📊 Project Report: Amazon Global Sales Dashboard

1. Introduction

The Amazon Global Sales Dashboard is a Power BI visualization designed to analyze sales performance, product profitability, and market trends from 2012 to 2015. This dashboard enables data-driven decision-making by providing insights into sales revenue, product performance, and customer segmentation across different regions.

---

2. Objectives

- Analyze year-wise sales trends from 2012 to 2015.

- Evaluate sales performance across different regions and segments.

- Identify top-performing and least-performing products based on profitability.

- Assess customer profitability by analyzing contributions to revenue.

- Provide interactive and dynamic insights for business decision-making.

---

3. Data Source & Methodology

- The dataset used in this analysis includes Amazon sales records spanning four years.

- Power BI was utilized for data transformation, visualization, and interactive reporting.

- KPIs (Key Performance Indicators) were defined to track overall sales trends.

---

4. Data Cleaning Process Using Power Query in Power BI

Data cleaning is crucial to ensure accurate analysis. The following steps were performed using Power Query in Power BI:

◆ **Step 1: Importing Data**

- Data was imported from Excel/CSV files into Power BI.

- Power Query Editor was opened to perform transformations.

◆ **Step 2: Handling Missing Values**

- Checked for null or missing values using the "Column Profile" feature.

- Replaced missing sales and profit values with zero to maintain data integrity.

◆ **Step 3: Removing Duplicates**

- Identified and removed duplicate sales records using the "Remove Duplicates" function.

- ◆ **Step 4: Standardizing Date Formats**

  - Converted date columns to the correct format (YYYY-MM-DD) to enable time-based analysis.

- ◆ **Step 5: Splitting & Merging Columns**

  - Split customer name into First Name and Last Name for better segmentation.

  - Merged city and country columns to create a location hierarchy.

- ◆ **Step 6: Creating Custom Columns**

  - Added a Profit Margin column:

  - Profit Margin = (Profit / Sales) * 100

  - Created a Sales Category column to classify products as "High," "Medium," or "Low" based on revenue.

- ◆ **Step 7: Data Type Corrections**

  - Ensured numerical columns (Sales, Profit, Quantity) had the correct data types.

- ◆ **Step 8: Removing Unnecessary Columns**

  - Removed irrelevant columns (e.g., supplier details) to optimize dataset size.

Once the data cleaning process was completed, the transformed dataset was loaded into Power BI for visualization.

---

5. Key Insights & Analysis

- ◆ **Sales Overview**

  - Total Sales Projection: $4.30M

  - Total Product Units Sold: 3,418

  - Key Performance Indicator (KPI): 61K

  - Total Returns: 1,079

- ◆ **Sales by Segment**

  - Sales were classified into Consumer, Corporate, and Home Office categories.

  - Consumer segment contributed the highest revenue.

◆ **Sales by Market**

- The dashboard provides insights into sales across Asia Pacific, Europe, USCA, LATAM, and Africa.

- USCA and Europe showed the highest sales contributions.

◆ **Top & Bottom Performing Products**

- **Top 5 Profitable Products:**

    o Canon imageCLASS Printer generated the highest profit (~$20K).

    o Other top-performing products included Cisco and Motorola Smart Phones.

- **Bottom 5 Profitable Products:**

    o Bevis Computer Table recorded the lowest profit (~ -$4K).

    o Other low-performing products included Lexmark MX611dh Printer.

◆ **Profit by Customer Name**

- Raymond Buch was the most profitable customer, followed by Jane Waco and Tom Ashbrook.

◆ **Year-Wise Sales Comparison (2012-2015)**

- Sales increased significantly from 2012 to 2015, indicating business growth.

---

6. Business Benefits & Applications

- 📌 Decision-Making Support: Helps managers and stakeholders make data-driven sales and inventory decisions.

- 📌 Sales Forecasting: Historical sales trends help predict future revenue growth.

- 📌 Customer Insights: Identifies high-value customers for personalized marketing.

- 📌 Product Strategy: Helps businesses focus on profitable products and improve underperforming ones.

- 📌 Regional Sales Strategy: Optimizes sales efforts in high-performing markets.

---

7. Conclusion

The Amazon Global Sales Dashboard is a powerful business intelligence tool that enables real-time monitoring of sales performance, customer profitability, and product trends. By leveraging Power BI's interactive features, businesses can optimize strategies to increase revenue, improve customer retention, and enhance profitability.