FMCG ENTERPRISE MIS & PROFITABILITYANALYSIS

Enterprise Reporting & Decision Support System

- **Role: Data Analyst**
- **Target Audience: CXO / Senior Leadership**
- **Industry: FMCG**
- **Geography: India**

1. EXECUTIVE SUMMARY

In a competitive FMCG environment, revenue growth alone does not guarantee business success. Many organizations experience margin pressure due to excessive discounting, inefficient regional strategies, and lack of visibility into product- and salesperson-level profitability.

This project focuses on building an **Enterprise-level Management Information System (MIS)** to provide leadership with a **single source of truth** for sales, profit, discounts, and performance metrics. Using transactional FMCG sales data across Indian regions, this analysis identifies **profit leakages**, **unhealthy revenue growth**, and **actionable improvement opportunities**.

The final outcome is a **decision-ready MIS solution** supported by Python analysis, SQL validation, and Power BI dashboards, enabling leadership to take corrective actions in pricing, discounting, regional focus, and sales performance management.

2. BUSINESS PROBLEM STATEMENT

A mid-sized FMCG company sells a diverse portfolio of consumer products (such as Amul, Parle, HUL, Reckitt, etc.) across multiple Indian regions and customer channels including Retailers, Distributors, and Modern Trade.

Despite **stable or growing sales**, leadership observes that:

- Profit margins are not improving proportionately
- Discounts are increasingly used to drive volume
- Regional and salesperson performance is difficult to compare objectively
- Reporting is manual, fragmented, and reactive

There is **no centralized MIS system** that clearly answers:

- Which products and brands are driving **healthy, profitable growth**?
- Which regions are experiencing **margin erosion due to discount dependency**?
- Which customer segments and channels are **profitable vs risky**?
- Are sales targets being achieved through **sustainable performance or excessive discounting**?

Business Objective

To design and deliver a **data-driven Enterprise MIS and profitability analysis system** that enables leadership to:

- Identify profit leakage points
- Improve pricing and discount strategies
- Optimize regional and customer focus
- Evaluate sales performance using revenue **and profit**, not revenue alone

3. DATASET OVERVIEW

The analysis is based on **realistic, enterprise-style FMCG transactional data**, structured to reflect how data exists in actual organizations.

Dataset Characteristics

- Transaction-level sales data including:
  - Quantity sold
  - Gross sales
  - Discounts
  - Net sales
  - Cost
  - Profit
- Product and brand information
- Category hierarchy
- Regional and state-level market coverage
- Customer segments and channels
- Salesperson details and monthly targets
- Daily transactional timeline

The **analysis time period** was derived directly from the transactional date dimension present in the dataset.

4. PROJECT PIPELINE & METHODOLOGY

This project followed a **structured, enterprise-grade analytics pipeline**, ensuring analytical rigor and business relevance.

a. Data Validation & Initial Review (Excel)

The first stage focused on **high-level data validation**:

- Verified column definitions and schema
- Checked for missing values and obvious inconsistencies
- Performed initial sanity checks on revenue, cost, and profit figures
- Ensured dimension tables aligned correctly with transactional data

This step ensured that downstream analysis was performed on **trusted data**.

b. Data Cleaning & Exploratory Data Analysis (Python)

Python was used for **deep data preparation and business-focused EDA**.

Key activities included:

- Handling missing discount values using business logic
- Validating numeric ranges for sales, cost, and profit
- Creating derived metrics such as profit margin
- Merging fact and dimension tables for analysis
- Performing EDA strictly aligned with **business questions**, not random exploration

The EDA phase focused on identifying:

- Revenue drivers vs margin drivers
- Discount impact on profitability
- Product, region, customer, and salesperson performance

c. Business Validation & Scalability (SQL)

To simulate enterprise reporting environments:

- Key insights were replicated using SQL
- Joins, aggregations, and business logic were validated
- This ensured findings were **scalable, auditable, and production-ready**

SQL served as a **cross-verification layer**, strengthening confidence in the insights.

d. Data Modeling & Visualization (Power BI)

A **Snowflake schema** was designed in Power BI to support:

- Scalable reporting
- Reusable dimensions
- Clean, enterprise-style data models

Dashboards were built for:

- Executive leadership
- Sales performance monitoring
- Discount and risk analysis

e. Reporting & Storytelling

The final stage involved translating analytical findings into:

- Clear business insights
- Leadership-focused recommendations
- Actionable decision points

This document represents the **final MIS report**.

5. KEY BUSINESS INSIGHTS

a. Product & Brand Performance

High-Performing Products

- Dove Shampoo 180ml
- Harpic Toilet Cleaner
- Lizol Floor Cleaner

These products consistently deliver:

- High revenue
- Strong profit margins
- Lower dependency on discounts

They represent **healthy, sustainable growth drivers**.

Brand-Level Performance

- Lux Soap Bar
- Pears Soap
- Lays Classic Salted

Despite reasonable sales volume, these products show:

- Low profit margins
- High discount dependency
- Margin pressure due to competitive pricing

Brand-Level Performance

- **Top Performing Brands:** HUL, Reckitt
- **Underperforming Brands:** PepsiCo, Britannia

This indicates that **Home Care and Personal Care brands** are more margin-efficient than snack-focused brands.

b. Regional Performance & Discount Erosion

- The **East region** records the **lowest profit margin (~24.82%)**
- Revenue levels remain stable, but discounts significantly reduce profitability

This indicates **discount-led growth**, which is not sustainable long-term.

c. Customer Segment & Channel Analysis

Profitable Segment

- **Urban customers**
  - Net Sales: ~₹5.4M
  - Total Profit: ~₹1.3M

Urban customers demonstrate:

- Better price realization
- Lower discount sensitivity
- Strong product mix

Risk Segments

- Semi-Urban and Rural segments
- Similar sales volumes but weaker margins

These segments require **controlled discount strategies**.

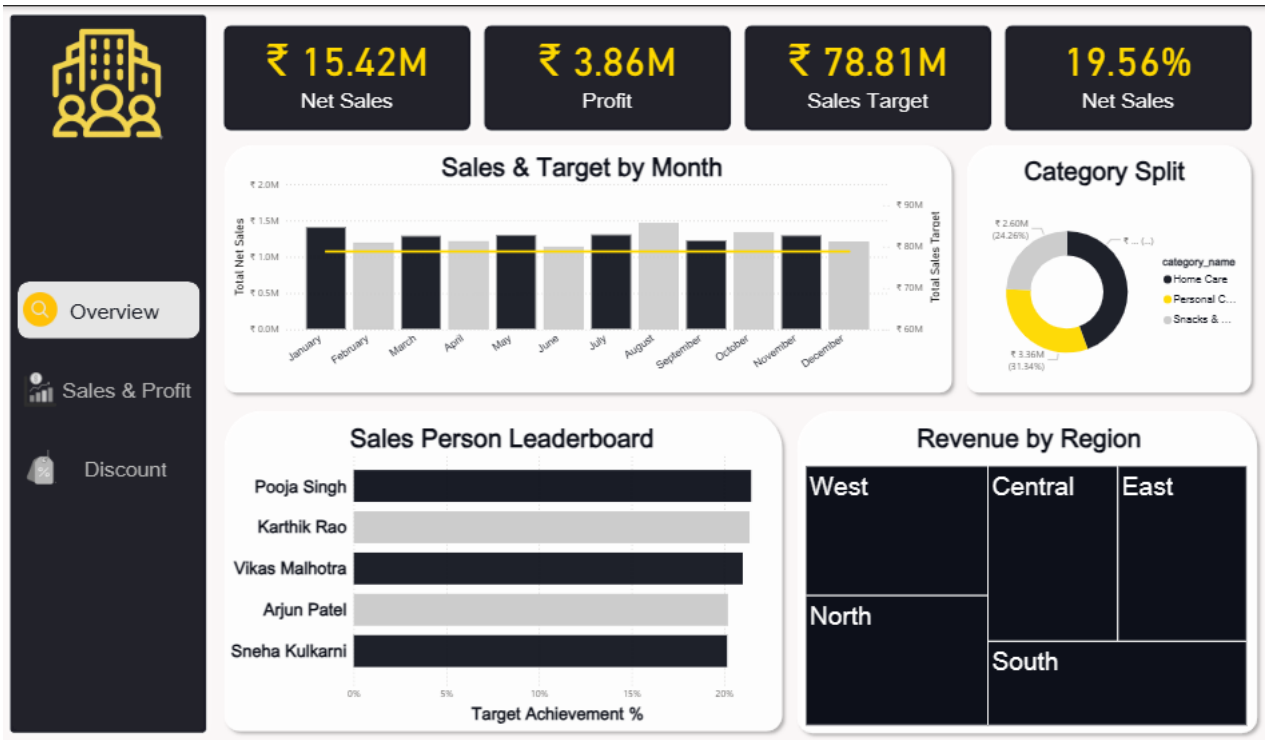
d. Salesperson Performance vs Targets

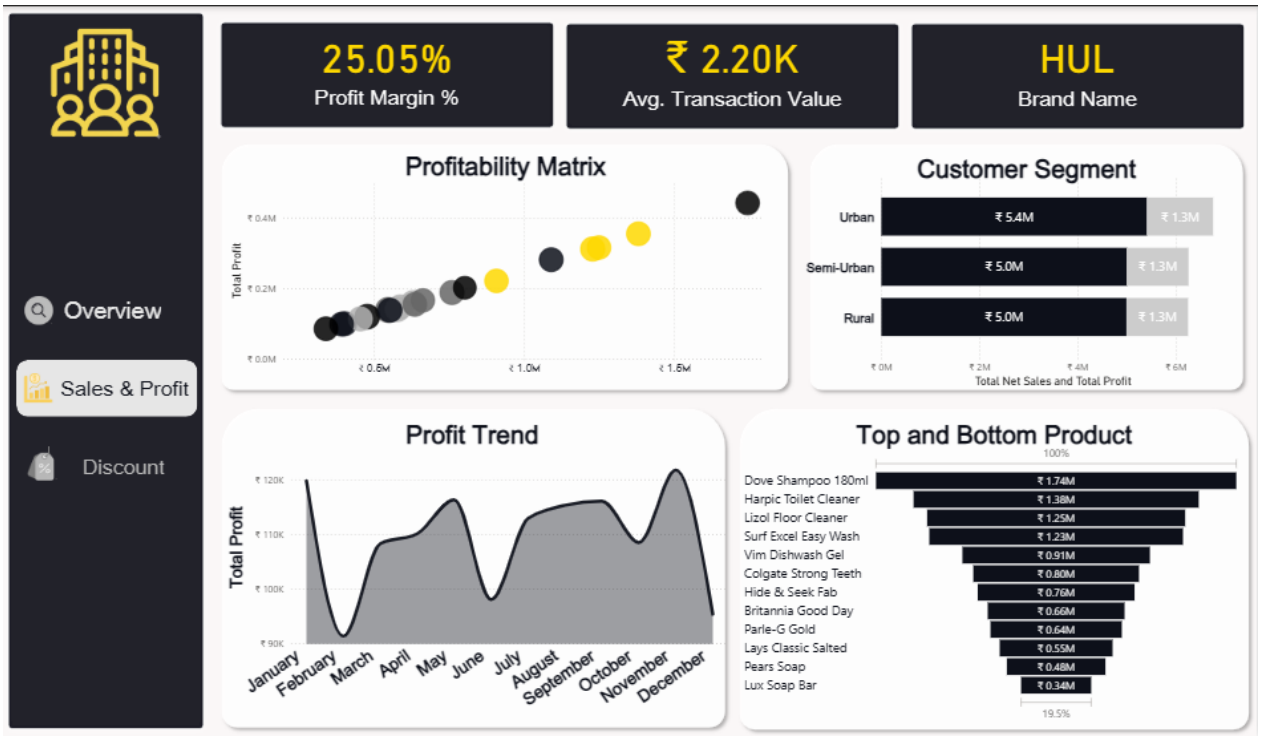
- **Pooja Singh** is the top-performing salesperson in:
  - Revenue generation
  - Profit contribution
- Although she narrowly missed her target, her performance is **healthier than peers**

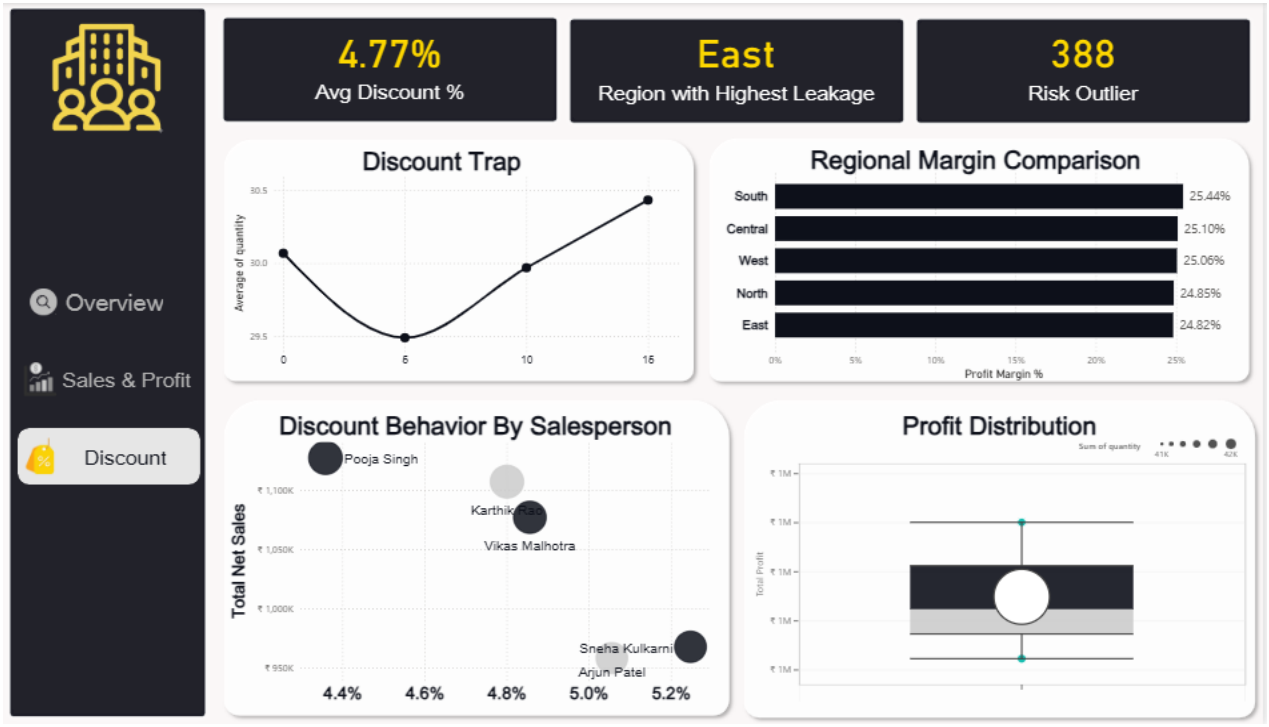
This suggests that:

- Targets may be aggressive or misaligned
- Profit contribution should be considered alongside revenue targets

6. DASHBOARDS & VISUAL EVIDENCE







7. BUSINESS RECOMMENDATIONS

Based on the analysis, the following actions are recommended:

1. **Rationalize discounts in the East region** to protect margins
2. **Prioritize high-margin products** (Home Care & Personal Care) in growth strategy
3. Revisit pricing and promotion strategies for **snack brands**
4. Introduce **profit-based sales incentives**, not revenue-only targets
5. Focus on **Urban customers** while improving efficiency in Semi-Urban and Rural markets

8. LIMITATIONS & ASSUMPTIONS

- Analysis is based on historical transactional data
- External market factors (competition, inflation) were not included
- Assumes cost data accuracy as provided

9. CONCLUSION

This project demonstrates how an **Enterprise MIS Automation System** can move leadership from **reactive reporting to proactive decision-making**. By shifting focus from revenue alone to **profitability and margin health**, the organization can achieve **sustainable, long-term growth**.