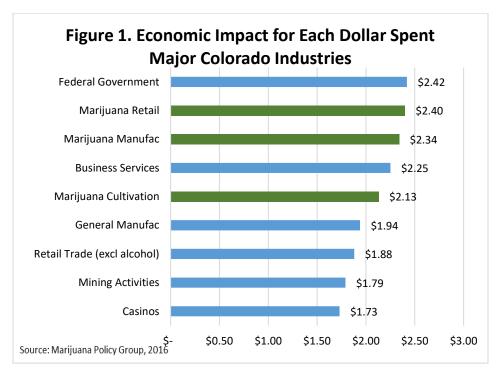
The Economic Impact of the Legalization of Marijuana in Colorado

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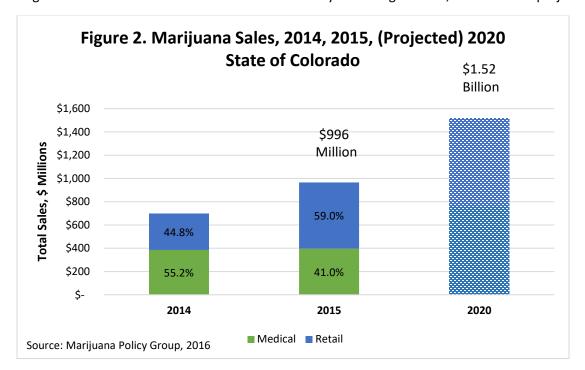
In many of the economic and health care presentations I do, I am asked about the impacts of the legalization of recreational marijuana in the state of Colorado. I tiptoe around the topic not only because it is politically and emotionally charged, but also because there is a sea of conflicting information. The inconsistencies are mostly due to the simple fact that marijuana has been illegal in most states up until relatively recently. By definition, a black market is difficult to measure so baseline information is dubious. In terms of dollars generated, many previous studies have over-estimated economic impact because they have assumed all associated revenues are new dollars, when in fact, many of those "new" dollars are shifted dollars from the black market to the legal market. Conversely, many studies have under-estimated economic impact because they have used existing industry codes, like the "retail" industry, with a typically lower economic multiplier.

This series of articles will focus upon the cannabis industry in Colorado, but will attempt to encapsulate not only the economic impact data, but also some of the emerging data on the health and safety impacts. A fair assessment of legalization should look at the whole picture incorporating not only the financial gains, but also the costs associated with health and safety, which also have methodological issues. Not unlike the economic impact, the previous illegality of recreational marijuana has clouded the study on health outcomes. Many past studies have analyzed existing users, who may have other characteristics that cause (possibly negative) health-related outcomes. In other words, teasing out the short and long-term health impacts of marijuana use in isolation is difficult due to a selection bias. Further complicating things is the subjective aspect of any kind of drug use. Most people have pre-set ideas about whether marijuana should be legal or not, which makes objective analysis that much more difficult.

Having said all of this, there is now a reliable and objective source of economic impact information for Colorado, and there is some emerging consistency in the health data. Perhaps the best U.S. study on economic impact is by the Marijuana Policy Group (MPG), a Denver-based think tank. Their 2016 study is a rigorous analysis of the cannabis industry from a strictly economic point of view. I will start by summarizing the MPG study in this article, which will comprise the largest part of this series, and then move on to the health and safety impacts in subsequent articles. Keep in mind, however, that the legal, recreational cannabis industry is in its infant stages, and more robust data should emerge in the coming years.



To start, it is important to point out that until October 2014, marijuana licensees in Colorado were required to be vertically integrated, meaning they had to internally cultivate, process and sell their product. This means that virtually all direct jobs and financial gains stayed within the state. Although the requirement is no longer in place, many existing marijuana businesses remain vertically integrated. For this reason, the economic impact within Colorado has been especially strong. Add to this the somewhat unexpected finding that cannabis-related tourism has been higher than expected. As Figure 1 shows, only federal government dollars have more economic impact than marijuana retailing and manufacturing. Federal government dollars have such a high economic multiplier because all funds that are coming from outside the state are infused into state programs. The high marijuana industry multiplier significantly inflates the overall impact when you consider that in 2015, total sales were at almost \$1 billion with 59% of sales attributable to recreational (non-medical). Undoubtedly, when 2016 data is released, sales numbers will be higher as MPG has projected sales will increase about 16% per year and will be at almost \$1.6 billion by 2020 (with roughly a 2-3% growth rate thereafter). Figure 2 shows the large increase in sales between the first and second years of legalization, as well as the projected sales for 2020.



It is important to note that industry sales grew by 42.4% from 2014 to 2015, and that 36.2% of that growth rate is due to a reduction in the black market. Because of this large shift to the legal market, and the inherent growth in new demand, it is not surprising that by the second year of legalization, the cannabis industry surpassed other large industries such as performing arts and sports venues, and multi-unit residential construction (among many others).

In the next article, cannabis-related new jobs and tax revenues will be discussed, and then subsequent articles will touch upon some the health and safety data.

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