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# Covid-19 Impacts Analysis Case-Study Report-

By Chirantan Bal

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## Summary:

This case study analyses the impacts of the Covid-19 pandemic on the global economy. Through a comprehensive data analysis, we examined key economic indicators, cross-country variations, policy responses, and case studies to understand the challenges and opportunities arising from the crisis. The study reveals significant disruptions across industries and regions, highlighting the need for effective recovery strategies. The findings provide valuable insights for policymakers, businesses, and individuals seeking to navigate the post-pandemic economic landscape and build resilience in the face of future challenges.

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## Introduction:

The Covid-19 pandemic, caused by the novel coronavirus SARS-CoV-2, has emerged as a global health crisis with far-reaching implications for the world economy. Since its outbreak in late 2019, the virus has spread rapidly across continents, leading to widespread infections, severe illness, and loss of lives. However, beyond the immediate health impact, the

pandemic has also triggered significant disruptions in economic systems, posing formidable challenges to countries, industries, and individuals worldwide.

The measures implemented to contain the spread of the virus, such as lockdowns, travel restrictions, and social distancing, have had unprecedented consequences on global economic activities. Businesses faced closures, supply chains were disrupted, and unemployment rates soared to alarming levels. The ripple effects extended to various sectors, including tourism, aviation, retail, manufacturing, and financial markets, exacerbating the complexity and scale of the economic crisis.

Understanding the multifaceted impacts of the pandemic on the global economy is crucial for policymakers, businesses, and individuals seeking to navigate the path to recovery. This case study aims to delve into the data, conduct a comprehensive analysis, and provide insights into the Covid-19 pandemic's ramifications on the global economic landscape.

Through this analysis, we aim to contribute to the body of knowledge surrounding the Covid-19 pandemic's impact on the global economy, empowering decision-makers with evidence-based insights and recommendations for building resilience, fostering recovery, and shaping a more resilient post-pandemic world.

## Methodology:

To conduct this analysis, a systematic approach was followed to ensure accuracy and reliability in the findings. The methodology encompassed the following steps:

1. **Data Collection:** The data we are using includes data on Covid-19 cases and their impact on GDP from December 31, 2019 to October 10, 2020 and is downloaded from <https://www.kaggle.com/>, including country code, country name, HDI index, daily deaths, daily cases, country population, GDP per capita etc...
2. **Data Preprocessing:** Before analysis, the collected data underwent preprocessing steps to ensure its quality and consistency. This involved cleaning & processing the data and looking into value counts, mode values, aggregations of data, sorting data, joining the columns.
3. **Exploratory Data Analysis (EDA):** Exploratory Data Analysis was conducted to gain a preliminary understanding of the data. Here we performed two types of EDA-
  - A. Analysing the Spread of Covid-19.
  - B. Analysing Covid-19 Impacts on Global Economy.

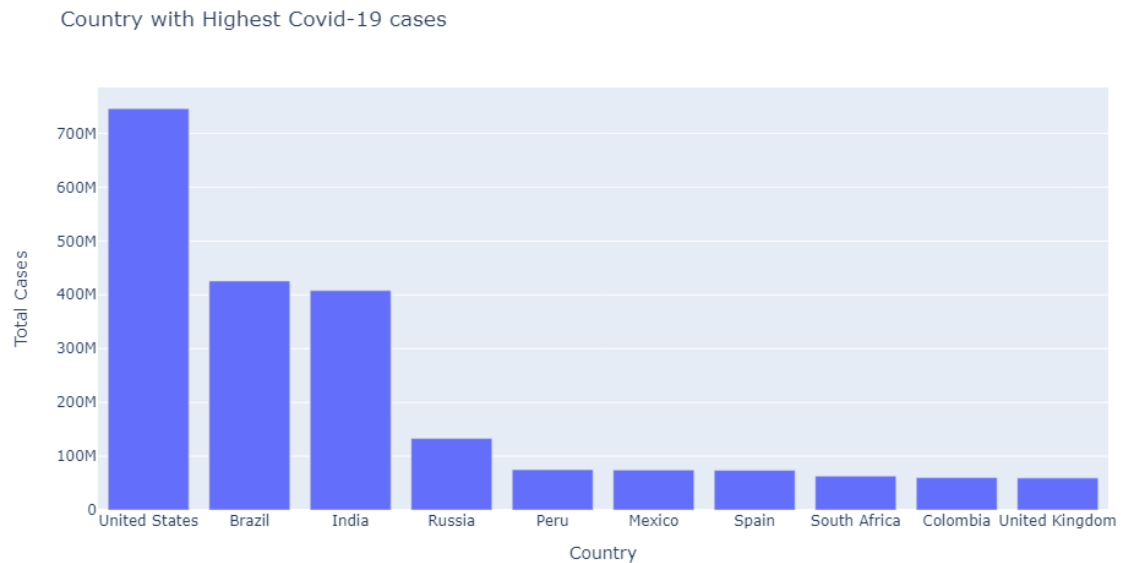
(Note: The data about GDP has been collected manually from trusted sources like wikipedia, and official government websites of the countries.)

4. **Reporting:** The findings, insights, and recommendations were compiled into a comprehensive data analysis report. The report presented the analysis results in a clear and organised manner using visualisations, tables, and concise explanations.

## Key Findings:

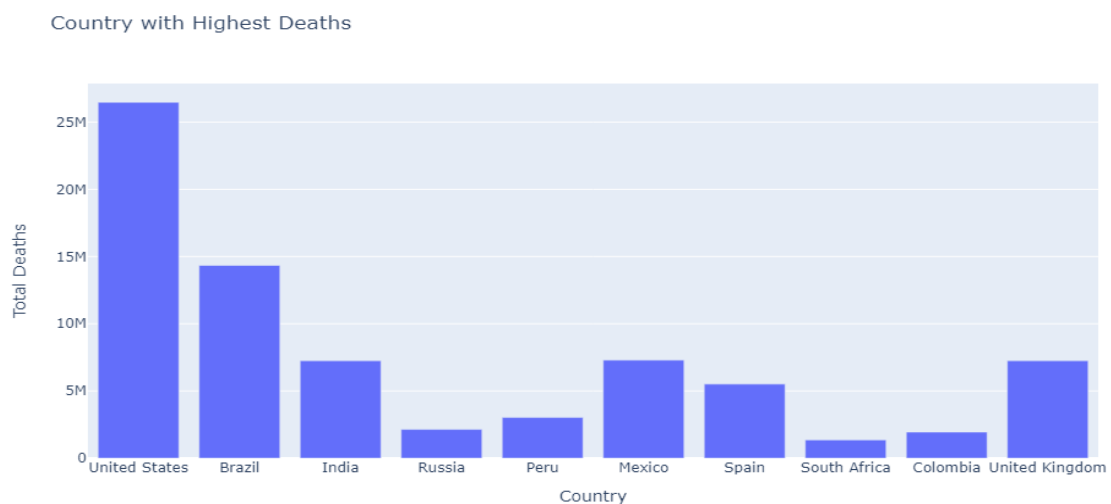
### A. Analysing the Spread of Covid-19-

#### 1. All the countries with the highest number of covid-19 cases:



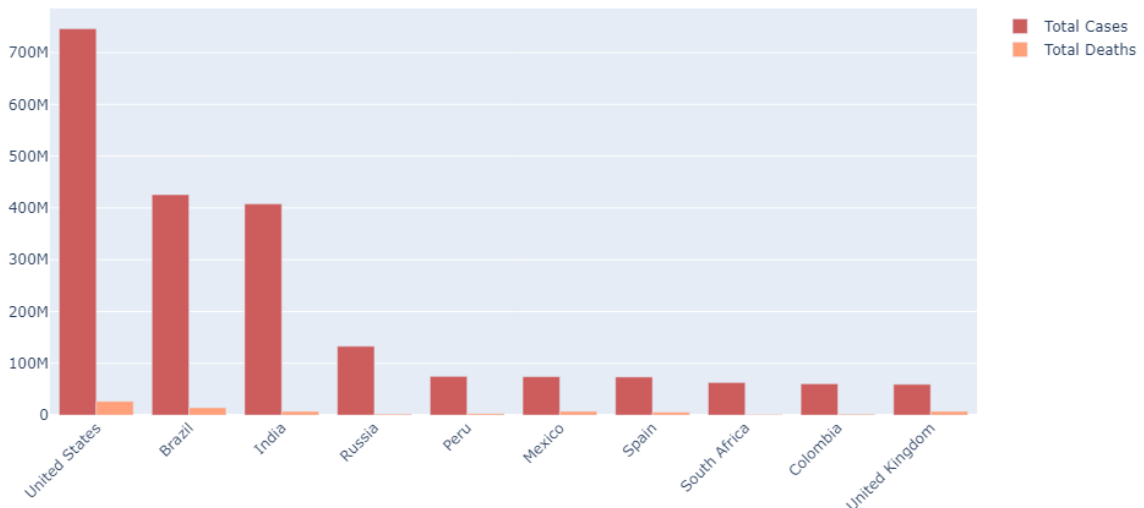
We can see that the USA is comparatively having a very high number of covid-19 cases as compared to Brazil and India in the second and third positions.

#### 2. The total number of deaths among the countries with the highest number of covid-19 cases:



Just like the total number of covid-19 cases, the USA is leading in the deaths, with Brazil and India in the second and third positions. One thing to notice here is that the death rate in India, Russia, and South Africa is comparatively low according to the total number of cases.

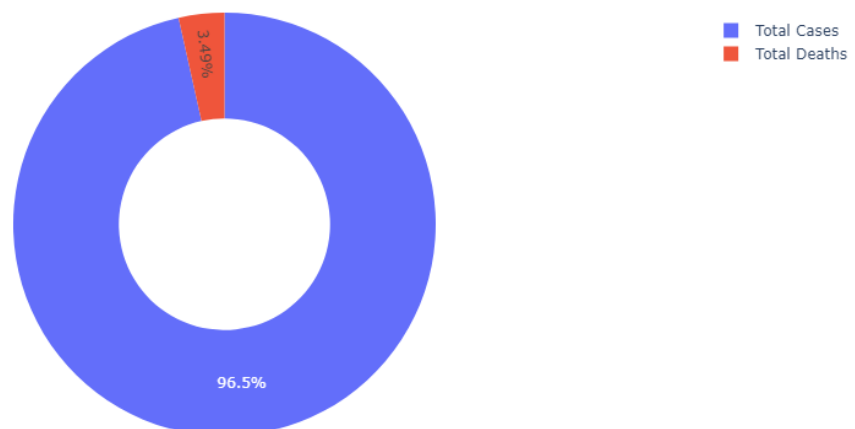
3. Comparison of total number of cases and total deaths in all these countries:



As we can see, the United States was having the biggest impact in terms of Covid-19 cases and deaths.

4. Percentage of total deaths and total cases among all the countries with the highest number of covid-19 cases:

Percentage of Total Cases and Deaths

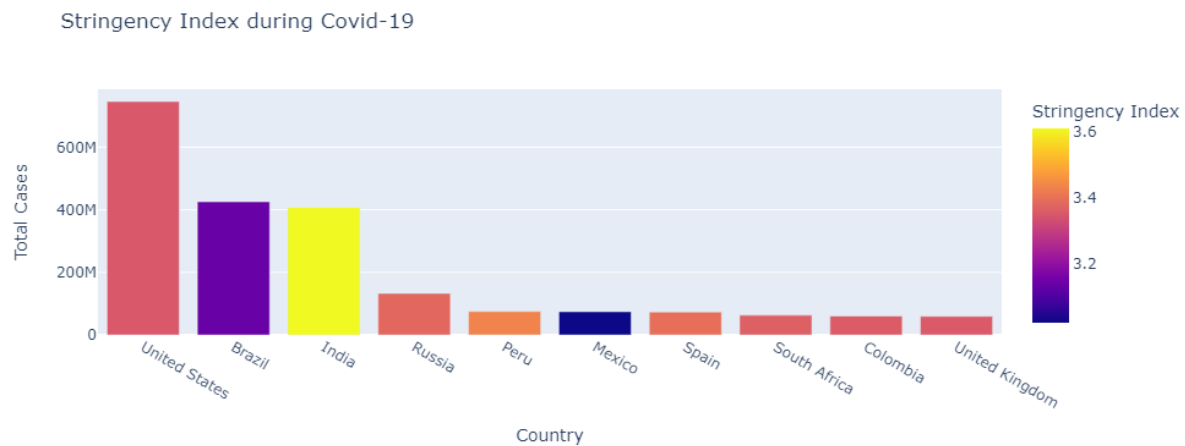


As we can see, total cases and total deaths percentages are 96.5% & 3.49%

5. The death rate of Covid-19 cases:

Death Rate = 3.61

6. How strictly countries are following these measures to control the spread of covid-19:



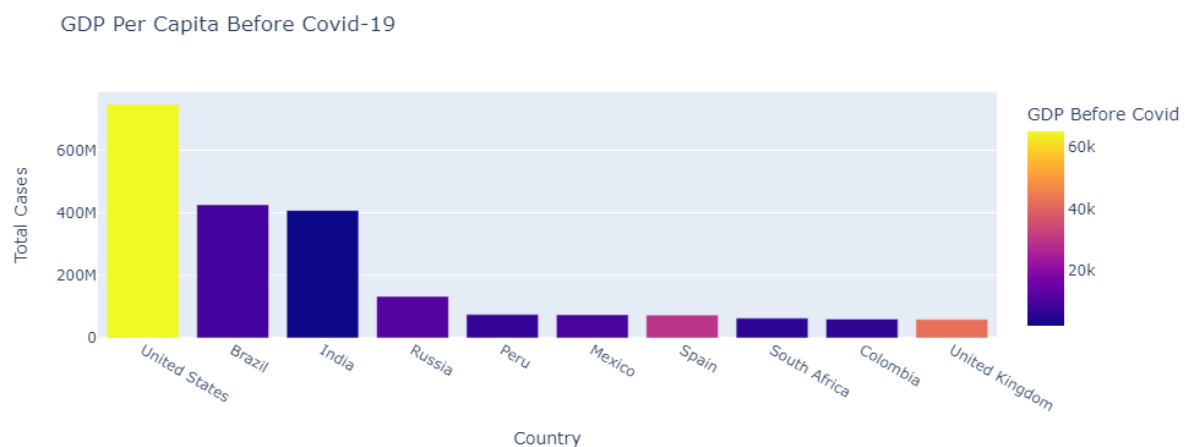
Here we can see that India is performing well in the stringency index during the outbreak of covid-19.

## B. Analysing Covid-19 Impacts on Global Economy-

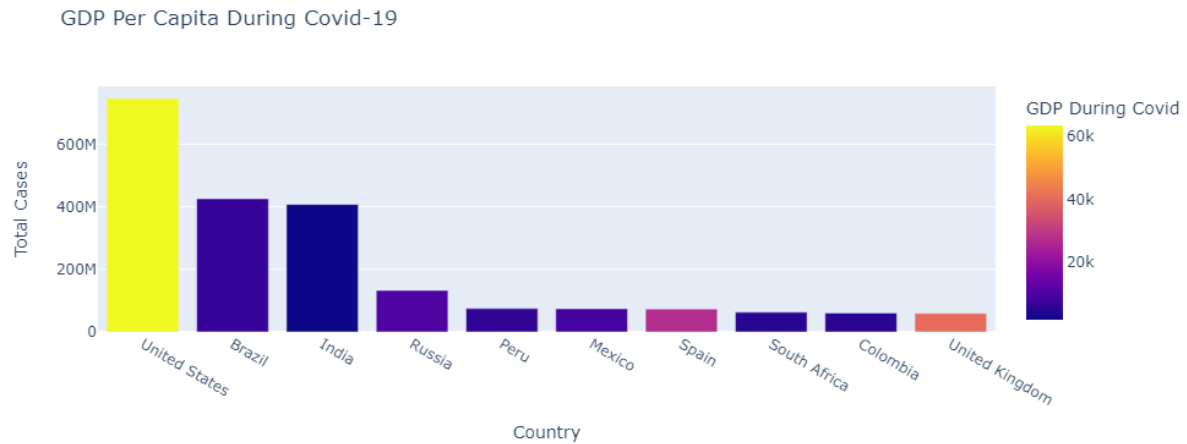
1. **GDP per Capita:**

a. GDP per capita before the outbreak of covid-19:

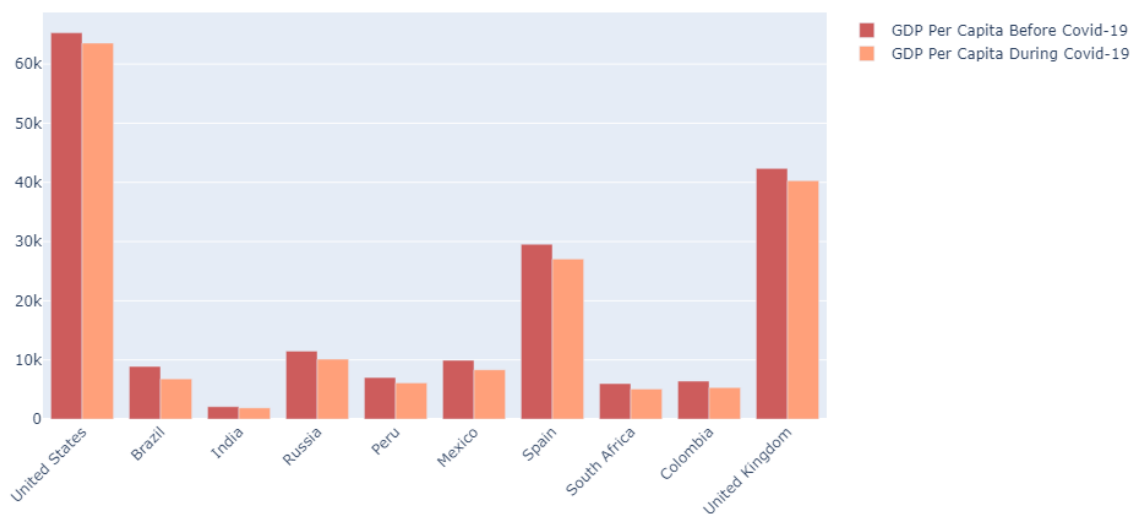
Here the GDP per capita is the primary factor for analysing the economic slowdowns caused due to the outbreak of covid-19.



b. GDP per capita during the rise in the cases of covid-19:



c. Impact of covid-19 on the GDP per capita:

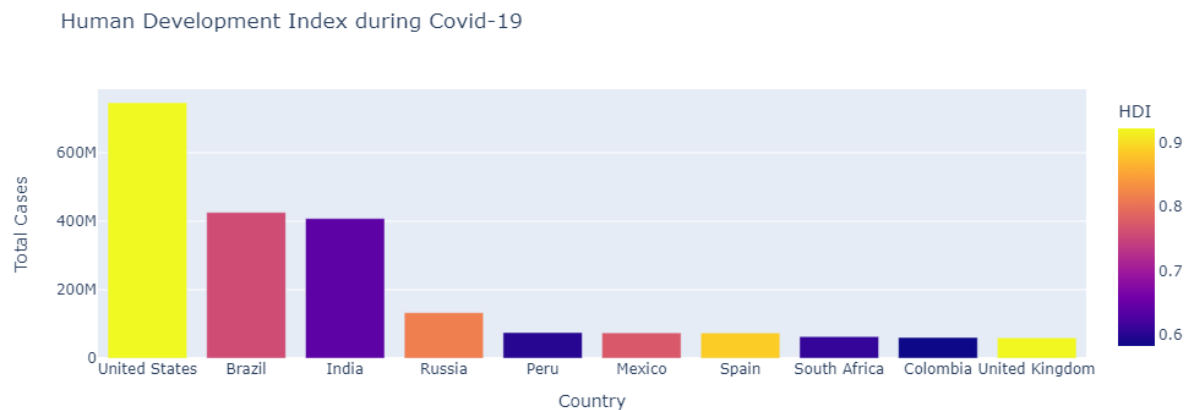


As we can see, a drop in GDP per capita in all the countries with the highest number of covid-19 cases.

## 2. Human Development Index:

One other important economic factor is the Human Development Index. It is a statistical composite index of life expectancy, education, and per capita indicators.

a. Human Development Index during Covid-19:



As we can see, the US spends their budget on human development close to 0.92 HDI and their total number of Covid-19 cases is over 600 million.

**Conclusion:**

In this case study, we studied the spread of covid-19 among the countries and its impact on the global economy. We saw that the outbreak of covid-19 resulted in the highest number of covid-19 cases and deaths in the United states. One major reason behind this is the stringency index of the United States. It is comparatively low according to the population. We also analysed how the GDP per capita of every country was affected during the outbreak of covid-19.