Enhancing Sales Big Basket

A Proposal report for the BDM capstone Project

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Declaration Statement

I am working on a Project titled "Enhancing Sales Big Basket". I extend my appreciation to Kaggle, 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 from 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 principles 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 understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

Signature of Candidate:

Name: Imran Ashraf

Date: 13 Jan 2025

Executive Summary

Big basket is one of the Indians top online grocery stores, is popular for its convenience, affordable price with its fast delivery. Big Basket offers wide range of fresh products, packed foods, household essentials and personal care products. Big basket caters millions of customers across major cities with a strong supply chain and multiple brand partnerships.

The data analysis shows some important issues many products have very high discounts (80%), low customer ratings and poor-quality brand. These problem leads to customer complaint frequent retunes trust issues.

This analysis is based on a comprehensive evaluation of few elements such as product data, pricing, customer ratings, discounts and brand performance, which play a crucial role in customer satisfaction. By ensuring the product pricing reasonable and elimination low quality products improves the company's profit margin. Prioritizing high quality products will not only enhance customer trust but also reduce return rates and negative feedback collaborating with reliable suppliers and enhancing product descriptions and images can improve transparency and reduce dissatisfaction

This analysis is based on the secondary data and it's taken from kaggel

Organization Background

Big basket was founded in 2011 by Hari Menon, VS Sudhakar, VS Ramesh, Vepul Parekh and Abhinay Choudhary currently one of the largest online grocery supermarkets in India. The headquarters are located in Bengaluru operates in more 30 cities. Big Basket has more than 2000 products and 1000 brands in its catalogue. It's a stop online grocery supermarket offers a variety of product for sale including food and beverages, electronics, health and beauty and home essentials customers order groceries through their app which will be deliver to their doorstep.

The Big Basket data has product, category different brand name of the product and its description. The data also contains sales price as wells as markets price, marking easier for

the customers to compare price, find the best deals and make informed purchasing decisions. The reviews of each product mentioned in the data helps the customer make informed decisions by providing insights into the quality performance and reliability of the product.

The Online grocery supermarket tries to deliver consistent value and services through their quality products and express delivery customer can order the required products which will be delivered in 90 minutes or next morning for slotted delivery. The supermarket has invested a modern technology like creating its own app to smoothen operations.

Comparing to other online grocery super market like Zepto, Instamart and Blinkit. Big Basket has quite low quick commerce (QGC). Big Baskets markets share is estimated to be around 7% whereas Zepto has 21%, Blinkit has 45%. Instamart has 27% markets share in the QGC segment.

Problem Statement

The supermarket has trouble growing steadily and remaining relevant in the face of intense competition. This analyze will objective to:

1. Overpriced Products with heavy discounts: The supermarket sets high prices and then gives big discounts, which can make customers feel like the prices are not fair, causing them to lose trust and shop elsewhere.

2. Low-Rated Products in key categories: Many important products have low ratings, making customers unhappy and hurting the supermarket's reputation and chances of getting repeat shoppers.

3. Inventory Management Issues: The store stocks too much of some products that don't sell well and runs out of popular ones, leading to lost money and missed sales.

Background of the problem

Overpriced products with heavy discounts: Some products have hugs discounts (80% or more), which can indicate artificially inflated market price to make discounts sems attractive,

unsustainable pricing that can hurt profit margin. Example: Ahand juicer originally priced at Rs1995 is sold for Rs349 (82% OFF), making the market price questionable customer may lose trust in the platform, suspecting the fake discounts.

Low-Rated Products in key categories: Many products in Beauty and hygiene, kitchen and food categories have ratings below 3.0, showing customers dissatisfaction. The few possible reasons are poor products quality, defective or substandard materials or bad packing or delivery. Delivering expired items causes health problems and customer dissatisfaction. If the low rated products remain on the platform without improvement, customers can go after other platform.

Inventory Management Issues: Frequent stockout of high-demand products and overstocking of low-demand items leads to customer frustration and financial losses. These issues arise due to poor demand forecasting. Supply chain inefficiencies, and inadequate stock monitoring negatively affecting both sales and customer satisfaction.

Problem Solving Approach

Data source and justification, the secondary data for this analysis was collected from Big Basket's publicly available product listing including product prices, discounts, rating. This data directly aligns with challenges related to stock management, price fairness and customer trust. The data includes stock availability trends which helps in identifying frequently out of stock product as well as over stocked products customer review and ratings are examined to assess dissatisfaction with product quality and services.

Data-driven and analytical approach can be used to solve the inventory management challenges, pricing in consistencies and quality concerns in Big Basket. By identifying which products are in high demand and which could cause over stocking, demand forecasting was used to optimize stock levels. This decreases waste and storage expense while ensuring that necessary items are always available. In order to identify inventory variations and prevent an excessive buildup of slow-moving items, real time stock monitoring has been introduced. This allows for the timely replacement of fast-moving products. In response to the low product rating, a customer feedback analysis was conducted to discover typical complaints

about product quality, packing and delivery. Partnering with trustworthy vendors and increasing quality control techniques helped reduce defective or mediocre categories such as beauty, hygiene, kitchen and food.

The Python Pandas package has been used to analyze the data for data cleaning to ensure the data is accurate and clean (removing duplicate and null values), transforming the data e.g. aggregation. Descriptive statistics and correlation analysis for all attribute can be analyzed by python panda package. We used Matplotlib and Seaborn for creating visual representations of inventory trends and pricing anomalies like bar chats, column chat, pie chat, line chats and heat map. Excel is used for initial data sorting, filtering, pivot table for analysis are the tools I utilized for all the processes I employ.

Expected Timeline- Work Breakdown Structure and Gantt Chart

Gantt chart:

ACTIVITY	Start Date	End Date	Days	January				February			
				W1	W2	W3	W4	W1	W2	W3	W4
Project Proposal and Scope Definition	02 JAN 2025	09 JAN 2025	8	green	green						
Data Preprocessing	10 JAN 2025	17 JAN 2025	8		green	green					
Data Analysis and Identifying Inventory Problems	18 JAN 2025	25 JAN 2025	8			green	green				
Analyzing and Evaluating Inventory Optimization Results	27 JAN 2025	04 FEB 2025	9				yellow	yellow			
Preparing Final Submission	05 FEB 2025	11 FEB 2025	7						red	red	
Creating Presentation	13 FEB 2025	15 FEB 2025	3							red	red

Figure 1 Expected timeline for completion of project.

Work Breakdown Structure
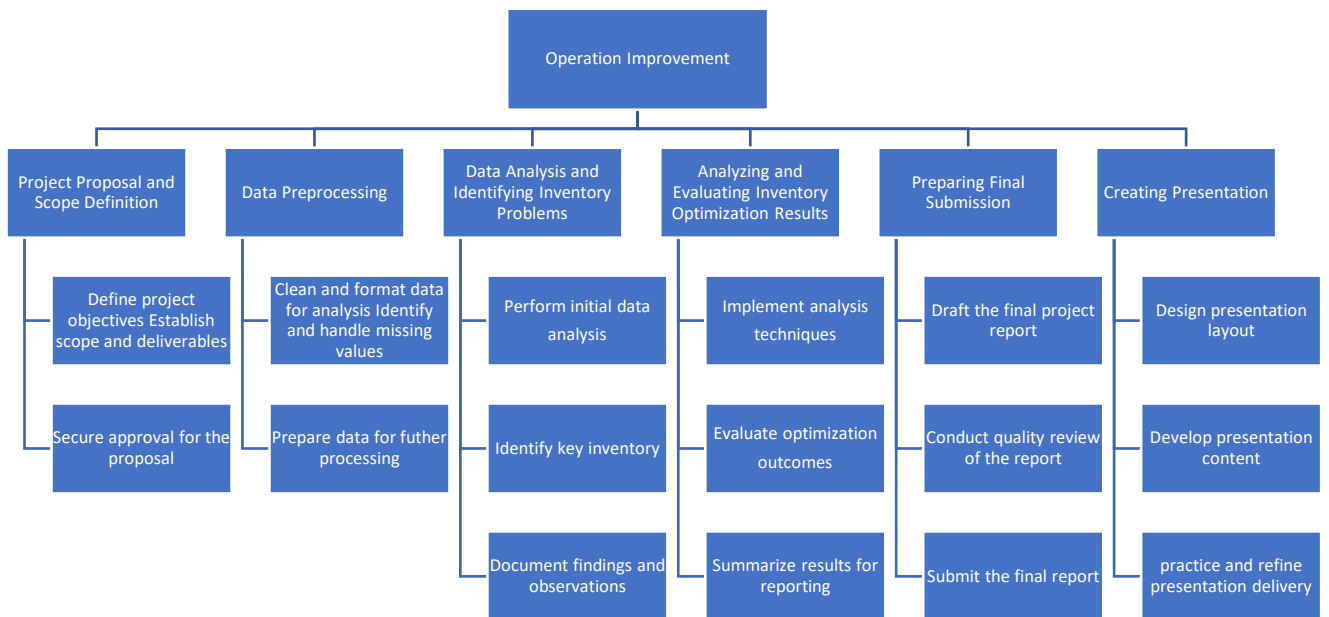
Expected Outcome

Combined Analysis of Supermarket dataset is expected to have the following outcome:

- **Improve Pricing Transparency:** Increased customer trust and better profit margins. Genuine pricing reduces customer skepticism about fake discounts. completive, realistic prices improve sales conversions sustainable profit margins instead of relying on deep discounts

- **Enhance product quality control:** Higher rating and reduced returns removing low-quality products lead to fewer complaints. Improved product quality results in higher customer satisfaction and rating.

- **Optimize Supplier Partnership:** Reliable and high-quality inventory. Better supplier relationships ensure consistent product standards customer trust Big Basket more due to fewer defective items. Faster delivery and fewer cancellations due to better stock management.