

WDI 2022 Analysis

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2025-10-08

Introduction

This is the beginning of my WDI 2022 analysis report.

Load the Dataset

```
import pandas as pd

# Load the dataset (make sure wdi.csv is in the same repo, e.g. data/wdi.csv)
df = pd.read_csv("wdi.csv")

# Show the shape and first few rows
print("Shape:", df.shape)

## Exploratory Data Analysis

# 1. GDP per Capita - check min and max
print("GDP per Capita (min, max):", df["gdp_per_capita"].min(), df["gdp_per_capita"].max())

# 2. Life Expectancy - check mean and median
print("Life Expectancy (mean, median):", df["life_expectancy"].mean(), df["life_expectancy"].median())

# 3. Inflation Rate - show summary stats
print("Inflation Rate Summary:")
print(df["inflation_rate"].describe())
```

Shape: (217, 14)

GDP per Capita (min, max): 250.634225368744 226052.001905201

Life Expectancy (mean, median): 73.10801989434641 74.1609756097561

Inflation Rate Summary:

count 175.000000

mean 12.296172

std 19.396593

min -6.687321

25% 5.344829

50% 7.922049

75% 11.781866

max 171.205491

Name: inflation_rate, dtype: float64

Summary of Findings

- **GDP per Capita:** Countries range from very low income (~250) to very high income (~226,000). This shows large global inequality.
- **Life Expectancy:** Average life expectancy is about 73 years, median slightly higher at 74. This indicates most countries are clustered in the 70s, with a few low outliers.
- **Inflation Rate:** Average inflation is about 12%, but with high variation (std 19). The maximum is extremely high (171%), showing some countries experience hyperinflation. The distribution is right-skewed.

Visualizations

HScatter plot of GDP per Capita and Life Expectancy

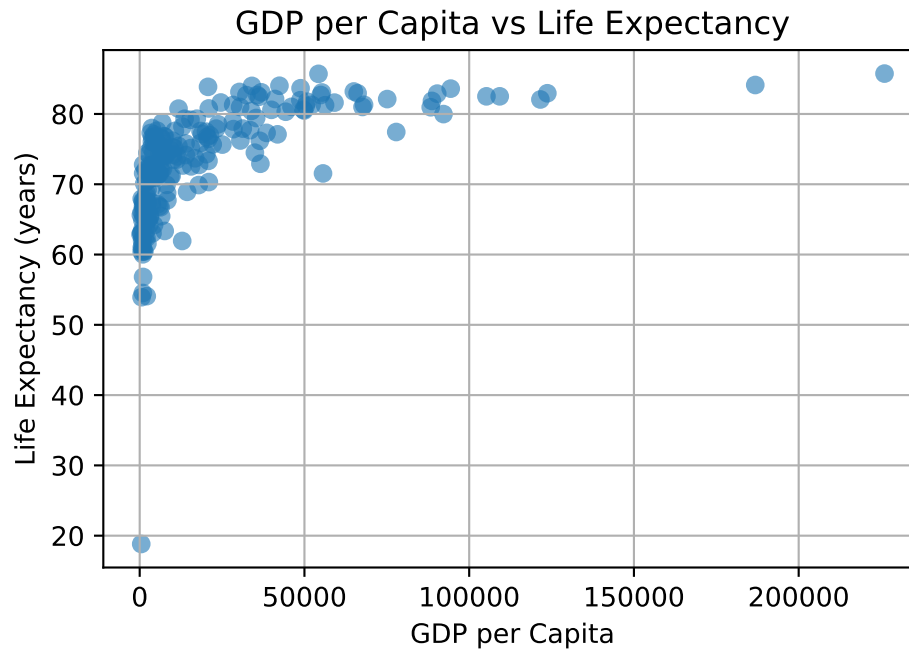


Figure 1: GDP per Capita vs Life Expectancy (WDI 2022). Source: World Bank (The World Bank 2022).

As shown in Table 1, GDP per Capita varies widely across countries, while Life Expectancy is much more concentrated.

Bar Chart: Inflation Rate Quartiles

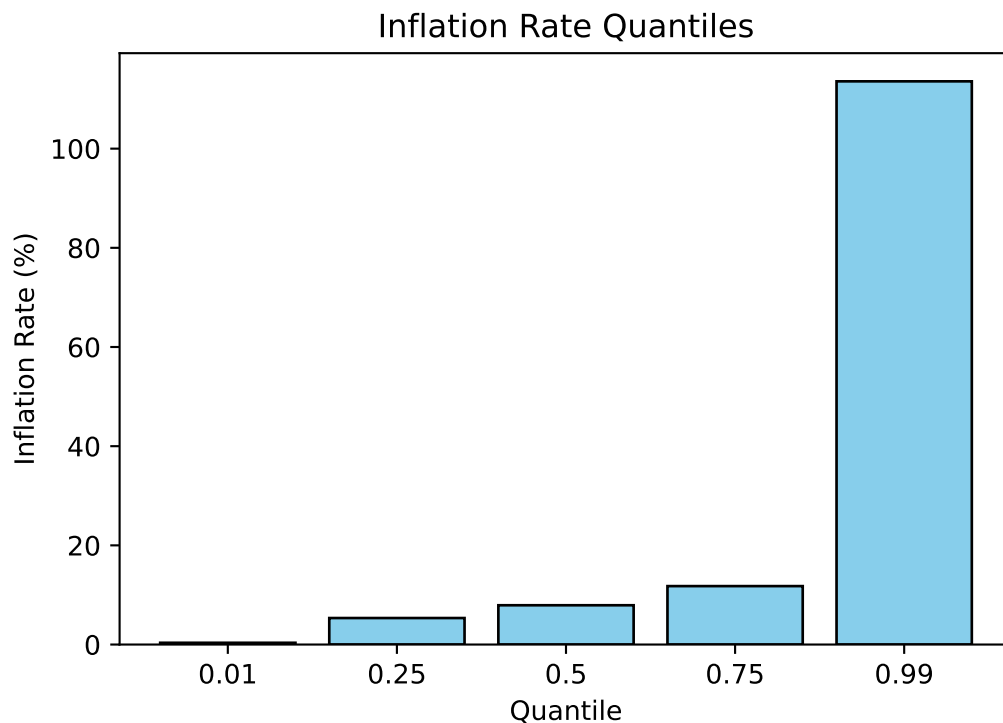


Figure 2: Inflation Rate Quartiles (1%, 25%, 50%, 75%, 99%) from WDI 2022. Source: World Bank (The World Bank 2022).

Global inflation trends have also been highlighted in the IMF's World Economic Outlook (International Monetary Fund 2022), which emphasizes the risks of high price volatility across emerging markets.

Key Statistics

Table 1

| Indicator | Min | Max | Mean | Median |
|-----------------|------|---------|------|--------|
| GDP per Capita | 250 | 226,000 | — | — |
| Life Expectancy | — | — | 73 | 74 |
| Inflation Rate | -6.7 | 171 | 12 | 7.9 |

International Monetary Fund. 2022. “World Economic Outlook: War Sets Back the Global Recovery.” <https://www.imf.org/en/Publications/WEO/Issues/2022/04/19/world-economic-outlook-april-2022>.

The World Bank. 2022. “World Development Indicators.” <https://datacatalog.worldbank.org/dataset/world-development-indicators>.