**Documentation & User Support**

**Approach & Optimization Strategy**

This dashboard was built to analyze and visualize key international economic indicators — GDP growth, inflation, unemployment, and government debt — across seven major economies from 2010 to 2024. The dataset was sourced from the IMF’s World Economic Outlook (WEO) and transformed in Power BI using Power Query. Unpivoting year columns, filtering key indicators, and structuring the data into a long format allowed for efficient modeling and DAX-based calculations.

A flat star-schema-like model was used for simplicity and performance, avoiding unnecessary relationships. Measures were created using DAX to calculate aggregated and time-sensitive insights like average GDP growth and debt change over time. Performance optimization was achieved by removing unnecessary metadata columns, keeping only essential fields, and pre-filtering the dataset to reduce visual load and ensure responsiveness.

**Challenges & Solutions**

The raw IMF data included a wide set of fields with non-standard column headers and missing values across some years. These were addressed in Power Query by first isolating relevant indicators and cleaning column names to ensure clarity and alignment with DAX logic. The unpivoting process initially created column mismatches due to improper headers, which were corrected by renaming columns before transformation.

Power BI’s visual-level filtering limitations for combo charts were resolved using explicit DAX measures to isolate GDP and inflation data, allowing clean separation of dual-axis chart inputs. Ensuring dynamic filtering based on country required the use of slicers and flexible DAX logic for real-time updates across visuals and KPIs.

**User Instructions (Technical & Non-Technical)**

This dashboard is interactive and designed for both analysts and policy stakeholders. Users can select a **country** using the slicer at the top of the report to instantly update all visuals. The **line and clustered column chart** show GDP growth (line) and inflation (bars) over time, using dual Y-axes for comparability. The **bar chart** compares unemployment and government debt for the latest year across countries.

**KPI cards** summarize key metrics: average GDP growth, latest inflation rate, and total change in government debt over the full period. Hover over charts for detailed tooltips. The slicers allow filtering by **Country** and **Year**, ensuring users can narrow insights quickly. If a **drill-through** page is implemented, right-click on a visual point (e.g., a year or country) and select “Drill-through” to explore detailed breakdowns and contextual data.

For new Power BI users: use the “Reset to default” button if visuals appear filtered unexpectedly. To export, use the top menu → “File” → “Export to PDF” or “Publish to Web” if enabled.