World Billionaires

Presented by Rekha Chapagain

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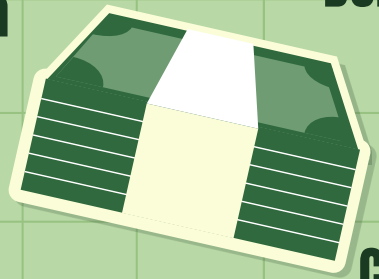

01

Introduction

Purpose

Since April 2023, there had been 2,640 known billionaires recorded in the world. This information is helpful for both governmental policymakers and researchers to understand how the distribution of wealth among various billionaires impact economic policies, taxation, and wealth distribution in a country. Governmental policy makers and researchers seek to balance the possible unfair benefits of wealth accumulation with the need to address inequalities and ensure an inclusive economic growth between citizens.

Key Questions

- What demographics affect the wealth of a billionaire?
- Where are billionaires most populated in the world?
- Are there any geographical factors that impact the wealth of a billionaire?
- How are billionaires distributed among the world?
- What factors correlate to the most number of billionaires in a country?

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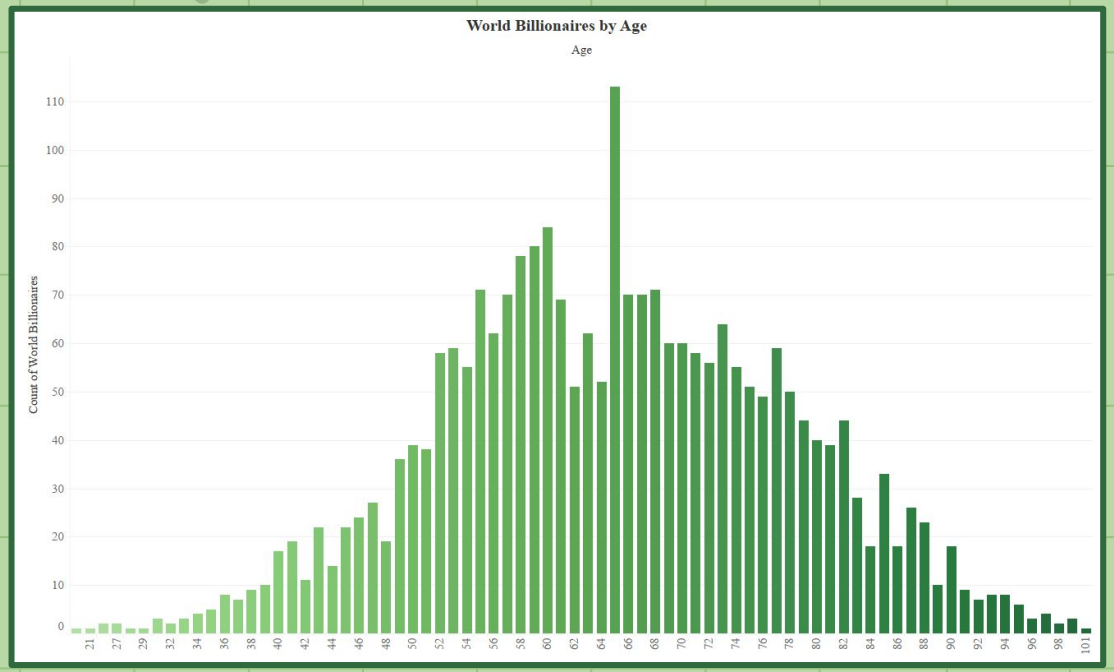
Demography of Billionaires

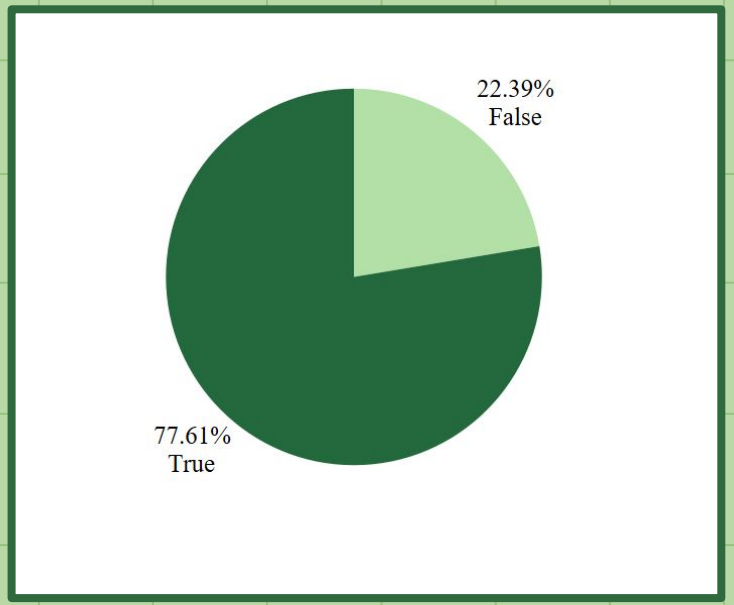
World Billionaires by Age



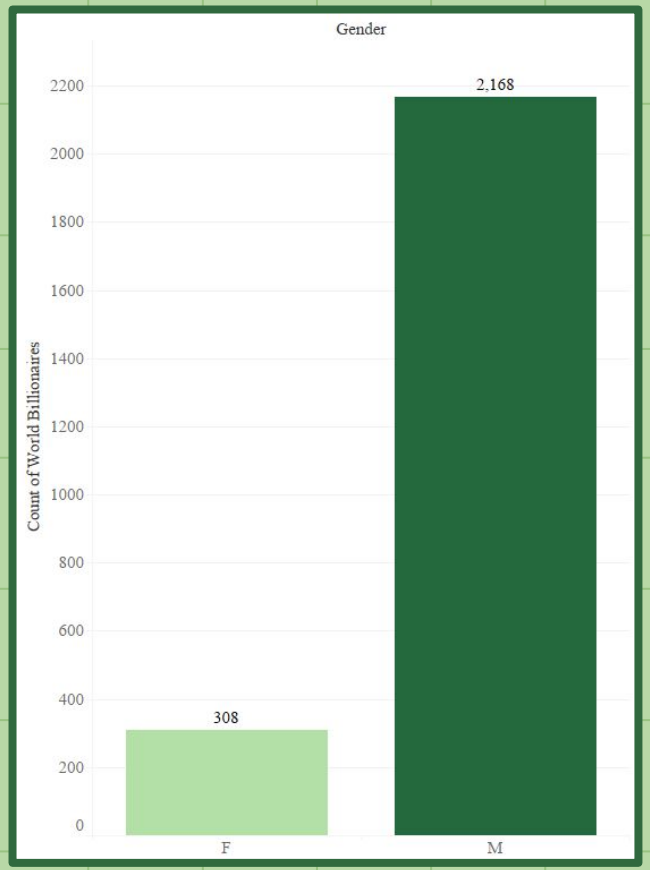
The bar graph on the left side shows a visual of billionaires and their ages. Looking at the chart we can categorize the billionaires into three categories; young-adults (ages 18 - 39), middle-aged (ages 40 - 64) , and seniors (ages 65 - 101). The graph shows that a majority of the billionaires are middle-aged and seniors, with ages ranging from 50 years old ro 70 years old. Furthermore, we can distinctively see that there are more 65 year old billionaires than any other ages (113 billionaires). This data makes sense because high amounts of wealth usually takes decades to accumulate.

Self Made vs Inheritance

The pie chart on the right side shows a visual representation of the billionaires and if their wealth was inherited or self-made. Looking at the graph we can conclude that a majority of the billionaires are “self-made” (built their money up) billionaires. Over three-fourths, approximately 78% said that their wealth was self-made. Around one-fourth, approximately 22% of the billionaires said that their wealth was “inherited” (meaning that their wealth was given to them through their family’s assets).



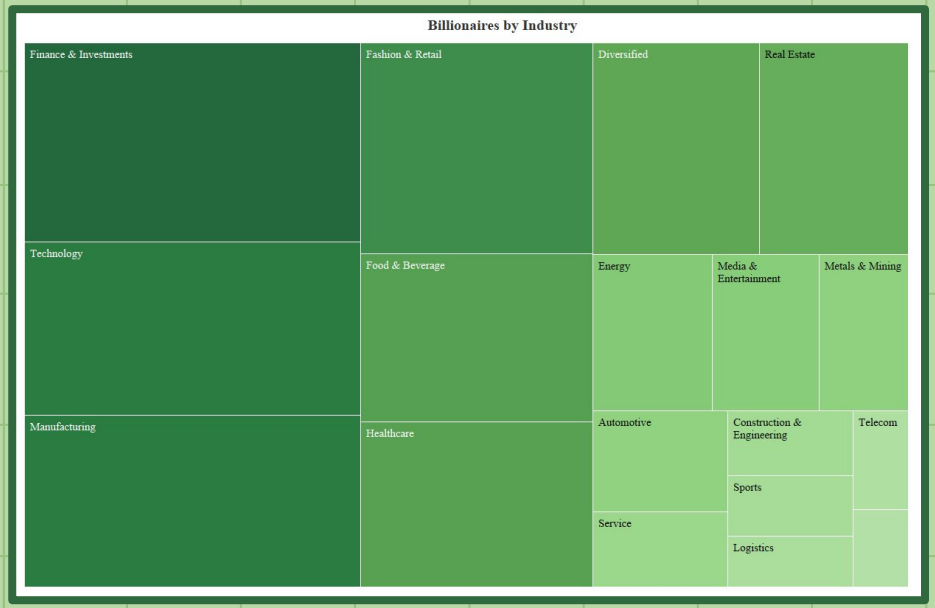
World Billionaires by Gender

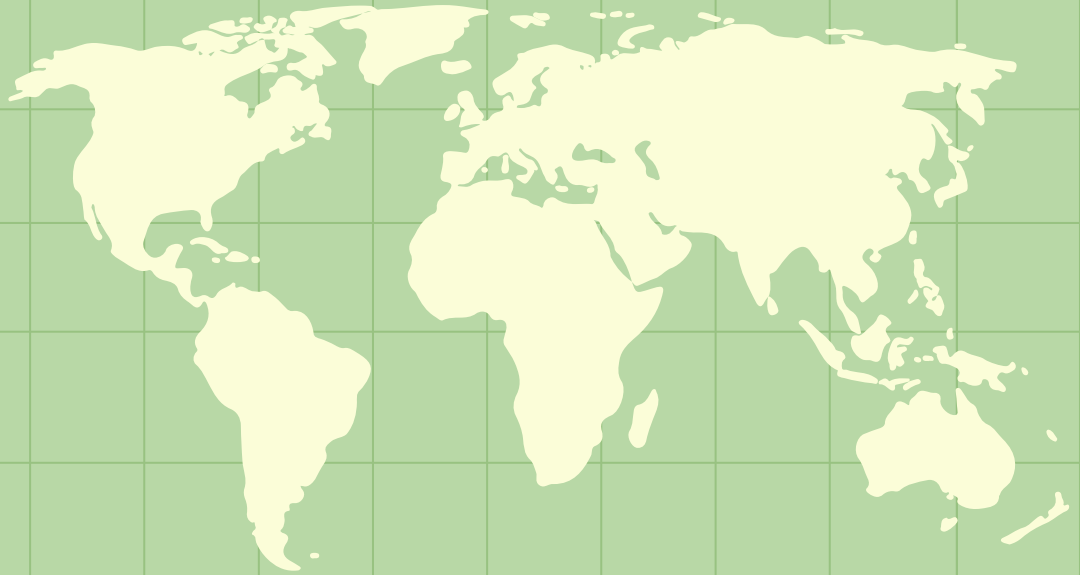


The bar graph on the left side shows a visual of billionaires and their genders. Looking at the graph, we can easily conclude that a majority of the billionaires are male. The male population of billionaires is almost seven times then that of the female population of billionaires. Males make up roughly 88% of worldwide billionaires, and females make up around 12% of worldwide billionaires.

Billionaires and Industries

The tree map on the right side shows a visual representation of the different industries that the billionaires are part of. The darker the color is, the more popular the industry is among the billionaires. Looking at the map, we can conclude that the top five industries are; Finance & Investments, Technology, Manufacturing, Food & Beverage, Healthcare.





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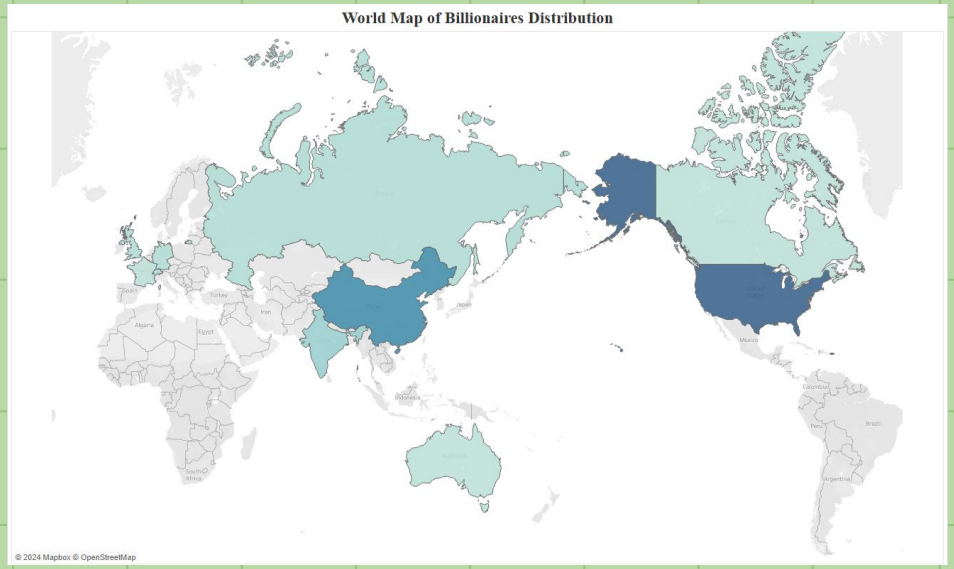
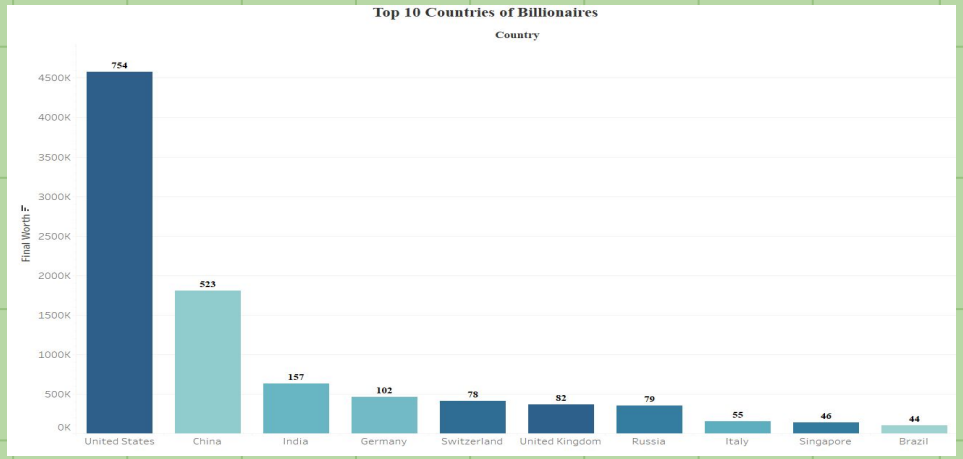
Geography of Billionaires

Billionaires and Countries

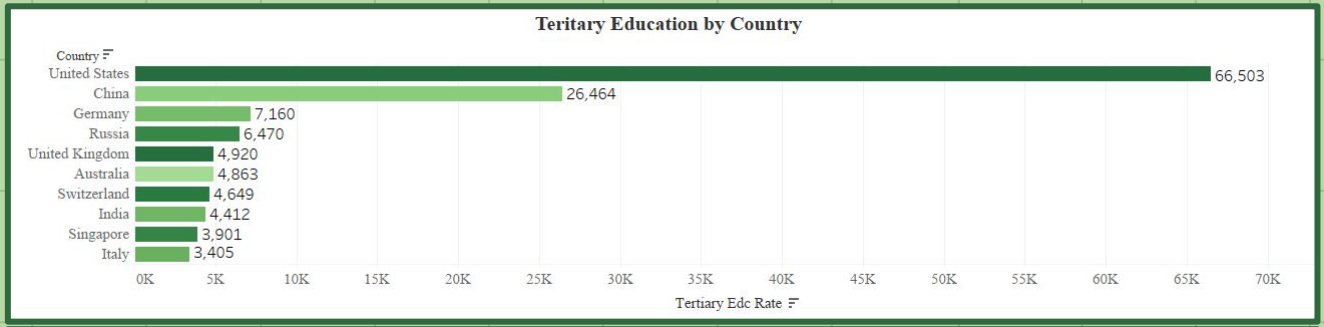


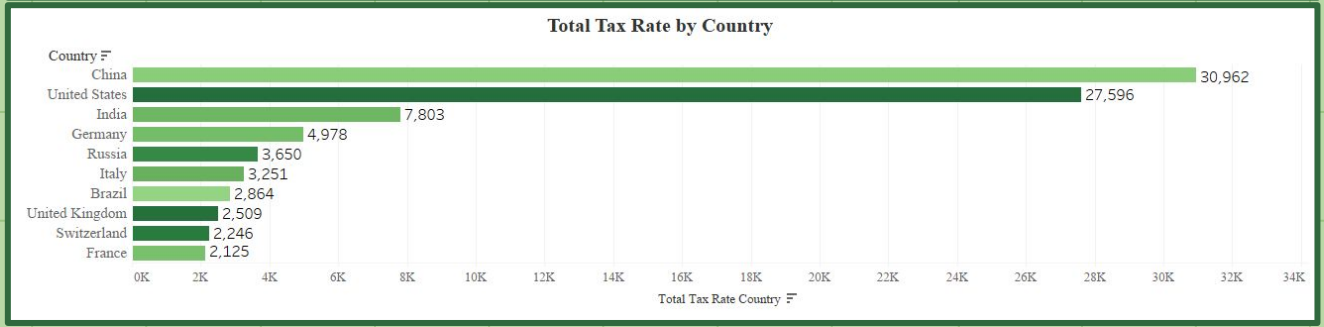


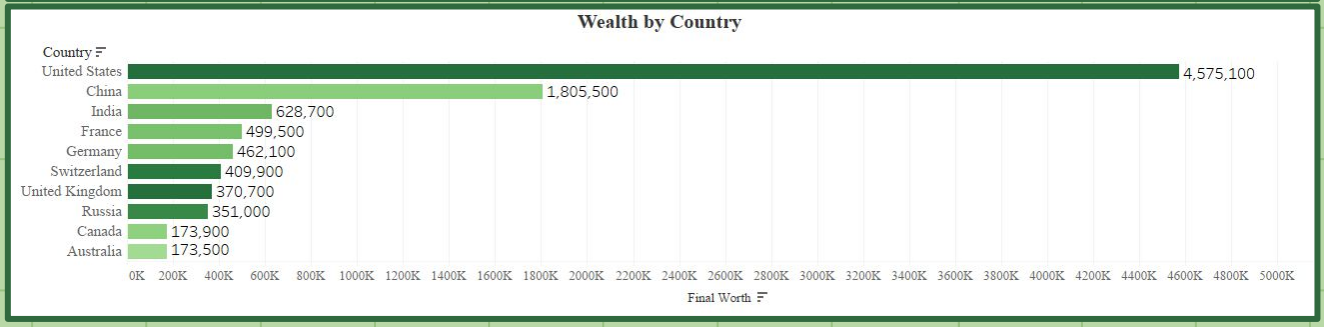
The geospatial and bar graph on the left side shows the distribution of billionaires among the countries.

We can see by looking at the graph that the top five countries with the most billionaires is the United states (754), China (523), India (157), Germany(102), and Switzerland(78).

Billionaires and Countries



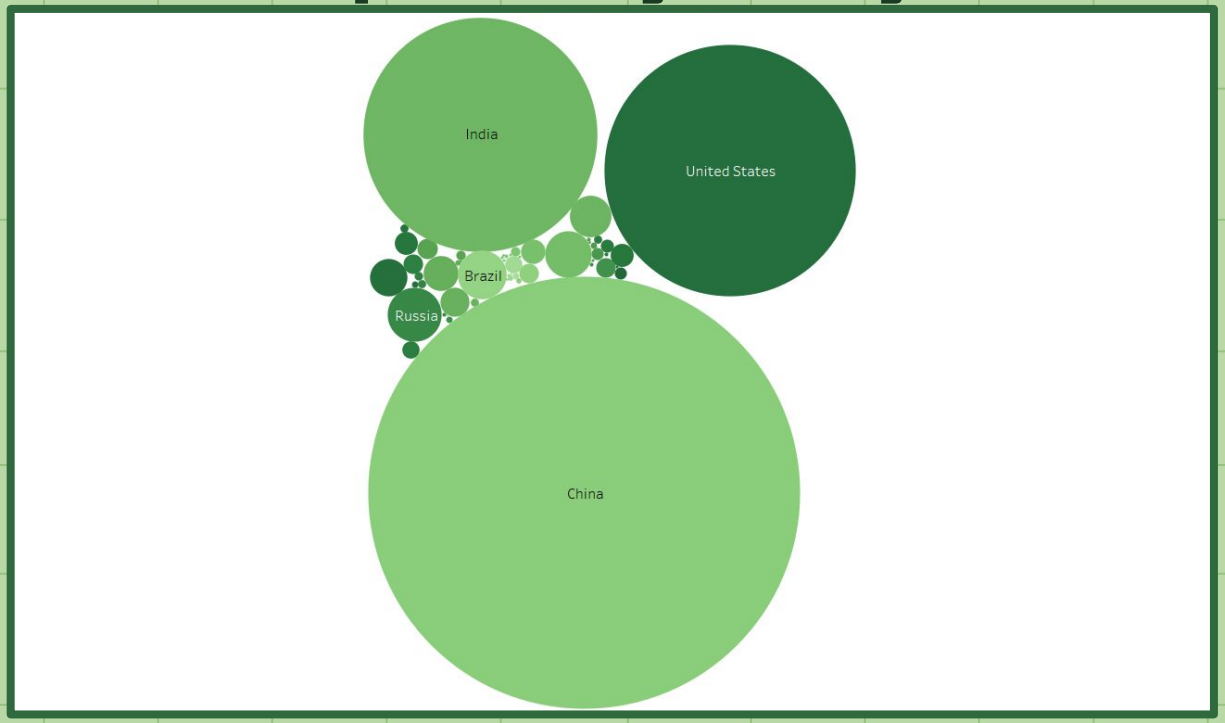




The three bar graphs on the left show visual representation between the top 10 countries and their education rate, tax rate, and wealth.

- ★ The tertiary education enrollment rate by country bar graph shows that the top three countries with the most enrollment is the United States, China, and Germany.
- ★ The total tax rate by country bar graph shows that the top three countries with the highest tax rate is China, United States, and India.
- ★ The wealth by country bar graph shows that the top three countries with the highest amount of wealth is the United States, China, and India.

Population by Country



The population by country bubble chart shows a visual representation of the population of every country compared to others. Looking at the graph, we can easily conclude that the United States, China. And India all have the highest population compared to other countries.

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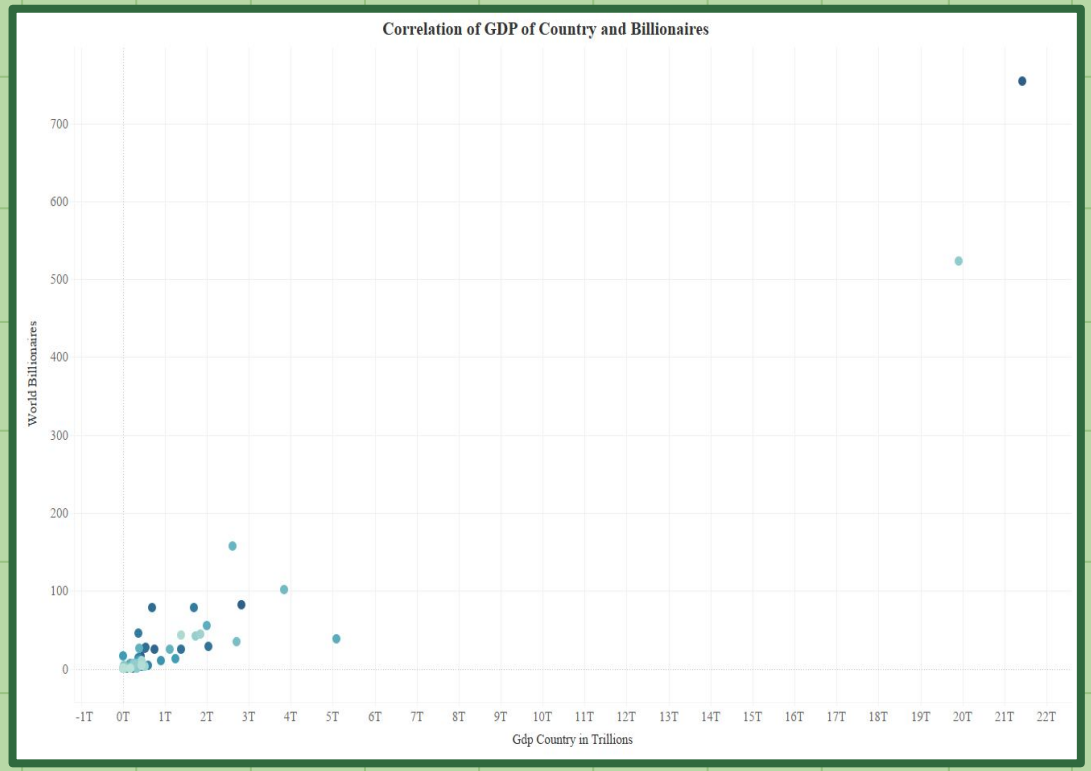
Correlation and Regression

Correlation of GDP of Countries and Billionaires



To explore the factors that could correlate to a higher population of billionaires in a country, we looked for a linear relationships between various variables in the dataset.

At first, I was expecting to find a linear correlation between the primary education and tertiary education enrollment rates and the number of billionaires per country. Strikingly, after graphing the data it showed that no linear correlation was found.

However, when I graph a scatter plot graph between the country's GDP and population of billionaires, we can see that the higher a country's GDP (Gross domestic Product) the more billionaires the country had.

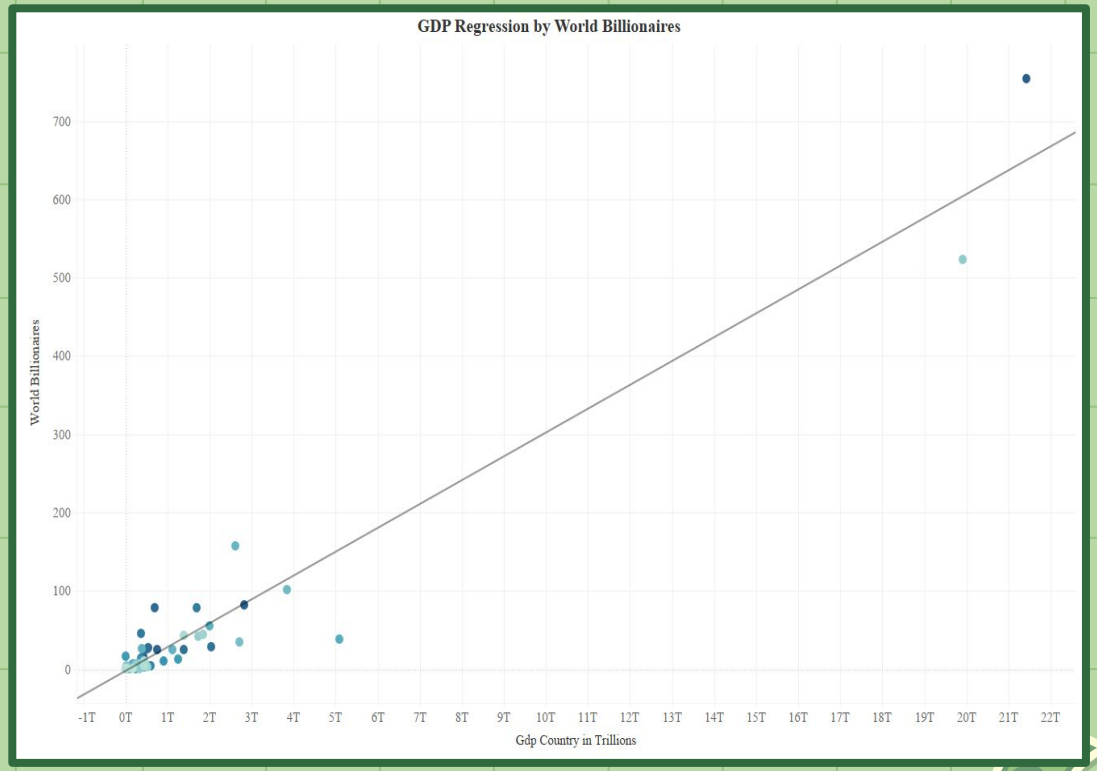
I was able to conclude the following hypothesis: The higher the GDP is in a country, the more billionaires the country will have.

Regression of GDP of Countries and Billionaires

To test if my hypothesis was true, I conducted a linear regression. Looking at the graph on the right side, it shows that ***a country's GDP contributes to around 94.12% of the population of billionaires in the country.*** This is a very strong correlation.

At first, I considered removing China and the United States from the graph because they were the two biggest outliers. However, I decided against it because these two countries together contribute to over half the billionaire population in the world and removing them would greatly distort the data. Furthermore, these two countries fit within the regression line, so they wouldn't need to be removed.

According to the dataset on the right, the largest correlating factor to the population of billionaires in a country is the country's GDP.



05

Results and Recommendations

Results

- ★ The factor with the strongest correlation to the population of billionaires in a country is the country's GDP (gross domestic product) .
- ★ The majority of billionaires are middle-aged to senior citizens within the age range of 50 to 70 years.
- ★ The majority of billionaires are male.
- ★ A majority (around 3/4ths) of billionaires are "self-made", around 22% inherited their wealth.
- ★ The countries in which most of the billionaires reside in are all top 10 in terms of tertiary education enrollment rate, tax rate, GDP, wealth, and population.
- ★ The top three industries in which billionaires make their wealth are Finance & Investments, Manufacturing, and Technology.

In summary, all of these results give a insight of wealth distribution, age dynamics, industry focus, and gender variance among billionaires. These can all inform evidence-based governmental policy-making that is aimed to promote economic growth, fostering inclusive development, and reducing inequalities among citizens.

Limitations of Analysis

Categories like "self-made" and "inherited" may not be entirely accurately reflecting reality. It does not specify "self-made" to a degree, many billionaires may have inherited large sums of money, but then built on it themselves to become a billionaire.

The "final worth" and "ranking" of the billionaires are measured in U.S dollars, but they do not take into consideration of the money in terms of exchange rate. For example, a billionaire's money may be worth more in another country because of the exchange rate, and the exchange rates are always constantly changing so the data may not be completely accurate.

Further Steps

- ★ Collect and analyze the dataset from year to year and conduct time-series analysis.
- ★ Explore what factors may influence the variant between the numbers of male and female billionaires.
- ★ Explore what factors may create differences between "self-made" and "Inherited billionaires.
- ★ With the yearly dataset collected, use historical data of the billionaires to analyze lifespan and factors that had impacted the population, lifespan, and wealth of deceased billionaires.

Resources

Jupyter Notebook, Tableau, Google Slides, and Excel was used to create this project

- ★ The dataset used for the project was retrieved from Kaggle.Com: "World Billionaires(2023)"
- ★ The JSON Dataset that was used for Country Locations: Countries JSON
- ★ Link to my GitHub Repository: World Billionaires Repository

Thank You!