

PA House Health Committee Hearing  
October 19<sup>th</sup>, 2023

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Chairpersons Frankel and Rapp, distinguished Committee members, staff, and fellow panelists, thank you for the opportunity to submit written testimony today on this important topic of cannabis legalization and its potential impacts on illegal markets and social equity. My name is Jon Caulkins. I am a professor at Carnegie Mellon University, past co-director of RAND's Drug Policy Research Center, and co-author of an Oxford University Press book on marijuana legalization. I have been studying drug markets and drug policy for 35 years. My focus on cannabis legalization dates to 2010, when colleagues of mine at RAND and I did pioneering analysis of California's Proposition 19. That proposition was defeated, but it served as a model that influenced Colorado and Washington State's 2012 propositions that did pass, and thus indirectly most if not all state legalization measures since.

### **Legal and Illegal Market Shares**

The first question I was asked to address is what share of a state's cannabis consumption one can expect to be served by legal supply (licensed or legal home grow) vs. the illegal market. The answer varies over time and across states, and it is impossible to know what is happening precisely because there are not good data on the scale of illegal activity, for obvious reasons. Nonetheless, based on my past work in Washington State (Caulkins et al., 2019), some current (not yet published) work with California, and parallel work by colleagues in other states, I think two-thirds legal and one-third illegal is a reasonable expectation for after the market has stabilized a few years after state-licensed supply opens and before national legalization.

That ballpark estimate comes with several elaborations and two warnings. The elaborations include: (1) It may take some time (perhaps 2-3 years) for the legal supply to ramp up, (2) Legal supply's market share may be greater for manufactured products (edibles, vape pen cartridges, etc.) than for basic flower, (3) Everything about state-legal cannabis markets including these market share estimates could be upended if and when the federal government legalizes, and (4) For these purposes I am treating as "legal" material that is sold legally and then diverted to youth. Such diversion is of course not legal, but the nature of the data do not permit distinguishing between instances when an adult purchases for their own use vs. purchasing for gift or resale to someone who is underage (e.g., a 21 year old purchasing on behalf of a 19 year old friend).

The first warning is that even if illegal supply's market share is reduced, say to one-third, that does not mean the size of the illegal market is reduced by anything close to that proportion, because the market

is growing. The liberalization of cannabis policy over the last 25 years has been accompanied by enormous growth in the quantity of cannabis consumed. We see that somewhat in prevalence statistics counting how many people self-report having used any cannabis in the past-month or past-year, but the bigger increase is in the intensity of use, not the number of users. This is apparent in conventional survey data (e.g., from the National Survey on Drug Use and Health or NSDUH) of self-reported days of cannabis use in the past month. Thirty years ago only about one-in-ten past-month cannabis users reported using daily or near-daily, the same proportion as for alcohol then and now. Now that proportion for cannabis is closer to 40 percent. That is, cannabis has transitioned from being primarily a “weekend recreational drug”, akin to alcohol, to a drug whose consumption is utterly dominated by daily and near daily users, as with tobacco cigarettes. The other component of this increase in intensity of use has been a very large increase in the average number of milligrams of THC consumed per day of use. This happens for various reasons including higher potency flower products, an increasing share of extract-based products, and an increase in the number of occasions of use per day of use.

The upshot is that even if the nation has reduced illegal supply’s market share by two-thirds, down to one-third, the scale of illegal supply has been reduced by far less, because illegal supply has a smaller share of a much larger market.

The second warning is that illegal supply’s market share is to an important degree determined by policy and law enforcement. In states that aggressively arrest and prosecute illegal suppliers, legal supply can outcompete illegal suppliers. In states that ignore illegal suppliers, the illegal suppliers can outcompete legal suppliers. One of the big misunderstandings of cannabis legalization is that it means an end to cannabis-related law enforcement. However, it is exactly when legal supply provides a viable alternative that enforcement against illegal supply may be most productive.

Discussions about the relative competitiveness of legal and illegal supply often dwell on cannabis-specific excise taxes, but that misses the big picture. The main reason legal supply has extra costs is that there are extra costs associated with operating any type of legal business. One has to withhold payroll and income taxes from employees, comply with fair labor practices, and comply with conventional regulations. For me, a memorable example is a grower who was converting to legal supply complaining about the cost of retrofitting facilities to make them ADA compliant. What illegal suppliers should have to contend with is an “enforcement tax” that forces them to operate in covert and inefficient ways. Back when federal cannabis enforcement was aggressive, domestic cannabis production often occurred within residential homes (“grow houses”) or in basements under artificial lights. Farmers don’t grow tomatoes or cucumbers in residential homes or basements, and it isn’t the most efficient place or way to grow cannabis plants either. Those methods are far less efficient than growing at scale in large green houses or farm fields. If law enforcement forces illegal suppliers to operate at small scale and go to great efforts to conceal production, and at times seizes property and other assets of illegal producers, the natural economies of scale that modern agricultural methods offer should be enough for legal supply to outcompete illegal supply. But if enforcement ignores illegal suppliers and lets them operate in similar ways as legal suppliers, but without withholding taxes or complying with the myriad regulations that apply to any legal business, then illegal producers remain competitive.

So, although the two-thirds/one-third split mentioned above may be a good rule of thumb, it is to a degree up to the state. If the state is determined to drive out illegal supply and is willing to commit the

resources, it can drive down illegal supply's market share. But the illegal supply won't just disappear on its own.

### **Social Equity Considerations with Legalization**

There are three main prongs or categories of beneficiaries of social equity dimensions of cannabis legalization: (1) Addressing past cannabis-related convictions, (2) Ensuring diversity in the legal cannabis workforce, and (3) Ensuring equitable access to cannabis licenses. Most discussion focuses on the third. That is a mistake. It is by far the least important because it affects so few people compared to the first or even the second. These ideas are fleshed out in an article I co-authored based on data from Virginia (Kilmer et al., 2021), but I will summarize them here as I believe they would pertain to any state. They are not specific to Virginia, but I have data for Virginia so I refer to those numbers.

We estimated that in Virginia over a ten-year period, from 2010 to 2019, there were 90,000 convictions of adults for simple cannabis possession, with 50,000 of those 90,000 being Black, Indigenous, or People of Color (BIPOC). Those were convictions, not people convicted; someone could be convicted twice. On the other hand, cannabis prohibition was ongoing since well before 2010. Overall, we estimated that legislation in Virginia that expunged past convictions for simple cannabis possession would help 100,000 BIPOC plus 100,000 other individuals. Pennsylvania is a more populous state than Virginia, so perhaps in Pennsylvania the numbers could be more like 150,000 and 150,000. Presumably your staff can give you better estimates than I can, but I'd expect it to be in six figures.

Those numbers are vastly greater than the number of people who will be employed by the legal cannabis industry. Presently there is roughly one legal cannabis job for every \$50,000 in annual sales. I trust that you have better estimates of projected sales revenue in Pennsylvania than I do, but just to illustrate the logic, suppose the legal market in Pennsylvania grew to \$3 billion per year. Dividing by \$50,000 suggests total employment of 60,000. If 20% of the workforce were social equity hires, that would be 12,000 people. In other words, very roughly ten times as many people would benefit from records expungement than would benefit from workforce diversity initiatives.

And there are many more cannabis industry workers than there are cannabis industry licensees. If that ratio is even 10 workers per owner, then you can see that the number of people who would benefit from records expungement could be 100 times as many as would receive licenses. And of course, not everyone who receives a license benefits from it. A common outcome for new start-up businesses is bankruptcy. That's not a comment about the cannabis industry; that's just a reality for all sorts of small business starts. So the number who benefit from expungement could be as much as 1,000 times more than the number who truly benefit from social equity licensing.

None of this is to say that there is anything wrong with any of the three prongs of social equity, but it is a caution that if so much time gets spent worrying about the licensing that not enough time is devoted to expungement, that would be a tragic missed opportunity. For example, if expungement is merely available to those who request it, not granted automatically, then many potential beneficiaries would not in fact receive that benefit. The particulars matter, and I hope that scarce legislative time and political capital prioritizes the records expungement side of legalization over debates about who gets how many licenses.

Note that there are other dimensions of cannabis legalization and social equity beyond the three I have mentioned. For example, there are concerns that if cannabis retail outlets cluster in disadvantaged neighborhoods, that could have detrimental health effects on already vulnerable populations, paralleling similar concerns regarding alcohol outlets. By focusing on the first three, I do not mean by omission to suggest that such other considerations are not also important.

## Final Note

In theory, regulations can protect the public from malfeasance by regulated companies. In practice, compliance with regulations is imperfect, and it varies across industries. The industries with the best outcomes often have a culture of compliance. Outside of totalitarian states, regulators depend to an important degree on good faith cooperation from the regulated companies. With only a few exceptions, regulators do not have staff on sight at every licensed premise 24/7.

At the other end of the spectrum there are, or at least were in the past, industries that achieved “regulatory capture” in the sense of industry using legal or illegal means to get the government employees working within the regulatory agency to prioritize the health and profitability of the companies over the health and safety of the consumers or public more generally.

It is still early, much may change with federal legalization, and the following point will be roundly contested by others. But it is my judgement that on the whole, looking across various states, the state-licensed cannabis industry has been rather troubling in this regard. There have been multiple high-profile cases, such as three people – including the former chair of the Michigan Medical Cannabis Licensing Board and speaker of Michigan’s House of Representatives<sup>1</sup> – going to prison for corrupt practices related to the licensed medical cannabis industry. There is hard evidence of product labels not being accurate, and many unpublished stories of how the cannabis testing industry has bad actors who cater to its customers, which is to say cater to the cannabis producers and sellers, not to the interests of the public (Vandrey et al., 2015; Oldfield et al., 2021 Schwabe et al., 2023).

Good governance is achieved only through deliberate prioritization and effort. It doesn’t happen automatically. I hope that amidst all of the many other stakeholder demands related to cannabis legalization, there is still time to attend to the basics of making sure that those who are licensed to legally produce and sell cannabis – which is after all, a dependence-inducing intoxicant with known health risks – are held to high ethical standards.

## References

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<sup>1</sup> [https://www.justice.gov/usao-wdmi/pr/2023\\_0928\\_Rick\\_Johnson\\_Sentencing#:~:text=GRAND%20RAPIDS%2C%20MICHIGAN%20%E2%80%93%20U.S.%20Attorney,Chairperson%20of%20the%20Michigan%20Medical](https://www.justice.gov/usao-wdmi/pr/2023_0928_Rick_Johnson_Sentencing#:~:text=GRAND%20RAPIDS%2C%20MICHIGAN%20%E2%80%93%20U.S.%20Attorney,Chairperson%20of%20the%20Michigan%20Medical)

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