

Analytica – The Data Analysis Event

Background

Urban Grocers Pvt. Ltd. is a fast-growing supermarket chain. Two years before, it opened **four** large supermarkets in Hyderabad and invested Rupees 20 crores. They have also invested in an advanced sales data system, capturing detailed daily transactions by food category, store location, inventory movements, pricing, promotions, and more.

The management obtained from their sales data system, a dataset comprising of 240,000 daily transaction-level records over 24 months during 2023 and 2024 representing a cross-section of bread, milk, fruits, vegetables, and meat sales.

After two years of moving into this new market, the management is not clear whether strategy followed by the new management team was successful. The management seeks to better understand the sales pattern, the impacts of pricing and promotions, and how external factors affect customer behavior. The leadership team wants analytics-driven recommendations for driving profit, reducing wastage, and optimizing operations, while ensuring top-notch customer satisfaction.

Dataset Columns

Date: Transaction day

Store_ID: Supermarket (A/B/C/D)

Transaction_ID: Transaction ID

Food_Category: Bread, Milk, Fruits, Vegetables, Meat

Units_Sold: Number of Units sold

Price_per_Unit: Price per unit

Promotion: 0/1 (0 – No; 1 – Yes)

Holiday_Weekend: 0/1 (0 – No; 1 – Yes)

Weather: Category (Sunny, Rainy, Cloudy)

Mode_Purchase: Mode of Purchase (Cash, UPI, Credit Card, Debit Card)

You are expected to answer the following questions based on your analysis of the dataset.

- Identify peak sales periods. How do holidays and weekends impact sales volume across product categories?
- Which store faces the most unpredictable demand?
- Whether the promotions helped? Quantify the impact.
- What are the overall and category-specific demand patterns across stores? Forecast demand for the next quarter for a selected category.
- Given the typical margin profit of grocery items is 14% based on current pricing strategy, perform investment analysis.

Based on the analysis, recommend evidence based suitable strategies for M/S Urban Grocers to improve their business.

Note:

- Check the attached link for the data [Urban_Grocers.csv.xlsx](#)
- Give the code or screenshots used for analysis