

World Development Indicators (2022) – Analysis

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2025-10-07

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0.1 Overview

One-page, reproducible WDI snapshot for 2022 using simple EDA and plots. Data are sourced from the World Bank’s World Development Indicators (The World Bank 2024). This report is generated with Quarto to ensure reproducibility (Posit, PBC 2025).

0.2 Data Loading

Read the provided CSV and quickly inspect the first rows.

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

0.3 Exploratory Data Analysis

Structure, summary stats, and missingness check for basic data health.

```
# Exploratory Data Analysis (EDA)
wdi.info()
wdi.describe()
wdi.isna().sum()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 217 entries, 0 to 216
```

```
Data columns (total 14 columns):
```

#	Column	Non-Null Count	Dtype
0	country	217 non-null	object
1	inflation_rate	169 non-null	float64
2	exports_gdp_share	169 non-null	float64
3	gdp_growth_rate	202 non-null	float64
4	gdp_per_capita	203 non-null	float64
5	adult_literacy_rate	49 non-null	float64
6	primary_school_enrolment_rate	114 non-null	float64
7	education_expenditure_gdp_share	105 non-null	float64
8	measles_immunisation_rate	193 non-null	float64
9	health_expenditure_gdp_share	20 non-null	float64
10	income_inequality	28 non-null	float64
11	unemployment_rate	186 non-null	float64
12	life_expectancy	209 non-null	float64
13	total_population	217 non-null	float64

```
dtypes: float64(13), object(1)
```

```
memory usage: 23.9+ KB
```

	0
country	0
inflation_rate	48
exports_gdp_share	48
gdp_growth_rate	15
gdp_per_capita	14
adult_literacy_rate	168
primary_school_enrolment_rate	103
education_expenditure_gdp_share	112
measles_immunisation_rate	24
health_expenditure_gdp_share	197
income_inequality	189
unemployment_rate	31
life_expectancy	8
total_population	0

0.4 Summary of Findings from EDA

- The dataset contains **217 observations** across **14 indicators** for various countries in 2022.
- Some indicators, such as *Adult Literacy Rate* and *Life Expectancy*, have many missing values, while variables like *GDP per Capita* and *Inflation Rate* are more complete.
- The numerical summary shows large variation in GDP per capita and unemployment rates, suggesting strong economic diversity across countries.
- We will focus our visual analysis on three indicators: **GDP per capita**, **Life Expectancy**, and **Unemployment Rate**, as they reflect key aspects of economic well-being, health, and labor outcomes.

0.5 GDP per Capita vs Life Expectancy

- Clear positive, *diminishing-returns* pattern: big life-expectancy gains at lower incomes that taper off as GDP per capita rises.
- A few outliers deviate from the curve, but overall the association is tight—suggesting income is a strong correlate of longevity in 2022.

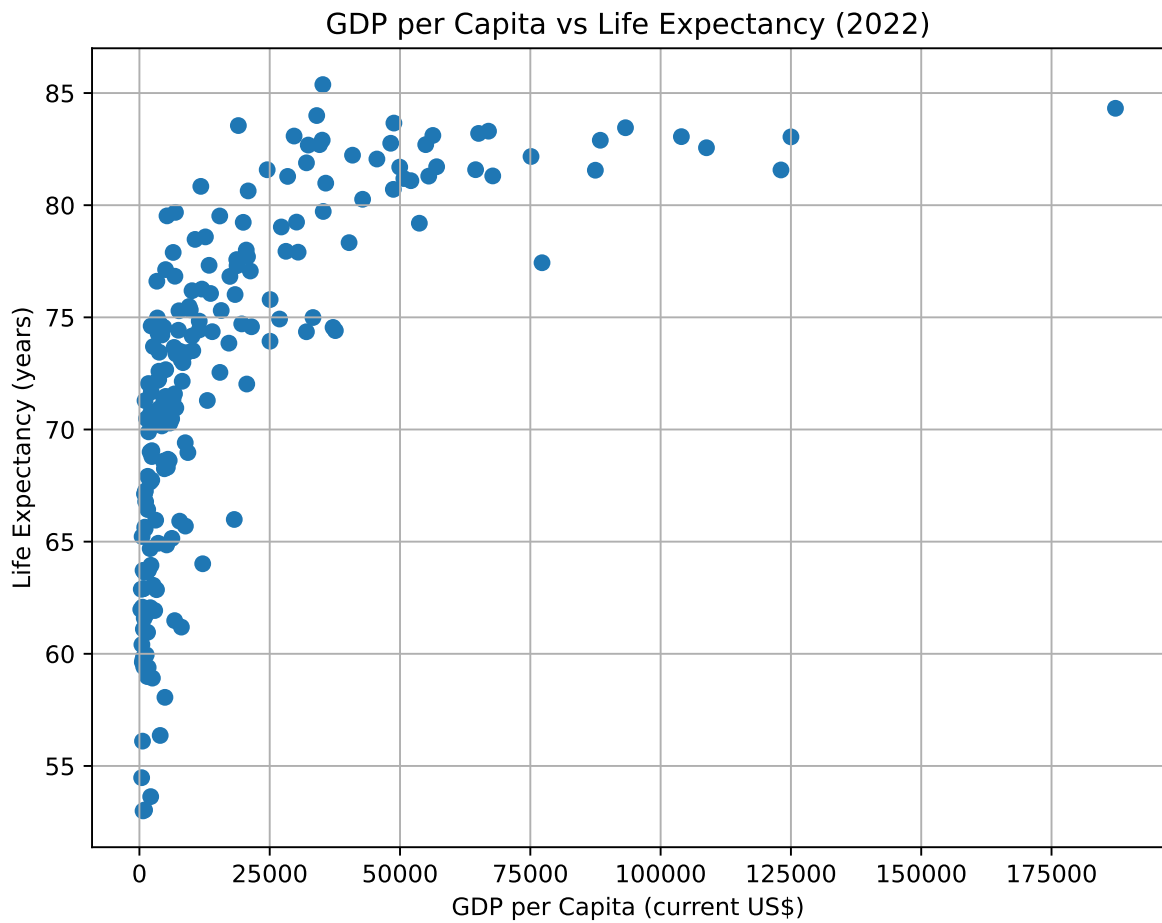


Figure 1: GDP per Capita vs Life Expectancy (2022). Source: World Bank WDI (2022).

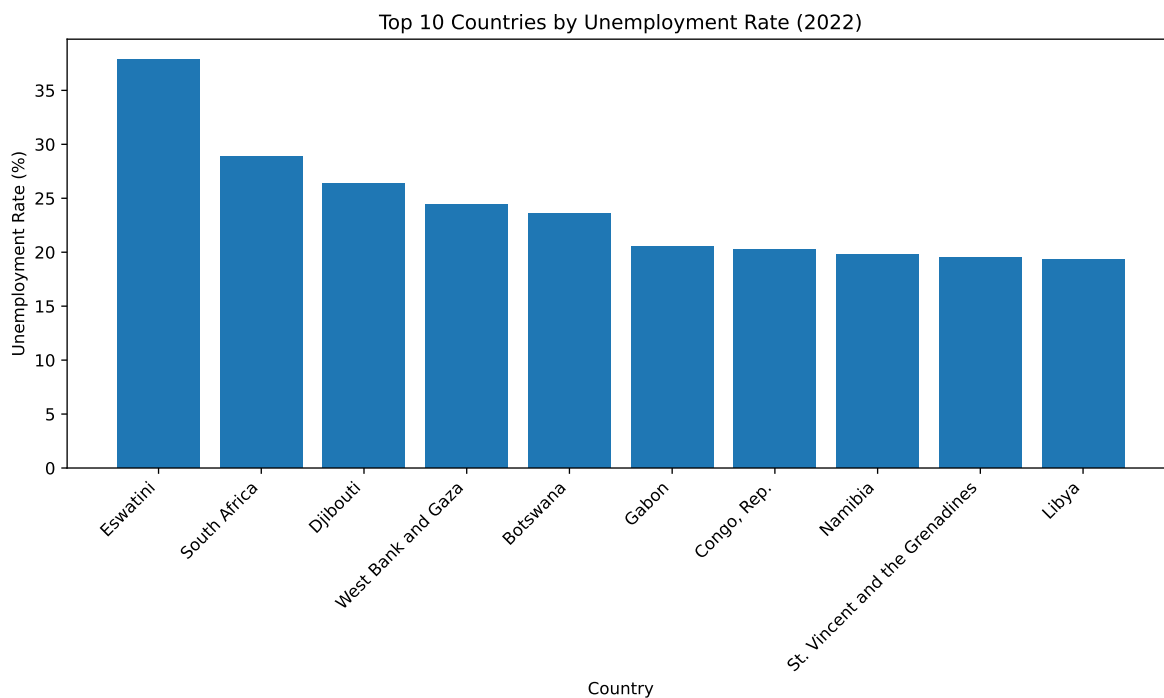


Figure 2: Top 10 Countries by Unemployment Rate (2022). Source: World Bank WDI (2022).

0.6 Top 10 Countries by Unemployment Rate

- Unemployment is highly concentrated in a small set of countries (20–38%), indicating substantial labor-market stress at the top of the distribution.
- Country rankings highlight regional and structural differences; policy context matters when comparing rates across economies.

Table 1: Summary statistics for key 2022 indicators — GDP per capita, life expectancy, unemployment rate. Source: World Bank WDI (2022).

	mean	min	max
gdp_per_capita	20345.71	259.03	240862.18
life_expectancy	72.42	53.00	85.38
unemployment_rate	7.27	0.13	37.85

0.7 Key Statistics Table

0.8 Discussion & Cross-References

As shown in **Figure 1**, countries with higher GDP per capita tend to have longer life expectancy, reflecting the positive relationship between income and health outcomes.

Meanwhile, **Figure 2** displays the ten countries with the highest unemployment rates in 2022, revealing wide differences in labor market conditions.

Finally, **Table 1** summarizes the main indicators used in this analysis.

Posit, PBC. 2025. “Quarto Documentation.” <https://quarto.org/docs/>.

The World Bank. 2024. “World Development Indicators.” <https://data.worldbank.org/products/wdi>.