PROJECT REPORT

1.INTRODUCTION:

1.1 Project Overview:

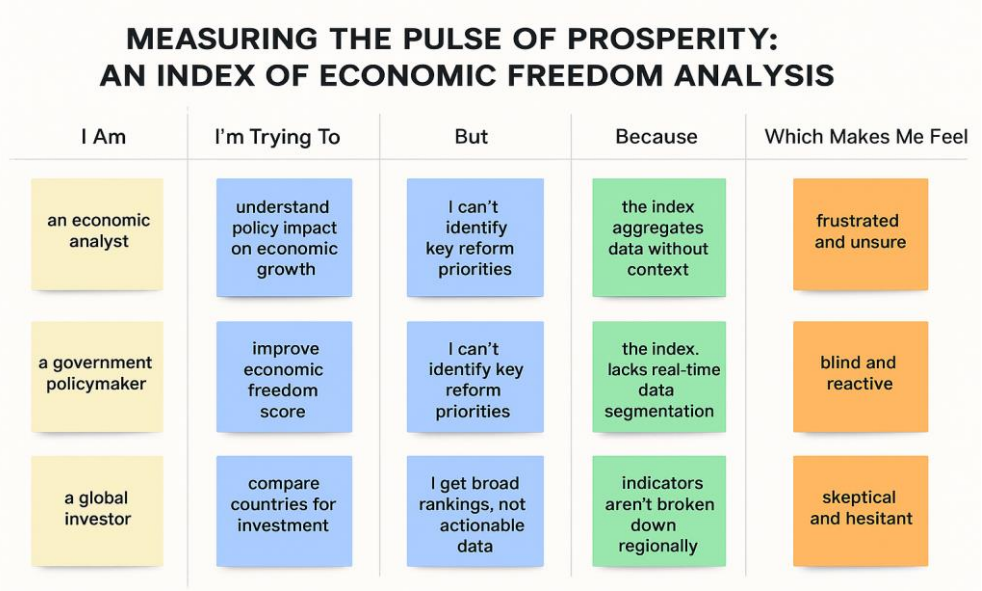
To evaluate and enhance how economic freedom indicators are used to measure and inform national prosperity, policy-making, and investment decisions. The project seeks to uncover data limitations, user pain points, and opportunities for improving economic insights through more contextual, real-time, and actionable information.

1.2 Project Purpose

The purpose of this project is to critically analyze and improve the effectiveness of economic freedom indices in reflecting true economic conditions and supporting informed decision-making. By addressing the current gaps in accessibility, granularity, and interpretability of data,

2.IDEATION PHASE:

2.1Problem statement:



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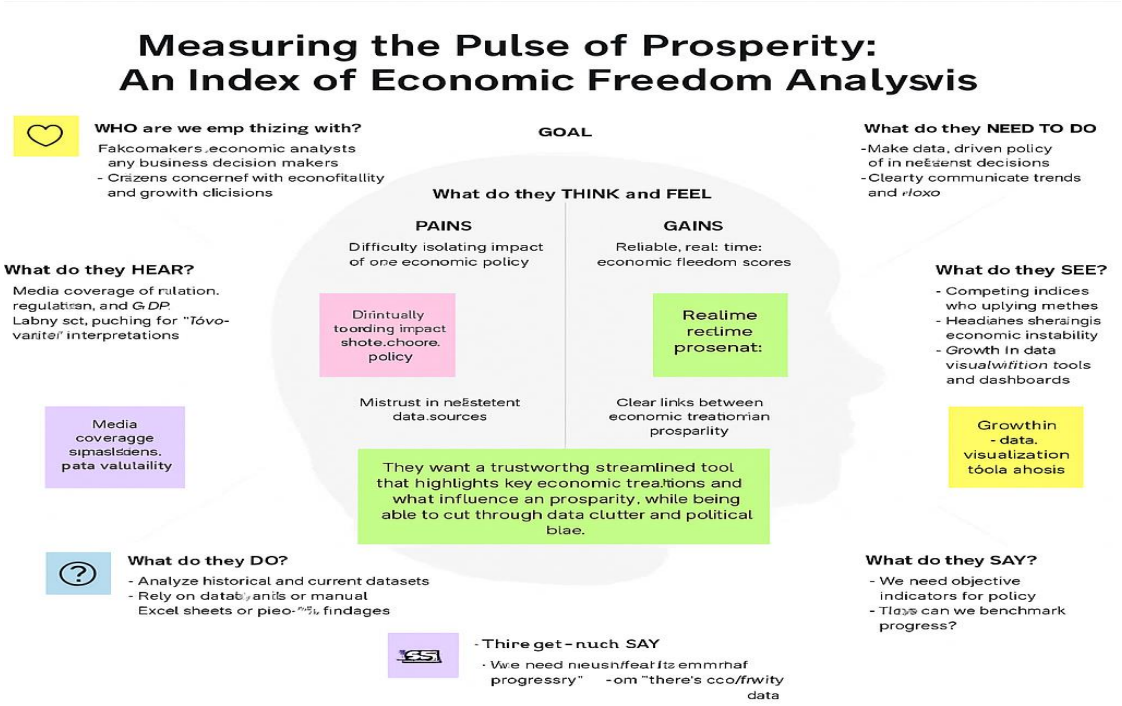
Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
Ps-1	An economic analyst	Understand policy Impact on economic growth	I cant identify key perform priorities	index Aggregates data With out content	Frustrated And unsure
PS-2	A government Policy maker	Improve economic freedom score	I cant identify key perform priorities	The index lacks Realtime data segmentation	Blind and reactive
PS-2	A global investor	Compare countries for investment	I get broad rankings not Actionable da	Indicators aren't Broken down regionally	Skeptical And hesitant

2.2

Empathy Map Canvas:



2.2 Brainstorming & Ideation:

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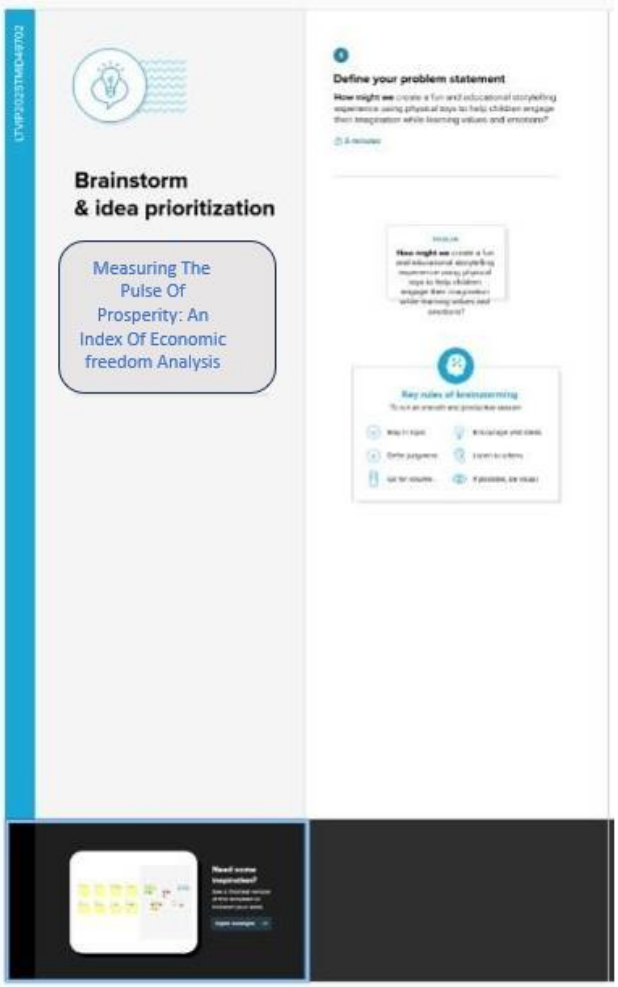

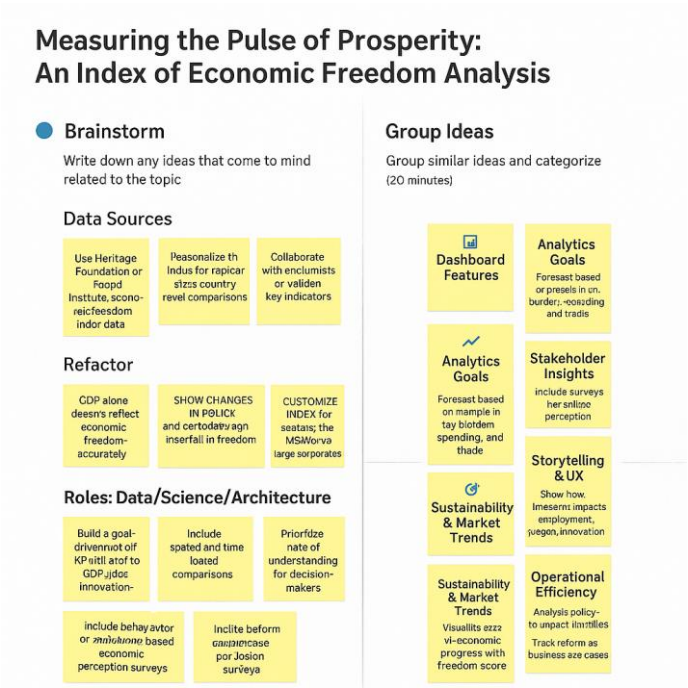

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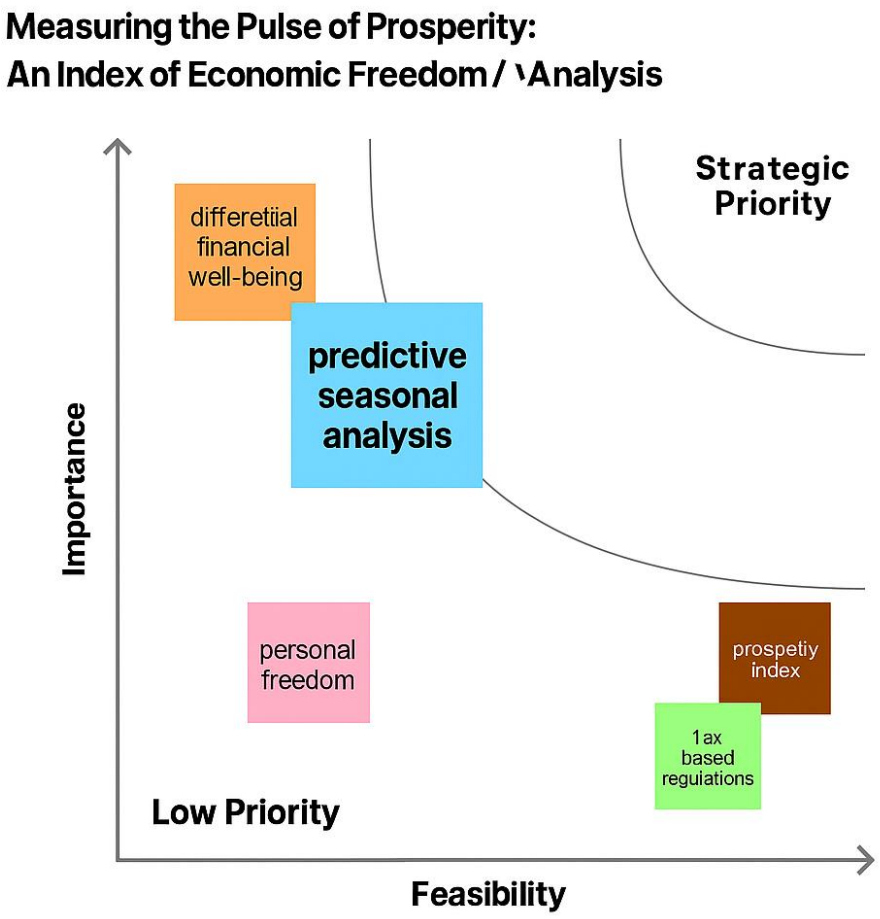

3.REQUIREMENT ANALYSIS:

3.1:Customer Journey Map:

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3.2:Solution Requirement:

Functional Requirements:

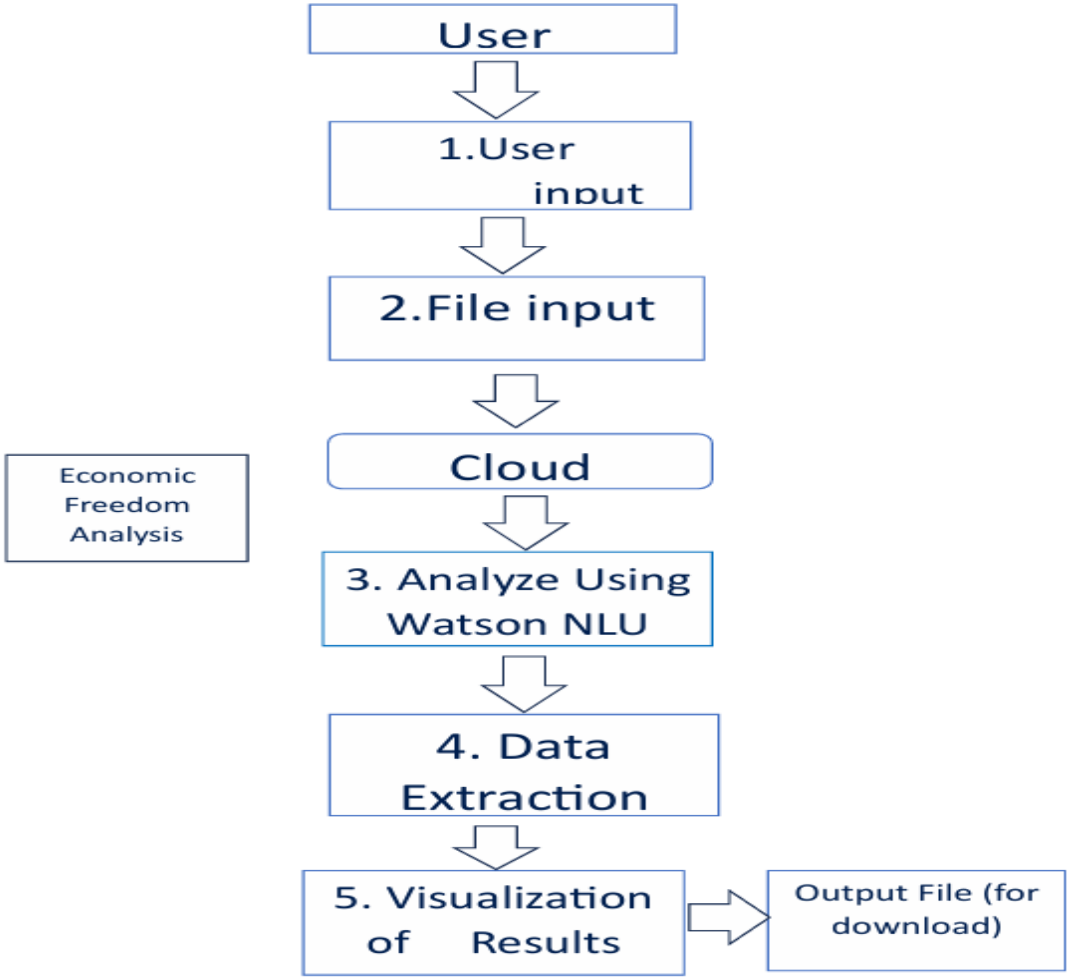
FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	• Registration through Form • Registration through Gmail • Registration through LinkedIn
FR-2	User Confirmation	• Confirmation via Email • Confirmation via OTP
FR-3	Economic Freedom Data Input	• Upload data via CSV/Excel • Manual entry via form
FR-4	Index Analysis	• Calculate economic freedom index • Generate visual analytics (charts/graphs) • Compare countries/regions

Non-Functional Requirements:

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The application should have a user-friendly and intuitive interface for data input and analysis.
NFR-2	**Security**	User data and uploaded files should be securely stored and transmitted using encryption (e.g.,HTTPS).

NFR-3	**Reliability**	The system should provide consistent and accurate results for index calculations and visualizations.
NFR-4	**Performance**	Index calculations and visual reports should load in under 5 seconds.
NFR-5	**Availability**	The system should be available 99.5% of the time with minimal downtime.
NFR-6	**Scalability**	The system should scale to support more users and increased data volumes as needed.

3.3:Data Flow Diagram:



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3.4:Technology stack:

component	Tool/technology	purpose
Data Collection	Kaggle, IMF, World Bank API, Heritage Foundation	Source of economic freedom indicators and metrics
Data Cleaning & Processing	Python (Pandas, NumPy), Jupyter Notebook	Data transformation, wrangling, null removal, and analysis.
Database	MySQL or PostgreSQL	Structured storage of cleaned datasets.
Visualization	Tableau / Power BI / Looker Studio	Interactive dashboards and visual representation.
Version Control	Git, GitHub	Collaborative code and data version tracking.
Deployment	Tableau Public GitHub Pages, or Heroku	For sharing dashboards and reports with stakeholders.

4.PROJECT DESIGN:

4.1:Problem Solution Fit:

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4.2:Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Analysts, researchers, and policymakers face difficulty understanding and comparing complex economic freedom indicators across countries due to scattered data and lack of dynamic visualization tools.

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2.	Idea / Solution description	Measuring the Pulse of Prosperity is a data driven solution that leverages Tableau dashboards to visualize and interpret real-time insights from economic freedom datasets. It provides interactive dashboards for comparing countries, tracking changes over time, and exploring factors like property rights, government integrity, and trade freedom—enabling informed decision-making.
3.	Novelty / Uniqueness	The solution integrates data from trusted global sources (e.g. Heritage Foundation, World Bank) and uses Python + MySQL + Tableau to produce visual narratives. Unlike generic index reports, it allows user-defined filtering, ranking, and geographic comparisons, providing a rich, interactive exploration of prosperity trends
4.	Social Impact / Customer Satisfaction	Helps policymakers, academics, and citizens understand and act on factors affecting economic prosperity. Drives transparency, encourages reforms, and supports equitable growth by simplifying access to complex data..
5.	Business Model (Revenue Model)	Freemium model: Provide free access to basic country-level dashboards for researchers and students. Offer a premium tier for institutions, policymakers, and think tanks that includes advanced analytics, downloadable reports, industry benchmarking, and forecast-based insights. Potential revenue through B2B partnerships with economic forums and policy agencies.
		partnerships with toy brands and analytics firms.
6.	Scalability of the Solution	The solution is easily adaptable to other indices such as Human Development Index, Corruption Perceptions Index, or Global Innovation Index. By modifying the data schema and reusing the dashboard framework, it can serve multiple domains. Future versions may include API integration, AI-based recommendations, and multilingual accessibility for broader global use.

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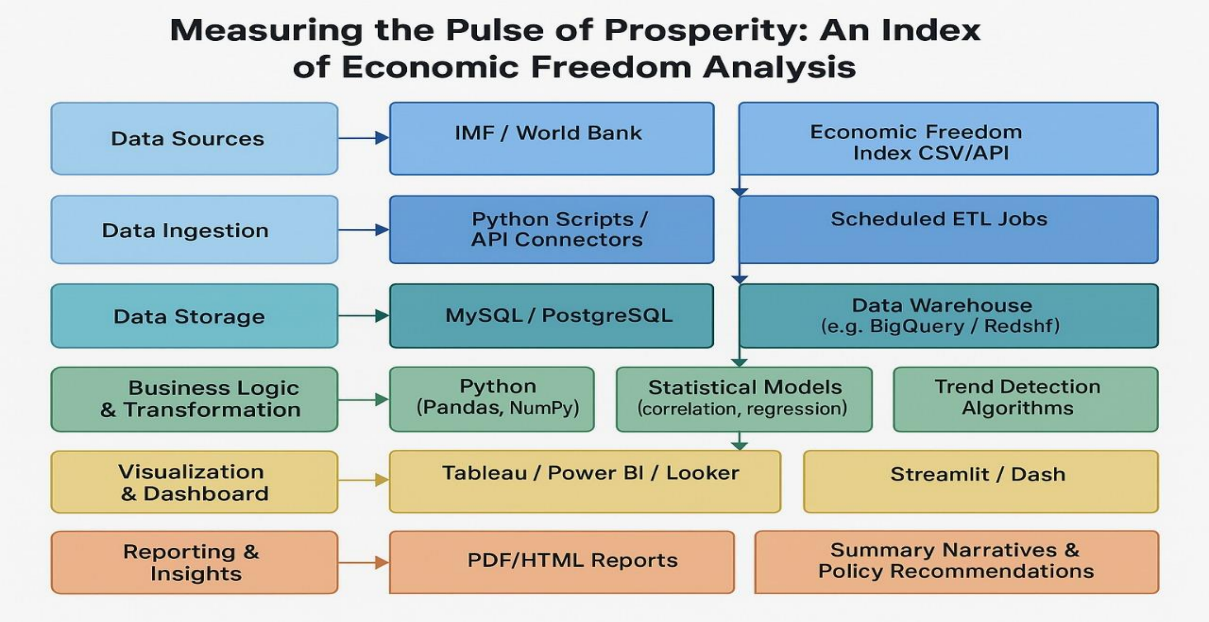
4.2:Solution Architecture:



5.PROJECT PLANNING&SCHEDULING:

5.1:Project Planning:

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Collection	USN-1	As a user, I can collect This dataset was taken from heritage.org '2022 Index of economic freedom' to start preprocessing.	2	High	ALL
Sprint-2	Data Cleaning	USN-2	As a user, I can clean and structure data using sql so that it's ready to be used in Tableau.	3	High	ALL
Sprint-3	Dashboard Design	USN-3	As a user, I can design process of creating graphical representations of data in order to help people understand and explore the information	4	Hiigh	ALL
Sprint-4	Story Buiding	USN-4	As a user, I can interact with data stories to understand trends and insights effectively.	3	Medium	ALL

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Sprint-5	Deployement	USN-5	As a user, I can publish the dashboards on Tableau Public for access by Measuring The Pulse Of Prosperity: An Index Of Economicfreedom Analysis	2	Medium	ALL

Sprint	**Total Story Points**	**Duration**	**Sprint Start Date**	**Sprint End Date (Planned)**	**Story Points Completed (as on Planned End Date)**	**Sprint Release Date (Actual)**
Sprint-1	20	2 Day	23 June 2025	24 June 2025	20	24 June 2025
Sprint-2	20	2 Day	25 June 2025	26 June 2025	20	26 June 2025
Sprint-3	20	2 Day	27 June 2025	28 June 2025	20	28 June 2025
Sprint-4	20	2 Day	29 July 2025	30 July 2025	20	30 July 2025
Sprint-5	20	2 Day	1 July 2025	2 July 2025	20	2 July 2025

6.FUNCTIONAL &PERFORMANCE TESTING:

S.No.	**Parameter**	**Screenshot / Values**
1.	Data Rendered	Economic Freedom Index data from 20202024across 150+ countries
2.	Data Preprocessing	Null values removed, categorical encoding of regions normalization of index values
3.	Utilization of Filters	Region, Year, Economic Category (e.g., Rule of Law, Market Openness)
4.	Calculation fields Used	Composite Index Score = Weighted average of pillar scores (e.g., (x1 + x2 + x3)/3)

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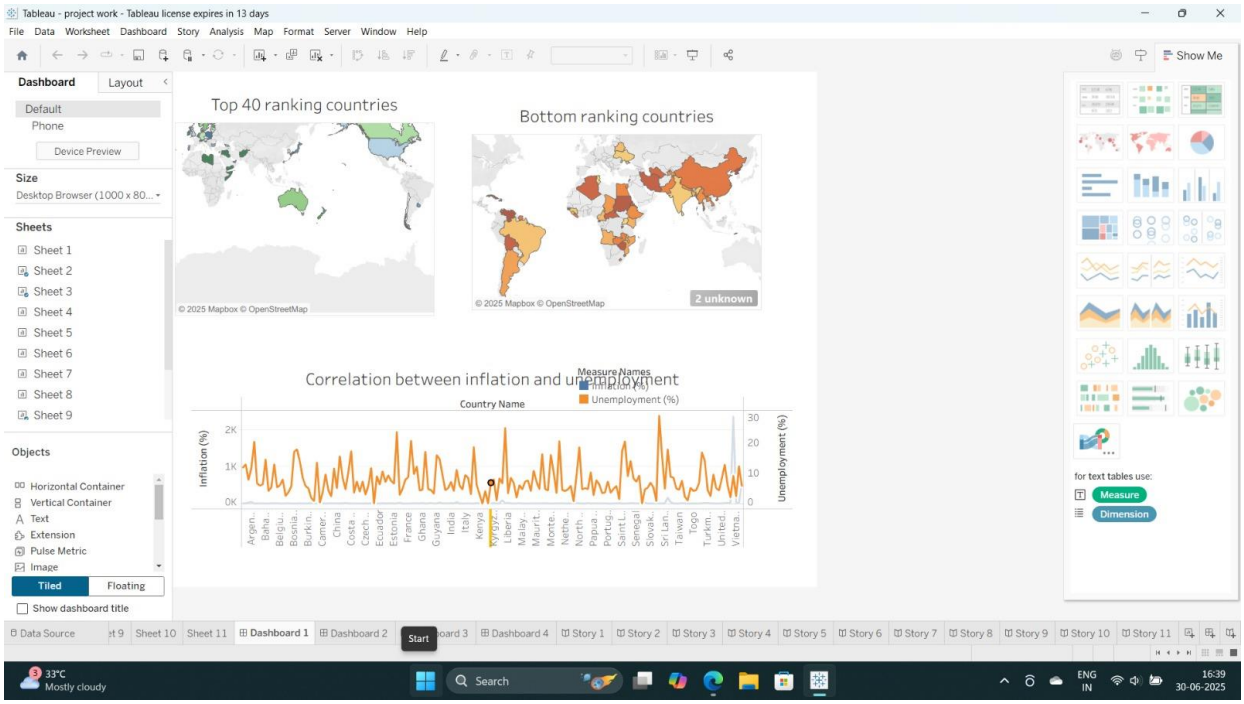
5.	Dashboard design	No. of Visualizations / Graphs – 6 (Line Chart, Bar Chart, Map View, Donut Chart)
6	Story Design	No. of Visualizations / Graphs – 4 (Narrative with insights across years & regions)

7.RESULTS:

7.1:Output Screenshots:



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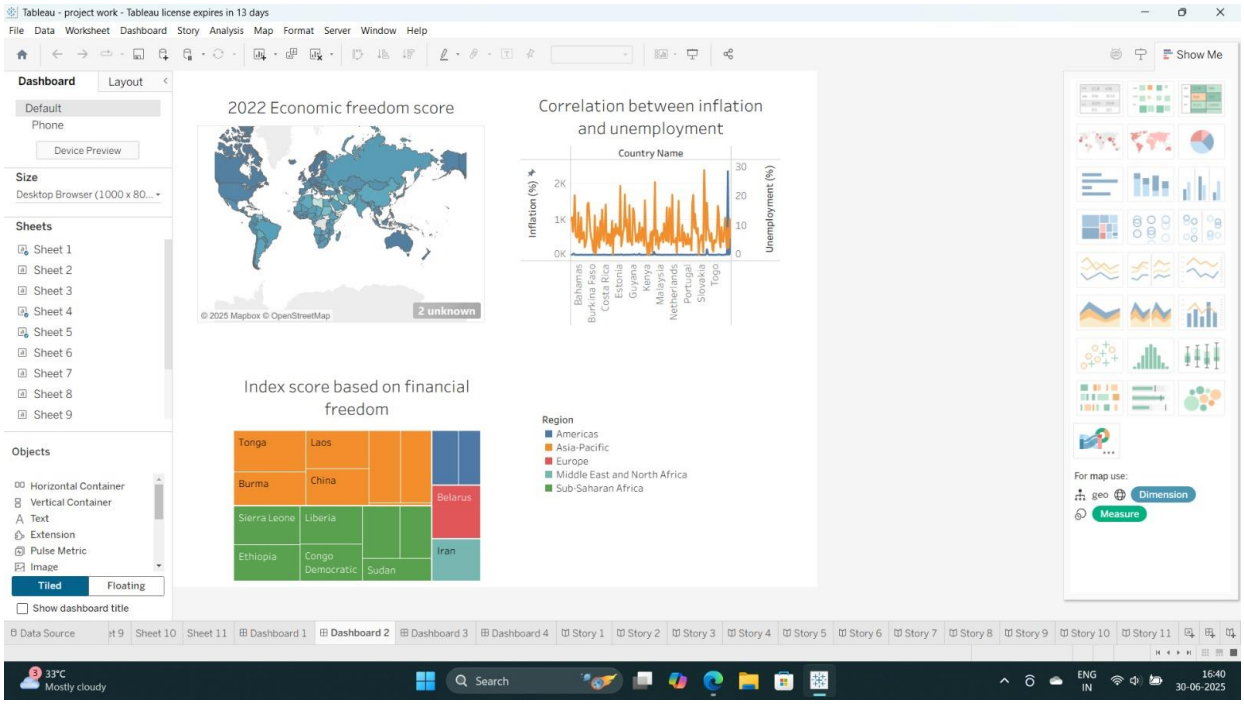

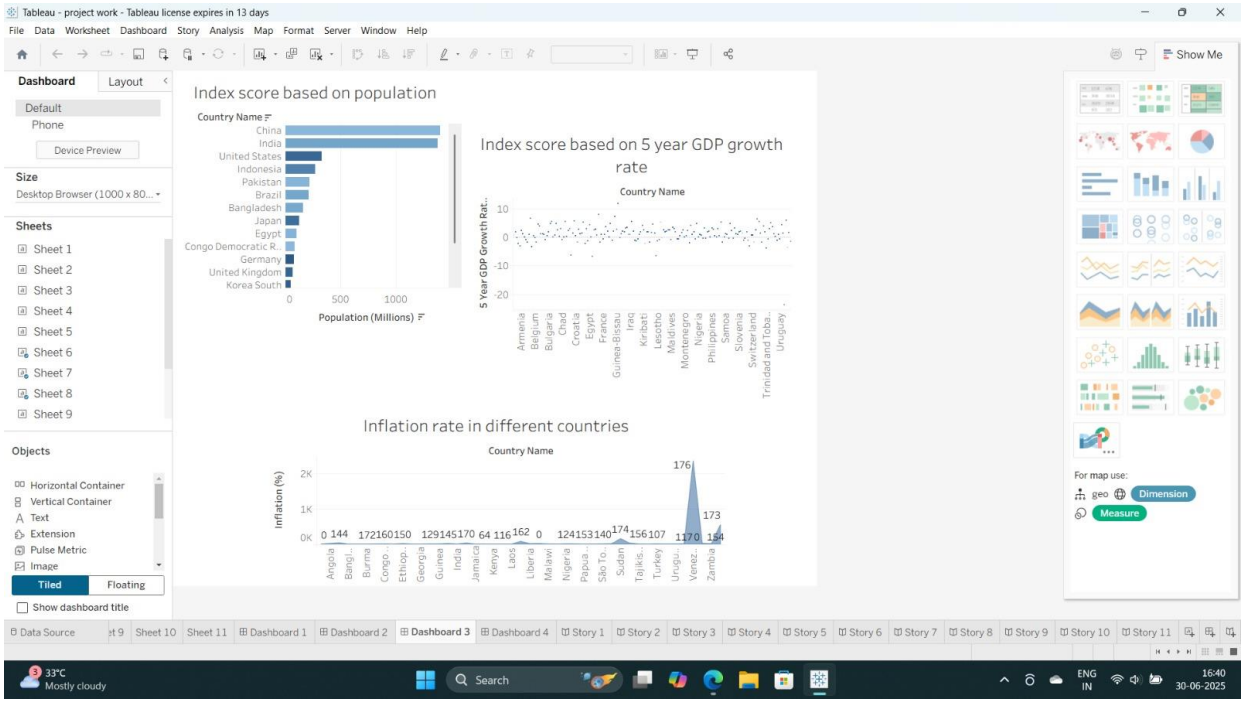

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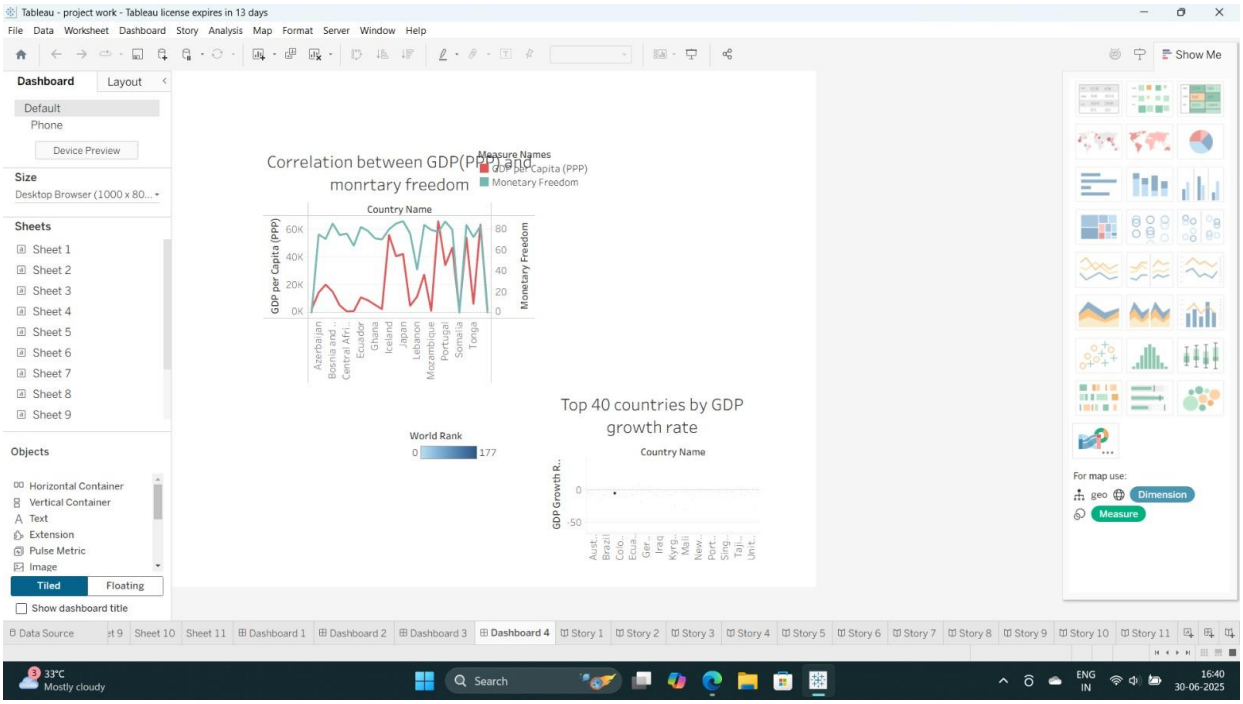

8.ADVANTAGES & DISADVANTAGES:

1. **Advantages Informed Policy-Making:**
   Enables governments to design more effective economic policies based on data-driven insights.
2. : **Investor Confidence**
   Helps investors assess the stability and growth potential of economies through transparent metrics.
3. **Benchmarking & Comparison:**
   Offers a standardized way to compare economic freedom across countries and over time.
4. **Early Trend Detection:**
   Real-time or updated data dashboards can reveal emerging patterns and risks earlier.
5. **Public Accountability:**
   Transparent economic indicators encourage better governance and reform efforts.

Disadvantages:

 Data Limitations:
Aggregated indices may oversimplify complex economic realities and mask regional disparities.
 Lag in Reporting:
Economic freedom scores are often based on outdated or annual data, limiting responsiveness.
 Lack of Context:
Rankings alone may not reflect unique national challenges, such as political instability or inequality.
 Overemphasis on Market Liberalism:
The index may favor deregulation and privatization, which might not suit all development models.
 Potential Misuse:
Governments or institutions may cherry-pick favorable data to support political agendas.

9.CONCLUSION:

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The analysis of *Measuring the Pulse of Prosperity — An Index of Economic Freedom* reveals that while economic freedom indices are valuable tools for assessing the policy environment and growth potential of nations, they are not without limitations. Current models often suffer from data lag, lack of regional context, and oversimplified rankings. To fully support policymakers, analysts, and investors, these indices must evolve to provide **more timely, granular, and interactive insights**. This project highlights the need to rethink how economic freedom is measured, interpreted, and applied in real-world economic strategies.

10.FUTURE SCOPE:

1. **Development of Interactive Dashboards**
    - Create dynamic, real-time tools to visualize economic freedom metrics by region, sector, and time period.
2. **Incorporation of Emerging Indicators**
    - Include digital economy, environmental sustainability, and social equity metrics in the index framework.
3. **Machine Learning & Predictive Analytics**
    - Use AI models to forecast economic freedom trends and identify early signals of reform or decline.
4. **Localized Economic Freedom Reports**
    - Produce city- or state-level insights to guide sub-national policy development.
5. **Public Participation & Feedback Loops**
    - Enable citizen and business input to validate or contextualize index data, making it more grounded.
6. **Global Collaboration & Standardization**
    - Work with international institutions to standardize and refine methodologies across different regions.

11.APPENDIX:

Dataset link: https://www.heritage.org/index/pages/all-country-scores