


## Power BI Project: Global Health Expenditure Analysis


Global Health Expenditure Analysis Power BI Objective: The objective of this Power BI project is to analyse global health expenditure data to gain valuable insights into various aspects of health spending across countries and regions. The primary goal is to provide a comprehensive and data-driven view of health expenditure trends and their relationships and identify key patterns. The analysis aims to answer critical questions and support decision-making in the field of global healthcare.


Data Pre-Processing: -


1. I have loaded the data from the Excel file that was provided by Newton School, which contains detailed information about Global Health Expenditure of 2018-2020.
2. Used Power query editor to clean and transform the data, such as by removing duplicates, filling in missing values, splitting columns, and renaming tables.
3. I have used new measures and some DAX functions for the KPI visual, such as calculating Total GDP, Total Expenditure, % of Expenditure, Average Growth %, and Maximum Expenditure Country.
4. Created a dashboard with several visualizations, such as a card visual, slicers, stacked bar charts, line charts, scatter charts, and maps, to show the key insights.
5. Lastly applied some filters and slicers to allow interactive exploration of the data, such as selecting a country name and year.


Key Features: -


 **KPIs at Your Fingertips:** My dashboard showcases a wide array of Key Performance Indicators (KPIs) that Total GDP, Total Expenditure, % of Expenditure, Average Growth % and Maximum Expenditure Country.

 **Real-time Data:** Stay in the loop with the latest Global Health Expenditure Analysis as my dashboard continuously updates to provide the most current insights.

 **Bar Chart:** This visualization provides a snapshot of healthcare spending in that specific year, aiding decision-makers in understanding variations and making data-driven choices related to global health expenditure.

 **Scatter Plot:** This visualization can help identify countries that may be over or underinvesting in healthcare relative to their GDP, supporting informed decisions in global healthcare and economics.

 **Line Chart:** A used line chart that allows users to explore the trend of health expenditure over the years for selected countries and regions.

 Map:- Utilizing a map visualization to show the distribution of health expenditure geographically is a powerful way to convey spatial patterns and disparities.

## SUMMARY

1. At 43.38%, 2020 had the highest Y2Y% change in Health Expenditure and was 18.30% higher than 2018, which had the lowest Y2Y% change in Health Expenditure at 36.67%.
2. 2020 had the highest Y2Y% change in Health Expenditure at 43.38%, followed by 2019 at 37.03% and 2018 at 36.67%.
3. 2018 had 36.67% Y2Y% change in Health Expenditure, 2019 had 37.03%, and 2020 had 43.38%.
4. 2020 in Country Name Monaco made up 1.67% of Sum of Health Expenditure.
5. Monaco had the highest Sum of GDP (578282) and Luxembourg had the highest Sum of Health Expenditure (154152).

## Conclusion:

In analysing the trends and distribution of health expenditure over the years 2018 to 2020, several key insights emerge:

### 1. Increasing Trend in Health Expenditure:

- The year-over-year (Y2Y) percentage change in health expenditure has consistently increased from 2018 to 2020. The most significant growth occurred in 2020, with a 43.38% increase compared to 2019's 37.03% and 2018's 36.67%. This indicates a growing emphasis on health spending, potentially influenced by global health events such as the COVID-19 pandemic.

### 2. Significant Rise in 2020:

- The sharp rise in health expenditure in 2020 (43.38%) suggests an extraordinary increase in healthcare investment, which might be attributed to the global health crisis demanding more resources.

### 3. Contribution of Monaco:

- In 2020, Monaco's health expenditure constituted 1.67% of the total sum of health expenditures, highlighting its relatively modest but significant contribution to the overall healthcare spending landscape.

### 4. GDP and Health Expenditure Leaders:

- Monaco led in terms of the highest sum of GDP, while Luxembourg stood out with the highest sum of health expenditure. This indicates differing economic dynamics and healthcare investment priorities between the two countries.

Overall, the data underscores a significant upward trend in health expenditures, particularly pronounced in 2020, reflecting possibly increased healthcare needs and responses to global health challenges. Monaco's and Luxembourg's economic and health expenditure standings provide further context to the broader financial and healthcare landscape during this period.

