

## **Designing Cannabis Supply to Promote Temperance**

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Chairperson Casey, Vice Chairperson Davies, Vice Chairperson Webber,  
members of the Committee:

It is an honor to be allowed to offer my views on the design of a legal market for cannabis, a topic that has absorbed a substantial part of my attention throughout my career in government and in academia. Since the topic is complex and time is limited, what follows cannot be a full exposition of all the complexities and uncertainties, and it omits the credit due to the many colleagues whose work it reflects. To be complete and properly sourced, each numbered point below would need to be a chapter.

1. The great gains from legalizing cannabis sales (for non-medical use) are the resulting shrinkage in illicit commerce and the provision of legal supply to adults who wish to use the drug and can do so temperately.
2. The great potential loss from legalizing cannabis is increased intemperate use. (A large increase in use by minors is substantial in terms of potential harm but modest in terms of probability.) While the drug is often represented as “non-addictive,” in fact quite substantial percentages of current users report having difficulty controlling their own behavior around the drug. (Rates of problem use in total use are roughly comparable to those for alcohol, for example.) In the United States, problematic cannabis use has increased very markedly, both absolutely and compared to the total number of users, over the past quarter-century. Of all U.S. persons who report in surveys having used cannabis in the past month, four in ten report having used it every day or almost every day during that month. Of those daily/near-daily users, approximately half self-report the symptoms of cannabis use disorder. That figure amounts to approximately 4 million people nationwide. I’m not familiar with comparable statistics for Canada, but the patterns of use in the two countries seem sufficiently similar that the U.S. statistics constitute a reason for Canadian concern.
3. Insofar as cannabis substitutes (in the economic sense) for other, more harmful intoxicants – including alcohol – legalization might lead to significant

gains in public health and public safety. There is some – though not yet definitive – evidence that greater cannabis availability tends to lead to less opiate use (medical and non-medical) and less opiate-related harm. Evidence on substitution for – or, alternatively, complementarity with – alcohol, remains scattered and mixed.

4. Cannabis is, as a legal product, quite cheap to produce. “Farm-gate” costs can be expected to fall below \$1/gram, and perhaps quite substantially below that level. Even with normal processing costs and retail markups, pre-tax prices once the licit market is mature should be expected to be a small fraction of illicit-market prices, or even current dispensary prices.

5. Very low prices encourage intemperate consumption.

6. The rapid growth in the estimated number of daily/near-daily users in the United States accompanied a marked decline in the price of cannabis (adjusted for inflation and THC content). The precise causal relationships remain unclear, but there is no assurance that further price declines – already marked in the U.S. states, which first legalized cannabis – will not fuel further growth in daily/near-daily use and in cannabis use disorder.

7. At current prices, a daily/near-daily user can easily spend thousands of dollars per year on cannabis. That fact alone suggests that heavy use is likely to be price-sensitive. On the other hand, price is of little concern to ordinary cannabis consumers. The current cost of cannabis use for someone who has not built up a tolerance is (very approximately) 50 cents per intoxicated hour.

8. Therefore, the social gains from lower prices are unlikely to be significant, while the risks are substantial. This suggests that preventing further price decreases ought to be among the design elements of a prevention-oriented cannabis policy. Preventing the growth of cannabis use disorder requires preventing the collapse of cannabis prices.

9. In Washington and Colorado, post-legalization prices have been falling at the rate of approximately 20% per year, with no bottom in sight. Everyday discounts make high-potency cannabis available at less than \$100 per ounce, equivalent to less than \$3.50 per gram or about 15 cents per intoxicated hour.

10. The most direct means of managing prices would be state-monopoly retail distribution, after the pattern of alcohol monopolies in some provinces.

11. However, equivalent results could be achieved by taxation (or by limiting production rights and conducting periodic rights auctions).

12. *Ad valorem* taxation – with the tax stated as a percentage of retail prices – is an unsatisfactory policy tool in this case, because *ad valorem* taxes fall along with market prices, which is the opposite of the desirable pattern.

13. Specific excise taxation based on product weight does not have that drawback, but it does tend to provide an undesirable tax incentive for producing and selling high-potency product to minimize the cost to the consumer of achieving any desired level of effect. (Imagine taxing whiskey and beer at the same rate per ounce.)

14. That suggests that cannabis products should be taxed according to their content of THC, the primary active agent in cannabis. Taxation based on THC also avoids the complexity of having different tax rates for different forms of cannabis (e.g., flower, extracts, edibles).

15. Taxes designed with prevention in mind will constitute a large fraction of the final retail price, as is now the case with tobacco. Such taxes would be very high indeed in value-per-bulk or value-per-weight terms, making them attractive targets for tax evasion, including illicit supply. Some enforcement efforts will be needed to prevent the growth of secondary cannabis markets resembling the current markets in untaxed tobacco products. There is an argument for keeping taxes low during the transition to legality in order to speed the extinction of the existing illicit cannabis market, and then increasing them gradually, ideally with the schedule of tax increases built into the initial legislation.

16. A THC-based tax system would require a system of product testing. The measurement problems of determining the chemical content of non-homogeneous dry materials are far from trivial. However, measuring for chemical content has health benefits, aside from its value in tax administration. Accurate labeling of cannabis products according to their chemical content represents an additional source of gain for consumers from legalization, because it could enable them to better regulate their cannabis intake to achieve the desired psychological state without accidental over-intoxication, which while not very dangerous can still be highly unpleasant. The same measurements needed for appropriate taxation are thus also valuable for consumer protection.

17. One danger of legalization is the creation of an industry whose financial resources give it political power, and whose political power is wielded for purposes at odds with the public interest. The licit tobacco and alcohol industries provide appropriate warnings in this regard. The heavy daily consumption that a diagnostician regards as a warning sign marks a key consumer from the viewpoint of a marketing manager. As in the case of alcohol, while a large majority of consumers are temperate, non-problem

consumers, the majority of sales in physical and revenue terms involves the relatively small number of very heavy users. The public interest in preventing substance use disorder is thus precisely opposed to the commercial interest in moving the product.

18. Therefore, an initial regulatory scheme that avoids the creation of a wealthy and powerful cannabis industry is more likely to survive, and avoid “regulatory capture,” than a scheme that allows such an industry to emerge.

19. Taxation is not the only policy tool to prevent the growth of intemperate use. It would be wise to curb the marketing practices of the emerging industry, and to take other measures to convey to consumers accurate information about the risks as well as the benefits of cannabis use. The final retail seller – the clerk or “budtender,” or the person accepting telephone orders – is one point at which the industry makes direct contact with every consumer, and could be enlisted in the cause of prevention.

20. Because practices of cannabis use are less well-established culturally than practices of alcohol use, and because cannabis is, pharmacologically, a far more complex product, with at least several, and perhaps scores, of active chemicals, cannabis consumers may be more inclined than alcohol consumers to take advice from the person on the other side of the counter. That raises the question of how those people should be trained, and to whom they should be responsible. If they are treated merely as sales clerks, they will likely receive no more training in pharmacology or substance use prevention than bartenders or clerks in liquor stores. Moreover, in the ordinary commercial course of things, their employers will expect them to sell as much product as possible: preferably, of course, high-price, high-margin product. I would suggest instead that they be treated as professionals: more like pharmacists than like liquor-store clerks. They should have professional licenses, based on fairly extensive training (measured in months, not in hours). And they should have a fiduciary responsibility to the consumer: it should be their professional responsibility to give the best advice they can rather than to maximize sales volume.

21. Employing retail sales agents as advocates for temperate use would constitute a substantial departure from the practice in existing markets for non-medical drugs. Like any innovation, its design would require careful thought, and its impacts could not be predicted with any precision. But a system designed to facilitate consumer access to cannabis while also minimizing the growth of problematic use might well benefit from substance abuse prevention advice delivered at the point of sale.