

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