Data Science Group 16
International Debt Statistics

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Motivation

To help businesses interested in solving real world problems in figuring out and developing applications and solutions for countries which are in need of financial advancement and betterment.

Dataset Description

The dataset is hosted by The World Bank https://databank.worldbank.org/source/international-debt-statistics .It consists of 2 data tables, containing records of over 170 countries across 20 economic topics and 498 indicators from 1970 to 2026. It focuses on trends in external debts affected by major financial indicators for low and middle income countries. The granularity of the dataset goes to global, regional and national level and is updated in real-time.

Data Cleaning and Preprocessing

Data tables were loaded into sqlite3, data was cleaned, unnecessary columns were dropped and datasets were imported to Jupyter Notebook after joining both the tables.

Analysis

Following analysis was performed on data:

- Finding indicators contributing minimum and maximum to International debt across all countries. *Import of goods and services* was found to have maximum debt of around 40T USD, whereas *Current account balance* was found to have minimum of around -75B USD.
- Categorizing data based on factors like income and geographical locations and understanding the trend of debt over the years. *Lower and middle income countries* were found to have maximum debt where as in geographical locations *Latin America and Caribbean* were found to have most debt.
- Understanding the trend of debt over the years. Dropdowns were created to find total debt for all the countries from 1970 to 2026. Countries with maximum debt in 2018 were selected and data from all indicators were merged into respective topics to create dropdowns and trend of debt for top 5 countries that is India, Russia, Mexico, China and Brazil were plotted.
- Analyzing how debt for various topics has varied over the years for India and what percentage of total debt each topic holds in present. *Economic Policy & Debt: External debt: Debt outstanding* was found to have maximum share of 56.5%. For further analysis, what indicators comprises of *Economic Policy & Debt: External debt: Debt outstanding* were evaluated. It was found to have 65 various indicators, where *External Debt Stocks* was found to maximum share of 12.2%.

Conclusion

With the above analysis it can be inferred how international debt has varied over years across various factors and indicators for low and middle income countries. Following these trends, solutions can be obtained for financial advancement and development of countries.