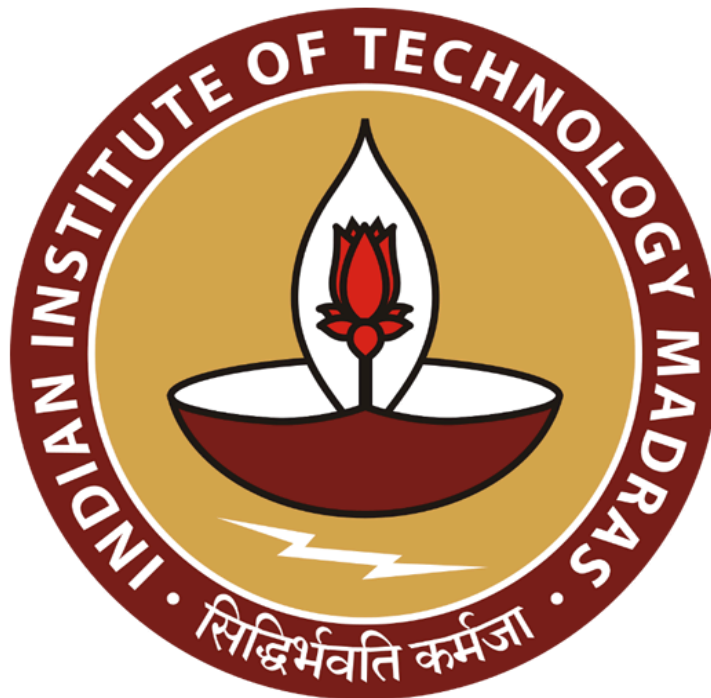# Optimizing Inventory and Sales through Data-Driven Strategies for a Small B2C Retail Shop

A Proposal report for the BDM capstone Project

Submitted by

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Contents

Declaration Statement

 I am working on a Project Titled **"Optimizing Inventory and Sales through Data-Driven Strategies for a Small B2C Retail Shop"**. I extend my appreciation to **Rakesh Enterprises**, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered through primary sources and carefully analyzed to assure its reliability.
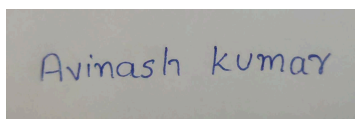
Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the information of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I agree that all the recommendations are business-specific and limited to this project exclusively, and cannot be utilized for any other purpose with an IIT Madras tag. I understand that IIT Madras does not endorse this.

Signature of Candidate:

Name: Avinash Kumar

Date:13/09/2025

1 Executive Summary

Rakesh Kumar is a 33-year-old man, owns a small mobile and stationery shop in A.G. Colony, Patna, Bihar, where he also lives. He provides mobile accessories, printing, photocopying, lamination, mobile recharge, stationery items, movies and songs and miscellaneous(Gift hamper, individual gift items etc) to his local customers, students, working professionals, and residents of the locality. The mobile and stationery store has a B2C model and he has been providing a worthy service to the residents since 2020. By providing a personal touch, lower pricing and loyal service, he has successfully built a customer relationship.

Despite his steady supply of patronage from his regular customers, there are inherent challenges in business operations, such as fluctuating month-to-month revenue; total monthly revenue of ₹5,000 - ₹12,000; low gross margins; limited customer outreach; unreliable inventory management; stocking out of high volume items, stocking too much of low volume/seasonal products.

The nature of this project will be a systematic Excel-based data analysis of the monthly revenue and sales of product categories, stock/category movement and product category selection by customers. Insights derived from the service transaction data will allow me to identify which product categories have high sales volume and developed recommendations for consistent stock consumption and recommendation of products to eliminate at the mobile and stationery shop and provide recommendations to improve operational performance, increase profitability and develop a business model with on-going sustainable growth.

2 Organization Background

The Store Opened in August of 2020 in A.G. Colony, Patna, our customers are mainly local students, working-class people, and people from our local community. We open the store at 9:00 a.m. and close it at 9:30 p.m., with sales of stationery, mobile accessories, and printing services. Our sales average between ₹5,000 and ₹12,000 only monthly, so we are a small-scale business. We made profits at the beginning, but with rising costs and small margins, the shop cannot establish itself in the market. Rakesh is the only one who works self-employed and has to do everything at the shop by himself.

The store faces enormous problems managing the stock item in a narrow space, as there is high stockout of higher demand, and slow-moving items have overstock. Capital is trapped in slow-moving items, shelf space is limited for the higher demand stock items, and stock-outs lead to lost sales. Price discounting, and increasing expenses (like rent, electricity, etc.), keep eating up profits each month. Further, we have low customer engagement, because a customer either visits/purchases or relies on a word of mouth referral. There is no formal product marketing or tiers of product awareness, therefore restricting company growth.

3 Problem Statement

3.1 Low Profit Margin : The store is having trouble with profit margins for low sales, and high operating costs. This gap between sale price and store expenses limits total profitability.

3.2 Customer Retention : A major challenge for the store is a lack of viability, to allow the store to grow. It is hard to grow the store due to a lack of customer acquisition which makes sales decline and market viability weak.

3.3 Inventory Management : There are significant issues with inventory management in part due to the absence of fiscally aligned standardized item numbers. The store is having trouble identifying n fast-sellers and slow-sellers, as well as the optimal times for ordering more, along with where to keep the product queues coming in from upcoming on-trend releases.

4 Background of the Problem

Rakesh Kumar, the shopkeeper faces many kinds of troubles to increase sales and maintain consistent income. The shop is run by a sole trader on a small scale. Thus, it is limited and facing challenges with growth and scalability.

The trouble arises from a myriad of factors both external and internal. One of the most prevalent external factors would be competitors. Customers do not have very high switching costs as multiple shops exist within a few minutes of the shop offering similar or identical product and service offerings. Price sensitivity for customers also plays a role in achieving visibility. But most of all, Rakesh does not market his shop nor have any other traction.

From an internal observation, the shopkeeper lacks digital literacy. Rakesh is unable to fill any forms online, cannot apply for government support schemes, Booking Ticket and/or mobile

recharges and manage digital banking and transfer. Rakesh cannot access digital tools that help standardize and improve operations and create conveniences for customers for the inability to do these.

Another internal issue is that Rakesh's shop offers a limited variety of stationery items-so customers would typically not find all that they need.

Currently, there are no inventory control or sales analysis operations, which limits Rakesh's ability to plan ahead. If limited to the issues raised above, the revenue is low; customers are not growing and/or developing their requirements; potential for business development goes unexploited.

5 Problem Solving Approach

For this Business Development Management capstone project, I will be researching the mobile and stationery business operated by Rakesh Kumar, whose gender is male, who is 33 and resides in A.G. Colony, Patna, Bihar. The aim of the project is to investigate the business operations and recommend ways to improve profit margins, customer retention, and inventory management.

Step 1: Data Collection and Cleaning

Sales and stock records from March to November 2024 have been collected, including sales revenue for stationery, mobile accessories, printing, and entertainment products. The first step includes cleaning the data in excel, organizing the data into relevant segments, as well as using standard item codes to map the sales and stock movement accurately to match inflow and outflows to total sales.

Step 2: Exploratory Data Analysis (EDA)

EDAs will be completed in Excel, to uncover seasonal demand patterns, determine best-selling and slow-moving items, and review revenues and profits by product category. Visual representations such as line charts, bar charts, pivot tables, and trend lines will reveal insights that help decision-making.

Step 3: Inventory Management and ABC Analysis

An ABC (or hierarchical) analysis will categorise stock differentiate into:

A items: High-value and fast-moving items requiring the most attention;

B items: Moderately demanded or seasonal items; and,

C items: Low-value and slow-moving items that can be kept to a low stock-level.

The ABC roughly categorisation will help customize stock control, maximize availability at peak demand periods, and reduce losses through spoilage on slow-moving or surplus stock.

Step 4: Profit Margin Optimization

A product with low margin values will be reviewed for suitable price modification. Seasonal items can expect a possible bump in price, and maybe a bump in quality, to help improve value. Short-term promotions and product bundling will help raise customer interest and profitability. Price elasticity of products will be tried to find a reasonable balance of selling volume and revenue growth.

**Step 5: Customer Retention and Engagement**

Sales trends will assist in forming seasonal specials and product variations. Discount targeting and promotions specifically designed for targeted promotions help build loyalty for recurring buyers and convert new customers. Repeat purchases will track customer retention improvement.

**Step 6: Implementation and Monitoring**

Dashboards based on point of sales data in Excel format will look at sales, seasonal trends, and inventory in real time. Continuous tracking of sales, seasonal trends and inventory will allow Black Sheep to optimize their reinvestment into the company. Continuous dashboards and reports will allow Black Sheep to do effective restocking, price changes, and planning promotional opportunities. Also, if monitoring regularly ensures that price margins, inventory viability and retention improvement remain consistent.

6 Expected Timeline

6.1 WorkBreakdown Structure:

6.2 Gantt chart
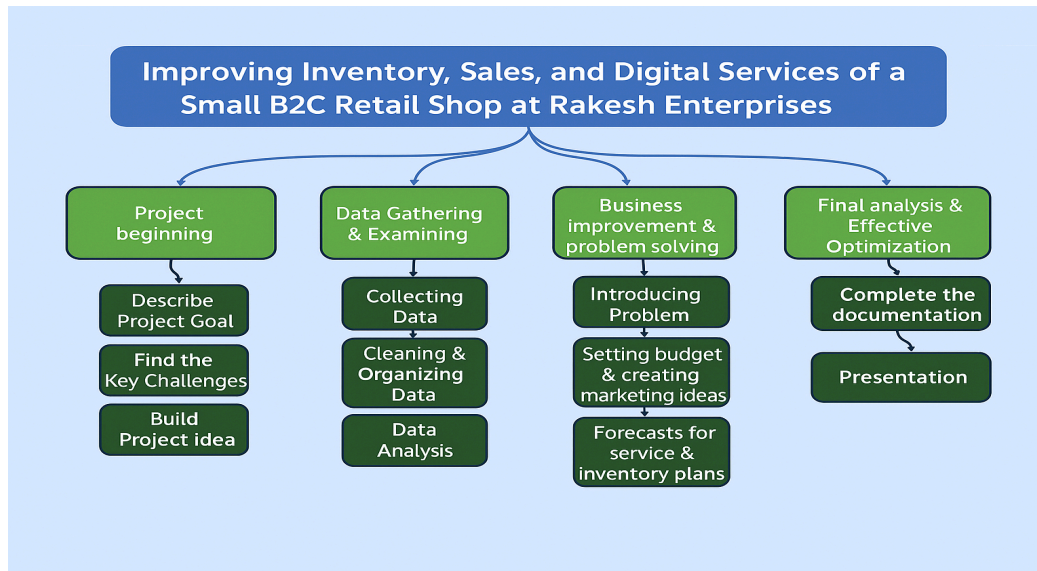
Project Timeline - Gantt Chart
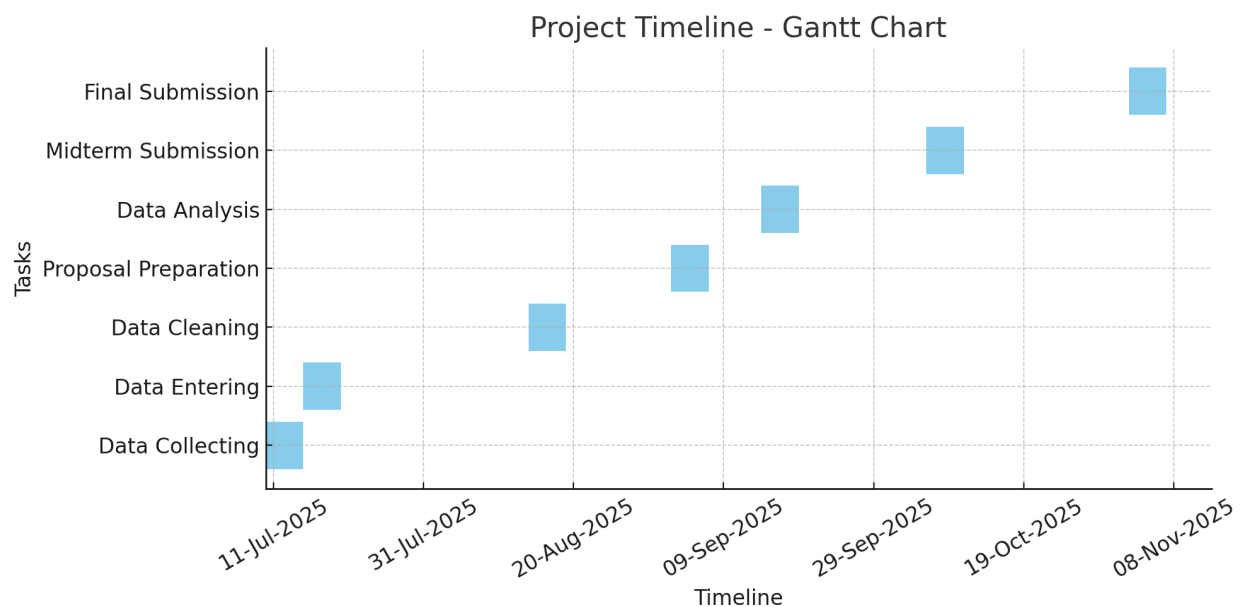
7 Expected Outcome

7.1 Better Inventory and Pricing Decisions

This analysis of sales from March through November will allow the store to identify items that are high in demand, seasonal, and slow-moving, thereby preventing the overstock of certain items while ensuring fast-moving items are on hand. It is anticipated that by doing this we will

free up 15-20% capital tied up while being able to price smarter to improve margins, especially during peak months such as April (school session), October (festivals), and November (wedding season).

7.2 Improved Customer Retention and Market Position

Customer buying patterns will point out frequent buyers and their preferences so that specific offers, discounts and seasonal promotions can be generated. This will make loyalty even stronger, provide incentives for gaining customers, and encourage repeat visits of 10–15% and create a better local market image for the shop.

7.3 Increased Sales and Revenue

Seasonal demand insights and the ABC analysis will inform replenishment and promotional decisions so that critical items never run out during times of high demand. Conclusively, these adjustments and quality improvements are expected to increment total sales revenue by 12–18%, enhance cash flow, reduce waste from over-ordering, and lead to more efficient and sustainable operations.