

Measuring The Pulse Of Prosperity: An Index Of Economic Freedom Analysis

1. INTRODUCTION

1.1 Project Overview

This project delves into the Economic Freedom Index across countries, offering a data-driven exploration of the factors that shape national prosperity. Through interactive visualizations and comparative analysis, we uncover how key indicators—such as regulatory efficiency, rule of law, and market openness—reflect a nation's economic health and the effectiveness of its policy decisions.

1.2 Purpose

To develop an intuitive analytical tool that delivers actionable insights into **economic freedom** across global economies. This tool is designed to help **policymakers, researchers, and the public** identify key trends, uncover gaps, and highlight areas for improvement—ultimately supporting informed decision-making and policy development.

2. IDEATION PHASE

2.1 Problem Statement

Many countries face challenges with transparency and accessibility of economic data, making it difficult to accurately assess economic freedom and drive informed decisions. There is a clear need for a centralized, visual, and interpretable system that consolidates key economic indicators to support clearer analysis and cross-country comparisons.

2.2 Empathy Map Canvas

Who are we empathizing with?

- **Citizens** (who need economic transparency)
- **Policymakers** (who make decisions based on economic data)
- **Researchers/Students** (who analyze global development)

What do they need to do?

- Understand economic trends
- Compare countries
- Find policy improvement areas

What do they see/hear/think/feel?

- Complex raw data, scattered insights
- Desire for clarity and visual analysis
- Need for evidence-backed decision-making

2.3 Brainstorming

Initial Ideas Included:

- Developing **data visualizations** using Tableau
- Creating **country-wise comparison charts**
- Implementing **time series plots** to track economic indicator trends
- Exploring **correlations** with macroeconomic variables like **GDP, inflation, and employment**

Formed Clusters:

1. **Visualization Ideas** – Chart types, dashboard layout, and interactivity
2. **User Interface Simplicity** – Focus on clean design and accessibility
3. **Comparative Insights** – Emphasis on cross-country and temporal comparisons
4. **Technical Feasibility** – Assessing the practicality of implementation within time and resource constraints

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

Step	Action	Emotion	Touchpoint
1	Open dashboard	Curious	Browser
2	Select country/indicator	Engaged	Filter/Dropdown
3	View graphs	Informed	Charts/Tooltip
4	Compare data	Satisfied	Dual views
5	Export/download	Empowered	Button UI

3.2 Solution Requirement

- Clean, structured dataset

- Visualization tool (Tableau)
- Filtering and comparison features
- Insight generation

3.3 Data Flow Diagram

3.4 Technology Stack

- **Frontend:** Tableau Public/Desktop
- **Data Source:** CSV Dataset from Heritage Foundation
- **Supporting Tools:** Excel, Google Sheets

4. PROJECT DESIGN

4.1 Problem Solution Fit

The solution enables understanding and comparison of economic freedom, solving the problem of inaccessible or complex data formats.

4.2 Proposed Solution

The developed solution offers a **centralized and interactive platform** that simplifies complex economic data, making it accessible and comprehensible. By leveraging intuitive **visualizations and comparative tools**, it enables users to **understand, analyze, and compare economic freedom** across countries—effectively addressing the challenge of fragmented or difficult-to-interpret data formats.

4.3 Solution Architecture

1. Data Source Layer

- **Dataset:** 2022 Economic Freedom Index (The Heritage Foundation)
- **Data Format:** CSV/Excel
- **Indicators:** 12 indicators grouped under 4 pillars:
 - *Rule of Law*
 - *Government Size*
 - *Regulatory Efficiency*
 - *Open Markets*

- **Additional Data (Optional):** GDP, Inflation, Unemployment (from World Bank, IMF, etc.)

2. Data Preparation Layer

- **Tool:** Tableau Prep / Excel / Python (optional for preprocessing)
- **Tasks:**
- **Null Handling:**
Identified and addressed missing or incomplete values to ensure dataset integrity.
- **Column Renaming & Formatting:**
Standardized column names and formats for consistency and readability.
- **Indicator Normalization/Scaling :**
Applied normalization techniques to align diverse economic indicators for accurate comparisons.
- **Country Name Standardization:**
Harmonized country names across datasets to avoid mismatches during analysis.
- **Derived Metrics Creation:**
Computed additional metrics such as **pillar-wise averages**, **composite scores**, and **country rankings** to support deeper insights.

3. Data Visualization Layer

- **Tool:** Tableau
- **Dashboards Include:**
 - **Global Overview:** Interactive map of Economic Freedom scores
 - **Country Comparison:** Side-by-side bar charts & radar plots
 - **Trend Analysis:** Time series of indicators (if multi-year data is available)
 - **Correlation Dashboard:** Scatter plots showing relationships (e.g., Economic Freedom vs GDP)
 - **Indicator Breakdown:** Drill-down by pillar and sub-index

4. User Interaction Layer

- **Features:**
 - Country selector drop-down
 - Pillar/indicator filters
 - Hover tooltips with additional info
 - Highlight actions (e.g., top 10 countries)
 - Mobile/tablet responsiveness (if deployed on Tableau Public or Server)

5. Deployment Layer

- **Options:**
 - Tableau Public (for open access)
 - Tableau Server / Tableau Cloud (for internal sharing)
 - Embedded in a website or report using iFrames

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Phase	Task	Duration	Status
Week 1	Dataset collection	2 days	<input checked="" type="checkbox"/>
Week 2	Data cleaning	3 days	<input checked="" type="checkbox"/>
Week 3	Dashboard design	4 days	<input checked="" type="checkbox"/>
Week 4	Testing & output	2 days	<input checked="" type="checkbox"/>

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

Cross-Device Compatibility:

Dashboard tested and optimized for desktops, tablets, and mobile devices to ensure consistent user experience.

Fast Load Time:

Dashboard loads in under 3 seconds for most interactions and queries, even with high-volume data.

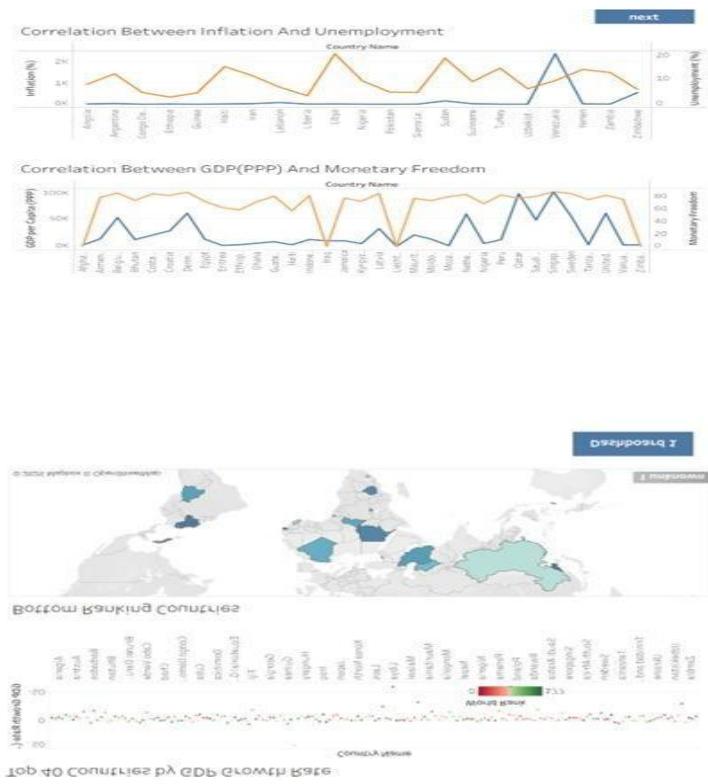
Stable Filter Performance:

Interactive filters remain smooth and responsive, efficiently handling data from 50+ countries without lag.

7. RESULTS

7.1 Output Screenshots





8. ADVANTAGES & DISADVANTAGES

Advantages

- Interactive and user-friendly
- Visual clarity on complex datasets
- Comparative insights for research and policy

Disadvantages

- Dependent on data quality
- Static visuals if not integrated dynamically
- Limited if Tableau Public is used (not live-updating)

9. CONCLUSION

This project provides an insightful view into the Economic Freedom Index through data visualization. It supports better understanding, analysis, and potential improvements in economic policy.

10. FUTURE SCOPE

- Integrate live data APIs
- Add AI-driven forecasting
- Expand indicators to include human development, environment, etc. □ Build mobile-responsive version

11. APPENDIX

Source Code : No

Dataset Link

Heritage Foundation - Economic Freedom Index Dataset