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Before the Grand Opening

Measuring Washington State's Marijuana Market in the Last Year Before Legalized Commercial Sales

Beau Kilmer, Jonathan P. Caulkins, Gregory Midgette, Linden Dahlkemper,
Robert J. MacCoun, Rosalie Liccardo Pacula

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Summary

The passage of both Initiative 502 (I-502) in Washington and Amendment 64 in Colorado in November 2012 was unprecedented. Before then, no modern jurisdiction had removed the prohibition on marijuana and allowed the commercial production, distribution, and possession of marijuana for nonmedical purposes—not even the Netherlands, which has a peculiar system of tolerated retail sale with an enforced ban on wholesale trade.

I-502 mandated that the Washington State Liquor Control Board regulate the newly legal cannabis industry. Among other tasks, the Liquor Control Board is responsible for making decisions about production, allocating and issuing licenses, and ensuring that marijuana businesses comply with regulations. It appears that the first marijuana stores will open in Washington in early 2014.

This report, *Before the Grand Opening*, provides a snapshot of the Washington marijuana market before the anticipated opening of commercial marijuana stores and their associated supply chain. It presents estimates of consumption for the entire state and each of its 39 counties for 2013. It also includes information about the characteristics of recent and heavy consumers and how they obtained marijuana. Knowing the market size is not only critical for making projections about consumption and tax revenues, it is also necessary for making informed decisions about how to distribute commercial licenses. It also provides baseline information for future evaluations of I-502.

While this report focuses on Washington state in 2013, many of the data sources and methods can be used by other jurisdictions seeking to learn about their marijuana markets. An important example is the web survey administered to improve understanding of how much marijuana users in Washington consume and how they obtain this marijuana. The survey did not simply ask respondents how much they spent and used; it also presented them with scaled pictures of marijuana to improve the accuracy of their responses about weights consumed.

Key insights from this report include the following:

- The National Survey on Drug Use and Health (NSDUH) reports that for 2010 and 2011 the average number of individuals in Washington who used marijuana or hashish in the past month was 556,000, with a 95-percent confidence interval of 475,000–650,000. NSDUH excludes some populations from its sampling frame, and self-report surveys typically underestimate consumption. Further, marijuana use has generally been rising, and these figures represent use in 2010 and 2011, not 2013. Thus, the unadjusted figures from the 2010/2011 NSDUH likely understate the number of past-month users in 2013.

- Three counties account for about 50 percent of marijuana users in Washington. King County has about 30 percent of the marijuana users, while Snohomish and Pierce counties have roughly 11 percent each.
- The literature is surprisingly thin concerning how much marijuana users consume during a typical day of use. That knowledge deficit becomes all the more acute when focusing on a particular jurisdiction and time, such as Washington in 2013. The emphasis has traditionally been on counting users, not counting grams. However, by augmenting that thin literature with data from the web-based consumption survey described above, we estimate that Washington residents who use marijuana 21 or more times per month consume, on average, 1.3–1.9 grams during a typical use day.
- Marijuana consumption in Washington in 2013 is greater than the 85 metric tons (MT) previously projected by the Washington Office of Financial Management (OFM, 2012a). Even before adjusting for survey undercounting/misreporting, our estimates suggest a 90-percent confidence interval of approximately 120–175 MT. The difference is largely driven by our use of more recent data.
- It is difficult to know by how much surveys understate actual consumption. Many of the relevant studies were published over a decade ago and times have changed; the NSDUH methodology has been improved substantially, and a national increase in marijuana use over the 2000s may have increased willingness to self-report. It is also unclear how applicable national and regional studies are to the state of Washington. After reviewing the evidence and attempting to adjust for undercounting/misreporting, results from our simulation suggest consumption likely falls within the interval of 135–225 MT, with a median estimate close to 175 MT.
- Multiple datasets provide information about the potency of the marijuana consumed in Washington. None is ideal, and there is no way to take a random sample of the universe of marijuana that is sold or consumed. But the available information suggests that lower-potency forms account for a modest share of the Washington market and probably a smaller share than they do nationwide.