

1. INTRODUCTION

1.1 Project Overview

This project aims to measure economic prosperity through the lens of economic freedom. By analyzing multiple countries based on indicators such as **rule of law, regulatory efficiency, open markets, and government size**, the project provides a data-driven index reflecting overall economic freedom.

1.2 Purpose

The purpose is to empower **policymakers, researchers, and the public** with a clear view of how economic freedom impacts national prosperity, using **data visualization and analysis**.

2. IDEATION PHASE

2.1 Problem Statement

Understanding how economic policies and freedoms influence prosperity remains a complex challenge. This project **quantifies and visualizes** the relationship through an index.

2.2 Empathy Map Canvas

Stakeholders include **economists, students, government analysts, and investors**. Their needs include **transparent metrics, accessible insights, and reliable data**.

2.3 Brainstorming

Ideas included:

- Country-wise dashboards
 - Correlation studies between **GDP and economic freedom**
 - Predictive analytics for **future freedom scores**
-

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

User collects country data → Inputs into tool → Views index score → Analyzes visualization → Informs decision or study.

3.2 Solution Requirement

- Dataset with economic indicators

- Python tools (Pandas, matplotlib)
- (Optional) Web UI for visualizing scores

3.3 Data Flow Diagram

Raw Data → Preprocessing → Analysis → Visualization → Index Generation

3.4 Technology Stack

- Python
 - Jupyter Notebook
 - Pandas, matplotlib/seaborn
-

4. PROJECT DESIGN

4.1 Problem Solution Fit

A **clear, visual, and quantifiable method** for comparing countries' economic freedom.

4.2 Proposed Solution

Create an **index score** for each country and present results in **bar charts and tables**.

4.3 Solution Architecture

Data ingestion → Index formula → Data analysis → Charts/tables output

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

- **Week 1–2:** Research & data collection
 - **Week 3:** Analysis & index formula
 - **Week 4:** Visualization and report generation
-

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

- Ensured index calculation efficiency
 - Verified correct chart rendering on **large datasets**
-

7. RESULTS

7.1 Output Screenshots

(Note: You can add screenshots of bar charts or visualizations here)

8. ADVANTAGES & DISADVANTAGES

Advantages:

- Clear visualization of abstract economic freedom concepts
- Uses open-source datasets

Disadvantages:

- Accuracy depends on data source updates
 - May not capture political or qualitative nuances
-

9. CONCLUSION

This project successfully demonstrated how economic data can be turned into actionable insight. The index helps identify **patterns and discrepancies** in prosperity across countries.

10. FUTURE SCOPE

- Add **prediction models**
 - Create **real-time dashboards**
 - Enable **regional-level breakdown**
-

11. APPENDIX

- **Source Code:** Available on request
- **Dataset Link:** Heritage Foundation / World Bank
- **GitHub & Demo:** *(Add your GitHub/Colab/Streamlit link if available)*