Analysis on Index-Based Economic Freedom

### 🧾 **Overview**

This document presents a data visualization-driven analysis of global economic freedom using various economic indicators. It evaluates relationships between **inflation**, **unemployment**, **GDP per capita**, **monetary freedom**, and **financial freedom** scores across countries. The report is built using interactive and visual statistical comparisons.

## 📊 **Key Analytical Sections**

### 1. **Inflation vs. Unemployment**

* **Type**: Scatter plot/correlation graph.
* **Description**: Visualizes the relationship between inflation rate (%) and unemployment rate (%) for various countries.
* **Insights**:
  + Shows how both metrics vary per country.
  + Countries like **Zimbabwe**, **Sudan**, and **Venezuela** are outliers with high inflation and unemployment.

### 2. **Financial Freedom Index (Per Region)**

* **Type**: Bar chart or region-wise heat map.
* **Regions Covered**:
  + Americas
  + Asia-Pacific
  + Europe
  + Middle East & North Africa
  + Sub-Saharan Africa
* **Insights**:
  + Countries are scored based on financial freedom, influencing investor confidence, ease of capital movement, and economic autonomy.

### 3. **Population vs. Economic Freedom Score**

* **Type**: Bar chart.
* **Description**: Compares population size (in millions) against the **2022 economic freedom score**.
* **Insight**: Helps understand if higher population correlates with higher/lower economic freedom.

### 4. **Inflation Rates (High Inflation Countries)**

* **Type**: Vertical bar chart.
* **Top Countries Listed**: Angola, Argentina, D.R. Congo, Ethiopia, Iran, Lebanon, Venezuela, Zimbabwe, etc.
* **Insight**: Highlights countries facing economic instability due to excessive inflation.

### 5. **GDP per Capita vs. Monetary Freedom**

* **Type**: Scatter plots by country.
* **Metric Definitions**:
  + **GDP per Capita (PPP)**: Wealth indicator.
  + **Monetary Freedom**: Reflects price stability and absence of price controls.
* **Insight**:
  + Countries with higher monetary freedom tend to have higher GDP per capita (e.g., developed nations).
  + Developing nations tend to cluster with lower values for both.

### 6. **GDP Growth Rate (Top 40 Countries)**

* **Type**: Bar chart.
* **Metric**: GDP growth rate (%).
* **Insight**:
  + Lists top-performing economies in terms of recent growth.
  + Useful for identifying emerging markets and economic booms.

### 7. **5-Year GDP Growth Score**

* **Type**: Bar chart or index score distribution.
* **Description**: Assigns a score based on GDP growth trend over 5 years.
* **Insight**: Helps visualize sustained economic performance over time.

## 🌍 **Geographic Coverage**

* Includes data and visualization for over **170+ countries**.
* Includes **top 40 and bottom 50** ranked countries by various economic indicators.
* Countries like **Liberia, Zimbabwe, Sudan, Iran, Venezuela** appear frequently in low-performing categories.

## 📌 **Conclusion**

This analysis uses multi-dimensional data to present a comparative picture of global economic health and freedom. The study highlights how different indicators—such as inflation, unemployment, GDP per capita, and freedom indexes—interact and vary geographically.