Power BI Dashboard Report: FAO Consumer Prices – India vs USA

Dataset Source: FAO - Consumer Prices Data (CP)

Currency: All prices are in USD.

Countries Analyzed: India and the United States of America

Years Covered: 1991–2023

Overview

This Power BI dashboard provides an analytical comparison of agricultural product prices across India and the USA. The primary objective is to evaluate volatility, trends, and price growth patterns over time to identify key insights that may influence food security, trade decisions, and economic planning.

1. Most Volatile Crop (India and USA)

Visual Type: Card Visualization

• India: The most volatile crop is Pepper (Piper spp.), raw.

• **USA**: The most volatile crop is *Coffee*, *green*.

Insight: These crops have experienced the highest price fluctuations over the years in their respective countries, indicating possible sensitivity to market or environmental factors.

2. Countries Donut Chart

Visual Type: Donut Chart

- Shows the selection between India and the United States of America.
- This acts as a slicer to dynamically update other visuals based on the selected country.

Insight: Enables country-level filtering for focused analysis.

3. Item and Year Filters

Visual Type: Slicers

• Item Filter: Allows users to select a specific crop for analysis.

• **Year Filter**: A slider to restrict the data between selected years.

Insight: Useful for drilling down into specific time periods or items of interest.

4. Data Table: Crop Price Summary (USA shown)

Visual Type: Table

Columns:

Item: Name of the agricultural product.

Area: Country (e.g., United States of America).

• FirstPrice: Price in the first available year.

LastPrice: Most recent price.

PriceChange: Absolute price change.

PricePercentChange: Percentage price growth over the selected period.

Insight: Shows long-term price movements across different crops. For example, *Coffee, green* has a price growth of 1014.31%, the highest among the listed items.

5. Line Chart: Production Price Change Over Years

Visual Type: Line Chart

• **Y-axis**: Average of production price (USD).

• X-axis: Year (from 1991 to 2023).

Series: India vs United States of America

Insight: The USA has consistently higher average production prices compared to India, with a steep increase post-2010. India's prices are flatter, suggesting either stable costs or government interventions.

6. Bar Chart: Price Growth (%) by Item and Area (USA)

Visual Type: Bar Chart

- Highlights the top agricultural products in the USA based on percentage price growth.
- Coffee, green and String beans show the highest growth rates.

Insight: Useful for identifying fast-growing or inflation-prone items in the U.S. food market.

7. Bar Chart: Price Growth (%) by Item and Area (India)

Visual Type: Bar Chart

- Displays crops in India with the highest price growth.
- Rice and Soya beans lead the chart.

Insight: Indicates which crops have become more valuable over time in India.

Strategic Observations

- **Price Volatility**: Products like coffee and pepper show significant volatility, suggesting sensitivity to climate, supply chains, or global trade.
- **Growth Trends**: The U.S. market sees more dramatic increases in certain food prices, likely reflecting differences in production, labor, and demand.
- **Comparative Pricing**: India's agricultural products generally remain cheaper, but some show rapid growth, hinting at changing domestic demand or reduced subsidies.