

**The Effect of Marijuana Decriminalization on the Budgets of Massachusetts Governments,
With a Discussion of Decriminalization's Effect on Marijuana Use
An Update of Miron (2002a)**

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October, 2008

This study is an updated version of Miron (2002a), which was commissioned by the Drug Policy Forum of Massachusetts. This update was commissioned by New England Policy Advocates. I am grateful to Grace Kim for excellent research assistance.

Executive Summary

- Decriminalization of marijuana has received substantial attention over the last several decades. Decriminalization means that possession is not subject to criminal sanctions but instead punishable only by a civil fine. Trafficking, and selling or distributing to minors, remain subject to standard criminal penalties.
- Proponents suggest that decriminalization has several beneficial consequences, including budgetary savings for state and local governments, improved welfare for marijuana users, and an improved allocation of criminal justice resources. Opponents suggest that decriminalization produces a substantial increase in marijuana use along with increased crime and other negative effects.
- This report examines two effects of decriminalization: the impact on government budgets and the impact on marijuana use.
- The report estimates that decriminalization of marijuana in Massachusetts would produce an annual savings in law enforcement resources of approximately \$29.5 million.
- This report also reviews evidence from other states and countries on the effects of marijuana decriminalization on marijuana use. This evidence provides no indication that decriminalization leads to a measurable increase in marijuana use.

I. Introduction

Decriminalization of marijuana is a policy that has received substantial attention over the last several decades. Decriminalization means that possession of marijuana is not subject to criminal sanctions but instead punishable only by a civil fine. Trafficking, and selling or distributing to minors, remain subject to standard criminal penalties.

During the 1970s eleven U.S. states adopted some form of decriminalization, and numerous countries have decriminalized as well.¹ The issue has resurfaced in recent years as ballot initiatives or legislative proposals to decriminalize have appeared in several states.² Proponents suggest that decriminalization has several beneficial consequences, including budgetary savings for state and local governments, improved welfare for marijuana users, and an improved allocation of criminal justice resources. Opponents suggest that decriminalization produces a substantial increase in marijuana use along with increased crime and other negative effects.

This study addresses two of the issues that are central to the debate over marijuana decriminalization: the impact of decriminalization on government budgets and the impact of decriminalization on marijuana use.

This report is not an overall evaluation of whether marijuana decriminalization is a beneficial change in policy. The fact that the budgetary savings would be large or small does not, by itself, determine the wisdom of this policy change. Similarly, the fact that any change in marijuana or other drug use would be large or small does not, by itself, determine whether decriminalization is better than current policy. Both pieces of information are nevertheless relevant to policy makers and the public when considering changes to current policy toward marijuana.

This report concludes that decriminalization of marijuana in Massachusetts would produce an annual savings in law enforcement resources of approximately \$29.5 million. The estimates provided here necessarily make use of approximations in cases where available data do not permit a more detailed analysis. Wherever possible, however, the report has relied on

¹ The states are Alaska, California, Colorado, Maine, Minnesota, Mississippi, Nebraska, New York, North Carolina, Ohio, and Oregon. Alaska (1990) has since voted to recriminalize, although in 1998 it decriminalized for medical purposes. A twelfth state, South Dakota, also decriminalized during this period but recriminalized within a year. In 1996 Oregon recriminalized, but in 1998 the voters rescinded recriminalization and returned to decriminalization. More recently, Nevada decriminalized in 2001. See <http://www.norml.org/> and <http://www.drugpolicy.org/statebystate/> for details. Countries that have decriminalized include Italy (1990), Spain (1992), Portugal (2001), Luxembourg (2001), Belgium (2001), and Austria (1998). Several other countries (Netherlands, Germany, Denmark, France, Switzerland, United Kingdom, and Canada) have either de facto decriminalized or are in the process of decriminalizing. See <http://eldd.emcdda.org/> and <http://www.norml.org> for details.

² For example, Question 9 on the November, 2002 ballot in Nevada would have eliminated criminal penalties for possession of up to 3 ounces of marijuana and required the state to provide a legal means of purchasing marijuana. Issue 1 on the November, 2002 ballot in Ohio would have allowed treatment instead of incarceration for many drug offenses. Proposition 203 on the November, 2002 Arizona ballot would have decriminalized possession of 2 ounces or less of marijuana. Several states have also passed or are considering medical marijuana laws. See the references in fn. 1 above.

approximations that bias the estimated budgetary effects downward, so the actual effects are plausibly higher than suggested here.

This report also reviews existing evidence from other states and countries on the effects of marijuana decriminalization on marijuana use. This evidence provides no indication that decriminalization leads to a measurable increase in marijuana use.

II. Estimating the Budgetary Implications of Decriminalization

There are two budgetary implications of marijuana decriminalization. The first is the savings in criminal justice resources that occurs to the extent police, prosecutors, state forensic laboratories, court clerical personnel, judges, and prisons are not utilized in connection with marijuana possession offenses. The second is any change in revenue that occurs because the criminal fines currently levied on marijuana possession offenders are replaced by civil fines. Of these two components, the savings in criminal justice resources is the more important. This section addresses each of these components in turn.

The Savings in Criminal Justice Resources

A simple approach to estimating the savings in criminal justice resources from decriminalization entails the following steps:

1. determine the percentage of all Massachusetts arrests that is for marijuana possession;
2. determine the criminal justice budget of Massachusetts;
3. multiply the first number by the second.

Under certain assumptions, this approach yields a reasonable estimate of the resources utilized due to the criminalization of marijuana possession in Massachusetts.³ Some of these assumptions are questionable, however, so modification of this approach is in order.

To begin, many arrests for marijuana possession do not lead to trials or prison terms. Instead, a substantial fraction of such arrests are plea-bargained, continued without a finding, dismissed, diverted to treatment, or otherwise handled in a manner that makes substantially less use of the criminal justice system than many other arrests. Thus, the approach outlined so far must be modified to account for the differential degree to which marijuana possession arrests utilize police resources, prosecutorial and judicial resources, and correctional resources. This report implements this more detailed approach below.

A second difficulty with the approach outlined above is that some arrests for marijuana possession occur because the arrestee was under suspicion for a different crime, but during a

³ An implicit assumption is that the technology is roughly constant-returns to scale, so that average costs equal marginal costs. This equivalence is not necessarily accurate in the short-run or for very small communities, but it is likely a good approximation overall. Relatedly, the police conduct activities that are unrelated to arrests, such as traffic control. These related police tasks are likely minor, however, in comparison to police activities that involve arrests.

routine search the police discovered marijuana. This means a marijuana possession arrest is recorded, along with an arrest on the other charge. But if marijuana possession is not a criminal offense, the suspects in such cases would still be arrested on the charge that led to the search, and police resources would be used to approximately the same extent as if marijuana possession were criminal.⁴

Taken to the extreme, the fact that some marijuana arrests are incidental to arrests for other offenses suggests decriminalization might produce minimal savings of police resources. The extreme is probably not an accurate description, for reasons given below, but it is important to think carefully about this issue.

To this end, it is useful to consider the various ways that marijuana possession arrests can occur. The first possibility, here labeled stand-alone, is those arrests that arise entirely out of the criminalization of marijuana possession. Stand-alone arrests include instances where police observe someone smoking marijuana or believe someone possesses marijuana because of detection of the characteristic odor. The second category, here labeled civil-incidental, includes arrests that are incidental to a non-criminal infraction, such as a traffic violation in which a police officer observes or smells marijuana. The third category, here labeled criminal-incidental, consists of arrests that occur because the police have detained a suspect under suspicion of a different crime and then determined that the suspect possesses marijuana.

A rough first approximation to the amount of police resources that would be saved under decriminalization would be that corresponding to stand-alone plus civil-incidental marijuana arrests. In both cases, under decriminalization the police would no longer make an arrest but instead simply cite the offender for possession, as occurs now for various traffic violations.⁵ Thus, it is useful to know what fraction of possession arrests are in these two categories as opposed to the criminal-incidental category.

Two kinds of information are available to estimate this fraction. The first is the experiences of judges and lawyers who are involved with marijuana possession cases. These impressions provide a useful baseline, even though they do not constitute hard evidence. For the purposes of this report, the author contacted several representatives from these groups. Each person contacted suggested that stand-alone plus civil-incidental arrests account for at least 40% of the marijuana possession arrests in Massachusetts, and several thought the percentage substantially higher.

The second approach to estimating this fraction is to obtain data on the fraction of those marijuana possession arrest incidents involving a single charge of marijuana possession, as compared to a charge of marijuana possession and a charge of something else. These data are available for two locations in Massachusetts, Brockton and Barnstable.⁶ These data indicate that

⁴ This assessment of equivalent resource utilization is an overstatement since there is typically a lab test to determine the precise content of any drugs seized. Also, it presumably takes additional resources to prosecute a given offender on multiple charges rather than on a single charge.

⁵ A charge of driving under the influence of marijuana might still occur, but that is a separate issue.

⁶ The data are averages over the 1999-2002 period (through 9/23/02). For first offenses the fraction is 34% in Brockton and 38% in Barnstable. For subsequent offenses the fraction is 24% in Brockton and 50% in Barnstable. First offenses are substantially more common, and the Brockton sample is substantially larger. Thus, 33% is a reasonable bound.

approximately 33% of marijuana possession arrests involve one charge only, meaning they are either stand-alone or civil-incidental.⁷

These facts together suggest that 33% is a reasonable lower bound on the fraction of marijuana possession arrests that would no longer occur *and* result in a savings in criminal justice resources under decriminalization.

To determine the implication of this fact for the Massachusetts budget requires information on the fraction of arrests due to marijuana possession. In 2006, 130,219 total arrests occurred in Massachusetts, of which 17,729 were for drug law violations.⁸ Also in 2006, 42.5% of arrests for drug law violations were for marijuana possession, implying that 5.8% ($= .425 \times (17,729/130,219)$) of arrests in Massachusetts were for marijuana possession.⁹ Multiplying this percentage by 33% gives 1.9% as the fraction of arrests that would not occur and result in a savings of criminal justice resources under decriminalization.

The savings in criminal justice resources implied by this percentage has three components in principal: a reduction in police resources because of the reduced number of arrests; a reduction in prosecutorial and judicial resources because of the reduced number of criminal applications, pre-trial hearings, and trials; and a reduction in correctional resources because of the reduced number of prisoners.

In practice, only the first of these three components is likely to be affected to any substantial degree by decriminalization of marijuana possession in Massachusetts. Data on the disposition of marijuana possession arrests are not readily available, but data on the number of prisoners serving time for marijuana possession suggest that only modest numbers of possession charges go to trial.¹⁰ Likewise, the relatively small number of persons imprisoned on marijuana possession charges means that correctional costs related to this charge are modest as well.¹¹

The most important source of savings is therefore that corresponding to the reduced use of police resources. The fiscal year 2004 Massachusetts budget for police protection was

⁷ Reuter, Hirschfield, and Davies (2001) provide data on this fraction for Baltimore in the late 1990s; the fraction of marijuana only arrests is 46%. They also present data for Montgomery County indicating that 616/1237 marijuana possession arrests occurred because of direct observation, with 436 additional arrests arising out of traffic stops. This would suggest an even higher stand-alone plus civil-incidental fraction.

⁸ See U.S. Department of Justice (2006, Table 69), http://www.fbi.gov/ucr/cius2006/data/table_69.html.

⁹ See U.S. Department of Justice (2006, Arrest Table), <http://www.fbi.gov/ucr/cius2006/arrests/index.html>. The 42.5% figure is for states in the Northeast; data specifically for Massachusetts are not yet available for 2006. Massachusetts data for earlier years, however, confirm that the Northeast figure is a reasonable estimate of the fraction of arrests due to marijuana possession in Massachusetts.

¹⁰ See Massachusetts Department of Corrections (2006). It is not possible to pin down the precise number of persons being held on marijuana possession charges since for certain prisoners the exact charge is difficult to determine (e.g., possession of a controlled substance in a school zone). In addition, these data sources do not indicate the length of sentence for different charges.

¹¹ As discussed further below, this conclusion of modest impact takes as given current rules on probation and parole violations, under which detection of any marijuana use can send parolees/probationers to prison. If these rules were relaxed, the number of prisoners would be affected more substantially, resulting in more savings from decriminalization.

\$1,479.7 billion.¹² Adjusting this figure upwards by 5% to allow for inflation over two years implies 2006 expenditure of \$1,553.7 billion. The arguments above thus suggest savings equal to 1.9% of this amount as the result of decriminalization, since this fraction of arrests would not occur and result in a proportionate reduction in police resources utilized. This implies a savings of \$29.5 million in 2006.¹³

Change in Revenue from Fines

Under current law, the penalty for marijuana possession can include a fine of up to \$500. Under decriminalization, marijuana possession would be punishable by a civil fine of, for example, \$100. The net effect of decriminalization on the revenue accruing to Massachusetts governments is difficult to determine. Many offenders under current law do not pay the criminal fine, but some indigent offenders under decriminalization might not pay the fine as well. Given these uncertainties, this report does not estimate the net change in revenue. Since the number of arrests in question is modest, the maximum effect of the change in policy on revenue collections is minor in comparison to the effect of decriminalization on savings in criminal justice resources.

II. Does Marijuana Decriminalization Lead to Increased Marijuana Use?

One critical issue in the debate over decriminalization is the degree to which marijuana use increases after adoption of decriminalization. Advocates of decriminalization do not regard all increases in use as undesirable; indeed, some suggest that allowing responsible marijuana use by adults is a benefit rather than a cost. Opponents of decriminalization regard any increase in use as undesirable. Whatever one's view on this issue, however, it is useful to know whether the change in marijuana use caused by decriminalization would be large or small. If the change is small, determining whether it is a cost or a benefit is not critical to the debate.

Evaluations of decriminalization experiences in other states and countries provides little indication that use increases to any substantial degree as the result of decriminalization.¹⁴

Johnston, O'Malley, and Bachman (1981) use data from Monitoring the Future, an annual survey of U.S. high school seniors, to see whether the changes over time in marijuana use differed across states that did or did not decriminalize during the 1970s. They find little evidence of any difference.

Thies and Register (1993) use data from the National Longitudinal Survey of Youth for 1984 and 1988 to determine whether individuals in decriminalized states had different use rates for alcohol, marijuana, or cocaine. They find little evidence that decriminalization affects use of any of these substances.

¹² See http://www.census.gov/govs/estimate/0422masl_1.html.

¹³ For a comparison to other estimates of the budgetary impacts of decriminalization, see Miron (2002a).

¹⁴ This report summarizes the most complete and convincing of the evaluations of decriminalization's effect on marijuana use. Several additional studies are either small-scale or less well-designed than those summarized here (see, for example, Office of Alcoholism and Drug Abuse Prevention (1978)). These studies nevertheless reach the same conclusion documented above.

Model (1993) finds some evidence of increased marijuana use resulting from decriminalization, but this evidence is hard to interpret because the measure of marijuana use is emergency room drug mentions of marijuana. This measure might reflect attitudes toward drug use, which could correlate with decriminalization. Model also finds that decriminalization is accompanied by decreased mentions of drugs other than marijuana, suggesting substitution away from other drugs.

MacCoun and Reuter (1997, 2001) discuss the evidence on marijuana decriminalization in the United States, Australia, and the Netherlands. They conclude there is no evidence that decriminalization increases marijuana use.¹⁵ Single, Christie, and Ali (2000) reach the same conclusion regarding evidence on the experience with decriminalization in several Australian states.

IV. Discussion

This report estimates the savings in criminal justice resources that would accrue to Massachusetts state and municipal governments under marijuana decriminalization. The estimate is \$29.5 million per year. Several aspects of this estimate deserve further discussion.

The estimated savings in criminal justice resources is likely the minimum savings that would occur under decriminalization, since most of the assumptions underlying this estimate err on the low side. In particular, the estimate assumes no trials on charges of marijuana possession and no prison terms due to marijuana possession. Both assumptions appear to be reasonable approximations, but they are not literally correct. To the extent trials and imprisonments occur, the estimated savings in criminal justice resources reported here is downward biased.¹⁶ Further, the estimate reported here uses 33% as the fraction of current marijuana arrests that would not occur and not be offset by resources devoted to other arrests; this estimate appears to be conservative. Indeed, results in Reuter, Hirschfield and Davies (2001) imply a fraction more than twice as high, which would imply a cost savings more than twice as high as that reported here.

The estimate presented here takes as given that current rules regarding parole and probation would remain in effect under decriminalization. Under these rules, a positive test for marijuana use constitutes a violation that can cause any parolee or probationer, regardless of underlying offense, to be sent to prison. It is plausible these rules would be relaxed under decriminalization. This would keep non-trivial numbers of parolees and probationers out of prison, with substantial savings for the government budget.

¹⁵ While finding no significant affect on use from decriminalization, MacCoun and Reuter do conclude that the commercialization of cannabis in the Netherlands has contributed to an increase in use. They are correct to suggest that commercialization might expand use more than decriminalization, but they potentially exaggerate the implications of the Dutch experience. See Miron (2002b).

¹⁶ The estimate here also ignores the fact that some prosecutorial and judicial resources are utilized in connection with possession arrests even when no trial occurs, such as in pre-trial hearings.

Several aspects of the results here could be refined if more detailed data were available. These data include information on the precise disposition of marijuana arrests, on the length of sentences served by marijuana offenders, and on the exact nature of the offense under which certain drug offenders are imprisoned. In addition, future work might fruitfully consider other aspects of policy toward marijuana, such as the rules regarding marijuana use by probationers and parolees.

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