PROJECT PROPOSAL

PROJECT TITLE –

Inventory Management in Kirana Stores

By-

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EXECUTIVE SUMMARY –

India's retail market is the fourth biggest retail market in the world projected to increase to almost 1.3 trillion dollars by 2025. India's retail sector is highly unorganised with brick-and-mortar stores accounting for 88 % of the sector. It has more than thirteen million Kirana and neighbourhood stores. This sector has grown substantially over the years and currently accounts for almost 11% of India's GDP and 8% of its entire employment.

Since the advent of E-commerce, the sector has become extremely competitive and Kirana businesses are losing customers as more and more are shifting to online shopping due to massive discounts given by e-commerce giants and legacy issues surrounding Kirana stores. Some of the major legacy challenges include inventory management, shop infrastructure and adoption to new technologies like digital payments etc.

However, during covid pandemic almost everybody relied on local Kirana stores which has brought out the hidden potential in them. They have proven to be extremely durable and have survived large retail chains, e-commerce, covid-19 and other challenges as well. They have shown increased flexibility since the pandemic welcoming technology such as digital payments suggesting their readiness to adapt to changing times.

ORGANISATION BACKGROUND –

India's retail market is the fourth biggest retail market in the world projected to increase to almost 1.3 trillion dollars by 2025. India's retail sector is highly unorganised with brick-and-mortar stores accounting for 88 % of the sector. It has more than thirteen million Kirana and neighbourhood stores. This sector has grown substantially over the years and currently accounts for almost 11% of India's GDP and 8% of its entire employment.

Retailing includes all the activities involved in selling goods or services to the final customers for personal, non-business use. The Indian retail is dotted by traditionally market places called bazaars or haats comprises of numerous small and large shops, selling different or similar merchandise which together make up the unorganised retail sector.

Kirana stores are owned and operated on a small scale, usually in a space of 500 sq. Ft or less. These places are easily available within residential localities. These small shops stock up with vide range of groceries and daily need products like sanitary products, snacks, tobacco etc. These Kirana stores are also known as corner shops, C- store or convenience shop. They are also found at petrol pumps or gas station to satisfy the basic needs of consumer while traveling. These stores do not offer any type of discount or any type deal that supper market or groceries stores may offer as these stores hold limited stock. Thus, prices are competitively higher than Wholesale stores. They are easy to access. Whenever in time you are need of something available at these stores is available to you. There are many more Kirana store offer that consumer need other than product they need i.e., credit. You may get small credits at the time of urgent and necessary need if you hold good relationship with these store owners.

PROBLEM STATEMENT –

Analyse the monthly sales of a local Kirana store to:

1. determine the monthly sales by product, sales by category to ensure a healthy stock of inventory is maintained
2. Provide an inventory management plan to minimise the number of trips to the wholesale markets thereby helping shopkeepers place bulk orders reducing cost price to Kirana store owners.
3. Find out the top 5 products that deliver the maximum profits and the to 5 products that deliver maximum sales volume.

BACKGROUND OF THE PROBLEM –

India's retail sector is highly unorganised with brick-and-mortar stores accounting for 88 % of the sector. It has more than thirteen million Kirana and neighbourhood stores. Since the advent of E-commerce, the sector has become extremely competitive and Kirana businesses are losing customers as more and more are shifting to online shopping due to massive discounts given by e-commerce giants and legacy issues surrounding Kirana stores. Some of the major legacy challenges include inventory management, shop infrastructure and adoption to new technologies like digital payments etc. Lack of proper inventory management tools and lack of understanding about the hidden costs of excess inventory or the potential losses in sale because of products being out of stock are causing Kirana stores heavy losses on a day-to-day basis making it difficult for them to survive in the emerging market scenarios. The pandemic might have caused many problems but one positive thing to have emerged has been the acceleration towards digital transformation among Kirana stores. And that too on a scale never been seen before. These neighbourhood outlets have upgraded to serve customers omnichannel via phone, WhatsApp and even with a branded online ordering app.

PROBLEM SOLVING APPROACH –

The problem-solving approach involves first collecting the required monthly sales data, cleaning it, analysing the data to find average monthly sales per product, maintaining inventory ledger to keep track of stock held and daily depletions in stock. Then, we utilise this data to map an inventory management plan to help the Kirana owner purchase in bulk increasing purchasing power and reducing cost price to the Kirana owner. Managing assorted inventory stocks, equalling the business trends, dealing with a Kirana store loan, and satisfying the customer needs were the significant challenges that made Kirana business owners rethink how they should operate and manage inventory post covid.

a) Method used with justification-

- To achieve our task of calculating the average monthly sales per product we will sum up all the sales over the time period of our data collection and divide it by the number of days for which our data was collected.

- To achieve our task of calculating the average monthly sales per category we will use the concept of grouping and group products according to the sectors to which they belong and then find an average monthly sale of that group.

- To achieve our task of finding the top 5 products according to sale volumes, we will sum over the sales of each product over the number of days for which we have collected our data and sort the summed sales in descending order and select the first 5 products.

- To achieve our task of finding the top 5 products delivering maximum profits we will simply find the average cost price and average selling price of each product, subtract them to find out average profit per item sold and then multiply it with the monthly sales of that product to find out the total profit generated per month by each product and then sort these values in descending order to get our top 5 products.

- To map out an efficient inventory management plan we will make use of the average monthly sales per product obtained from the data and opening stock for the month. The initial thing to do while maintaining Kirana store stocks is setting par levels of your products, which are the minimum quantity of goods that should be in the store at all times. By maintaining stocks at par level, we can better understand when to order more inventory when stock drops below that predetermined level, which will differ from product to product. This helps us always remain efficient with your stock ordering. Also, by keeping inventory at par levels, Kirana business owners can eliminate excess stock problems and prevent a lack of in-demand products.

b) Intended data collection with justification-

The data that we need for solving this business problem is the daily sales data of the Kirana store for a period of minimum 1 month as we need to calculate the monthly average sales of the products so that we can find out the maximum profit generating products and create an inventory management solution. The data is collected from the billing invoice copies shared by the Kirana store owner and stored into an excel sheet.

c) Analysis tools with justification-

The software used to store, clean and analyse our data is MS excel. Ms Excel provides an easy to use interactive and straightforward interface with multiple features that will be useful in solving our business problem. It provides various mathematical functions for calculations and allows us to plot charts and graphs to analyse data not just analytically but also visually and hence we are making use of excel for this project.

EXPECTED TIMELINE –

The expected timeline for the project is as follows –

- By 18 September, I expect to collect previous few months primary sales data.
- By 23 September, I expect to clean, process and understand the data.
- By 28 September, I expect to calculate the monthly sales by category.
- By 3 October, I expect to calculate the monthly sales by product.
- By 8 October, I expect to find out the top 5 profit generating products.
- By 13 October, I expect to find out the top 5 products by sales volume.
- By 18 October, I expect to formulate an optimised Inventory management plan.

EXPECTED OUTCOME –

The findings of the analysis done in this project will help the local Kirana store to have a general idea about their monthly sales per category and monthly sales per product thereby helping the Store owners to make efficient Inventory management decisions thereby minimising inventory issues such as lost sales due to product being out of stock, help them avoid holding excessive inventory as well as help reduce the number of trips made to the local markets thereby helping shopkeepers place bulk orders reducing cost price to Kirana store owners.