

## Report

The initial dataset didn't indicate any useful information that would be helpful in decision-making, the dataset was just a random excel coffee orders dataset. In this case, I had to ask questions that could help extract and explore information that would help decision-makers improve and evaluate performance.

But before that, I did some operations in the data to help me to analyse it accurately:

1. Explore and understand the dataset: I explored the dataset in order to gain insights into its structure, variables, and potential relationships. This involved examining data distributions, identifying missing values, and understanding the range of values for each variable.
2. Data cleaning: excel functions were employed to populate the missing customer and product information in the dataset. Using two excel sheets: customer and product and functions like VLOOKUP to gather customer info and INDEX MATCH to gather product info, hence INDEX MATCH is more dynamic formula.
3. Data formatting: Used IF functions to expand abbreviated Coffee Types and Roast Types, formatted Date, Size, Unit Price and Sales columns for better readability and removed all duplicates.
4. Data organization: converted range into a table for preparation to facilitate PIVOT TABLES AND PIVOT CHARTS analysis.

After exploring and understanding the dataset, the following key questions were formulated to guide the analysis:

1. Yearly Total Sales Trends by Coffee Types: Investigate sales evolution and patterns, identifying outliers and underlying causes.
2. Total Sale Price Comparison Across Different Countries: Compare sale prices across three countries to reveal spatial variations.
3. Customer Loyalty Trends: Identify the top 5 customers in terms of sales to understand loyalty trends.
4. Average Sale Price Comparison Across Roast Types: Analyse average sale prices across various roast types for insights into consumer preferences.

### Visualization

In my Excel dashboard, I've crafted various visualizations to extract and communicate general insights from my analysis:

1. Total Sales per Coffee Type Over Time: This dynamic line graph provides a concise overview of sales trends across various coffee types over time, facilitating a deeper understanding of market dynamics.
2. Total Sales by Country: Presented as a bar graph, this visualization highlights the contribution of each country to our overall coffee sales, offering valuable insights into regional market performance and potential growth opportunities.
3. Top 5 Customers: Displayed as a column graph, this visualization highlights the top five customers who have demonstrated unwavering loyalty to our business.
4. Average Sales by Roast Type: Utilizing a pie chart format, this visualization offers a comprehensive overview of average sales across different roast types, enabling us to identify emerging market trends and refine product offerings to meet consumer demand.

**Interactive Filters:** To enhance usability, the dashboard features interactive filters for country, size, loyalty card, quantity. These filters empower customizations of analysis based on specific criteria of interest, ensuring extraction of actionable insights.

## **Conclusion**

In summary, what began as a seemingly ordinary dataset of coffee orders evolved into a rich source of insights through meticulous exploration and analysis. By leveraging Excel functions for data cleaning, formatting, and organization, we unearthed valuable trends and patterns crucial for decision-making.

From uncovering sales trends by coffee type to identifying top customers and comparing prices across countries and roast types, our analysis provided actionable insights to drive performance and strategy. Through visually compelling dashboards and interactive filters, we empowered stakeholders with the tools needed for customized analysis and informed decision-making.