

## 1. Introduction

This interactive dashboard was created using Power BI Desktop to analyze sales data across multiple countries and different time periods. The purpose of this work is to provide a comprehensive overview of the organization's performance in terms of total sales, average order value, sales distribution by countries, product types, and years, using clear visual indicators and tools to assist in making strategic decisions.

## 2. Objectives of the Dashboard

- Analyze Total Sales globally.
- Identify the best-selling product types.
- Study sales trends over the years.
- Measure average order value and profit margin.
- Represent the geographical spread of sales through an interactive map.

## 3. Dashboard Components

### 3.1 Key Performance Indicators (KPI Cards)

- Sum of Sales: Represents total sales amounting to 1.70 billion, the main indicator of overall performance.
- Count of avg\_order\_value: The number of average order values is 48, reflecting the number of segments or periods studied.

### 3.2 Line Chart

- Title: Total Sales by Year
- Illustrates the evolution of total sales over the years (from approximately 2010 to .(2016
- Allows observation of periods with increased or decreased commercial performance.

### 3.3 Bar Chart

- Title: Total Sales by Item Type
- Shows the best-selling product types, with Office Supplies leading followed by Household and Cosmetics.
- This analysis helps identify the most in-demand products and improve marketing and production decisions.

### 3.4 Map Visualization

- Each point represents a country participating in the data, with point size indicating sales value.
- Enables users to identify the most active markets and regions with high profits.
- Locations such as Japan, Albania, Andorra, and others are included in the geographical distribution.

### 3.5 Table Visualization

- Displays detailed data for each country including:
  - total\_sales
  - avg\_order\_value
  - profit\_margin
  - segment and year

- Example results for Albania and Andorra are provided.

### 3.6 Interactive Filters

- Filters for years (2014 ,2013 ,2012) and product types are included.
- These filters allow users to quickly filter data by time period or product type, increasing user interaction with the dashboard.

## 4. Data Sources

- A main table named country\_segments is used, containing fields such as total\_sales, avg\_order\_value, profit\_margin, segment, Japan, and year.
- Other metrics like totalRevenue, totalProfit, unitCost, and unitPrice can be used in future analyses.

## 5. Analysis Summary

- The years between 2012 and 2014 saw significant differences in sales with a stable overall trend.
- The most profitable product types are those related to office and household supplies.
- Geographical distribution shows a significant concentration of sales in Europe and Asia.
- Profit margins are similar across countries, indicating a relatively uniform pricing policy.

## 6. Conclusion

The dashboard has proven its effectiveness in simplifying the presentation of business data and facilitating visual analysis. Through this work, it is now possible to track performance across years,

countries, and products interactively and in an easily understandable manner. In the future, the dashboard can be expanded to include other indicators such as unit cost, net revenue, and expected sales using forecasting models.

The Power BI dashboard provides a comprehensive overview of sales performance across years, countries, and product categories. The line chart shows that **2011 and 2013** recorded the highest sales figures, indicating strong business activity during those periods, while **2016** experienced a noticeable decline, possibly due to economic factors or market shifts. The bar chart of product types highlights that **Office Supplies** were the top-selling category, followed by **Household** and **Cosmetics** items, reflecting consumer preferences and effective marketing strategies. The interactive map reveals that **Europe and Asia** were the most profitable regions, with significant sales concentrations in countries such as **Japan, Albania, and Andorra**, whereas smaller markets showed lower performance levels. The detailed table also indicates that the **profit margin** remained relatively stable among countries (around 0.25 to 0.35), suggesting consistent pricing policies and balanced profitability. Overall, sales performance remained solid and steady in most years, with opportunities for improvement in weaker periods and for strengthening high-demand product lines to ensure sustainable growth in future years.