Global Political Stability and Violence Risk Analysis

Project Overview:

Political stability and the absence of violence are critical factors influencing economic development, governance quality, and investment decisions. This project analyzes global political stability trends and violence risk using governance indicators published by the World Bank.

The analysis combines Python-based data exploration with an interactive Power BI dashboard to identify long-term trends, country-level differences, and short-term volatility—particularly among the world's most populous countries.

Data Source:

- Worldwide Governance Indicators (WGI)
- **Indicator:** Political Stability and Absence of Violence/Terrorism
- **Score range:** approximately –2.5 (low stability, high violence risk) to +2.5 (high stability, low violence risk)
- Lower scores indicate a higher perceived likelihood of politically motivated violence, terrorism, and instability.

Data Cleaning and Preparation
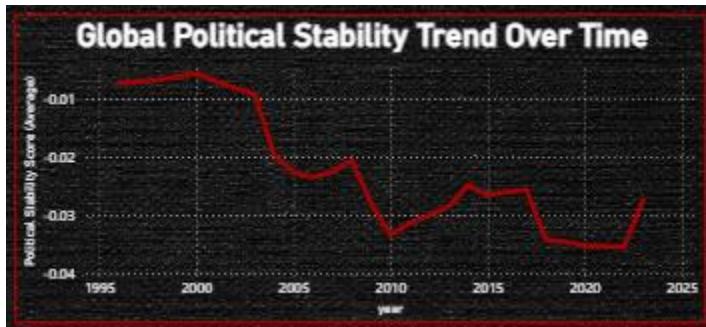
Data preparation was performed using Python (Pandas) to ensure analytical accuracy and consistency.

Key steps included:

- Removing metadata and retaining only analytical columns
- Standardizing country names and data types
- Ensuring one observation per country per year
- Handling missing values by excluding records without stability scores
- Engineering a year-over-year (YoY) change metric to capture short-term shifts in political stability
- Resolving index-alignment issues during feature engineering to ensure accurate YoY calculations
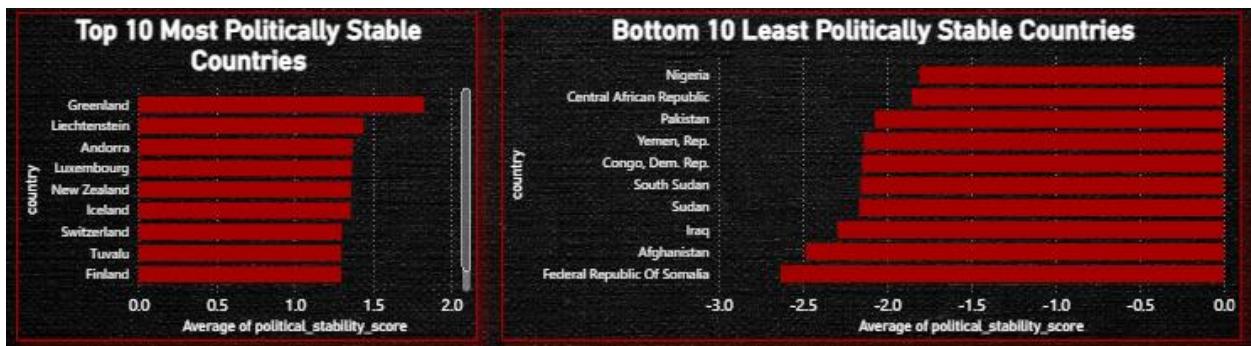
The final dataset was validated for consistency before visualization in Power BI.

Exploratory Data Analysis (EDA) and Insights:

**Global Political Stability Trends:**
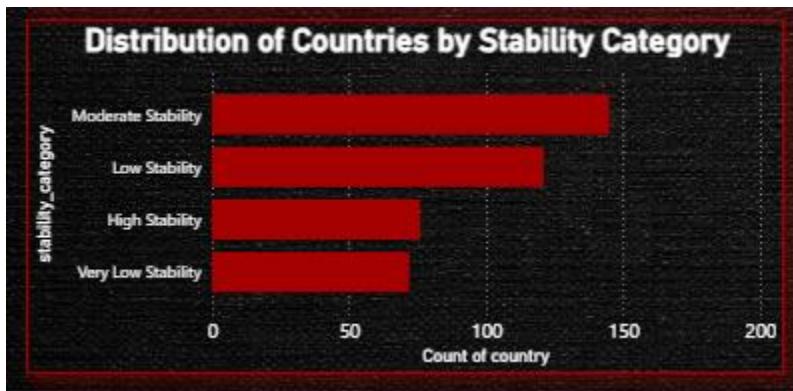
Global average political stability shows a long-term declining trend, indicating increasing exposure to political instability and violence risk worldwide. While short-term recoveries appear in certain periods, the overall trajectory remains negative.

Country-Level Comparisons:
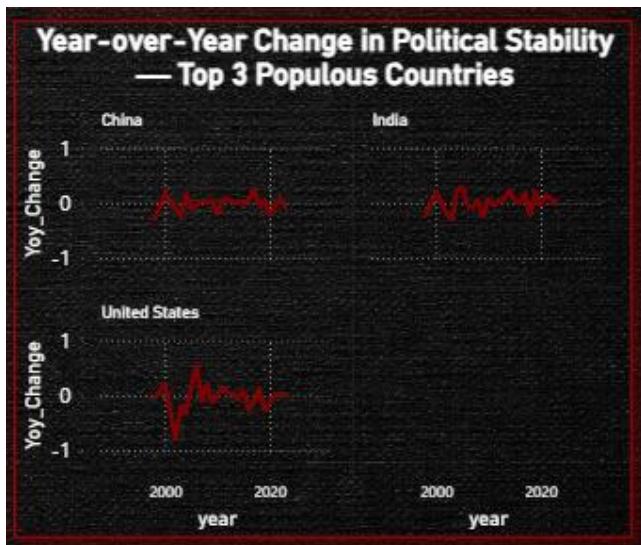
A small group of countries consistently exhibits high political stability, while several nations remain persistently unstable across multiple years. The gap between stable and unstable countries highlights unequal global governance conditions.

Distribution of Stability Categories:

Most countries fall into the Moderate and Low Stability categories. Relatively few countries maintain High Stability, while a significant number remains in Very Low Stability, indicating widespread governance and violence-related challenges.

High-Population Country Analysis:

Focusing on the world's most populous countries (China, India, and the United States) reveals differing long-term stability trajectories. Year-over-year analysis shows short-term volatility, suggesting that even large and relatively stable countries can experience sudden changes in political stability.

Dashboard Overview:

A two-page Power BI dashboard was developed to communicate insights clearly:

- **Page 1 – Global Overview:**
  Displays global average stability, long-term trends, and top/bottom country rankings.
- **Page 2 – High-Population Country Focus:**
  Examines political stability trends and year-over-year changes for the world's most populous countries to assess short-term volatility.

This structure separates high-level global context from focused country-level analysis.

Key Insights:

- Global political stability has declined over the long term, suggesting rising global instability and violence risk.
- Political stability is unevenly distributed, with many countries clustered in low to moderate stability ranges.
- A subset of countries remains persistently unstable, facing prolonged governance and conflict challenges.
- High-population countries exhibit notable short-term volatility, even when long-term trends appear relatively stable.
- Year-over-year changes provide early signals of instability that are not visible in long-term averages alone.

Recommendations:

- **Strengthen early-warning monitoring systems**
  Countries with persistent low scores or high volatility should be prioritized for continuous political risk monitoring.
- **Focus on volatility, not only average stability**
  Large year-over-year fluctuations may signal emerging instability even in moderately stable countries.
- **Integrate political stability indicators into planning**
  Development agencies, investors, and policymakers can use stability trends to inform risk-adjusted decision-making.
- **Prioritize high-population countries for monitoring**
  Instability in populous nations can have wider regional and global spillover effects.

Projections:

- If current trends persist, global political stability is likely to remain under pressure in the near term.
- High-population countries may continue to experience short-term volatility rather than sustained stability.
- Countries already classified as low or very low stability to face a higher risk of prolonged instability.
- Improvements in political stability, if they occur, are likely to be uneven and concentrated among already stable countries.

Limitations:

- The indicator reflects perceived risk rather than actual counts of violent events.
- Country-level aggregation may mask regional or local instability.
- The analysis identifies patterns and trends but does not establish causal relationships.

Conclusion:

This project demonstrates how governance indicators can be used to assess political stability and violence risk at both global and country levels. By combining long-term trends with short-term volatility analysis, the study highlights persistent instability patterns and emerging risks, particularly among high-population countries. The findings support the use of political stability indicators as a valuable input for risk assessment and policy planning.