CANNABIS NEXT DOOR:

A PROFILE OF THE CONSUMERS DRIVING A NEW INDUSTRY

March 2019 Insights | #CannabisNextDoor





ABOUT THE AUTHORS

Quinn Thomas is a marketing communications and brand strategy agency with offices in Seattle and Portland. DHM Research is an independent research firm with offices in Portland and Washington, D.C.

Five years ago, we teamed up on the first of a series of *Insights* reports. These reports are designed to bring our collective expertise in research, audience analysis, and strategic communications to emerging issues confronting our communities. Our goal is to explore topics that business executives, policymakers and community influencers are wrestling with, bringing critical research and perspective to the discussion so leaders can make more informed decisions.

This report is the fourth installment in the *Insights* series. The first three reports are:

- Are Millennials Reshaping Politics in the Pacific Northwest, April 2014
- Social Media's Influence on Public Discourse in the Pacific Northwest, October 2015
- Merge Ahead: Seattle's new and long-term residents adapt to change, September 2017

These reports can be found on our respective websites - www.quinnthomas.com and www.dhmresearch.com.

Cannabis is a deeply complex topic, and we are by no means experts. So, we are eternally grateful to those who took the time to sit for in-depth interviews about their perspective on this emerging industry. While we conducted these interviews in confidence, we'll note that the leaders we interviewed represent key regulatory, industry, employer, and advocacy voices grappling with how to adapt to a new world of legalized cannabis in Colorado, Washington, and Oregon. Their insights were invaluable to us as we developed our research methodology, survey, and focus group materials.

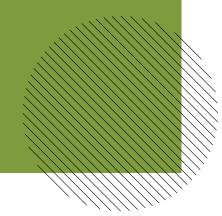




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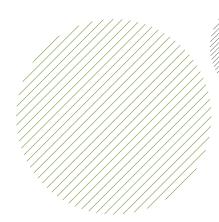
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I. ABOUT THIS REPORT

Approaching cannabis as a topic for research and analysis is a challenge. The issue itself has endless storylines. Do you explore the patchwork of state regulatory structures across the country, each doing their best to manage recreational or medicinal use in the absence of federal legalization? What about how regulatory decisions are influencing industry development, some allowing vertical integration while others mandate siloed supply chains? Or how policies governing out-of-state investment are driving or inhibiting growth and ownership structures? What about how industry suppliers, such as electricity providers and banks, are trying to meet demand or overcome federal regulatory restrictions?



The purpose of this research is to better understand cannabis users in order to help business leaders, community influencers, and policymakers navigate the post-legalization environment. These are all real factors in the growing cannabis industry. While we enjoy a complicated policy discussion as much as the next person, we decided to focus on our area of expertise: research, audience analysis, and marketing communications. We wanted to create a body of research that might have a longer shelf-life than a snapshot of today's industry. Regulatory frameworks and business models can change quickly, particularly with cannabis and all of its "trial and error" fine-tuning. That's not a judgement on industry and regulatory leaders; it's a recognition that everybody is doing something that hasn't been done before. The industry, and its regulatory agencies, are constantly learning and adapting.

The purpose of this research is to better understand cannabis users in order to help business leaders, community influencers, and policymakers navigate the post-legalization environment. Who are the industry's customers and why do they use cannabis? What are their product preferences and where do they typically consume cannabis? How do they describe their upbringing, personality, and performance in school? We felt a consumer profile that went beyond standard demographics and explored them more deeply would help us all understand them better. That, as it happens, is the point of our *Insights* reports: to bring greater understanding about the people at the core of important public issues.

Developing a body of research around cannabis users has its own challenges. In wanting to understand trends in the evolving landscape, we felt it is important to not only understand consumers, but how legalizing cannabis for recreational use changes their behavior. That means we needed to focus our research on states that have legalized cannabis for both medical and recreational use and, importantly, did it long enough ago that there might be measurable changes in behavior. This led us to focus on researching cannabis users in Colorado, Washington, and Oregon. We believe insights from this population can help inform the policy debate and industry development in other states just beginning the process of legalization.

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METHODOLOGY

With that as a backdrop to the team's research strategy, we needed to define a cannabis user. To do so, we screened out anybody who said they're not interested in using cannabis, whether or not they've tried it in the past. So, our universe of respondents includes only those who are regular, occasional or infrequent users. We will use these terms throughout the report, so it's important for the reader to understand their use to put it in context.

- Regular User consumes nearly daily (a mean of 24 times per month)
- Occasional consumes 7 to 8 times per month
- Infrequent consumes 2 to 3 times per month

As stated earlier, our survey and focus group guide were both developed after the team conducted 12 in-depth interviews with industry, policymaker, employer, and advocacy leaders in the three states. These interviews provided context to the issues we wanted to explore, while helping to identify other questions they felt would advance the objective of understanding cannabis users better.

Survey Research

Cannabis users in Colorado, Washington, and Oregon were reached with an online survey from January 8, 2019 to January 14, 2019. In total, 900 respondents completed the survey, with 300 respondents completing it in each of the three states. This gave us an identical sample in each state to compare users and their consumer preferences.

STATEMENT OF LIMITATIONS: Any sampling of opinions or attitudes is subject to a margin of error. The margin of error is a standard statistical calculation that represents differences between the sample and total population at a confidence interval, or probability, calculated to be 95 percent. This means there is a 95 percent probability the sample taken for this study would fall within the stated margin of error if compared with the results achieved from surveying the entire population. The margin of error for a sample of 900 respondents is +/- 3.3 percent.

Focus Group Research

Focus groups were conducted with cannabis users in Portland, Oregon and Seattle, Washington to further explore their attitudes about cannabis. Topics of exploration included public perception of cannabis users, their openness about use, their consumer preferences, where and when they use cannabis, their retail experience, and what they would change about laws governing use.

The two focus groups were conducted on January 16, 2019 (Portland) and on January 22, 2019 (Seattle). Each group discussion lasted two hours. A total of 19 cannabis users participated in the discussion – 9 in Portland and 10 in Seattle.

STATEMENT OF LIMITATIONS: The focus groups were led by a professional moderator and consisted of both written exercises and group discussions. Although research of this type is not designed to measure with statistical reliability the attitudes of a particular group, it is valuable for giving a sense of the attitudes and opinions of the population from which the sample was drawn.

II. EXECUTIVE SUMMARY

It is uncommon for an entire industry to materialize overnight. When it does happen, these industries are typically the result of innovative or disruptive technologies that create a new market or upend an established one – think smartphones or ridesharing. These industries tend to be controlled by the innovators, the first-movers who translate their vision into market dominance. It is nearly unheard of for an entire industry to appear at the check of a ballot box or stroke of a pen – as if a whistle blew and a herd of industry pioneers, small businesses and scrappy entrepreneurs were set loose on an empty field with no organization, few rules, and a hard-to-reach customer base. Yet this is the cannabis story. And if the emergence of the cannabis industry was a bit clunky, its growth has been anything but.

Colorado and Washington started it all with Amendment 64 and Initiative 502, respectively. Both measures were approved by voters on November 6, 2012 with comfortable margins, unleashing a chain of events that set the stage for the legal use of cannabis for recreational purposes. In the first month that Colorado's recreational marijuana stores opened, recreational sales exceeded \$14 million and medical sales more than doubled that amount at \$32.5 million. By 2017, recreational sales had grown to almost \$1.1 billion, and medical sales were almost \$417 million¹. In Washington, sales grew from \$259 million in 2015 to \$1.37 billion in 2017².

Oregon quickly followed the lead of Colorado and Washington when voters approved Measure 91, which legalized the recreational use of cannabis. Sales in Oregon have grown from \$523 million in 2017 (first full year of sales) to \$638 million in 2018³. If the top-line revenue in Oregon seems small relative to the other two states, it may be simply a function of low prices driven by oversupply. It's not due to low demand. Oregon has the highest percentage of monthly cannabis consumption in the country among its adult population – 20 percent⁴. The initial low prices in Oregon reflect the law of supply and demand in a market that has yet to find balance in its ecosystem of growers, retailers, and consumers. This will correct over time and result in higher industry revenue. The exponential growth of the nascent cannabis industry in all three states is proof that a strong and growing market existed, paving the way for larger investors to provide capital and drive scale.

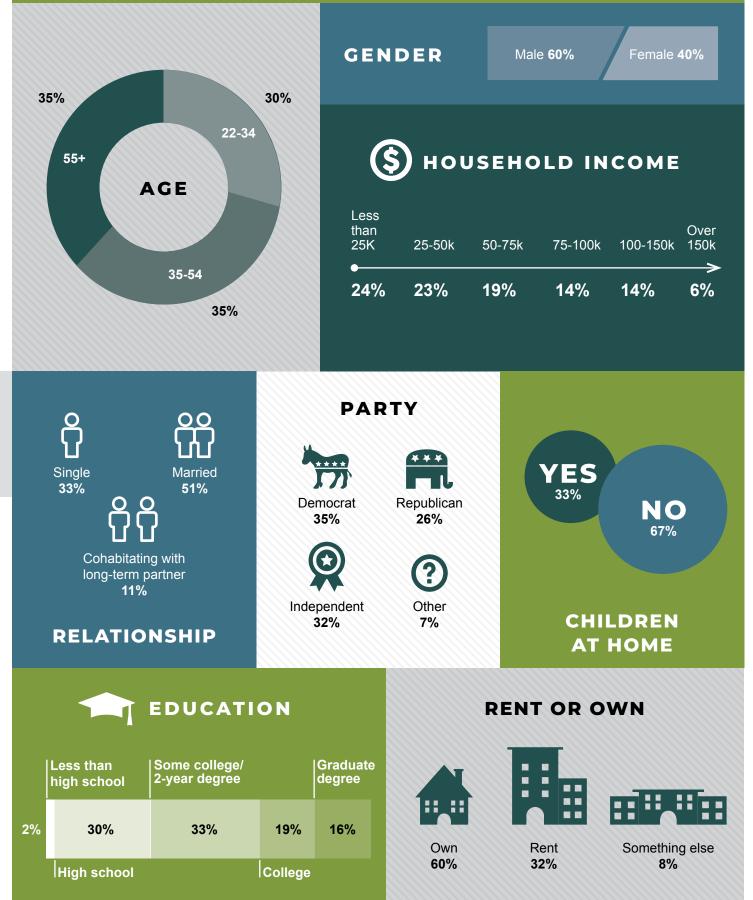


THE CANNABIS CONSUMER NEXT DOOR

As stated earlier, this report is about the people who are fueling the industry's growth: consumers. Who are they? Well when you analyze the data it turns out they aren't much different from the population as a whole. They are young, single renters; middle-age homeowners with kids at home; and retired seniors. They generally match the U.S. average educational attainment, household income levels, and the political composition and race and ethnicity breakdown of the three states we researched. The only demographic difference that seems to stand out is that they skew male. Beyond traditional demographic descriptors of a population, we found deeper insights into cannabis users' personality and make-up that can help employers and policymakers better understand their values and motivations. There is much more to be learned on this in the section on cannabis users, including why they consume cannabis, their product and consumption preferences, retail experience, and trusted sources of information.

- 1 https://www.kansascityfed.org/publications/research/rme/articles/2018/rme-1q-2018
- 2 https://data.lcb.wa.gov/stories/s/WSLCB-Marijuana-Dashboard/hbnp-ia6v/
- 3 Oregon Cannabis Tracking System, Oregon Liquor Control Commission
- 4 National Survey on Drug Use and Health, Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services, 2017

CANNABIS USER DEMOGRAPHICS



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CANNABIS HAS A BRAND PROBLEM

It's not news that cannabis suffers from negative perceptions of those who use it or the culture that surrounds it. The image of an illegal drug user – at least one that was illegal only a few years ago – is bound to conjure up negative stereotypes, particularly when the images are so frequently reinforced through film, music, and other parts of our popular culture. What's surprising is how deeply that perception penetrates even the mindset of cannabis users. When asked to describe a cannabis user, even a focus group of users gravitated to the image of a long-haired, young male "standing outside a convenience store." The feeling of social stigma is widely felt among cannabis users – only 49 percent of our survey respondents are fully transparent about their cannabis use with close friends and family.

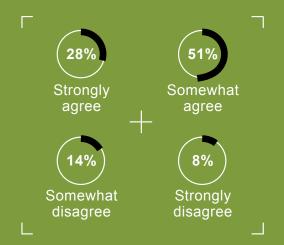
The policy drift in the U.S. is unmistakable: more and more states will approve of legalization of cannabis for medicinal purposes, and those states will eventually approve of legalization for recreational purposes. At some point, the federal government will feel compelled to step in to legalize – perhaps out of a pragmatic need to regulate nationwide commerce than philosophical support for cannabis. But changing laws and the passage of time bring more social acceptance. As generations grow up without knowledge of cannabis as an illegal drug, it will garner greater mainstream acceptance and those negative stereotypes will disappear.

This may be the greatest challenge to the cannabis industry. It's not the advocacy needed to overcome legal impediments to growth; it's the long road to altered perceptions and mainstream acceptance. Today, much of their customer base may feel judged by a society not ready to fully embrace cannabis. For businesses that plan in one, three or five-year increments, social acceptance is a metric that is difficult to impact.



FIGURE 2

Even though cannabis is legal, I still feel there is a social stigma attached to it

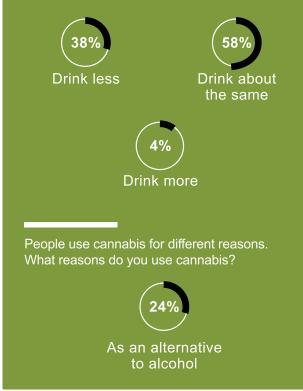


CANNABIS IS DISPLACING ALCOHOL

Let us state up front that we can't draw any direct connection between an increase in cannabis use and levels of alcohol consumption at an industry level. Our research was not intended to analyze the market dynamics between the two sectors, only to understand why cannabis users choose cannabis and some of the consumer behaviors that result from their use. In this context, there is an unmistakable connection between cannabis and alcohol.

FIGURE 3 Cannabis and Alcohol Use

How has your consumption of alcohol changed since cannabis was legalized?



This survey research was validated in our focus groups, where a majority of participants preferred cannabis to alcohol. The distinction we would make here is that they were given the choice to use one or the other "at home." It's an important distinction because the law in each of our research states prohibits public consumption of cannabis. We don't know, for instance, how that question would be answered if presented with a choice between cannabis and alcohol in public venues. As we explore in the report, however, reasons for consuming

cannabis are more likely to include reducing stress, anxiety, and pain as opposed to socializing with friends. Many of our focus group participants made references to alcohol being for "going out" and cannabis being for "staying home."

We should also note that substitution of cannabis for alcohol is more prevalent among regular cannabis users. Fifty-eight percent of regular cannabis users report drinking less since legalization; Thirty-two percent of occasional cannabis users report drinking less; and twentysix percent of infrequent cannabis users report drinking less. So, while the level of impact varies, there is one unmistakable conclusion: as people use more cannabis, they consume less alcohol.

A DESPERATE NEED FOR MORE TRUSTED SOURCES

Who do consumers trust to give them accurate information about cannabis? It's a vexing question that is challenging the industry and state policymakers, and at this point in the market's evolution, there is no ready answer. Like the rest of the industry, the concept of trusted sources is evolving.

FIGURE 4 Who do cannabis users trust?

If you have a question about cannabis, who would you trust to give you accurate information?

- Staff at a licensed cannabis retailer **49%**
- Your doctor **38%**
- Cannabis grower 26%
- State cannabis regulators **20%**
- Manufacturer of cannabis products **19%**
- State health authority 18%

Consumers – even regular users – have a lot of questions about recreational and medical uses of cannabis. This spans the spectrum from basic information about the agents in cannabis that generate chemical reactions in the body – THC and CBD – to whether there are long-term health effects to cannabis use. Most describe a lack of reliable sources for this information.

Whether – and how – the industry, policymakers, and professional boards address gaps in information and trusted sources is sure to be a complex and lengthy debate. But, this is not an issue that is going to diminish with time. The growth trajectory of the cannabis industry and the clear consumer demand for pain relief options should be enough to generate urgency.

CANNABIS IN THE WORKPLACE

How employers treat the issue of cannabis use among its workforce is an open question, so policies are evolving. While some employers have stopped drug testing for cannabis as a condition of employment, they maintain restrictions on use while on the job. Others have continued to screen for cannabis use among individuals seeking employment. During the in-depth interviews we conducted with employers, we found that the tight labor market has sometimes led to the elimination of screening for cannabis – a change some found was necessary in order to fill shifts.

When reviewing our data on cannabis in the workplace it's important to understand that only 55 percent of our cannabis survey respondents are currently working full- or part-time. So, we're analyzing responses from a subgroup of 500 cannabis consumers who are currently working.

FIGURE 5 Cannabis on the Job

(responses from working cannabis consumers)

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In the last 12 months, I have...

- Used cannabis while at work
 - A few/ several times 23%
 - Once **3%**
 - Never 66%
- Used cannabis immediately prior to starting work
 - A few/several times 24%
 - Once **4%**
 - Never 66%

Our data suggests *a quarter* of all employed cannabis users have used cannabis at work, or immediately prior to work. This is not an insignificant percentage. We weren't able to dive more deeply into this question to determine *where* these employees work and whether their use violated any specific policies. But, employers should be aware of the prevalence of use.

MAKING USE OF THIS REPORT

Of course, the insights summarized here – and many more contained within the report itself – need some action in order to leverage what the data is telling us. There are numerous findings readers can pull from the report to help them better understand cannabis consumers, but here are a few highlights.





Opportunities for cannabis brands

Since consumer preferences today are so driven by price, readers may be tempted to view cannabis as something of a commodity. Our findings provide a lot of evidence to the contrary. Consumers are in tune with the quality and consistency of products and display a certain amount of allegiance to growers, manufacturers, and retailers who can deliver consistent product and service. As the industry matures and consolidates, there is an opportunity for brand differentiation and loyalty to grow deeper – as long as brands are delivering on that quality and consistency. Legalization has demonstrated it leads to higher demand and more consumers, so investing in brand and customer loyalty early can pay huge dividends down the road.

Manufacturers have an opportunity to convert alcohol consumers

Due to restrictions on marketing in the cannabis industry, it's difficult to deploy a full complement of traditional methods in reaching a target audience. But, cannabis manufacturers should find creative ways to identify and engage consumers who may be open to an alternative to alcohol. Our data suggests that cannabis users will consume alcohol or cannabis, but not both simultaneously. Convincing those who seek to relax with an alcoholic drink to try cannabis instead could create a reliable customer base.

Improve the retail experience

Cannabis retailers do not have to worry about the shopping experience of regular consumers. Generally, they're highly-educated on the product and know what they're looking to accomplish with their purchase. Occasional and infrequent consumers, however, are the growth opportunity. And, according to our data, there is room to improve their retail experience. Creating a comfortable environment where they can ask a lot of questions will create repeat business. This is particularly true of women, who report more anxiety in retail outlets and seek the comfort of companions while shopping.

Consumers still need more information and trusted sources

Consumers trust staff at licensed dispensaries, but they are better equipped to handle questions about recreational cannabis use than medical use. Consumers trust doctors, but they are cautious when it comes to dispensing treatment advice to patients about the medical use of cannabis. As a result, consumers are often left to research their questions online. They can frequently find basic information from credible sources, but they have few options when it comes to questions about their personal health. How to address this information gap is a discussion taking place within public health agencies and medical licensing boards, and slow progress is being made to deploy information into the hands of medical professionals. But, there is clearly a desire for more information and trusted sources who can help individuals through their personal decision-making around cannabis.

Ш. THE CANNABIS CONSUMER NEXT DOOR

It goes without saying that Americans have been fed a steady diet of cannabis user caricatures over the years. This created a popular stereotype that has a powerful grasp on the cannabis brand, and it may take a generation for that grasp to be loosened completely. Even cannabis users themselves imagine this stereotype when asked to describe the average user, and it drives a persistent social stigma they feel is attached to cannabis use (See Figure 2).

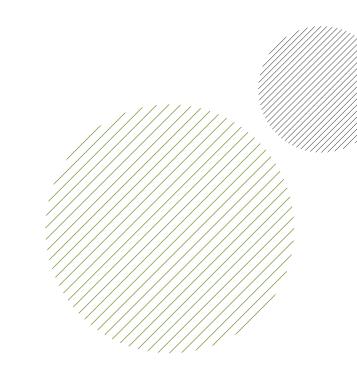
What is undeniable about stereotypes, however, is they cannot withstand careful examination and data. As we analyzed the data from our survey of cannabis users in Colorado, Washington, and Oregon, we found plenty of evidence of cannabis use across the entire demographic spectrum - from education to household income to age. It is a population that has much more in common with a typical middle-class resident than with the caricatures created in Hollywood movies that live on in the minds of most Americans



Characters Jay and Silent Bob from the movie, Clerks (1994)

Describe a typical cannabis user? This is embarrassing, but Jay and Silent Bob, hanging out in front of the convenience store, loser type. That's the first thing that popped

> - Kim, cannabis user Portland, OR



into my head.

GETTING TO KNOW A O CANNABIS USER		
At my current job, I am a Salaried employee - 26%	I contribute regularly to a retirement account (401k or IRA)	As - 29% Bs - 47%
Hourly employee - 26% Not applicable - 48%	Yes – 52% No – 48%	BS – 47% Cs – 19% Ds – 4% Fs – 1%
I consider myself very	I'm more of an	Compared with the average person, I'm
Good with my hands – 36% Outdoorsy – 33% Artistic – 22% Athletic – 16%	Extrovert – 48% Introvert – 52%	A risk taker – 39% More cautious – 61%
Is religion important to me?	\$ When I was a kid my family was	OO When I was a kid, my parents were
Very – 24% Somewhat – 25% Not too – 20% Not at all – 31%	Lower income – 31% Middle income – 61% Higher income – 8%	Very strict - 13% Somewhat strict - 56% Somewhat lax - 25% Very lax - 6%

Given the growth in cannabis consumption, having a clear picture of who is consuming – regardless of their consumption level – is important. After all, an infrequent user today may be a regular user three years from now. But, a more nuanced view of cannabis users today requires a careful examination of how consumption breaks down along frequency of use. As a reminder, we've broken down consumers into three categories of use: regular (daily or near-daily use); occasional (7 to 8 times per month); and infrequent (2 to 3 times per month).

FIGURE 6

Regular, occasional, and infrequent cannabis users are significantly different populations, and these differences can impact a wide variety of consumer behaviors. We believe understanding the demographic differences between categories of cannabis users is important for the employers, policymakers, and industry leaders we're seeking to inform.

FIGURE 7

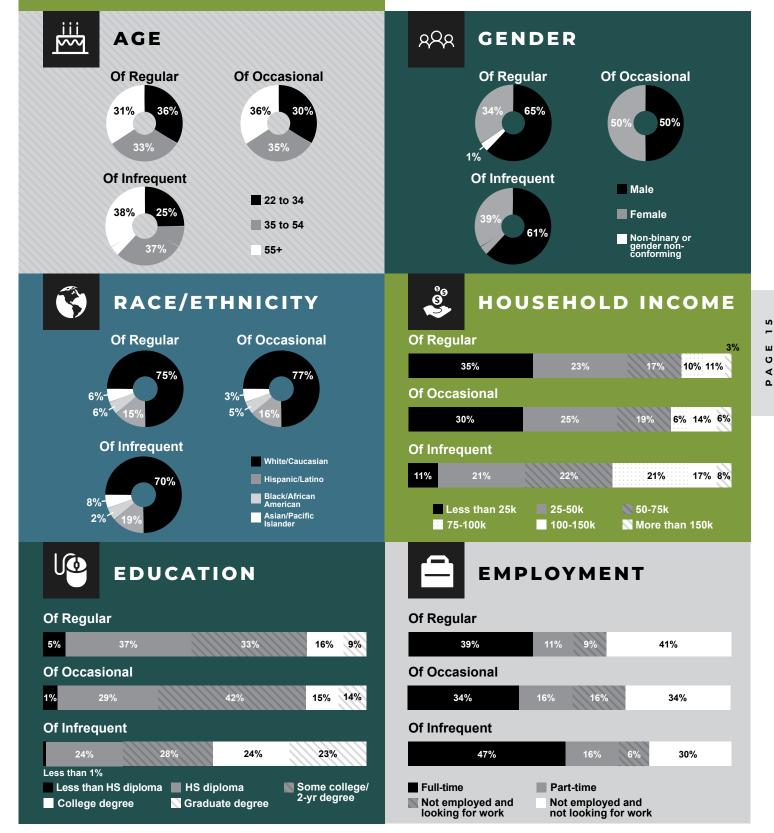
CANNABIS USERS **BY FREQUENCY OF USE**

The data suggest clearly that higher levels of cannabis consumption are concentrated at the lower end of the income scale. 35 percent of regular cannabis consumers have household gross incomes of less than \$25,000 per year, compared with 11 percent of infrequent consumers. Does it matter that regular users are spending a much higher proportion of their income on cannabis?

Demographic data has its limitations because it really only provides insights into who is consuming cannabis. In order to understand our audience at a deeper level, we need to understand their reasons for consuming cannabis, consumer habits, and preferences.

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IV. CONSUMER BEHAVIOR

While there have been well-established cannabis preferences going back decades, legalization for recreational and medical use is a grand experiment in consumer behavior and preferences. After all, a new product was hitting stores with no brand preferences, customer loyalties, or even trendlines to inform future product development and marketing. How would consumers respond to a broad mix of available products – leaf, vaping, edibles, topical oils, etc. – all engineered with a range of THC and CBD levels and delivered to engender brand loyalty, either to growers or manufacturers? How will early adopters – at least of *legal* cannabis – influence the growth in these product categories?

We felt it was important to understand today's cannabis use in states that have at least a couple years of industry growth, which was one of the key drivers to selecting Colorado, Washington, and Oregon. This would provide a perspective on the trends we want to identify.

One of the key questions asked around legalization is will it increase use and drive demand. This may seem obvious – a once-illegal product should naturally see increased usage once legalized, right? But, it's always good to understand the degree that this is happening.

FIGURE 8 Comparing cannabis use before and after legalization

Regular consumers who consume daily

48% Pre-legalization74% Post-legalization

Occasional consumers who consume a few times a month

11% Pre-legalization27% Post-legalization

I used cannabis before legalization, not a lot though. It all depended on if I had a friend who I could buy from. Now I use it daily, and I think it should have been legalized years ago. I thought it was a long time coming.

- James, Tukwila, WA

Among our cannabis survey respondents, the frequency of use showed clear increases after legalization. The most dramatic increase was among regular users (See Figure 8), but in some cases consumption among occasional users more than doubled. Legalization has led to more demand.

We know consumption is increasing, but why, where, when and how are consumers choosing to use cannabis? The answers to these questions can help us understand the motivations of cannabis consumers.



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WHY DO CONSUMERS USE CANNABIS?

While the prevailing perception of why people use cannabis – at least among non-users – may be to just enjoy the "high," the reasons are much more complex. When we asked consumers why they used cannabis, the two most popular responses were to "reduce stress and anxiety" (58 percent) and to "reduce pain" (56 percent). It's a recurring theme in the data and in our focus groups – people use cannabis the same way they might unwind with a glass of wine after work. For regular users, it's part of a daily ritual. Seventy-two percent of regular users say they use cannabis to reduce stress and anxiety and 66 percent say they do it to relieve pain. The biggest reasons for our infrequent users are reducing pain (52 percent) and reducing stress and anxiety (42 percent). So, regardless of the frequency of use, consumers primarily use cannabis for the same reasons.

For me, it's mostly mental health as opposed to physical. Relaxation, destress, kind of calm down the outside world, just thinking about my own thoughts.

- Rylie, Tukwila, WA

FIGURE 9 Why do you consume cannabis?



If both cannabis and alcohol are consumed to reduce stress and anxiety, does that mean our survey respondents are replacing alcohol with cannabis? There's some evidence of that (See Figure 3).

These findings were validated in our focus groups, where a majority of participants preferred cannabis to alcohol. The distinction we would make here is they were given the choice to use one or the other "at home." It's an important distinction because the law in each of our research states prohibits public consumption of cannabis. We don't know how that question would be answered if presented with a choice between cannabis and alcohol in public venues. Many of our focus group participants, however, made references to alcohol being for "going out" while cannabis is for "staying home."

It's nice to come home from a long day at work and kind of zone out. I'll smoke a little bit, and it's kind of same effect as having a glass of whiskey.

– Eric, Marion, WA

WHERE AND WHEN DO CONSUMERS USE CANNABIS?

As stated above, Colorado, Washington, and Oregon all have laws preventing the consumption of cannabis in public spaces. So, perhaps it's not surprising that 83 percent of our survey respondents say they primarily use cannabis at home. But given the reasons for cannabis use – relief of stress, anxiety, and pain – it's likely that consumers would still primarily use at home even without those laws. While regular users cite "home" as the place they've used cannabis the most – 92 percent – infrequent users are a bit different. Even though 71 percent still identify their home as the place they consume, 25 percent of once-a-month users have consumed *only* outside the home in the last 12 months – either at a friend's house or someplace outdoors.

FIGURE 10 Where do you most often obtain cannabis?

69%	Licensed retailer
20%	Given to me by someone I know
7 %	From plants I grow
4%	Other

Where do our consumers get their cannabis? Relative to regular users, infrequent users are less likely to purchase their own cannabis. So, a higher percentage say they mostly obtain it from a friend: 28 percent compared with 13 percent. Growing your own plants has been a long-time practice of daily cannabis users, and that practice continues today. 12 percent of regular users say they grow their own cannabis, compared with 6 percent of occasional users.

FIGURE 11 In what situations do you typically use cannabis?

On weekdays, during the work week

Yes, often	Yes, occasionally	No
29%	34%	37%

On weekends and holidays

Yes, often	Yes, occasionally	No
39%	46 %	16%

By yourself

Yes, often	Yes, occasionally	No
39%	35%	27%
3 3 70	33 70	270

With alcohol

Yes, often	Yes, occasionally	No
12%	27%	61%

With prescription drugs

Yes, often	Yes,	No
9%	occasionally	77%
2 70	13%	

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Regular users, of course, do not distinguish between days of the week, and they show up strongly across the board on those questions. Infrequent users, however, are twice as likely to use on the weekends and holidays (65 percent) as opposed to on weekdays during a work week (33 percent). This makes sense when you consider the question of how often consumers use by themselves. Nearly our entire subgroup of regular consumers – 95 percent – report that they typically use cannabis alone. Within that, 74 percent say they *often* use alone, and 21 percent *occasionally* use alone.

Our infrequent consumers, however, are more likely to use in a group. Only 15 percent say they often use alone, and 36 percent occasionally use alone. 48 percent of infrequent consumers report that they've only used in groups over the last 12 months. While they may consume for similar reasons as regular users, infrequent users are just as likely to make cannabis a low-key social activity as opposed to something they do by themselves.

I use maybe three or four times a year at the most. Usually it's in a safe environment with friends. Like one time it was New Year's Eve, hanging out at a buddy's house. A couple of friends, we would just get together and just have a fun evening.

– Brody, Portland, OR

Responses in the survey to questions about combining alcohol and prescription drug use with cannabis track with the overall survey and focus group data. Many consumers we engaged use cannabis as a replacement for these two substances, so it's not surprising to see they keep them separate. Again, the two biggest reasons given for consuming cannabis are reducing stress and anxiety and reducing pain, respectively. We find that a majority of users seek this relief through cannabis rather than alcohol and prescription drugs.

WHO DO CONSUMERS TRUST FOR INFORMATION?

Many consumers, particularly occasional or infrequent consumers, have a lot of questions about why and how they should use cannabis. As outlined in Figure 4, staff of licensed dispensaries and doctors are the two most trusted sources of information, which can be a problem due to a lack of training or willingness to recommend medical treatments with cannabis. What type of information are consumers seeking? We found it fell into two broad buckets.

> You go to a pot shop, and it's a consistent budtender every time. It's like I've found my best friend. You suggested something good, so I'll go to you every time. Then I come back and you're just gone one day. How could you betray me like that?

- Cassidy, Seattle, WA

The first bucket is consumers seeking information for recreational cannabis use. This is where the licensed cannabis retailers – referred to as "bud-tenders" – play a major role. They are the individuals at licensed retail outlets who help consumers navigate the questions around smoking, vaping, edibles, and oils; help customers understand the various levels of THC potency that provide the "high"; and can break down the sight and smell characteristics that determine quality. They are the most trusted source for cannabis users, but our focus group participants revealed wide opinion about them. Not unlike workers at any lower-wage retail outlet, our focus group participants found large gaps in knowledge between bud-tenders and a general transience that led to high turnover and lack of stability in their personal sources.

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The second bucket is consumers seeking cannabis for medical purposes. These are people suffering from chronic and intermittent pain and looking for alternatives to pharmaceutical treatments. It's a large and growing population. Our survey indicates that fifty-six percent of cannabis consumers are seeking relief from pain. The problem is they feel they have few sources to turn to for accurate information. If fifty-six percent of cannabis consumers are attempting to address chronic pain, why are only thirty-eight percent turning to their doctor for answers to questions? According to our focus group participants, they simply didn't get any information from their doctor that could be utilized in their treatment. They acknowledge that it's probably not an unwillingness to provide information; rather, it's an inability to make recommendations for cannabis treatments based on a lack of sourced research or experience from their own practice.

I had heard a little bit but didn't realize how effective it had been for people. When I talked to my doctor about it, I didn't get a prescription or anything. He just said, 'If you want to try it, go ahead. It's legal now.' It's like, 'Thanks a lot.' I would have liked a little more direction, but maybe they didn't have it.

- Steve, Seattle, WA

The lack of information was evident in our focus groups, where even regular users sought answers to basic questions around cannabis use - whether it causes cancer or lung damage, has long-term effects on the brain, is addictive, or can truly relieve pain. Most participants recount relying on internet searches or friends when they need answers to questions. They described struggling with opioid addiction and turning to cannabis as an alternative. According to our survey research, this is not a complete leap of faith. Eightyfour percent of cannabis users believe that CBD - the compound found in cannabis that relieves pain - has a positive effect on pain. Even so, a number of our focus group participants asked if that was true, revealing a gap between what they think is true and what they know is true.

As cannabis expands as a market and more consumers raise questions about health effects, it will be critical for health agencies to develop credible sources and information to meet this need.

V. PRODUCT PREFERENCES AND THE RETAIL EXPERIENCE

We've explored why, where, and when consumers are using cannabis. How are they using it?

Smoking cannabis in leaf form is easily the most popular form of consumption. This is largely due to the consumption preference of regular consumers – 66 percent prefer smoking cannabis leaf; 16 percent prefer vaping; 10 percent prefer edibles; and only 6 percent consume through topicals. By contrast, infrequent users have much more varied preferences. Only 35 percent prefer smoking leaf; 28 percent prefer edibles; 19 percent consume through topical oils and creams; and only 8 percent vape.

The breakdown of types of use can also depend on the reasons for use. Consumers who say they use for recreation will most often smoke leaf (62 percent), while those who say they use for medicinal purposes most often use edibles (31 percent) and topicals (30 percent).

CONSUMER PREFERENCES

When consumers are in certified retail outlets to purchase cannabis, what drives their purchasing decisions? We wanted to explore this question as a way of understanding why they may gravitate to specific products.

Price is the biggest factor in the selection of a cannabis product. Because regular users skew lower-income, this should not be a surprise. In fact, consumers in the under \$25,000 and \$25,000 to \$50,000 household income brackets identify price as their overwhelming purchasing factor – 71 percent and 70 percent, respectively. Price becomes less of an issue as you go up the income brackets.

63 percent of regular users also prioritize THC potency, as opposed to 33 percent of infrequent users. In fact, infrequent users say CBD potency is more important than THC, underscoring the fact that 52 percent of this subgroup use cannabis to relieve pain.

FIGURE 12

In the last 12 months, what forms of cannabis have you used? *Mark all that apply*.

64%	Smoking the cannabis leaf
47 %	Edibles
32%	Vaping
23%	Topicals, such as oils and creams

FIGURE 13

What form of cannabis do you use *most often*?

51%	Smoking the cannabis leaf
18%	Edibles
14%	Vaping
12%	Topicals, such as oils and creams

FIGURE 14

What are your <u>two</u> most important considerations when purchasing cannabis?

62%	Price
45%	THC potency
35%	Product type, e.g. leaf, edible or oil
28%	CBD potency
14%	Recommendation from others
9%	Familiarity with cannabis plant varietal
7%	Familiarity with brand

I'm still unsure on all the terms, but I think I'm taking five milligrams per piece of chocolate. I know that's the number I need to look for, and I think that's the THC level. I don't really know. I know that I tried this stuff that got recommended to me by the people that worked there, and it's worked, so that's what I stay with.

– Kim, Gladstone, OR

While brand loyalty is not a major driver of consumer preferences today, it is an emerging factor. 61 percent of all cannabis consumers say they will always or most of the time "choose a product from a familiar company" when shopping. This compares with 62 percent who say they will only sometimes or never try something new. As we found in our survey data, price and THC levels of products primarily drive these choices. But, 60 percent of all consumers pay close attention to where and how cannabis is grown or processed. Many of our focus group participants demonstrated a desire to stick with a product that delivers the right reaction for them personally. A company that promotes consistency in price, product growth and processing, and THC/ CBD levels could tap into the growing category of users who see the potential for brand differentiation.

FIGURE 15

All that matters is the cannabis THC and CBD levels. Otherwise, all cannabis products are pretty much the same. The only differences come down to packaging and marketing.

15%	Strongly agree
41%	Somewhat agree
29%	Somewhat disagree
15%	Strongly disagree

FIGURE 16 Spent more than \$500 on cannabis in the last 12 months (by household income)

26%	Less than \$25k	13%	\$75-100k
18%	\$25-50k	13%	\$100-150k
17%	\$50-75k	14%	More than \$150k

How much are consumers spending on cannabis? Here is where the frequency of use among lower-income households has the greatest impact. Without question, consumers with the least amount of disposable income are spending more money on cannabis than any other income bracket. As a result, they are dedicating a much higher percentage of their annual income to support their cannabis use.

Zoot brand has these little hard candies called Zoot Rocks, and I like those better than chewables. Whenever you suck on them and you're absorbing them through your saliva, then they take effect quicker than if I were to ingest them and wait for my stomach to digest them. This shop I usually go by once a week has them so I buy a couple of packs.

- James, Seattle, WA

THE RETAIL EXPERIENCE

Since cannabis was legalized in Colorado, Washington, and Oregon, licensed dispensaries have grown abundant. What's the retail experience like for consumers? For many regular cannabis consumers, the retail experience is really the novelty of legalization. Most of them used cannabis long before legalization and had fairly deep knowledge of the product itself. It's the novelty of going into a licensed dispensary that is the key difference between pre- and post-legalization. What about for our infrequent consumers, those for whom the pre-legalization cannabis "culture" may have seemed foreign? How do they feel when shopping?

FIGURE 17

How do you feel while shopping for cannabis at a retail store? *Mark all that apply.*

57%	Comfortable
36%	Confident
28%	Knowledgeable
28%	Uncertain
18%	Intimidated
14%	Anxious
6%	Embarassed

FIGURE 18 Differences in cannabis shopping between men and women.

I prefer to shop alone

72% Men 45% Women

I feel "uncertain" while shopping

21% Men 39% Women

I feel "confident" while shopping 41% Men 28% Women As with many other questions when it comes to cannabis use, there is a vast difference between regular and less frequent consumers. 72 percent of regular consumers report feeling comfortable while shopping in a dispensary, compared with only 41 percent of infrequent consumers. These infrequent consumers also have much higher feelings of uncertainty (39 percent) and intimidation (26 percent) compared with regular users – 13 percent and 8 percent, respectively. So, at least for our more infrequent consumers, more could be done to improve their retail experience.

Among all cannabis consumers, 62 percent prefer to shop alone and 38 percent like to shop with others. In this instance, it's not necessarily the frequency of use that drives different preferences, although that still registers as regular consumers prefer to shop alone. The key difference is gender.

It's overwhelming if you're not in that space very often. There's a lot of questions to ask. So, if you don't know what you're doing, the people who are in on it have a lot of lingo that they use - CBD or THC and the content of it as far as percentages and stuff. You just don't know what all that is. There's a learning curve.

- Corina, Portland, OR

Owners of licensed dispensaries may want to think about how to approach the retail experience to address these disparities. Perhaps differently branded spaces with more male or female clientele in mind? Or better training for bud-tenders about the feelings different shoppers bring to the dispensary, and how they might change their approach to reduce those feelings of anxiety and uncertainty? As more consumers enter the cannabis market, retail outlets that create the feeling of comfort could build a very loyal customer base.

FIGURE 19 Which is closer to how you shop for cannabis?	
77%	Like shopping for fine wine
23%	Like shopping for cheap beer

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VI. TESTING FOR USE

The issue of how employers screen for cannabis use is something we explored in our in-depth interviews with business representatives responsible for hiring and managing their workforce. Our data on this is qualitative, but it is further validation that employers are struggling with developing new policy for cannabis use in a post-legalization environment. This is particularly true of many so-called "blue collar" industries – heavy manufacturing and construction, for instance – where a desperate need for workers has forced many employers to stop screening job candidates for cannabis. Workers in these sectors often experience chronic pain that requires medication, and many turn to cannabis instead of opioids for relief.

When reviewing our data on cannabis in the workplace it's important to understand that only 55 percent of our cannabis survey respondents are currently working full- or part-time. So, we're analyzing responses from a subgroup of 500 cannabis consumers who are currently working. As with other data provided in this report, the information in this section is intended to provide context to the scale of the issue, and each employer will have to filter the data through their own individual circumstances.

Our research reveals that a quarter of employed cannabis users have used a few or several times during or prior to work over the last 12 months (See Figure 5). This percentage goes up significantly when you solely look at regular users (See Figure 20). The percentages are large enough that employers should be aware of the scale.

FIGURE 20 Over the last 12 months, I have used cannabis several or a few times *while* at work*.

43%	Regular consumers
21%	Occasional consumers
12%	Infrequent consumers

Over the last 12 months, I have used cannabis several or a few times *immediately prior* to work*.

49%	Regular consumers
20%	Occasional consumers
10%	Infrequent consumers

*Data is extracted from only *employed* cannabis users (n=500), not the entire survey sample.

This isn't simply a case of consumers needing cannabis for medical reasons while at work. Of those regular cannabis users who've consumed at work, 42 percent say they did it for recreational purposes. While we didn't capture the industries in which these consumers are working, those who say they've frequently used cannabis at work are more likely to be salaried than hourly employees.

What about testing for cannabis use? While we don't see signs of widespread cheating on tests for cannabis use, it's apparent that consumers experience testing. Forty percent of consumers have stopped using cannabis in order to pass a test; twenty percent of cannabis users have failed a drug test because of cannabis; and nineteen percent have cheated or tampered with a drug test in order to avoid testing positive.

FIGURE 2	21		
Have y	ou do	ne the	following?*
Taken a drug test that checked for cannabis use			
30%		21%	48%
Failed a	drug t	est becau	use of cannabis use
11%	9%		80%
			ith a drug test to or cannabis
10%	9%		81%
Temporarily stopped using cannabis in order to pass a drug test			
20%	20%		60%
Chosen not to apply or interview for a job because it required a drug test that checked for cannabis use			
13%	14%		73%
Yes, more than a year ago			
Yes, in the last 12 months			
No			
*Data is extracted from only <i>employed</i> cannabis users (n=500), not the entire survey sample.			

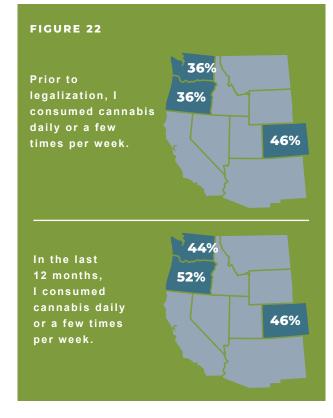
All of this suggests there is evidence of employees consuming cannabis at work or avoiding tests that screen for use. In the case of regular users, the percentage of those consuming periodically at work approaches nearly half of the subgroup. For some employers, this behavior will be distressing. Others who are struggling with meeting their workforce needs may feel more pragmatic about the responses.

VII. DIFFERENCES BETWEEN STATES

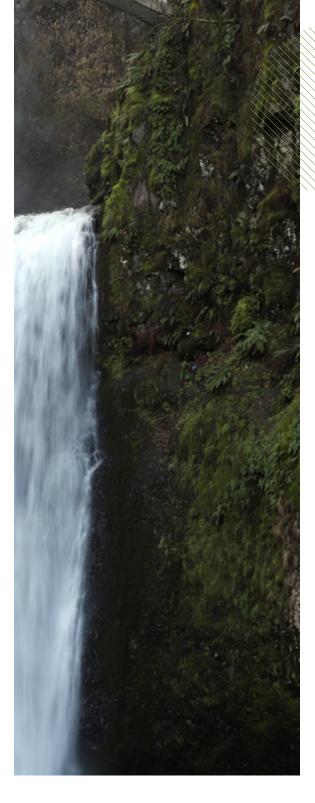
While the survey affords us the opportunity to compare responses from cannabis consumers in Colorado, Washington, and Oregon, we found that much of the data was similar between the three states. The fact that there is little variation in the data gives us a high degree of confidence that what we are seeing reported is accurate. There are only a couple of issues where the gap in responses between the states merits recognition.

DIFFERENCES IN FREQUENCY OF USE

A higher percentage of Oregon consumers report using cannabis regularly – 42 percent – compared with their counterparts in Washington and Colorado – 33 and 35 percent, respectively. Oregon has also seen a much higher percentage increase among regular users pre- and post-legalization.







Among regular users, Oregon saw a 16 percentage-point increase in cannabis consumption after legalization, compared to 8 percent in Washington and no change in Colorado.

PRICE OF CANNABIS

The oversupply of the Oregon cannabis market has been welldocumented⁵. While this oversupply has led to intense pain in a still-developing industry, it has been a boon for consumers. The median price per gram of cannabis in October 2016 was \$10.50; in December of 2018, it was \$4.78⁶.

FIGURE 23

Are you satisfied or dissatisfied with the price of cannabis?

Oregon

76%	Satisfied
24%	Dissatisfied

Washington

70%	Satisfied
30%	Dissatisfied

Colorado

64%	Satisfied
36%	Dissatisfied

The low prices in Oregon also show up in the questions we asked consumers about how much they've spent on cannabis in the last 12 months. While just 14 percent of Oregon consumers have spent more than \$500 per year, 23 percent of Colorado consumers have spent beyond that number. Oregon consumers as a whole are somewhat heavier users – a mean of 12.5 days per month versus 11.7 in Colorado. But, that small difference can't alone account for the difference in the amount spent on cannabis.

Clearly, the low prices in Oregon are saving consumers money. Is it also driving demand higher? Given the growth in consumption post-legalization and the fact that price is such a key factor in purchasing, it's likely a factor.

DO REGULATORY DIFFERENCES CHANGE CONSUMER BEHAVIOR?

The development of the legal cannabis markets in Colorado, Washington, and Oregon all started with very different policy prescriptions. This led to a regulatory framework that alters the landscape in some profound ways – from the treatment of out-of-state investment to whether companies can vertically integrate growing, manufacturing, distribution, and retail operations.

6 Oregon Liquor Control Commission

One of the key questions surfaced during our interviews with industry, regulatory, and advocacy leaders is this: will vertical integration – or lack thereof – influence consumer behavior? The theory is that the economic incentives for the industry are different in these two regulatory structures. In markets that are not allowed to vertically integrate, the economic incentive would be to innovate within your space. For instance, if you are a grower or manufacturer you will build market share by differentiating through product development. In markets that are allowed to vertically integrate, however, the economic incentives may be to construct the most efficient supply chain. Would disparate vertical integration rules between two states lead to different consumer behavior?

At this point in the development of the cannabis markets, our data suggest that regulatory differences have had little effect on consumers when it comes to price, the variety of cannabis products available, and the location of retail stores. Figure 24 details consumer opinion about price in each of the three states, their feelings about variety and location of stores.

FIGURE 24 Are you satisfied or dissatisfied with the following?

The variety of cannabis products available to you at licensed retailers:

95%	Oregon Satisfied
96%	Washington Satisfied
95%	Colorado Satisfied

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The location of cannabis retail stores where you live:

91%	Oregon Satisfied
95%	Washington Satisfied
84%	Colorado Satisfied

When we did hear differences of opinion it was in our focus groups, where some consumers described personal preferences between shopping for cannabis in Oregon versus Washington. Many of our Seattle focus group participants prefer the retail experience in Oregon, where they're allowed to directly interact with cannabis leaf.

I like smelling it in Oregon. That makes it a lot easier, and touching it, knowing if it's sticky or not. That's why I don't like it up here in Washington, because you can only feel the bag, or you're looking at a little glass jar. How are you supposed to tell anything from that?"

– Josh, Seattle, WA

⁵ Oregon cannabis: Who's still standing after a year of pain, *Portland Business Journal*, February 14, 2019

VIII. CONCLUSION

The multi-billion-dollar cannabis industry is in its infancy, and much of the attention so far has been on the regulatory and industry dynamics shaping market development. This is understandable given the opportunity for return on investment, the patchwork of legal and regulatory frameworks that dictate supply chains, and the shadow of federal legalization that hangs over every state action.

But less attention has been paid to the consumers themselves, and we hope this report has helped provide some insight into this group. Early industry revenue and growth is clearly being driven by regular consumers of cannabis, many of whom used prior to legalization. But when you think about cannabis as a replacement for alcohol or opioids, the size of the market takes on a much different look and feel. The consumer who seeks relief from stress or pain can now address those issues through easy access to numerous retail outlets and an abundance of products, all tailored to fit their individual preference.

As the industry consolidates, the supply chain is allowed to vertically integrate – subject to regulatory approval – and cannabis becomes more acceptable in the mainstream of America, strong brands should find consumers receptive to their marketing. As we've seen in other markets, strong brands can drive a premium. So, today's consumer focus on price may give way to a willingness to pay more for a brand that delivers a consistent reaction, fits their consumer preferences, or is simply successful in identifying and connecting with the values of its core customer.

All of this will take time. But, as we stated at the beginning of this report, first-movers in new markets are generally rewarded. So, the rush is on.

