Project 1 - Major Findings and Analysis

Raj Pandher, Jose Cardenas, Madeline Sachtler

10 February 2021

**Why this topic?**

While we were contemplating possible project ideas we wanted to bring data analysis that would pertain to everyone in the class. We have all been recently impacted by the pandemic that riddled the entirety of 2020 and we have all learned to adapt. Further, one of the common activities that we all share or have a solid understanding of in our daily lives is ‘drinking’. So we began to question how this has been affected by the pandemic. How has the pandemic affected American consumption of alcohol and how does this correlate to the number of DUI arrests within that time frame?

**Is there a major change between the consumption of alcohol in 2020 and previous years?**

Alcohol consumption seems to follow a generally identical path within each compared year with only some slight differences. We found that typically there was always a ‘early year’ reduction of drinking followed by a huge beer and wine drinking summer months. Hard liquor saw a similar rise in the summer months but it rarely rose as high as the other two. Then for the last portion of the year they all had a huge increase in the amount consumed. However, we did see a slightly upwards trending set of numbers which

**Which States have the highest consumption?**

Due to our limited data set, the state with the highest alcohol consumption by gallons was recorded to be Texas. This makes sense as Texas is the second highest populated state, and additionally has a large and impressive drinking culture. The state with the lowest recorded consumption was found  to be Utah. Utah is not only an extremely low density populated state, but 55% of the country is a part of the Latter Day Saints religion, which when a part of the church, it is illegal to consume alcoholic beverages. I would largely assume that due its large size, and massive collections of wineries and breweries, that it would be California with the largest consumption; however our dataset did not provide us with that information.

**Was there a spike in Texas alcohol consumption during the pandemic?**

When looking at the data, it is hard to say with confidence that there was a large spike primarily due to the pandemic. For Beer consumption, it appears that each year has a sharp spike in beer consumption from March to April, which was right when the lockdown happened this year. The shift in alcohol consumption by year shows trends throughout the year based on holidays, elections and perhaps the subsequent lockdown. Overall there seems to be a general increase in consumption from year to year, perhaps due to the increase in consumption acceptance. Wine consumption saw a sharp increase in 2020 during March when the lockdown was first imposed, higher than any other year before and subsequently stayed substantially higher than any other year until sharply declining during the month of july. Liquor consumption in 2020 was substantially higher than any other year, and peaked during July to an all time high of roughly 50,000,000 gallons of consumption. This again was accompanied by a sharp decline during the month of july. It is probable that these sharp declines and inclines coincide with the state laws regarding covid lockdown, but it is uncertain as there has been no viable research done. It is only fair to assume that alcohol consumption has definitely increased on a yearly basis, not due to the pandemic.

**How has alcohol revenue been affected by the Covid 19 pandemic?**

The pandemic has led to an increase in alcohol sales revenue. The revenue of 2019 alcohol sales was about $53 billion, and increased to $63 billion in 2020. From our data, we found that there was a significant spike in alcohol sales when the lockdown began, and it continued to increase in the following months. Revenue continued to increase into the end of the year, but the biggest spike was in the prime of the pandemic where there were very strict lockdowns and stay at home orders in place, between the months of March and August.

**What factors of the pandemic led to this increase in revenue?**

There were many factors caused by the pandemic that led to an increase in alcohol revenue. As places shut down, and there were more and more stay at home orders in effect, weekend plan options became more and more limited, leading to an increase in alcohol purchases. This was especially prevalent in the stricter lockdown months according to our data. People were also simply bored, and were more than happy to participate in virtual happy hours. There were also stress factors in the pandemic such as unemployment, having to commit more time to one's children learning from home, and limited social interactions which led to an increase in alcohol sales.