Project Report Format

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    Source Code(if any)

    Dataset Link

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PROJECT TITLE:

Measuring the pulse of prosperity: an index of economic freedom

1. INTRODUCTION

1.1 Project Overview

Economic freedom refers to the ability of individuals and businesses to control their labor, property, and financial decisions with minimal government interference. Countries that promote economic freedom tend to experience higher economic growth, innovation, investment, and improved living standards.

The Index of Economic Freedom evaluates countries using indicators such as property rights, taxation, government spending, regulatory efficiency, and market openness. Understanding these indicators helps explain why some countries prosper while others struggle economically.

This project analyzes global economic freedom data along with economic indicators such as GDP growth, inflation, unemployment, and monetary stability. Using data visualization techniques, the project presents insights through dashboards and storytelling to make complex economic data understandable and useful for decision-making.

1.2 Purpose

The purpose of this project is to simplify complex economic data and present it through interactive dashboards and visual storytelling so that users can understand economic trends, compare countries, and evaluate how economic freedom influences prosperity and development.

The project aims to support policymakers, entrepreneurs, researchers, and citizens in making informed decisions by transforming raw economic data into meaningful insights.

2. IDEATION PHASE

2.1 Problem Statement

Economic data related to taxation, inflation, unemployment, and economic freedom is complex and scattered across multiple sources. Many stakeholders find it difficult to interpret these indicators and understand how economic policies influence growth and prosperity. The lack of clear visualization tools further limits effective analysis and decision-making.

2.2 Empathy Map Canvas

Target Users

- Policymakers and government officials
- Entrepreneurs and investors
- Researchers and students
- Citizens interested in economic development

Thinks

- Why do some countries grow faster than others?
- How do policies affect economic growth?

Feels

- Confused by complex economic data
- Concerned about economic stability
- Hopeful for better economic opportunities

Says

- Transparent policies improve growth
- Economic reforms are necessary

Does

- Reads economic reports and rankings
- Compares country performance
- Researches before making decisions

Pain Points

- Complex data and regulations
- Lack of clear insights
- Difficulty comparing countries

Gains

- Better understanding of economic performance
- Improved decision-making
- Awareness of growth opportunities

4

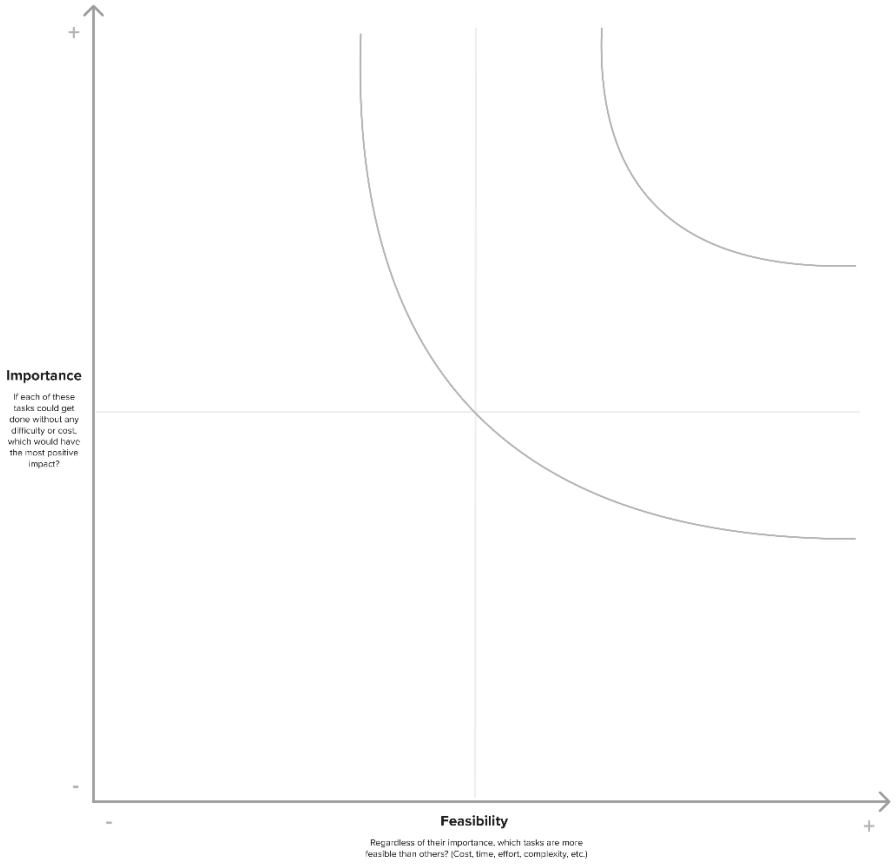
Prioritize

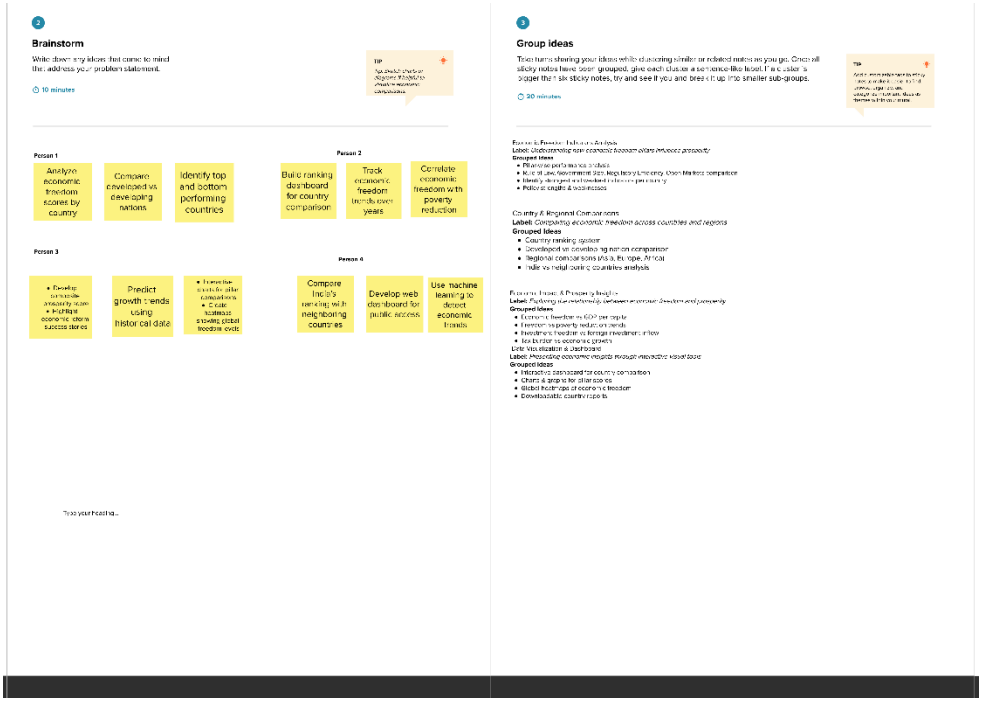
Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

TIP

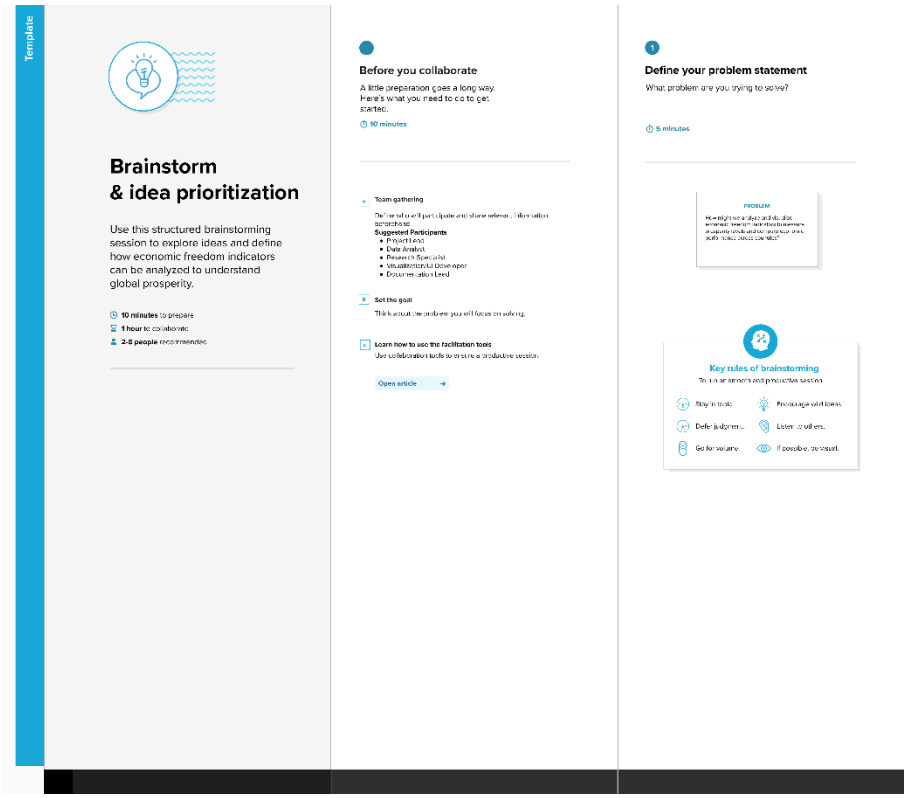
Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H key** on the keyboard.





2.3 Brainstorming

During brainstorming, the team explored multiple ideas including:



- Comparing economic freedom scores across countries
- Studying the relationship between freedom and prosperity
- Analyzing inflation, unemployment, and GDP trends
- Developing dashboards for visualization
- Publishing insights through a web application

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

1. The user wants to understand economic performance and growth trends.
2. The user searches for economic reports and datasets.
3. The user finds the data complex and difficult to interpret.
4. The user accesses the dashboard to explore visual insights.
5. The user understands trends and makes informed decisions.

3.2 Solution Requirements

Functional Requirements

- Collect economic freedom and economic indicator data
- Process and analyze datasets
- Generate visualizations and dashboards
- Provide filters for comparison and exploration
- Publish dashboards through a web interface

Non-Functional Requirements

- User-friendly interface
- Fast performance and responsiveness
- Reliable and accurate data presentation
- Secure and accessible system
- Scalable architecture for future expansion

3.3 Data Flow Diagram

The system follows a structured data flow:

External Data Sources → Data Processing → Database → Visualization → Web Interface → Users

Data is collected from global sources, processed and stored, visualized through dashboards, and delivered to users through a web application.

3.4 Technology Stack

Data Collection & Processing: Python, Excel
Visualization Tool: Tableau Desktop & Tableau Public
Database: MySQL / CSV / Excel
Web Development: HTML, CSS, Bootstrap
Data Sources: Heritage Foundation, World Bank
This technology stack ensures efficient data processing, visualization, and accessibility.

4. PROJECT DESIGN

4.1 Problem–Solution Fit

The project addresses the challenge of understanding complex economic indicators by transforming raw data into interactive visual dashboards. The solution helps users interpret economic performance, compare countries, and identify trends quickly and effectively.

4.2 Proposed Solution

The proposed system integrates global economic datasets, analyzes key indicators, and presents insights through dashboards and storytelling. Users can explore economic freedom trends, inflation patterns, and GDP growth relationships through an interactive web interface.

4.3 Solution Architecture

The architecture consists of layered components:

- **Data Source Layer:** Global economic datasets
- **Processing Layer:** Data cleaning and analysis
- **Storage Layer:** Structured data storage
- **Visualization Layer:** Tableau dashboards
- **Presentation Layer:** Web interface for user access

This architecture ensures efficient data flow and scalability.

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

The project was developed using an agile approach divided into four sprints:

Sprint 1: Data collection and preprocessing

Sprint 2: Data analysis and comparison

Sprint 3: Dashboard development and visualization

Sprint 4: Web integration, testing, and documentation

This approach ensured systematic development and timely completion.

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

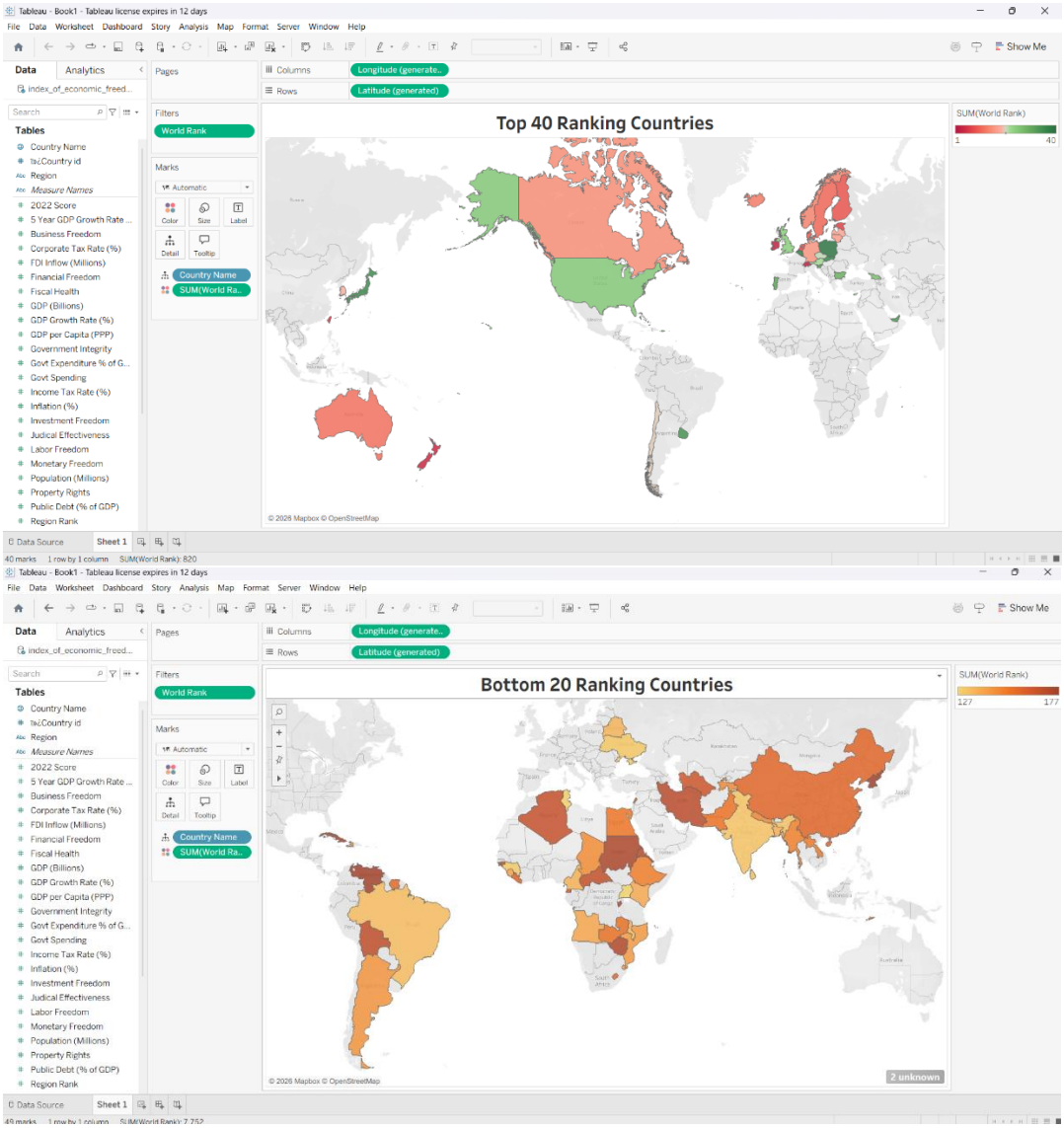
- Data renders correctly across visualizations.
- Filters allow dynamic exploration and comparisons.
- Calculated fields provide accurate rankings and correlations.
- Dashboards load quickly and respond smoothly.
- Storyboard presents insights in logical sequence.

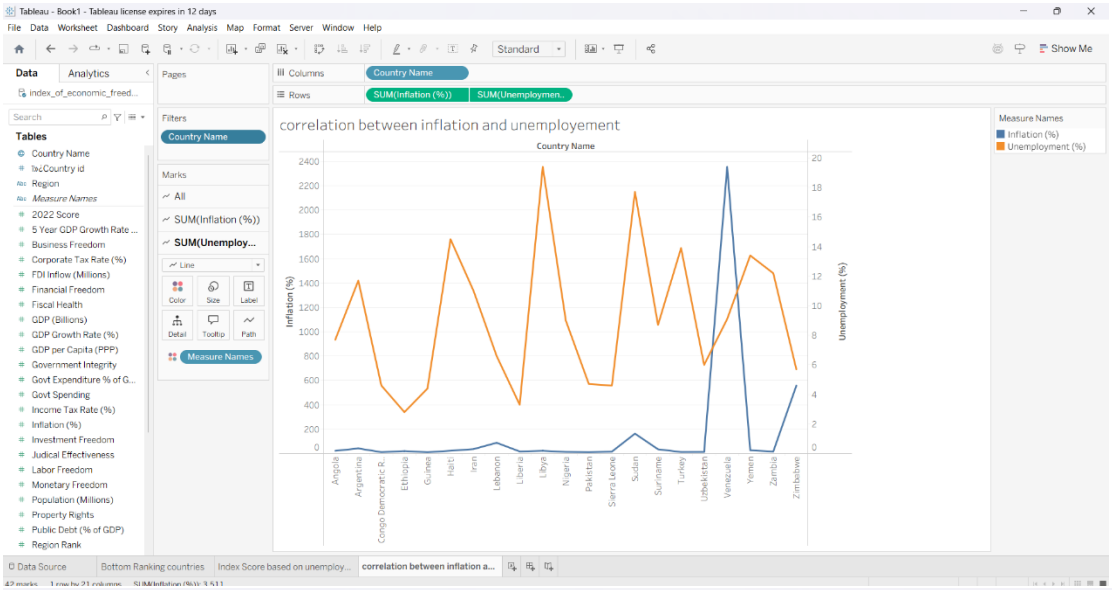
7. RESULTS

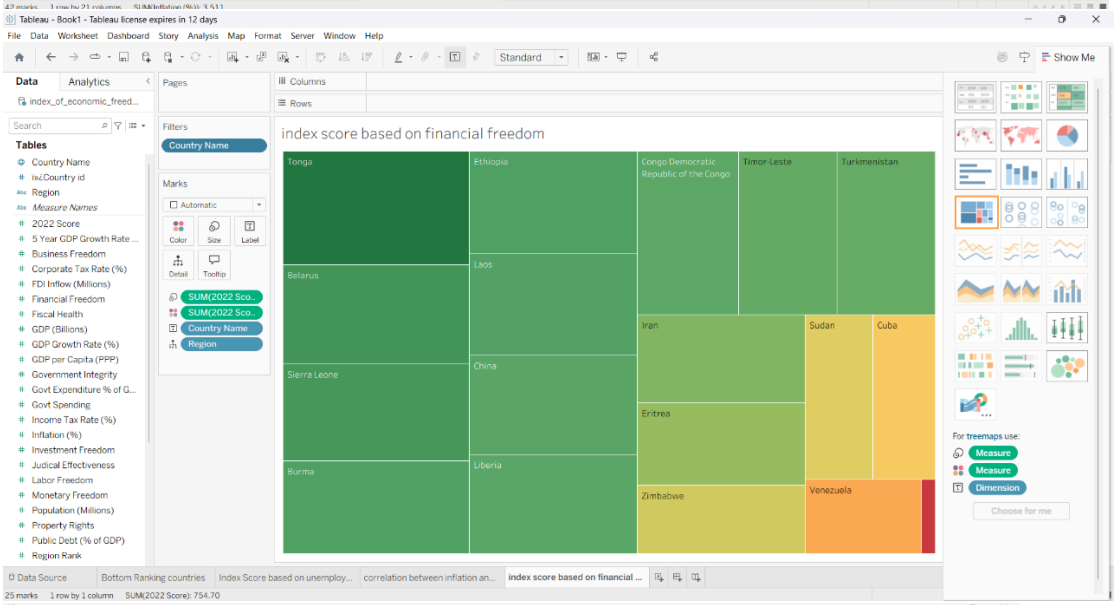
7.1 Output Screenshots

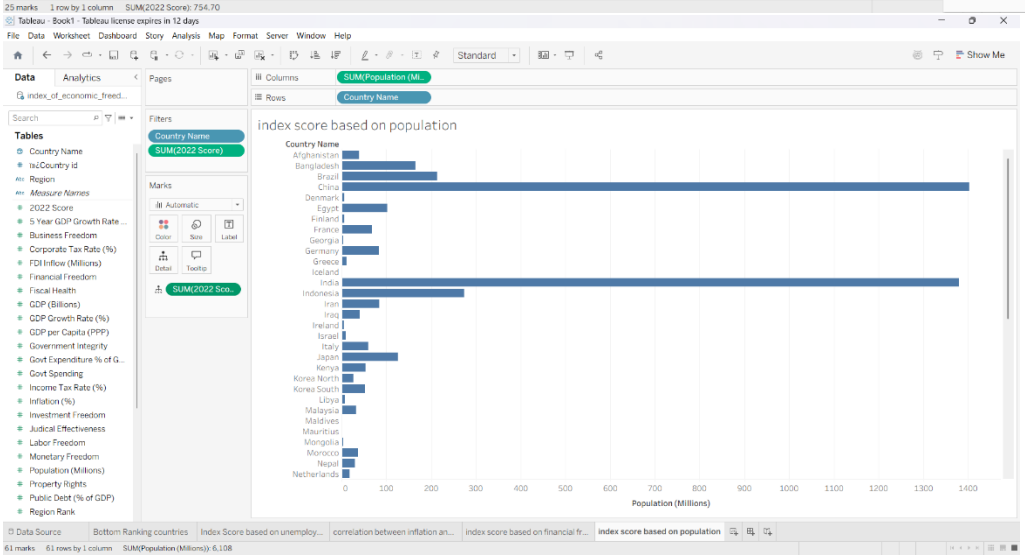
The system generates:

- Economic freedom ranking charts
- GDP growth comparison visuals
- Inflation and unemployment correlation graphs
- Interactive dashboards with filters
- Data story presenting key insights




correlation between inflation and unemployement
Country Name
Inflation (%)
Unemployment (%)
Measure Names
Inflation (%)
Unemployment (%)
Angola
Argentina
Congo Democratic R.
Ethiopia
Guinea
Haiti
Iran
Lebanon
Liberia
Libya
Nigeria
Pakistan
Sierra Leone
Sudan
Suriname
Turkey
Uzbekistan
Venezuela
Yemen
Zambia
Zimbabwe


index score based on financial freedom
Tonga
Ethiopia
Congo Democratic Republic of the Congo
Timor-Leste
Turkmenistan
Belarus
Laos
Iran
Sudan
Cuba
Sierra Leone
China
Eritrea
Burma
Liberia
Zimbabwe
Venezuela
For treemaps use:
Measure
Measure
Dimension
Choose for me


index score based on population
Country Name
Afghanistan
Bangladesh
Brazil
China
Denmark
Egypt
Finland
France
Georgia
Germany
Greece
Iceland
India
Indonesia
Iran
Iraq
Ireland
Israel
Italy
Japan
Kenya
Korea North
Korea South
Libya
Malaysia
Maldives
Mauritius
Mongolia
Morocco
Nepal
Netherlands
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
Population (Millions)

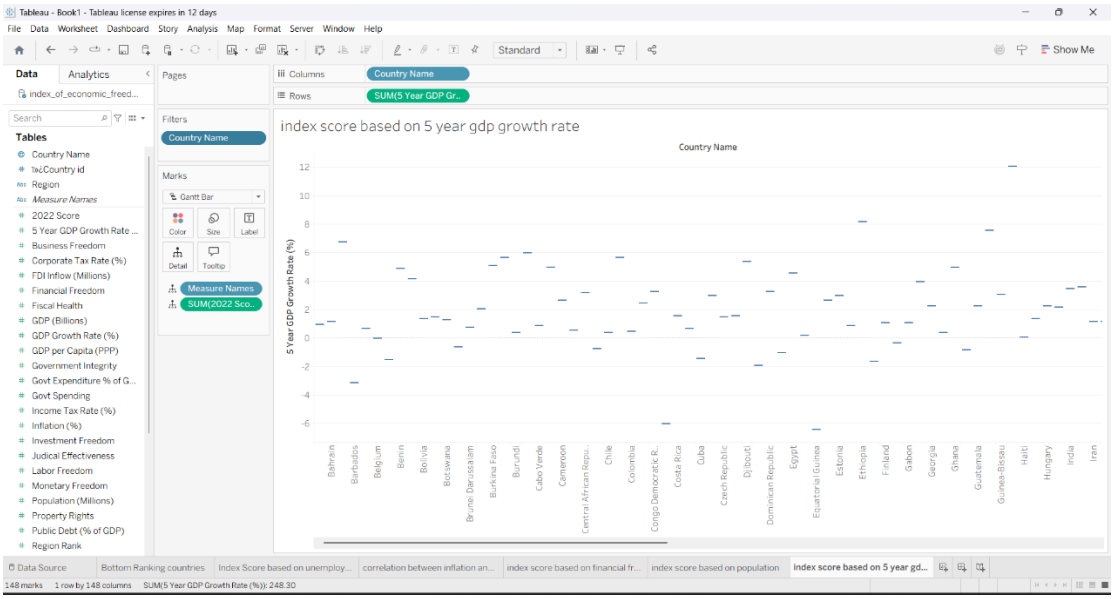
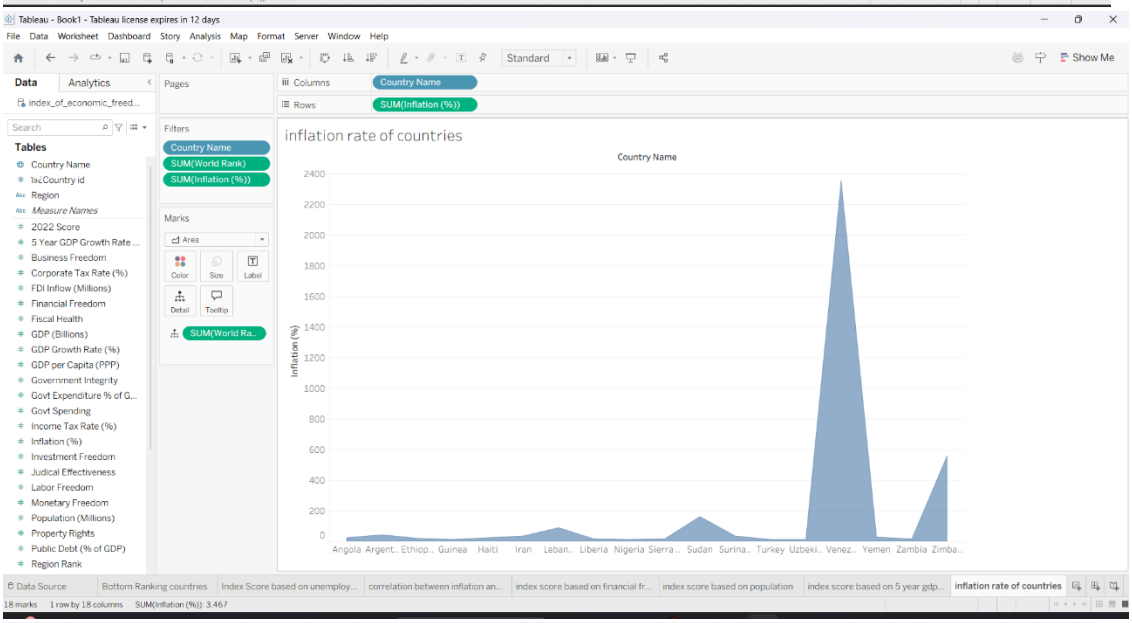


Tableau - Book1 - Tableau license expires in 12 days
index score based on 5 year gdp growth rate
Country Name
5 Year GDP Growth Rate (%)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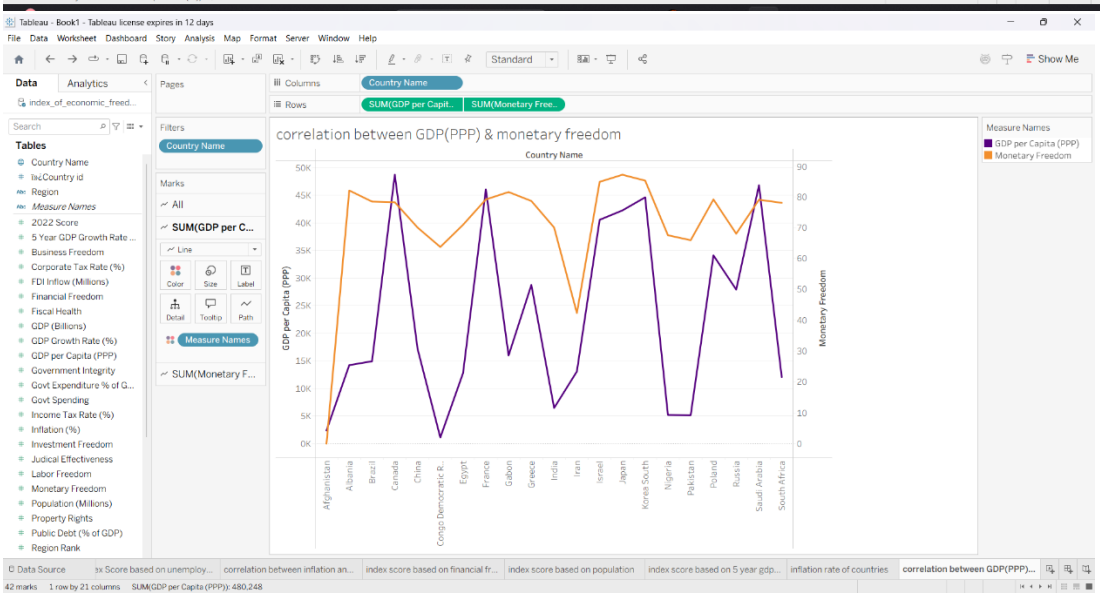
inflation rate of countries
Country Name
Inflation (%)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correlation between GDP(PPP) & monetary freedom
Country Name
GDP per Capita (PPP)
Monetary Freedom

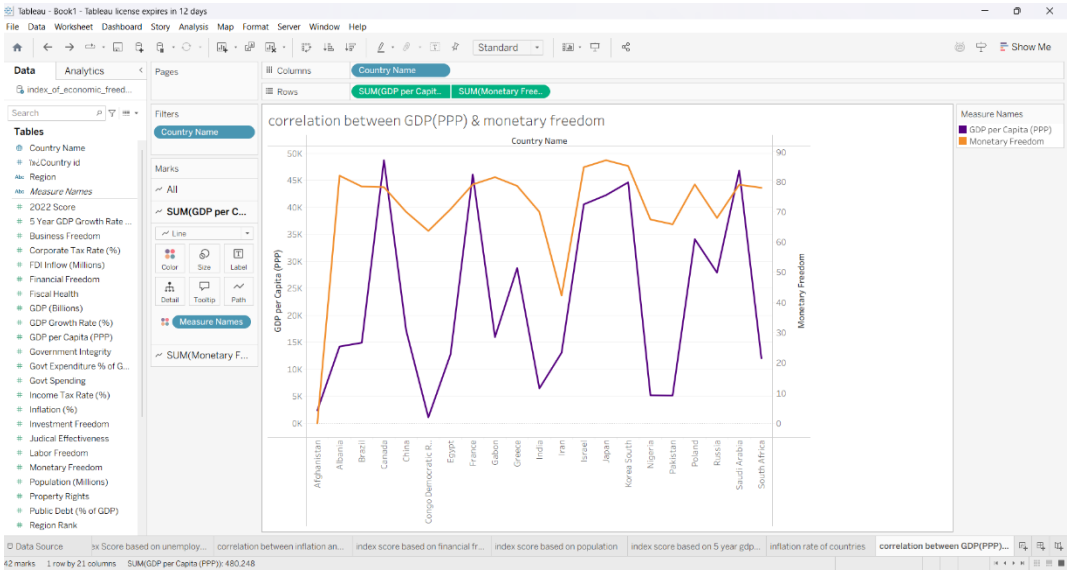
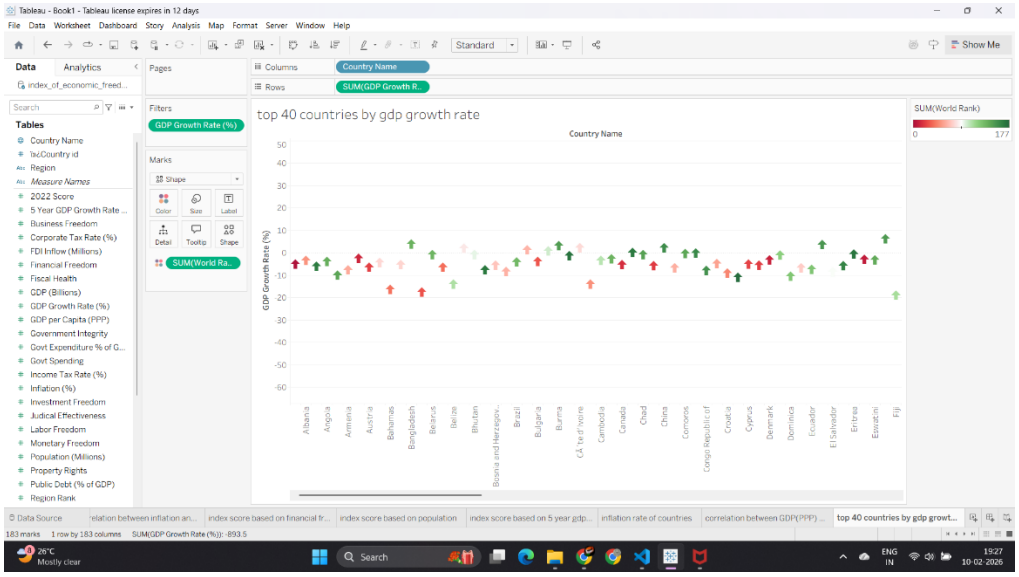


Tableau - Book1 - Tableau license expires in 12 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
Pages
Columns
Country Name
Rows
SUM(GDP per Capit..
SUM(Monetary Free..
Filters
Country Name
Marks
All
SUM(GDP per C...
Line
Color
Size
Label
Detail
Tooltip
Path
Measure Names
SUM(Monetary F...
Tables
Country Name
Tax2Country id
Region
Measure Names
2022 Score
5 Year GDP Growth Rate ...
Business Freedom
Corporate Tax Rate (%)
FDI Inflow (Millions)
Financial Freedom
Fiscal Health
GDP (Billions)
GDP Growth Rate (%)
GDP per Capita (PPP)
Government Integrity
Govt Expenditure % of G...
Govt Spending
Income Tax Rate (%)
Inflation (%)
Investment Freedom
Judical Effectiveness
Labor Freedom
Monetary Freedom
Population (Millions)
Property Rights
Public Debt (% of GDP)
Region Rank
correlation between GDP(PPP) & monetary freedom
Country Name
GDP per Capita (PPP)
Monetary Freedom
Measure Names
GDP per Capita (PPP)
Monetary Freedom
Afghanistan
Albania
Brazil
Canada
China
Congo Democratic R...
Egypt
France
Gabon
Greece
India
Iran
Israel
Japan
Korea South
Nigeria
Pakistan
Poland
Russia
Saudi Arabia
South Africa
Data Source
correlation between GDP(PPP)...
42 marks
1 row by 21 columns
SUM(GDP per Capita (PPP)): 480,248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Standard
Show Me
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Analytics
Pages
Columns
Country Name
Rows
SUM(GDP Growth R..
Filters
GDP Growth Rate (%)
Marks
Shape
Color
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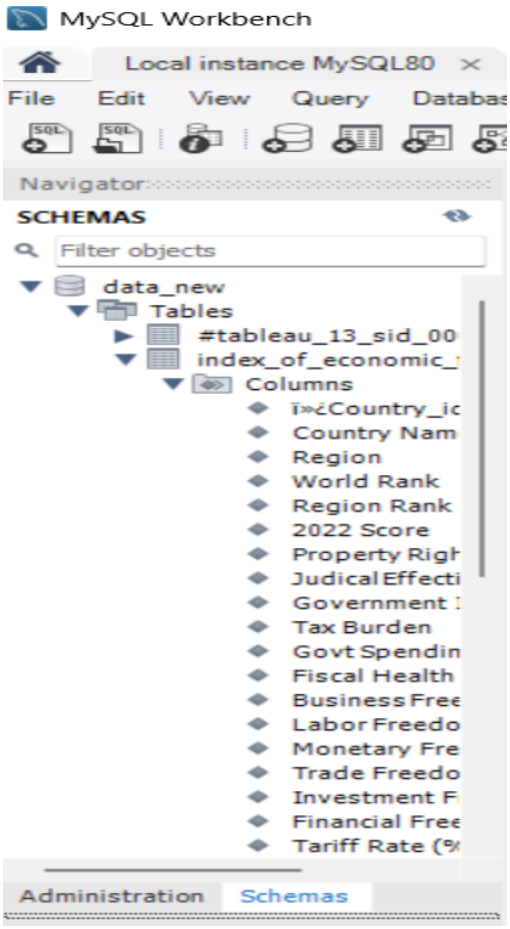
SUM(World Ra..
Tables
Country Name
Tax2Country id
Region
Measure Names
2022 Score
5 Year GDP Growth Rate ...
Business Freedom
Corporate Tax Rate (%)
FDI Inflow (Millions)
Financial Freedom
Fiscal Health
GDP (Billions)
GDP Growth Rate (%)
GDP per Capita (PPP)
Government Integrity
Govt Expenditure % of G...
Govt Spending
Income Tax Rate (%)
Inflation (%)
Investment Freedom
Judical Effectiveness
Labor Freedom
Monetary Freedom
Population (Millions)
Property Rights
Public Debt (% of GDP)
Region Rank
top 40 countries by gdp growth rate
Country Name
SUM(World Rank)
0
177
GDP Growth Rate (%)
Albania
Angola
Armenia
Austria
Bahamas
Bangladesh
Belarus
Belize
Bhutan
Bosnia and Herzegov...
Brazil
Bulgaria
Burma
CA Ivo d'Ivoire
Cambodia
Canada
Chad
China
Comoros
Congo Republic of
Croatia
Cyprus
Denmark
Dominica
Ecuador
El Salvador
Eritrea
Eswatini
Fiji
Data Source
top 40 countries by gdp growt...
183 marks
1 row by 183 columns
SUM(GDP Growth Rate (%)): -893.5
26°C
Mostly clear
Search
ENG
IN
19:27
10-02-2026



8. ADVANTAGES & DISADVANTAGES

Advantages

- Simplifies complex economic data
- Supports informed decision-making
- Provides interactive and visual insights
- Enables global comparisons
- Useful for research and policy analysis

Disadvantages

- Dependent on availability of updated data
- Requires basic data interpretation skills
- Economic indicators may change over time

9. CONCLUSION

This project demonstrates how economic freedom influences prosperity and economic development. By transforming complex economic indicators into clear visual insights, the system enables users to understand trends, compare countries, and make informed decisions. The dashboard and storytelling approach makes economic analysis accessible and meaningful.

10. FUTURE SCOPE

- Integration of real-time economic data
- Predictive analytics using machine learning
- Mobile-friendly dashboard development
- Policy recommendation system
- Expansion to additional global indicators

DataSet Link : https://drive.google.com/file/d/1EBIa1LtM3Ni2Uh3nekLB6wt3263Q3NeX/view

Github Link: