

Understanding the Business Purview of a Grocery Firm

A Proposal report for the BDM capstone Project

Submitted by

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Declaration Statement

I am working on a Project Title “Understanding the Business Purview of a Grocery Firm”. I extend my appreciation to Moji Ram Surender Kumar & Company, 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.

Rahul Gupta

Signature of Candidate: (**Digital Signature**)

Name: Rahul Gupta

Date: 24th Nov 2024

1 Executive Summary

Moji Ram Surender Kumar & Company, located in the historic Khari Baoli market of Old Delhi, has been a prominent grocery shop specializing in sugar and its variants since the 1940s. Despite the history, the shop faces challenges such as material wastage during packaging and inefficient inventory management, which affect revenue and profit margins.

This project focuses on analyzing the shop's sales, purchase, and inventory data to optimize stock levels, minimize wastage, and identify high-revenue-generating items. By leveraging modern analytical tools like excel, python, etc. we aim to provide actionable insights that will enable better inventory planning and revenue maximization. Expected outcomes include improved profitability, reduced wastage, and a streamlined approach to identifying and promoting top-selling products

2 Organization Background

Moji Ram Surender Kumar & Company, owned by Vikas Goel and supported by his son Rishabh Goel, has been present in Khari Baoli market in Old Delhi since the 1940s. Known for its high-quality sugar variants, such as Mawana Sugar, Dhampure Sugar, jaggery, powdered sugar, roasted gram among other various related grocery items, the shop has built a loyal customer base over the decades. Operating primarily as a B2C enterprise, the shop caters to both individual and small business customers.

Despite the strong market presence, the shop still relies on traditional systems for tracking sales, purchases, and inventory. This has resulted in operational inefficiencies, particularly in inventory management and sales optimization. The shop is also facing modern-day challenges, including competition from online marketplaces and mega stores, which offer convenience and discounts that are hard to match. Coupled with issues like material wastage during packaging and high operational costs, these challenges threaten the profitability and sustainability of the business. However, with their reputation for quality, Moji Ram Surender Kumar & Company has immense potential to evolve and thrive.

3 Problem Statement

Based on my interaction with the shop owner, there are several longstanding challenges that the business is facing, which I believe can be resolved or, at the very least, we can move in a direction that will benefit the business in the long run. Below are the problems I have identified that appear most suitable for this project :

- 3.1 **Inefficient Inventory Management:** Manual inventory tracking has led to overstocking low-demand items and stockouts of high-revenue products, causing revenue losses.
- 3.2 **Competition from Online Marketplaces:** The shop struggles to retain customers against online platforms offering discounts and free deliveries.
- 3.3 **Material Wastage:** Item Spillage, uninformed customer tastings, overfilling during packaging results in a loss of 2-3% per kilogram, directly affecting profit margins.

4 Background of the Problem

The current model of Moji Ram Surender Kumar & Company is heavily reliant on manual processes for tracking inventory and sales. This outdated approach has led to significant inefficiencies, such as overstocking items that see low sales and running out of high-demand products. The shop frequently faces stockouts of these high-revenue items due to poor forecasting.

Additionally, the inability to optimize inventory contributes to unnecessary capital being tied up in unsold stock. This issue is further exacerbated by increasing competition from online marketplaces and mega stores that offer free delivery, discounts, and a broader selection of goods. Studies show that consumer preference is shifting toward these platforms, with a ~20% year-over-year increase in online grocery sales in urban areas like Delhi.

Material wastage during packaging is another problem with overfilling, spillage and free consumer tasting which are mostly uninformed, leading to a loss of 2-3% per kilogram. Over a year, this translates to a substantial financial impact on profit margins. Combined with outdated systems and growing external competition, these factors highlight the urgent need for modern, data-driven solutions to ensure sustainable growth.

5 Problem Solving Approach

The business is facing a few problems, and I plan to take different approaches to solve them. Here's how I will go about it:

Intended Data and Analysis

I will collect and study time-series data on sales, purchases, revenue, and inventory for the top five best-selling products. By looking at trends and seasonal patterns, we can figure out which items are in high demand and when. This will help the business stock popular items properly and avoid overstocking items that don't sell much. I will use Excel and Tableau to analyze the data since they are versatile and have great tools like charts and graphs to show insights clearly. This will also help make predictions about future sales in a simple and affordable way.

SWOT Analysis

We can do a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) to understand the shop's position in the market. This will help identify what the business is good at, where it can improve, opportunities to grow, and how to handle competition from big online stores.

Revenue Maximization Strategies

Using the data I analyzed, I will come up with strategies to increase revenue. For example, I'll suggest bundling related products, giving discounts on high-margin items, and promoting the best-selling products. These strategies will make customers more likely to buy, which will help the shop earn more money.

Customer Retention and Outreach

I will create a customer outreach plan by talking to customers informally and doing small surveys to understand what they like. Based on this feedback, I will suggest starting loyalty programs and giving discounts to regular customers. This will encourage people to keep coming back and will also help the shop compete better with online stores.

Material Wastage Management

To reduce wastage during packaging, I will recommend using weight-checking machines or accurate digital scales. This will help avoid overfilling. I'll also suggest setting rules to control

how much product is used for free tastings, as this adds to wastage. I will train staff to politely manage customer expectations about tastings and prevent spillage by improving storage and packaging methods to make them more secure.

With these steps, I believe the shop can solve its problems and improve its business in a practical way.

6 Expected Timeline

6.1 Work Breakdown Structure:

❖ Phase 1 (10th Oct– 15th Oct)

- o Understanding Business & Pain Points
- o Get in touch with the owner/stakeholder for deeper grasp of business and request required data
- o Collect data & perform EDA
- o Finding basic statistics & description of data

❖ Phase 2 (16th Oct– 19th Oct)

- o Begin work on Midterm
- o Finding Insights based on problem statements

❖ Phase 3 (21st Oct– 3rd Nov)

- o Finish finding the insights and work around them to seek solutions for problem statements
- o Prepare Final Submission Report
- o Begin submission of files starting with Proposal

6.2 Gantt chart

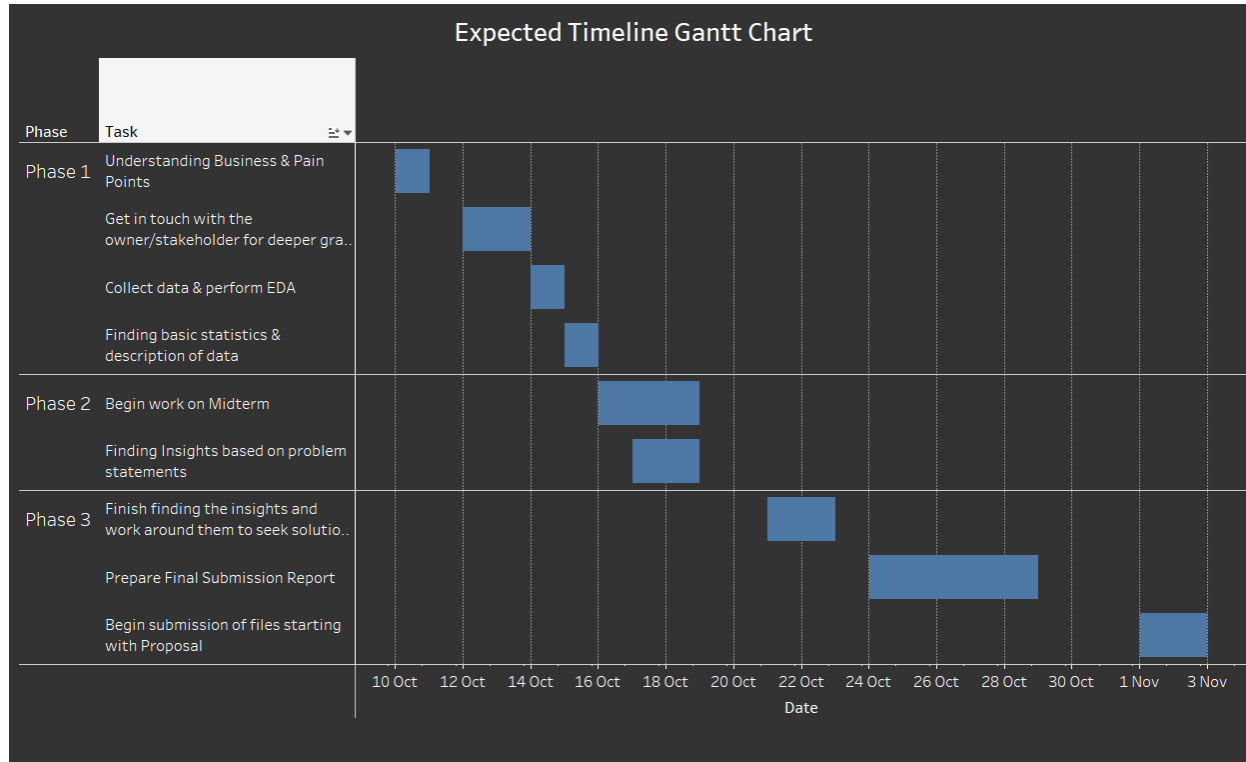


Figure 1.1 Expected Timeline Gantt Chart

7 Expected Outcome

- 7.1 Improved inventory management, leading to reduced wastage and better stock availability for top-selling products.
- 7.2 A clearer understanding of customer preferences, enabling focused promotional efforts and revenue maximization.
- 7.3 Enhanced operational efficiency through real-time inventory tracking systems
- 7.4 Increased customer satisfaction and retention by ensuring consistent availability of high-demand products.