

## **DATA ANALYSIS DASHBOARD PROJECT: SALES PERFORMANCE ANALYSIS**

**Project Title:** “Sales Performance Analysis: Sales by Region, Channel, and Salesperson”

## Objectives:

The Sales Performance Dashboard aims to highlight top contributors by using clustered column charts to compare total sales values across regions (e.g., Europe: \$1.30M), channels (e.g., Direct Sales: \$1.96M), and top salespeople. It visualizes monthly sales trends via a line chart to reveal patterns, such as peaks in May and October, and uses pie charts to show sales distribution (e.g., Europe: 24.1%). The dashboard consolidates insights for quick decision-making, supports recommendations like boosting the online channel, ensures interactivity with Pivot Table-based charts, and fulfills project visualization requirements for submission.

## Data Overview:

The Dataset contains the following columns:

- **Sales\_id**: Unique identifier for each transaction (e.g., 1, 2 ...).
- **Sales value**: Transaction amount in dollars (e.g., 8351.96).
- **Sales date**: Date of the sale (e.g., 10/6/2021).
- **Sales region**: Geographic region (e.g., Africa, Asia, Europe, North America, South America).
- **Sales channel**: Sales method (e.g., Direct sales, Distributor, In-store, Online).
- **salesperson\_id**: Unique identifier for the salesperson (e.g., 1, 2).
- **Sales quantity**: Number of units sold (e.g., 453).

## Project Tasks:

I analyzed the dataset and created an interactive Excel dashboard. The project is divided into the following steps:

### Step 1: Data Transformation

- Begin by ensuring that the raw data is in a usable format for analysis.
- Format the 'sales\_date' field into a proper date format so that Excel can handle it in calculations and analysis. Verify that 'sales\_value' and 'sales\_quantity' are numeric.
- Use Excel's \*VALUE () function to convert any improperly formatted data.
- Identify any missing or invalid data entries and handle them by filling them in or removing the affected rows.
- Ensure that your data is clean and structured in a way that allows for efficient analysis.

### Step 2: Statistical Analysis

- **Total Sales Value**: Sum the values in the 'sales\_value' column to get the overall sales revenue.
- **Average Sales Value**: Calculate the average sales amount to understand the typical value of a sale.

- Total Quantity Sold: Sum the 'sales\_quantity' column to understand how many products were sold in total.
- Average Quantity Sold: Calculate the average quantity sold to see typical sales volume per transaction.

### Step 3: Data Analysis

**Objective:** Perform granular analysis to identify trends and top performers.

- Sales by Region: Group the data by 'sales\_region' and calculate the total sales value and quantity sold for each region.
- Sales by Channel: Group by 'sales\_channel' (e.g., Direct Sales, Distributor) to see how each sales channel is performing.
- Sales by Salesperson: Evaluate the performance of individual salespeople by grouping the data by 'salesperson\_id' and calculating total sales and quantities sold per salesperson.

This analysis will help you understand which regions, channels, and salespeople are the most successful, and where there might be room for improvement.

### Step 4: Data Visualization (Dashboard)

**Objective:** Create a dashboard to visualize insights and highlight top contributors.

- Bar Charts: Use bar charts to compare total sales values by region, sales channel, and salesperson. This will help highlight the biggest contributors to sales.
- Trend Charts: Plot the data over time to identify trends, such as rising or falling sales in certain periods.
- Pie Charts: Use pie charts to show how sales are distributed by channel or region, helping to visualize the market share and areas of focus.

### Step 5: Conclusion

#### ☐ Total Sales Performance:

- **Total Sales Value:** \$5,038,148.02
- **Average Sales Value per Transaction:** \$5,038.15
- **Total Quantity Sold:** 483,300 units
- **Average Quantity Sold per Transaction:** 483.3 units

☐

#### **I. Highlight the top-performing regions, sales channels, and salespeople.**

- **North America:** Generated the highest total sales value at \$1080783.89 (22% of total sales), driven by a high volume of transactions (301) and strong performance in the Distributor and Direct Sales channels.
- **Top-Performing Sales Channels:**  
**In-store:** The most effective channel, contributing \$1306267.82 (37.0% of total sales) with 360 transactions
- **Top-Performing Salespeople:**  
**Salesperson ID 52 (Cristabel Stute):** Highest sales value at \$9,929.79 (single transaction, Africa, Direct Sales).

## II. Trends and Areas for Attention:

- **Underperforming Region - Asia:** Asia's low contribution (4.8% of total sales) suggests untapped potential, possibly due to fewer transactions (45) and limited market penetration. The average sales value in Asia (\$5,409.86) is high, indicating that increasing transaction volume could significantly boost performance.
- **Distributor Channel Underperformance:** The Distributor channel has the lowest sales contribution (15.2%) and the lowest average sales value (\$4,401.27). This may indicate inefficiencies in distributor relationships or pricing strategies.
- **High Variability in Salesperson Performance:** While top performers achieve sales values close to \$10,000, many transactions are below \$1,000 (e.g., Salesperson ID 203, Doll MacSkeagan, with \$7.51). This suggests inconsistent training or incentive structures.
- **Customer Country Discrepancy:** A significant number of customers are based in China (241 transactions), yet Asia's sales are low. This could indicate that sales in Asia are driven by international customers rather than local demand.

## III. Data-Driven Recommendation

Based on the analysis, the following recommendations are proposed to optimize sales performance:

### ☐ Expand Operations in Asia:

- a. **Action:** Invest in market research and local partnerships to increase transaction volume in Asia. Leverage the high average sales value by targeting more local customers.
- b. **Rationale:** Asia's low sales contribution (4.8%) contrasts with its high average sales value, indicating significant growth potential.

### ☐ Strengthen Distributor Channel:

- a. **Action:** Review distributor contracts, offer performance-based incentives, and provide training to improve sales efficiency.

- b. **Rationale:** The Distributor channel's low average sales value (\$4,401.27) and contribution (15.2%) suggest inefficiencies that could be addressed to boost performance.

#### **Enhance Salesperson Training and Incentives:**

- a. **Action:** Implement targeted training programs for underperforming salespeople and introduce tiered incentives for high-value deals.
- b. **Rationale:** The wide gap between top performers (e.g., \$9,929.79) and low performers (e.g., \$7.51) indicates inconsistent sales skills or motivation.

#### **Investigate Customer Country Trends:**

- a. **Action:** Analyze why many customers are based in China, but Asia's sales are low. Develop targeted campaigns for local Asian markets.
- b. **Rationale:** The discrepancy suggests missed opportunities in Asia's local market, which could be addressed with tailored marketing.

