinos and "racinos" (casino-racetrack hybrids) tends to be short-lived. Competition is a significant contributing factor, suggesting that as more states legalize these activities, states already collecting gaming revenue could see further erosion in these tax streams.

- Nonetheless, states are increasingly looking at sin taxes to generate new revenue. This trend is demonstrated by the steady flow of casino openings, a majority of states considering implementing sports betting, and continued interest in legalized recreational marijuana.
- States are experimenting with *ad valorem* taxation—which is based on the price of the good, not quantity sold—and other tax structures on e-cigarettes and legalized recreational marijuana. Under the current structures, recreational marijuana revenue has been strong in the states with available data, but the markets for it and e-cigarettes are too new to gauge their long-term revenue potential.

The findings suggest that policymakers should carefully evaluate the purpose of these revenue-raising measures. Recent and historical trends in sin tax revenue point to three main takeaways:

- Sin taxes are a useful tool for supporting public health objectives and can be effective in raising revenue in the short term.
- States should carefully assess the sustainability of these revenue sources in the long term, especially for funding ongoing budget commitments, to avoid structural budget challenges.
- Policymakers can benefit from considering historical experiences with sin tax revenue as they seek to implement new, related tax policies. States should be especially cautious about pursuing emerging sin taxes where markets are volatile and forecasts rely on limited data. Given this uncertainty, and the trends in revenue from these sources, states should also be mindful of potential pitfalls in directing new sin tax revenue toward recurring expenditures.

Structural Budget Problems

To achieve a balanced budget in any fiscal year, a state must bring in at least as much revenue as it spends. When revenue declines, such as during a recession, it may need to spend more money than it takes in by, for example, using reserve funds. However, states balance this need when they collect more revenue than they spend during periods of economic growth. A state that achieves fiscal stability over the long term is commonly referred to as having a "structurally balanced budget."

Structural budget problems can occur for many reasons. A tax base can erode when the consumption of a taxed good declines, weakening revenue collections. Or policymakers can misalign recurring and nonrecurring revenues and expenditures, for example by dedicating a one-time windfall—such as the proceeds of a legal settlement—to an ongoing spending priority, leaving the state without a funding source when that money runs out.

Established sin taxes: Tobacco, alcohol, and gambling

Sin taxes have a storied history. Alexander Hamilton famously proposed a whiskey tax in the late 18th century to help pay down the debt incurred during the Revolutionary War, a move that helped spark the Whiskey Rebellion.[5] About the same time, Adam Smith, the father of modern economics, likewise said that alcohol—rum, specifically—was worthy of taxation and that tobacco use was another vice that should bring in tax revenue due to its widespread use.[6] Since then, sin taxes have been a mainstay of American life.

Technically, a sin tax is an excise or selective sales tax—a tax on a specific activity or good. Like all levies, sin taxes involve trade-offs, some of which extend beyond purely fiscal considerations. Factors policymakers must weigh include impacts on individuals, businesses, and the state's finances over the long term. Since these taxes tend to affect lower-income consumers more than affluent ones, most economists consider them regressive.[7] Other considerations include transparency, administration, and compliance.

Taxes imposed on tobacco, alcohol, and gambling are similar in significant ways, including much of their structure, while also different in areas such as sales regulation and consumption. For example, alcohol, tobacco, and gambling are taxed at the federal, state, and, in some cases, local levels. Alcohol and tobacco are taxed based on quantity rather than price.

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State taxes on alcohol are generally calculated per gallon. Therefore, revenue rises due to growth in consumption or in the tax rate, but not solely from price increases. These taxes can be imposed in several ways: as wholesale taxes, retail taxes, case or bottle fees, or extra sales taxes. Wine and spirits usually have significantly higher tax rates than beer.[8] The federal government taxes distilled spirits, beer, and wine at three rates.[9]

The regulatory structure for taxing alcohol varies among states. Two models apply for alcohol sales: license and monopoly. In the 33 license states, private businesses may buy and sell alcohol, and the state collects revenue through taxes and license fees. The remaining states have a monopoly system whereby the state operates the sale of spirits and, in some cases, wine. In monopoly states, revenue is earned primarily from the markup of alcohol in state-run stores. These states can also tax beer and most also tax wine.[10] Tax rates on alcohol vary considerably, both by state and by type of alcohol. Texas, for example, has a specific sales and gross receipts tax on mixed drinks.[11]

Tobacco tax rates are levied per pack or other unit of sale. Both the federal government and states tax tobacco, and cigarette sales make up the largest share. The current federal tax on a pack of cigarettes is $1.01, while state taxes vary significantly. As of January 2017, Missouri had the lowest cigarette tax (17 cents a pack) and New York the highest ($4.35 a pack).[12] Taxes nationwide average about 44 percent of the retail price of a pack of cigarettes.[13] Some cities have also taxed cigarettes.

Collections from gambling include all taxes and fees transferred to state and local governments from gambling operations, except taxes on winnings. Lotteries are the biggest source of income from this sin tax across the 44 states operating them. They have also been operating for many years; most states running lotteries began doing so before 1990.

Other activities that are taxed include gambling at commercial casinos and racinos, and parimutuel wagering (betting on a short sporting event with a ranked finish). More states are legalizing these forms of gambling—and reaping revenue from a rush of new betting houses. About half of all casinos and racinos outside of Nevada were opened after 2001.[14] As with alcohol and tobacco, the federal government also taxes gambling winnings.[15]

Trends in sin taxes

For all the attention they garner, sin taxes typically represent a small portion of state revenue. In 2015, they made up just over 2 percent of total state revenue. That year, sin taxes accounted for 12 percent of Nevada's revenue, the highest share in the nation. In North Dakota, however, they made up less than 1 percent.[16] In real dollars, alcohol and tobacco raised $25 billion in state tax revenue nationwide in 2016. Gambling accounts for roughly the same amount: In 2015, the most recent year for which data are available, lotteries, casinos, and racinos generated almost $28 billion for states.[17]

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Table 1

Sin Taxes as Share of Total State Revenue, 2015

Proportion remains relatively small

State	Total sin taxes	Rank	Alcohol tax/license	Rank	Tobacco tax	Rank	Gambling revenue	Rank
U.S.	2.3%		0.3%		0.8%		1.2%	
Nevada	12.0%	1	0.5%	20	1.3%	32	10.2%	1
Rhode Island	11.1%	2	0.4%	32	2.8%	2	7.9%	2
West Virginia	8.1%	3	0.2%	41	1.2%	34	6.7%	3
Louisiana	8.1%	4	0.4%	27	1.0%	35	6.7%	4
New Hampshire	7.9%	5	0.4%	30	5.7%	1	1.8%	26
South Dakota	7.7%	6	0.6%	16	2.2%	9	4.8%	5
Pennsylvania	7.3%	7	0.7%	15	1.9%	13	4.7%	6
Florida	6.3%	8	0.9%	10	2.2%	7	3.2%	13
Indiana	5.9%	9	0.3%	38	1.9%	12	3.7%	9
Delaware	5.8%	10	0.4%	31	1.8%	15	3.5%	11
Michigan	5.6%	11	0.4%	29	2.4%	5	2.7%	19
Georgia	5.4%	12	0.7%	14	0.8%	40	3.8%	8
Ohio	5.4%	13	0.3%	34	2.0%	11	3.1%	14
Maryland	5.3%	14	0.1%	49	1.5%	28	3.7%	10
Illinois	5.3%	15	0.6%	18	1.7%	19	3.0%	16
Maine	5.2%	16	0.5%	21	2.6%	4	2.1%	23
Montana	5.1%	17	0.9%	7	2.2%	8	1.9%	25
Texas	4.9%	18	1.5%	2	1.9%	14	1.6%	30
Missouri	4.9%	19	0.2%	40	0.6%	46	4.1%	7
Oregon	4.9%	20	0.1%	48	1.6%	25	3.2%	12
New Jersey	4.8%	21	0.3%	35	1.7%	22	2.8%	17
Iowa	4.6%	22	0.2%	45	1.6%	23	2.8%	18
New York	4.6%	23	0.3%	36	1.3%	33	3.1%	15
Massachusetts	4.6%	24	0.2%	43	1.8%	18	2.6%	20
Tennessee	4.5%	25	0.9%	8	1.5%	26	2.0%	24
Mississippi	4.2%	26	0.4%	26	1.4%	31	2.4%	21
Kentucky	3.9%	27	0.9%	11	1.5%	27	1.5%	31

Continued on next page

State	Total sin taxes	Rank	Alcohol tax/license	Rank	Tobacco tax	Rank	Gambling revenue	Rank
Washington	3.8%	28	1.7%	1	1.7%	21	0.5%	43
Connecticut	3.8%	29	0.4%	33	1.8%	17	1.7%	27
Wisconsin	3.6%	30	0.2%	39	2.7%	3	0.7%	38
North Carolina	3.5%	31	1.1%	4	0.8%	41	1.6%	29
South Carolina	3.4%	32	1.1%	6	0.2%	50	2.1%	22
Kansas	3.3%	33	1.1%	5	0.8%	43	1.4%	32
Vermont	3.2%	34	0.6%	17	2.0%	10	0.6%	40
Arizona	3.1%	35	0.4%	28	1.7%	20	1.0%	35
Minnesota	3.0%	36	0.3%	37	2.3%	6	0.5%	44
Oklahoma	2.9%	37	0.8%	12	1.6%	24	0.6%	41
Arkansas	2.9%	38	0.5%	22	1.8%	16	0.6%	39
Virginia	2.9%	39	0.8%	13	0.5%	47	1.6%	28
Alaska	2.4%	40	0.9%	9	1.5%	29	0.0%	48
Colorado	2.3%	41	0.2%	42	1.0%	37	1.1%	33
New Mexico	2.3%	42	0.4%	25	0.8%	44	1.1%	34
Alabama	2.0%	43	1.2%	3	0.8%	42	0.0%	47
Idaho	2.0%	44	0.2%	46	0.9%	39	0.9%	36
Hawaii	2.0%	45	0.6%	19	1.4%	30	0.0%	48
Nebraska	1.9%	46	0.5%	24	0.9%	38	0.5%	42
Utah	1.5%	47	0.5%	23	1.0%	36	0.0%	48
California	1.5%	48	0.2%	44	0.5%	48	0.8%	37
Wyoming	0.8%	49	0.0%	50	0.6%	45	0.1%	46
North Dakota	0.7%	50	0.1%	47	0.4%	49	0.1%	45

Note: This table refers to state own-source revenue and does not include federal funds.

Source: Rockefeller Institute of Government and U.S. Census Bureau's Annual Surveys of State and Local Government Finances

Nonetheless, despite their small stature in state budgets, sin taxes often catch policymakers' attention. Especially in recent years, states have increasingly viewed them as budget fixes. For evidence, look no further than the explosion in casino openings over the past decade, exemplified by a bill passed in Pennsylvania in October 2017 to expand casinos to help plug the state's multibillion-dollar budget gap.[18] However, this source of tax dollars, as with tobacco and alcohol, is unlikely to prove a reliable or robust funding source over the long term, at least without continued growth or higher tax rates.

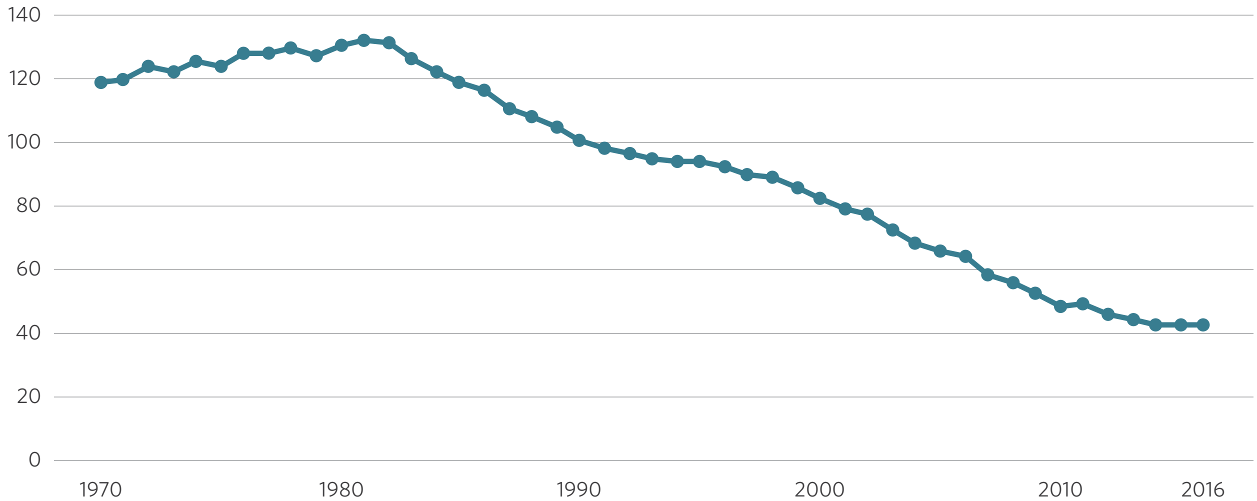
Tobacco: Shifts in consumer behavior and taxes

Cigarette smoking has declined steadily since the early 1980s. Although this has been a boon for public health, it has had the opposite effect on tobacco tax revenue. Despite moves by over half of U.S. states to raise tax rates in recent years, the decline in tobacco consumption caused revenue from this source to drop by an average of about 1 percent across all states from 2008 to 2016. In those states that increased cigarette tax rates and still recorded revenue declines, those losses ranged from about 3 percent in Washington to nearly 26 percent in Louisiana between 2008 and 2016. Thirty states saw declines in tobacco tax revenue over those years.[19]

This revenue slowdown is a clear result of less usage and a tax structure that relies on consumption growth. Examining data across states reveals that tax policy changes have determined whether states saw this revenue rise or fall. Between 2009 and 2016, 22 states did not raise tax rates on cigarettes. Of those, 21 had a decline in tobacco tax revenue. In 19 of the 28 states that did hike cigarette tax rates (several of them multiple times), tobacco tax revenue rose.[20] Because tobacco taxes are a fixed per-pack amount, they do not rise with inflation, as they would if the tax were a percentage of prices. Without the benefit of inflation, tobacco tax revenue is positively correlated with the population of smokers.

That population has decidedly shrunk. Taxable cigarette consumption nationwide fell from 56 packs per capita in 2008 to 42 packs in 2016.[21] (See Figure 1.) Between 2005 and 2016, the smoking rate among American adults dropped from 21 to 15 percent—in stark contrast to the 40 percent who smoked in 1965.[22] Rates of smoking among middle and high school students also declined from 2011 to 2016.[23] If the Centers for Disease Control and Prevention meets its goal of driving smoking rates below 12 percent by 2020, the tax base will continue to narrow.[24] So while tobacco taxes may raise enough funds for an immediate budget fix, these long-term trends should signal to policymakers that relying on this source could lead to structural challenges: As revenue continues to decline, states will face imbalances between diminishing taxes and steady or growing expenditures.

Figure 1
Per Capita Sales of Taxed Cigarette Packs, 1970-2016
Steady decline since early 1980s



Source: Centers for Disease Control and Prevention, "The Tax Burden on Tobacco, Volume 51, 1970-2016" (Orzechowski and Walker, 2017)

Tobacco taxes also tend to affect particular segments of the population more. Although just 14 percent of those at or above the poverty line smoke, roughly 1 in 4 adults living below the poverty line does.[25] Medicaid recipients and those without insurance smoke at higher rates than the rest of the population: About 28 percent of recipients and 27 percent of the uninsured smoke, while just 11 percent of people on private insurance and 9 percent of Medicare recipients do.[26] And Americans with lower incomes tend to spend a bigger share of their earnings on tobacco than those with higher incomes. Moreover, research shows that from 2005 to 2015, tobacco use became more skewed toward those at or below the poverty line. As a result, tobacco taxes, like many sin taxes, are regressive—and have become increasingly so over the last decade.[27]

Alcohol: Revenue driven by consumption patterns

Unlike tobacco, alcohol revenue grew from 2008 to 2016 in many states despite fairly stable tax rates. This trend is explained by higher consumption, underscoring the fact that sin taxes based on quantity, not price, rely on increased sales for revenue growth.

States have generally been more leery of hiking taxes on alcohol than tobacco. Only a handful have raised taxes on beer, wine, or liquor since 2008.[28] The median tax rates on these three alcohol types are actually lower than they were in the 1980s, after accounting for inflation.[29]

State coffers have benefited from this boost in sales. Inflation-adjusted alcohol tax revenue nationwide was up 12 percent in 2016 compared with 2008. Thirty-five states saw alcohol tax revenue grow from 2012 to 2016.[30] Again, increased drinking led to the gains: Per capita wine and spirit consumption each rose around 10 percent between 2008 and 2016. Although beer consumption fell 9 percent in those years, the greater numbers drinking wine and spirits made up for the decline. Bolstering this effect is the fact that taxes on wine and spirits also are usually significantly higher than those on beer.[31]

Despite gains in alcohol tax revenue tied to more imbibing, policymakers would be wise to take a long view. Alcohol consumption tends to be cyclical. The average per capita alcohol consumption in 2015 was 2.3 gallons, down from the 1981 peak of 2.8 gallons (and up from the 1998 trough of 2.1 gallons).[32] Given alcohol's quantity-based tax structure and that usage ebbs and flows with societal trends and consumer whims, revenue gains may not always be a reality—nor is increased usage desirable from a public health or safety perspective. Policymakers should therefore not rely on alcohol tax revenue for long-term budget commitments.

Gambling: Revenue is up in some states but unreliable long term

Gambling represents the greatest share of sin tax revenue in the United States. In 2015, this share was over half, both nationwide and per adult.[33] However, gambling taxes also come with caveats, including almost no growth in lottery revenue, greater competition as casinos proliferate, and weakening growth in tax collections as a result. These challenges, while distinct from those associated with tobacco and alcohol taxes, elicit the same caution: Short-term budget fixes could turn into long-term structural imbalances, depending on where gambling revenue is directed.

Types of Gambling Activity

Lottery: Lotteries allow patrons to guess winning numbers or otherwise draw "lots" (such as those on scratch-off tickets) for cash prizes. New Hampshire was the first state to legalize modern-day lottery operations, in 1964.

Commercial casino: A private gambling facility that offers slot machines, video games, card games, or other games of chance, such as keno, craps, and bingo. Nevada was the first state to legalize commercial casinos, in 1931.

American Indian casino: A gambling business that operates on an Indian reservation and is run by the tribe. States usually do not have authority to regulate or profit from these casinos. However, some states have negotiated special revenue-sharing agreements with tribes.

Racino: A hybrid of a racetrack and a casino. In addition to racing, racinos host other gambling activities such as slot machines, video lottery terminals, and table games. The first racino emerged in 1992, when Rhode Island legalized placement of video lottery terminals at racetracks.

Video gaming device/video lottery terminal: A special gaming machine programmed to carry a variety of games, such as video poker. Some states count revenue generated from these devices as lottery revenue, while other states count it as part of racino or casino revenue.

Parimutuel wagering: Gambling on an event such as horse or dog racing, jai alai, or other sporting events with a relatively short duration in which participants finish in a ranked order.

iGaming (internet gambling): Online casino gambling (including online poker). Nevada was the first state to legalize casino-style online gambling, in 2013, followed by Delaware and New Jersey.

Fantasy sports: A type of online game in which participants assemble fantasy/virtual teams and compete against each other based on actual professional players' or teams' statistics.

State and local revenue from gambling come almost entirely from three sources: lotteries, casinos, and racinos. Lotteries account for two-thirds of these dollars and casinos and racinos nearly all of the remainder.[34] These tax revenues are concentrated in a few populous states: California, Florida, Illinois, New York, and Pennsylvania collectively accounted for roughly a third of all gambling revenue in 2015. Certain states also rely more on gambling revenue relative to total revenue: While the national average of gambling revenue per $1,000 in personal income was just under $2, it was over $7 in West Virginia, Nevada, and Rhode Island.[35]

While lottery revenue held steady over the past decade—inflation-adjusted revenue growth was near zero between 2008 and 2015—casinos and racinos have quickly spread in the states that have newly legalized them. Five states—Florida, Kansas, Maryland, Ohio, and Pennsylvania—have opened their first casino or racino since 2006, adding over 30 more by spring 2018, allowing comparisons between "new" and "old" casino/racino states.[36] From 2008 to 2015, these five states reaped a collective 164 percent rise in tax and fee revenues from these new businesses in real terms. Meanwhile, the group of 18 older casino/racino states saw a 16 percent revenue drop. (Four of those states had a rise in revenue, while the rest experienced declines.)[37] Figure 2 shows that late adopters have driven all the growth in casino and racino revenues since fiscal year 2012.

State and local revenue from gambling come almost entirely from three sources: lotteries, casinos, and racinos. Lotteries account for two-thirds of these dollars and casinos and racinos nearly all of the remainder.

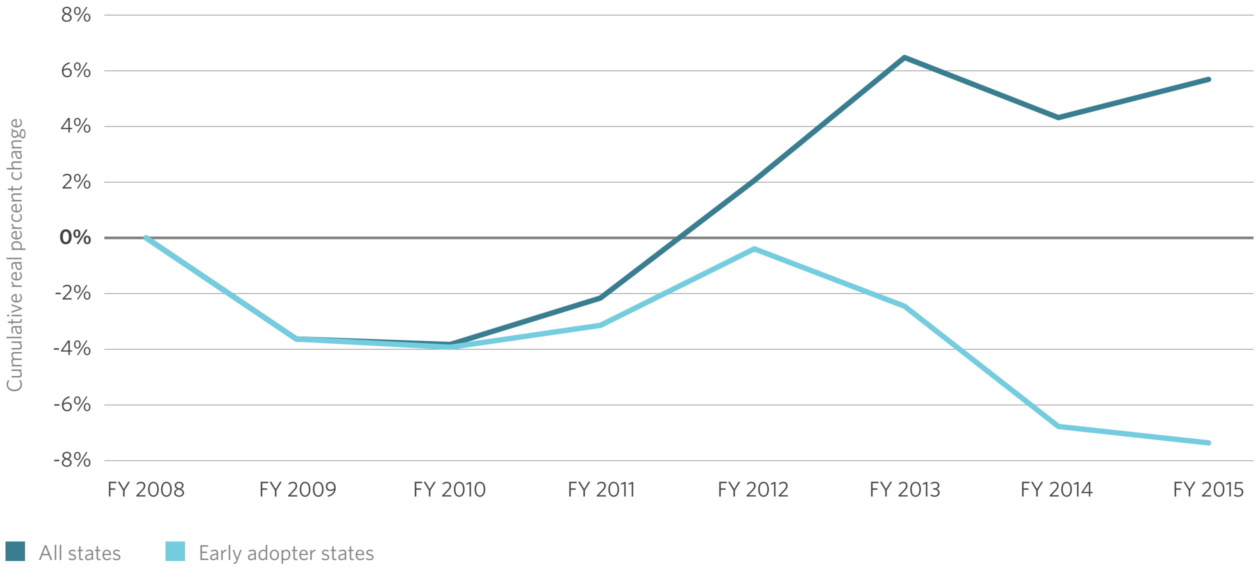
Two factors help explain these trends. The first is that when a state newly legalizes casinos or racinos, it can expect an initial burst of activity as consumers flock to a new attraction. The second is that new casinos and racinos poach gambling activity—both within a state and between neighbors. Standard & Poor's cited this latter phenomenon in a 2018 report warning that states from the mid-Atlantic to New England would likely experience significant pressure on gaming revenue due to cannibalization from a host of new casino openings.[38]

Maryland's experiences bear this out. The state legalized slot machines in 2008 and table games in 2012. Since 2010, six casinos have opened, including MGM National Harbor, the largest in the state, in late 2016. In August 2017, MGM generated $53 million in tax revenue, the most among the state's casinos. Overall casino tax revenue that month was $37 million higher than in August of the previous year—before MGM opened. But removing MGM from the equation changes the narrative: Revenue at the remaining casinos fell 16 percent over that span.[39]

Figure 2

Casino and Racino Tax and Fee Revenues

Inflation-adjusted growth driven largely by late-adopter states



Note: Kansas, Maryland, and Ohio are identified as late-adopter states because all three legalized casino/racino operations after fiscal year 2008.

Source: Rockefeller Institute of Government analysis of data from state gaming regulatory agencies

While Maryland—and Pennsylvania—enjoyed post-recession casino revenue growth, neighboring New Jersey, which legalized casino gambling in 1976, was dealt a different hand. Between 2008 and 2015, casino/racino tax and fee revenues in the Garden State fell 54 percent in real terms—during the same period that Maryland and Pennsylvania were significantly expanding their gambling options.[40] Most notably, five casinos in Atlantic City closed before the state stepped in to pull the city back from the brink of bankruptcy.[41]

However, with tax dollars from lotteries nearly flat in recent years, policymakers have grown increasingly interested in tapping revenue from casinos and racinos. While casinos do offer short-term padding for budgets, these funds often come at the expense of neighboring states and other casinos in the state. Policymakers should also expect casino and racino revenues to taper off as their numbers expand.

Many states are also looking to add a new gambling operation: sports betting. A January 2018 report predicted that 18 to more than 30 states could put forward bills legalizing and regulating sports betting this year.[42] Probably driven in part by the popularity of online fantasy sports betting, which has a murky legal status,[43] lawmakers have become increasingly interested in tapping this activity as a potential revenue source. Action on the bills was pending the June 2018 outcome of a Supreme Court case brought by New Jersey, a ruling that overturned a federal anti-gaming law.[44]

New sin taxes: E-cigarettes and recreational marijuana

With the growing appeal of e-cigarettes and legalized recreational marijuana, lawmakers are looking to both as a source of revenue to ease long-term budget challenges. Although both products offer fresh sources of funds, lawmakers would benefit from taking a cautious approach to them. Uncertainties, including long-term consumption trends and shifts in the black market, make returns difficult to forecast. As with tobacco, alcohol, and gambling taxes, new levies on marijuana and e-cigarettes may provide short-term revenue gains. Their ability to be sustainable long-term revenue sources capable of funding ongoing expenditures, however, is unclear.

> E-cigarettes were introduced to the U.S. market in 2007, and consumption has grown steadily as traditional cigarette sales have fallen. Absent federal regulations, some states have taken it upon themselves to define parameters for their use and enforcement.

E-cigarettes were introduced to the U.S. market in 2007, and consumption has grown steadily as traditional cigarette sales have fallen. Absent federal regulations, some states have taken it upon themselves to define parameters for their use and enforcement. In 2010, Minnesota became the first state to broaden the definition of tobacco products to include e-cigarettes and to implement a tax on the products.

While medical marijuana is legal in 30 states, beginning with California in 1996, recreational marijuana has only begun to gain momentum. It's legal now in nine states and sold at store counters in six. These new taxable goods come with both opportunities and challenges in terms of how taxes are structured. States are not only weighing the benefits of value-based versus unit-based taxes, they are experimenting with taxation at multiple points along the supply chain.

E-cigarettes remain unproved

As of 2017, California, Minnesota, and Pennsylvania taxed e-cigarettes on an *ad valorem* basis, while four states—Kansas, Louisiana, North Carolina, and West Virginia—taxed them on a per-unit basis.[45] The latter structure has the same pitfall as alcohol and tobacco taxes based on quantity: Tax collections will stagnate even as prices rise. In the short term, however, e-cigarette taxes have been viewed as a way to not only curb potential public health risks, but also to generate growth as revenue from traditional tobacco taxes declines.[46] Research has shown that substitution between the two products is substantial. In 2015, nearly a third of adult e-cigarette users were former regular cigarette smokers.[47]

The immediate challenge for state policymakers is that there is little information on the e-cigarette market, which is evolving as technology advances and is influenced by outside factors, such as federal policies, that are difficult to quantify. In 2016, the Food and Drug Administration ruled that e-cigarettes would be regulated as a tobacco product.[48] State regulations have already had significant effects on suppliers. In Pennsylvania, for example, more than 100 shops have closed since a tax—40 percent of wholesale value—went into effect in October 2016.[49] Wide disparities in state tax rates probably incentivize smuggling and tax evasion; high tax rates could fuel a black market. A shortage of data is the major obstacle to reliable forecasting, which makes it challenging for policymakers to base long-term budgeting decisions on this revenue stream.

Forecasting revenue from marijuana taxes has challenges

In the 22 years since California passed a law authorizing the medical use of marijuana, 29 states and the District of Columbia have followed suit. In recent years, nine states and the District have legalized the drug for recreational purposes. Colorado and Washington were first, in 2012, followed by Alaska and Oregon two years later, and California, Maine, Massachusetts, and Nevada in 2016. Notably, all legalization measures before 2018 resulted from voter initiatives and referendums. (In January 2018, Vermont became the first state to legalize marijuana through legislation.)

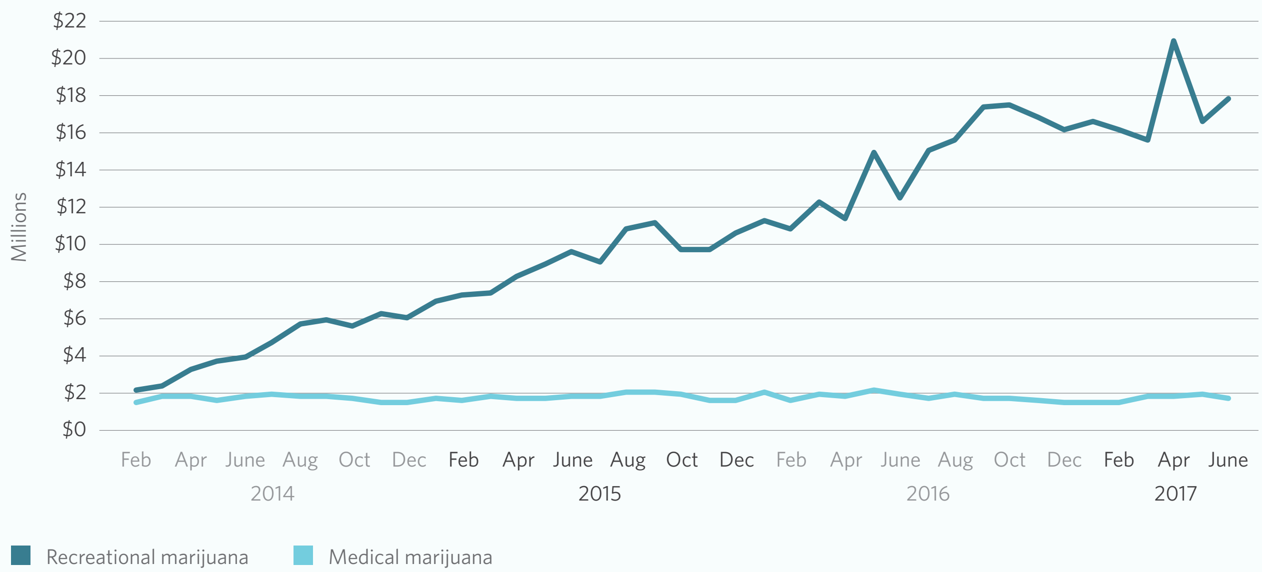
Ten of the states that have legalized medical marijuana have a tax in place, most in the form of an excise or general sales tax. Illinois, the exception, also levies a "privilege tax" on sellers and growers. In contrast, six states with legalized recreational marijuana have been more experimental with the tax—with varying degrees of success. Most tax the good's value rather than its quantity. Examples include a tiered structure and taxing based on levels of THC, the principal chemical compound in marijuana.

When Colorado's tax on recreational marijuana took effect in 2014, collections in the first month amounted to a little over $2 million. By June 2017, collections had skyrocketed to $18 million, eclipsing medical marijuana tax revenue, which stayed at or just under the same initial level. Recreational marijuana revenue has also seen strong, if volatile, growth in Oregon and Alaska, the other states for which reliable data are available. (See Figure 3.)

> In the 22 years since California passed a law authorizing the medical use of marijuana, 29 states and the District of Columbia have followed suit. In recent years, nine states and the District have legalized the drug for recreational purposes.

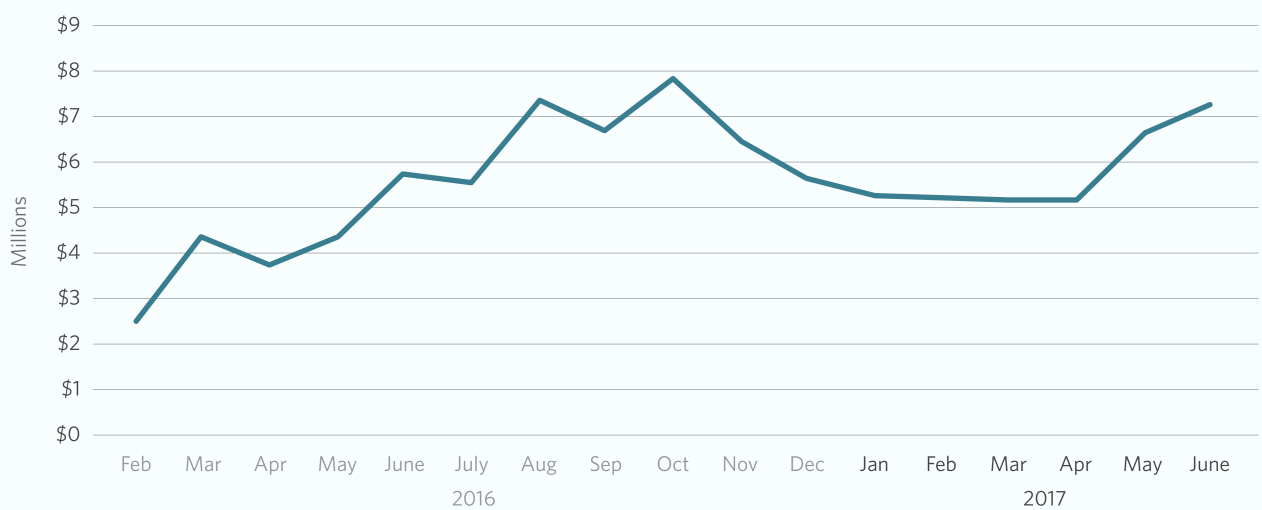
Figure 3
Marijuana Tax and Fee Revenues
Early revenues in Colorado, Oregon, and Alaska are strong, but growth is volatile

Colorado, 2014-17



Source: Colorado Department of Revenue, https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data

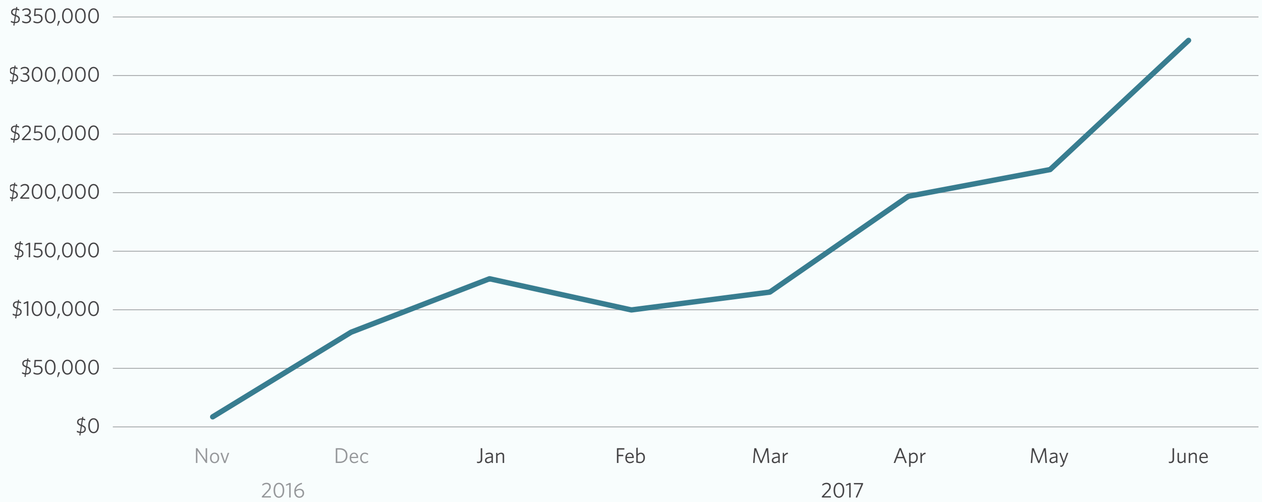
Oregon, 2016-17



Source: Oregon Department of Revenue, http://www.oregon.gov/DOR/programs/gov-research/Pages/research-marijuana.aspx

Continued on next page

Alaska, 2016-17



Source: Alaska Department of Revenue (data received by email)

Unlike tobacco, there is no single tax structure for recreational marijuana. States will probably continue to refine taxes as they learn what is most conducive to enforcement and compliance. According to Irena Asmundson, chief economist with California's Department of Finance, one challenge of imposing an excise tax on the drug is determining the base—whether it is on the value or volume sold.[50]

Some early-adopting states have already changed their tax structures. Oregon initially imposed a harvest tax on growers based on a fixed dollar-per-flower amount but replaced it with an excise tax of 17 percent of the retail price when enforcement proved too complicated. Washington simplified its tax structure in 2015, distilling what had been taxes at three points in the supply chain to a single price-based retail tax.[51]

Despite this learning curve, some policymakers are looking to marijuana taxes as a potential budget fix. Legislation introduced in Colorado in 2017 sought to eliminate the general sales tax of 2.9 percent on recreational marijuana but raise the special sales tax from 10 to 15 percent in hopes of generating extra dollars for rural schools and a tax break for business owners on personal property.[52] In an effort to address the public health effects of broader substance use, Colorado has also appropriated a percentage of this revenue to drug prevention and treatment programs—a practice common with other sin tax revenue. Other states that have since legalized recreational marijuana have followed suit.

Oregon has had a similar outlook. According to Josh Lehner, senior economist with the state's Office of Economic Analysis, the new revenue stream from recreational marijuana is a welcome resource in an environment of long-term declines in income and general sales taxes. However, he noted that marijuana revenue in Oregon is still significantly less than that derived from tobacco taxes. And, as in all states with legalized recreational marijuana, it is not expected to become a major part of the state's budget.[53] Setting the tax rate itself is also difficult. The optimal rate would be one that maximizes revenue while minimizing the black market.

A number of studies have attempted to estimate the revenue potential of marijuana taxes if all states were to legalize the drug. Using data from Colorado and Washington, the Tax Foundation estimated that collections nationwide could range from $5.3 billion to $8.8 billion a year if all states taxed at a rate of 15 percent and 25 percent, respectively.[54] The Congressional Research Service considered a federal tax scenario of $50 an ounce and estimated total revenue at about $6.8 billion a year.[55]

The challenge of forecasting marijuana revenue has kept many states that have legalized it wary of making strong claims about revenue potential. A range of factors contribute to this challenge, the most frequently cited being that recreational marijuana markets remain in flux. One variable states need for accurate forecasting is price. Prices at the wholesale and retail levels are driven by the interaction of supply and demand, which have not yet stabilized in most states.

Jim Wells, director of the Governor's Finance Office in Nevada, noted that prices for the drug changed several times as the office tried to make tax revenue projections for the initial implementation.[56] Growth in consumption has been difficult to predict, in part due to the effect of legalization on the black market. In some states, the number of certified suppliers has been slow to increase. Washington initially lacked the regulatory structure to approve enough licensed suppliers to satisfy demand, leading to a shortage in its first few weeks of sales.[57] Nevada famously declared an emergency after running out of marijuana in its first week of sales. The shortage stemmed in part from restrictions on who could distribute the substance.[58]

Colorado, the state with the most mature recreational market, could be seeing saturation on the supply side if trends hold, said Eric Hurley, director of the Office of Research and Analysis in the state Department of Revenue.[59]

Generally, the data that states can use to inform their revenue projections are limited. Oregon, for example, has had to rely largely on data from early adopters Colorado and Washington for its forecasts. Surveys on usage, including demographic information useful for estimating the growth in demand, have mostly been conducted before states have legalized recreational marijuana and are unreliable. Questions about where marijuana's price will settle also contribute to the uncertainty of revenue projections. Forecasters expect these challenges to be alleviated as states gain more experience with the drug.

Volatility in marijuana tax collections has been less of an issue and has primarily stemmed from seasonality. Nevertheless, Nevada passed legislation in 2017 to distribute a portion of marijuana tax dollars to the state's rainy day fund because policymakers saw it as an unpredictable source of revenue. Lawmakers feared that the state would have to scramble for funds if collections were dedicated entirely to education, as was initially intended.[60] Other considerations are the likelihood of federal intervention and its effect on the industry, and how localities choose to regulate and impose their own taxes.

All of these variables make the long-term outlook for marijuana tax revenue hazy at best. The growth of the industry and what that path might look like are challenging to predict. Lance Carey, a senior economist with Washington's Economic and Revenue Forecast Council, expects the market to ultimately reach a point where growth in tax revenue is more in line with population plus inflation; the question that remains is when.[61] Location could also influence this timing. California may not see the same surge in demand as other states, because the market is already operational in neighbors Oregon and Nevada.

Conclusion

With state budgets still recovering from the Great Recession, sin taxes continue to tantalize policymakers.[62] The new taxes on e-cigarettes and recent legalizations of recreational marijuana and gambling signify a growing interest in securing new revenue streams. A handful of cities have added a tax on soft drinks that, while seemingly successful at driving down consumption, has brought in less revenue than initially projected.[63]

Long-standing excise taxes, like those on alcohol and tobacco, still rely on growing consumption—always an uncertain prospect. Policymakers can take steps to harness the revenue potential of these goods and activities, including taxing on price rather than quantity and increasing tax rates. Even so, states should be cautious about relying on sin taxes as longer-term fixes to budget woes. In this arena, federal policy may also complicate and even stymie the potential of some of these revenue sources. Most recently, the Justice Department rolled back the Obama-era policy of noninterference with marijuana-friendly states, making the climate fraught for states that have legalized recreational use as well as those planning to.

Policymakers may be tempted to turn to sin tax revenue during downturns or to fund new spending initiatives. As with all revenue, states should be mindful of both short-term volatility and long-term growth trend. It is important for states to support recurring spending with recurring revenue and to ensure that critical functions are funded by sustainable revenue streams. Given the unpredictability of sin tax revenue, states should be cautious about extending what may be effective short-term fallbacks into long-term solutions.

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