



DATA ANALYSIS PROJECT

INTERNATIONAL DEBT ANALYSIS

UNDERSTANDING GLOBAL FINANCIAL TRENDS FOR DEVELOPING COUNTRIES

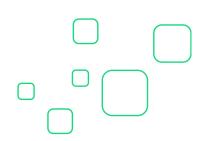
Project Overview:

In a world where nations face the dual challenges of managing economic growth and financial stability, debt plays a crucial role in shaping the future. Developing countries often rely on external debt to fund vital infrastructure projects, social welfare programs, and long-term development goals.

However, balancing these financial commitments with repayments is a delicate act. In this project, I analyzed a comprehensive dataset from The World Bank, exploring the intricate relationships between debt accumulation, repayment patterns, and economic strategies across developing countries.

Key Objectives:

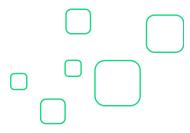
- Assess the diversity of the dataset by determining the number of distinct countries involved.
- Highlight the financial powerhouses by identifying the country with the highest total debt.
- Explore debt management strategies by identifying the country with the lowest amount of repayments on external debt.





The goal was to uncover key insights from international debt data, such as identifying the countries with the highest levels of debt, the countries facing the lowest repayment pressures, and understanding the overall financial landscape of developing nations. This analysis offers valuable lessons on the global financial ecosystem and its implications for sustainable development.





The dataset used for this analysis is sourced directly from The World Bank, containing detailed records of external debt and repayments from developing nations. The core dataset consists of the following columns:

| Column | Definition | Data Type |
|----------------|--|-----------|
| country_name | Name of the country | varchar |
| country_code | Unique code representing the country | varchar |
| indicator_name | Description of the debt indicator | varchar |
| indicator_code | Code representing the debt indicator | varchar |
| debt | Debt value in current US dollars for a given indicator | float |

Note: This data serves as a snapshot of the financial health of nations, highlighting key indicators of debt management and repayment.

SQL Queries & Insights:

1. Identifying the Number of Distinct Countries:

Our first step was to explore the scope of the dataset. How many distinct countries are represented in the dataset? By analyzing the number of unique country names, we could better understand the diversity of data and the global reach of the World Bank's debt monitoring efforts.

SELECT

COUNT(DISTINCT country_name) AS total_distinct_countries FROM international_debt;

Result:

Total distinct countries: 124

With 124 distinct countries, the dataset offers a broad, global perspective on the debt challenges faced by developing nations.

Insight: This global breadth emphasizes the widespread reliance on external debt, showcasing how countries across continents seek funding for growth and development.

2. Uncovering the Country with the Highest Debt:

Debt is often seen as a means to fuel development, but it also comes with long-term financial commitments. By aggregating the total debt for each country, we sought to identify the country with the highest debt, a crucial indicator of how certain nations manage large-scale financial obligations.

SELECT

country_name, SUM(debt) AS total_debt FROM international_debt GROUP BY country_name ORDER BY total_debt DESC LIMIT 1;

Result:

Country with the highest debt: China

Total debt: \$285.79 billion USD

Insight: China stands as the leader in international debt, with a staggering \$285.79 billion in total debt. This insight sheds light on China's ambitious infrastructure and development projects, which have driven its global financial footprint. However, it also brings to the forefront the complexities of managing such an immense debt load while maintaining rapid economic growth.

3. Finding the Country with the Lowest Repayment:

Repayment rates reveal a lot about a country's financial health and its ability to manage debt. By focusing on principal repayments on long-term external debt, we were able to identify which country faced the least repayment pressure, possibly indicating a more favorable debt-to-GDP ratio or a smaller external debt burden.

SELECT

country_name,
indicator_name,
MIN(debt) AS lowest_repayment
FROM international_debt
WHERE indicator_code = 'DT.AMT.DLXF.CD'
GROUP BY country_name, indicator_name
ORDER BY lowest_repayment
LIMIT 1;

Result:

Country with the lowest repayment: Timor-Leste

Indicator Name: Principal repayments on external debt, long-term (AMT, current US\$)

Lowest repayment: \$825,000 USD

Insight: Timor-Leste, a small nation with a growing economy, recorded the lowest repayment amount. This result likely reflects the country's relatively small external debt obligations, perhaps due to its limited international borrowing or its ability to negotiate favorable repayment terms. This insight underscores the importance of managing debt effectively, especially for smaller economies with limited financial resources.

Key Insights:

124 Distinct Countries: The dataset encompasses a diverse range of developing countries, offering a global view of debt management strategies across various regions.

China's Dominance in Debt: With a total debt of \$285.79 billion USD, China is the leader in international debt, a reflection of its ambitious global initiatives and extensive infrastructure projects.

Timor-Leste's Minimal Repayment: Timor-Leste's repayment of just \$825,000 USD highlights the financial agility of smaller nations in managing their external debt, perhaps due to limited debt or favorable terms negotiated with creditors.

Conclusion:

This analysis of international debt data reveals important patterns in the financial landscape of developing countries. By identifying key players like China, which carries the highest debt burden, and Timor-Leste, with its low repayment rate, we gain insights into the diverse ways countries manage their financial responsibilities. The project underscores the complexities of global debt, highlighting the balance between development needs and financial sustainability.

Skills Demonstrated:

Advanced SQL querying, including aggregate functions, sorting, and filtering.

Data exploration and pattern recognition in large datasets.

Financial analysis, specifically in the context of international debt.

Ability to extract actionable insights from complex datasets.

Technologies Used:

SQL (Structured Query Language)

Database Management Systems (DBMS)

World Bank's International Debt Dataset

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