



Average price of cannabis in Canada is \$6.60 per gram for illicit cannabis and \$8.37 per gram for licit cannabis, as reported by users. A 10% drop in the price of cannabis could cause a 4 to 6 percent increase in the consumed amount of cannabis

BACKGROUND

Whenever there is a change in policy, it is important to collect information on metrics that will be used by researchers and policy makers to examine the impact of the policy. Legalization of the recreational use of cannabis is a historic policy change for Canada. It is vitally important to create a regime of data collection pre- and post-legalization in order to determine what impact the regime change has had on society.

Despite representing one of the country's most commonly used illicit drugs, relatively little is known about the cannabis market in Canada. Recent surveys have reported that 12 percent of Canadians aged 12 years or older have used cannabis in the past year (CTADS, 2016), a rate that has been found to be higher among at-risk populations, including homeless youth and adults. Since the implementation of regularly administered national surveys on drug use, cannabis use prevalence rates ranged from a high of 14 percent in 2014 to a low of 9 percent in 2011, averaging 9.29 percent between 2004 and 2015. However, while surveys have begun to regularly track Canadians' past-year cannabis use, there is little empirical data on measures of the Canadian cannabis market, including prices, potency, and quantity consumed.

Knowing the price of cannabis is essential for assessing the consequences of current cannabis laws and making projections about policy changes. In the current cannabis regime in Canada, information on the retail price of cannabis is critical for measuring total cannabis expenditures, which can then be used to help estimate the amount of money being diverted to organized crime and other market participants. Data about the retail price in the illegal market can also be informative for governments or licensed producers for

price setting for legal medical cannabis products. Many of the major outcomes discussed in cannabis legalization debates—the size of illicit market, tax revenues, and consumption (which will have implications for public health)—will be shaped by what happens to the retail price after the policy change. Finally, a lower price of licit cannabis may eventually make cannabis more attractive to children and youth, whereas higher price will likely cause flourishing of organized crime elements who will strive to supply cheaper illicit alternatives through the black market. The current report aims to fill this gap by providing estimates of: 1) cannabis prices from 2011 to 2015; and 2) the price elasticity of cannabis demand in Canada.

METHOD

The study used approximately 9,000 self-reported cannabis transactions from 2011 to 2015, extracted from *Price of Weed*, an online crowdsourcing website that allows cannabis users to anonymously submit the price, size, quality, and location of their most recent cannabis transaction. Cannabis prices are examined across provinces, and according to the perceived quality, and quantity purchased, as well as in relation to medical cannabis prices. The transaction data is then used to generate price elasticity estimates of cannabis demand. Price elasticity of demand measures the degree to which changes in prices affect the consumption of goods or services. Specifically, price elasticity of demand measures the change in quantity demanded following a 1 percent change in price. Demand is considered *elastic* if an increase of 1 percent in price leads to a greater than 1 percent change in quantity demanded. Demand is considered *inelastic* if a 1 percent increase in price leads to a less than 1 percent change in quantity demanded. Estimates

of price elasticity provide insight into how changes in price, either due to policy factors or internal market conditions, influence rates of cannabis usage.

FINDINGS

Over the past five years, retail prices of cannabis have declined slightly. From 2011 to 2015, the average national price of high quality cannabis was \$7.69 per gram, medium quality cannabis \$7.14 per gram, and low quality cannabis \$7.26 per gram. The average price of cannabis that includes all the reported qualities across all of Canada for the years under study was \$6.60 per gram. Cannabis prices remained relatively stable across this period, with the median national price dropping on average \$0.01 per month.

Medical cannabis prices tend to be higher than illicit cannabis prices. Comparisons of medical cannabis prices to illicit cannabis prices showed that medical prices were, on average, nearly \$2.00 per gram higher than illicit prices. However, caution should be used when interpreting this price discrepancy. The comparisons are based on self-reported cannabis prices and do not control for the size of the transaction or the potency of the product.

Under prohibition, demand for cannabis appears to be inelastic, with price elasticity estimates ranging from -0.42 to -0.60. In economics terms, this means that the demand for illicit cannabis appears to be rather inelastic to prices because it is below a full 1 percent. In other words, the study estimated that a 10% drop in the price of cannabis could cause a 4 to 6 percent increase in the consumed amount of cannabis. These price elasticity estimates of Canadian users fall within the range reported in other western countries also under prohibition. The results highlight that demand varied according to the quality of cannabis, suggesting that changes to the supply and demand of cannabis may not be uniform across different potencies.

IMPLICATIONS

While this study is methodologically limited due to the self-reported, non-representative nature of the data, it exemplifies an important contribution to an understudied area of cannabis market in Canada. The estimates of prices and price elasticity in the current report represent those during a period of prohibition,

making it impossible to fully estimate how potential movements to legalization could impact the market. However, the importance of obtaining estimates prior to policy shifts should not be understated. Having timely estimates allow policymakers to avoid many of the pitfalls in other jurisdictions. For instance, States within the US lacked baseline data on price estimates and elasticity during periods of prohibition, as well as information about the location and number of medical outlets. These barriers have precluded researchers and policymakers from fully analyzing the effects of legalization policy and the impact of legalizing cannabis on the market. Documenting this now in various provinces will play a significant role for evaluating the impact of legalization in Canada. An understanding of cannabis markets requires a meaningful starting point. Much of what is known about prices in Canada extends from a single source, self-reported transactions from the Price of Weed. Nationally representative surveys that ask about drug transactions in combination with more focused efforts to target regular, chronic users would strengthen the infrastructure currently in place for assessing the cannabis market.

SOURCES

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