

Identifying Top 10 and Bottom 10 Spenders

The ranking is based on the average health spend per capita for the year range **2010 to 2019**. Given the time constraints of this team project, we opted to focus on the **Top 10 and Bottom 10 countries** and omitted exploring the mid-level category. While this approach is not fully comprehensive, it allowed us to delve deeper into the extremes of the dataset.

Top 10 Highest Spending Countries (Average Per Capita)

This table ranks the top 10 countries by their average health spending per capita in USD between **2010 and 2019**:

Rank	Country Code	Country Name	Avg Spend Per Capita (\$ USD)
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1	USA	United States	730.0734
2	MLT	Malta	669.0481
3	CHE	Switzerland	652.6311
4	FRA	France	482.7316
5	SVN	Slovenia	475.1195
6	ITA	Italy	472.0180
7	JPN	Japan	461.7490
8	SVK	Slovakia	461.5247
9	BGR	Bulgaria	461.3481
10	LTU	Lithuania	451.1292

The corresponding bar chart of the Top 10 highest spending countries visually illustrates the data.

Bottom 10 Lowest Spending Countries (Average Per Capita)

This table ranks the bottom 10 countries by their average health spending per capita in USD for the same period (**2010 to 2019**):

Rank	Country Code	Country Name	Avg Spend Per Capita (\$ USD)
1	TUR	Turkey	35.1717
2	NZL	New Zealand	140.7403
3	COL	Colombia	161.3840
4	CRI	Costa Rica	161.4761
5	GBR	United Kingdom	179.9348
6	DNK	Denmark	218.3306
7	NOR	Norway	221.5305
8	KOR	South Korea	229.1562
9	MEX	Mexico	230.7111
10	NLD	Netherlands	246.4994

A bar chart of the Bottom 10 lowest spending countries complements this analysis.

Supporting Code

The Python code used to calculate and rank the top and bottom 10 spenders can be found in the 4_top_bottom.ipynb file within our repository. This notebook includes step-by-step implementation details and accompanying visualizations.

Data Analysis in Python

After grouping the **Top 10** and **Bottom 10** countries, we further analyzed these groups using methods such as:

- **Linear Regression:** To assess relationships between health expenditures and other factors.
- **Clustering:** To categorize countries based on spending patterns.
- **Forecasting:** To predict future trends in health spending.
- **Data Visualization:** Created both static and dynamic visualizations using Python libraries. Optionally, we explored additional visualizations using Tableau Public.