

INSIGHTS & ANALYSIS

Craft Beer and Cannabis (and Hemp)



By [Bart Watson](#) 
Vice President of Strategy & Chief
Economist

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For the second of our “Craft Beer and” series we’re tackling a big one that probably accounts for more traffic in the collective Stats and Econ inbox as all the others put together: cannabis. This post will run through some of the history, data, and current debates over cannabis—first marijuana (MJ) and now hemp-derived delta-9-tetrahydrocannabinol (THC)—to try to give you a sense of how these markets have interacted with craft in the past, and how they might in the future. I generally like shorter posts that get to the point and drive home a few conclusions. This isn’t that post. It’s long, convoluted, murky and contradictory, just like this topic.

Definitions

This post uses cannabis as the general term for plants and products made using plants that contain cannabinoids such as THC and Cannabidiol (CBD). Marijuana when used specifically refers to plants with more than 0.3% THC by dry weight whereas hemp means plants with less than 0.3% THC by dry weight.

History

The modern history of legalized cannabis in the United States starts in 1996 with the passage of Proposition 215 in California, ushering in the era of medical cannabis. The next few decades saw a slow expansion and further codification of medical cannabis regimes, eventually leading to the approval of adult-use recreational marijuana in Colorado and Washington in 2012. Today, 24 states and the District of Columbia have legalized adult recreational use, another 14 have comprehensive medical cannabis programs, and nine have

what the [National Conference of State Legislatures](#) terms “CBD/low THC programs.” That leaves only three states (Nebraska, Idaho, and Kansas) with no regulated cannabis program of any sort. Nebraska has a ballot initiative in November and Kansas has a committee looking at the issue. While we can’t play out the counterfactual, craft largely grew throughout this era, with strong growth through the era of medical legalization, peak growth shortly after the onset of recreational states, and share peaking in 2019 before the COVID-19 pandemic.

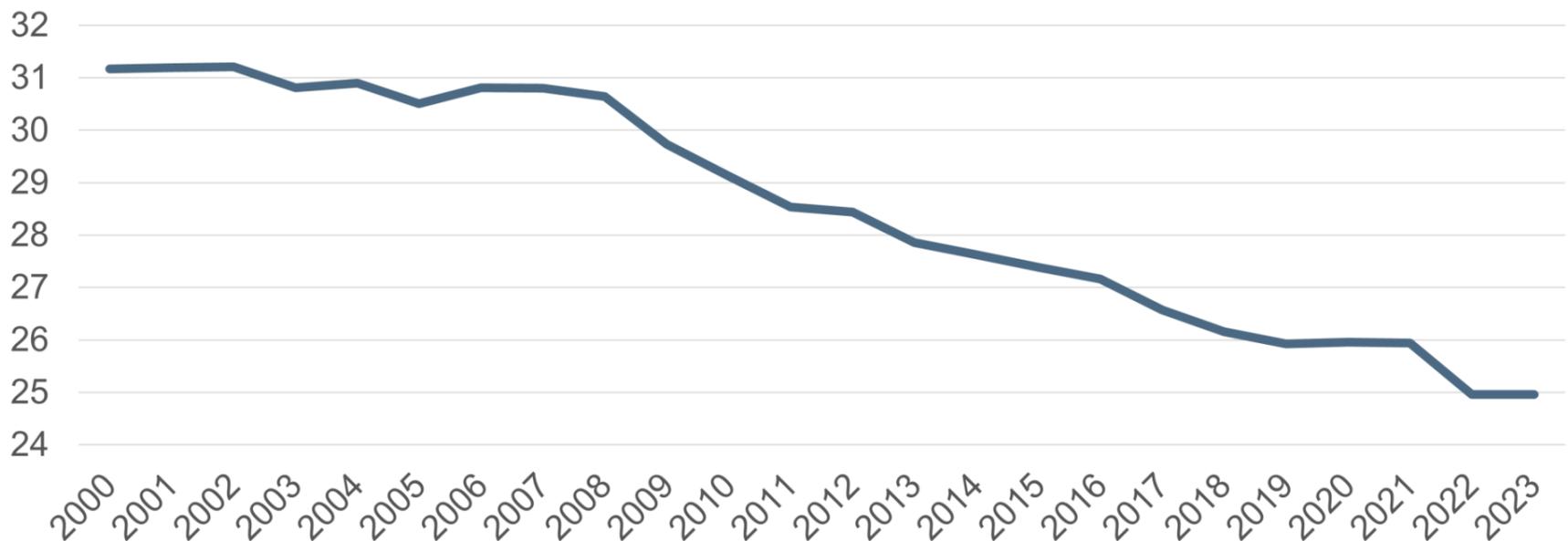
At the federal level, the [Cole Memorandum](#) [↕](#), first issued in 2009, and subsequently updated in 2011 and 2013, essentially directed federal prosecutors to not focus on states with legal marijuana regimes. This was subsequently rescinded by the Trump administration in 2018, but that action did little to change the practice of the federal government operating in a grey area where marijuana remained a Schedule 1 drug but taking few if any enforcement actions in states with regulatory regimes.

Federal policy did shift with the 2014 and 2018 Farm Bills, which de-scheduled and created a legal regulatory framework for hemp; defined as plants with not more than 0.3% THC by dry weight. This further complicated the legal landscape, methods for extracting delta-8 and delta-9 THC from hemp quickly led to the emergence of THC products on the marketplace. You can read more about this in Brewers Association (BA) General Counsel Marc Sorini’s [Legal Insights](#), but the expansion of these products without a regulatory regime in most states has kicked off a flurry of market, legislative, and regulatory activity.

Data on Interaction with Craft and Beverage Alcohol

So, what impact have all these changes had on beverage alcohol? The answer is complex, but if we’re talking about aggregate volumes, for most of the past three decades, the answer is not much. Per capita beer volumes have been declining for several decades, but that’s largely been the result of the corresponding increase in spirits—largely driven by cheaper relatively pricing—and until the last few years, total beverage alcohol consumption per capita levels were quite steady.

US Beer Shipments, Gallons per 21+ Adult



Source: Beer Institute and U.S. Census Bureau, BA Analysis

Total Alcohol (Ethanol) Per Capita

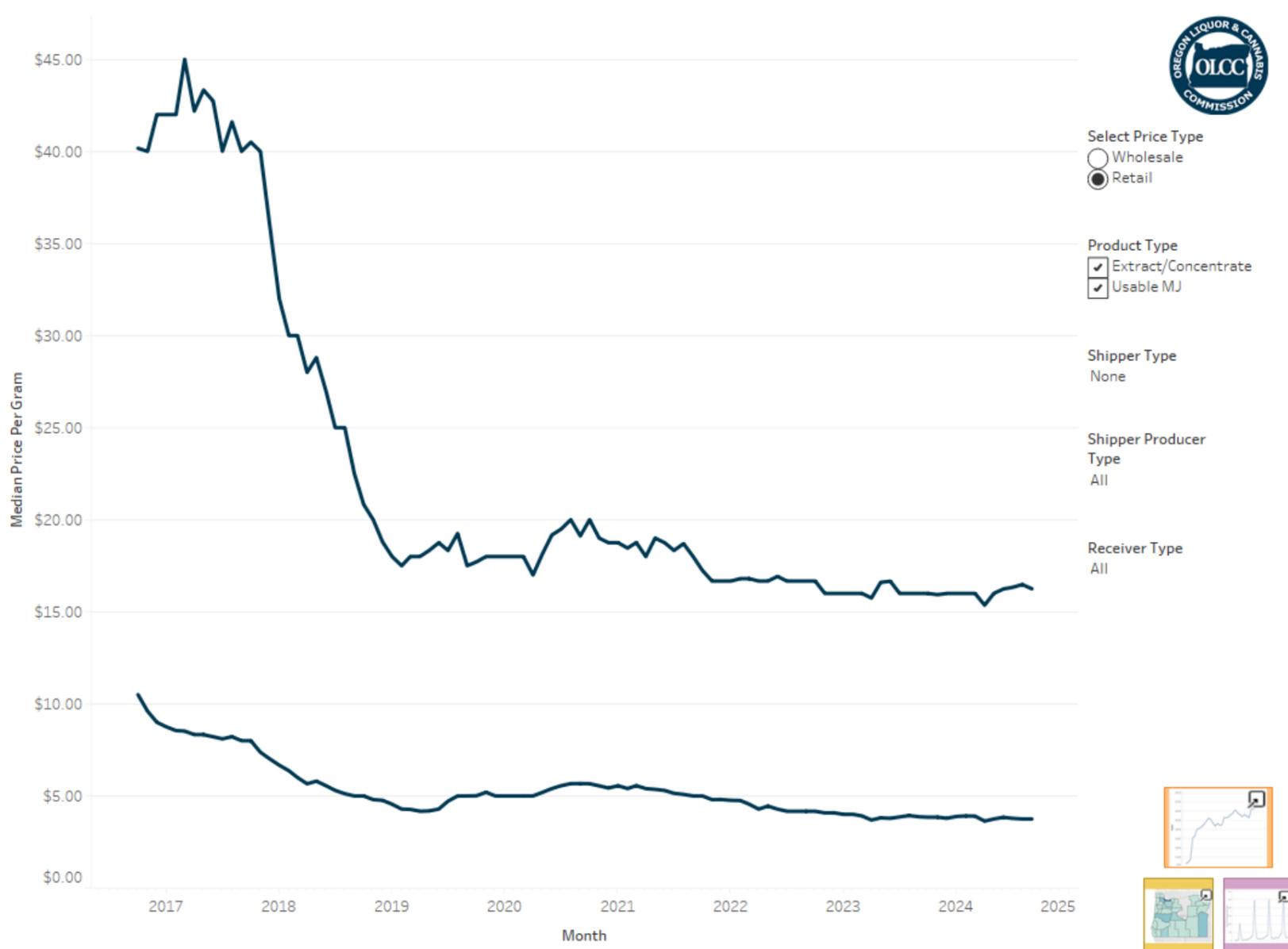


Source: NBWA

How could that be?

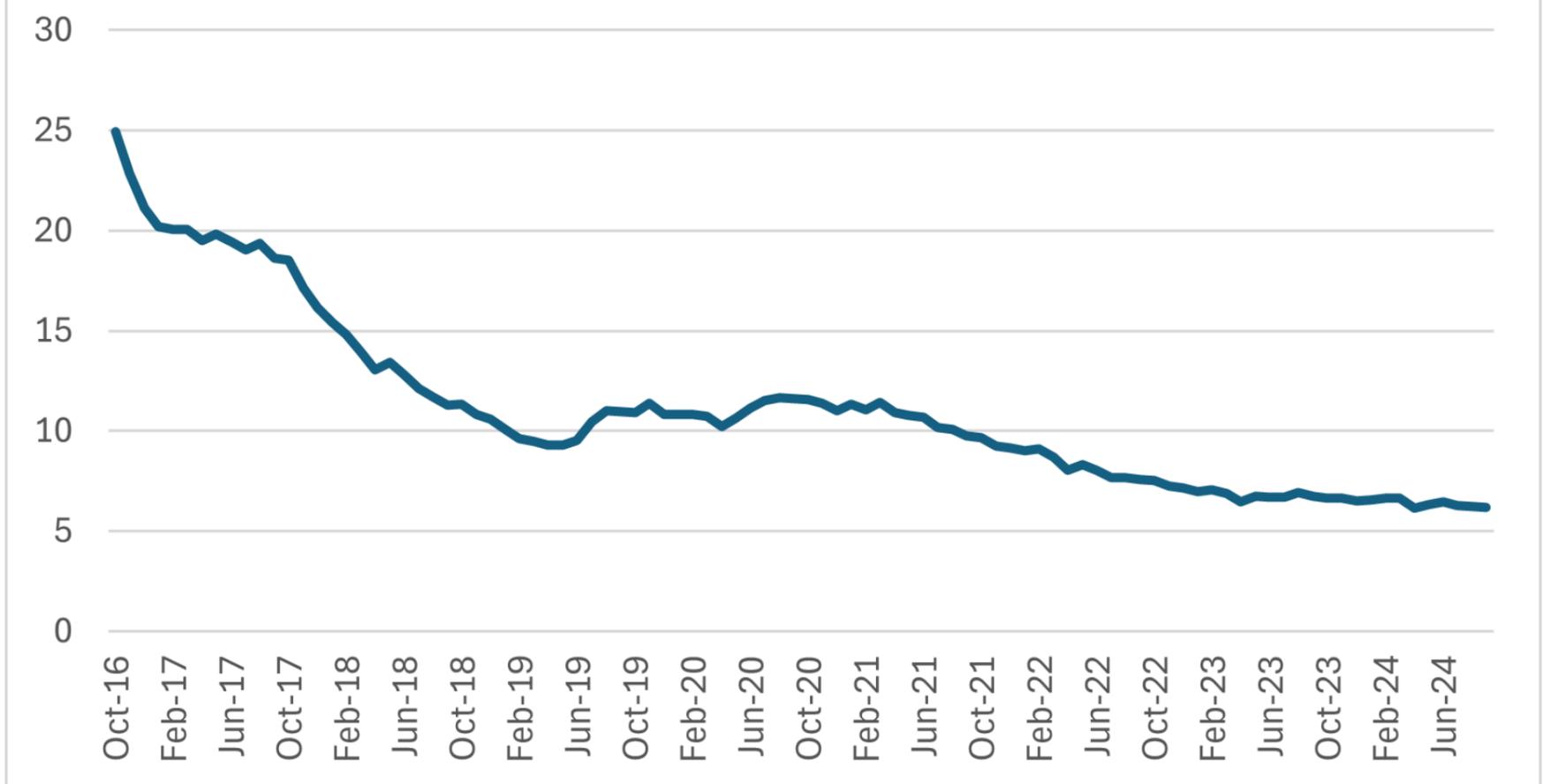
When I look at the data and research, I see signs that there are effects between cannabis and beverage alcohol, but not in a single direction. For example, cannabis may be taking some occasions from beverage alcohol (particularly in this new beverage era), but legalization has lowered cannabis pricing and in doing so increased disposable income for cannabis consumers. So, while some of those effects are negative, the cumulative set of effects hasn't dramatically changed the equation for beverage alcohol, at least yet. Since I [wrote about this in 2019](#), I think much of what I wrote still holds true.

One of the things I wrote about in 2019 was pricing. We'll talk about occasions later, but legal cannabis only takes beer money out of consumer's pockets if they are spending more on cannabis post-legalizations. And given how large price decreases have been in many states, it's hard to see how that's the case. Here's a price chart from Oregon. The top line is "extract/concentrate" and the bottom line is "usable MJ."



And [here's data from Colorado](#). In Colorado, bud cost \$1,876/pound in 2014. Today it's \$658. Like other goods, [lower prices may increase demand](#), but it's likely that most cannabis consumers in legal states have more discretionary expenditure available than they did a few years ago due to lower pricing. Here's that same Oregon data but now interacted with average hourly wages, which have risen steadily.

Minutes Worked to Buy a Gram, Oregon



Sources: OLCC, FRED, BA Analysis

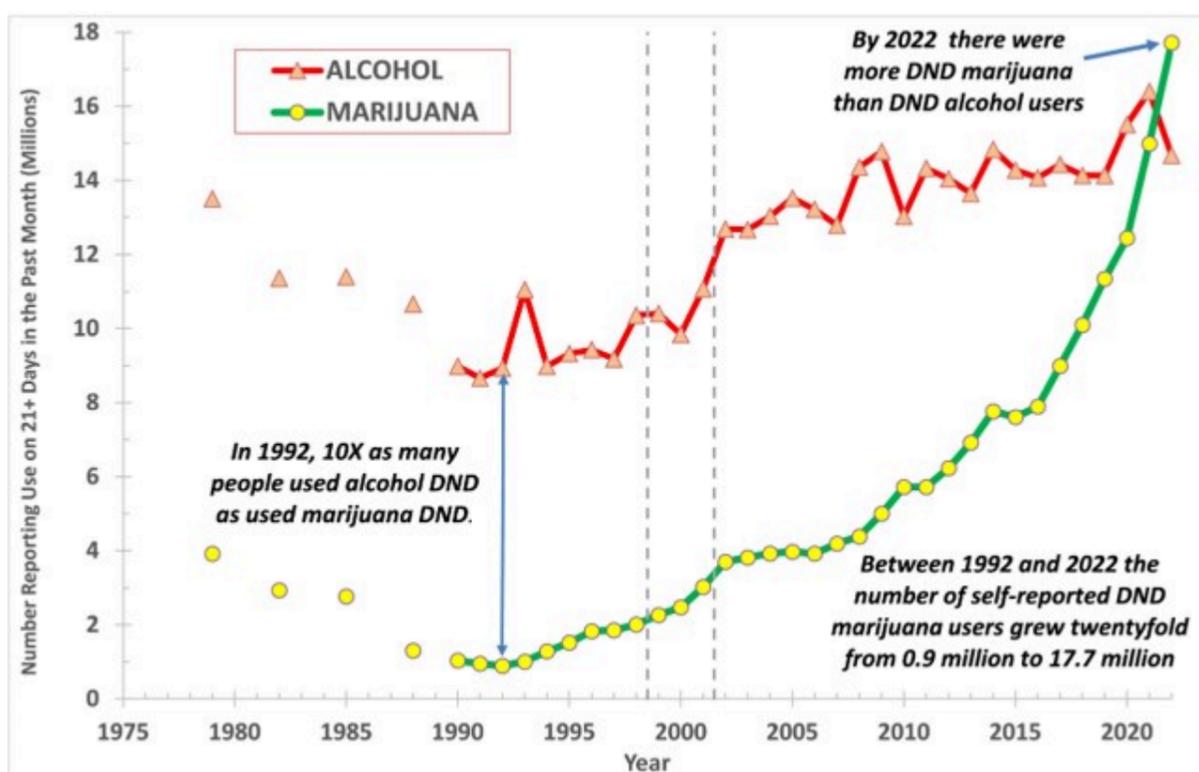
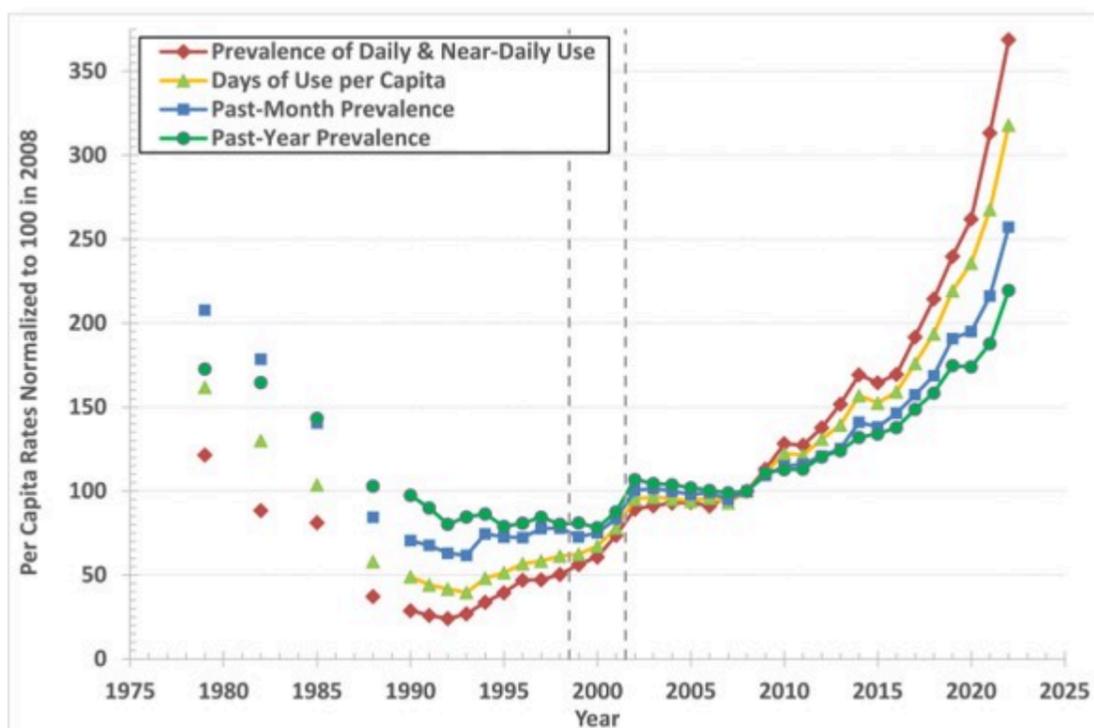
When marijuana was legalized at the average hourly wage it took an Oregonian about 25 minutes of work to afford a gram at median retail prices. Today that's down to about six minutes.

We've also asked about the interaction of marijuana and its effect on people's craft beer consumption in [our annual Harris Poll survey](#). Since 2018 when we started asking this question, 314 people have told us they are drinking *less* craft beer and consuming *more* marijuana is a reason why. During that same time period, 315 people have told us they are drinking *more* craft beer and consuming *less* marijuana is a reason why. That's about 2.6% of the sample each way. This doesn't count people who left craft or never entered because of cannabis use, just as it doesn't account for the overall growth in the craft population or for frequency or levels of consumption, but I think you get the picture. Yes there are flows out of craft due to cannabis, but that equation runs in both directions and equal numbers of people are flowing back in.

While I can't share all of the research beer industry groups have done on this due to data sharing agreements, we've also looked at county-based shipments versus cannabis taxes within states and not seen much of an effect as well. Other industry analysts have come to largely the same conclusion. A [2019 Distilled Spirits Council \(DISCUS\) study](#) looking at Colorado, Washington, and Oregon found little to no impact on spirits sales in those states.

Digging into some more recent research, the findings on just about everything are mixed and show why marijuana legalization isn't as simple as "a growing legal market = lower alcohol sales." To start, studies vary wildly on their estimates of how much legalization has actually increased the consumer base for marijuana. Surveys pretty clearly show increases in people reporting cannabis use (surveys below are specific to marijuana). The following two charts come from [Caulkins \(2024\) analysis](#) of the U.S. National Survey on Drug Use and Health. Both show sharp increases over time.

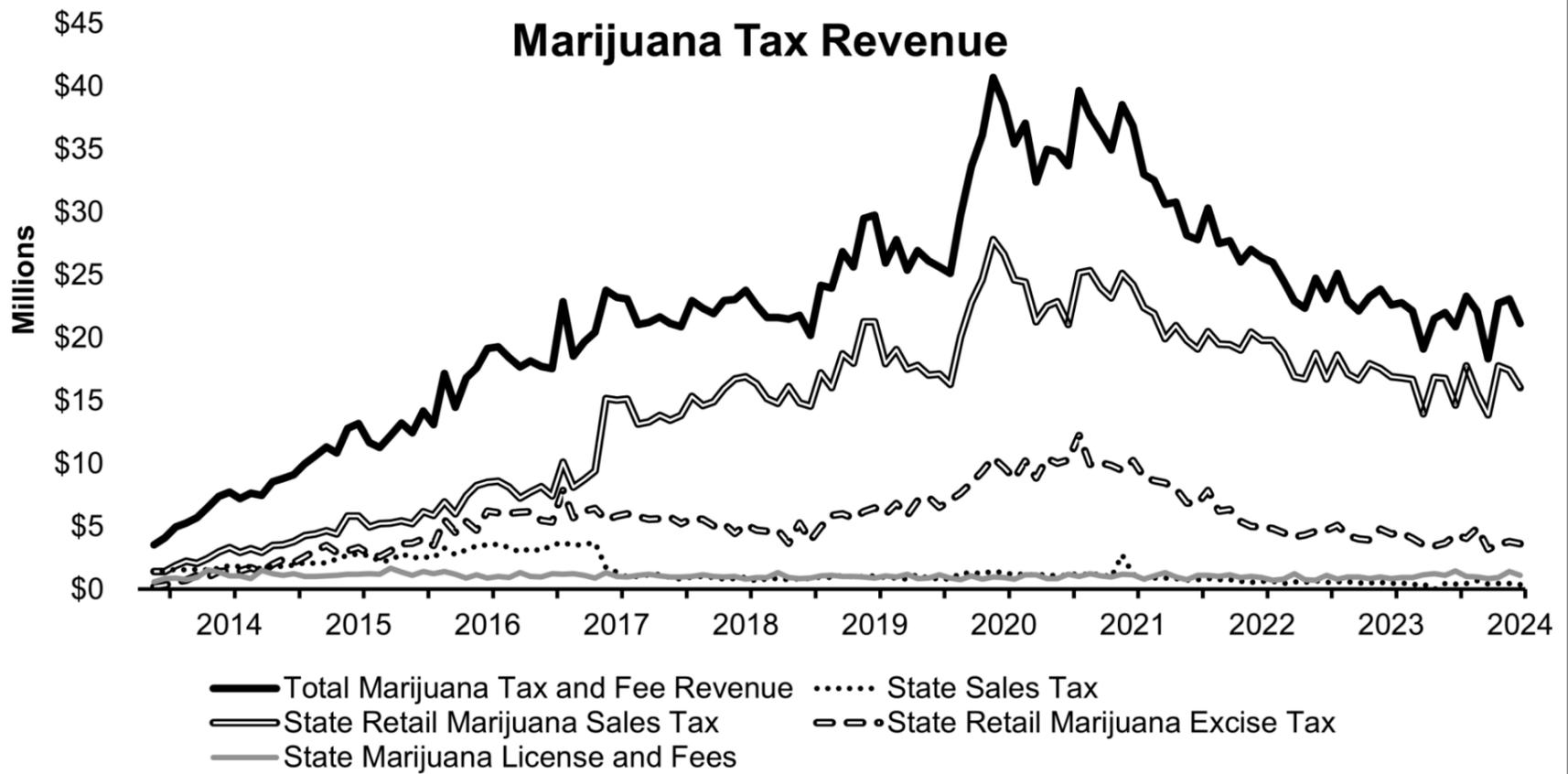
(All indexed to be 100 in 2008; Dashed lines indicate two major survey redesigns)



Source: *Addiction*, Volume: 119, Issue: 9, Pages: 1648–1652, First published: 22 May 2024, DOI: (10.1111/add.16519)

That said, it's hard to know from surveys how much these numbers have actually increased since some of this growth is likely due to changing survey bias over time. When marijuana was illegal would you tell a federal researcher you used marijuana daily? Shorter time frame studies looking at panels of the same participants or even twins have found smaller effects. A [2022 study in the journal *Addiction*](#) found twins in legalized states 20% more likely to use cannabis. But [another study in *Addictive Behaviors* from 2020](#) looking at a panel of young adults in California found that “marijuana use frequency did not change over time, including following legalization.”

It's also worth noting that as more states legalize, many states are no longer seeing growth in marijuana sales. Here's [marijuana tax revenue in Colorado](#). As many times as I've gotten the question “have increasing marijuana sales taken from beer?” no one has ever asked me “will decreasing marijuana sales benefit beer?”



Colorado was an early mover with a lot of tourism that probably isn't typical of most states, where you'd still expect growth, but this chart is a clear reminder that you shouldn't assume just because state tax revenues are going up that demand is also growing, just in the same way I don't assume that Colorado is seeing a precipitous drop in demand or cannabis use amongst residents. These are still emerging legal markets with a lot going on as states rapidly change their legislative and regulatory structures.

Reading through the data and numerous studies I think it's reasonable to assume there has been some demand growth in the era of legalization, but that it's nowhere near as large as state sales figures suggest, particularly when so much of that growth is simply black market moving to legalized markets. That said, even if social desirability bias (or fear of legal repercussions) explains some of the increase in surveys, it's worth noting that the changes in that bias illustrate something about where marijuana now fits in society. It's more acceptable to use marijuana and say you use it today than it ever has been. So the increasing levels of reported use in surveys tells us something even if it doesn't tell us everything.

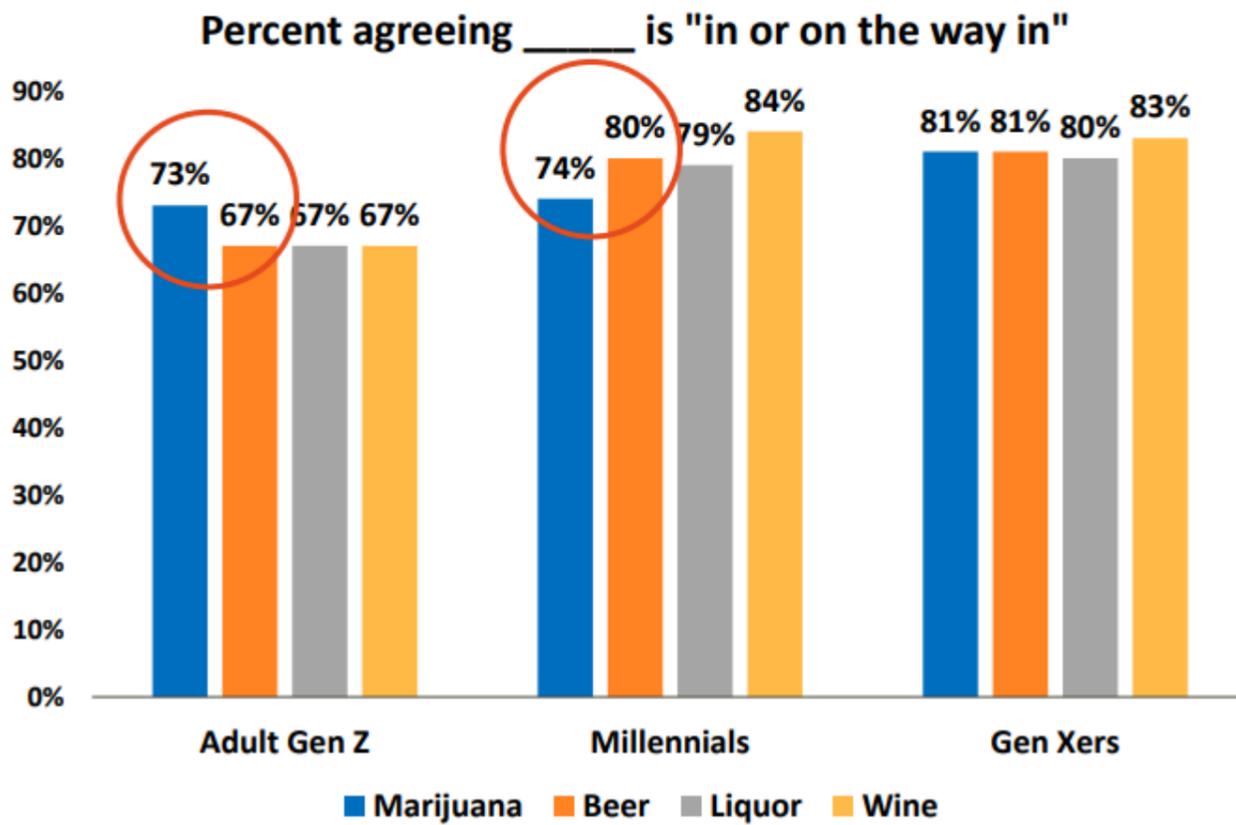
Longer Run Changes

After I've just spent more than 1,000 words hopefully convincing you that so far we haven't seen huge aggregate effects of cannabis legalization on craft or beverage alcohol sales, I want to pivot and draw a distinction with what we might see in the future. Why might the future relationship look different than the historical data? I see three overlapping reasons: demographic change and changing preferences, which overlap the most, and new forms of cannabis competition that might intersect more with beer occasions. Let's discuss each.

Let's start with demographic change and preferences. I'm going to try to build a nuanced argument here, so bear with me. I don't see a lot of data that the next generation is ditching alcohol for cannabis. What I do see is growing evidence that the next generation is—at least initially—a bit more skeptical about beverage alcohol, and I think it's possible that marijuana and the cannabis industry's constant comparisons to “safer than alcohol” and “buzz without hangovers” may play a role.

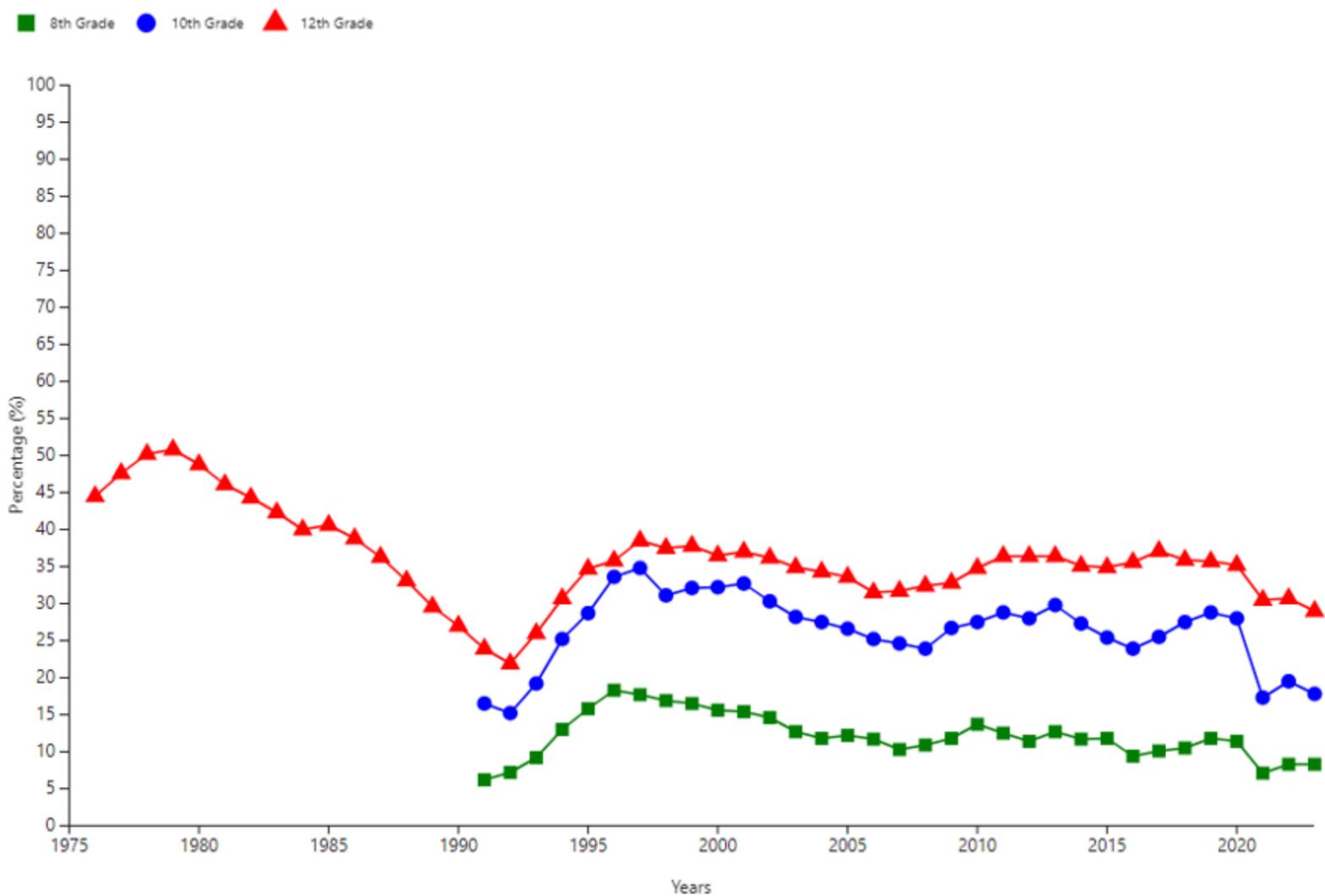
For evidence, let's start with some data from Kantar that [Mike Kallenberger presented](#) at the 2023 [Craft Brewers Conference](#). This looks generationally at Gen Z vs. Millennials and Gen Xers on what they think is “in or on the way in.” Note that Gen Z isn't necessarily more prone to think marijuana is “in” than older generations, but they are less likely to think alcohol is.

Marijuana's "in-ness" held steady in the Millennial-Gen Z transition, while beer, liquor, and wine fell markedly



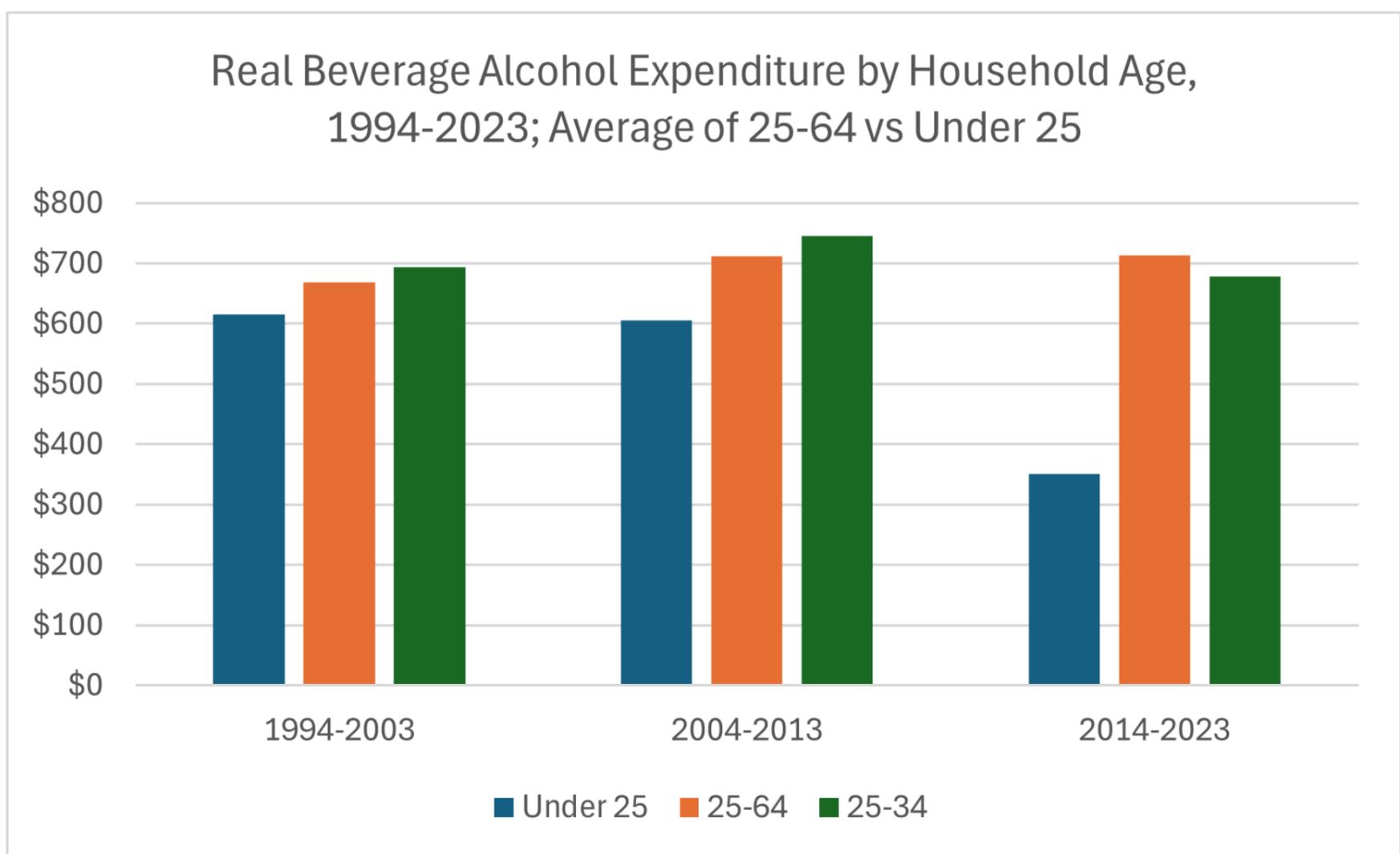
Source: Kallenberger (2023)

Both of those points can be seen in other data sets. Looking at underage marijuana use from the Monitoring the Future Survey (MTF), it's actually declined across the era of legalization. Reported use aggregated for young adults 18-30 shows increases, but if we look at the youngest 18+ adults, it shows similar data—it's actually decreased in recent years. For 18, 19-20, 20-21 and 23-24, the percentage saying they've used cannabis in the past 12 months is actually down from 2018. Not a stat you read very often in articles talking about how cannabis is replacing alcohol.



Miech, R. A., Johnston, L. D., Patrick, M. E., & O'Malley, P. M. (2024). Monitoring the Future national survey results on drug use, 1975–2023: Overview and detailed results for secondary school students. Monitoring the Future Monograph Series. Ann Arbor, MI: Institute for Social Research, University of Michigan. Available at <https://monitoringthefuture.org/results/annual-reports/>

Underage beverage alcohol use has also dropped sharply in recent years and that's carried over to young legal drinking age population expenditure. Here's data from the Bureau of Labor Statistics consumer expenditure survey comparing households under 25 versus those 25-64. The drop in the past decade is stark.



But remembering what I just told you about young adult cannabis use, this can't just be a cannabis story. In addition, the 25-34 year old age group hasn't dropped anywhere near as much, so the first cohorts that saw this drop are largely reverting back to the mean as they age, but it's clear that new legal drinking age adults are acting differently as they come of age than previous generations. While the MTF data shows the same drop as marijuana for alcohol for 21-22 and 23-24 year-olds from 2018 to 2023, the 25-26, 27-28, and

29-30 prevalence rates are all up over that five-year period for alcohol. And the 35-44 year old age group, which has seen real expenditure rise, shows big jumps in reported cannabis use. In 2018 only 23.6% of 35 year-olds and 21.6% of 40 year-olds reported cannabis use in the past 12 months. In 2023 those were 38.2% and 30.6%, respectively. So the age groups that have been using cannabis more haven't seen a drop in beverage alcohol expenditure and the group that says they've been using cannabis less has.

So to sum up, young legal drinking age adults are likely drinking a tiny bit less and report spending a lot less on alcohol than previous generations, though there isn't super strong evidence that's due to higher marijuana use (which isn't going up for that group) and for some past cohorts those effects have gone away fairly quickly. So if marijuana or cannabis legalization is pulling down alcohol consumption for young legal drinking age adults, the only argument I see is that it's due to the wider messaging and/or comparative evaluations of the two products (think of it as marijuana running a negative campaign that doesn't necessarily motivate their voters but does demotivate alcohol voters).

I don't have any compelling evidence that legal marijuana's rise and messaging is driving the weakening connection between younger legal drinking age adults and alcohol, but there is some circumstantial evidence. The time series is right—legal marijuana and messaging happened first—and they are certainly correlated. The biggest closely related confound (so ignoring the economy, etc.) is that there has been a lot of other negative public health messaging around alcohol in recent years. So I'd say this is one to learn more about rather than a clear link.

Hemp Beverages and Consumer Occasions

The final piece concerns occasions and competition, and that's where hemp-derived THC beverages come in. Don't know what I mean by hemp-derived THC beverages or intoxicating hemp beverages? [Read Marc Sorini's legal primer](#) and wrap your head around the weird wild west world of a Farm Bill change that opened the door for THC products coming from the same plant (but with different levels of THC) to suddenly have radically different legal status at the federal level, and a whole lot of confusion and contention at the state level. This is a space that is evolving rapidly and probably everything I write below will be out of date in a year or two.

To me, the biggest unique dimension that hemp-derived THC beverages have introduced is availability, but it's also radically increased the percentage of THC products being sold in a format that mimics beer. THC beverages were never going to be a one-to-one stand in for beer. The use occasions and demographics overlap, [but aren't exactly the same](#). That said, greater availability of THC in beverage form has the potential to close those Venn diagram circles a bit.

On availability, it's long been clear that dispensaries were not the ideal place for THC beverages (either marijuana or hemp derived). This is one reason that most of the hemp beverage industry is so intent on staying out of the existing cannabis regulatory system. On the consumer side, going through a cashier (in this case a bud tender) isn't how people typically buy beverages. On the retailer side, beverages are heavy relative to value, and in a business where many shops put all of their product in a safe every night, moving heavy inventory back and forth on a daily basis isn't ideal. So if you're a dispensary, you probably don't want to carry many beverages. To summarize, a dispensary is a pretty terrible channel to sell beverages. Without weighing in from a policy perspective on whether it's a good or bad idea to put hemp-derived THC beverages in liquor stores or other places where beverage alcohol is sold, it was always certain to increase the sales of those beverages. Add in the sharp increase in points of sale it creates and any potential de-stigmatization effect of having THC products in more "traditional" retailers, and it's no surprise sales have grown. Data compiled and shared by 3 Tier Beverages shows that over 4,000 businesses in Minnesota, including about 600 liquor stores, 200 bars, 400 restaurants and 100 brewers and distillers have registered to sell hemp products. One retailer has nearly 300 products in their stores and many of those liquor stores are reporting 10-15% of their sales coming from THC products. This is a state that previously had a limited number of places to purchase medical cannabis and hasn't yet issued any cannabis business licenses. When they do, they plan to award 150 cannabis retailer licenses in the first round of licensing (source: emailing with the Minnesota Office of Cannabis Management).

In terms of increasing the overlap with beer occasions, I have zero data here, but having brewers make it, putting it in a can that looks like beer, and selling it where beer is sold—I have to assume some percentage of consumers are going to see that and think "this product must be intended for similar occasions as beer." That's probably especially true for any consumers without a lot of experience in cannabis where the placement of hemp-derived THC in liquor stores might be their first exposure to those beverages (in some states this might be the first non-medical cannabis retail available). I'm going to think differently about where an IPA might fit into my occasions if I see it at a doctor's office versus a night club.

There is lots of anecdotal evidence out of Minnesota on what the effect has been on beer sales, but in the two years before hemp-derived THC beverages started showing up in the state, Minnesota constituted 1.8706% of U.S. beer shipments. In the 17 months of data available since legalization, that's 1.8685%. Squint really, really hard and you see an effect, but so far it's all statistical noise. So, here's another case where I've heard a lot about how these are taking from craft sales and you can make arguments about what

cannabis might do, but it's not necessarily showing up in the numbers. Yes, craft sales in Minnesota and other states where these beverages are popping up are weak, but I don't see a lot of evidence they are worse than where you can't buy them. It's a challenging year for everyone.

The biggest interaction between craft beer and hemp-derived THC beverages is that breweries are lining up to make them. We did a quick market check in late 2023 and at that point 45% of Minnesota breweries had at least one THC product (many are contracting them out elsewhere). I doubt the percentage has gone down since then. So, if THC beverages were pulling from beer volumes, craft breweries would be one of the beneficiaries.

Conclusions...If There Are Any

I've thrown a lot of data at you in this piece. Very little of it clearly says that cannabis in any form is directly pulling from craft volumes. So why is there so much noise about the interactions in the space and why do you get a question from a member nearly every week about the topic?

To me, this is one of those places where the human brain looks for simple stories instead of grappling with the radical complexity of the world and all the contradictions and confounders that come with that. The rise of cannabis coincides, and may perhaps fit with, other changes in consumer patterns and occasions. The post-pandemic world has dramatically shifted how people act and how businesses look. A new generation that came of age during those periods would already have looked different in their preferences and consumption patterns. When we see changes that are occurring within craft or beverage alcohol, how do we weigh in those things against cannabis, not to mention all of the complexity within cannabis that I've outlined above? As one small example, "nearly 70% of American adults are now more likely to order takeout than they were pre-pandemic" and "a whopping 80% of fine dining and casual restaurant owners enhanced their takeout options." Both of those stats come from the [National Restaurant Association via Yelp](#).

Our [Harris Poll data](#) tells us that 25% of people say that they drink craft beer while eating out at a restaurant but only 19% say they drink craft beer while home alone. So if people are adopting different patterns of living and staying in/going out, it's going to shift consumption patterns independent of other factors. So if people are sitting on their couch having dinner and now they're using cannabis at home rather than drinking a beer at a bar while eating dinner, is that cannabis replacing beer, or an at-home occasion (that was maybe a cannabis occasion before) replacing a going out occasion? And does that matter if beer is lost either way?

I'll close there. Cannabis is certainly going to affect beverage alcohol in the coming years, but as this post hopefully has convinced you, those effects aren't unilateral, and the form cannabis takes in terms of products and regulation will likely matter on directions and levels. In addition, those effects will be nested within larger societal changes and consumer preferences and the more everyone understands those and how they shape spending patterns of all types the more you can try to be ready to react. We'll be here providing context and insight to the best of our ability.

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WRITTEN BY

Bart Watson, Vice President of Strategy & Chief Economist 

Bart Watson, Vice President of Strategy & Chief Economist for the Brewers Association, is a stats geek, beer lover, and Certified Cicerone®. He holds a PhD from the University of California, Berkeley, where in addition to his dissertation, he completed a comprehensive survey of Bay Area brewpubs one pint at a time. You can follow him on X, formerly known as Twitter, [@BrewersStats](#).

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