

# Assignment05

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## Data and Methods

|   | country        | inflation_rate | exports_gdp_share | gdp_growth_rate | gdp_per_capita | adult_ |
|---|----------------|----------------|-------------------|-----------------|----------------|--------|
| 0 | Afghanistan    | NaN            | 18.380042         | -6.240172       | 352.603733     | NaN    |
| 1 | Albania        | 6.725203       | 37.395422         | 4.856402        | 6810.114041    | 98.5   |
| 2 | Algeria        | 9.265516       | 31.446856         | 3.600000        | 5023.252932    | NaN    |
| 3 | American Samoa | NaN            | 46.957520         | 1.735016        | 19673.390102   | NaN    |
| 4 | Andorra        | NaN            | NaN               | 9.563798        | 42350.697069   | NaN    |

## Exploratory Data Analysis: Distribution and Ranking

### 1 GDP per capita — Distribution

Mean: \$20,346 | Median: \$7,588 | 10th-90th pct: \$1,000 - \$53,383

#### Interpretation.

As shown in Figure Figure 1, the distribution of GDP per capita in 2022 is highly right-skewed, with a mean of \$20,346 and a median of \$7,588. This large gap indicates that a few very high-income countries pull up the global average. Most countries lie between \$1,000 and \$53,000 (10th–90th percentile), showing that the majority of economies fall in low- to middle-income ranges.

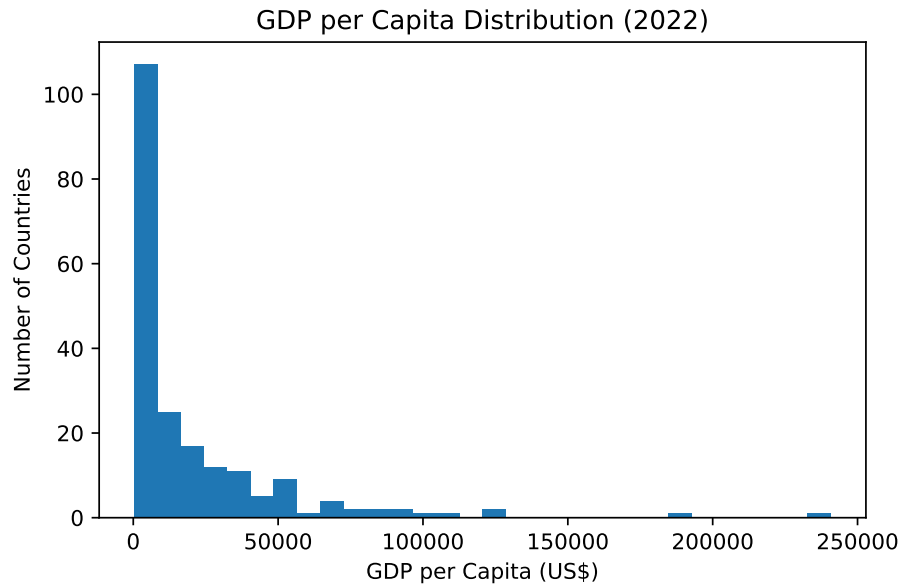


Figure 1: Distribution of GDP per capita across countries (2022).

## 2 Life expectancy — Distribution

Mean: 72.4 years | Median: 73.5 years | 10th-90th pct: 61.4 - 82.2 years

### Interpretation.

Figure Figure 2 shows that life expectancy is centered around the mid-70s. In contrast with GDP per capita (Figure Figure 1), its distribution is much more symmetric, suggesting smaller inequality across countries in health outcomes.

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## 3 Inflation rate — Ranking

Global average (sample): 12.49% | Average among the same 15: 12.48% | Count above global avg

### Interpretation.

Figure Figure 2 shows that life expectancy is centered around the mid-70s. In contrast with GDP per capita (Figure Figure 1), its distribution is much more symmetric, suggesting smaller inequality across countries in health outcomes.

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## 4 Summary statistics table

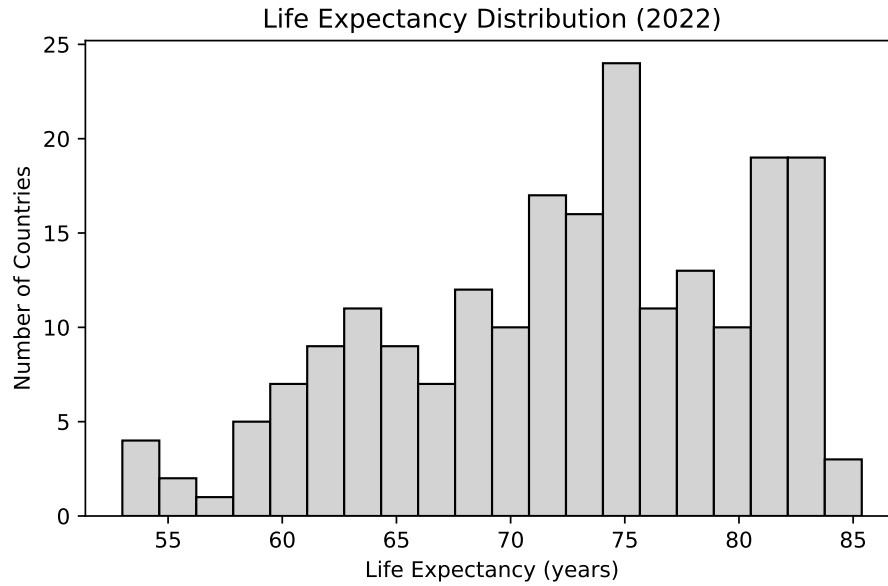


Figure 2: Distribution of life expectancy across countries (2022).

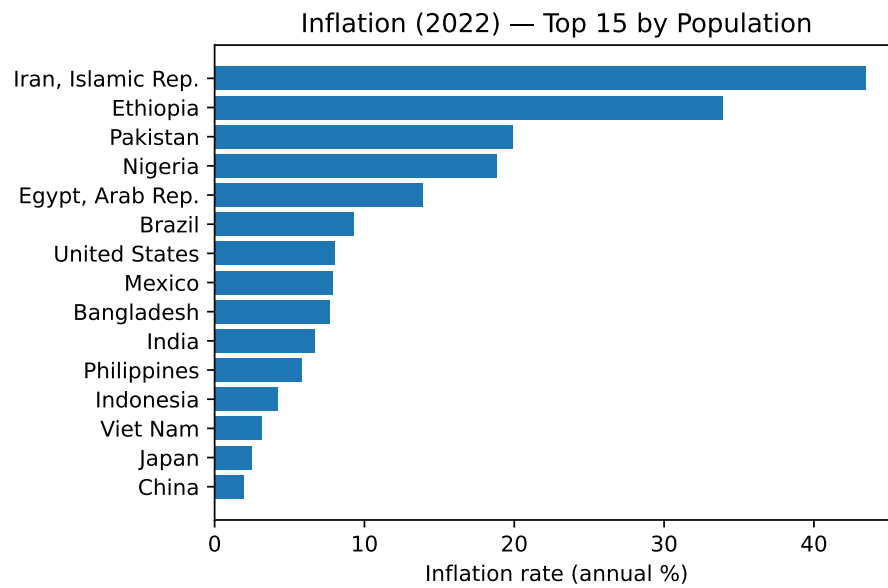


Figure 3: Inflation rate (annual %, 2022) among 15 most populous countries.

Table 2: Summary statistics for three analyzed indicators (2022).

|        | gdp_per_capita | life_expectancy | inflation_rate |
|--------|----------------|-----------------|----------------|
| count  | 203.00         | 209.00          | 169.00         |
| mean   | 20345.71       | 72.42           | 12.49          |
| median | 7587.59        | 73.51           | 7.97           |
| std    | 31308.94       | 7.71            | 19.68          |
| min    | 259.03         | 53.00           | -6.69          |
| max    | 240862.18      | 85.38           | 171.21         |

**Reading Table Table 2.**

- GDP per capita and life expectancy show moderate spread.
- Inflation has higher relative dispersion, confirming Figure Figure 3.

Data: World Development Indicators (Bank, 2024).

Document built with **Quarto** (Posit, PBC, 2025).

Bank, T. W. (2024). *World development indicators (WDI)*. <https://databank.worldbank.org/source/world-development-indicators>

Posit, PBC. (2025). *Quarto documentation*. <https://quarto.org/docs/>