

MEASURING THE PULSE OF PROSPERITY: AN INDEX OF ECONOMIC FREEDOM ANALYSIS

INTRODUCTION:

PROJECT OVERVIEW

The project “Measuring the Pulse of Prosperity: An Index of Economic Freedom Analysis” focuses on analyzing how economic freedom influences prosperity, growth, and overall development across nations. It uses the Index of Economic Freedom published by the Heritage Foundation to evaluate countries based on key pillars such as rule of law, government size, regulatory efficiency, and open markets. The project examines how these factors collectively shape economic performance and living standards.

Purpose of the Project

The purpose of this project is to understand the relationship between economic freedom and prosperity. It aims to identify policy strengths and weaknesses, highlight best practices for economic governance, and provide insights that can help policymakers, researchers, and investors promote sustainable growth, reduce poverty, and improve economic opportunity

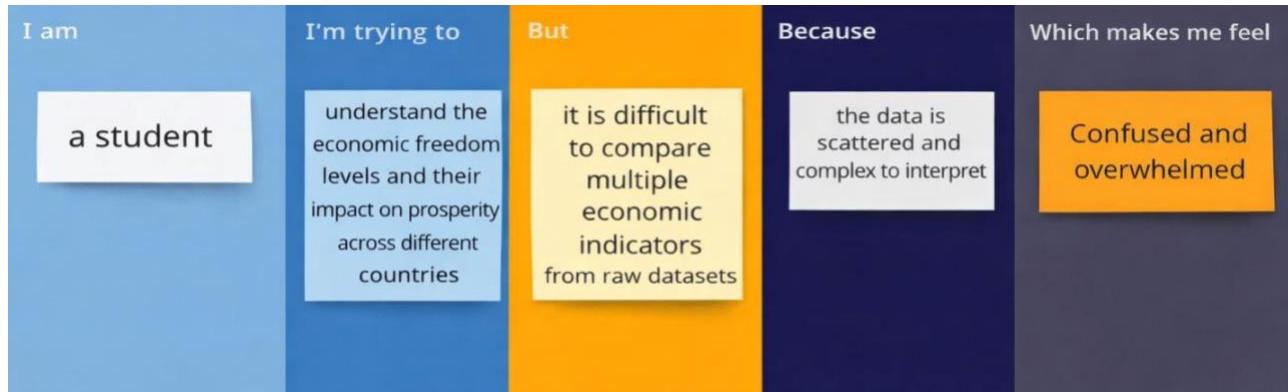
IDEATION PHASE:

PROBLEM STATEMENTS

Customer Problem Statement :

This problem statement is created to understand the user's perspective regarding the analysis of economic freedom and prosperity across different countries. This helps to identify the challenges faced by users while interpreting economic data and understanding economic indicators. By clearly defining the user's problem, the project aims to provide better insights through data visualization and analysis.

| | |
|----------------------------|---|
| I am | A student analyzing global economic data and economic freedom indicators. |
| I am Trying to | Understand how economic freedom impacts prosperity, GDP growth, unemployment, and inflation across different countries. |
| But | It is difficult to analyze and compare multiple economic indicators from raw datasets. |
| Because | The economic data is complex, scattered across different sources, and not easily understandable without visualization. |
| Which Makes Me Feel | Confused while interpreting complex economic data. |



| Problem Statement (PS) | I am (Customer) | I'm trying to | But | Because | Which makes me feel |
|-------------------------------|------------------------|---|---|--|----------------------------|
| PS-1 | A student | understand how economic freedom affects prosperity in different countries | it is difficult to analyze many economic indicators | The data is complex and scattered across different sources | Confused |
| PS-2 | A student | Learn about the economic freedom of different countries | the data is hard to understand | there are too many numbers and reports | frustrated |

Empathize & Discover

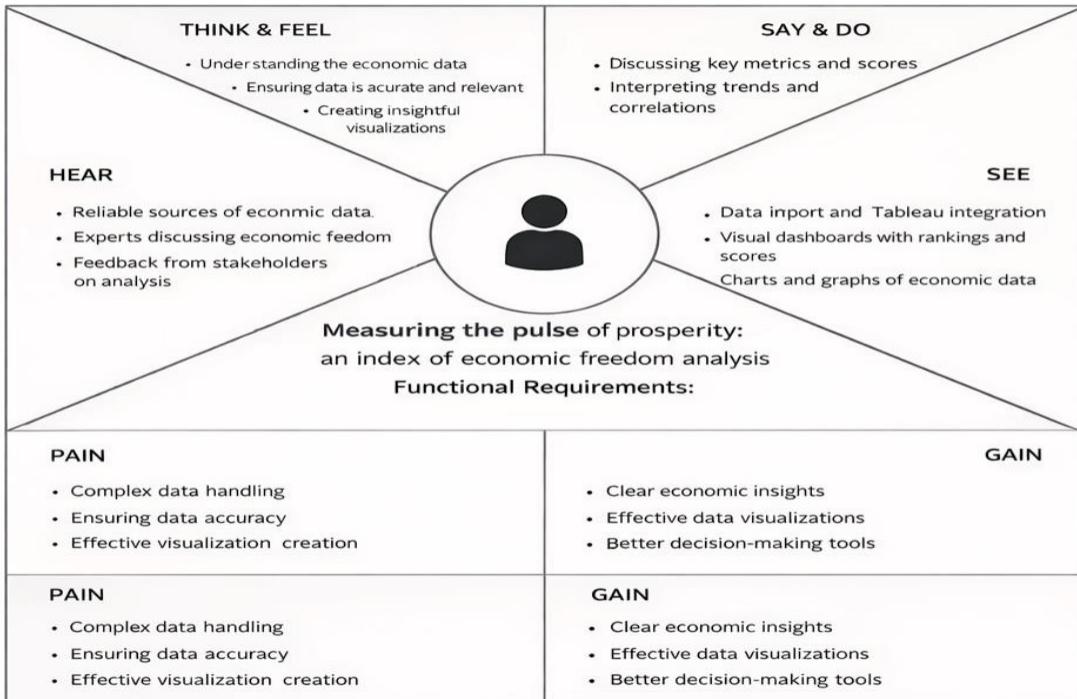
Empathy Map Canvas:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes. It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

Empathy Map

Measuring the pulse of prosperity: an index of economic freedom analysis

Functional Requirements:



I

Brainstorming & idea prioritisation

BRAINSTORMING & IDEATION PRIORITIZATION TEMPLATE:

This brainstorming and ideation prioritization exercise focuses on analyzing the relationship between economic freedom and prosperity using the Index of Economic Freedom. The team collaboratively generated ideas on how economic freedom influences key economic outcomes such as GDP growth, investment, job creation, governance quality, and market efficiency. These ideas were then grouped into related themes and evaluated using an importance–feasibility matrix. High-priority ideas, including index improvement strategies, policy reform

recommendations, and global case studies, were identified as both impactful and achievable. The process helped streamline the project's focus and ensured that the most relevant and practical ideas guide the analysis of prosperity across countries.

STEP1: Team Gathering, collaboration and select the problem statement

The screenshot shows a Mural template for a team gathering. At the top left is a circular icon with a lightbulb and a bar chart. The title 'Measuring India: Analysing the Evolution of Economic Freedom Analysis' is displayed prominently. Below the title, a sub-instruction reads: 'Use this template in your brainstorming sessions to analyse the Index of Economic Freedom and its relation to prosperity.' To the right, there are three main sections: 'Before you collaborate' (10 minutes), 'Define your problem statement' (5 minutes), and 'How might we use the Index of Economic Freedom to measure the level of prosperity?' (with a yellow background). Each section includes a list of steps: 'Team gathering', 'Set the goal', and 'Learn how to use the facilitation tools'. A tip box at the bottom right says: 'Tip: Don't hold back. Focus on open or fast iteration the ideas of your same team ready - with same team.' On the far right, a sidebar lists 'Key rules of brainstorming': Work in an open and positive session, No judgment, Go for volume, Encourage wild ideas, Listen to others, and Be visual.

Measuring India: Analysing the Evolution of Economic Freedom Analysis

Use this template in your brainstorming sessions to analyse the Index of Economic Freedom and its relation to prosperity.

Before you collaborate
A little bit of preparation goes a long way with this session. Here's what you need to do to get going.
⌚ 10 minutes

Team gathering
Check who's available – join in the session and send an invite. Share relevant materials if necessary.

Set the goal
Define the problem, you'll be focusing on: relation between economic freedom and proce

Learn how to use the facilitation tools
Test your facilitation tools to ensure a smooth and productive session.

Tip:
Don't hold back. Focus on open or fast iteration the ideas of your same team ready – with same team.

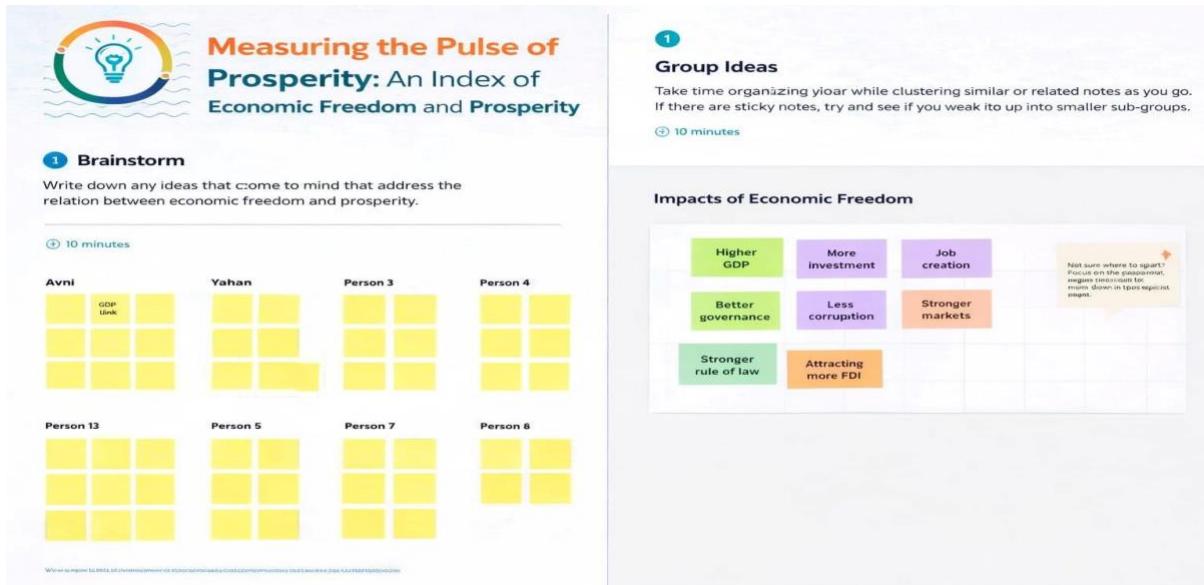
Define your problem statement
What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.
⌚ 5 minutes

How might we use the Index of Economic Freedom to measure the level of prosperity?

Key rules of brainstorming

- ⌚ Work in an open and positive session
- 🔇 No judgment
- 🔊 Go for volume
- 💡 Encourage wild ideas
- 👂 Listen to others
- 🖼️ Be visual

STEP-2: Brainstorm & Idea listening and Grouping



Measuring the Pulse of Prosperity: An Index of Economic Freedom and Prosperity

1 Brainstorm
Write down any ideas that come to mind that address the relation between economic freedom and prosperity.

⌚ 10 minutes

| | | | |
|----------|-------|----------|----------|
| Avni | Yahan | Person 3 | Person 4 |
| GDP Link | | | |

| | | | |
|-----------|----------|----------|----------|
| Person 13 | Person 5 | Person 7 | Person 6 |
| | | | |

Group Ideas
Take time organizing your while clustering similar or related notes as you go. If there are sticky notes, try and see if you break it up into smaller sub-groups.

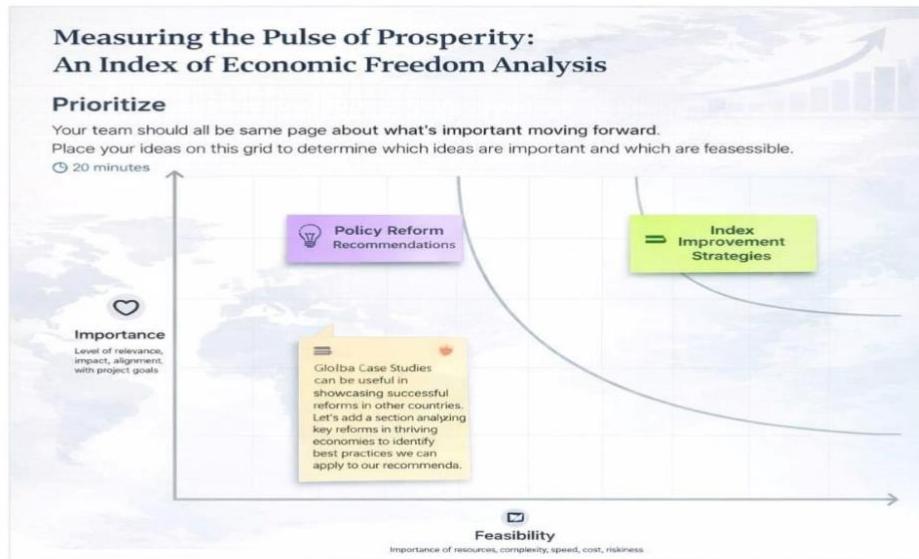
⌚ 10 minutes

Impacts of Economic Freedom

| | | |
|----------------------|---------------------|------------------|
| Higher GDP | More investment | Job creation |
| Better governance | Less corruption | Stronger markets |
| Stronger rule of law | Attracting more FDI | |

Not sure where to start? Focus on the general region relevant to your focus in this report page.

SREP-3: Idea prioritization



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

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

| | |
|--|---|
| Importance | Feasibility |
| Level of relevance, impact, alignment with project goals | Importance of resources, complexity, speed, cost, riskiness |

Policy Reform Recommendations

Index Improvement Strategies

Global Case Studies
can be used in identifying successful reforms in other countries. Let's add a section analyzing key reforms in thriving economies to identify best practices we can apply to our recommendations.

REQUIREMENT ANALYSIS:

CUSTOMER JOURNEY MAP

Customer Journey Map

Project: Measuring the Pulse of Prosperity – Index of Economic Freedom Analysis



| 1 Discover | 2 Explore | 3 Analyze | 3 Analyze | 4 Interpret | 4 Share | 6 Apply |
|---|---|---|--|---|---|--|
| User goal: Find economic data insights | User goal: Understand economic freedom indicators | User goal: Compare economic performance | User goal: Compare economic performance | User goal: Understand meaning of data | User goal: Share insights with others | User goal: Use insights for decision making |
| User Actions | User Actions | User Actions | User Actions | User Actions | User Actions | User Actions |
| <ul style="list-style-type: none"> Searches for economic freedom Visits the analytics website/dashboard Reads project introduction | <ul style="list-style-type: none"> Opens interactive dashboard Filters data by country Views charts and graphs | <ul style="list-style-type: none"> Opens interactive dashboard Filters data by country Views charts and graphs | <ul style="list-style-type: none"> Compares multiple countries Studies economic freedom score Observes trends | <ul style="list-style-type: none"> Reads dashboard insights Interprets economic indicators Observes trends | <ul style="list-style-type: none"> Downloads or shares dashboard Uses embedded in website Presents insights in reports | <ul style="list-style-type: none"> Uses data for research Applies insights in policy analysis Uses results in presentations |
| Touchpoints | Touchpoints | Touchpoints | Touchpoints | Touchpoints | Touchpoints | Touchpoints |
| <ul style="list-style-type: none"> Website Dashboard homepage Tableau Public link | <ul style="list-style-type: none"> Website Dashboard homepage Tableau Public link | <ul style="list-style-type: none"> Tableau dashboard Filters and dropdown menus Visualizations | <ul style="list-style-type: none"> Comparison charts Score rankings Country dashboards | <ul style="list-style-type: none"> Story dashboards Data explanations Insights section | <ul style="list-style-type: none"> Tableau Public sharing Web integration Project report | <ul style="list-style-type: none"> Research papers Academic work Policy discussions |
| User Feelings | User Feelings | User Feelings | User Feelings | User Feelings | User Feelings | User Feelings |
| <ul style="list-style-type: none"> Curious 😊 Wants clear information | <ul style="list-style-type: none"> Curious 😊 Wants clear information | <ul style="list-style-type: none"> Interactive filters Easy navigation | <ul style="list-style-type: none"> Add ranking visuals Provide trend analysis charts | <ul style="list-style-type: none"> Provide short explanations Add data storytelling | <ul style="list-style-type: none"> Confident 🚀 Sharing knowledge 🎤 | <ul style="list-style-type: none"> Achieved objective Value from analysis 📈 |
| Opportunities | Opportunities | Opportunities | Opportunities | Opportunities | Opportunities | Opportunities |
| <ul style="list-style-type: none"> Provide clear project description | <ul style="list-style-type: none"> Show key metrics at first glance | <ul style="list-style-type: none"> Interactive filters Easy navigation | <ul style="list-style-type: none"> Highlighting visuals | <ul style="list-style-type: none"> Provide easy share options | <ul style="list-style-type: none"> Provide export options | <ul style="list-style-type: none"> Provide export options |

SOLUTION REQUIREMENTS

Project Design Phase-II Solution Requirements (Functional & Non-functional)

Functional Requirements:

Following are the functional requirements of the proposed solution

| S.No | FUNCTIONAL REQUIREMENTS | SUB REQUIREMENTS (Sub / sub Task) |
|------|-------------------------|-------------------------------------|
| 1. | Data collection | 1. Downloading the data set |
| 2. | Working with data set | 1. Understand the data |

| | | |
|----|--------------------------------|---|
| | | 2. Import dataset into database and connect tableau desktop to dashboard server |
| 3. | Data visualization | <ol style="list-style-type: none"> 1. <u>No.of visualization,</u> <ul style="list-style-type: none"> • 2022 Economic freedom score • Top 40 ranking countries in the index • Bottom ranking countries in the index • Index score based on unemployment rate • Index score based on financial freedom • Index score based on population • Index score based on 5 year on GDP growth rate(%) • Inflation rate in different countries • Correlation between inflation and unemployment • Correlation between GDP(PPP) and monetary freedom • Top 40 countries by GDP growth rate |
| 4. | Dashboard | 1. Creating the Dashboard |
| 5. | Story | 1. Creating the story board |
| 6. | Publishing and web integration | <ol style="list-style-type: none"> 1. Publishing dashboard and reports to tableau public 2. Integrating with Web with Embed code |
| 7. | Performance testing | <ol style="list-style-type: none"> 1. Amount of Data Rendered to DB 2. Utilization of Data Filters |

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

| S.NO | NON- FUNCTIONAL REQUIREMENTS | DESCRIPTION |
|------|------------------------------|-------------|
| | | |

| | | |
|----|---------------------|---|
| 1. | Usability | The dashboard should be simple, interactive, and easy to understand with clear visualizations and responsive filters. |
| 2. | Security | The system must protect economic data and analysis results from unauthorized access and ensure data integrity. |
| 3. | Reliability | The analysis should consistently produce accurate and repeatable results using the same data and methods. |
| 4. | Performance | The system should efficiently process economic freedom data and generate results without significant delays. |
| 5. | Availability | Project data and analytical outputs should be accessible whenever needed for study, collaboration, or evaluation. |
| 6. | Scalability | The system must support the addition of more countries, indicators, and time periods without affecting performance. |

DATA FLOW DAIGRAM:

A Data-Flow diagram is a way of representing a flow of Dara through a process or a system. The DFD also provide information about the outputs and inputs of each entity and the process itself. A data-flow diagram has no control flow there are no rules and no loops.

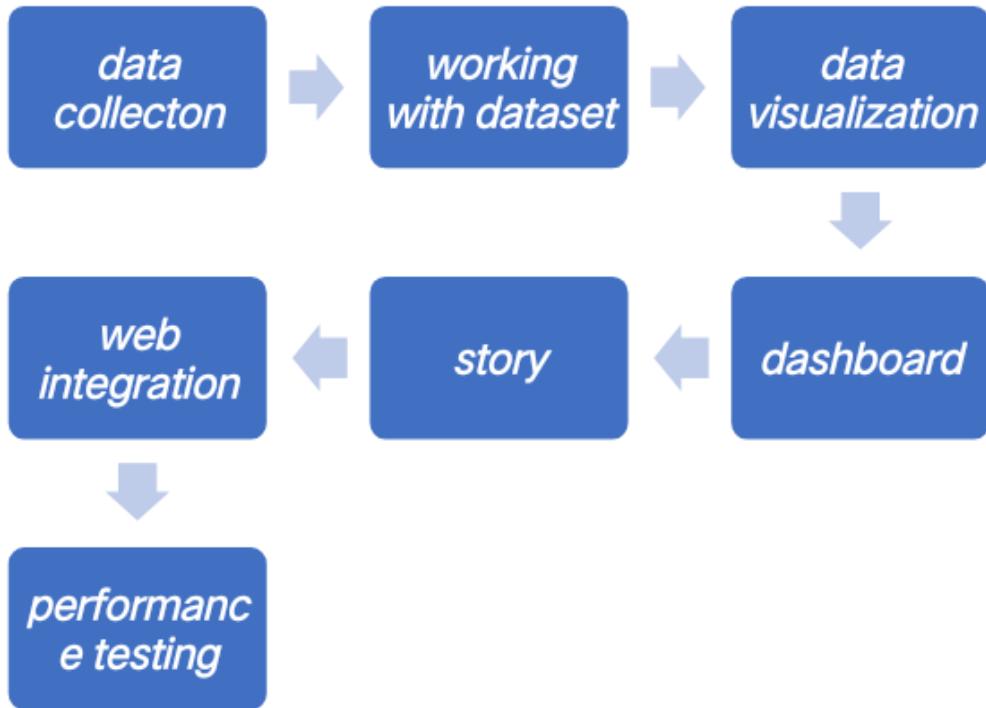
USES:

Visualizes data movement in a system clearly and logically.

Identifies system inputs, outputs, processes, and data storage elements .

Helps in system Analysis by understanding the flow of information.

Simplifies complex system into understandable components.

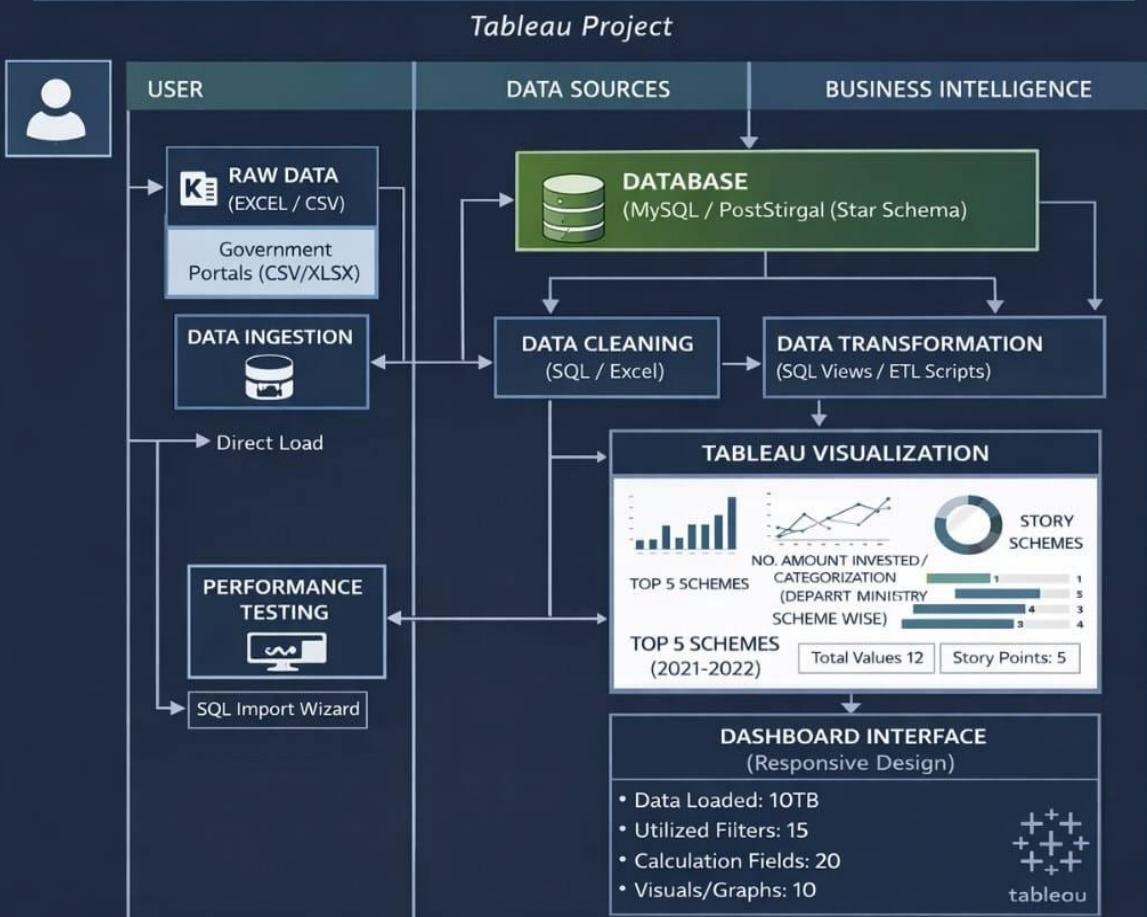


TECHNOLOGY STACK

(Architecture & stack)

TECHNICAL ARCHITECTURE: The technical architecture of the Economic Freedom Analysis project follows a structured end-to-end data flow. Raw data is collected from Excel/CSV files and government datasets, then loaded into a relational database like MySQL.

END-ENTD DATA ANALYTICS TECHNOLOGY STACK (SQL, EXCEL & TABLEAU)



The data is cleaned and transformed using SQL and Excel to remove errors, handle missing values, and create calculated metrics. After processing, the refined data is connected to Tableau to build interactive dashboards and visualizations. Finally, the dashboard presents insights such as country comparisons, pillar-wise analysis, and trend evaluation for effective decision-making.

TABLE-1:Components & Technologies:

| S.N o | Components | Description | Technologies |
|----------|-------------|---|--------------|
| 1. | Data Source | Contains raw Economic Freedom Index data such as country scores and ranking | CSV/ Excel |

| | | | |
|----|-----------------------|---|---------------------------------|
| 2. | Data storage | Stores organized data securely for querying and analysis | My SQL |
| 3. | Data visualization | Builds interactive dashboards, charts, and maps for analysis | Tableau |
| 4. | Reporting | Presents insights like country comparisons, pillar analysis, and trends for decision making | Tableau dashboard |
| 5. | Dashboard interaction | Allows users to explore data dynamically | Tableau filters & parameters |
| 6. | Data validation | Ensure accuracy, consistency, and reliability of data | Excel / SQL constraints |
| 7. | Data processing | Cleans data, removes errors, and create calculated metrics and KPIs | SQL / Excel |
| 8. | KPI calculation | Computer overall scores, averages, and rankings | SQL & Tableau calculated Fields |

PROJECT DESIGN:

PROBLEM-SOLUTION FIT

PROBLEM – SOLUTION FIT

PROBLEM:

Many countries still face low economic freedom due to corruption, weak legal systems, high taxes, heavy government control, and trade restrictions. These issues limit business growth, reduce investment, and slow economic development, leading to poverty and unemployment.

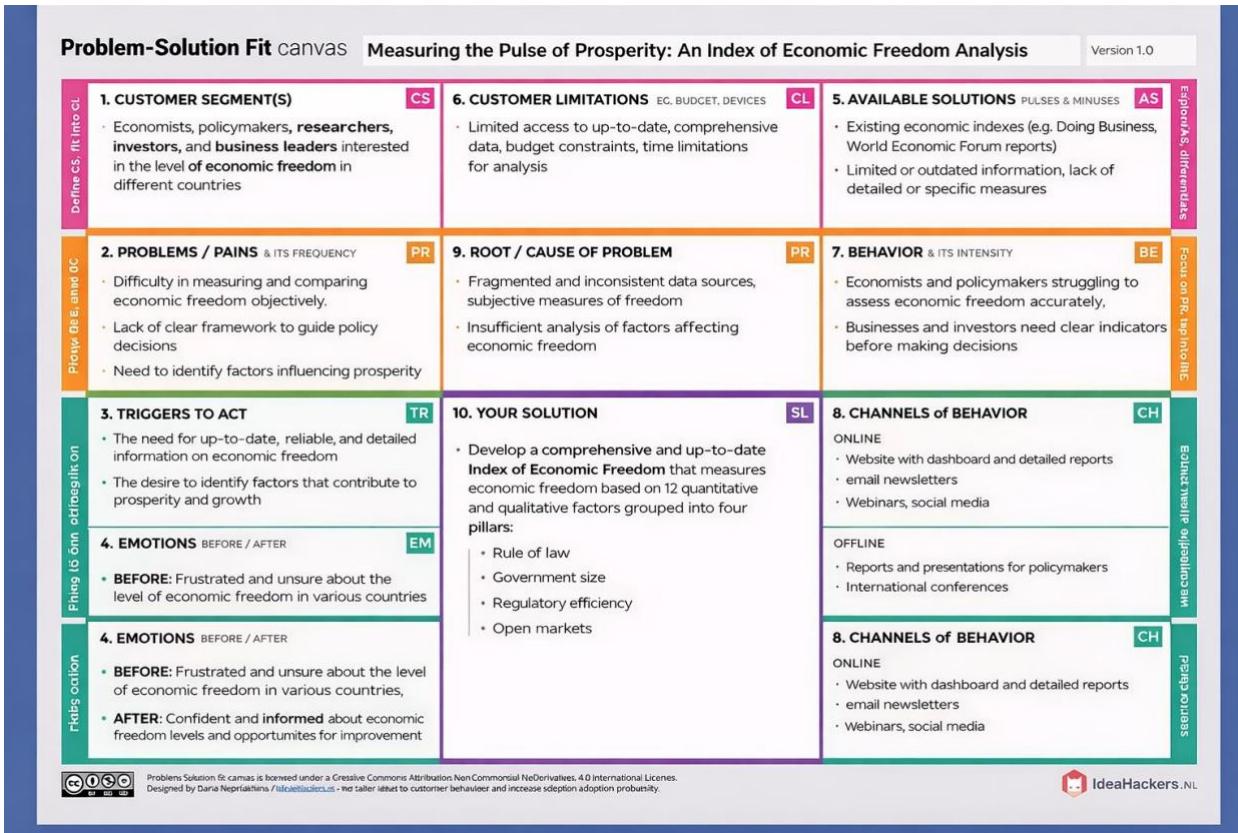
SOLUTION FIT:

By analyzing data from the Index of Economic Freedom published by The Heritage Foundation, governments can identify weak areas in rule of law, government size, regulatory efficiency, and open markets. Improving these areas can increase economic growth, investment, and overall prosperity.

PURPOSE:

- ❖ To measure the level of economic freedom across countries.
- ❖ To analyze the four pillars: rule of law, government size, regulatory efficiency, and open markets.
- ❖ To identify strengths and weaknesses in a country's economic system.
- ❖ To understand the relationship between economic freedom and prosperity.
- ❖ To provide recommendations for policy improvements.
- ❖ To create awareness about the importance of economic freedom in reducing poverty and promoting growth.

PROBLEM-SOLUTION FIT TEMPLATE:



PROPOSED SOLUTION TEMPLATE

PROPOSED SOLUTION TEMPLATE:
project team shall fill the following information ir proposed solution template

| S NO | PARAMETERS | DESCRIPTION |
|------|---|---|
| 1. | Problem statement (problem to be solved) | Economic prosperity is often measured using limited indicators like GDP, which fail to capture institutional quality, governance, and market freedom. Policymakers and investors lack a comprehensive tool to identify structural barriers to sustainable growth. |
| 2. | Idea/ solution description | Use the Index of Economic Freedom, developed by the Heritage Foundation, to evaluate countries based on rule of law, government size, regulatory efficiency, and market openness, enabling data-driven policy and investment decisions. |
| 3. | Novelty/ uniqueness | <ul style="list-style-type: none"> ● Holistic assessment beyond income metrics ● Standardized global comparison ● Direct linkage between policy reforms and economic outcomes |
| 4. | Social impact/ customer satisfaction | Promotes good governance, transparency, entrepreneurship, and inclusive growth while helping governments, investors, and citizens make informed decisions. |
| 5. | Business model (Revenue model) | Revenue through data subscriptions, policy consulting, licensing reports, and customized analytical dashboards. |

| | | |
|----|-----------------------------|--|
| 6. | Scalability of the solution | Highly scalable across countries and regions due to standardized methodology and low marginal costs, with potential integration of advanced analytics. |
|----|-----------------------------|--|

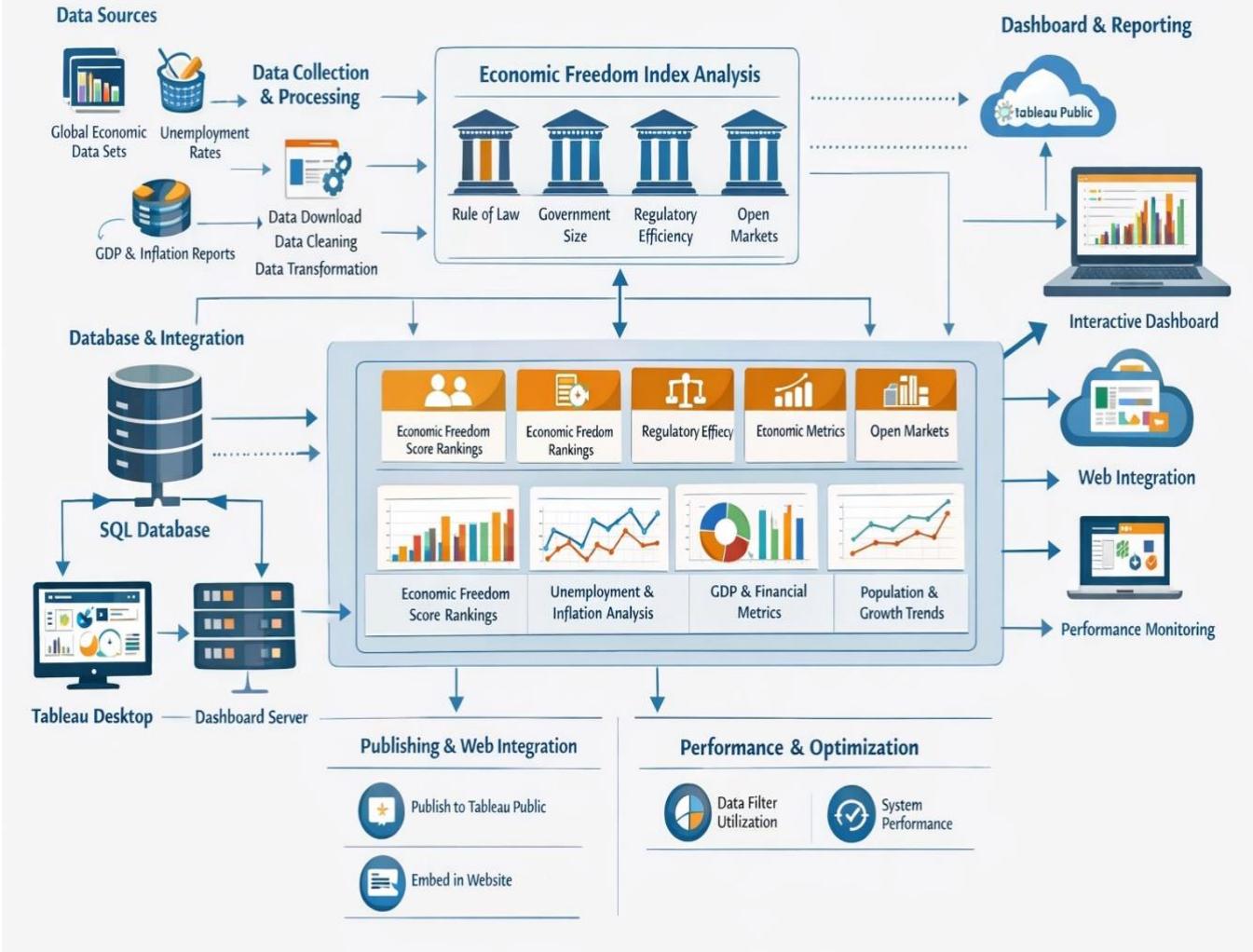
Solution Architecture

SOLUTION ARCHITECTURE:

1. Data Collection: Collect data on Economic Freedom indicators, GDP, unemployment, taxes, and trade from global sources.
2. Data Processing: Clean the data, remove errors, and organize it into four pillars: Rule of Law, Government Size, Regulatory Efficiency, and Open Markets.
3. Database Storage: Store the prepared data in an SQL database for structured management and easy access.
4. Analysis: Calculate the overall Economic Freedom score and generate country rankings and comparisons.
5. Visualization: Create interactive dashboards in Tableau to display rankings and economic trends.
6. Publishing: Publish the dashboard online and embed it into a website for public access.
7. Dashboard creation: Design interactive charts and graphs in Tableau.
8. Comparison: Compare countries based on rankings and performance.
9. Deployment: Publish the dashboard online and share it through website.

SOLUTION ARCHITECTURE TEMPLATE:

Economic Freedom Analysis Solution Architecture



PROJECT PLANNING & SCHEDULING

PROJECT PLANNING

Product Backlog, Sprint Schedule, and Estimation :-

The below template is for product backlog and sprint schedule

| Sprint | Functional Requirement | User story number | User story/Task | Story points | Priority | Team Members |
|----------|------------------------|-------------------|---|--------------|----------|---------------------------------------|
| Sprint 1 | Data collection | USN-1 | Collect Economic Freedom Index dataset and download that. | 2 | High | Gadi Hemalata |
| Sprint 1 | Working with dataset | USN-2 | Clean and prepare the dataset for analysis. | 2 | Medium | Buddepu Krishnaveni |
| Sprint 2 | Data visualization | USN-3 | Create charts to visualize economic indicators. | 4 | Medium | Hemalatha Krishnaveni Jyothsna Soniya |
| Sprint 2 | Dashboard | USN-4 | Build an interactive dashboards for country comparison. | 4 | High | Chintanippula soniya |
| Sprint 3 | Story | USN-5 | Create a story to present insights from the analysis. | 4 | High | Dondapati Jyothsna |
| Sprint 3 | Publishing | USN-6 | Publish the dashboard and story on | 3 | High | Gadi Hemalatha |
| | | | Tableau Public. | | | |

| | | | | | | |
|----------|---------------------|-------|---|---|--------|----------------------|
| Sprint 4 | Web integration | USN-7 | Embed the dashboard into a web page. | 6 | High | Buddepu krishnaveni |
| Sprint 4 | Performance testing | USN-8 | Test dashboard performance and functionality. | 4 | Medium | Ch.soniya d.jyotshna |

Project Tracker, Velocity & Burndown Chart :-

| Sprint | Total story points | Duration | Sprint start date | Sprint end date | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|----------|--------------------|----------|-------------------|-----------------|---|------------------------------|
| Sprint 1 | 20 | 6 | 05 Feb 2026 | 10 Feb 2026 | 20 | 10 feb 2026 |
| Sprint 2 | 20 | 6 | 11 Feb 2026 | 16 Feb 2026 | 20 | 11 feb 2026 |
| Sprint 3 | 20 | 6 | 17 Feb 2026 | 22 Feb 2026 | 20 | 17 Feb 2026 |
| Sprint 4 | 20 | 6 | 23 Feb 2026 | 28 Feb 2026 | 20 | 28 Feb 2026 |

Velocity:--

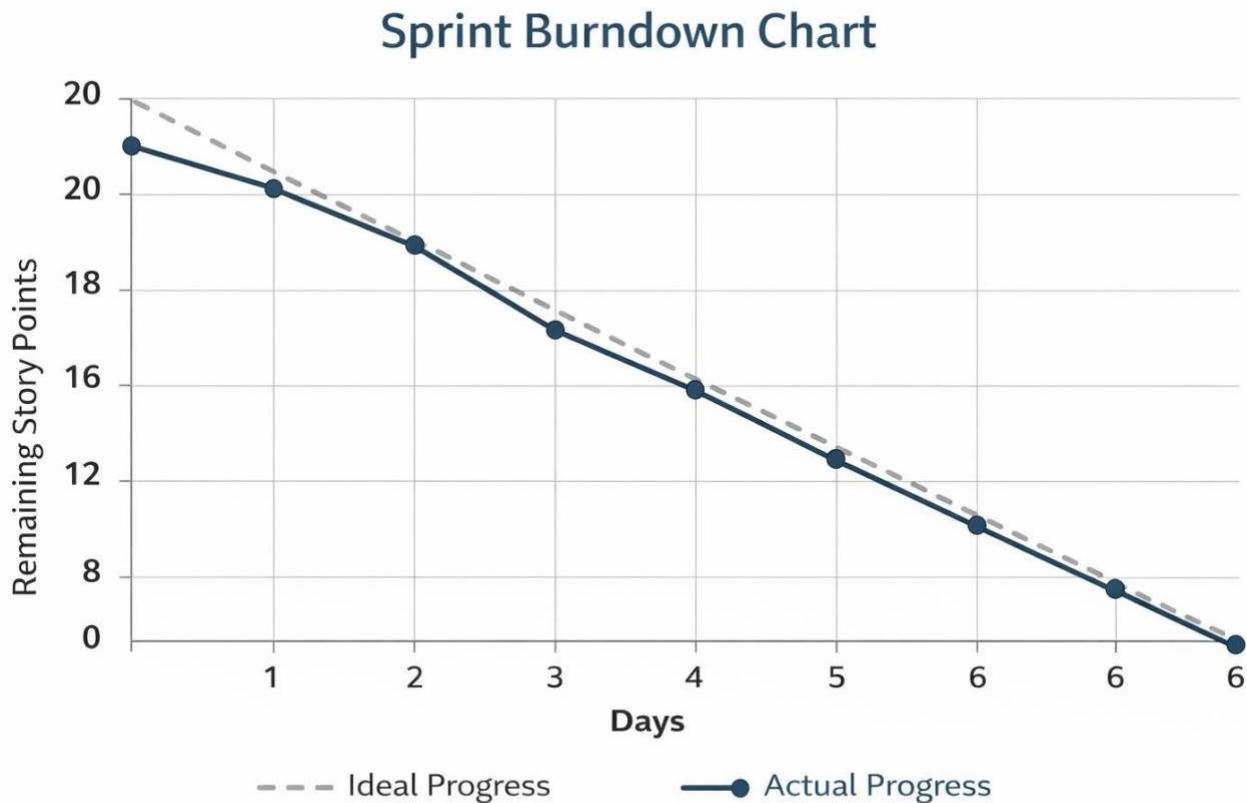
We have 6 days sprint duration , and the total story points is 20. Calculate the team average velocity per iteration unit

Average velocity (Av) = Velocity/Sprint duration

$$20/6 = 3.333$$

Burndown Chart :-

The burndown chart is used to track the progress of the sprint by showing the remaining story points over the sprint duration. In this project, each sprint has 20 story points with a duration of 6 days. As tasks are completed each day, the remaining story points gradually decrease until they reach zero on the final day of the sprint.



FUNCTION AND PERFORMANCE TESTING

PROJECT DEVELOPMENT PHASE

PERFORMANCE TESTING Performance

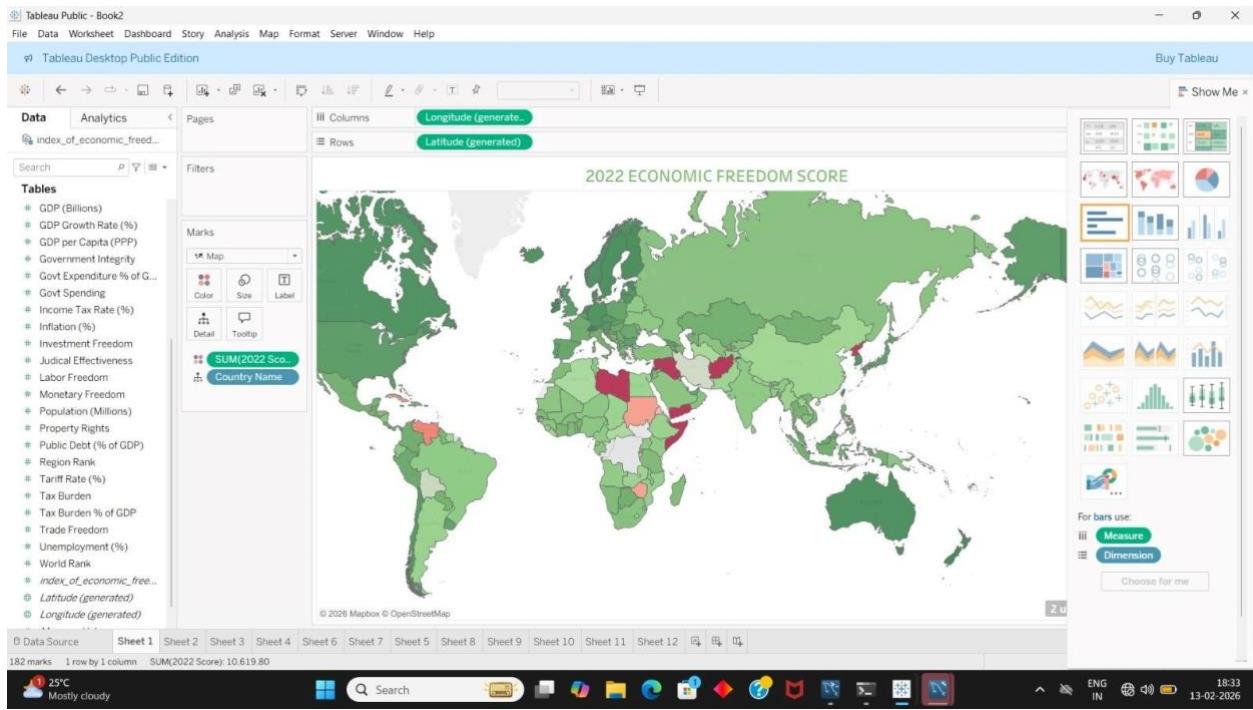
Testing:

| S.no | Parameter | Screenshot/values |
|------|-------------------------|--|
| 1. | Data Rendered | Visual representation of country-wise and year-wise economic freedom scores. |
| 2. | Data Processing | Cleaning, formatting, and organizing data for accurate analysis. |
| 3. | Utilization of filters | Interactive filters used for country, region, and year selection. |
| 4. | Calculation fields used | Calculations for averages, rankings, and comparative scores. |
| 5. | Dashboard design | Combined visualizations to present insights clearly and effectively |
| 6. | Story design | Sequential visuals explaining trends and key findings. |

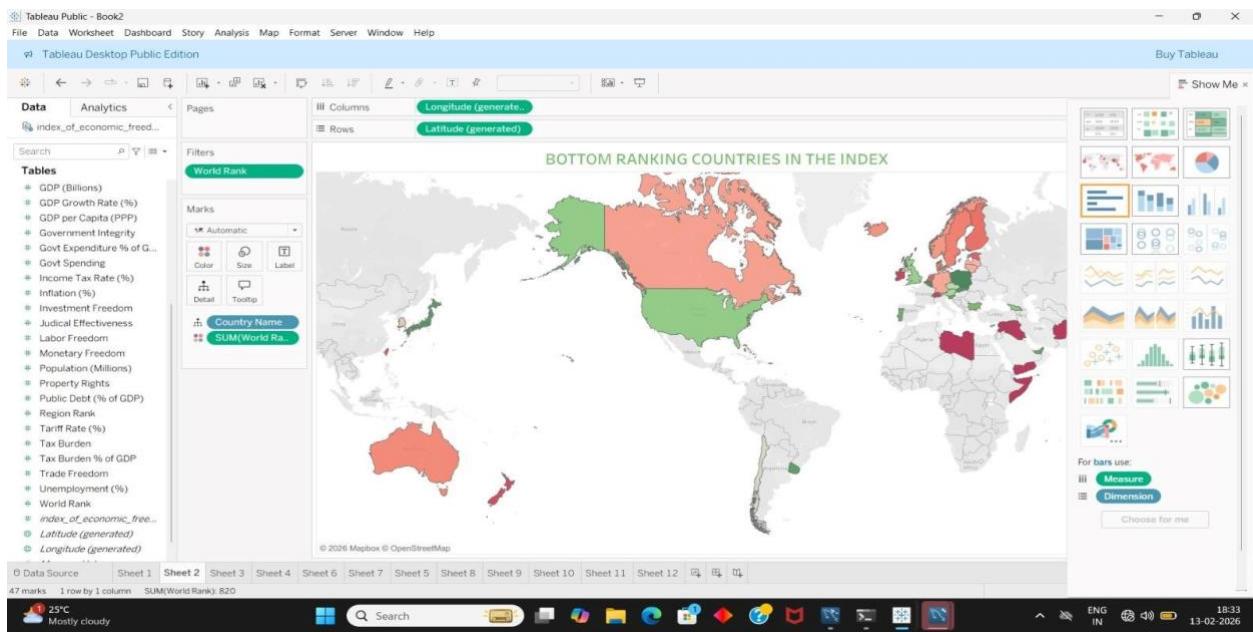
RESULTS: OUTPUT RESULTS

Data visualizations

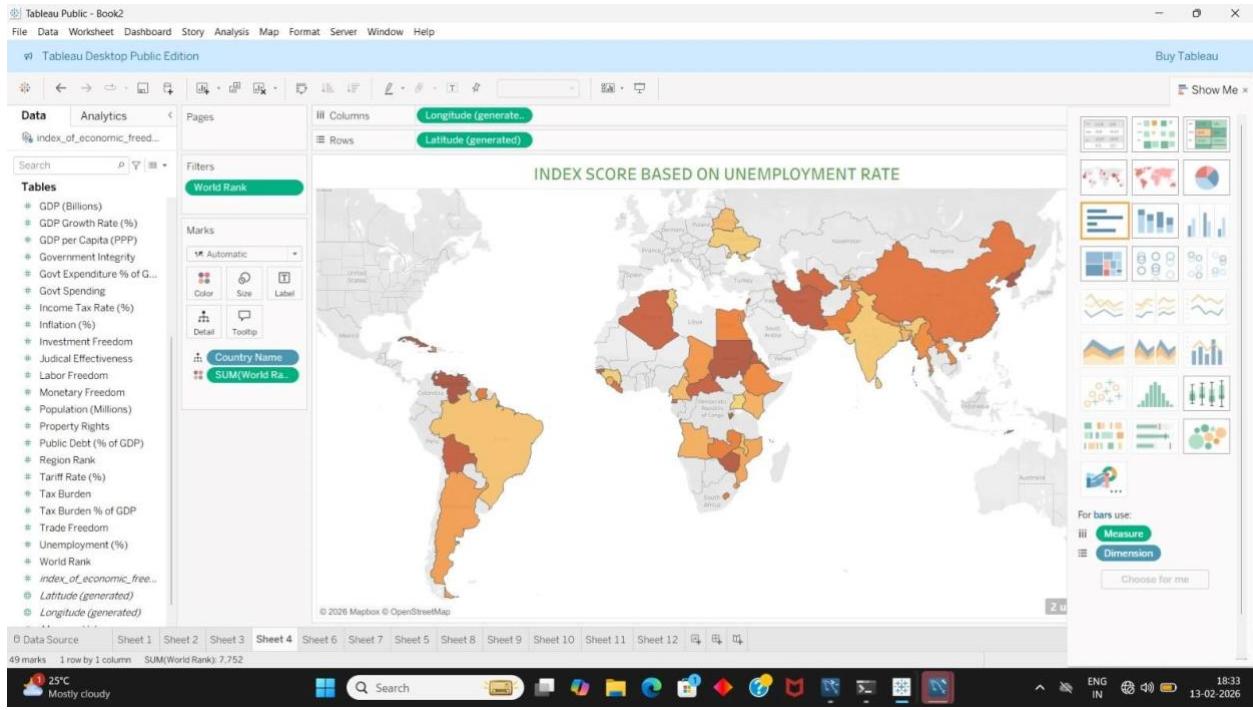
1.2022 Economic Freedom score



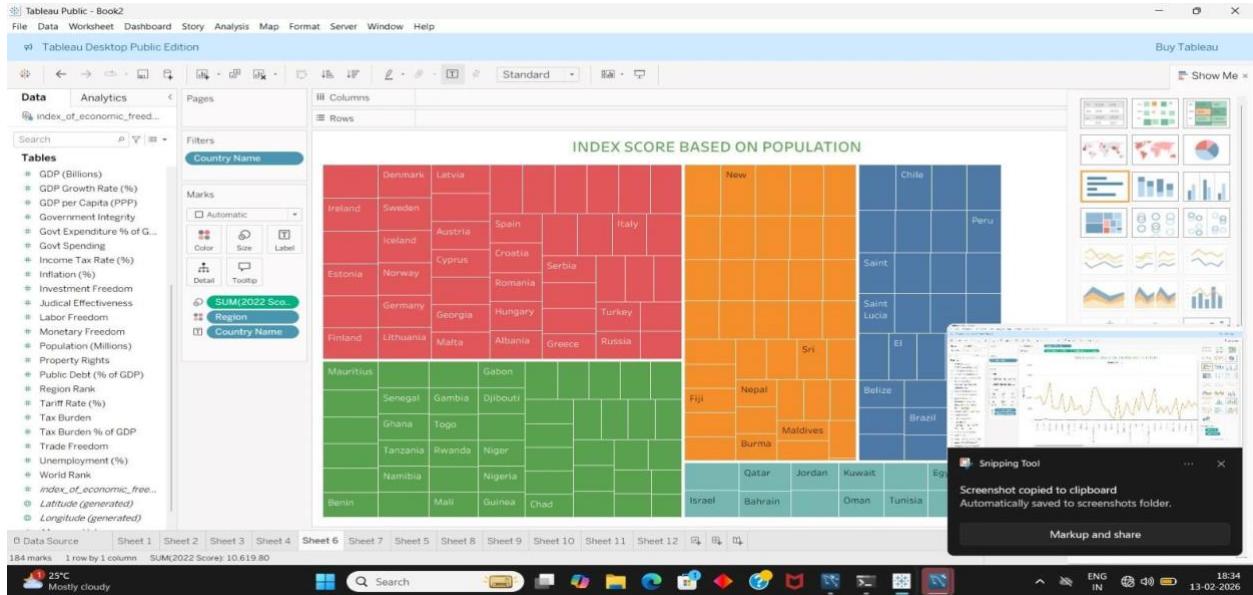
2. Bottom Ranking countries in the index



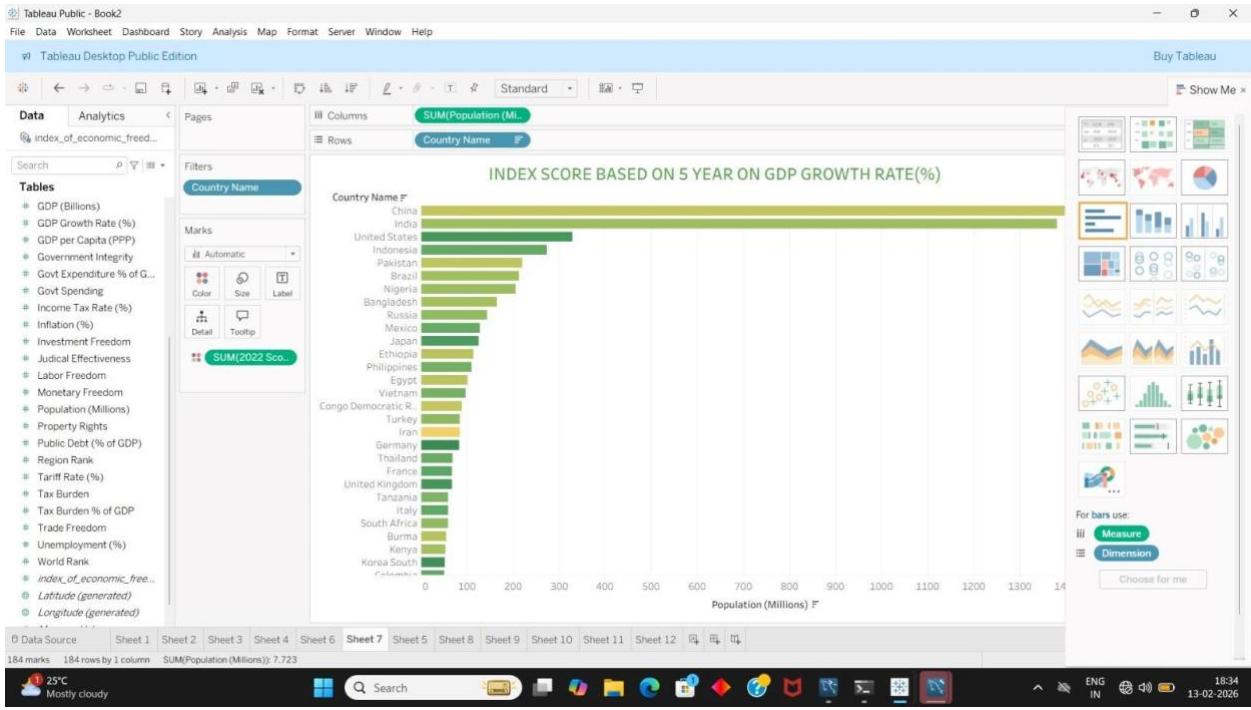
3. Index score based on unemployment



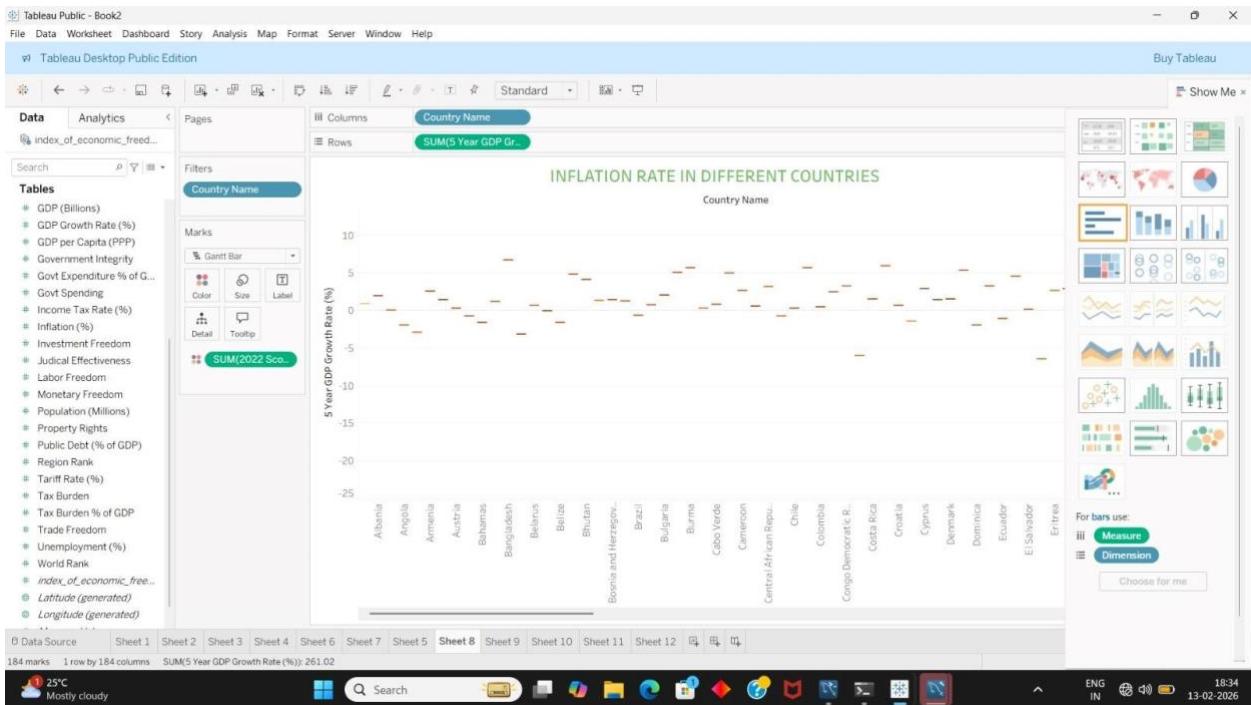
4. Index score based on population



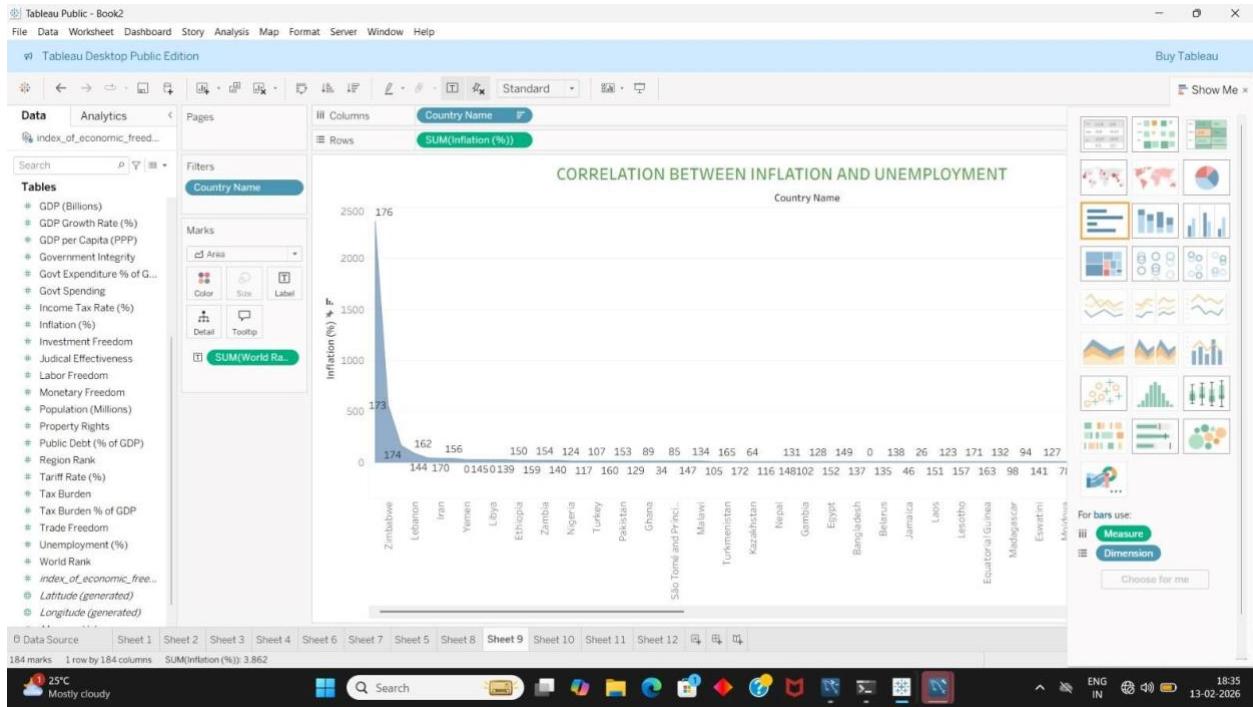
5. Index score based on 5 years on GDP (PPP) Growth rate (%)



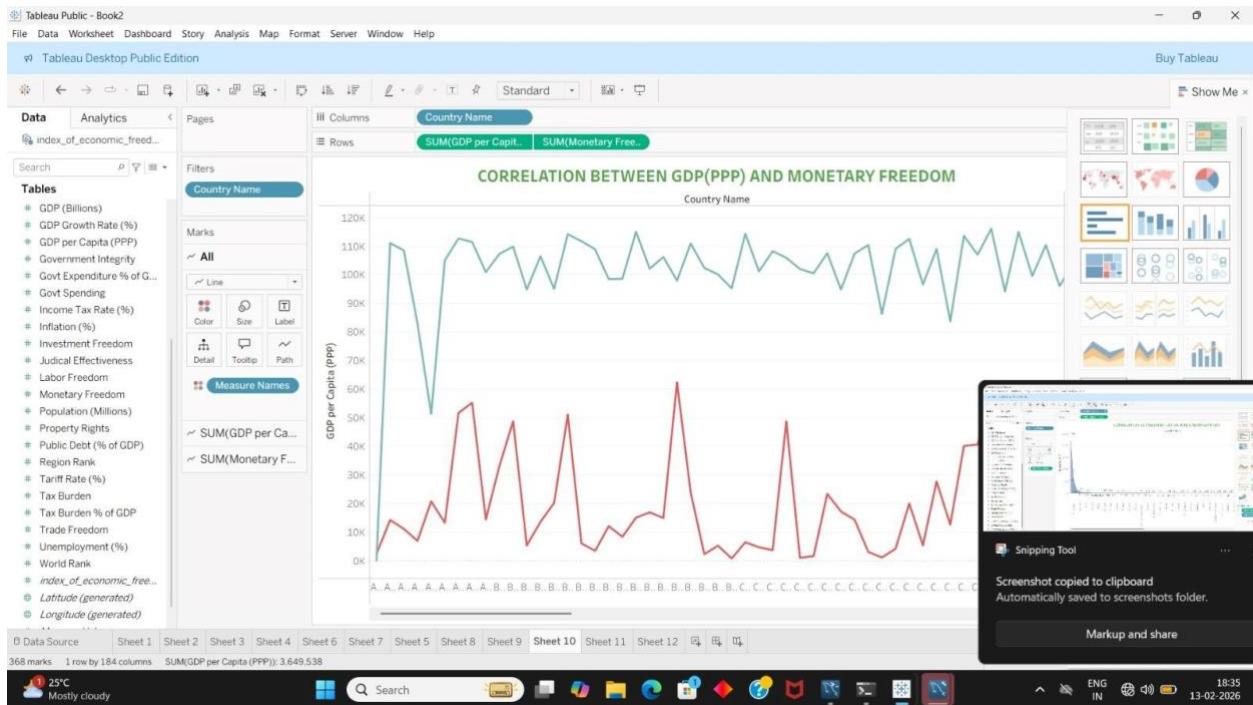
6. Inflation rate in Different countries



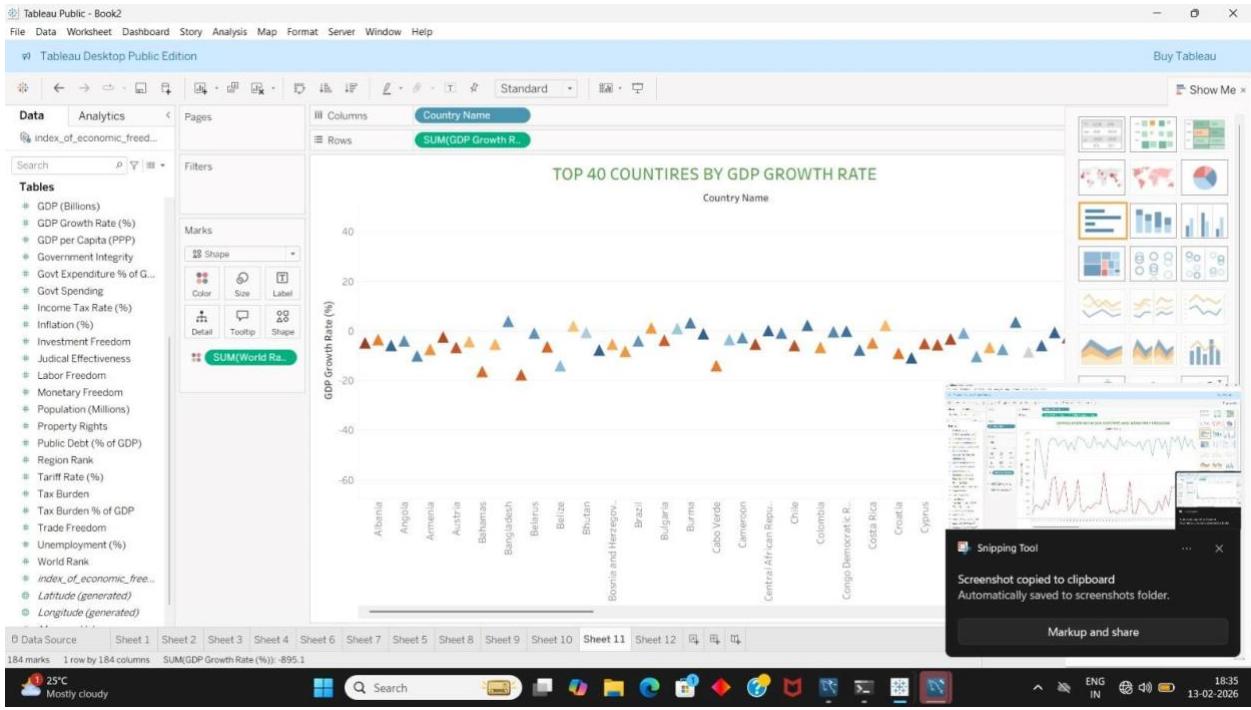
7. Correlation between inflation and unemployment



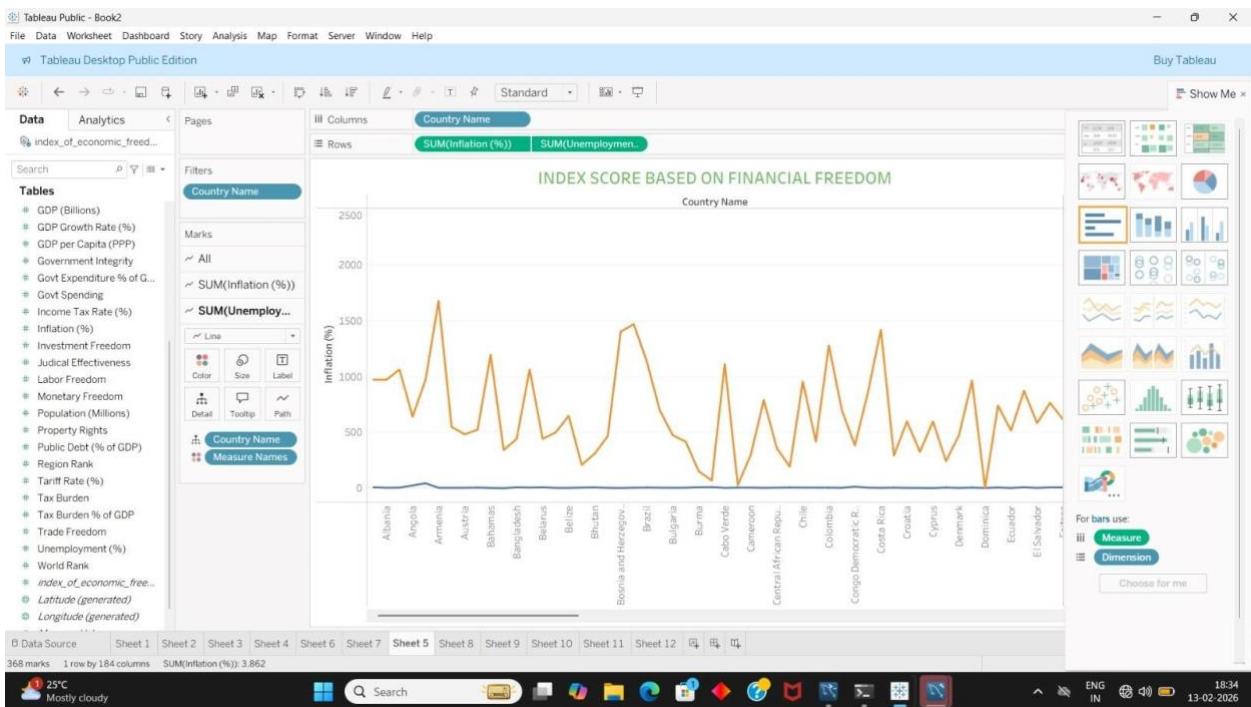
8. Correlation between GDP(PPP) AND Monetary Freedom



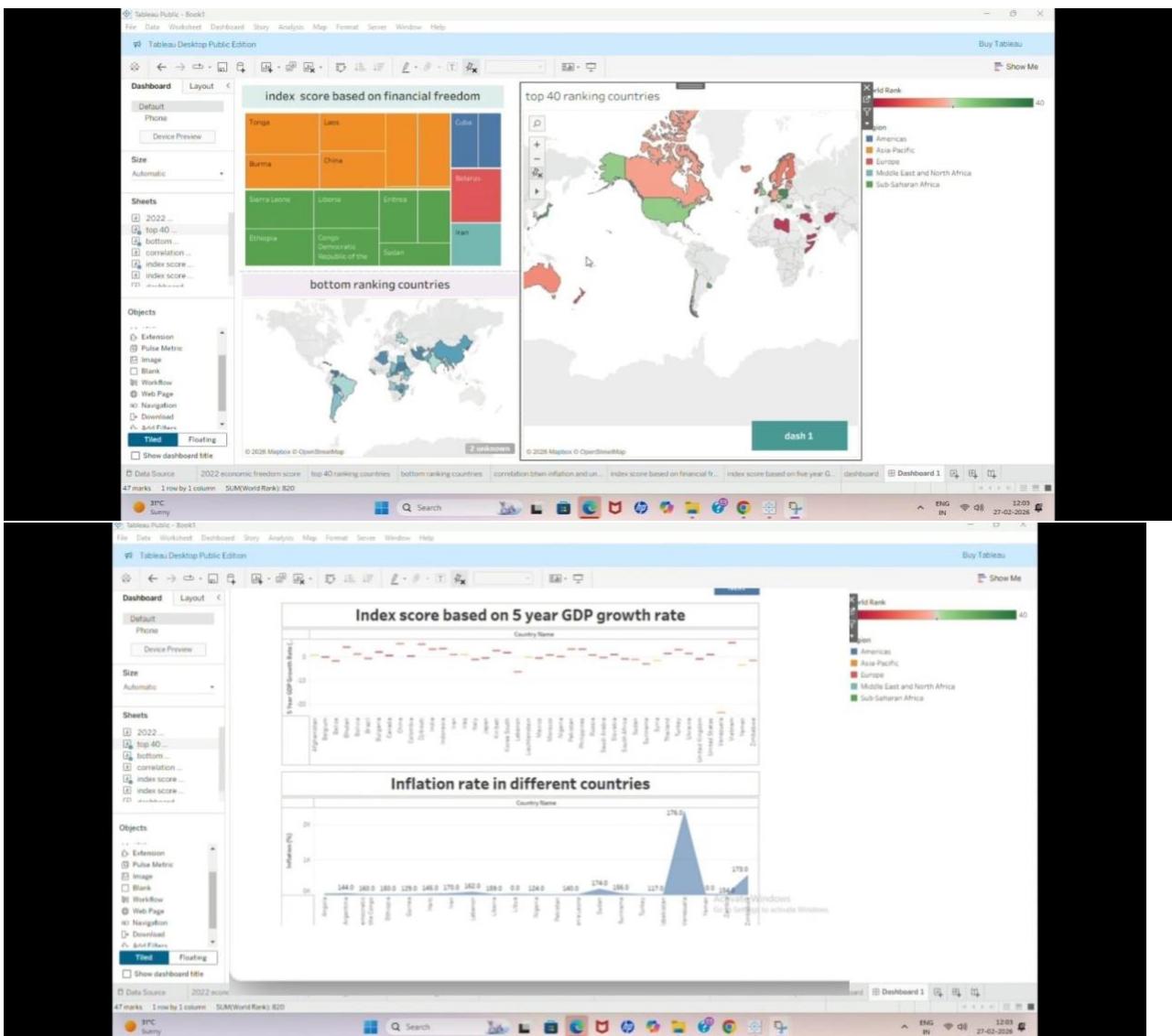
9. Top 40 countries by GDP Growth rate



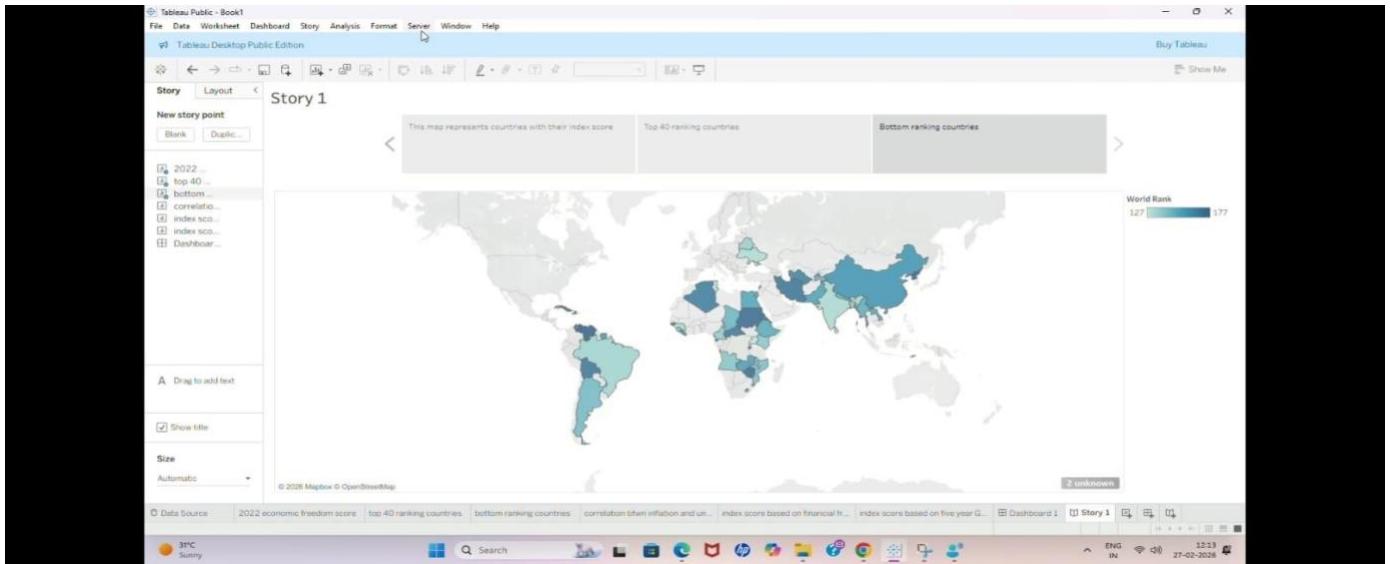
10. Index score based on financial freedom



DASHBOARDS:



STORY:



WEB INTEGRATION



ADVANTAGES AND DISADVANTAGES:

ADVANTAGES:

- ❖ Provides a comprehensive measure of economic freedom using 12 qualitative and quantitative indicators.
- ❖ Helps explain why economic freedom leads to prosperity, reduced poverty, and better living standards.
- ❖ Encourages free movement of labor, capital, and goods, supporting innovation and growth.
- ❖ Supports good governance through emphasis on rule of law, judicial effectiveness, and integrity.
- ❖ Assists governments and institutions in policy evaluation and reform planning.

DISADVANTAGES:

- ❖ May oversimplify complex economic realities by using standardized indicators across diverse countries.
- ❖ Heavy focus on market freedom may underestimate the role of government intervention in social welfare.
- ❖ Some qualitative measures (like integrity and judicial effectiveness) can be subjective.
- ❖ Does not fully capture social equity or income distribution aspects.
- ❖ Economic freedom alone may not address short-term economic shocks or crises.

CONCLUSION :

Measuring the pulse of prosperity through the Index of Economic Freedom provides a clear and structured framework for understanding how economic freedom influences growth, opportunity, and human well-being. By evaluating countries across key pillars such as rule of law, government size, regulatory efficiency, and open markets, the index highlights the importance of policies that protect individual liberty and encourage free economic activity. Although the approach has certain limitations, including subjectivity and reduced sensitivity to local contexts, it remains a valuable tool for policymakers, investors, and researchers. Overall, the analysis demonstrates that greater economic freedom is closely associated with higher prosperity, reduced poverty, and improved quality of life.

FUTURE SCOPE:

The Index of Economic Freedom has significant potential for further development and application. Future studies can enhance the index by incorporating real-time and high-frequency data to reflect rapid economic changes more accurately. The framework can be expanded to include country-specific and regional indicators, allowing more contextual analysis of economic freedom. Additionally, integrating social and environmental factors can help assess inclusive and sustainable growth. The index can also be applied at state, city, or sectoral levels to support targeted policy reforms and long-term economic planning.

APPENDIX:

DATA SET LINK:

<https://drive.google.com/file/d/1EBla1LtM3Ni2Uh3nekLB6>

FLASK FOLDER LINK

https://drive.google.com/drive/folders/1Uq5_xShFeSo9iMwPid146mbuR9csKk8x?usp=drive_link