

Supermarket Sales Performance Report

Project Title: Identifying Revenue Decline Across Three Supermarket Branches

Prepared By: Project Team

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Executive Summary

This project analyzes sales data from three supermarket branches using a data-driven approach to investigate a decline in revenue. The study includes customer segmentation, product category analysis, payment method trends, and sales performance across time. Insights from this report enable business leaders to make evidence-based decisions to boost profitability, customer satisfaction, and operational efficiency.

Key Performance Metrics

- Total Revenue: 323,000 \$
- Total Transactions: 1,000
- Gross Profit: 15,000 \$
- Gross Margin: 4.8%
- Average Customer Rating: 6.97 / 10

Key Concern: Despite good sales volume, low profit margin raises concern about cost structure and discounting policies.

Monthly Revenue Trend (Seasonality)

Strong Q1 Performance:

- January: 87K
- February: 63K
- March: 73K

Sharp Drop in Q2:

- April: 8K
- May–June: 12K–14K range

Partial Recovery:

- Gradual increase in Q3 and Q4

Possible Causes: Seasonality, stock availability, external factors (e.g., holidays, inflation), reduced promotions.

Branch-Level Performance

Branch A: 340 transactions

Branch B: 332 transactions

Branch C: 328 transactions

Fairly balanced performance across branches. Revenue dip appears system-wide, not isolated to a single location.

Product Line Analysis

Customer Behavior Analysis

Gender Distribution:

- Females dominate spending in every product category.

Customer Types:

- Members: 50.85%
- Normal Customers: 49.15%

Membership programs are attracting repeat customers. Consider expanding incentives (e.g., points, discounts, loyalty bonuses).

Time-Based Insights

Sales by Time of Day:

- Afternoon: 454
- Evening: 355
- Morning: 191

Sales by Day of Week:

- Best Days: Tuesday (55K), Sunday (50K)
- Worst Day: Monday (35K)

Strategy Tip: Run targeted promotions on Mondays and mornings to boost slow traffic periods.

Payment Method Preferences

Cash: 34.74%

E-Wallet: 34.06%

Credit Card: 31.20%

Customers are evenly split — ensure all methods are fast and reliable. Strong e-wallet usage shows a digitally aware customer base.

Customer Satisfaction (Rating Analysis)

Most common rating: "Very Good"

Electronic Accessories had the most "Bad" ratings

Recommendation: Review product quality, delivery, and return policies for electronics.

Tools, Languages & Frameworks

Languages: Python, SQL

Tools:

- Pandas – Data cleaning, filtering
- Seaborn & Matplotlib – Visual analysis
- Tableau – Interactive dashboards
- Jupyter Notebook – Scripted analysis

Source: Kaggle (CSV file)

Project Timeline

Week 1: Data Collection & Cleaning

Week 2: Exploratory Data Analysis & Insights

Week 3: Dashboard Development

Week 4: Final Documentation & Report

Final Deliverables

- Cleaned dataset (CSV)
- Jupyter notebook (Python analysis)
- Interactive dashboards (Tableau)
- Final report (PDF)
- User manual (dashboard guide)

Team Members & Roles

Ahmed Hassan – Team Leader & Data Analyst

Mostafa Salem – Data Analyst & Reporting

Yomna Ali – Visualization & Dashboard Developer

Mariam Elnemrawy – Data Engineer & Documentation

Magda Haytham – Data Cleaning Specialist & Analyst

Collaboration Tools: Google Drive, WhatsApp, Weekly Meetings

Key Recommendations

1. Investigate low profit margins – assess cost structures and pricing.
2. Capitalize on peak hours/days – shift marketing to match peak times.
3. Boost low-rated product lines – review product quality (esp. electronics).
4. Offer incentives on slow days – e.g., Monday-only discounts.
5. Continue expanding loyalty programs – encourage membership signups.

Contact Information

Team Leader: Ahmed Hassan
Email: ahmed.hassan@email.com
Phone: +20 111 602 9913

We welcome your feedback and are happy to answer any questions.