The Legalization of Marijuana:
A Cost-Benefit Analysis

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Cannabis sativa, or its more common name, marijuana, has a long, complex history that dates back thousands of years. This naturally occurring plant takes about 4-8 weeks to grow and flower. The stem of the plant is used to make a durable, soft fiber called hemp, while the flowering buds of the plant can be used for medicinal or recreational use.

Cannabis was cultivated in Canada from the 1600-1900s as a profitable fiber for production of paper and textiles, and as a medicinal treatment for such ailments as migraines, epilepsy, and depression. Heavy lobbying in the 1900s from cotton and newspaper companies resulted in the American Marijuana Tax Act of 1937, and the subsequent Canadian Opium and Narcotics Act of 1938, which levied a heavy tax on cannabis production and prevented further research into the medicinal effects of cannabis (Canada, Senate, 2002). The recreational use of cannabis was very limited in Canada, with few convictions until the 1960s (Canada, Senate, 2002). Despite this lack of psychoactive use, in 1954 the Canadian government created a new offence for the “possession for the purpose of trafficking” (Canada, 2002). In the early 1970s, the Le Dain Commission found that prohibition was “diverting law enforcement capability, clogging the judicial system, and providing a base of funds for organized crime” (Canada, Senate, 2002). In his 1979 Throne Speech, Joe Clark advocated reforming cannabis regulation in the Criminal Code (Canada, Senate, 2002). However, the 1980’s saw the Reagan-Bush administration push the ‘war on drugs’, and Canada followed suit, signing the UN’s Convention on Psychotropic Substances and halting any plans to legalize cannabis (Canada, Senate, 2002). Civil suits by hemp farmers and medicinal marijuana users in the 1990s resulted in Canada’s decision to legalize the cultivation of hemp in 1998 (Agricultural and Agri-Food Canada, 2013) and regulate the medicinal use of marijuana in 2001 (Canada, Senate, 2002). Recent decades have also seen a more permissive attitude towards marijuana consumption, but there remains a powerful group that opposes marijuana legalization for its harmful social effects. They argue legalization will encourage consumption by minors, contribute to health care costs, and increase the number of people driving while high.
Today in Canada, the Progressive Conservative government has been hindering cannabis consumption. Their current policy is against recreational cannabis, restricts medicinal production to commercial industries (Keller, 2014), sets physicians skeptical of marijuana use as the gateway keepers to its prescription, and is considering softening their penalties to fines (Wingrove, 2014), likely increasing the number of people charged for possession. On January 1 2014, Colorado became the first American state to legalize recreational marijuana, with Washington set to begin later this year. With sales tax rates of 13-20% and a “retail marijuana excise tax” of 15%, this high sin tax made the state $3.5 million in pot-related tax revenue in January and has seen massive demand for a more expensive product (Phillips Erb, 2014).

Considering a national standing, the benefits of legalization are centered on the fact that it would increase the utility of those who use marijuana both recreationally and medicinally by reducing distortions in the market. The price of marijuana is highly inflated by a risk premium, information asymmetry, and unnecessary transaction costs resulting from criminal activity and social stigma associated with the black market. The benefits of legalization derive from a decrease in these costs that would increase consumption and utility of current consumers. The costs of legalization include the basic cultivation costs of producing the plant and the paternalistic altruist existence value placed on legalization by a portion of the population. Many of the social ills attributed to illegal drugs are due to the prohibition of them, and not to the drugs themselves, as they carry the black market with them (Bowmaker, 2006, p.44).

This cost-benefit analysis will assume that the Canadian government will tax at the same rate as the state of Colorado since the US and Canada are very close trading partners and in the past have conducted similar policies towards marijuana. Average prices from the roughly 30 dispensaries were $18.57/g (Ferner, 2014), which is very high compared to prices found by law enforcement agencies in the black market (Werba, 2012). This price may be inflated due to the extremely high demand upon opening, Colorado’s monopoly, and the market taking time to adjust to changes in large-scale production.
We can also assume no change in consumption directly due to legalization, as some may begin once it is government regulated, but some may stop, as it is no longer a ‘forbidden fruit’ (Bowmaker, 2006, p.45). In his work, Becker has shown drug consumption is rational as users weigh the benefits and costs, like they do for any other daily decision (1988). Therefore, any policy prohibiting drug consumption is unduly decreasing consumer surplus as it limits the choice of rational individuals (Miron, 2001).

The value of medicinal marijuana to society may be greater; as comparatively the price of prescription drugs used to treat the same illnesses are typically much higher than marijuana’s recreational substitutes, such as alcohol (Adams, 2013). However, marijuana has been shown to have both positive and negative effects and further research is required to understand if one outweighs the other (Health Canada, 2013). Furthermore, given the minimal support of doctors and the government to support medicinal marijuana, medicinal users face the same prohibition problems and are typically grouped in the same statistics as recreational users. Therefore, medicinal and recreational users will be considered together, but it is uncertain if this will over/underestimate the benefits.

Marijuana users pay a high risk premium due to the illegality of the drug. To avoid prosecution, dealers pay bribes and usually spend a lot of extra time producing and distributing in secret, causing higher opportunity cost of their time (Bowmaker, 2006). The risk of violence and time in jail is also added to the price of the final product, resulting in a huge mark-up. Communities feel the price of violence as profits attract organized crime and drug wars, causing fear and physical damage (Werba, 2012, p. 436). However, the lack of costly policies required for a regulated industry (and the enforcement of them) such as taxes and safety regulations might counter the risk premium (Bowmaker, 2006, p.436). Still, when we compare the price per gram of tobacco and marijuana, we can get an understanding of these price differences. With tax, tobacco is about $0.70/gram, while marijuana can be sold on average for $7.50/gram (Werba, 2012:440) in the black market and $18.57/gram in Colorado.
From 1990-1999, Clements (2009) finds a larger decrease in the price of marijuana relative to other goods in Australia. This is attributed partly to increased productivity with the emergence of hydroponics and partly to a decrease in penalties and arrests for marijuana as society’s feelings towards the drug softened resulting in a lower risk premium.

However, the heavy tax imposed by the state government plus monopoly power of these first firms has actually decreased consumer surplus by marking up the price. We can assume, however, that if legalization was widespread, Colorado’s monopoly of the market will decrease and the price would adjust.

One cause for Colorado’s higher price may be the reduced information asymmetry and transaction cost. Under prohibition, consumers must deal with the black market, rife with criminal characters that can be hard to trust and put them in uncomfortable situations. The huge demand for the costly legal product may be another indicator that people place a high value on the negative transaction costs of dealing with the black market and the social stigma attached to it. Quality control of this experience good is exacerbated by the high turnover rates of sellers and lack of advertising or warranty in the market. In Colorado, the highest quality, most expensive buds were sold quickest (Ferner, 2014), indicating that variety and advertising worked to decrease information asymmetry and that consumers trusted the dispensaries’ products.

Under legalization, there would also be more demand for research on marijuana, potentially subsiding the fears of medical professionals who are unimpressed with the volatility of marijuana as a medicinal drug (Grant, 2014). This decrease of information asymmetry on the producer side would bring more doctors into the market, increasing the supply and social surplus, as doctors are currently the gatekeepers of marijuana prescriptions.

Marijuana’s inflated price compared to tobacco in the regulated and black market can also be attributed to the inefficiency in production. Currently, mostly smaller firms grow marijuana to avoid detection. Under legalization, large firms would be able to enter the market and greatly improve efficiency with large-scale
production and distribution. This would decrease the cost of producing marijuana and the transaction cost of those purchasing it, resulting in an increase of both producer and consumer surplus. This price decrease has not been seen in Colorado as legalization is very new to the American market and it will take time for larger businesses to adapt to this new industry.

The sale of marijuana would also be regulated like that of other similar industries, which is likely to decrease its use among minors who arguably face fewer deterrents in the black market. Those who protest marijuana as immoral and base their utility on the paternalistic altruist existence value of legalizing the drug may eventually change their opinions as marijuana becomes more acceptable and given the same level of public education as tobacco and alcohol (Miron, 2001, p. 837).

Unlike these legal narcotics, marijuana is a recreational drug with positive externalities due to its medicinal qualities. It is arguably safer than either of these regulated drugs (National Institute on Drug Abuse, 2014) yet has been demonized by society and the government since the 1930s. The major argument against legalization these past eighty years has been the moral hazard it would cause, assuming children will be more inclined to smoke marijuana if it were legal. These paternalistic existence values have distorted the marijuana industry by keeping it in the black market with undue cause. Legalization would create a more efficient market for marijuana with better production techniques, lower transaction costs and more information for consumers and producers, causing increased social surplus for Canada.
Works Cited

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