

# A5

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## Introduction

This report analyzes selected indicators from the World Development Indicators dataset for the year 2022. The goal is to explore relationships between economic and health outcomes across countries. The data used in this analysis comes from the World Bank Bank (2022).

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## Load Data

	country	inflation_rate	exports_gdp_share	gdp_growth_rate	gdp_per_capita	adult_literacy_rate
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

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## Data Overview

	inflation_rate	exports_gdp_share	gdp_growth_rate	gdp_per_capita	adult_literacy_rate	pr
count	169.000000	169.000000	202.000000	203.000000	49.000000	11
mean	12.493936	46.170395	4.368901	20345.707649	79.574801	10
std	19.682433	34.001404	6.626811	31308.942225	19.375539	12
min	-6.687321	1.571162	-28.758591	259.025031	27.280001	64

	inflation_rate	exports_gdp_share	gdp_growth_rate	gdp_per_capita	adult_literacy_rate	pr
25%	5.518129	24.526642	2.438593	2570.563284	72.400002	94
50%	7.967574	40.221277	4.204431	7587.588173	83.779999	10
75%	11.665567	55.460067	6.200000	25982.630050	95.500000	10
max	171.205491	211.278206	63.439864	240862.182448	99.999977	13

The dataset contains multiple indicators including GDP per capita, life expectancy, and unemployment rate.

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### Analysis: GDP vs Life Expectancy

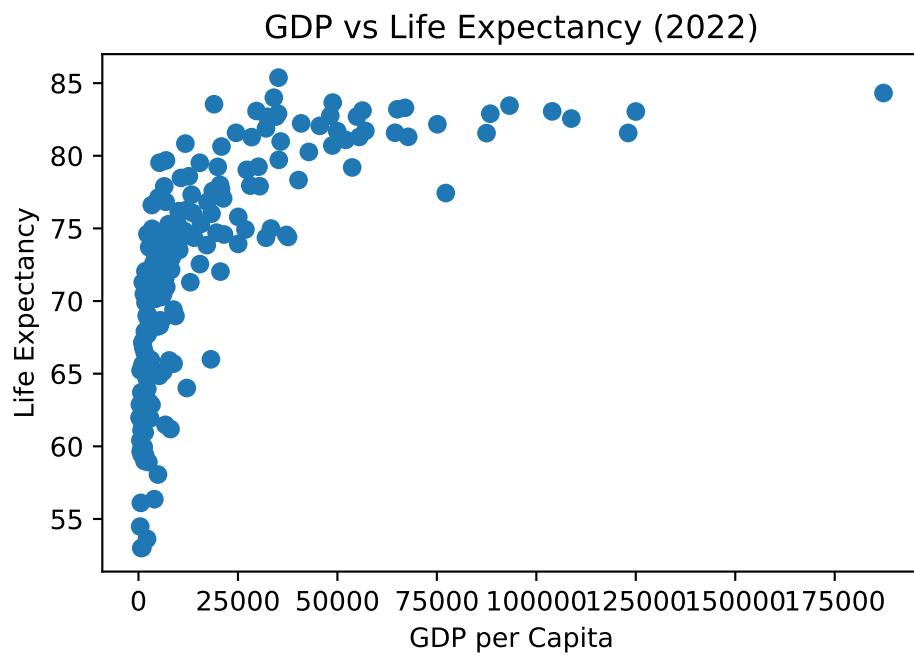


Figure 1: Relationship between GDP per Capita and Life Expectancy

As shown in Figure 1, countries with higher GDP per capita tend to have higher life expectancy. Previous research has shown a strong relationship between economic development and life expectancy Preston (1975).

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## Analysis: Top Countries by GDP

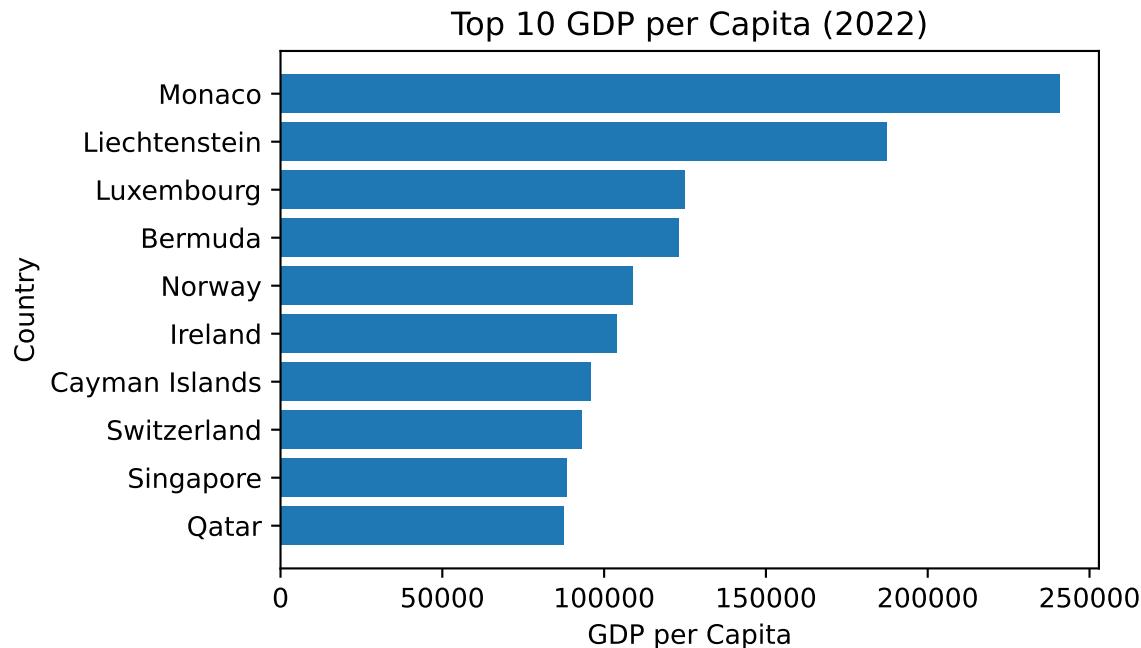


Figure 2: Top 10 Countries by GDP per Capita

Figure Figure 2 shows the countries with the highest GDP per capita.

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## Analysis: Unemployment Rate Distribution

Figure Figure 3 shows the spread of unemployment rates across countries.

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## Summary Statistics Table

Table 3: Summary statistics for GDP per capita and life expectancy (2022)

	gdp_per_capita	life_expectancy
count	203.00	209.00

Table 3: Summary statistics for GDP per capita and life expectancy (2022)

	gdp_per_capita	life_expectancy
mean	20345.71	72.42
std	31308.94	7.71
min	259.03	53.00
25%	2570.56	66.78
50%	7587.59	73.51
75%	25982.63	78.47
max	240862.18	85.38

Table Table 3 summarizes key statistics for GDP per capita and life expectancy.

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## Key Findings

- Higher GDP per capita is associated with longer life expectancy
  - There is significant variation across countries
  - Unemployment rates vary widely across countries in 2022
  - Economic development strongly influences health outcomes
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## Conclusion

This analysis demonstrates clear relationships between economic and health indicators using 2022 WDI data.

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## References

- Bank, World. 2022. “World Development Indicators.” <https://data.worldbank.org>.
- Preston, Samuel H. 1975. “The Changing Relation Between Mortality and Level of Economic Development.” *Population Studies* 29 (2): 231–48.

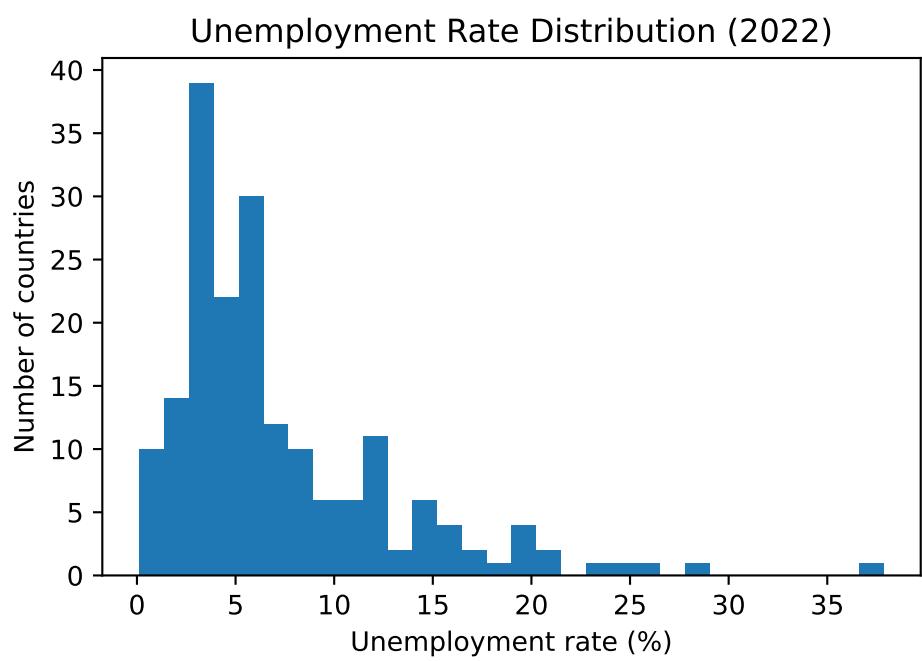


Figure 3: Distribution of unemployment rates across countries (2022)