**COFFEE SALES ANALYSIS**

**Executive Summary**

The coffee shop sales analysis focuses on understanding the demographic trends in sales, particularly the significant differences between male and female customers. The analysis identifies the top-selling coffee products, their pricing, the most popular coffee ingredients, and the sales distribution among different geographical locations managed by top-performing managers. By examining these key factors, the goal is to provide insights and recommendations on how to better market to female customers, a largely untapped segment. The findings are visualized through a comprehensive dashboard, presenting actionable insights for strategic decision-making.

**Business Problem**

The company is facing a substantial gender gap in coffee sales, with female customers representing only 4.97% of total purchases, compared to 95.03% for male customers. This disparity suggests a missed opportunity to increase sales among women, possibly due to a lack of targeted marketing, product variety, or engagement strategies that resonate with the female demographic. Addressing this issue could lead to significant revenue growth by appealing to and attracting more female customers.

**Methodology**

SQL, Excel, and Tableau were utilized to address the business problem and extract, analyze, and visualize the data.

* **SQL Queries**: Structured Query Language (SQL) was used to extract and process data from the company’s database. Key queries answered the following questions:

1. *Top-Selling Products*: Identified the top 10 coffee products by sales volume.

SELECT product\_name, SUM(product.price \* sales\_detail.quantity) AS total\_sales

FROM product

JOIN sales\_detail ON product.product\_id = sales\_detail.product\_id

JOIN sales\_transaction ON sales\_detail.transaction\_id = sales\_transaction.transaction\_id

GROUP BY product\_name

ORDER BY total\_sales DESC

LIMIT 10;

1. *Impact of Pricing on Sales*: Analyzed how coffee prices affect sales volume.

SELECT sales\_detail.price, SUM(sales\_detail.quantity) AS total\_quantity\_sold

FROM sales\_detail GROUP BY sales\_detail.price

ORDER BY total\_quantity\_sold DESC;

1. *Customer Demographics*: Compared sales volumes by gender to identify customer trends.

SELECT gender, COUNT(sales\_transaction.transaction\_date) AS count\_of\_sales\_by\_gender

FROM sales\_transaction

JOIN customer ON sales\_transaction.customer\_id = customer.customer\_id

WHERE gender IS NOT NULL

GROUP BY gender

ORDER BY count\_of\_sales\_by\_gender DESC;

1. *Popular Ingredients*: Identified the 5 most frequently used coffee ingredients in sales.

SELECT product\_type.description AS coffee\_ingredients, SUM(sales\_detail.quantity) AS total\_quantity\_used\_by\_sales

FROM sales\_detail

JOIN product ON sales\_detail.product\_id = product.product\_id

JOIN product\_type ON product.product\_type\_id = product\_type.product\_type\_id

WHERE product\_type.description IS NOT NULL

GROUP BY product\_type.description

ORDER BY total\_quantity\_used\_by\_sales DESC

LIMIT 5;

1. *Manager Performance by City*: Analyzed which managers generated the most sales and where.

SELECT CONCAT(staff.first\_name, ' ', staff.last\_name) AS manager\_name, sales\_outlet.city, SUM(sales\_detail.price \* sales\_detail.quantity) AS total\_sum\_of\_manager\_sales

FROM sales\_detail

JOIN sales\_transaction ON sales\_detail.transaction\_id = sales\_transaction.transaction\_id

JOIN sales\_outlet ON sales\_transaction.outlet\_id = sales\_outlet.outlet\_id

JOIN staff ON sales\_outlet.manager\_id = staff.staff\_id

GROUP BY manager\_name, sales\_outlet.city

ORDER BY total\_sum\_of\_manager\_sales DESC;

* **Data Processing in Excel**: The results of the SQL queries were exported to Excel for further processing and validation. Key metrics such as total sales, gender comparison, and price ranges were analyzed to gain deeper insights.
* **Dashboard Creation in Tableau***:* Using Tableau, a comprehensive dashboard was created to represent the findings visually. The dashboard includes five key charts:
  + *Top Manager Sales by City*: Highlights the most successful managers in terms of sales volume across different cities.
  + *Top 10 Best-Selling Coffee Products:* Displays the top-selling coffee items and their respective sales volumes.
  + *Most Popular Coffee Ingredients:* A doughnut chart showcasing the most used ingredients in coffee sales.
  + *Sales by Gender*: Illustrates the significant gender disparity in coffee purchases.
  + *Total Coffee Sales by Price Range*: This shows the relationship between coffee pricing and the quantity sold.

Additionally, gender-based filters were applied across all the charts, allowing a deeper analysis of gender’s impact on various aspects of sales. The dashboard is designed for clarity and ease of understanding to help stakeholders make informed decisions on marketing strategies and customer engagement.

**Results:**

1. Top Manager Sales by City:
   * The sales data indicates that Xena Rahim from Long Island City is responsible for the highest sales, contributing to 54.41% of total sales. This suggests that her city is performing exceptionally well in terms of sales.
   * Dawn Anthony from New York follows with 37.85%, and Reed Eve, also from New York, comes in third at 7.74%.
2. Top 10 Best-Selling Coffee Products:
   * The top 10 best-selling coffee products show Cappuccino leading with 608.0 units sold, followed by Latte with 573.8 units sold and Hot Chocolate with 540.0 units sold.
   * The lowest performers among the top 10 include Dark Chocolate (479.5) and Sustainably Sourced Coffee (483.8).
3. Most Popular Coffee Ingredients:
   * The most used ingredient is Coffee itself, comprising 45.39% of all ingredients used. This is followed by Bakery items at 33.17%.
   * Other notable ingredients include Drinking Chocolate at 8.86%, Loose Tea at 2.16%, and Tea at 10.41%.
4. Sales by Gender:
   * There's a significant gender disparity in coffee sales: 95.03% of total sales are made by male customers, while only 4.97% are made by female customers. This highlights a substantial gender gap.
5. Total Coffee Sales by Price Range:
   * The chart shows that most coffee sales occur in the lower price range (below $10). However, as prices increase beyond $20, the quantity of sales drops sharply, indicating that higher-priced products are less popular among customers.

**Conclusion and Recommendations:**

1. Target Female Customers: Implement marketing campaigns and promotions tailored specifically for female customers to address the 95% sales dominance by male customers. Consider product flavours, packaging, and advertising that appeal more to women.
2. Replicate Successful Sales Tactics from Long Island City: Leverage the strategies used by Xena Rahim in Long Island City, where sales are the highest, across other regions to boost performance. This could involve replicating her customer engagement methods or promotional tactics.
3. Expand Product Line with Popular Coffee Varieties: With Cappuccino and Latte leading in sales, the company can consider introducing seasonal or new variants of these popular drinks to maintain interest and drive sales further.
4. Optimize Pricing Strategy: Since the majority of sales occur in the lower price range, the company can explore bundling options or introduce promotions for higher-priced items to encourage customers to try premium offerings.
5. Enhance Ingredient Offering: Given the high demand for coffee and bakery ingredients, the company should expand the bakery menu and offer diverse coffee blends to attract a wider range of customers and provide more variety.