Legalizing Recreational and Medical Marijuana in the State of Kentucky: A Tax Revenue Recommendation

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Introduction

On November 5, 1996 Proposition 215, also known as Compassionate Use Act of 1996, was passed by the citizens of California and officially noted the beginning of what we know today as medical marijuana. Although it has been 23 years since this highly controversial topic was put onto the national stage, it has never been more hotly debated and discussed than it is today. As of June 2019, 33 states and the District of Columbia, have approved the full use of medical marijuana. Of those that have approved, 11 states and the District of Columbia also allow the sale and consumption of recreational marijuana.

Figure 1

Source: Institute on Taxation and Economic Policy

Although every state but 4 (Idaho, Kansas, Nebraska, South Dakota) have marijuana programs to an extent, federal law still considers it to be a schedule 1 drug.
Schedule 1 drugs or substances are defined as drugs with no currently accepted medical use and a high potential for abuse. Some examples of schedule 1 drugs are:

1. Heroin
2. Lysergic Acid Diethylamide (LSD)
3. Marijuana (Cannabis)
4. 3,4-Methylenedioxymethamphetamine (Ecstasy)
5. Bath Salts

Because marijuana is seen as illegal by the federal government, each state has different laws and statutes surrounding the sale and consumption of medical and recreational marijuana. This makes it very tough to track, which means tax rates, revenue disbursements, and regulations vary from state to state.

Due to the fact that financial regulations and legislature vary so much by state, this Capstone will be focusing strictly on the state of Kentucky. This project is going to focus on the potential areas that the sale of medical and recreational marijuana could help local communities and government, as well as the state of Kentucky as a whole. Kentucky currently does not have full medical or recreational marijuana laws passed, so other states will be leveraged to gather and collect data and information to formulate an educated proposal as to whether or not the state of Kentucky should look to marijuana as a potential revenue source. The potential impacts, financially and in everyday life, to citizens will also be discussed throughout this project. To conclude, there will be a proposal made as to whether or not the state of Kentucky should look into the sale of recreational and medical marijuana as a potential revenue source, and if so, what best practices should be applied.
There are a few options as to how recreational and medical marijuana can be taxed:

**Weight-Based Tax**

A weight-based excise tax refers to the amount of the product that someone is purchasing rather than its price. This would mean that the weight of the marijuana being purchased would determine how much excise tax would be applied. The advantage to a weight-based tax is that the government is not vulnerable to a revenue loss every time the price of marijuana drops. Although revenue would decline with a steep price drop, a weight-based tax would keep the revenue fairly steady compared to a price-based tax that depends solely on the current market price. Another advantage that the weight-based tax has over its counterparts is that the tax is applied earlier in the supply chain process. This is better for state and local governments because it means that a fewer amount of people are involved in the purchasing process, which makes it easier for the state tax departments when it is time to audit. Last but not least, it is tough to determine the actual value of marijuana from company to company, so being able to just worry about the quantity within the sale makes the process simple and straightforward.

One potential disadvantage of a weight-based excise tax is that it does not factor in the Tetrahydrocannabinol (THC) level of the marijuana being sold. THC is the main ingredient in marijuana and determines how strong the effects a person may feel are. States such as Alaska, California, and Maine take this into account and tax the more potent marijuana plants at a higher tax rate than the lower potency plants. Another disadvantage of a weight-based tax rate is that over time they are vulnerable to inflation. This is why states that have legalized the sale of recreational and medical marijuana
should include in their tax law a provision that adjusts the tax rate with inflation, due to a flat rate per ounce or pound declining over a period of time. Currently California is the only state that does this.\(^2^6\) With the correct tax laws in place, a weight-based tax provides security for a state or local government.

The state of Kentucky currently has a traditional sales tax of six percent but applies a unit-based, or weight-based, excess tax on alcohol, cigarettes, and other tobacco products.\(^1\) The current tax on cigarettes is 60 cents per pack of 20 cigarettes, 15% of distributor price is tax on tobacco products (besides snuff and chewing tobacco), snuff is taxed at 19 cents per ounce and a half and chewing tobacco is taxed at 19 cents per unit and 40 cents per half pound unit or 65 cents per pound.\(^1\) The alcohol excise tax is also applied based on a unit amount, generally per gallon. Currently the payment of tobacco and alcohol excise taxes are made by the vendors and not the consumers, though the taxes are passed on into the retail price.

**Price-Based Tax**

A price-based excise tax is the second most popular excise tax behind the weight-based excise tax. This type of excise tax applies to the overall purchase price at either the wholesale or retail level. The rate is a set percentage amount, that way it stays consistent for large and small purchases. An advantage of the price-based excess tax on marijuana is that it is able to charge a higher tax rate, for stronger and more expensive marijuana, which produces more revenue. Another advantage is that it is easy to calculate, and you do not have to worry about applying measurement regulations like you do with the weight-based tax. One disadvantage with the price-based excise tax model is that it is very hard to determine the price of marijuana at the
wholesale level. This makes it a struggle for tax regulators trying to determine the true value. Another major disadvantage with the price-based tax is that typically the revenue generated fluctuates with the market price. When the price of the product drops, so does the tax revenue generated through the price-based tax. This would put a damper on revenue being generated and would lead to underwhelming figures. However, this may not always be the case. Colorado is one of the two states that taxes their recreational marijuana at a price-based level.\textsuperscript{26} As you can see in Figure 2 below, the wholesale prices of marijuana have dropped tremendously over the last five years, which one would assume generates a lower amount of tax revenue being collected by the state.

**Figure 2**

\begin{figure}
\centering
\includegraphics[width=\textwidth]{Wholesale_Cannabis_Prices_in_Colorado_Since_Legalization_of_Recreational_Sales}
\caption{Wholesale Cannabis Prices in Colorado Since Legalization of Recreational Sales}
\end{figure}

However, Figure 3 may argue this point. While wholesale prices may be dropping year over year, rather than seeing this as a disadvantage to the price-based tax model, it
might just be an effect of legalization competing with the illicit market. As shown below, the tax revenue generated from marijuana in the state of Colorado has grown rapidly during the same period of the wholesale price drop. This is a strong rebuttal to the detractors of a price-based tax.

**Figure 3**

It will be interesting to follow Colorado’s recreational marijuana tax revenue stream over the next few years to see if there is any change in revenue due to the decrease in wholesale marijuana prices. There could be a potential plateau or drop off that occurs, but that is the risk that is taken when taxing at the price-based tax level.

**Medical Marijuana Tax**

Medical marijuana is taxed almost identically to recreational marijuana with a few stipulations. Although medical marijuana is currently considered a non-prescription
drug, there are currently 11 states that offer an exemption to their general sales tax.\textsuperscript{26} This is the same tax structure that prescription drugs fall under. There are concerns that lowering tax rates on medical marijuana will encourage people to circumnavigate the recreational market and go through a doctor to receive their marijuana without a legit explanation as to why they need it. This is why it is imperative that a comprehensive licensing and permitting system is in place at the state and federal level to prevent this behavior. At the same time, however, attaching a large excise tax to medical marijuana may make lower income individuals less susceptible to receiving the treatment that they need. This is especially true since no cannabis products are covered by any insurance providers across America.

\textbf{Figure 4}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{state_tax_structures.png}
\caption{State-Level Tax Structures Applying to Medical Cannabis}
\end{figure}

\textsuperscript{Source: Institute on Taxation and Economic Policy}
Many states that have already legalized recreational marijuana do not currently tax medical marijuana with any consumption tax, as seen above in Figure 4. This allows residents to have access to potential relief from whatever medical issue they are currently dealing with for little to no extra cost at all. States typically legalize medical marijuana before they decide to go a step further and legalize recreational.

**Current Recreational Marijuana Tax Revenue**

States that currently have legalized the sale of recreational and medical marijuana have a variety of different tax systems in place. Some states are following the price-based excise tax system, some are following the weight-based tax system, and others are using a combination of the two.

**Figure 5**

Source: Institute on Taxation and Economic Policy
Of the states that currently apply a weight-based tax to their recreational marijuana, California is the only one that has applied an inflationary index into its tax rate. This is a very smart move on the state of California’s part as the value of the weight-based tax is almost guaranteed to decline over time, as mentioned above. Another interesting note is that Alaska is the only state that does not include some type of price-based tax on the sale of recreational marijuana. These tax rates are not set in stone forever as Colorado and Oregon have both adjusted their tax rates on consumers since implementation.

**Current Kentucky Tax Revenue**

For fiscal year 2018, the total amount of sales and gross receipts tax reported in the government wide statements for Kentucky was $6,062,029,000. In 2018, the state generated $146,454,000 in alcoholic beverage tax and $260,281,000 in tobacco products tax, for a combined total of $406,735,000. The majority of this revenue goes into the state’s General Fund.

**Figure 6**

<table>
<thead>
<tr>
<th>Sales and Gross Receipts Tax (Expressed in Thousands)</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales and Use Tax</td>
<td>3,633,586</td>
</tr>
<tr>
<td>Motor Fuels Tax</td>
<td>708,222</td>
</tr>
<tr>
<td>Motor Vehicles Usage Tax</td>
<td>531,188</td>
</tr>
<tr>
<td>Healthcare Provider Tax</td>
<td>297,840</td>
</tr>
<tr>
<td>Tobacco Products Tax</td>
<td>260,281</td>
</tr>
<tr>
<td>Insurance Premiums Tax</td>
<td>163,782</td>
</tr>
<tr>
<td>Limited Liability Entity Tax</td>
<td>237,223</td>
</tr>
<tr>
<td>Alcoholic Beverage Tax</td>
<td>146,454</td>
</tr>
<tr>
<td>Telecommunications Tax</td>
<td>61,467</td>
</tr>
<tr>
<td>Transient Room Tax</td>
<td>13,491</td>
</tr>
<tr>
<td>Parimutel and Race Track Admission Tax</td>
<td>8,495</td>
</tr>
<tr>
<td><strong>Total Sales and Gross Receipts Tax</strong></td>
<td><strong>6,062,029</strong></td>
</tr>
</tbody>
</table>
Out of the current legal states of Alaska, California, Colorado, Nevada, Oregon, and Washington, Kentucky would rank third in total revenue generated from alcoholic and tobacco tax.\textsuperscript{26} This shows that Kentucky residents are prone to buying items that already have an excess tax associated with them, which could mean high potential revenue from the legalization of recreational and medical marijuana.

**Data Revenue Analysis**

After digging through budgets and looking at state to state revenue projections and financial reports, the biggest problem that continued to show up again and again was the over or under estimation of tax revenue produced from the legalization of medical and recreational marijuana. The highest overestimations and underestimations of tax revenue were seen at the implementation stage of legalization. This can be seen in Figure 7 below.

**Figure 7**

**First Year Marijuana Tax Revenue**

<table>
<thead>
<tr>
<th>State</th>
<th>Year of Implementation</th>
<th>Projected</th>
<th>Actual</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>2017</td>
<td>$2,000,000.00</td>
<td>$1,749,497.00</td>
<td>-12.5%</td>
</tr>
<tr>
<td>California</td>
<td>2018</td>
<td>$643,000,000.00</td>
<td>$345,000,000.00</td>
<td>-46.3%</td>
</tr>
<tr>
<td>Colorado</td>
<td>2014</td>
<td>$134,000,000.00</td>
<td>$67,594,323.00</td>
<td>-49.6%</td>
</tr>
<tr>
<td>Nevada</td>
<td>2018</td>
<td>$50,300,000.00</td>
<td>$69,759,783.00</td>
<td>38.7%</td>
</tr>
<tr>
<td>Oregon</td>
<td>2016</td>
<td>$44,000,000.00</td>
<td>$73,072,727.00</td>
<td>66.1%</td>
</tr>
<tr>
<td>Washington</td>
<td>2015</td>
<td>$36,300,000.00</td>
<td>$64,881,111.46</td>
<td>78.7%</td>
</tr>
</tbody>
</table>

Indicates recreational marijuana only

Sources: Alaska Department of Revenue, California Department of Revenue, Colorado Department of Revenue, Nevada Department of Revenue, Oregon Department of Revenue, Washington Department of Revenue.

This makes sense due to the fact that these states were the pioneers of legalization. Some states such as California and Colorado hurt themselves from the jump by projecting tax revenue numbers that were unattainable by a large margin. This caused
some early concern in Colorado, but they have since gotten on track, and on June 12, 2019 the state announced that it surpassed $1 billion in total cannabis-related revenue, the first state in the country to hit that milestone. On the flip side, a state that started out with a very promising tax revenue haul, Oregon, has fallen into some trouble with overproduction of marijuana. Because they shot their first-year projections out of the water, marijuana farmers and businesses grew their supply tenfold. With slow revenue growth in the years following implementation, the state now finds itself in a bind to get rid of all of their marijuana on hand that is stockpiling.

Although there are other states that have recently passed legislation to allow the sale of recreational and medical marijuana, there was not enough data present to show revenue for a whole year. Reasons for the data not being available have to do with slow licensing processes, states in the process of writing regulations, and legislation that still needed to be passed.

**Social Impacts on Community**

The economic impacts of legalizing recreational and medical marijuana have been discussed throughout the entirety of this project, but social impacts within local communities also need to be scrutinized. Because economic impacts are easily trackable through revenue numbers, employment rates, and overall financial health, the social impacts surrounding the legalization of recreational and medical marijuana require a more in-depth analysis.

One of the biggest social impacts that comes along with the legalization of marijuana is public safety. Law enforcement officials in state local governments, that do not allow the use or sale of recreational or medical marijuana, have been trained their
whole tenure to police and detain any individual who possesses any form of marijuana. The reason for this is because marijuana use or possession is generally associated with criminal activity such as theft, burglary, and other criminal offenses. States with marijuana legalization already in place have recognized this and taken action.

To make citizens in the local communities feel safe, lawmakers in Colorado implemented tight regulations such as licensing, security systems, lighting, and employee background checks to protect citizens as well as the businesses. This is a very good precaution to take because it allows law enforcement to provide added security on a business that was once considered very dangerous. Arrests for drugs have also been shown to decrease exponentially in states that have legalized recreational and medical marijuana. In Colorado total marijuana arrests have dropped 50 percent since 2012, decreasing from 12,709 arrests to 6,153 in 2017. Slashing arrests by 50 percent also yields cost savings for local communities which could be put back into local law enforcement training or education. In 2017 alone, there were 25,239 marijuana arrests throughout the state of Kentucky. This made up a quarter of all arrests in the state. By reducing this number, it will allow law enforcement to reallocate time and expenses to more serious crimes and offenses.

Another major potential social impact that comes along with legalization is the fear that it will have a large impact on usage among the youth. When marijuana becomes legal, it becomes more accessible throughout communities which creates increased susceptibility to issues among underage children. Among these issues are potential increased dropout rate, lower graduation rates, potential addiction, and mental health issues. While these concerns are understandable, they haven’t proven to be
completely true in states that have legalized the use of marijuana. For example, according to the Washington State Healthy Youth Survey conducted in 2016, the rates of current marijuana use stayed consistent for sixth, eighth, tenth, and twelfth graders from 2012 to 2016 (legalization was passed in 2012).\textsuperscript{15} There is also evidence of this in the state of Colorado, which has not experienced an increase in marijuana use among adolescents, although it was the biggest reason for school expulsions in the 2016-2017 school year.\textsuperscript{25} Graduation rates in Colorado have also increased since 2012, while dropout rates have decreased in the same time frame.\textsuperscript{25} Whether or not these numbers continue to trend this way remains to be seen, however this is a fairly strong indication that the legalization of marijuana in Colorado and Washington has not affected the education of young kids.

**Reason for Concern**

There should be a warning that while it is proven that states can produce significant revenue from the sale of recreational and medical marijuana, it also takes very careful and proper legislation, regulation, and public financial management to produce these figures. For the states that currently have medical and recreational marijuana legalized, there have been some issues that have arisen throughout the implementation and production process that non-legalized states on the fence should note:

1. **Production Issues** – In Oregon, the state developed production capacity that was much greater than the demand. This has led to “so much legal weed that if growing were to stop today, it could take more than six years by one estimate to smoke or eat it all.”\textsuperscript{24} Due to this oversupply, the state has currently stopped
taking applications for new growth sites and businesses. Current marijuana business owners within the state are starting to feel the pressure from richer out-of-state developers who will soon look to capitalize on their current issues.

2. **Rollout and Consumption Issues** – In California, the legal market is being undercut by the illicit market which is dramatically decreasing revenue projections by the state. This has been caused due to a high state tax of 15 percent on all marijuana products, including medicinal, as well as local governments being given the freedom to add taxes on sales themselves. This has led to some communities taxing up to 50 percent on marijuana purchases and some banning sales or not setting up regulations for businesses to operate. In January of 2019, the governor’s budget forecast projected the state to bring in $355 million for the year that ends in June 2019 and $515 million in 2020.\(^2\) Due to all of the confusion and lack of consumption in the market, the state cut marijuana state tax revenue projections in May of 2019 by $67 million and $156 million respectively.\(^2\) This ultimately will lead to a decrease from earlier projections that stated California could bring in upwards of $1 billion a year from marijuana tax revenue.

3. **Delay in Receiving Tax Revenue** – With data for legal marijuana sales being available for five years now, there is one thing that is very clear regarding the revenue that is being generated, and it is that it does not happen overnight. As seen in Figure 8, it took Colorado about four years to start seeing consistent revenue being brought in via recreational marijuana taxation.
When legislators are trying to get marijuana laws passed in their states, one of the biggest attractors is that the tax revenue would be used to provide funds to invest in public programs and infrastructure, educating the youth on drug use, training law enforcement, environmental health, and much more. Due to the amount of time that it takes to actually realize the revenue, it is highly possible that years will have passed without the full amount of promised funds being distributed. This not only causes backlash from the community, but it also hurts those in need of the promised revenue.

Recommendation and Proposal for Kentucky

After reviewing and studying marijuana tax revenue options, current legalized states’ financial failures and successes, the social impacts of legalized medical and recreational marijuana, and the state of Kentucky’s current financial position, it is recommended that the state of Kentucky should legalize the sale and use of marijuana.
Tax Proposal

The taxation of recreational and medical marijuana in the state of Kentucky should follow the mold of the successful implementations by the states of Colorado and Washington. These states have a lot of data readily available and years of experience to learn from. While it will take time to gain traction, if followed correctly, the state of Kentucky could generate a large sum of extra potential revenue that could be used for education, infrastructure, and public safety. Currently the states of Colorado and Washington have tax systems in place that apply a state tax on retail marijuana sales, a state sales tax, an excise tax, and optional local sales and excise taxes. Kentucky should implement a tax that does that same thing. By allowing local communities and cities to add their own excise or sales tax, it allows them to generate more revenue that will affect people directly within the community.

Revenue Proposal

Current Kentucky Governor, Matt Bevin, has long been against the legalization of recreational marijuana as another channel to generate revenue for the state. However, in February of 2019, the current Governor stated that he would be “happy” to sign a bill that would make marijuana legal in Kentucky for medical purposes, but also relayed that his support of the bill would depend on how it was written.11 Multiple members of Kentucky’s General Assembly have proposed legislation as recently as early 2019 that surrounded medical marijuana legalization. The proposed bill will be filed in the 2019 Regular Session and a vote should happen sometime after. Legalizing medical marijuana, as a first step to eventual recreational legalization, would be a tremendous way for the state of Kentucky to generate outside revenue that is currently not figured in
the state’s financial documents. These states will be used for reference since they have the most readily available data, as well as being the most successful legalized states in terms of revenue generated.

As mentioned above, one of the biggest data revenue issues has been the severe over, or under, estimation of potential tax revenue. With there being five years of readily available data from almost 10 states, Kentucky is in a good position to evaluate which revenue projections are the most successful.

In order to determine how much potential tax revenue is available for the state of Kentucky, information from Substance Abuse and Mental Health Services Administration will be used to determine the average percentage of adults aged 18 or older who used marijuana in the past month. The percentage of users who have consumed marijuana in the last month from Alaska, Colorado, Oregon, and Washington is 14.7 percent. California was excluded due to its large population and number of residents who use marijuana, this caused it to be an outlier.

With percentages tallied, a projection can be determined using revenue data from Colorado and Washington State. A proper projection would include each state’s population and average tax revenue collected from their first four years of being implemented, as well as the number of marijuana users within the state. This information would then be able to determine the tax revenue per user, by multiplying the percentage of adults who used marijuana in the last month by the average tax revenue number. Once the potential revenue per person is projected, it is multiplied against the average percentage of marijuana users 18 or older within the last month in the state Kentucky. Figure 9 below shows this in detail.
Using the average of the potential revenue that the state of Kentucky could generate by legalizing the sale of recreational and medical marijuana, the state could generate an additional $200 million per year after being established for at least four years. This is a significant amount of new revenue which is why the state of Kentucky should legalize the sale of both medical and recreational marijuana.

**Distributing Revenue Proposal**

States that are currently legalized now have a big task when it comes what to do with the revenue. Politicians make big promises during the proposal stage to get the sale of recreational and medical marijuana legalized, which can potentially cause issues down the road. As mentioned above, one of the biggest mistake’s forecasters make is projecting too much too soon. This has been a common theme throughout the legalization process as more states are projecting these revenues.

It has also become popular to earmark the revenues created by marijuana taxation to certain funds within state and local governments. For example, the state of
Colorado has implemented policy that requires the first $40 million generated from marijuana tax revenue to be distributed to school construction, and another $30 million for the state’s public-school fund. This would be a great policy idea for the state of Kentucky to follow, but at a cautionary pace. Even though revenue funds are earmarked for certain programs, politicians may borrow against these funds which then neutralizes the purpose of the earmarking. In order for the state of Kentucky to see a real benefit from earmarking they must have strict fiscal policy in place to prevent this from happening. Revenue from marijuana taxation should also be directed towards substance abuse programs, public safety, and marijuana education.

Legislation, Implementation, and Monitoring Proposal

In order to make sure the legalization process goes smoothly; it is imperative that the those in power within the state do their best to put together a diverse and coordinated leadership team. There must be rationale and purposeful legislation being put forward that citizens can get behind. The propaganda must reach all demographics and age groups. In order to get legislation passed and implemented there must be complete transparency between the lawmakers and the citizens. If the citizens do not feel like they have a voice, then legalization will take a long time to get passed. There will be challenges along the way but the data, experience, and information readily available from current legalized states should generate enough meaningful talking points and references to pull from.

Once legalization legislation has been passed, it is imperative that a strong set of controls is in place. Due to the fact that this will be new territory for everyone involved, there is the risk that state and federal laws may change over time. It is very important
that there is leadership and legislation in place that can adapt to these early issues that are almost guaranteed to happen. Preparing a thorough set of rules and regulations will go a long way in mitigating any potential problems that may arise.

**Conclusion**

The purpose of this research project was to depict the social and financial impacts of legalizing the sale of recreational and medical marijuana in the state of Kentucky. After conducting hours of research and creating a proposal, it has been determined that the sale of recreational and medical marijuana would be a positive for the state of Kentucky. The current Governor of Kentucky, Matt Bevin, has recently stated that he would be a proponent of a medical marijuana bill if it included the correct language. This would be a good reasonable first step towards the total legalization of marijuana within the state.

In conclusion, the state of Kentucky has something very exciting to look forward to. Due to its current financial position and pension issues, it only makes sense that they turn to another revenue generator to supply funds for state and local community projects. The potential revenue that comes with marijuana taxation is limitless when done correctly. While there will undoubtedly be challenges that come along with the process, the reward is much greater than the risk.
Sources

1. “Annual Reports.” *Annual Reports - Department of Revenue*, Kentucky, revenue.ky.gov/News/Publications/Pages/Annual-Reports.aspx.


