

Retail Shop Performance (Merchant Performance & Engagement) Analysis

1. Project Overview

Project Title: Analyzing SME Growth and Digital Adoption in the Retail Sector.

Domain: Fintech / Retail SaaS (Software as a Service).

2. Data Dictionary

Column Name	Description
date	Hourly timestamp of activity on the SME-Sync app.
shop_id	Unique identifier for a SME-Sync merchant.
shop_type	Business category (Grocery, Pharmacy, Restaurant).
city	Geographic location of the merchant.
new_user	Binary (1 = Newly joined SME-Sync, 0 = Existing).
total_sales_amount	Revenue recorded by the merchant in the app.
transactions_count	Total number of sales entries made.
due_amount	The amount of credit (Baki) owed to the merchant.
expenses_amount	Costs recorded by the merchant.
subscription_purchased	Whether the merchant bought a SME-Sync plan (1/0).
subscription_package	The tier of the plan (None, Standard, Premium).
app_sessions	Number of times the merchant opened the SME-Sync app.

Project Context

SME-Sync is a digital platform that connects shops to an app-based ecosystem where:

- Shops generate sales
- Shops manage transactions
- Shops purchase subscription packages
- App sessions track digital engagement
- Company monitors revenue and due amounts

Management wants performance visibility.

Business Objective

To analyze shop-level app data to:

- Monitor revenue performance
- Evaluate subscription effectiveness
- Measure digital engagement
- Track operational efficiency
- Identify financial risks
- Support strategic expansion

Stakeholders

- CEO / Founder
- Product Manager
- Sales Team
- Operations Manager
- Finance Department

Core Business Questions

KPIs

I had created these metrics:

- Total Sales
- Net Profit (Sales – Expenses)
- Total New Users
- Subscription Adoption Rate
- Average Sales per Shop
- Revenue per Transaction
- Expense Ratio
- Due Ratio
- App Engagement Index (App Sessions per Transaction)

A. Revenue Monitoring

1. What is total sales trend over time?
2. Which cities generate highest revenue?
3. Which shop type performs best?
4. Which shops are consistently underperforming?

B. App Engagement

1. Which shops have highest app sessions?
2. Does higher app usage lead to higher sales?
3. Are subscribed shops more digitally active?

C. Subscription Performance

1. What % of shops purchase subscription?
2. Which package is most popular?
3. Do subscription buyers generate more revenue?
4. What is revenue difference between subscribed vs non-subscribed shops?

D. Financial Health Monitoring

1. Which shops have high due amounts?
2. Due amount trend over time
3. Expense vs sales ratio
4. Profitability per shop

E. Expansion Strategy

1. Which city has high users but low sales? (Opportunity)
2. Which city has high sales growth?
3. Should the company invest more marketing in certain regions?