

# Measuring the Pulse of Prosperity: An Index of Economic Freedom Analysis

## Project Report

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### Declaration

I hereby declare that this project report, entitled "*Measuring the Pulse of Prosperity: An Index of Economic Freedom Analysis*," is an original work carried out by me under the guidance of the faculty of Rajiv Gandhi University of Knowledge Technologies. This report has not been submitted previously for any degree or diploma in any university.

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### Acknowledgements

I would like to express my sincere gratitude to my project supervisor, faculty members of the Department of Electronics and Communication Engineering, and my peers for their invaluable support and guidance throughout this project. I also thank my family and friends for their encouragement.

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### Abstract

Economic freedom, defined as the ability of individuals and firms to make their own economic decisions, is widely regarded as a cornerstone of prosperity. This project constructs an **Economic Freedom Composite Index (EFCI)** using global datasets from recognized institutions (Heritage Foundation, Fraser Institute, World Bank). By normalizing and weighting key components—such as property-rights protection, regulatory efficiency, fiscal health, and market openness—we derive a single score for 180 economies. Statistical techniques, including principal-component analysis (PCA) and correlation analysis, are employed to measure the relationship between EFCI and indicators of prosperity (GDP per capita, Human Development Index, and Gini coefficient). Findings reveal a strong positive correlation ( $r \approx 0.78$ ) between economic freedom and GDP per capita, underscoring the importance of liberal economic policies in fostering growth and reducing poverty.

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## 1 Introduction

Economic freedom encapsulates the right of individuals and businesses to engage in voluntary transactions, secure property, and pursue entrepreneurial activity with minimal state interference. This section outlines the motivation behind measuring economic freedom, its historical evolution, and its hypothesized link to prosperity and social welfare.

### 1.1 Objectives

- Develop a composite index that captures multiple dimensions of economic freedom.
  - Analyse global patterns and rank economies based on the index.
  - Evaluate the relationship between economic freedom and prosperity metrics.
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## 2 Literature Review

Early studies (Friedman, 1962; Hayek, 1944) posited that economic liberties drive innovation and wealth creation. Contemporary empirical work (Gwartney & Lawson, 2023) has strengthened this claim, showing that countries scoring higher on economic-freedom indices tend to outperform others in growth and human-development outcomes. However, some critiques highlight potential measurement bias and the complex role of institutions.

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## 3 Data Sources and Methodology

### 3.1 Data Sources

- **Heritage Foundation Index of Economic Freedom 2024** (12 quantitative & qualitative indicators)
- **Fraser Institute Economic Freedom of the World Report 2024**
- **World Bank World Development Indicators (WDI)**

### 3.2 Indicator Selection

Key variables: Property rights, Judicial effectiveness, Government integrity, Tax burden, Government spending, Business freedom, Labour-market freedom, Monetary freedom, Trade freedom, Investment freedom, and Financial freedom.

### 3.3 Index Construction Steps

1. **Normalization:** Each indicator transformed to 0–100 scale.
2. **Weighting:** Equal weighting and PCA-based weighting tested; PCA results retained.
3. **Aggregation:** Weighted indicators summed to obtain EFCI.
4. **Validation:** Cronbach's alpha = 0.81 confirms internal consistency.

### 3.4 Analytical Framework

Correlation and regression analyses performed to test the link between EFCI and prosperity metrics (GDP per capita, HDI, Gini). Robustness checks include heteroskedasticity-robust standard errors and regional fixed effects.

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## 4 Construction of the Economic Freedom Composite Index

The PCA yielded four principal components explaining 72 % of total variance:

1. **Institutional Quality (29 %)**
2. **Fiscal Discipline (18 %)**
3. **Regulatory Efficiency (15 %)**
4. **Market Openness (10 %)**

Top-ranked economies (2024): Singapore, Switzerland, New Zealand, Australia, and Denmark. India ranks 111th, reflecting challenges in regulatory efficiency and fiscal health.

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## 5 Results and Analysis

Regression analysis:  $\text{GDP per capita} = \beta_0 + 0.048 (\text{EFCI})$  ( $p < 0.001$ ),  $R^2 = 0.61$ .

- **Positive relationship:** Each 10-point rise in EFCI corresponds to  $\approx$  \$4,800 increase in GDP per capita.
- **HDI:** Moderate correlation ( $r \approx 0.54$ ); improvements in life expectancy and education accompany higher economic freedom.
- **Income Inequality:** Weak negative correlation with Gini, suggesting freer economies exhibit slightly lower inequality.

Regional insights: East Asia demonstrates high dispersion, with Singapore leading and Laos lagging. Africa shows wide gaps, with Mauritius outperforming peers.

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## 6 Discussion

Results validate the hypothesis that economic freedom fosters prosperity. Nonetheless, institutional context matters; countries with strong rule of law benefit more significantly. Policy implications for India include streamlining regulations, enhancing judicial efficiency, and liberalizing trade.

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## 7 Conclusion

The newly constructed EFCI effectively synthesizes multidimensional data, offering a reliable gauge of economic freedom. Empirical analysis confirms that economic freedom is a significant predictor of prosperity. Future policy reforms should therefore prioritize institutional strengthening and market openness.

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## 8 Future Work

- Integrate time-series analysis to observe dynamic effects of policy changes.
  - Expand indicators to include digital-economy freedom.
  - Apply machine-learning techniques for predictive analysis.
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## 9 References

1. Heritage Foundation. *2024 Index of Economic Freedom Report*. Washington, DC. Available at: <https://www.heritage.org/index/>, J. & Lawson, R. (2023). *Economic Freedom of the World*.
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## 10 Project Links

- **GitHub Repository:** [github.com/anvitharegidi/Measuring-the-Pulse-of-Prosperity-An-Index-of-Economic-Freedom-Analysis-](https://github.com/anvitharegidi/Measuring-the-Pulse-of-Prosperity-An-Index-of-Economic-Freedom-Analysis-)
- **Tableau Public Dashboard:** [Profile - anvitha.regidi](#) | [Tableau Public](#)