**Overview**

The purpose of this project is to perform an exploratory analysis of the WHO’s data on global alcohol consumption during the years spanning from 2010 to 2019, with the goal of answering the following questions:

1. How has alcohol consumption changed during the 2010s in the USA?
2. How have alcohol consumption numbers changed during the 2010s, worldwide?
3. Which country consumes the most alcohol in general?
4. Which country consumes the most of each type of alcohol?

The data used in this analysis comes from the [WHO’s record of alcohol consumption per capita](https://apps.who.int/gho/data/node.main.A1039?lang=en), kept for public viewing on their website. All numbers recorded are the amount of consumption per capita, in liters of pure alcohol.

Some things to note:

1. For some countries, all consumption numbers in the “Other alcoholic beverages” category are zero. This is most likely because, according to some, any alcoholic beverage that isn’t a beer or wine is a spirit; since this dataset cites different sources for different countries, it is likely that some sources lumped in all non-beer/wine drinks as spirits.
2. In our data analysis, we will often refer to visuals created from an interactive report made using PowerBI, which can be found in the Github repository for this project as “Interactive Alcohol Report.pbix”.
3. We will also be performing analysis on smaller tables that were queried from the full dataset using MySQL; the SQL scripts used, and the corresponding output tables, can also be found in the Github repository.
4. **Changes in consumption in the USA**

The following line chart was pulled from the interactive report, having been filtered to include only data from the USA?

A line of colored lines

Description automatically generated with medium confidence

A cursory glance at this chart suggests that alcohol consumption in the USA has changed very little, if at all; the only visible trends are a slight decrease in the consumption of beer, and a slight increase in the consumption of spirits.

Additionally, it would be worthwhile to compare the consumption of different types of alcohol in the USA overall, using a pie chart:

A blue and orange pie chart

Description automatically generated

From this chart, we can see that about half (47%) of alcohol consumed in the USA is beer, while around 35% of consumption is in spirits, and the remainder (18%) is in wine.

We can further compare this distribution to worldwide consumption, which is displayed in the following chart:

A pie chart with numbers and text

Description automatically generated

By comparing the two charts, we can see that the USA is about average in terms of its consumption of the different types of alcohol; global consumption is about 40% in beer, 19% in wine, and about 40% in spirits or other types.

1. **Changes in consumption worldwide**

The following line chart was pulled from the interactive report, with no filters:

A line graph with different colored lines

Description automatically generated

Like in the USA, this chart suggests that alcohol consumption on a global scale has experienced little or no change in raw numbers. The consumption amounts of each variety, likewise, have changed very little over time.

1. **Country which consumes the most alcohol**

|  |  |
| --- | --- |
| **Country** | **Total\_Consumption** |
| Estonia | 151.11 |
| Kuwait | 0 |
| Mauritania | 0 |
| Saudi Arabia | 0 |
| Somalia | 0 |

From the table “max\_and\_min\_overall.csv”, we can see that the country which consumed the most alcohol in the given timeframe was Estonia, at approximately 151.11 liters per capita.

Kuwait, Mauritania, Saudia Arabia, and Somalia all come in at the bottom, with no consumption of any alcohol reported (it’s fairly safe to assume that this is a reporting issue, but for the purposes of this project, we’ll take their word for it).

1. **Country which consumes the most of each type**

|  |  |  |
| --- | --- | --- |
| **Country** | **Types** | **Total\_Consumption** |
| Cook Islands | Spirits | 67.91 |
| Czechia | Beer | 68.1 |
| France | Wine | 69.69 |
| Afghanistan | Wine | 0 |
| Bangladesh | Beer | 0 |
| Bangladesh | Wine | 0 |
| Bangladesh | Spirits | 0 |
| Democratic People's Republic of Korea | Wine | 0 |
| Eritrea | Wine | 0 |
| Eritrea | Spirits | 0 |
| India | Wine | 0 |
| Iran (Islamic Republic of) | Beer | 0 |
| Iran (Islamic Republic of) | Wine | 0 |
| Kuwait | Beer | 0 |
| Kuwait | Wine | 0 |
| Kuwait | Spirits | 0 |
| Mauritania | Beer | 0 |
| Mauritania | Wine | 0 |
| Mauritania | Spirits | 0 |
| Pakistan | Beer | 0 |
| Pakistan | Wine | 0 |
| Saudi Arabia | Beer | 0 |
| Saudi Arabia | Wine | 0 |
| Saudi Arabia | Spirits | 0 |
| Somalia | Beer | 0 |
| Somalia | Wine | 0 |
| Somalia | Spirits | 0 |
| Yemen | Wine | 0 |
| Yemen | Spirits | 0 |

From the table “max\_and\_min\_by\_type\_output.csv”, we can see that the country which consumed the most beer was Czechia at 68.1 liters per capita, the country which consumed the most wine was France at 69.69 liters per capita, and the country which consumed the most spirits was the Cook Islands at 67.91 liters per capita.

The bottom positions are all tied at 0 by a variety of countries, including Afghanistan, Bangladesh, North Korea, Eritrea, India, Iran, Kuwait, Mauritania, Pakistan, Saudi Arabia, Somalia, and Yemen.

**Conclusions**

To answer each of our initial questions:

1. There was no significant change in the USA’s alcohol consumption during the 2010s.
2. There was no significant change in global alcohol consumption during the 2010s.
3. The country which consumed the most alcohol per capita was Estonia.
4. The countries which consumed the most of each type per capita were France (wine), Czechia (beer), and the Cook Islands (spirits).

Further studies may seek to gather and investigate data from 2020 onward and determine the effect of the COVID-19 pandemic on alcohol consumption. It may also be of interest to gather and analyze data on sales of various major brands of alcohol, and see how they have changed over time in relation to the overall consumption of alcohol.

**Works Cited**

“Recorded Alcohol per Capita Consumption, from 2010.” World Health Organization, World Health Organization, 13 June 2022,

< <https://apps.who.int/gho/data/node.main.A1039?lang=en> >.