Policy designs for cannabis legalization: starting with the eight Ps

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Abstract

The cannabis policy landscape is changing rapidly. In November 2012 voters in Colorado and Washington State passed ballot initiatives to remove the prohibition on the commercial production, distribution, and possession of cannabis. This paper does not address the question of whether cannabis should be legal; it instead focuses on the design considerations confronting jurisdictions that are pondering a change in cannabis policy. Indeed, whether or not cannabis legalization is net positive or negative for public health and public safety largely depends on regulatory decisions and how they are implemented. This essay presents eight of these design choices which all conveniently begin with the letter “P”: production, profit motive, promotion, prevention, potency, purity, price, and permanency.

Keywords

Cannabis, drug policy, economics, legalization, marijuana

History

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Introduction

The cannabis policy landscape is changing rapidly. In November 2012, voters in Colorado and Washington State passed legalization initiatives to remove the prohibition on the commercial production, distribution, and possession of cannabis. This is very different from decriminalization which typically refers to making possession a civil offense instead of a criminal offense. For-profit retail cannabis outlets opened in Colorado on 1 January 2014 and are scheduled to open in Washington later in the year. While cannabis remains illegal under federal law, the US Department of Justice (DOJ) announced that it would not attempt to block legalization efforts in states with “‘Strong and effective regulatory and enforcement systems…”’ (1).1

This essay does not address whether cannabis should be legal; it instead focuses on design considerations confronting jurisdictions that are pondering a change in cannabis policy. Whether legalization is net positive or negative for public health and public safety largely depends on regulatory decisions and how they are implemented (2). Eight of these design choices are described below. These insights are based on a number of collaborations (2–6) and many were previously mentioned in a published op-ed (7). This article provides a more rigorous discussion of these decisions.

The eight Ps

Production

Prohibition inflates the costs of producing and distributing cannabis, which then get passed on to the consumer. Much of the mark-up is attributable to compensating the dealers and others along the supply chain for their risk of arrest, incarceration, and assault (8). Costs are also inflated because of the “structural consequences of product illegality”, which create inefficiencies in the market since participants have to operate covertly (9,10). Indeed, with legalization there is an opportunity to take advantage of increasing economies of scale. Caulkins et al. (2) examined the production costs associated with other transplant crops and calculated that full industrial farming could bring the production costs for a pound of high-potency cannabis close to $20; growers in California currently get about $2000 for an equivalent amount (2). Decision makers could attempt to limit cost deflation by only allowing indoor production; however, the drop in cost would still be substantial (10). The production costs will depend on more than just where production takes place. The number of producers and types of products allowed will influence these costs as will decisions about whether producers can vertically integrate with processors and retailers or operate multiple facilities.

Profit motive

Since about 80% of the cannabis market is driven by the roughly 20% of past year users who use on a daily or near-daily basis (2), profit-maximizing companies will have strong incentives to create and retain heavy users. While Washington and Colorado will regulate for-profit companies that produce

1The Cole (2013) memo listed eight federal priorities for prosecutors to consider when charging cannabis cases. Examples include preventing distribution to minors and preventing the diversion of cannabis to other states.
and distribute cannabis, this is only one alternative to prohibition. For example, jurisdictions could permit home production, cannabis buyers’ clubs, non-profit cooperatives, or even a state monopoly. While some US states have monopolies on certain aspects of their alcohol control systems (11), this option has not gained traction in US cannabis debates since states cannot order their employees to violate federal law.

Promotion

Cannabis companies may attempt to create and keep heavy users through marketing and advertising. Jurisdictions seeking to reform cannabis laws should consider how promotion is handled inside and outside of the stores (e.g. billboards, social media, packaging, in-store display). Policymakers in Colorado and Washington are attempting to limit cannabis advertising, but prohibition is difficult in the US with its doctrine of commercial free speech. Targeting cannabis firms that market in ways that appeal to minors is a DOJ enforcement priority (1). It will be interesting to see how federal prosecutors determine when companies have crossed the line and how these violations will be addressed.

Prevention

While even the best prevention programs are not particularly effective, they are often cost beneficial since prevention is relatively inexpensive (12). Cannabis legalization raises questions as to how cannabis prevention messages should be framed and presented when those 21 and older are allowed to consume. If a decision is made to change cannabis prevention programming, the timing of implementation will need to be determined. Advocates of cannabis reform often argue that the taxes accrued from legalizing cannabis can be used to fund prevention efforts. However, it may be optimal for prevention programs to be retooled and disseminated before stores are allowed to sell cannabis.

Prevention can also include limiting access or exposure to cannabis. Experience with regulating alcohol suggests that decisions about the number of retail off-premise stores, days of operation, and hours of operation can influence consumption (See discussion in Pacula et al. (6)).

Potency

There are dozens of cannabinoids found in the cannabis plant. Delta-9-tetrahydrocannabinol (THC) is primarily responsible for marijuana’s intoxicating effects and increasing the probability of anxiety and panic attacks (13). While the THC potency of cannabis imported from Mexico into the US is often 4–8%, high-potency cannabis sold in medical cannabis dispensaries typically ranges from 10–25% THC (19). Concentrates in medical cannabis dispensaries can be even more potent, with some hash oils on the market allegedly exceeding 80% THC (14). An important question for jurisdictions seeking to regulate cannabis is whether a limit on THC should be imposed. There is currently a discussion in the Netherlands as to whether cannabis sold at coffee shops should have THC potency limited at 15% (15). Opponents argue this will create a black market for more potent products (e.g. 16).

In addition, THC is only one of many cannabinoids present in cannabis. Cannabidiol (CBD) may reduce anxiety (e.g. 17) and has antipsychotic properties (e.g. 18). Jurisdictions seeking to regulate the potency of cannabis could, for example, impose a maximum THC concentration, a minimum CBD concentration, or a THC:CBD ratio below a certain threshold. Cannabinoid consumption could also be influenced via taxation policies (discussed below).

Purity

Forensic testing can be used to identify impurities, such as molds and pesticides. Jurisdictions must consider whether to regulate the purity of cannabis products, and if so, what the limits should be. It will need to be decided how much of this information should be included on product labels. Regulators will also need to consider additives and concentrates. Will cannabis products be allowed to be infused with alcohol or nicotine? Colorado, for example, expressly forbids cannabis or any cannabis product to include alcohol or nicotine. Will electronic cigarettes with hash-oil solutions be allowed? If these products are permitted, will jurisdictions attempt to test and regulate the ingredients?

Price

The retail price of cannabis will determine what happens to consumption, tax revenues, and diversion to other jurisdictions (19). Users and potential users are sensitive to the price of cannabis: a 10% decline in price is likely to lead to approximately a 3% increase in cannabis participation (20,21). Jurisdictions can influence the retail price of cannabis through tax rates, the type of production and number of producers allowed, decisions regarding potency and purity, and other factors. For example, regulators could impose minimum pricing (22).

Taxes deserve special attention. If taxes are set too high, users could turn to the black market for an untaxed and unregulated product (3,4,23). One has to look no further than tobacco to observe the smuggling that occurs when taxes are set too high (24,25). Since it can be difficult to identify tax rates that create the right balance, they may need to be adjusted over time.

How the taxes are levied will also have important consequences. Setting the tax as a function of the total weight (e.g. $50 per ounce) may not be ideal since it creates incentives to produce and purchase more potent cannabis (3). Colorado imposes taxes based on the value of the cannabis and Washington will do the same. However, taxes could also be based on THC potency or the THC:CBD ratio.

Permanency

Since it is unlikely that a pioneering jurisdiction will get cannabis legalization “right” on the first or second attempt,
it would be wise to build flexibility into the system. Jurisdictions should also consider incorporating a ‘‘sunset provision’’ that provides an escape clause if needed (i.e. after a fixed number of years, politicians or voters decide whether to continue with the policy or try another approach). This can be useful, for example, if jurisdictions that allow for-profit companies to market and dispense cannabis are concerned that these firms will attempt to maintain the status quo in the absence of popular support.

Conclusions

There are costs and benefits to all cannabis policy options and opinions typically hinge on values about intoxication, personal freedom, and guesses about what will work best (2). Since no modern jurisdiction had removed the prohibition on commercial cannabis production and distribution before Colorado and Washington, it is not known whether legalization will be a net positive or negative for society. These ‘‘Eight Ps’’ are a reasonable place to start for those engaging in policy design, analysis, and serious debate.

Declaration of interest

The author reports no conflicts of interest. The author alone is responsible for the content and writing of this paper.

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