



Estimated Tax Revenues from Marijuana Legalization in New York

New York City Comptroller Scott M. Stringer

Bureau of Budget

MAY 2018

In just the past six years, voters in eight states and the District of Columbia have passed ballot measures to legalize the adult use of marijuana. At least seven more states may follow suit this fall. In total, over half of states have legalized marijuana for medical purposes since California first did so in 1996. This dramatic change in public attitudes is reflective of changes as measured by survey data, with 61% of Americans now supporting lifting the ban on marijuana.¹ More than just a change in attitudes toward marijuana itself, the growing movement for legalization also acknowledges the immeasurable harm done by the criminalization of marijuana use, especially among communities of color.

New York State's 2014 Compassionate Care Act legalized marijuana for medical use. Legislation to legalize adult marijuana use, the Marijuana Regulation and Taxation Act, has been reintroduced in each subsequent legislative session. In his Executive Budget for State Fiscal Year 2018-2019, Governor Cuomo proposed a study of the economic impacts of legalization and the implications of continuing to prohibit use while other nearby states move to legalize. In this report, New York City Comptroller Scott M. Stringer provides an estimate of the fiscal impact of legalizing adult-use marijuana sales in New York. This report estimates the legal, adult-use marijuana market at some \$3.1 billion per year in New York State, about \$1.1 billion of that in New York City. In turn, the Comptroller's Office estimates that this market could conservatively yield annual tax revenues of as much as \$1.3 billion total at the State and City levels. That assumes a combination of state and local sales and excise taxes in line with what other jurisdictions have passed that could yield up to \$436 million in revenues for the State, \$336 million for the City, and some \$570 million for localities outside of the city. Of course, the total revenues realized at the State and local levels would depend on the final outcome of any legalization effort..

Beyond the mere dollars that legalization could yield, decriminalization has clear human and societal benefits. In states where adult marijuana use has been legalized, there have been declines in teenage usage of marijuana, and public health and safety concerns have been addressed. Finally, misdemeanor marijuana arrests continue to fall most heavily on young Black and Latino New Yorkers, despite a higher reported usage rate among White youth. Erasing the harmful repercussions, including the stigma of a criminal record, would open doors that have been closed to too many for too long, yielding incalculable human, economic, and societal benefits.

State Marijuana Laws

Although illegal under federal law, marijuana is currently permitted for medical use in a majority of U.S. states, including New York. Adult-use marijuana sales are currently permitted in Alaska, California, Colorado, Nevada, Oregon, Washington, but not in New York. Adult-use marijuana sales have been approved in Massachusetts and Maine, but sales have not yet begun. Adult use, but not sales, is currently permitted in Vermont and Washington DC.

In addition to neighboring Massachusetts and Vermont, many other states, including most of New York's neighbors, are moving toward legalizing adult-use marijuana sales. Momentum toward legalization in Connecticut, New Jersey, and Canada creates the possibility that adult-use marijuana sales will soon be legal in every state bordering New York, with the exception of Pennsylvania.² This would undermine both enforceability of current New York law and collection of New York tax revenues.

State Marijuana Taxation

States tax marijuana sales through a variety of licensing fees, excise taxes, and sales taxes. Most revenue is generated from sales taxes imposed on retail transactions, excise taxes on retail sales, or excise taxes imposed on sales by producers/growers to retailers (Table 1).

Both Washington and Colorado began allowing adult-use marijuana sales in 2014. Washington originally imposed a 25% tax on grower sales to processors, a 25% tax on processor sales to retailers, and a 25% tax on retail sales to customers, but has since moved to a single 37% excise tax on gross retail receipts. This change simplified enforcement, eliminated double taxation on non-integrated producers, and allowed sellers to deduct taxes paid on their federal income taxes.

Table 1. Current Taxes on Adult-Use Marijuana Sales, by State

State	Year of adult-use Legalization	Excise/Producer Tax	Sales/Retail Excise Tax	State Sales Tax	Local Sales Tax
Colorado	2014	15%	10%	2.9%	up to 8%
Washington	2014		37%	6.5%	2-3%
Alaska	2015	\$50/oz.			
Oregon	2015		17%		up to 3%
Nevada	2016	15%	10%		6-8%
California	2018	Leaves: \$2.25/oz. Flowers:\$9.25/oz.	15%	7.25%	7-10%
Massachusetts	2018		10.75%	6.25%	up to 3%

SOURCES: Colorado: <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data> (last visited 4/17/2018)
Washington: <https://dor.wa.gov/about/statistics-reports/recreational-and-medical-marijuana-taxes> (last visited 4/17/2018); Alaska: <http://tax.alaska.gov/programs/programs/index.aspx?60000> (last visited 4/17/2018); Oregon: <http://www.oregon.gov/olcc/marijuana/Pages/FAQs-Taxes.aspx> (last visited 4/17/2018); Nevada: https://tax.nv.gov/FAQs/Retail_Marijuana/(last visited 4/17/2018), ; California:

<http://www.cdtfa.ca.gov/industry/cannabis.htm> (last visited 4/17/2018); Massachusetts: <https://www.mass.gov/service-details/learn-about-massachusetts-tax-rates> (last visited 4/17/2018)

Colorado imposes a 15% excise tax on producers, and in August 2017 increased their retail excise tax on gross receipts from 10% to 15%. States that legalized marijuana more recently impose a variety of sales and excise taxes. California and Alaska impose weight-based excise taxes. Colorado and Nevada impose value-based excise taxes, and all states except Alaska impose excise taxes on gross retail sales as well as state and/or local sales taxes.

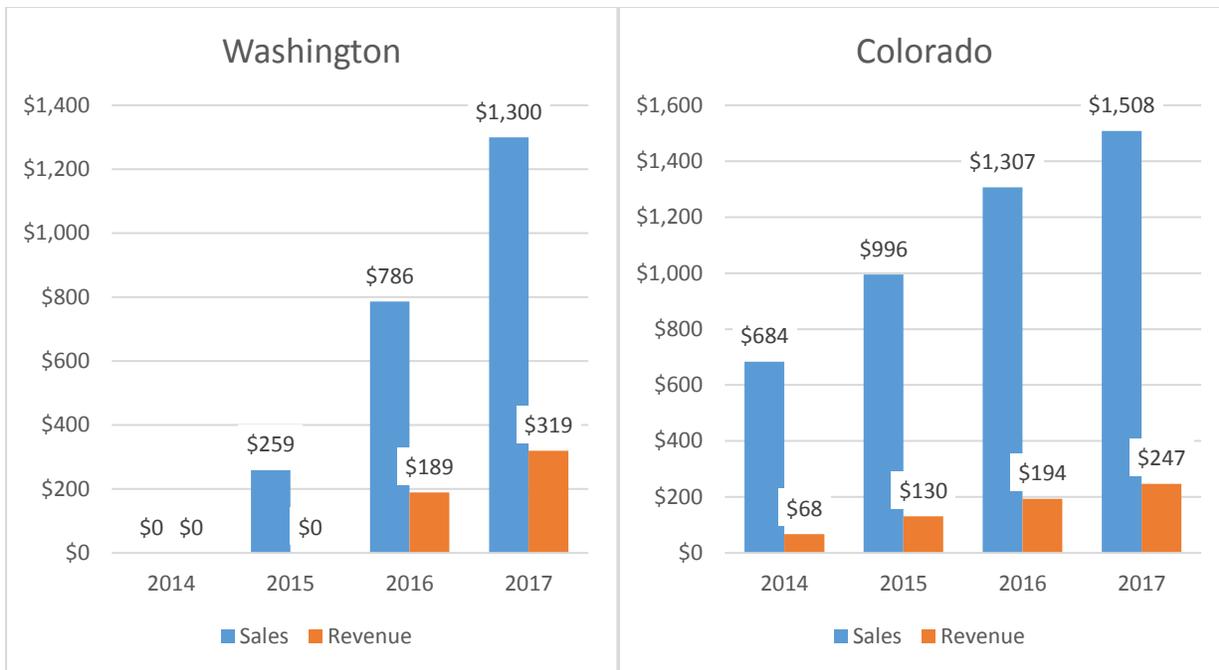
State Tax Revenue from Adult-Use Marijuana

In states with multiple levels of taxation across the marijuana supply chain, the net impact of taxation is difficult to measure, as excise taxes on producers are imposed only on wholesale prices and retail/excise and sales taxes are imposed on higher retail prices. States that legalized marijuana more recently also offer little to no historical data to gauge sales and tax revenue.

However, multiple years of data are available from both Colorado and Washington. These data suggest it takes time for legal marijuana markets to emerge from the shadows (Figure 1). Since 2014, annual sales of marijuana in Washington grew rapidly, from \$259 million in 2015 to \$1.3 billion in 2017. Annual tax revenues grew to \$319 million in 2017. Over this period, survey data show the overall rate of marijuana use in Washington changed very little, suggesting that rising sales and revenues are driven by the transition from illicit to legal markets, rather than growth in the market overall.³ In fact, use among Washington teens, ages 12 to 17, showed a significant decline, suggesting that the transition to legal, regulated markets reduced teen access to marijuana.⁴

Figure 1. Marijuana Sales and Tax Revenues in Washington and Colorado

Millions of dollars



SOURCES: <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data> (last visited 4/17/2018); <https://www.tre.wa.gov/portfolio-item/washington-state-marijuana-revenues-and-health/> (last visited 4/17/2018).
 NOTE: Revenue includes all marijuana taxes, licensees and fees, but not state and local sales tax. Washington revenues reflect the 37% retail excise tax in 2016 and 2017.

Sales in Colorado rose from \$683 million in 2014 to \$1.5 billion in 2017. Tax revenues rose to \$247 million in 2017, a smaller fraction of sales than in Washington, reflecting Colorado’s lower tax rates. In contrast to Washington, survey data show marijuana use grew by roughly one-third over this time period. However, as in Washington, marijuana use declined among those age 12-17.⁵

Taxing Marijuana In New York

The Size of New York State and New York City Marijuana Markets

Directly measuring the size of New York City and New York State markets for adult-use marijuana is not possible due to the lack of records, receipts or other reliable sales measures, because current adult-use marijuana sales occur exclusively on the illicit market. The size of this market, however, can be estimated by reference to the markets in Colorado and Washington, adjusted for population size, and the prevalence of marijuana use.

In 2012, the New York City Comptroller’s Office estimated the size of the New York City marijuana market at about \$1.65 billion annually. This estimate was based on survey data of frequency of marijuana use, estimates of average portion sizes, and legalization of marijuana use in the City, but not outside it, a scenario which no longer seems likely.

Washington’s and Colorado’s experience with legalized marijuana since 2014, including aggregate data on marijuana sales, allows for improved estimates. New York State has an adult population of 15.1 million, 6.5 million of them residing in New York City. Although both have a larger population than either Colorado or Washington, survey data on marijuana use shows a smaller fraction of the adult New York population uses marijuana on a monthly basis, as shown in Table 2 below. While 17% of Colorado adults use marijuana on a monthly basis, and 11% of Washington adults do, only 8-10% of New Yorkers do.

Table 2. Estimating the Size of the Marijuana Market

Jurisdiction	Adult Population	Monthly Adult Use	Estimated Monthly Users	Estimated Annual Sales/User	Market Size (\$ millions)
Washington State	5,540,571	11.42%	632,733	\$2,055	\$1,300.0
Colorado	4,180,931	17.12%	715,775	\$2,106	\$1,507.7
New York City	6,505,088	8.43%	548,151	\$2,080	\$1,140.4
NY State	15,109,013	9.90%	1,495,792	\$2,080	\$3,112.0

SOURCES: Population estimates from the 2016 American Community Survey. State use estimates from the 2016 National Household Survey on Drug Use, past month marijuana use. NYC use estimate from 2014 National Household Survey on Drug Use, sub-state estimates.

NOTE: Market size for Washington and Colorado are actuals as reported by each jurisdiction; New York City and State are estimated.

Applying these estimates of the rates of use to the adult population in each state, yields an estimated population of about 1.5 million regular marijuana users in New York State, of which roughly 550,000 reside in New York City. In comparison, there are an estimated 630,000 regular marijuana users in Washington State and about 715,000 in Colorado.

Marijuana sales totaled \$1.3 billion in Washington in 2017, and over \$1.5 billion in Colorado, equivalent to average annual sales of about \$2,080 per user in Washington and Colorado. Assuming New York marijuana users would spend similar amounts each year, this \$2,080 in annual spending per user would imply a total annual adult-use marijuana market of roughly \$3.1 billion in New York State, of which \$1.1 billion is attributable to New York City.

These estimates ignore the impact of 970,000 workers who work in New York City but live outside it, many of whom might purchase marijuana in the city if adult-use sales are legalized in New York, but not in New Jersey and Connecticut. Commuter purchases are likely to be less important if marijuana sales are legalized in neighboring states, as currently seems likely.

Tourism may also have an important impact on these revenue estimates. In 2017, there were over 61 million tourist visits to New York City, and 239 million visits to New York State.⁶ By comparison, Colorado had roughly 82 million tourist visits in 2016 and Washington roughly 40 million in 2015.⁷ The impact of these visitors is already reflected in Colorado and Washington marijuana sales and estimated sales per user.⁸ The impact of tourism is therefore, to some extent, already incorporated into these estimates of the size of the New York State and New York City marijuana market. These estimates may, however, understate the size of the market if visitors to

New York, such as foreign tourists, are more likely to purchase marijuana or purchase larger quantities.

Proposals for Taxing Marijuana in New York

Regulation and taxation of legalized adult-use marijuana sales in New York should take into account a variety of factors including:

- The tax rates in neighboring states. The combined excise and sales tax rate is currently up to 20% in Massachusetts (depending on the local sales tax rate). Rates could potentially be higher or lower in New Jersey and Connecticut if and when they legalize marijuana sales. Tax rates that are too high would incentivize buyers to make purchases out of state.
- New York’s tax regime for medical marijuana, which currently imposes a 7% excise tax on gross receipts. Taxing adult-use marijuana at lower rates would likely wipe out the established medical market;
- Lower initial tax rates may facilitate a transition from an illicit to a regulated market.
- The impact of legalization on long-term production costs, market prices, and use. Legalization of marijuana is likely to drive down long-run production costs and marijuana prices. If taxes on sales are too low, falling prices could lead to large long-term increases in marijuana use, and potentially unpredictable societal and public health impacts.
- Changing circumstances and improving data that will likely require periodic adjustments to tax rates and regulations.

Another consideration is the combined impact of State and local-level taxation. New York already imposes excise taxes on alcohol and cigarettes, for example, with both State and City leveling taxes (Table 3). New York State imposes an excise tax of \$4.35 per pack on cigarettes – almost three times the \$1.50 per pack charged by New York City. Similarly, New York State imposes a tax on liquor of \$1.70 per liter, while the City’s tax rate is \$0.264 per liter. Real property transfer taxes and sales tax are also imposed by both the State and the City.

Table 3. Existing New York State and City Excise Taxes

Product	NY State	NY City	Total
Cigarettes	\$4.35/pack	\$1.50/pack	\$5.85/pack
Beer	\$0.14/gallon	\$0.12/gallon	\$0.26/gallon
Liquor	\$1.70/liter	\$0.264/liter	\$1.964/liter

New York’s existing excise tax regime is, however, not a good model for taxing marijuana sales. Taxes imposed on physical quantities can become disproportional as prices change. New York City’s combined city and state beer excise tax of \$0.26/gallon works out to only two cents per 12 oz. of beer, as compared to the combined cigarette excise tax of \$5.85/pack, which is equivalent to about 30 cents per individual cigarette. New York’s cigarette taxes are so high that New York

State leads the nation in cigarette smuggling, and it is estimated that 55 percent of cigarettes consumed in New York are smuggled.⁹

A 10% state level excise tax on gross retail marijuana receipts would ensure that taxes at the state level are both proportional to price levels and low enough to avoid upstate smuggling with Massachusetts, where adult-use marijuana sales face a retail excise tax of 10.75%, in addition to about the same levels of state and local sales tax.

New York State could also grant New York City and other localities the flexibility to charge a local retail excise tax of up to 25%. This would ensure that local governments have the revenue to address social and public health impacts of adult-use marijuana, the flexibility to adjust taxes upward to address the potential for falling prices and rising marijuana use, as well the flexibility to adjust taxes downward as necessary if marijuana sales are eventually legalized and taxed at lower rates in neighboring areas.

Our analysis shows that a 10% retail excise tax on marijuana sales, together with sales tax at the existing rate of 4%, would generate roughly \$436 million in New York State tax revenue annually (Table 4). A 25% retail excise tax in New York City would generate up to \$336 million in city excise and sales tax, and as much as \$570 million in other New York localities. The combined maximum excise tax rate of 35% would be roughly equivalent to Washington State's current marijuana retail excise tax.

Table 4. Estimated Tax Revenues from Adult-Use Marijuana Sales

<i>\$\$ in millions</i>	Market Size	Excise Tax	Sales Tax	Total
New York State	\$3,111	\$311.2	\$124.5	\$435.7
New York City	\$1,140	\$285.1	\$51.3	\$336.4

NOTE: 10% State excise tax; 25% City excise tax.

One concern would be whether neighboring jurisdictions adopt similar rates. If City tax rates are considerably higher than in other jurisdictions, as they are currently with cigarettes, revenues could be less due to a combination of extra-jurisdictional purchases and smuggling.

Additional Considerations

Public Safety Cost Savings

Eliminating misdemeanor marijuana arrests could yield costs savings in the form of reduced police overtime and court costs. By 2016, the number of misdemeanor arrests had declined to 21,457, from a peak of 55,623 in 2010.¹⁰ The vast majority (18,121) were for possession; the rest were for misdemeanor sales. The Drug Policy Alliance has estimated the per-arrest cost as at least \$2,000, which would yield savings of \$36 million or more annually from the elimination of misdemeanor possession arrests.¹¹ These costs include police overtime and court costs.

Public Health Issues

As noted above, one unanticipated benefit of legalization in Colorado and Washington State was the reduction in marijuana usage among teens, ages 12 to 17, most likely attributable to a shrinking illicit market supply and prohibitions on sales of (legal) marijuana to minors. Other studies have found that states that have legalized marijuana have lower rates of opioid prescriptions than states that have not, as some medical professionals and patients switch to marijuana for pain management, away from opioids.¹²

Among other issues of concern are pediatric exposure, particularly with respect to edible products,¹³ as well as driver safety.¹⁴ To date, Washington and Colorado have worked to address public health concerns with preventive regulations, including child-resistant packaging requirements, warning labels, education and enforcement. Their experience provides lessons for implementing and monitoring proactive health and safety measures in other jurisdictions.

Broader Economic and Social Benefits

Although the total number of arrests have fallen substantially, young Black men continue to be arrested at a disproportionately high rate. In addition to the potential budgetary savings, there are human benefits to legalization such as reducing the damaging impact of a criminal record on future employment opportunities, access to housing, education and credit, the ability to obtain an occupational license, and many other areas of life.¹⁵ These harms fall particularly heavily on communities of color. The economic benefits of the ability to more fully participate in society and the economic life of the City are difficult to quantify, but clearly, broadening access to housing, education, credit and employment can only be beneficial.

Acknowledgements

The Comptroller wishes to thank Andrew McWilliam, Senior Research Economist, for his work on this report, along with Alyson Silkowski, Senior Research Analyst, and Angela Chen, Senior Web Developer and Graphic Designer, for their contributions.

Endnotes

¹ <http://www.pewresearch.org/fact-tank/2018/01/05/americans-support-marijuana-legalization/>

² Connecticut: <https://www.thecannabist.co/2018/04/06/recreational-marijuana-connecticut/103155/>, accessed 4/16/2018. New Jersey: http://www.nj.com/marijuana/2018/02/new_bill_calls_for_medical_marijuana_overhaul_in_n.html, accessed 4/20/2018. Canada: <https://globalnews.ca/news/4030429/recreational-marijuana-canada-sale-delay-august/>, accessed 4/16/2018.

³ National Household Survey on Drug Use, <https://www.samhsa.gov/data/population-data-nsduh/reports>, accessed 4/18/2018

⁴ Ibid.

⁵ Ibid.

⁶ <https://www.governor.ny.gov/news/governor-cuomo-announces-economic-impact-new-york-state-tourism-achieves-historic-1048-billion>, accessed 4/20/2018

⁷ <http://watourismalliance.com/new-research-indicates-modest-state-tourism-growth/>, accessed 4/20/2018

⁸ <https://www.colorado.com/news/colorado-tourism-sets-all-time-records-sixth-consecutive-year>, accessed 4/20/2018

⁹ <https://www.mackinac.org/archives/2016/s2016-09.pdf>, accessed 4/23/18

¹⁰ Chauhan, P., Tomascak, S., Cuevas, C., Hood, Q.O., & Lu, O.: *Trends in Arrests for Misdemeanor Charges in New York City, 1993-2016*, John Jay College of Criminal Justice, February 2018.

¹¹ Drug Policy Alliance: *\$75 Million; The Cost of New York City's Marijuana Possession Arrests*, March 2011. (<http://www.drugpolicy.org/sites/default/files/%2475%20Million%20A%20Year.pdf>)

¹² Wen, H. and Hockenberry, J., "Association of Medical and Adult-Use Marijuana Laws With Opioid Prescribing for Medicaid Enrollees" *JAMA Intern. Med.*, Apr. 2, 2018. <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2677000?redirect=true>

¹³ Wang, G.S., Le Lait, M-C., Deaknye, S.J., et al, "Unintentional Pediatric Exposure to Marijuana in Colorado, 2009-2015." *JAMA Pediatr.*, Sept. 6, 2016. <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2534480>

¹⁴ Aydelotte, J. D., Brown, L.H., Luftman, K.M., et al. "Crash Fatality Rates After Recreational Marijuana legalization in Washington and Colorado," *American Journal of Public Health*, July 12, 2017 <https://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2017.303848>

¹⁵ Ibid.