

# **THE ECONOMIC IMPACT OF A STRONG REGULATORY FRAMEWORK FOR MEDICAL MARIJUANA IN MICHIGAN**

By DR. GARY WOLFRAM

*President of Hillsdale Policy Group, Ltd.; William E. Simon Professor of Economics  
and Public Policy; and the Director of Economics at Hillsdale College*

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## EXECUTIVE SUMMARY

Proposals to reform Michigan's [medical marijuana law of 2008](#) through a regulatory framework that establishes independent, separate tiers of commercial enterprises have the potential to protect consumers by eliminating black market sales of medical marijuana as well as generate significant revenue for the State of Michigan and its citizens. This potential economic benefit comes as proponents of this legislative framework say it will protect patients' access to safe medicine, promote public safety, increase accountability and create a level playing field for all businesses to compete fairly. The proposed legislation provides a needed clarification to Michigan's medical marijuana law, which has [remained vague](#) since voters passed it in 2008.<sup>1</sup>

The Michigan Legislature is considering a package of bills – House Bills 4209, 4210 and 4827 – that will establish the framework for a responsible medical marijuana marketplace. Using the latest available data from the State of Michigan and other states, as well as information from businesses in the industry, this report is intended to provide policymakers and the public with a reasonable estimate of the economic impact of creating a marketplace for medical marijuana with clear guidelines so all businesses can compete fairly.

**This analysis estimates that a robust free market medical marijuana industry with fair and open competition, as envisioned in the proposed legislation, can generate between \$44.3 million to \$63.5 million a year in revenue for the State of Michigan.**

The formula recommended in House Bills 4209 and 4210 will disburse the funds to local municipalities, counties, county sheriffs and the State of Michigan General Fund, allowing Michigan citizens to receive benefits in the form of critical services.

This revenue estimate is especially significant in light of the recent focus on infrastructure problems such as Flint's water supply and the state's roads and bridges, as well as attempts to deal with the financial difficulties of the Detroit Public School system.

House Bills 4209, 4210 and 4827 could also potentially generate an estimated 10,000 new jobs in Michigan in the early years of implementation if the Michigan experience reflects that of other states. Some, if not many, of these jobs could go to people who are hard to employ or otherwise unemployable.

The revenue of \$44.3 million to \$63.5 million a year and resulting job creation are contingent on the establishment of a strong medical marijuana framework that will promote

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<sup>1</sup> MLive, March 18, 2012. <http://www.annarbor.com/news/opinion/legislature-needs-to-clarify-medical-marijuana-law-not-make-it-stricter/>

entrepreneurship and a fair and free marketplace as envisioned in House Bills 4209, 4210 and 4827.

As the analysis looks only at revenue generated from sales to registered patients in Michigan and does not factor in additional potential sources of revenue, such as licensing charges for commercial enterprises, the economic impact in this analysis can be considered conservative.

## BACKGROUND

The Michigan Department of Licensing and Regulatory Affairs has determined that Michigan has [182,091 registered medical marijuana patients](#) and 34,269 registered caregivers, as of December 2015.<sup>2</sup>

Under current law, Michigan allows patients with any one of 16 medical conditions to use marijuana for medicinal purposes with their physician's recommendation. More than 92 percent of Michigan patients use medical marijuana for severe and chronic pain. More than 23 percent use medical marijuana for severe and persistent muscle spasm, and nearly 5 percent of medical marijuana patients use it for cancer. (The percentages add up to more than 100 percent because many patients cite multiple conditions as reasons for taking medical marijuana.)<sup>3</sup>

It is important to note that under current Michigan law, selling and buying medical marijuana remains technically illegal. Some municipalities have passed ordinances allowing retail outlets to operate in a kind of legal grey area, where law enforcement generally looks the other way or de-prioritizes acting on medical marijuana. Many more communities across Michigan ban retail operations entirely.

As of early 2016, the Michigan Municipal League lists [13 communities](#) as having local medical marijuana ordinances.<sup>4</sup> At least 19 communities have decriminalized marijuana or voted to make marijuana possession the lowest law enforcement priority.<sup>5</sup>

Where retail outlets or provisioning centers are allowed to operate, no state sales tax – currently 6 percent – is collected.

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<sup>2</sup> Michigan Department of Licensing and Regulatory Affairs, Fiscal Year 2015 report. [http://www.michigan.gov/documents/lara/Medical\\_Marihuana\\_Act\\_-\\_FY\\_2015\\_Statistical\\_Report\\_MCL\\_333.26426\\_510088\\_7.pdf](http://www.michigan.gov/documents/lara/Medical_Marihuana_Act_-_FY_2015_Statistical_Report_MCL_333.26426_510088_7.pdf)

<sup>3</sup> Michigan Department of Licensing and Regulatory Affairs, Fiscal Year 2015 report.

<sup>4</sup> Michigan Municipal League

<sup>5</sup> The Daily Chronic, Nov. 4, 2015. <http://www.thedailychronic.net/2015/49190/michigan-two-more-cities-vote-to-legalize-marijuana/>

### *Michigan's current medical marijuana law*

The Michigan Medical Marijuana Act, as it is formally known, was initiated by Michigan voters in November 2008.<sup>6</sup> The law legalized the growth, possession and use of marijuana to treat certain debilitating conditions. The law allows Michigan residents to be issued special licenses by the Department of Licensing and Regulatory Affairs upon the recommendation of a certified doctor that allows them to possess up to 2.5 ounces of marijuana in order to treat symptoms associated with certain debilitating conditions without the fear of prosecution. The law further allows individuals in possession of a certified license, or their caregivers, to grow up to 12 marijuana plants in an enclosed, locked facility. The law bars the use or possession of marijuana in public areas.

The law makes no mention of the role that municipalities should play in the regulation of medical marijuana. Because of this silence, the enforcement of the law has been unequal, unpredictable and disparate throughout Michigan, with a [patchwork of local ordinances](#) – where they exist – that vary from place to place.<sup>7</sup>

Furthermore, the current law does not mention roles, responsibilities and regulations affecting any entity other than patient and caregiver, and is silent on the issue of commercial enterprises such as growers (manufacturing), processors, testing facilities, delivery services and retailers.<sup>8</sup> The Michigan Supreme Court has ruled on [nine separate occasions](#) that the law contains too many loopholes and has urged the state Legislature to act and address these loopholes by creating a clear regulatory framework and a consistent standard for enforcement across the state.<sup>9</sup>

### *Michigan's proposed medical marijuana legislation 2015-2016*

Bills passed by the state House in October 2015 (House Bills [4209](#), [4210](#) and [4827](#)) attempt to address these concerns by creating a new [comprehensive regulatory framework](#) for medical marijuana in the state.<sup>10</sup> The passage of these bills is significant because they represent the first concerted effort at significantly clarifying Michigan's 2008 law with a real chance of passage and, ultimately, becoming law.

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<sup>6</sup> Initiated Law 1 of 2008, MCL 333.26421-333.26430.

<sup>7</sup> Marijuana Business Daily, Dec. 18, 2015. <https://mjbizdaily.com/detroits-new-zoning-ordinance-tough-on-dispensaries/>

<sup>8</sup> Michigan Medical Marijuana Act, Initiated Law I of 2008.

<sup>9</sup> MLive, July 28, 2015. [http://www.mlive.com/lansing-news/index.ssf/2015/07/michigan\\_supreme\\_court\\_inconsi.html](http://www.mlive.com/lansing-news/index.ssf/2015/07/michigan_supreme_court_inconsi.html)

<sup>10</sup> Associated Press, Oct. 17, 2015

The bills lay out a new framework to clarify regulations already in place, as well as to expand upon them in several important ways. These include allowing the limited sale and purchase of marijuana by people holding a certified license; imposing an excise tax of 3 percent on all medical marijuana retailers; allowing municipalities to pass ordinances authorizing the establishment of medical marijuana dispensaries and facilities; and creating a new system to track the sale and purchase of marijuana.

The new regulations, which would be enforced by the Department of Licensing and Regulatory Affairs in conjunction with the Department of Treasury, aim to close many of the loopholes contained in current medical marijuana law and to create a more uniform, comprehensive system across the state.

A fundamental regulatory mechanism in these bills is the establishment of separate, independent “tiers” of commercial enterprises. These tiers – or categories – are provisioning centers (retailers), testing facilities, growers, processors and secure transporters (delivery services). None of these enterprises currently exist or are allowed under current state law. Supporters of this component, including medical marijuana businesses themselves, say a [tiered system is critical](#) to safety, transparency and competitive fairness because everyone will be held accountable at each stage of the “chain of custody” of the medical marijuana product. The tiered system will encourage businesses to play by the same set of rules.<sup>11</sup> Several major industries in Michigan use a tiered system, including in the auto and alcohol sectors.

The proposed legislation also spells out what [rules](#) Michigan’s regulatory agency, the department of Licensing and Regulatory Affairs, must have in place to further enhance accountability, transparency and patient and public safety:

“The rules must include, among other things, appropriate standards for facilities; minimum levels of insurance for licensees; establish testing standards; provide for the levy and collection of fines for violations of the act or rules; establish chain of custody standards and standards for waste disposal; establish procedures for securely and safely transporting marijuana between marijuana facilities; and establish labeling and packaging standards, procedures, and requirements for marijuana sold or transferred through provisioning centers (including a prohibition on labeling or packaging intended to appeal to or has the effect of appealing to minors), and marketing and advertising restrictions for marijuana products and facilities.

The rules must also establish daily purchasing limits at provisioning centers for patients and caregivers to ensure compliance with the Michigan Medical Marijuana Act. Further, the rules must establish the maximum tetrahydrocannabinol (THC) levels for marijuana-infused products

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<sup>11</sup> Hybrid-Life, Sept. 16, 2015.

sold or transferred through provisioning centers as well as restrictions on edible marijuana-infused products to prohibit shapes that would appeal to minors.”<sup>12</sup>

NOTE: Michigan voters may be asked to vote in the 2016 general election on whether to legalize marijuana for recreational use. The proposed legislation described in this analysis, while focused on medical marijuana, is expected to provide the regulatory blueprint for the production, distribution and sale of all marijuana products, including recreational marijuana should voters approve the question in 2016. It is reasonable to assume that should marijuana be decriminalized, the resulting market would be significantly larger than the market for just medical marijuana and the economic impact would be greater. Because passage of marijuana decriminalization is not a foregone conclusion, this analysis focuses only on medical marijuana.

### *Protection of the Consumer*

Under current law, patients who use medical marijuana can obtain their medication either through growing it on their own, or by getting it from a caregiver. A significant problem with this is a patient may not have the capability of growing his or her own marijuana for a number of reasons, such as lack of expertise, space, proper storage facilities, or time. It may also be difficult to find a caregiver who is willing and able to grow marijuana, as a patient may only have one caregiver and no caregiver can serve more than five patients.<sup>13</sup>

These constraints create incentives for black market activity in the production and sale of marijuana. This leads to a number of problems, including opportunities for organized crime to earn economic profit, but of particular interest here is patients will lack assurance that the marijuana they are purchasing is safe or of the proper dosage. The proposals would provide a clear, legal, regulated market in marijuana that would eliminate the dangers that currently exist for patients who are unable to find a legal caregiver.

### ECONOMIC IMPACT ESTIMATION

To plausibly estimate the economic impact of a medical marijuana industry in Michigan that is regulated under the tiered system proposed in pending legislation, this analysis:

- Looked at publicly available information compiled by Michigan’s Department of Licensing and Regulatory Affairs;
- Compiled information and estimates provided by key sources within Michigan’s medical marijuana industry;

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<sup>12</sup> House Fiscal Analysis, House Bills 4209, 4210 and 4827, Jan. 4, 2016

<sup>13</sup> MCL 333.24246

- Reviewed sales data from other states with medical marijuana available to registered patients in a multi-tiered system; and
- Reviewed available market research, with 23 states and the District of Columbia now allowing medical marijuana use by registered patients.

[Michigan currently ranks fourth](#) among all states that allow medical marijuana, with 23.2 registered patients for every 1,000 adult residents in the state.<sup>14</sup> For this analysis, we used data from comparison states, Colorado and Nevada, which have participation rates of 25.7 registered patients per 1,000 adult residents and 6.1 per 1,000 adult residents, respectively. Colorado has the second highest participation rate of all medical marijuana states, while Nevada ranks 13<sup>th</sup>. More importantly, these states have tiered systems that bear close resemblance to proposals in Michigan. Given Michigan's high participation rate, our findings are consistent with sales data in these and other states and it is reasonable to conclude the following:

1. Medical marijuana under a strong, regulatory framework will allow patients to have safe access to their medicine and may even increase patient access to their medicine.
2. Medical marijuana produced and sold through a licensed, transparent and accountable system will promote business growth and competition.
3. In light of the potential for growth in patient use and business and commercial activity, medical marijuana under a strong regulatory framework should have a robust impact on Michigan's economy in the near future and long term.

NOTE: The economic impact analyzed in this report is conservative because it looks only at revenue generated from sales of medical marijuana to registered patients in Michigan. The revenue number can reasonably be expected to be larger when factoring in licensing and other charges for prospective commercial enterprises, which Michigan's proposals leave to the discretion of the Department of Licensing and Regulatory Affairs once Michigan's proposals become law. Different states have diverse fee schedules.<sup>15</sup> For example, Nevada assesses a \$5,000 non-refundable application charge, while Colorado's application charges alone range from \$7,000 to \$15,000 and initial licenses range from \$5,200 to \$13,200.

#### *Tax Revenue Estimation*

The passage of pending legislation in Michigan as described above will create a transparent, regulated and licensed medical marijuana industry where the following factors are established:

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<sup>14</sup> Marijuana Business Daily, Feb. 1, 2016. <http://mjbizdaily.com/chart-week-state-rankings-medical-marijuana-patients-per-capita/>

<sup>15</sup> Canna Advisors: [http://cannaguardsecurity.com/wp-content/uploads/2015/02/State-by-State-Cannabis-Regs-Guide\\_CBT.pdf](http://cannaguardsecurity.com/wp-content/uploads/2015/02/State-by-State-Cannabis-Regs-Guide_CBT.pdf)

- Patients have ready access to their medicine.
- All medical marijuana products are tested for safety and quality.
- Businesses can operate under a set of clear, consistent rules across the state that promotes competition and a level playing field.
- All commercial enterprises are licensed, and employees undergo background checks.
- The collection of revenue and other information is streamlined and consistent.
- Revenue for the state will be generated from a 3-percent excise tax on medical marijuana sales, under HB 4209, and the application of a 6-percent [state sales tax](#).

For a baseline, we assume that the number of registered patients in Michigan, as reported in FY 2015, is around 182,000, with two-thirds of them buying their medicine from licensed retailers – as allowed under the proposed legislation – and the remaining one-third growing their own medicine or getting it from caregivers. This analysis assumes that 67 percent of Michigan patients will buy their medicine from licensed retailers or provisioning centers with the implementation of a regulatory framework as envisioned in proposals before the Legislature.

This analysis addresses five variables to calculate the economic impact estimates of a regulated, tiered medical marijuana industry in Michigan:

1. The number of registered patients in Michigan
2. The percentage of medical marijuana patients who will purchase their medicine from licensed provisioning centers (the retail tier)
3. The average quantity each patient purchases each month, estimated at one ounce per month, according to Michigan medical marijuana business owners.
4. Average retail price paid per ounce, estimated at around \$285 per ounce, a price consistent with pricing in other states and in Michigan, including black-market pricing.<sup>16</sup>
5. Gross retail sales of non-cannabis items, defined as “paraphernalia” under current Michigan law, averaging 18 percent. This average is based on the percentage of gross retail sales at dispensaries in other states with the regulated retail sale of medical marijuana.
6. The tax rate and distribution of revenue is as determined in HB 4209: a 3-percent tax rate on the gross retail income of provisioning centers that is distributed 30 percent to municipalities in which the center is located, 40 percent to the counties in which the center is located, 5 percent to county sheriffs, and 25 percent to the state General Fund.
7. The 6-percent retail sales tax is applied to the retail sale of medical marijuana

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<sup>16</sup> Forbes, May 12, 2015. <http://www.forbes.com/sites/frankbi/2015/05/12/the-most-and-least-expensive-states-to-buy-marijuana/#3709cce527ed>



The revenue calculation is relatively straightforward as shown in the tables below. Based on these variables, we estimate the following revenue amounts for Michigan with a tiered regulatory framework:

- ✓ The industry would generate more than \$44.3 million a year based on the current patient population, with the assumption that two-thirds of them would buy from a licensed provisioning center.
- ✓ If the proportion of current registered patients buying from licensed medical marijuana retailers increases to 80 percent, the revenue for Michigan exceeds \$52 million.
- ✓ We further assume that a more regulated, accountable and transparent medical marijuana system, with clear and consistent protections for patients and guidelines for businesses and law enforcement, will result in an increase in the number of registered patients. Should the number of registered medical marijuana patients in Michigan increase by 20 percent, to around 219,000 patients, the revenue for Michigan would be \$63.5 million a year.

The following is a more detailed breakdown of the economic impact of the proposed legislation, and the benefits to local communities.

### Estimated Annual Revenue with 67% via Provisioning Centers

<i>Michigan</i>	Registered Patients	If 67% of patients buy from provisioning centers	Ounces per year* (average estimate)	Medical Marijuana Sales @ \$285 per oz	Paraphernalia Sales @ 18% (average estimate)	Annual gross retail sales
Fiscal Year 2015	182,091	122,001	1,464,012	\$417,243,420	\$75,103,816	<b>\$492,347,236</b>

\*Avg. 1oz per patient per month

<i>Annual Tax Revenue on Med. Marijuana Sales</i>	
3% Gross Retail Income Tax	\$14,770,417
6% Sales Tax	\$29,540,834
<b>Total Revenue</b>	<b>\$44,311,251</b>

<i>Distribution of 3-percent tax on gross retail income of provisioning centers</i>		
		<b>\$14,770,417</b>
<b>Municipalities</b>	<b>30%</b>	\$4,431,125
<b>Counties</b>	<b>40%</b>	\$5,908,167
<b>County Sheriffs</b>	<b>5%</b>	\$738,521
<b>State General Fund</b>	<b>25%</b>	\$3,692,604

### Estimated Annual Revenue with 80% via Provisioning Centers

<i>Michigan</i>	Registered Patients	If 80% of patients buy from provisioning centers	Ounces per year* (average estimate)	Medical Marijuana Sales @ \$285 per oz	Paraphernalia Sales @ 18% (average estimate)	Annual gross retail sales
Fiscal Year 2015	182,091	145,673	1,748,076	\$498,201,660	\$89,676,299	<b>\$587,877,959</b>

\*Avg. 1oz per patient per month

<i>Annual Tax Revenue on Med. Marijuana Sales</i>	
3% Excise Tax	\$17,636,339
6% Sales Tax	\$35,272,678
<b>Total Revenue</b>	<b>\$52,909,017</b>

<i>Distribution of 3-percent tax on gross retail income of provisioning centers</i>		
		<b>\$17,636,339</b>
<b>Municipalities</b>	<b>30%</b>	\$5,290,902
<b>Counties</b>	<b>40%</b>	\$7,054,536
<b>County Sheriffs</b>	<b>5%</b>	\$881,817
<b>State General Fund</b>	<b>25%</b>	\$4,409,085

**Estimated Annual Revenue with 80% via Provisioning Centers with 20% Increase in Patients**

<i>Michigan</i>	Registered Patients	If 80% of patients buy from provisioning centers	Ounces per year* (average estimate)	Medical Marijuana Sales @ \$285 per oz	Paraphernalia Sales @ 18% (average estimate)	Annual gross retail sales
Fiscal Year 2015	218,509	174,807	2,097,684	\$597,839,940	\$107,611,189	<b>\$705,451,129</b>

*Avg. 1oz per patient per month*

<b>Annual Tax Revenue on Med. Marijuana Sales</b>	
<b>3% Excise Tax</b>	\$21,163,534
<b>6% Sales Tax</b>	\$42,327,068
<b>Total Revenue</b>	<b>\$63,490,602</b>

<b>Distribution of 3-percent tax on gross retail income of provisioning centers</b>		
		<b>\$21,163,534</b>
<b>Municipalities</b>	<b>30%</b>	\$6,349,060
<b>Counties</b>	<b>40%</b>	\$8,465,414
<b>County Sheriffs</b>	<b>5%</b>	\$1,058,177
<b>State General Fund</b>	<b>25%</b>	\$5,290,884

Under the scenarios outlined above, the revenue from Michigan’s 6-percent sales tax to the School Aid Fund, local municipalities and revenue sharing (separate from the 3-percent in HB 4209 and 4210) is as follows:

- Under Michigan's Constitution, 60 percent of the revenue from the first 4 percent of the sales tax rate and 100 percent the revenue of the last 2 percent of the sales tax rate goes to the School Aid Fund, which is 4.4 percent of retail sales or 73.3 percent of the sales tax revenue (Article IX, Section 11). Based on this formula, the School Aid Fund would receive between \$21.65 million and \$31.02 million in increased revenue per year.
- Under Michigan's Constitution, 15 percent of the revenue from the first 4 percent sales tax rate goes to cities, villages, and township, which is .6 percent of retail sales or 10 percent of the sales tax revenue (Article IX, Section 10). Based on this formula, Michigan’s cities, villages and townships would receive between \$2.95 million and \$4.23 million in increased revenue per year.
- Statutory revenue sharing requires that up to 21.3 percent of the revenue from the first 4 percent sales tax rate goes to cities, villages, and township, which is .852 percent of retail sales or 14.2 percent of the sales tax revenue (MCL 141.901). Based on these assumptions, revenue sharing with Michigan’s cities, villages and townships would increase by between \$4.19 million and \$6.01 million per year.

## *Fee Revenues*

In addition to the taxes levied under HB 4209 there will be an initial license application fee and a regulatory assessment. The regulatory assessment will be collected annually from licensed growers, processors, provisioning centers and secure transporters. The purpose of the fees and assessments is to pay for the state's cost of regulating the industry as well as funding substance use disorder prevention, education, and treatment programs and will be determined by the state's costs. The regulatory assessment for a Class A grower license (no more than 500 plants) could not exceed \$10,000.

As the amount of the fees will offset state expenditures on the medical marijuana program and thus will not increase the ability to fund other state programs this analysis does not attempt to estimate the revenue from these fees.

## *Employment Estimates*

As noted earlier, this analysis extrapolates its findings from models in several states, most notably Colorado, whose multi-tiered regulated model provides a useful blueprint. While many states do not track medical marijuana job statistics, this analysis uses data from states that do, media reports and extrapolates that the [average dispensary typically requires five to 10 employees](#).<sup>17</sup>

In 2012, Colorado voters approved fully legalizing recreational marijuana. The state continues to track medical marijuana retail outlets, and as of February 2016, reported [517 medical marijuana dispensaries](#), 754 cultivators and 204 infused products manufacturers.<sup>18</sup>

Colorado's medical marijuana sector employs thousands of people in good-paying jobs.<sup>19</sup> An entry level bud-trimmer, for example, can expect to be paid at least \$15 an hour.<sup>20</sup> An operations supervisor at a marijuana facility can expect to make between \$50,000 to \$80,000 a year.<sup>21</sup> As of 2014, the most recent full year for which data is available, Colorado reported 6,600 people working in the medical marijuana sector alone.<sup>22</sup>

Before Colorado fully legalized recreational marijuana in 2012, the state had 108,526 registered patients. For just medical marijuana, Colorado reported monthly sales of around \$40 million.<sup>23</sup>

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<sup>17</sup> The Street, April 4, 2014.

<sup>18</sup> Colorado Department of Revenue.

<sup>19</sup> Marijuana Business Daily, May 5, 2014.

<sup>20</sup> Natural Society, May 23, 2014.

<sup>21</sup> WeedHire 2015 employment report.

<sup>22</sup> Colorado Marijuana Enforcement Division; 9 News, Feb. 27, 2015.

<http://www.9news.com/story/news/local/politics/2015/02/27/colorado-marijuana-data/24122963/>

<sup>23</sup> Denver Post, Oct. 9, 2015

For perspective, Colorado reported sales of 74 tons of marijuana flower in the state in 2014, of which only 19 tons were sold as “recreational,” indicating medical marijuana represents a larger share of the overall marijuana market.<sup>24</sup>

Given Michigan has twice the population of Colorado, the economic and jobs impact would be conceivably larger, with an estimated 10,000 jobs in Michigan being created after passage of House Bills 4209, 4210 and 4827.

Also of note is the experience of medical marijuana in Nevada.

In 2000, voters in Nevada approved medical marijuana. Dispensaries, however, were prohibited for years, much like Michigan. In 2013, Nevada finally allowed dispensaries to open, and the first dispensary opened in 2015.<sup>25</sup> In August 2015, 437 applications were submitted to the state to operate dispensaries, growing, production facilities and testing labs.<sup>26</sup> Each applicant paid a \$5,000 non-refundable application fee, and had to document \$250,000 in liquid assets ready to begin operations. Nearly one-third of applicants listed medical doctors as owners of the prospective business. So far, Nevada has already approved 371 applicants – 55 of them dispensaries, the remainder related businesses.<sup>27</sup> This analysis estimates at dispensaries alone, Nevada will begin to immediately employ between 275 and 550 people (with each dispensary employing five to 10 people). Most of the remaining businesses approved in Nevada are farming or growing operations (182) and processors (117). Using estimates that each business would require an average of 10 employees, the number of jobs in these two sectors is 1,352. This brings the range of jobs from Nevada’s initial round of license approvals to between 1,627 and more than 1,900 with a population about one-fourth that of Michigan.

## CONCLUSION

Medical marijuana proposals currently before the Michigan Legislature represent the most comprehensive effort to date to provide clarity and certainty to patients, their families and businesses that want to provide safe products to their customers.

Passing this regulatory framework, anchored by a tiered structure of independent, separate categories of commercial enterprises has the potential to generate significant revenue for the State of Michigan.

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<sup>24</sup> Colorado Marijuana Enforcement Division; 9 News, Feb. 27, 2015.c

<sup>25</sup> The Cannabist, July 13, 2015. <http://www.thecannabist.co/2015/07/31/nevada-medical-marijuana/38822/>

<sup>26</sup> Las Vegas Review Journal, Aug. 19, 2014. <http://www.reviewjournal.com/news/nevada/nevada-medical-pot-applications-total-437>

<sup>27</sup> Marijuana Business Daily, Nov. 3, 2014. <http://mjbizdaily.com/nevada-awards-371-mmj-business-licenses/>

- ✓ Based on the current population of 182,091 registered medical marijuana patients as of December 2015, the most recent year for which data is available, Michigan's medical marijuana industry would generate more than \$44.3 million a year.
- ✓ If the proportion of current registered patients buying from licensed medical marijuana retailers increases to 80 percent, the revenue for Michigan will exceed \$52 million.
- ✓ The analysis also assumes that a regulated, accountable and transparent medical marijuana system, with clear and consistent protections for patients and guidelines for businesses and law enforcement, will result in an increase in the number of registered patients. Should the number of registered medical marijuana patients in Michigan increase by 20 percent, to around 219,000 patients, the revenue for Michigan would be \$63.5 million a year.

In addition to the economic benefits to the state of Michigan, passage of legislation that establishes a strong regulatory framework for medical marijuana will do the following:

- Allow patients to have safe access to their medicine and may even increase patient access to their medicine;
- Promote business growth and encourage robust competition, which will promote consumer choice and help drive down the cost of products; and
- Positively impact Michigan's economy in the near future and the long term in light of the potential for growth in patient use and business and commercial activity.

**About the Author:** The author is President of Hillsdale Policy Group, Ltd, and the William E. Simon Professor of Economics and Public Policy and the Director of Economics at Hillsdale College. He is the author of *A Capitalist Manifesto: Understanding Market Economy and Defending Liberty*, and has published numerous works on public policy issues. He has served in several policy positions, including Michigan's Deputy State Treasurer, member of the Michigan State Board of Education, President of the Board of Trustees of Lake Superior State University and Congressman Nick Smith's Washington Chief-of-Staff. Dr. Wolfram received his Ph.D. in Economics from the University of California at Berkeley and has taught at the University of California at Davis, Mount Holyoke College, Washington State University, and the University of Michigan at Dearborn.