



# **Regulating and Taxing MARIJUANA**

*The Fiscal Impact on NYC*



NEW YORK CITY COMPTROLLER  
JOHN C. LIU

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# Regulating and Taxing MARIJUANA

## The Fiscal Impact on NYC

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**John C. Liu**

Comptroller

**First Deputy Comptroller**

Ricardo Morales

**Deputy Comptroller  
for Public Affairs**

Ari Hoffnung

**Chief Economist**

Frank Braconi

**Special Assistant for  
Public Affairs**

Jacqueline S. Gold

**Executive Director for Budget**

Jonathan Rosenberg

**Director of Policy**

Carolyn Karo

Rachel Bardin  
Doug Giuliano  
Tomas Hunt  
Andrew McWilliam  
Susan Scheer

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## About the New York City Comptroller's Office

The New York City Comptroller, an independently elected official, is the Chief Financial Officer of the City of New York. The mission of the office is to ensure the financial health of New York City by advising the Mayor, the City Council, and the public of the City's financial condition. The Comptroller also makes recommendations on City programs and operations, fiscal policies, and financial transactions. In addition, the Comptroller manages the assets of the five New York City Pension Funds, performs budgetary analysis, keeps the City's accounts, audits City agencies, manages the City's debt issuance, and registers proposed contracts. His office employs a workforce of more than 700 professional staff members. These employees include accountants, attorneys, computer analysts, economists, engineers, budget, financial and investment analysts, claim specialists, and researchers, in addition to clerical and administrative support staff.

## About Regulate Marijuana NYC

Regulate Marijuana NYC advocates for regulating and taxing the sale of marijuana for personal use for adults in New York City. It also calls for the creation of an interagency task force comprised of the Police Department, Administration for Children's Services, Department of Education, Department of Health and Mental Hygiene, District Attorneys, and Department of Consumer Affairs to study issues related to regulation and work collaboratively with the New York State Senate and Assembly in order to pass appropriate legislation.



The New York City Comptroller's Office estimated certain of the fiscal impacts that could be expected if marijuana use in New York City was legalized and the production and sale of it was regulated and taxed. The Comptroller's Office estimates that such regulation and taxation would have a positive direct fiscal impact of roughly \$431 million annually through increased revenues and cost savings. The Comptroller's Office did not attempt to quantify the costs of incarceration, which are largely borne by the state, or other secondary fiscal impacts of legalization, such as the positive or negative effects on public health spending. Moreover, the Comptroller's Office did not attempt to quantify the broader economic impacts of legalization, including the costs of lost time, work, and other opportunities currently imposed on those arrested.

## BACKGROUND

Marijuana was criminalized in New York City in 1914 by the Board of Health, which added cannabis to the list of drugs prohibited by its Sanitary Code. New York State subsequently criminalized the possession or sale of marijuana for other than medical purposes in 1927.

Federal prohibition of the cultivation, distribution and possession of marijuana began with the Controlled Substances Act (CSA) of 1970. Prior to that, prohibition relied upon state laws.

Since 1996, however, twenty states and the District of Columbia have, to varying degrees, legalized marijuana for medical use. Another four states have pending legislation that would legalize medical marijuana, including New York. In June 2013, a New York State bill passed the State Assembly, but failed to come to a vote in the State Senate before the end of session.

In 2012, Washington and Colorado became the first states to legalize marijuana for recreational use.

The extent to which the Controlled Substances Act trumps state laws legalizing marijuana remains an unresolved legal question. As yet, U.S. Attorney General Eric Holder has not responded to requests that he clarify the Federal Government's position on State laws legalizing marijuana, those of Washington and Colorado in particular, though he has shown interest in reducing sentences for low-level drug offences.<sup>1</sup>

In New York State possessing marijuana in open view is a misdemeanor and an arrestable offense, but possessing small amounts (25 grams or less) privately is a violation, subject to fines. However, bringing small amounts of marijuana into the public view, for example during a stop and frisk encounter, turns a violation into a class B misdemeanor (PL 221.10). It has been estimated that in recent years over two-thirds of people arrested for possession of small amounts of marijuana in New York City displayed it at an officer's request.<sup>2</sup>

In 2011, Police Commissioner Raymond Kelly issued an Operations Order instructing police officers that they "...may not charge the individual with PL 221.10(1) CPM 5th if the marijuana recovered was disclosed to public view at an officer's direction." Considering that directive, it is not clear why marijuana arrests continued at the high level of 39,230 in 2012 and are running at an annual rate of 37,000 in 2013.<sup>3</sup>



The vote on marijuana legalization in Washington State.

Source: regulatemarijuana.org



A logo from the successful campaign to legalize marijuana in Colorado.

Source: regulatemarijuana.org

1 Johnson, Carrie, With Holder in the Lead, Sentencing Reform Gains Momentum, *National Public Radio*, August 7, 2013, <http://www.npr.org/2013/08/07/209253516/with-holder-in-the-lead-sentencing-reform-gains-momentum>, accessed 8/8/2013.

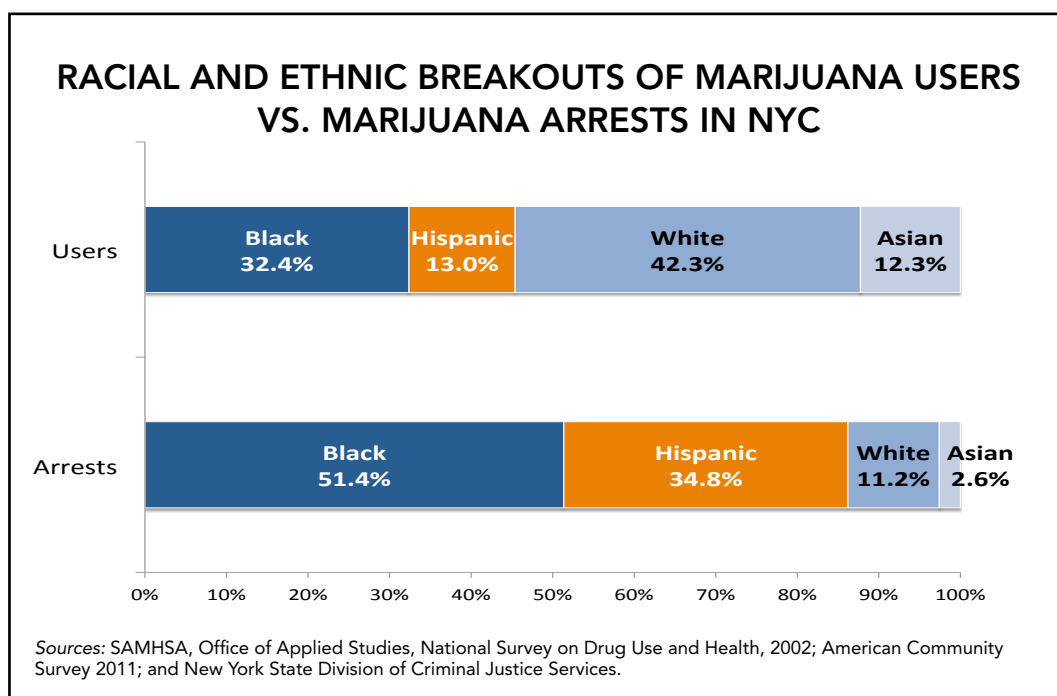
2 Levine, Harry and Small, Deborah Peterson, "Marijuana Arrest Crusade Racial Bias and Police Policy in New York City 1997-2007," *New York Civil Liberties Union*, April 2008, [http://www.nyclu.org/files/MARIJUANA-ARREST-CRUSADE\\_Final.pdf](http://www.nyclu.org/files/MARIJUANA-ARREST-CRUSADE_Final.pdf).

3 New York State Division of Criminal Justice Services, Computerized Criminal History system. From January through the end of June, 2013 there were 18,416 New York City misdemeanor marijuana arrests.



Effective March 2013, Mayor Bloomberg issued a statement that after being arrested for small amounts of marijuana “anyone presenting an ID and clearing a warrant check will be released directly from the precinct with a desk appearance ticket to return to court.”

Although survey data shows that whites use marijuana at rates roughly equal to or greater than other racial and ethnic groups, 86 percent of those arrested in New York City under PL 221.10 in 2012 were black or Hispanic. Such arrests can have long-term adverse impacts on the ability to secure jobs, find places to live, and obtain student loans.



## POTENTIAL TAX REVENUES

The Comptroller’s Office estimates that the retail marijuana market in New York City is currently about \$1.65 billion annually. Of course, that activity is currently illicit and untaxed. We estimate that legalization, regulation, and taxation of the marijuana market would expand the market to \$1.7 billion, primarily by shifting some metropolitan area purchases from outside the City to within the City. A tax policy designed to hold the retail price constant would produce tax revenues of approximately \$400 million in the intermediate term.<sup>4</sup> The long-term tax revenue potential may be significantly greater, as the costs of supplying the market demand falls.

Our revenue estimates are based on an assumed 20 percent ad valorem excise tax plus existing State and City sales taxes. The City’s total sales tax rate is currently 8.875 percent, of which 4.5 percentage points represents the City’s sales tax levy and 4.0 percentage points represents the State share of the sales tax. The Metropolitan Commuter Transportation District (MCTD) receives the remaining 0.375 percentage point. As a result of this allocation of sales tax revenue, our estimate of the \$400 million revenue impact includes \$331 million to the City, \$63 million accruing to the State, and \$6 million allocated to the MCTD.

In our estimates, the excise tax is set at 20 percent in order to hold the retail price of marijuana roughly at its existing level. For a variety of reasons, it is expected that legal marijuana would rapidly drive underground market marijuana out of the marketplace even if the retail prices were comparable. It is further assumed

<sup>4</sup> Three to five years after legalization.



that, as a matter of public policy, a goal of legalization would not be to lower the retail price. The Comptroller's Office estimates that a 20 percent excise tax, combined with existing sales taxes, would roughly offset the price decline that would be expected after legalization, leaving retail prices unchanged.

## REVENUE METHODOLOGY

The task of estimating the fiscal impact of marijuana legalization in New York City is complicated by a lack of reliable data. Because marijuana is an illicit drug, there is no regulatory body tracking sales volumes and overseeing quality, and no commercial market research monitoring prices and consumer behavior.

Our estimates of the size of the marijuana market consequently are based on more indirect and speculative methods. State authorities in Washington<sup>5</sup> and Colorado<sup>6</sup> relied upon demand-side estimates of the marijuana market to calculate the fiscal impacts of legalization. These state demand-side estimates utilized survey data on the frequency of marijuana use combined with rough estimates of marijuana portion sizes to estimate total marijuana consumption. We take a similar approach here.

Supply-side estimates infer the size of the marijuana market at the national level from estimates of marijuana acres under cultivation, or gross marijuana seizures by law enforcement.<sup>7</sup> These methods are difficult to apply to New York City, but provide an additional point of reference.

Based on the best available evidence, we estimate the potential size of the New York City marijuana market by combining estimates of the number of New York City residents, commuters and visitors that use marijuana, the amount they use on average, and average market prices.

### 900,000 NEW YORK CITY MARIJUANA CONSUMERS

According to the Census Bureau, there were roughly 6.5 million New York City residents in 2011 aged 18 or older. In addition, there were about 900,000 commuters who work in the City but live outside it. Furthermore, about 600,000 of those commuters are married or have a domestic partner. Because of the difficulty of estimating the portion of commuter household consumption of marijuana that is currently purchased within the City, we consider that population, in addition to the resident adult population, to constitute the primary market base for marijuana that would be sold legally in New York City. We expect that if marijuana were to become legally available in New York City, regular commuters to the City and adult members of commuter households who use marijuana would shift the majority of their purchases to legal outlets. In calculations of the market size both before and after legalization, we assume that the entirety of their purchases are made within the City.

Based on a recent report by the Substance Abuse and Mental Health Services Administration, we estimate that 10.4 percent of New York, Northern New Jersey, and Long Island residents used marijuana in the past year, an incidence of use which is lower than that of New York State (12.2 percent) and of the United States (10.7 percent).<sup>8</sup> We make no attempt to correct for survey respondents' tendency to underreport their marijuana use, but note that such a correction would push our estimates of marijuana users, and our estimates of the size of the total market, higher.

Taking 10.4 percent of the population of 8.0 million New York City residents and commuter household adults yields an estimate of roughly 830,000 primary New York City marijuana consumers.

<sup>5</sup> Office of Financial Management, Fiscal Impact Statement (I-502), August 10, 2012, [http://www.liq.wa.gov/publications/Marijuana/I-502/502\\_fiscal\\_impact.pdf](http://www.liq.wa.gov/publications/Marijuana/I-502/502_fiscal_impact.pdf), accessed 8/7/2013.

<sup>6</sup> Colorado Legislative Council Staff, Fiscal Impact Statement, September 18, 2012, <http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251821710778&ssbinary=true>, accessed on August 12, 2013.

<sup>7</sup> *Marijuana Production in the United States*, Jon Gettman, The Bulletin of Cannabis Reform, December 2006 [http://www.drugscience.org/Archive/bcr2/MJCropReport\\_2006.pdf](http://www.drugscience.org/Archive/bcr2/MJCropReport_2006.pdf), accessed 8/7/2013.

<sup>8</sup> SAMHSA, Center for Behavioral and Health Statistics and Quality, National Survey on Drug Use and Mental Health, 2005 and 2006 to 2010 (revised March 2012), New York-Northern New Jersey-Long Island MSA. <http://www.samhsa.gov/data/NSDUHMetroBriefReports/NSDUH-Metro-New-York.pdf>, accessed 8/7/2013.



If marijuana were sold legally, tourists would probably contribute to local marijuana demand more than they currently do. With approximately 90,000 hotel rooms in the City, an average occupancy rate of about 85 percent, and approximately 1.5 adults per occupied hotel room, there are about 115,000 adult tourists and other overnight travelers in the City on a given day.<sup>9</sup> Approximately half of the overnight stays are made by domestic travelers, the other half by international visitors. It can be assumed that the frequency of marijuana use among domestic visitors to New York City is similar to the national rate. Approximately half of international visitors to New York City are from Canada, Australia, or Europe, where marijuana consumption appears to be similar to or slightly less than in the U.S. The other half mostly visit from countries where marijuana use is significantly less common. Based on these considerations, we estimate that overnight travelers would add the equivalent of 10,000 resident marijuana consumers.

There are about 14.6 million people in the New York metropolitan area aged 18 or above. We estimate that adult New York City residents and adult members of commuter households total about 8.0 million, leaving approximately 6.6 million who do not live in the City or live in a commuter household. Based on the consumption patterns discussed, it can be estimated that 700,000 of them are marijuana users. It can be assumed that many of them would purchase legal marijuana on their occasional business or recreational visits to the City, or even make visits to the City specifically for that purpose. To account for this component of demand, we estimate, conservatively, that one-tenth of their marijuana purchases would be made in the City, adding the equivalent of 70,000 resident consumers.

Our demand estimates incorporate a post-legalization retail price only slightly below the current underground market price, so we make no adjustments in the consumption figures based on price elasticity. However, it is probable that legalization itself will cause consumption to rise as criminal sanctions are removed, retail supply becomes more readily available, and quality control and product consistency become established. We make no adjustment for this possible effect, thereby biasing downward our estimates of consumption and tax revenues.

## 0.56 OUNCE PER CAPITA CONSUMPTION

We assume the average marijuana user smokes 5 ounces of marijuana per year. This assumption is based on estimates of average marijuana portion sizes and estimates of the frequency of marijuana use. Estimates of typical marijuana portion sizes range from 0.5 grams (0.018 ounce) to 3 grams (0.11) ounce.<sup>10</sup>

Frequency of use affects users' tolerance of marijuana, so daily recreational users or cancer patients may become accustomed to larger portion sizes in order to achieve the desired effects. By one estimate roughly 1 percent of the U.S. population uses marijuana more than 300 days a year.<sup>11</sup> Applying this estimate to New York City would imply roughly 90,000 daily marijuana users in New York City, each of whom would smoke somewhere in the neighborhood of 1 kilogram (35 ounces) of marijuana annually (300+ days x 3 grams/day).

Our assumed average of 5 ounces of marijuana used per user per year represents an average of heavy users and many others who may only smoke several times per year.<sup>12</sup> Survey data suggest the median marijuana user in the U.S. smokes between 25 and 51 times per year.<sup>13</sup> Our assumption of 5 ounces per user per year lies in between the daily use estimates incorporated into the Washington and Colorado fiscal impact analyses.

It is worth noting that these crude estimates of ounces used per year ignore variability in the potency of marijuana used. This is akin to measuring total sales of alcoholic beverages in ounces without being able to distinguish an ounce of beer from an ounce of whiskey.

<sup>9</sup> Many overnight visitors to the City stay with friends or family, or as boarders in private homes and apartments. We assign their marijuana consumption, if any, to the annual consumption total of the host residents.

<sup>10</sup> *Bulletin on Narcotics, Volume LVIII, Nos. 1 and 2, 2006, Review of the World Cannabis Situation*, United Nations Office on Drugs and Crime, p. 43.

<sup>11</sup> The National Survey on Drug Use and Health, "Daily Marijuana Users," November 24, 2004, <http://www.samhsa.gov/data/2k4/DailyMJ/DailyMJ.pdf>, accessed 8/8/2013.

<sup>12</sup> Detailed picture of user frequency is available here: *Bulletin on Narcotics, Volume LVIII, Nos. 1 and 2, 2006, Review of the World Cannabis Situation*, United Nations Office on Drugs and Crime, p. 48.

<sup>13</sup> *Ibid*, Table X, p. 48



Distributed over the relevant adult population (including commuter households and tourists and metropolitan non-commuter resident equivalents), our use estimates imply an annual adult per capita consumption of 0.56 ounces. By comparison, in its Fiscal Impact Statement of Amendment 64, the Colorado Legislative Council Staff used a wide range of consumption estimates, the midpoint of which implied adult per capita consumption of 0.42 ounces. Washington's estimates of the fiscal impact of Initiative 502 utilized an implied annual per capita consumption figure of 0.57 ounces. A careful study of Australia's consumption, a country in which survey data indicates marijuana use is very similar to that in the United States, estimated adult per capita consumption at 0.64 ounces annually.<sup>14</sup>

Supply-based approaches to estimating marijuana consumption generally produce much higher estimates. For example, a Marijuana Availability Working Group organized under the auspices of The Library of Congress arrived at a supply-based estimate of total U.S. consumption of 10,000 to 24,000 metric tons annually.<sup>15</sup> Given that New York City resident adults and commuter household adults, as estimated here, represent about 3.1 percent of all Americans aged 18 and above, the Library of Congress figure implies per capita consumption two to three times greater than that used in this analysis.

## **NEW YORK CITY MARIJUANA PRICES, \$400 PER OUNCE**

We estimate the average retail price of marijuana in New York City at roughly \$400/ounce in 2013. This estimate is based on price quotes for different "brands" of marijuana taken from the High Times Price Index,<sup>16</sup> an index of price quotes of marijuana strains listed geographically. Six New York City-specific price quotes were available in four different months of 2013; a simple average of them yields an estimated market price of roughly \$400/ounce.

### **2013 NEW YORK CITY MARIJUANA PRICE QUOTES**

Month	"Brand"	Price/Ounce (\$)
February	Strawberry Cough	420
March	Strawberry Cough	400
	Burmese Cush	350
April	Guava Chem	450
	Strawberry Cough	400
July	Guava Chem	420
<b>AVERAGE PRICE</b>		<b>407</b>

We have no satisfactory way of confirming these price quotes. In general, quoted prices appear to be higher in New York City than in other parts of the country. If accurate, it may reflect the higher incomes of New York City consumers, higher costs of doing business in the City, or supply constraints. Unlike other cities, we found no New York City-specific price quotes for lower grades of marijuana. If New York City users of lower quality marijuana are less likely to provide price quotes, this estimate will overstate the average market price.

<sup>14</sup> Kenneth W. Clements and Mert Daryal: *The Economics of Marijuana Consumption*. Economic Research Centre, Department of Economics, The University of Western Australia, 1999.

<sup>15</sup> *Marijuana Availability In The United States And Its Associated Territories*, Federal Research Division, Library of Congress, 2003.

<sup>16</sup> Hughes, Mike, "Pot Prices June 2013 THMQ" *High Times*, July 3, 2013, <http://www.hightimes.com/read/pot-prices-june-2013-thmq>, accessed 8/8/2013.



## MARKET SIZE

Based on our estimates of the size of the relevant consuming population and their consumption patterns, we estimate total potential purchases of legal marijuana sold in New York City at 4.5 million ounces annually. At an average retail price of close to \$400 per ounce, the retail dollar size of the legal marijuana market would be roughly \$1.7 billion annually.

We estimate that legalization would cause marijuana prices to fall by roughly 30 percent during the initial years of legalization, implying a post-legalization pre-tax market size of approximately \$1.3 billion. That price assumption is based on a recent study that evaluated how marijuana prices changed in states that approved marijuana for medical purposes.<sup>17</sup> The study found marijuana prices decreased in a range of 15 percent and 45 percent between the first and fifth years following legalization of medical marijuana.

Using this estimate to predict post-legalization price decreases in New York City may be problematic for a number of reasons. State approval of marijuana for medical use likely has a muted impact on marijuana supply, and therefore marijuana prices, as compared to full legalization. Full legalization would remove more legal barriers to production and distribution, and would likely lead to larger price decreases over time.

Data from Colorado and Washington that might allow us to estimate the price impact of full legalization is not yet available. Even if data were available, however, comparisons to those states would have to be made with caution. Without full legalization throughout New York State, all legalized marijuana sold in New York City would have to be produced within its borders. Rough calculations based on known marijuana crop yields suggest that would be physically possible, but due to the City's limited land area, most production would probably take place in high-cost indoor "farms," limiting the price declines. A more plausible scenario is that legalization of marijuana in New York City takes place as a precursor of legalization throughout the State, ultimately leading to much less costly production methods and much lower wholesale prices.

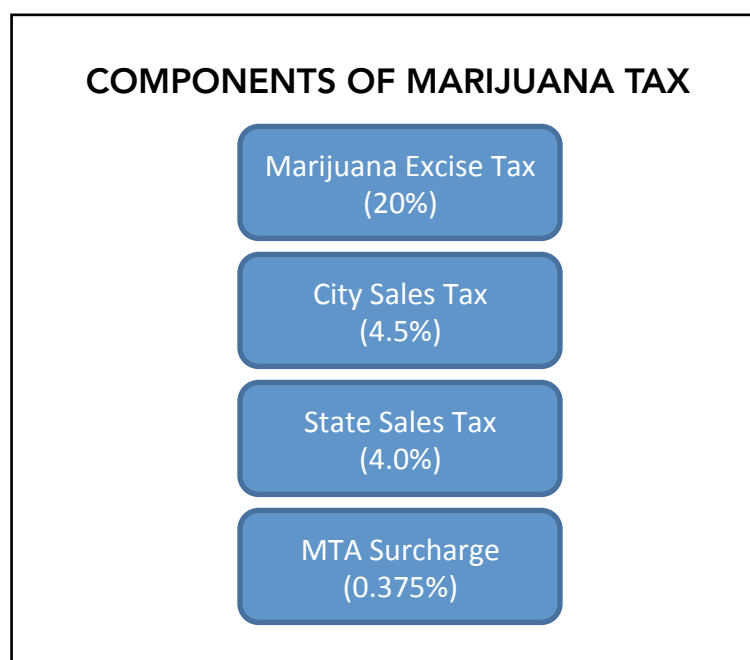
<sup>17</sup> D. Mark Andersen, "Medical Marijuana Laws, Traffic Fatalities, and Alcohol Consumption", forthcoming in the *Journal of Law and Economics*, [http://dmarkanderson.com/Medical\\_Marijuana\\_Accidents\\_and\\_Alcohol\\_10\\_16\\_12\\_v1.pdf](http://dmarkanderson.com/Medical_Marijuana_Accidents_and_Alcohol_10_16_12_v1.pdf), accessed 8/8/2013.





## TAX REVENUE

We assume a 20 percent excise tax on marijuana which, together with existing New York City sales taxes, would generate roughly \$400 million in tax revenue annually. We derive this estimate based on a 20 percent retail excise tax (or its wholesale equivalent) on marijuana applied to a post-legalization market size of roughly \$1.3 billion generating roughly \$260 million annually. Applying New York City's sales tax of 8.875 percent to the \$1.56 billion post-excise tax market (\$1.3 billion + \$260 million) yields roughly \$140 million in sales tax to be shared between New York City, New York State, and the Metropolitan Transportation Authority.



The post-legalization time horizon over which revenue might materialize would depend on how quickly marijuana distribution reorganizes itself through legal channels. The appropriate rate of taxation also depends on the elasticity of the marijuana supply over time. In the long run, if legal reform allows marijuana to be grown on industrial scales, growing costs and market prices are likely to fall much more than assumed here. A dramatic fall in wholesale marijuana prices would allow for a larger fraction of the market price to be captured as tax revenue, while leaving the retail price unchanged.

Nearly all scenarios in which the sale of marijuana would be legalized in New York City involve either subsequent legalization throughout the state, or a greater participation of the state in the revenue stream than is assumed in this analysis. We do not believe those scenarios necessarily imply a smaller fiscal benefit for New York City, providing that cultivation of marijuana be legalized statewide. Allowing marijuana to be grown in less urbanized areas of the State would facilitate lower cost production, drive prices down, and make room for additional taxes at the State and/or City level.

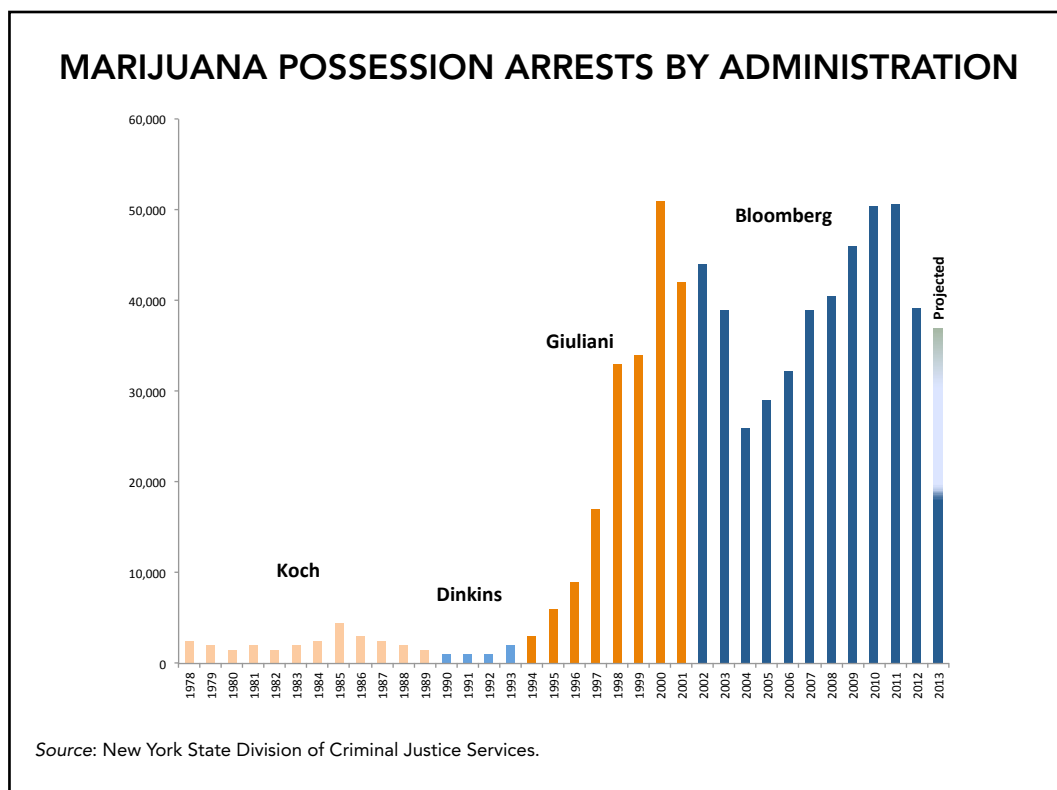
## POTENTIAL COST SAVINGS

The Comptroller’s Office estimates that legalization would save New York City roughly \$31 million annually by reducing the number of arrests for marijuana-related offenses. We derive this estimate as the product of the number of New York City misdemeanor marijuana arrests and the cost per arrest.

### NUMBER OF ARRESTS

According to the New York State Division of Criminal Justice Services there were 18,416 misdemeanor marijuana arrests in New York City in the first six months of 2013 (January through June). If that pace of arrests continues through the remainder of the year, there will be roughly 37,000 misdemeanor marijuana arrests in 2013. That would represent a slight decline from the roughly 39,000 misdemeanor marijuana arrests in 2012. By comparison, in 2010 and 2011 there were more than 50,000 misdemeanor marijuana arrests in New York City each year.<sup>18</sup>

Some fraction of those arrested for misdemeanor marijuana possession were also arrested for other offenses at the same time. The New York State Division of Criminal Justice Services was unable to provide data that would allow us distinguish those arrested solely for marijuana possession from those arrested for more than one offense. However, research suggests somewhere between 33 percent and 85 percent of those arrested for marijuana possession are arrested for that alone.<sup>19</sup> Aggressive enforcement of drug laws is likely to lead to more marijuana arrests solely for marijuana possession. We follow the conservative assumption that 50 percent of those arrested for misdemeanor marijuana possession are arrested for more than one offence. By this assumption we estimate that legalizing marijuana in New York City would avert roughly 18,500 misdemeanor arrests (50 percent of 37,000).



18 New York State Division of Criminal Justice Services, Computerized Criminal History System.

19 “The Budgetary Implications of Marijuana Prohibition,” June 2005, Jeffrey A. Miron <http://www.prohibitioncosts.org/wp-content/uploads/2012/04/MironReport.pdf>, accessed 8/8/2012.



## COST PER ARREST

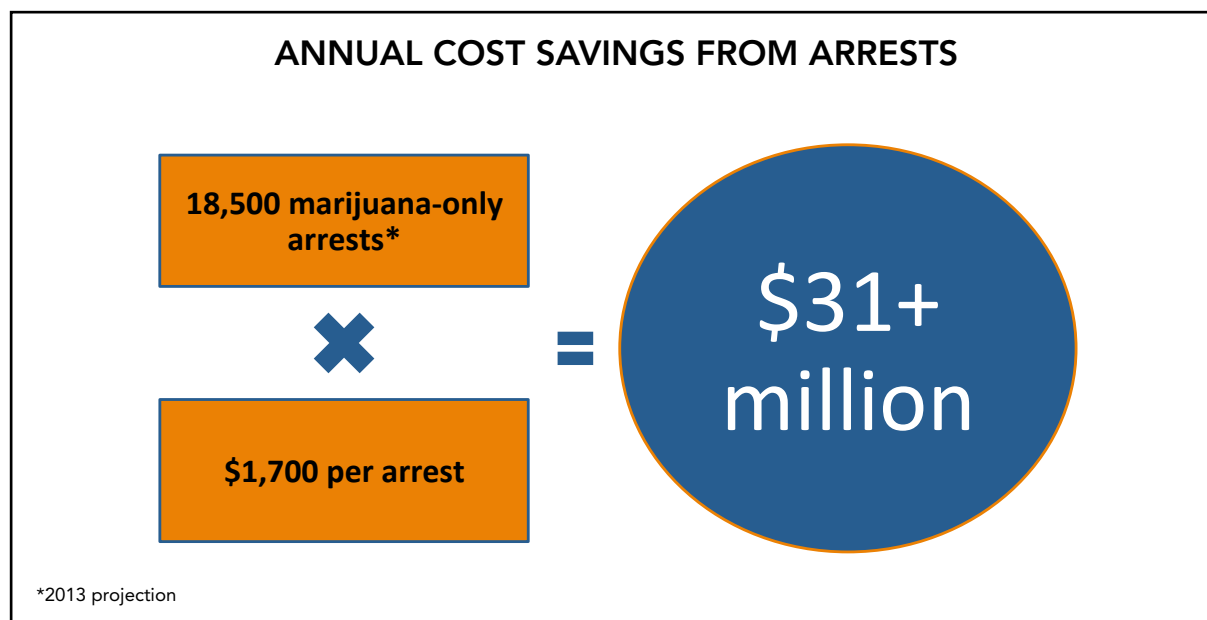
We estimate the average misdemeanor marijuana arrest costs the City roughly \$1,700. The costs of a marijuana arrest include police time for taking arrestees to the police station, submitting seized marijuana into evidence, fingerprinting and photographing, performing criminal background checks, and filling out associated paperwork. Judicial costs may include the time of prosecutors, public defenders, bailiffs, and other administrative work.

The American Civil Liberties Union provides a thorough review of different estimates of the costs of a marijuana arrest.<sup>20</sup> Perhaps the most widely cited estimate of the cost of a misdemeanor arrest comes from a 2001 study by the Washington State Institute for Public Policy. The study used expenditure and workload data for jurisdictions in Washington State to estimate that each misdemeanor arrest cost \$764 in police costs and \$336 in judicial costs for a total of \$1,100 per misdemeanor arrest.<sup>21</sup> Updating the Washington figures to 2013 dollars but making no adjustment for the possibility that police costs in New York City may be different than in Washington State, we derive an estimate of \$1,700 per misdemeanor marijuana arrest.

In Washington State roughly 70 percent of the total cost of a misdemeanor arrest was attributed to police costs and 30 percent to judicial costs. Assuming those proportions hold approximately for New York City, it can be surmised that roughly \$1,200 of the estimated \$1,700 cost of a misdemeanor marijuana arrest is attributable to police costs.

## TOTAL COST SAVINGS

We estimate total cost savings from marijuana legalization as the product of 18,500 misdemeanor arrests solely for marijuana possession and an estimated \$1,700 cost per arrest to derive a total estimated cost savings of roughly \$31 million.



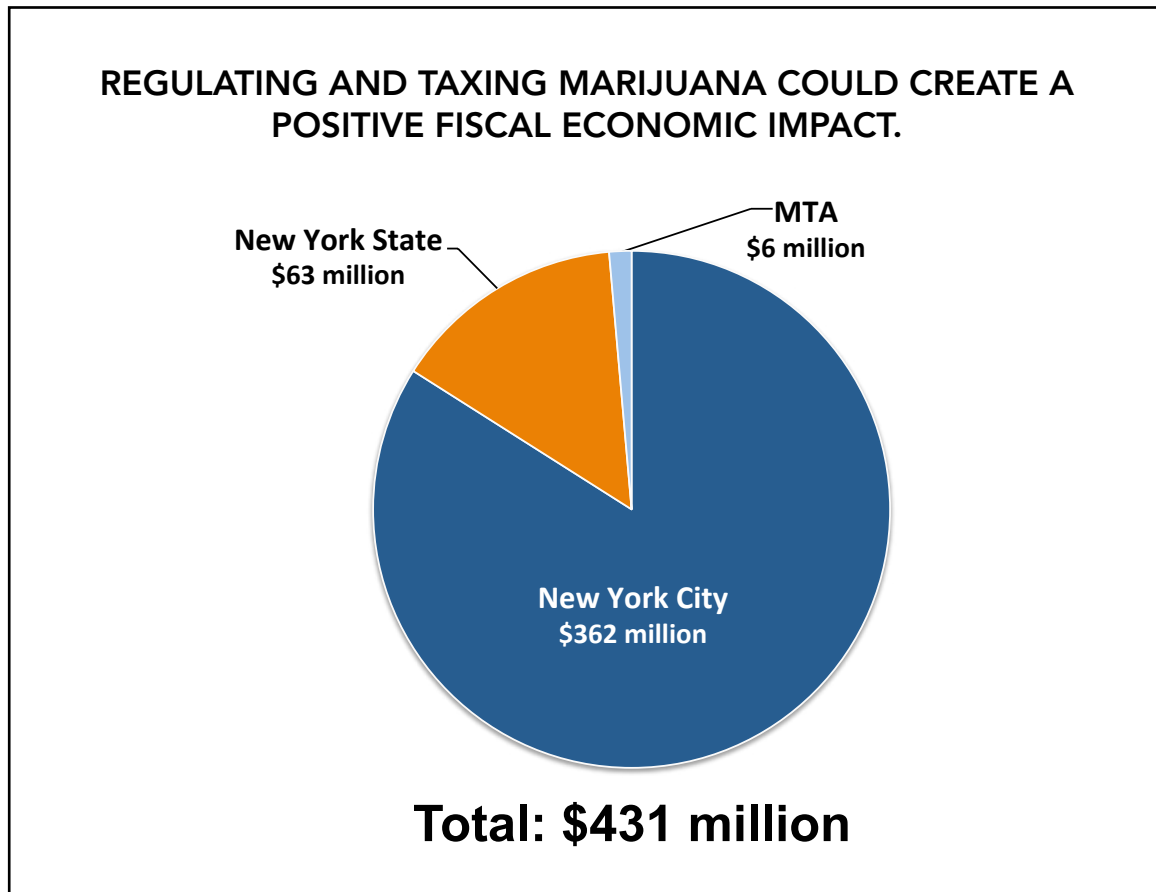
20 "The War on Marijuana in Black and White, Billions of Dollars Wasted on Racially Biased Arrests," American Civil Liberties Union, June 2013, <http://www.aclu.org/files/assets/aclu-thewaronmarijuana-rel2.pdf>, accessed 8/8/2013.

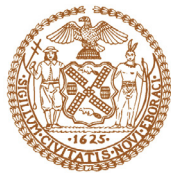
21 "The Comparative Costs and Benefits of Programs to Reduce Crime, Version 4.0," May 2001, Washington State Institute for Public Policy, <http://www.wsipp.wa.gov/rptfiles/costbenefit.pdf>, accessed 8/8/2013.



**CONCLUSION - TOTAL FISCAL IMPACT**

We estimate the total fiscal impact of legalizing marijuana in New York City at roughly \$431 million annually, the sum of roughly \$400 million in tax revenues and roughly \$31 million in averted misdemeanor arrests.





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JOHN C. LIU**

**Comptroller of the City of New York  
1 Centre Street, New York, NY 10007**

**[comptroller.nyc.gov](http://comptroller.nyc.gov)**