Project Scoping

Name

Analyzing Economic Trends in the European Union: A Comparative Study of GDP Growth, Unemployment, and Inflation (by André Jardim).

Business Problem

Policymakers responsible for economic planning and strategy within the European Union need to understand how key economic indicator, such as GDP growth, unemployment rate, and inflation, evolve across different EU countries. This is especially crucial when comparing Eurozone countries to non-Eurozone members. By examining these indicators, the project will provide insights to help policymakers refine economic strategies, promote economic stability, and allocate resources effectively across the EU. Additionally, the project will assess how Eurozone membership impacts these economic indicators, guiding decisions on fiscal policy, investment, and market integration.

Stakeholders

- **Primary Stakeholder:** EU policymakers and economic strategists.
- **Secondary Stakeholders:** Economic analysts, business leaders, government officials, and EU financial institutions.

Business Impact

By focusing on the needs of EU policymakers, this project will help:

- Inform decisions on fiscal policy, investment, and resource allocation.
- Offer insights on economic disparities within the EU, especially between Eurozone and non-Eurozone countries.
- Provide a clear understanding of how different countries' economies are performing, and how they interact with broader EU economic goals.

Dataset(s)

Source: World Bank – World Development Indicators (1960–2023)

Details: The dataset includes global economic, social, and environmental data across various indicators such as GDP, inflation, unemployment, and poverty rates for 200+ countries from 1960 to 2023. It contains multiple CSV files:

- **WDICSV (Main Indicator Data):** Time-series data for multiple indicators across countries and years.
- **WDICountry (Country Metadata):** Metadata for countries including region, income group, and country names.
- **WDISeries (Indicator Metadata):** Metadata for indicators such as name, measurement units, and frequency.
- **WDIcountry-series (Country-Indicator Link):** Mappings between countries and indicators.
- **WDIfootnote (Footnotes):** Additional notes for country-indicator-year combinations.
- **WDIseries-time (Time-Specific Indicator Descriptions):** Footnotes or descriptions for indicators over time.

Strengths: The dataset offers comprehensive and reliable data for over 200 countries, covering economic indicators from a global perspective. It enables cross-country and time-series analysis, with detailed

metadata on countries, indicators, and measurement units. This facilitates in-depth analysis of global economic trends and comparisons between countries of various income levels and regions.

Weaknesses: The data can contain missing or incomplete records for certain countries or years, especially for smaller or developing nations. There may also be discrepancies in reporting frequency across indicators, leading to inconsistent data over time. Additionally, some indicators may have gaps or missing values, which may require careful handling during analysis to ensure accuracy.

Key Metrics and Dimensions

Metrics:

- GDP Growth (annual %)
- Unemployment Rate (total % of labor force)
- Inflation Rate (consumer prices, annual %)
- Real GDP (for additional context on total economic output)

Dimensions:

- Country
- Year (2014-2023)
- Eurozone vs non-Eurozone
- Indicator (GDP Growth, Unemployment, Inflation)

Analytical Focus:

- Trends and relationships between GDP growth, unemployment, and inflation across different EU countries.
- Identifying the impact of Eurozone membership on economic performance.

Dashboard

Overview

The dashboard will focus on providing policymakers with insights into how economic conditions in the EU are evolving, comparing different regions (Eurozone vs non-Eurozone).

Visualizations:

- **Bar Chart:** Comparison of GDP growth by country (highlighting differences between Eurozone and non-Eurozone).
- **Map:** Unemployment rate distribution across EU countries.
- **Line Chart:** Trends in inflation rate across years.
- **Scorecards:** Average GDP growth, unemployment, and inflation rates by region (Eurozone vs non-Eurozone).

Milestones

- **Data Cleaning and Filtering:** Ensuring data consistency and focusing only on EU countries for the three key indicators.
- **Exploratory Data Analysis (EDA):** Visualizing trends and relationships between GDP growth, unemployment, and inflation.
- **Outlier Detection:** Identifying any outliers or data inconsistencies to ensure accurate analysis.
- **Dashboard Development:** Building a clean, interactive dashboard that allows for easy comparison across countries and years.

- **Final Report:** A clear and concise summary of insights for EU policymakers, focusing on trends, country comparisons, and the impact of Eurozone membership.

Timeline

Week	Tasks
Week 1	Data cleaning, filtering, and initial exploratory analysis (EDA). Outlier detection.
Week 2	Continue EDA and develop key visualizations. Begin building the dashboard.
Week 3	Finalize dashboard with interactive features. Begin drafting the final report.
Week 4	Complete final report with insights for EU policymakers and prepare presentation.