

## DataCamp – Analyze International Debt Statistic

[DataCamp](#) is an online learning platform that helps students build data skills at their own pace. DataCamp courses include non-coding essentials like BI tools to data science and machine learning.

### Overview

This data set is provided by DataCamp where they took it the data set from The World Bank. A country may also take debt to manage its economy. For example, infrastructure spending is one costly ingredient required for a country's citizens to lead comfortable lives. The World Bank is the organization that provides debt to countries.

We are going to analyze international debt data collected by The World Bank. The dataset contains information about the amount of debt (in USD) owed by developing countries across several categories, like **country\_name**, **country\_code**, **indicator\_name**, **indicator\_code**, and **debt**. We are going to find the answers to questions like:

- What is the total amount of debt that is owed by the countries listed in the dataset?
- Which country owns the maximum amount of debt and what does that amount look like?
- What is the average amount of debt owed by countries across different debt indicators?

### Tool

The tool that I use for this analysis is SQL that has been provided by DataCamp in their website.

## Analyze

- The World Bank's international debt data

```
%%sql
postgres://international_debt

SELECT * FROM international_debt LIMIT 10
```

10 rows affected.

country_name	country_code	indicator_name	indicator_code	debt
Afghanistan	AFG	Disbursements on external debt, long-term (DIS, current US\$)	DT.DIS.DLXF.CD	72894453.700000003
Afghanistan	AFG	Interest payments on external debt, long-term (INT, current US\$)	DT.INT.DLXF.CD	53239440.100000001
Afghanistan	AFG	PPG, bilateral (AMT, current US\$)	DT.AMT.BLAT.CD	61739336.899999999
Afghanistan	AFG	PPG, bilateral (DIS, current US\$)	DT.DIS.BLAT.CD	49114729.399999999
Afghanistan	AFG	PPG, bilateral (INT, current US\$)	DT.INT.BLAT.CD	39903620.100000001
Afghanistan	AFG	PPG, multilateral (AMT, current US\$)	DT.AMT.MLAT.CD	39107845
Afghanistan	AFG	PPG, multilateral (DIS, current US\$)	DT.DIS.MLAT.CD	23779724.300000001
Afghanistan	AFG	PPG, multilateral (INT, current US\$)	DT.INT.MLAT.CD	13335820
Afghanistan	AFG	PPG, official creditors (AMT, current US\$)	DT.AMT.OFFT.CD	100847181.900000006
Afghanistan	AFG	PPG, official creditors (DIS, current US\$)	DT.DIS.OFFT.CD	72894453.700000003

For the first let's we see the data in the table for the first ten rows. From the first ten rows, we can see the amount of debt owed by Afghanistan in the different debt indicators.

- Finding the number of Distinct Countries

```
%%sql
SELECT
COUNT(DISTINCT country_name) AS total_distinct_countries
FROM international_debt;
```

```
* postgres://international_debt
1 rows affected.
```

total_distinct_countries
124

We can see there are a total of 124 countries present on the table.

- The most Common Debt Indicators

```
%%sql
SELECT
    indicator_code,
    COUNT(indicator_code) AS indicator_count
FROM international_debt
GROUP BY indicator_code
ORDER BY indicator_count DESC, indicator_code DESC
LIMIT 20;
```

\* postgresql:///international\_debt  
20 rows affected.

indicator_code	indicator_count
DT.INT.OFFT.CD	124
DT.INT.MLAT.CD	124
DT.INT.DLXF.CD	124
DT.AMT.OFFT.CD	124
DT.AMT.MLAT.CD	124
DT.AMT.DLXF.CD	124
DT.DIS.DLXF.CD	123
DT.INT.BLAT.CD	122
DT.DIS.OFFT.CD	122
DT.AMT.BLAT.CD	122
DT.DIS.MLAT.CD	120
DT.DIS.BLAT.CD	113
DT.INT.PRVT.CD	98
DT.AMT.PRVT.CD	98
DT.INT.PCBK.CD	84
DT.AMT.PCBK.CD	84
DT.INT.DPNG.CD	79
DT.AMT.DPNG.CD	79
DT.INT.PBND.CD	69
DT.AMT.PBND.CD	69

As we can see there are a 25 debt indicators from this data set. And there are a total of six debt indicators in which all the countries listed in our dataset have taken debt. The indicator DT.AMT.DLXF.CD is also there in the list.

- Country with the Highest Debt

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

\* postgresql:///international\_debt  
1 rows affected.

country_name	total_debt
China	285793494734.200001568

So, it was China with the highest debt in this data set.

- Average amount of Debt across Indicators

```
%%sql
SELECT
    indicator_code AS debt_indicator,
    indicator_name,
    AVG(debt) AS average_debt
FROM international_debt
GROUP BY debt_indicator, indicator_name
ORDER BY average_debt DESC
LIMIT 10;
```

\* postgresql:///international\_debt  
10 rows affected.

debt_indicator	indicator_name	average_debt
DT.AMT.DLXF.CD	Principal repayments on external debt, long-term (AMT, current US\$)	5904868401.499193612
DT.AMT.DPNG.CD	Principal repayments on external debt, private nonguaranteed (PNG) (AMT, current US\$)	5161194333.812658349
DT.DIS.DLXF.CD	Disbursements on external debt, long-term (DIS, current US\$)	2152041216.890243888
DT.DIS.OFFT.CD	PPG, official creditors (DIS, current US\$)	1958983452.859836046
DT.AMT.PRVT.CD	PPG, private creditors (AMT, current US\$)	1803694101.963265321
DT.INT.DLXF.CD	Interest payments on external debt, long-term (INT, current US\$)	1644024067.650806481
DT.DIS.BLAT.CD	PPG, bilateral (DIS, current US\$)	1223139290.398230108
DT.INT.DPNG.CD	Interest payments on external debt, private nonguaranteed (PNG) (INT, current US\$)	1220410844.421518983
DT.AMT.OFFT.CD	PPG, official creditors (AMT, current US\$)	1191187963.083064523
DT.AMT.PBND.CD	PPG, bonds (AMT, current US\$)	1082623947.653623188

We can see that the indicator DT.AMT.DLXF.CD tops the chart of average debt. This category includes repayment of long term debts. Countries take on long-term debt to acquire immediate capital.

- Other Viable debt issues and conclusion

```
%%sql
SELECT
    country_name,
    MAX(debt) AS maximum_debt
FROM international_debt
GROUP BY country_name
ORDER BY maximum_debt DESC
LIMIT 10;
```

\* postgresql:///international\_debt  
10 rows affected.

country_name	maximum_debt
China	96218620835.699996948
Brazil	90041840304.100006104
Russian Federation	66589761833.5
Turkey	51555031005.800003052
South Asia	48756295898.199996948
Least developed countries: UN classification	40160766261.599998474
IDA only	34531188113.199996948
India	31923507000.799999237
Indonesia	30916112653.799999237
Kazakhstan	27482093686.400001526

It was the top 10 country with the most debt to The World Bank.