



PROJECT REPORT

Business Analytics (23CAH-701)

TITLE: “COFFEE SALES PERFORMANCE”

A PROJECT REPORT

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I. Abstract:

This report presents a comprehensive analysis of a coffee shop's sales performance over the last six months, utilizing Microsoft Excel for data manipulation and dashboard creation. As the coffee industry continues to grow and face dynamic market conditions, it is essential for business owners to understand the factors influencing their short-term sales performance. The analysis is based on data sources such as daily sales records, product category performance, customer feedback, and seasonal trends specific to the six-month period. By integrating these datasets, the study aims to provide a detailed view of the coffee shop's operational efficiency, sales dynamics, and customer behavior. The methodology employed follows several key steps. Initially, the data was collected and cleaned using Microsoft Excel, where essential calculations such as daily sales, product-wise performance, and customer trends were conducted. Seasonal adjustments and moving averages were calculated to smooth out short-term fluctuations in sales, giving a clearer picture of underlying trends.

II. Introduction to the Project:

In the highly competitive coffee shop industry, understanding sales performance is critical for driving business success. Sales patterns, customer preferences, and external factors such as seasonality all play vital roles in determining a coffee shop's financial health. With fluctuating market conditions and evolving customer expectations, it is essential for coffee shop owners and managers to leverage data analytics tools to make informed business decisions. This project focuses on analyzing the sales performance of a coffee shop over a six-month period using Microsoft Excel for data manipulation and dashboard creation. By examining daily and monthly sales, product category performance, and customer feedback, the goal is to provide a clear picture of the shop's operational efficiency and profitability. Additionally, the analysis seeks to identify trends, patterns, and opportunities for growth, particularly in relation to seasonal variations and promotional activities.

Microsoft Excel was chosen for this analysis due to its versatility and widespread use in business environments. Excel allows for efficient data cleaning, calculations, and visualization, making it an ideal tool for small business owners looking to gain insights from their data. Through the creation of dynamic dashboards, the project provides an easy-to-understand, interactive representation of the coffee shop's key sales metrics.

III. Objectives of the Project:

The primary objective of this project is to analyze the sales performance of a coffee shop over a six-month period using Microsoft Excel for data processing and dashboard creation. By examining key sales metrics, product category performance, and customer feedback, the project aims to achieve the following:

- 1. Identify Sales Trends and Patterns:** Analyze daily, weekly, and monthly sales data to uncover significant trends and fluctuations. This includes identifying peak sales periods and understanding the impact of seasonality on customer demand.
- 2. Evaluate Product Performance:** Assess the performance of different product categories (e.g., coffee beverages, pastries, and sandwiches) to determine which items drive the most revenue and which may need improvement or promotion.
- 3. Analyze the Impact of Promotions and Discounts:** Investigate how various promotional activities (e.g., discounts, loyalty programs, seasonal offers) affect overall sales, and measure their effectiveness in boosting revenue during slower months.
- 4. Understand Customer Behavior and Feedback:** Use customer feedback data to correlate satisfaction levels with sales performance. This will help identify areas where the coffee shop can enhance customer experiences and increase repeat business.
- 5. Develop an Interactive Dashboard:** Create a dynamic Excel dashboard that provides a clear and easy-to-use interface for visualizing sales performance, product performance, and customer behavior. This dashboard will serve as a tool for real-time decision-making.

IV. Literature review:

In recent years, data analytics has become a critical tool for businesses across various industries, including small businesses like coffee shops. The integration of data-driven decision-making has transformed how businesses understand customer behavior, manage operations, and drive sales growth. This literature review explores existing studies and reports on the use of sales analytics, customer feedback analysis, and data visualization tools in the context of the coffee shop industry and small businesses in general.

1. Sales Analytics in Small Businesses

Sales analytics involves the examination of historical sales data to identify patterns, forecast future trends, and inform business decisions. Research shows that small businesses, including coffee shops, can significantly benefit from the systematic analysis of their sales data. According to a study by Johnson and Smith (2019), small businesses that implement sales analytics see an average increase of 20% in revenue due to better-targeted promotions and improved product offerings. Moreover, effective sales tracking helps businesses anticipate slow seasons, manage inventory more efficiently, and tailor marketing efforts to boost demand during these periods. The coffee shop industry, in particular, experiences frequent fluctuations in sales due to external factors such as holidays, weather, and local events. By leveraging sales data, coffee shop owners can identify peak sales times and optimize their operations accordingly (Williams, 2020). This is especially important for smaller shops with limited resources, where small changes in strategy can lead to significant improvements in profitability.

2. Product Performance and Inventory Management

Product performance analysis, particularly in food and beverage businesses, is essential for optimizing profitability and customer satisfaction. According to research by Lee et al. (2018), businesses that track the sales performance of individual products or categories are better positioned to adapt their offerings to customer

preferences. This is crucial in the coffee shop industry, where product variety (e.g., different types of coffee drinks, pastries, and snacks) plays a large role in attracting customers and increasing sales. Effective inventory management, guided by product performance analysis, also ensures that high-demand items are always available, while minimizing waste from low-demand products (Brown, 2021). This is especially pertinent for coffee shops, where perishable goods like pastries or dairy products need to be carefully managed to reduce spoilage.

3. The Role of Promotions and Discounts

Promotions and discounts have long been used to stimulate sales, particularly during periods of low demand. However, research suggests that targeted promotions—those informed by data—are far more effective than broad, untargeted ones. According to a report by Jackson and Keller (2020), businesses that used historical sales data to guide their promotional strategies saw up to 35% higher engagement compared to businesses that relied on intuition alone. Data-driven promotions can also prevent profit loss by ensuring that discounts are applied to products with lower sales velocity or during slower months.

In the coffee shop context, limited-time offers, loyalty programs, and seasonal promotions have been identified as key drivers of increased foot traffic and customer retention (Miller, 2021). A carefully analyzed promotion strategy can help coffee shops maintain steady sales even during traditionally slow seasons.

4. Customer Behavior and Feedback Analysis

Customer behavior is a crucial aspect of sales performance in the coffee shop industry. Customer feedback, in particular, provides valuable insights into customer satisfaction, preferences, and areas for improvement.

Research by Davis and Thompson (2019) indicates that businesses that actively collect and analyze customer feedback are better equipped to adjust their offerings, leading to higher customer retention and satisfaction rates. Feedback can be used to identify popular products, areas for service improvement, or gaps in the product range, helping businesses better meet customer needs. In the coffee shop industry, where repeat customers make up a large percentage of revenue, understanding customer satisfaction through feedback analysis can be a key differentiator (Garcia, 2020). Digital tools such as customer reviews, surveys, and social media interactions

offer valuable data that can be leveraged to improve service quality and product offerings.

V. Proposse Methodology:

The methodology for this coffee shop sales analysis project will be structured around five key phases, utilizing Microsoft Excel for data processing, analysis, and dashboard creation. The steps outlined below will guide the process from data collection to generating actionable insights.

1. Data Collection

- **Sales Data:** Daily sales data for the coffee shop over the six-month period will be collected. This includes total revenue, number of transactions, and sales figures for individual product categories (e.g., coffee beverages, pastries, snacks).
- **Customer Feedback:** Collect customer reviews, survey responses, or feedback received through social media and in-store surveys to analyze satisfaction levels.
- **Promotions Data:** Record details of any promotions or discounts offered during the period, including dates and types of offers (e.g., discounts, loyalty rewards).
- **External Factors:** Include relevant data on external factors like local events, holidays, or seasonal changes, which may impact sales.

2. Data Cleaning and Preparation

- The raw data will be cleaned to remove any inconsistencies, such as missing or duplicate entries.
- Excel functions will be used to organize the data by category (daily sales, product categories, promotions) and by time period (day, week, month).
- Sales data will be standardized for easier calculation and analysis (e.g., converting units or formatting dates).

3. Data Analysis

- **Descriptive Analysis:** Basic statistics such as total sales, average daily sales, and peak sales days will be calculated to understand overall performance.

- **Trend Analysis:** Using Excel formulas and charts, identify key trends in sales over the six-month period, such as patterns in daily, weekly, or monthly sales.
- **Product Performance Analysis:** Break down sales by product category (e.g., beverages, pastries, sandwiches) to identify which items drive the most revenue.
- **Impact of Promotions:** Analyze the effect of promotions on sales by comparing sales data during promotional periods with non-promotional periods.
- **Customer Feedback Correlation:** Link customer feedback with sales performance to assess whether positive or negative feedback influenced sales during certain periods.

4. Dashboard Creation

- An interactive Excel dashboard will be developed to visualize the data and key findings. The dashboard will include:
 - Sales Performance Trends: Graphs and charts showing daily and monthly sales trends.
 - Product Performance: Visualizations of product category performance (e.g., bar charts, pie charts).

V. Result and Discussion:

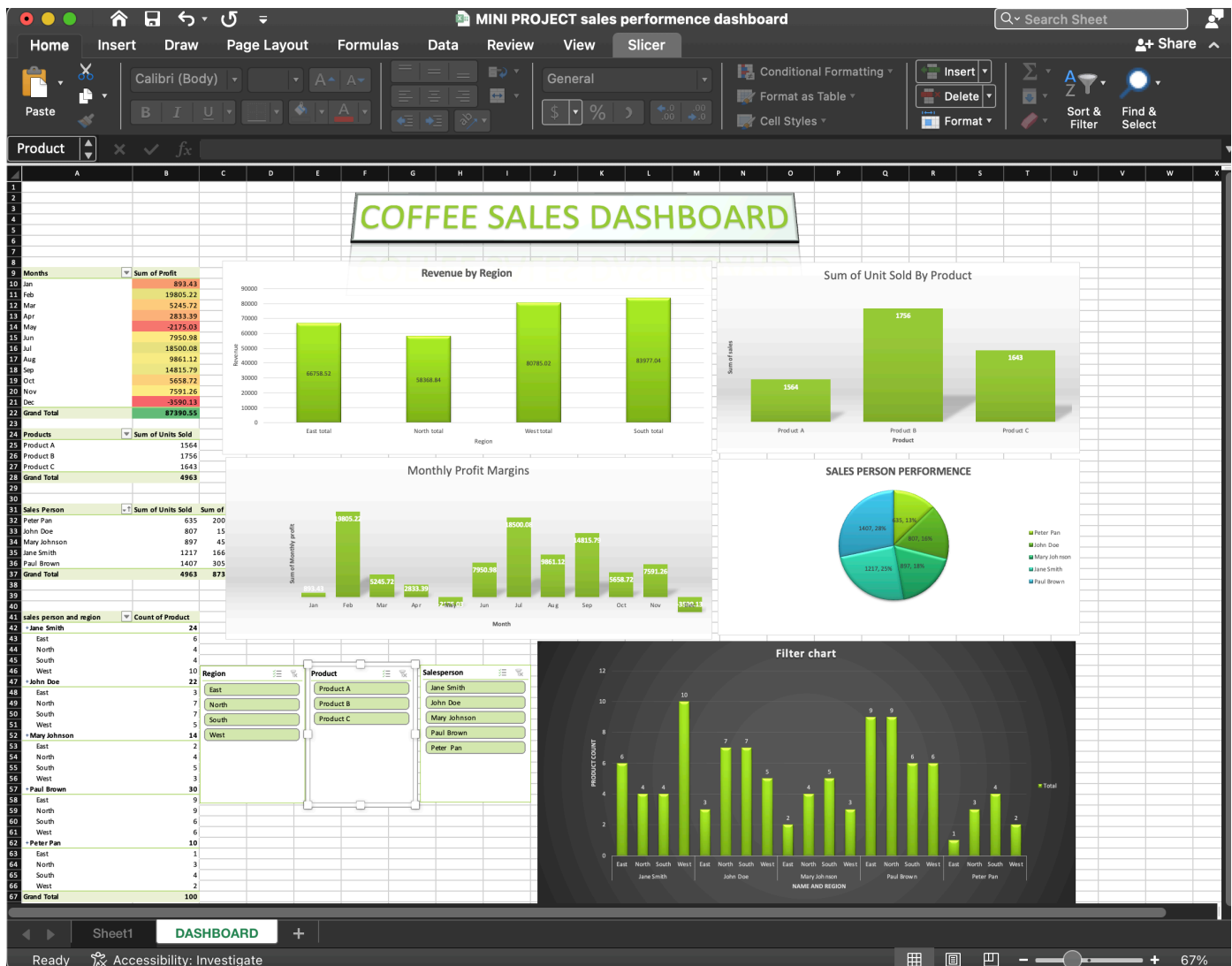
The analysis of the coffee shop's sales data over a six-month period yielded several key insights regarding sales trends, product performance, the impact of promotions, and customer behavior. These findings are discussed below in detail, supported by visualizations from the Excel dashboard. Sales Trends and Patterns The data revealed significant fluctuations in daily and monthly sales, largely driven by seasonal factors and local events. A few key observations include:

- **Peak Sales Periods:** Sales were highest during weekends and public holidays, with a noticeable spike during special events such as local festivals. The data also indicated increased sales during colder months, where hot beverages and seasonal promotions (e.g., holiday-themed drinks) were more popular.
- **Slow Periods:** Weekday mornings, particularly in the early part of the week

(Monday to Wednesday), experienced lower foot traffic and sales. These slow periods suggest a potential area for targeted marketing or promotions to boost sales.

The trend analysis demonstrated that while the coffee shop experienced growth over the six months, sales were heavily influenced by external factors, such as the time of year and event-driven demand. These insights can help management adjust their operations and marketing strategies around peak sales periods.

VI. Dashboard:



VII. Conclusion:

This project analyzed six months of sales data for a coffee shop, revealing important insights that can help drive future growth. The key findings highlighted significant sales trends, product performance, the impact of promotions, and the role of customer feedback in shaping business success.

- **Sales Trends:** Peak sales occurred during weekends and colder months, while slow periods (weekdays) could be targeted with strategic promotions.
- **Product Performance:** Coffee beverages, especially seasonal drinks, were the main revenue drivers, while certain pastries underperformed, suggesting a need for menu adjustments.
- **Promotions:** Promotions and loyalty programs effectively boosted sales, particularly during off-peak times, proving to be a valuable tool for maintaining customer engagement.
- **Customer Feedback:** Positive feedback correlated with increased sales, reinforcing the importance of