

CANNABIS INTELLIGENCE BRIEFING

US Legal Cannabis: Driving \$40 Billion Economic Output



Executive Summary

US Legal Cannabis: Driving \$40 Billion Economic Output

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**The legal cannabis industry in the
United States will contribute nearly
\$40 billion in total economic output and
create a total employment effect
of almost 414,000 full-time equivalent
workers by 2021**

Letter From the Editor

Dear Colleagues,

For elected and appointed public officials, what's not to like about the cannabis industry? By 2021 the business will have driven the creation of 413,988 full-time-equivalent jobs in legal states, a \$39.6-billion contribution to the mainstream US economy, as well as millions in general sales taxes and cannabis-related revenue enriching local and state government treasuries.

In fact, there's a lot to like about the industry for government officials now that cannabis is:

- Shedding the stigma which it acquired as a strictly scheduled controlled substance.
- Showing its health value to gravely ill patients and typical adult consumers alike.
- Transitioning to less obtrusive forms of consumption than smoking.
- Becoming a positive, tax-paying presence in shopping districts around the country.

That's why, after years of legalization spreading the hard way-through the arduous voter initiative process-in the last 12 months both large states (Pennsylvania and Ohio) and small (West Virginia) have moved to legalize medical use via legislative action. And these are also reasons that regulators in new adult-use states are working overtime to get businesses licensed and operating on time (California in January 2018) or even ahead of schedule (Nevada in July 2017).

It is a phenomenon as American as The Declaration of Independence with its claim of the right of the citizenry to "...institute new government, laying its foundation on such principles and organizing its powers in such a form, as to them shall seem most likely to effect their safety and happiness."

Ironically, the cannabis industry will have an especially positive effect on local economies and job-creation due to federal restrictions on interstate commerce and foreign trade.

Because of federal prohibition, each state is having to build its own cannabis-industry infrastructure and supply chain. That means more jobs in total, and a more broadly spread economic contribution than if, for example, California were supplying the whole country as in the illicit trade.

Because the United States made anti-cannabis laws a pre-condition of participating in the post-WWII world trading system, it will be years – even after the end of federal prohibition stateside – before US companies and their workers will face lower-wage competition from abroad.

I take both of those effects of federal prohibition as further evidence that every cloud has a silver lining!



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ACKNOWLEDGEMENTS

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Arcview Market Research in partnership with BDS Analytics

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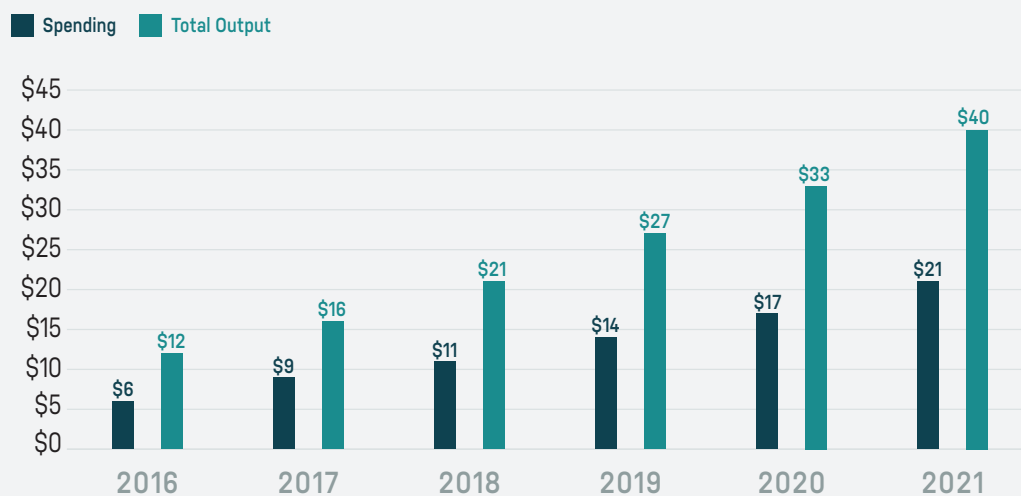
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The Economic Upside of Legal Cannabis

Thomas Carlyle dubbed economics “The Dismal Science”, but there is nothing dismal about the positive economic impact legalizing cannabis will have in the years ahead: creating jobs, generating tax revenue, reducing incarceration and medical costs, and more. It’s clear that legal cannabis will be a major contributor to the health of the US economy in the next five years. Our analysis suggests it will generate \$20.8 billion in direct spending in 2021, and \$39.6 billion in total contribution after factoring in what economists call “indirect” and “induced” effects.

Economists build models to assess the total economic impact of an industry beyond the direct dollars spent on the core product because each of those dollars in turn is either paid out to employees, contractors, and vendors, or taken out as profits and spent or reinvested by owners. Direct output creates indirect and induced outputs that vary by industry, based on how the companies in the business spend their revenue. Those direct, indirect, and induced outputs equal total output (see Chapter 4 for the results of the model created for this report and Appendix A for details on the methodology used).

Legal Cannabis Spending and Total Output (In Billions)



Source: Cannabis Intelligence Briefing

States that have legalized and regulated cannabis use will see a boom in jobs created over the next several years (see Chapter 2 for details). In 2016, direct cannabis industry employment across legal cannabis states totaled nearly 89,500 full-time equivalent (FTE) workers. This year, direct industry employment is forecast to rise to more than 121,000 FTEs, with total direct, indirect, and induced employment of more than 171,000 FTEs.

By 2021, direct cannabis industry employment will top 291,500 FTE jobs, with a total employment effect of nearly 414,000 FTEs across all legal cannabis states. Many of those jobs will be in well-paying professions such as software development, finance, law, scientific research, and the like. And those currently in the retail or cultivation end of the illicit business will have the opportunity to transition into jobs with health benefits and 401k plans.

As a result of their efforts to regulate legal cannabis in their states, those governments will generate as much as \$1.4 billion in wholesale, excise, and cannabis-specific sales taxes in 2017 as well as around half a billion dollars in general sales taxes on cannabis products and tens of millions in non-tax revenue such as application

and licensing fees. Taxes and fees paid by cannabis businesses are already accounted for in the economic contribution model presented in this report but those paid by consumers will have additional impact beyond their base amounts as governments spend that money on goods and services (see Chapter 3 for a more detailed discussion of governmental cannabis revenue).

These estimates of the economic effects of the legal cannabis market on the overall US economy are likely conservative. Our study uses a single-region I-O model using IMPLAN data, which tracks 536 unique industries and 24 institutional sectors, to derive output multipliers for the cannabis industry in the two largest cannabis markets in 2017—Colorado and California (see Appendix A for a

It's clear that legal cannabis will be a major contributor to the health of the US economy in the next five years

technical description of methodology and Appendix B for a glossary of terms used here).

Those output multipliers for the retail, cultivation, and manufacturing sub-sectors were in the 2.2 to 2.45 range in both states (see Chapter 4), and produced through the I-O model an estimate of total economic contribution in 2017 in Colorado of \$3.0 billion (or 1.88 times our projected spending of \$1.6 billion) and in California \$5.8 billion (or 1.94 times our projected spending of \$3.0 billion). We applied the lower of those contribution multiples to our spending estimates for other states to be conservative in estimating national impact.

That was purposeful: to avoid the temptation to which some have succumbed to overstate the positive effects of cannabis legalization to encourage legislators and regulators to liberalize existing laws. Still, the results presented here are plenty positive—and present a compelling picture of the benefits to states that move to legalize cannabis.

Plus, there are enormous if unquantifiable benefits to cannabis legalization, including reduced law enforcement, judicial, and incarceration costs, and the related ability of

those working in those fields to focus on more important issues. Thousands of individuals will no longer have their lives and the lives of their families disrupted by cannabis-related legal action. There is some indication that legal medical cannabis can reduce public health costs. And the stigma that prompted many cannabis consumers to be considered, and to consider themselves, outside the law will disappear. The positive societal and economic impacts are difficult to forecast since nothing like it has happened since the end of alcohol prohibition in the 1930s.

Another parallel with the end of alcohol prohibition is the surge in government revenues that came with the moving

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of an underground economy into the mainstream where companies could be charged fees for operating licenses, and both companies and consumers could be taxed. Those government revenues in turn generate economic output as salaries are paid to government employees, and investments are made in public infrastructure.

Economic effects such as increased output, hiring and investment are historically difficult enough to measure for the likes of the Commerce Department and state-level equivalents, much less project and forecast. The cannabis industry, of course, faces the huge wild card of further legalization at the state level, and ultimately the lifting of federal prohibition. Medical legalization in Texas or adult-use in Florida, for example, would drive enormous gains in economic output, employment, and government revenue.

But whatever the caveats and uncertainties, we currently project that there will be 35 states with at least medical legalization by 2021. They will be making nearly a \$40-billion contribution to the national economy, directly or indirectly supporting nearly 414,000 FTE jobs, and pouring more than \$4 billion in taxes and fees into state coffers. No other industry offers that kind of upside to the US economy.

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“induced” effects**

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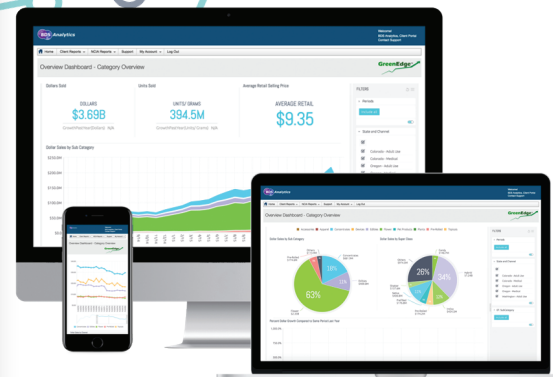
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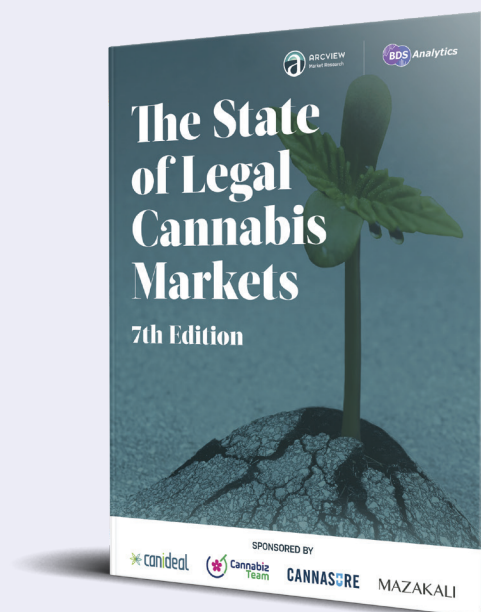
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