Coffee Orders Data Analysis Report (2019-2022)

1. Introduction

This project involves analyzing coffee order data between 2019 and 2022 to extract meaningful insights regarding sales, customer behavior, and product preferences. Using Excel's advanced features such as XLOOKUP, nested IF statements, Pivot Tables, and various data visualizations, the analysis provides a comprehensive view of the company's sales performance.

2. Data Collection and Preparation

Data Source

The data was divided into multiple sheets within an Excel workbook, including:

- Orders

- Customers

- Products

- Total Sales

- Top 5 Customers

- Country-specific sales

Each of these datasets was combined and cleaned to create a cohesive and structured dataset for analysis.

Key Data Gathered:

1. Customer Name, Email, and Country: XLOOKUP was used to extract this information from the customers' sheet, helping identify customer behavior patterns.

2. Coffee Type, Roast Type, and Size: Using XLOOKUP, coffee-specific details were brought in from the products sheet.

3. Unit Price: The unit price for each coffee product was linked using XLOOKUP.

Calculated Fields:

1. Sales Calculation: The formula Quantity * Unit Price was applied to calculate total sales for each transaction.

2. Full Forms for Coffee Type and Roast Type: Nested IF statements were utilized to transform short product codes into full descriptive names, enhancing readability.

3. Date Formatting: The dates were formatted to dd/mm/yyyy to maintain consistency and enable effective time-series analysis.

4. Size Formatting: Product sizes were converted to a custom format, representing them in kilograms (kg) with one decimal place.

5. Currency Formatting: Unit price and sales columns were formatted to display values in USD ($).

Duplicate Removal:

A data cleaning process was performed to eliminate any duplicate entries, ensuring the integrity of the data.

3. Pivot Tables and Data Analysis

Sales of Different Coffee Types (2019-2022)

A Pivot Table was created to examine total sales across different coffee types over the 4-year period. This analysis helps identify trends in product popularity and revenue contribution.

Insight: Certain coffee types showed significant year-over-year growth, while others remained stable. Seasonal trends in sales were also identified, correlating specific coffee types with holiday promotions and events.

Top 5 Customers

This Pivot Table ranks customers based on their total spending, providing insight into the company's most valuable customers.

Insight: These top customers contributed to a significant percentage of overall revenue, highlighting the importance of customer retention strategies.

Sales by Country

A Pivot Table was used to aggregate sales data across three countries. This analysis helps in understanding market dynamics in different regions.

Insight: One country led in total sales, while others showed potential for growth. This could indicate market saturation in certain regions, requiring different marketing approaches.

4. Data Visualizations

Line Chart for Total Sales by Coffee Types (2019-2022)

A line chart was used to visualize the total sales of different coffee types over the four-year period. Distinct colors were assigned to each coffee type to differentiate trends.

Insight: The visual shows how certain coffee types experienced spikes in sales during specific periods, helping understand product performance.

Horizontal Bar Chart for Top 5 Customers

A horizontal bar chart was used to display the top 5 customers and their total spending. This type of chart provides a clear comparison of high-value customers.

Insight: It highlights the distribution of sales among the top customers, making it easy to identify key contributors to revenue.

Horizontal Bar Chart for Sales by Country

A horizontal bar chart was used to visualize the sales in all three countries, allowing for a quick

comparison of market performance across regions.

Insight: The bar chart helped compare the relative sales volume in each country and pinpoint areas for potential growth or investment.

5. Interactive Dashboard

An interactive dashboard was created, providing a dynamic and user-friendly interface for exploring sales data. The dashboard contains the following elements:

Slicers:

- Roast Type Name: Allows filtering by different roast types (light, medium, dark).

- Size: Filters sales based on coffee size (measured in kilograms).

- Loyalty Card Holders: Filters data based on whether the customer holds a loyalty card, helping assess the effectiveness of loyalty programs.

Timeline Filter:

A timeline slicer was added to filter sales data by time (2019-2022). This enables easy exploration of sales performance over specific periods, such as seasonal campaigns or specific years.

6. Recommendations and Key Insights

Customer Behavior:

The top 5 customers contribute a significant portion of sales. Focusing on these high-value customers through personalized promotions or loyalty programs could further enhance customer retention and increase revenue.

Market Opportunities:

Country-level analysis suggests that certain markets (countries) are underperforming compared to

others. The company could invest in marketing or promotions in these regions to grow sales.

Product Strategy:

The sales of different coffee types revealed specific seasonal patterns. Introducing seasonal promotions or product bundles during high-sales periods can maximize revenue.

Loyalty Program Effectiveness:

Slicers that filter for loyalty card holders can be used to measure the effectiveness of the loyalty program. If these customers are significantly more valuable, expanding the program could boost long-term growth.

Forecasting Sales Trends:

Analyzing historical sales trends of different coffee types could help forecast future demand. This information can be used for inventory management and promotional planning.

7. Conclusion

The coffee order data analysis for the period 2019-2022 highlights several important trends and areas for business growth. From identifying top-performing products to recognizing valuable customer segments, the data-driven insights offer a clear roadmap for strategic decision-making. The creation of an interactive dashboard provides an accessible way for stakeholders to explore sales data, with features like slicers and timeline filters enabling detailed exploration of key metrics.

Key Takeaways:

- High-value customers play a pivotal role in total revenue. Strategies aimed at nurturing relationships with these customers will be key to maintaining strong sales figures.

- Country-level analysis shows potential for market expansion in certain regions. Targeted marketing

efforts could increase sales in underperforming areas.

- Seasonal sales trends for different coffee types suggest opportunities to leverage seasonal promotions or limited-time offers, driving up revenue during peak periods.

- Loyalty programs appear to have a positive impact on customer retention and sales. Expanding the reach of this program may further boost overall sales performance.

By continuing to monitor and act on the findings in this report, the company can optimize its sales strategies and achieve sustainable growth in the future.