Optimising the Sales of a Medium-Scale Grocery Shop

Final Report for the BDM capstone Project

Submitted by

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Contents

1 Executive Summary and Title

New Joy Maa Kali Bhandar Shop, founded by Mr. Bipro Roy, located in Shibpur near IIEST, Shibpur 1st Gate, Howrah, West Bengal- 733301 and established in 2011, is currently facing challenges in terms of profitability and inventory management, leading to indirect impacts on net profit and sales. The proposed capstone project aims to comprehensively address these challenges by focusing on enhancing inventory management, boosting sales, and formulating effective marketing strategies to increase overall net profit and sales for the store.

The primary objective of the capstone project is to augment net profit, optimize inventory, and establish effective control over goods flow. To achieve this, an in-depth analysis of sales data, coupled with fluctuations in purchase prices throughout the month, will be conducted. Identifying gaps and areas for improvement in the existing strategy will be a critical component of the project. The analysis will also delve into sales data to uncover patterns and trends, facilitating the identification of best and worst-performing Stock Keeping Units (SKUs). This insight will be pivotal in formulating targeted marketing strategies to enhance net sales and, consequently, increase net profit.

Following a thorough analysis, the project report will provide recommendations to address the identified problem areas. These recommendations will be tailored to optimize inventory management, improve sales, and refine marketing strategies.

To effectively analyse sales data and make informed business decisions, various Excel tools such as pivot tables, bar graphs, and line graphs will be employed. These tools serve as valuable aids in creating graphical representations, enabling the visualization of trends, patterns, and key insights within the sales data. By leveraging these Excel tools to analyse the performance of products, the project will yield data-driven recommendations, marketing strategies, and decisions aimed at optimizing revenue generation.

In conclusion, the capstone project for New Joy Maa Kali Bhandar Shop focuses on enhancing profitability through a comprehensive analysis of sales data, inventory management, and the formulation of targeted marketing strategies. The approach ensures that the recommendations are data-driven, tailored to the store's specific needs, and aimed at overcoming the challenges currently faced by the business.

2 Proof of Originality of Data and Store

The name of the shop for which I am doing analysis is New Joy Maa Kali Bhandar Shop, the name of the shop owner is Mr. Bipro Roy, located in Shibpur near IIEST, Shibpur 1st Gate, Howrah, West Bengal- 733301. It is mostly a B2C(Business-to-Consumer) type of business.

New Joy Maa Kali Bhandar Shop is a typical local grocery shop specializing in the retail of everyday essentials such as Dal, Sugar, Salt, Oils, Ghee, Dry Fruits, and more. Established in early 2011, the proprietor has invested a total of three lakhs in the business, allocating some funds to fixed assets like the building and others to variable assets like merchandise. Through discussions with the store owner and my subsequent analysis, it has come to light that the store was performing well before the advent of online marketing systems. However, since the emergence of online platforms, there has been a significant downturn in both sales and profit margins.

Fig 1. Image of the Shop

3 Detailed Explanation of Analysis Process/Method

3.1 Data Analysis for Sales and Expenditure

As mentioned earlier, the primary tool for conducting the analysis is Microsoft Excel. The initial step involves collecting sales data from New Joy Maa Kali Shop in an unstructured format, including the prices of each product, spanning a period of 31 days.

The store employs an informal method for data storage, and the raw data is subsequently input into Excel. The first stage of data processing encompasses basic tasks such as imputing missing values, rectifying typing errors, and sorting the data.

- The pre-processed sales data consists of 21 columns. Of these, 10 columns represent the sales quantity for each Stock Keeping Unit (SKU) on a given day, and an additional column denotes the date. The remaining 10 columns correspond to the prices of each SKU on the respective days.

DATE	SALES(QUANTITY SOLD)									
	RICE	ATTA	TOOR DAL	MOONG DAL	URAD DAL	SUGAR	COOKING OIL	GHEE	MILK & DAIRY	DRY FRUITS
11/1/2023	95	110	24	16	40	70	36	20	60	5
11/2/2023	90	80	28	18	44	48	35	10	56	5
11/3/2023	70	50	20	20	50	40	40	8	60	5
11/4/2023	85	40	22	14	44	42	45	10	64	7
11/5/2023	66	36	18	15	40	48	38	8	80	8
11/6/2023	35	24	8	10	4	10	8	4	70	2
11/7/2023	40	20	8	8	8	8	6	2	60	2
11/8/2023	40	24	8	6	6	10	8	4	60	3
11/9/2023	60	30	6	4	4	6	6	4	80	4
11/10/2023	65	32	8	6	4	8	8	0	60	1
11/11/2023	84	24	6	8	6	8	6	2	60	0
11/12/2023	48	28	8	8	8	6	6	2	60	0
11/13/2023	50	28	6	8	6	10	4	0	60	1
11/14/2023	105	34	12	8	10	12	8	2	65	1

Fig.2 Dataset (Sales Data)

DATE	SELLING PRICE									
	RICE	ATTA	TOOR DAL	MOONG DAL	URAD DAL	SUGAR	COOKING OIL	GHEE	MILK & DAIRY	DRY FRUITS(KAJU)
11/1/2023	₹50	₹35	₹200	₹140	₹120	₹45	₹140	₹550	₹60	₹855
11/2/2023	₹50	₹35	₹200	₹140	₹120	₹45	₹140	₹550	₹60	₹855
11/3/2023	₹50	₹35	₹200	₹140	₹120	₹45	₹140	₹550	₹60	₹855
11/4/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹140	₹550	₹60	₹865
11/5/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹140	₹550	₹60	₹865
11/6/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹140	₹550	₹60	₹865
11/7/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹140	₹550	₹60	₹865
11/8/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹140	₹550	₹60	₹865
11/9/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹140	₹550	₹60	₹865
11/10/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹140	₹550	₹60	₹865
11/11/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹140	₹550	₹60	₹865
11/12/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹135	₹550	₹60	₹865
11/13/2023	₹50	₹35	₹200	₹140	₹120	₹43	₹135	₹550	₹60	₹865

Fig.3 Dataset (Selling Price)

- Using sales and selling price revenue for the day, average sales, selling price and total revenue can be calculated by formula:

$$Revenue = Selling\ price * Sales$$

$$\text{Total } Revenue = \sum R_i$$

where R_i = Revenue made at i^{th} day

- Similarly purchase data has been collected for every SKUs and along with total expenditure for the day, average expenditure per SKU as well as Total expenditure is calculated for 31 days using formulars:

$$\text{Expenditure} = \text{Purchase Price} * \text{Quantity}$$

$$\text{Total Expenditure} = \sum E_i$$

where E_i = Revenue made at i^{th} day

	PURCHASE(Quantity)									
DATE	RICE	ATTA	TOOR DAL	MOONG DAL	URAD DAL	SUGAR	COOKING OIL	GHEE	MILK & DAIRY	DRY FRUITS
11/1/2023	0	0	0	0	0	0	0	0	60	44
11/2/2023	0	200	0	50	0	0	0	0	56	0
11/3/2023	0	0	50	0	50	0	60	20	60	0
11/4/2023	0	0	0	0	50	0	60	0	64	0
11/5/2023	0	0	0	0	0	0	0	0	80	0
11/6/2023	0	200	50	0	50	50	0	0	70	0
11/7/2023	0	0	0	50	0	0	0	15	60	0
11/8/2023	0	0	0	0	0	0	0	0	60	0
11/9/2023	0	0	0	0	0	0	20	0	80	0
11/10/2023	0	0	0	0	0	0	0	0	60	0

Fig. 4 Dataset Purchase (Quantity)

	PURCHASE PRICE									
DATE	RICE	ATTA	TOOR DAL	MOONG DAL	URAD DAL	SUGAR	COOKING OIL	GHEE	MILK & DAIRY	DRY FRUITS
11/1/2023	₹45	₹32	₹184	₹126	₹110	₹42	₹132	₹495	₹57	₹701
11/2/2023	₹45	₹32	₹184	₹126	₹110	₹42	₹132	₹495	₹57	₹701
11/3/2023	₹45	₹32	₹184	₹126	₹110	₹42	₹132	₹495	₹57	₹701
11/4/2023	₹45	₹32	₹184	₹126	₹110	₹40	₹132	₹495	₹57	₹709
11/5/2023	₹45	₹32	₹184	₹126	₹110	₹40	₹132	₹495	₹57	₹709
11/6/2023	₹45	₹32	₹184	₹126	₹110	₹40	₹132	₹495	₹57	₹709
11/7/2023	₹45	₹32	₹184	₹126	₹110	₹40	₹132	₹495	₹57	₹709
11/8/2023	₹45	₹32	₹184	₹126	₹110	₹40	₹132	₹495	₹57	₹709
11/9/2023	₹45	₹32	₹184	₹126	₹110	₹40	₹132	₹495	₹57	₹709
11/10/2023	₹45	₹32	₹184	₹126	₹110	₹40	₹132	₹495	₹57	₹709
11/11/2023	₹45	₹32	₹184	₹126	₹110	₹40	₹132	₹495	₹57	₹709

Fig. 5 Dataset Purchase (Price)

3.2 Increase the overall profit of the Business

- During my discussion with the business owner, we discovered that due to high competition and entry of new shops and online grocery shops profits were declining, were not steady and it's becoming difficult for them to survive.
- Hence first step was to calculate profit / loss for each day, each SKU to determine the authenticity of the owner, for that I used sales and purchase data to calculate profit/loss, profit % for each SKU Day using formula:

$$Profit = Sales - Purchase$$
$$Profit_{SKU}\ \% = (profit_{SKU} / T.profit)\ \%$$

PRODUCT	P/L	REVENUE (SALES)	% OF TOTAL PROFIT	% OF TOTAL REVENUE	PROFIT MARGIN %
RICE	₹22,480	₹166,300	22.05%	20%	19.75%
ATTA	₹4,217	₹44,660	4.14%	5%	20.00%
TOOR DAL	₹9,312	₹88,800	9.13%	10%	17.50%
MOONG DAL	₹6,391	₹46,256	6.27%	5%	14.89%
URAD DAL	₹6,232	₹61,104	6.11%	7%	10.97%
SUGAR	₹1,891	₹32,046	1.85%	4%	6.00%
COOKING OIL	₹7,110	₹79,900	6.97%	9%	5.80%
GHEE	₹12,579	₹110,490	12.34%	13%	19.79%
MILK & DAIRY	₹6,004	₹116,603	5.89%	14%	5.00%
DRY FRUITS	₹25,745	₹105,970	25.25%	12%	18.00%
	₹101,960	₹852,129			13.77%

Fig. 6 Profit/Loss Calculation

DATE	TOTAL SALES	TOTAL EXPENDITURE	PROFIT / LOSS
11/1/2023	₹47,505	₹34,268	13236.6
11/2/2023	₹40,895	₹15,932	24963
11/3/2023	₹37,725	₹35,936	1789
11/4/2023	₹40,791	₹17,064	23727
11/5/2023	₹38,564	₹4,560	34004
11/6/2023	₹15,750	₹27,171	-11421
11/7/2023	₹13,994	₹17,145	-3151
11/8/2023	₹15,945	₹3,420	12525
11/9/2023	₹17,848	₹7,192	10656
11/10/2023	₹13,219	₹3,420	9799
11/11/2023	₹13,964	₹3,420	10544
11/12/2023	₹12,828	₹3,420	9408
11/13/2023	₹11,955	₹3,420	8535
11/14/2023	₹18,621	₹62,942	-44321
11/15/2023	₹12,677	₹3,420	9257
11/16/2023	₹13,207	₹3,135	10072
11/17/2023	₹8,227	₹3,083	5144.25

Fig. 7 Profit/Loss on Days

Considering the fact that there was some inventory for every SKU at the start and end of data collection purchase of each SKU was calculated using formula:

$$Purchase = T.Purchase + I.Inventory - E.Inventory$$

Where I.Inventory = Initial inventory, E.Inventory = End inventory,
T.Purchase = Total purchase

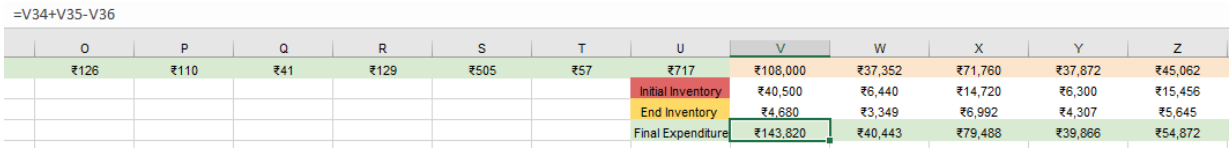

Fig. 8 Formula

Lastly cumulative profit was calculated for Pareto Chart.

PRODUCT	% OF TOTAL PROFIT	Cumulative Profit %
RICE	22.05%	22.05%
DRY FRUITS	25.25%	47.30%
GHEE	12.34%	59.64%
TOOR DAL	9.13%	68.77%
COOKING OIL	6.97%	75.74%
MOONG DAL	6.27%	82.01%
URAD DAL	6.11%	88.12%
ATTA	4.14%	92.26%
MILK & DAIRY	5.89%	98.15%
SUGAR	1.85%	100.00%

Fig. 9 Table for Pareto Chart

3.3 Optimising Inventory

Upon discussion with the owner, we got to know that inventory management was the main concern for the owner as according to owner stock was piled up at the end of the month and also profit was less hence buying new stock was getting difficult due to inflation.

Inventory data is collected for every SKU at the first day of data collection (i.e. 1/11/23). Further Inventory data is calculated using sales, purchase and initial inventory using formula:

$$Inventory = Initial\ Inventory - Sales + Purchase$$

=B5-SALES!B5+PURCHASE!B5

	A	B	C	D	E	F
						INVENTORY
	DATE	RICE	ATTA	TOOR DAL	MOONG DAL	URAD DAL
	11/1/2023	900	200	80	50	140
	11/2/2023	805	90	56	34	100
	11/3/2023	715	210	28	66	56
	11/4/2023	645	160	58	46	56
	11/5/2023	560	120	36	32	62
	11/6/2023	494	84	18	17	22
	11/7/2023	459	260	60	7	68
	11/8/2023	419	240	52	49	60
	11/9/2023	379	216	44	43	54
	11/10/2023	319	186	38	39	50
	11/11/2023	254	154	30	33	46

Fig. 10 Table for Inventory Analysis

Using inventory data average inventory, total inventory is calculated for every day as well as every SKU

$$Total\ Inventory = \sum I$$

where I = Inventory at day

TOTAL DAILY INVENTORY	AVERAGE DAILY TOTAL INVENTORY	DATE
1836	183.6	11/1/2023
1464	146.4	11/2/2023
1356	135.6	11/3/2023
1233	123.3	11/4/2023
1034	103.4	11/5/2023
757	75.7	11/6/2023
1002	100.2	11/7/2023
965	96.5	11/8/2023
856	85.6	11/9/2023
752	75.2	11/10/2023
620	62	11/11/2023
476	47.6	11/12/2023
362	36.2	11/13/2023
249	24.9	11/14/2023

Fig. 11 Table for Inventory Analysis

3.4 Fixed Cost Analysis

For fixed Cost analysis cost Transport, Rent, Furniture, Electricity, Accessories, Loan were calculated for a period of 31 days (according to data) along with depreciation rate (approx. as per area)

According to data Total fixed cost was calculated,

	FIXED COST ANALYSIS		
	COST	RATE OF DEPRICIATION	DEPRICIATION
FURNITURE	200000	1%	₹2,000
FREEZER	40000	2%	₹800
CONTAINERS	20000	1%	₹200
DELIVERY VEHICLES	130000	2%	₹2,600
PETROL/TRANSPORT	3000	100%	₹3,000
RENT	15000	100%	₹15,000
ELECTRICITY	1000	100%	₹1,000
CARRY BAGS	2000	100%	₹2,000
EMI	10000	100%	₹10,000
TOTAL FIXED COST	₹421,000	FIXED COST	₹36,600

Fig. 12 Table for Fixed Cost Analysis

4 Results and Findings

4.1 Volume Analysis

The graphical representation of the revenue (sales) generated for the month provides valuable insights into the store's performance. Several key observations can be drawn from the analysis:

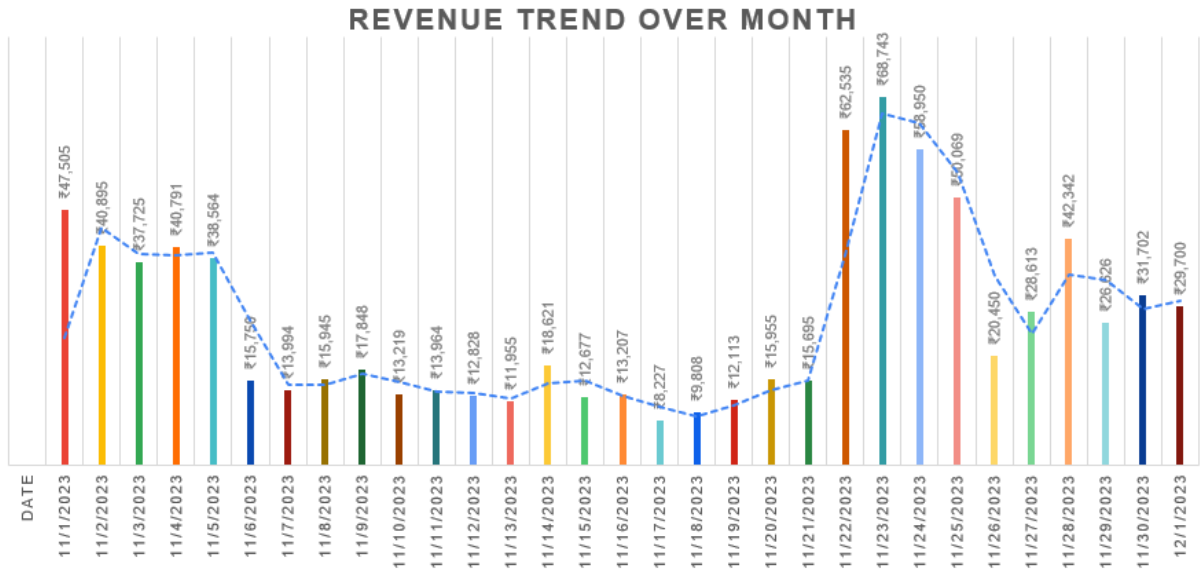

Fig. 13 Revenue Trend Over Month

- **Peak Revenue Periods:** The graph illustrates that the start and end days of the month emerge as the highest revenue-generating periods. Specifically, the early days at the end of the month (22nd to 28th) are identified as the most crucial, referred to as the "golden period."
- **Mid-Month Revenue Challenges:** Conversely, the middle of the month appears to be challenging for revenue generation, indicating a potential dip in sales during this period.
- **Average Daily Revenue and Fluctuations:** The analysis calculates an average daily revenue of ₹27,323 with a notable standard deviation of ₹17118.80. The high standard deviation in relation to the average suggests significant revenue fluctuation, signifying the need for a closer examination of contributing factors.
- **Revenue Range:** The minimum recorded revenue is ₹8,227, while the maximum reaches ₹68,743, resulting in a substantial range of ₹60,516 (calculated using the formula: Range = Max - Min).
- **SKU-Specific Revenue Analysis:** To delve into the revenue generated by each Stock Keeping Unit (SKU), two graphs have been generated: one illustrating the revenue for each SKU over the month, and the other presenting a Pareto chart highlighting the cumulative contribution of each SKU to the total revenue.

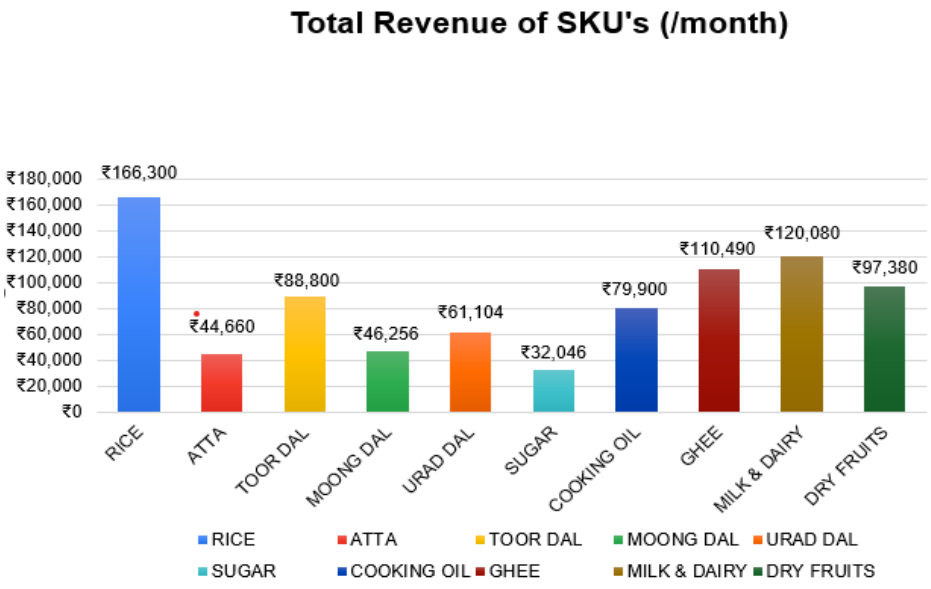

Fig. 14 Total Revenue of SKU's (/month)

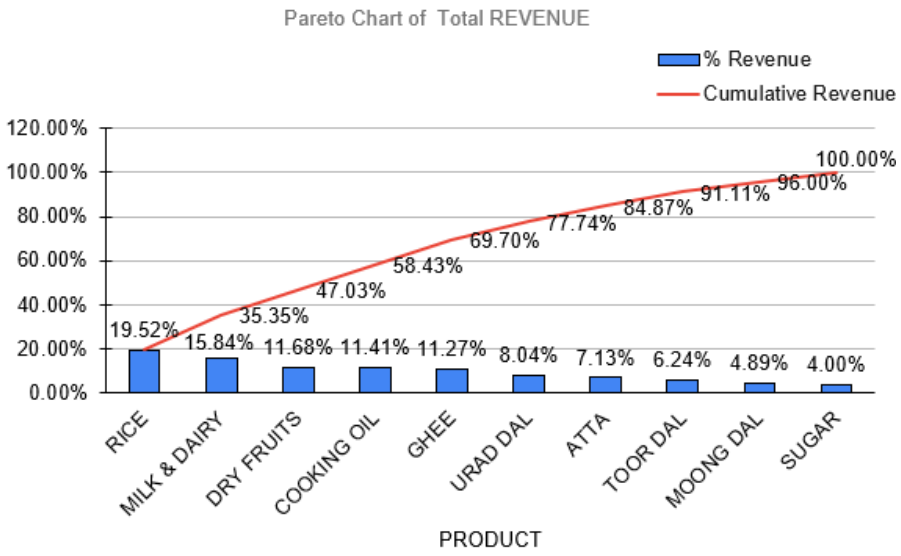

Fig. 15 Pareto Chart of Total Revenue

- Above analysis depicts that Rice, Milk & Dairy, Dry Fruits, Cooking Oil, Ghee and Urad Dal are the main revenue generating SKU for the shop which can be seen on the pareto chart can be seen as well as these 6 contributes approx. 80% to the total revenue generated of the shop.

To analyze each SKU contribution along with pareto, the below graphs are generated to show the proportion of each SKU contribution to Total revenue generated as well as Total sales volume of the shop for a period of month:

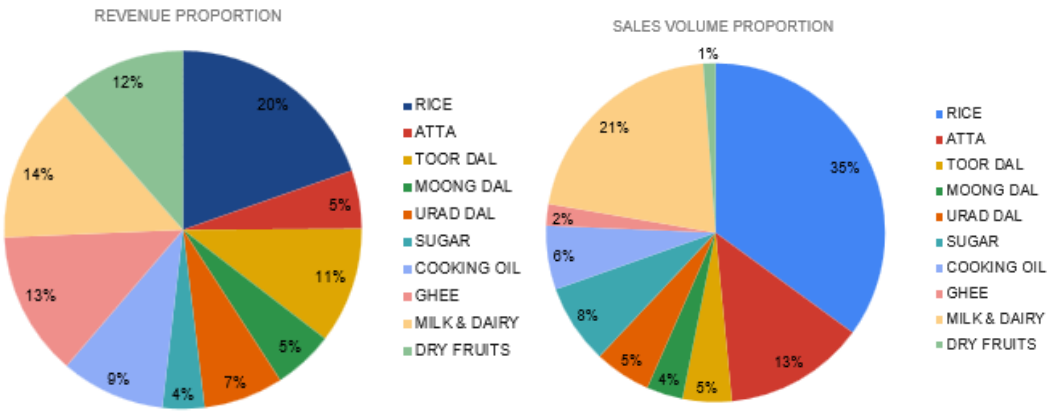

Fig. Showing Revenue Proportion and Sales Volume Proportion

- From the above analysis it can be clearly deduced that Sales and revenue proportion for each SKU are directly related to each other meaning there is no high revenue generating product at low sales volume for the shop except.
- Cooking oil and Ghee which has a contribution of 6.2% and 6% respectively to the sales volume proportion while having a contribution margin of 11.4% and 11.3% to the total revenue indicating high revenue generation at low volume in comparison to other SKU's.

- It can also be seen that the major 6 SKUs from the pareto chart for revenue have a high-sales volume proportion and revenue proportion making our pareto chart results valid After Sales, to analyse the fluctuation or trend in purchase price, the below graph is plotted for the purchase price of each SKU over the period of month.

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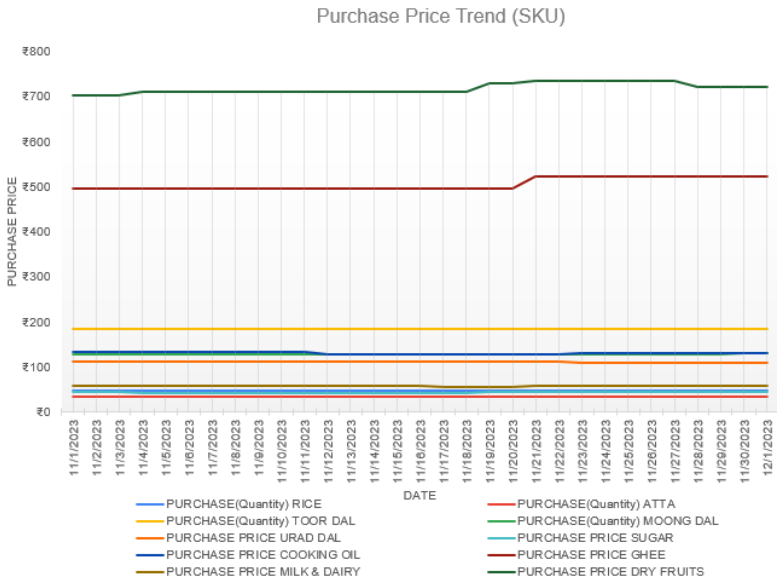

Fig. 16 Purchase Revenue Trend

- **Purchase Price Trends:**
  - Most SKUs experience a marginal increase in purchase prices from the middle to the end of the month.
  - Notable exception: Cooking oil, which exhibits a contrasting trend during this period.
- **Golden Period and Revenue:**
  - The identified "golden period" (19th to 27th) corresponds with the highest revenue-generating phase for the shop.
  - Implication: Strategic alignment of purchase decisions with revenue peaks can optimize profitability.
- **Cooking Oil Insights:**
  - Cooking oil shows a dip in purchase price during the golden period.
  - Recommendation: Propitious time for buying; potential for increased profit margins.
- **Urad Dal Dynamics:**
  - Urad Dal witnesses a substantial increase in purchase price (₹10 - ₹12) during the golden period.
  - Strategy: Early investment advised; stocking Urad Dal earlier can lead to significant profit gains.
- **Graphical Representation:**

- Graphs for Cooking oil and Urad Dal purchase prices have been plotted to visually illustrate the trends.
- Decision Support: Visualizing purchase price fluctuations aids in informed buying decisions.

- **Owner's Buying Decision Analysis:**
  - The analysis emphasizes the importance of strategic timing in purchasing decisions.
  - Encourages the owner to capitalize on the dip in cooking oil prices during the golden period for enhanced profitability.
  - Urges early stocking of Urad Dal to mitigate the impact of significant price increases during the same lucrative timeframe.
- **Profit Optimization:**
  - Overall, the analysis aims to guide the owner in optimizing profits by aligning purchase decisions with revenue peaks and understanding SKU-specific dynamics.

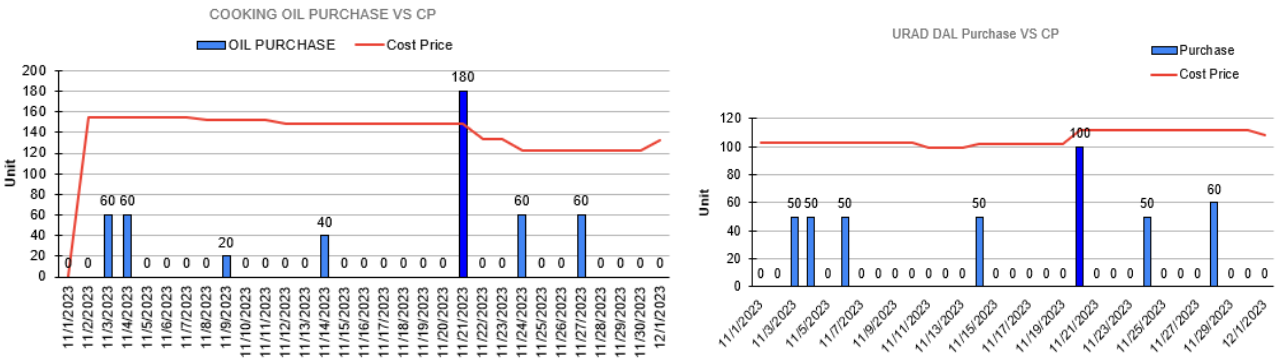

Fig. 17Cooking Oil Purchase v/s CP and Urad Dal Puchase v/s CP

4.2 Profit/Loss Analysis

The below graph shows the comparison of average purchase price to the average selling price for each item present in the shop which can be further used to calculate average profit per item to analyze the areas / SKU's which can be improved to increase net profit.

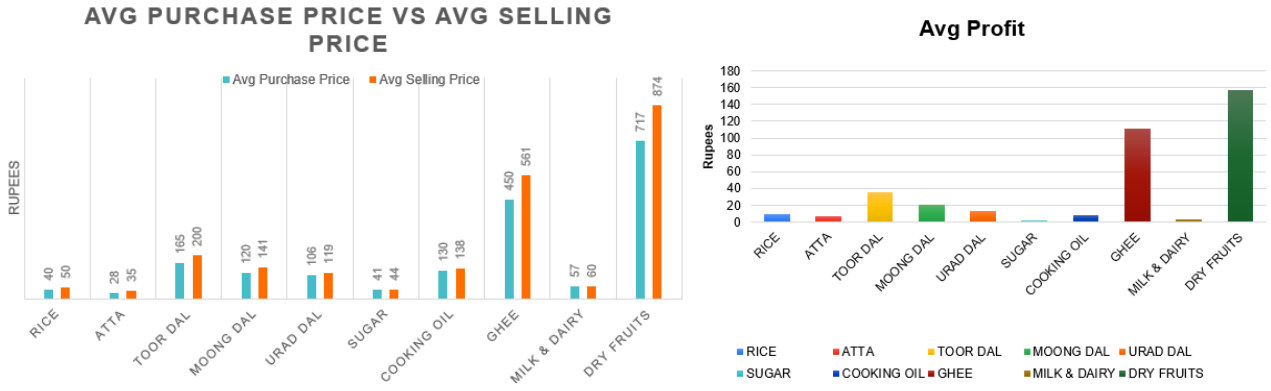

Fig. 18 Avg Purchase Price v/s Avg Selling Price and Avg Profit

- From the above graph it can be seen that Dry fruits and Ghee are the items that holds maximum profit generating capacity while comparing these results to the revenue and revenue volume proportion pie chart it can be clearly seen that Dry Fruits and Ghee sales volume need to be improved for the shop to increase its net profit.

Further to analyze, below graph is plotted for, each SKU contribution to the profit in comparison to the contribution in revenue.

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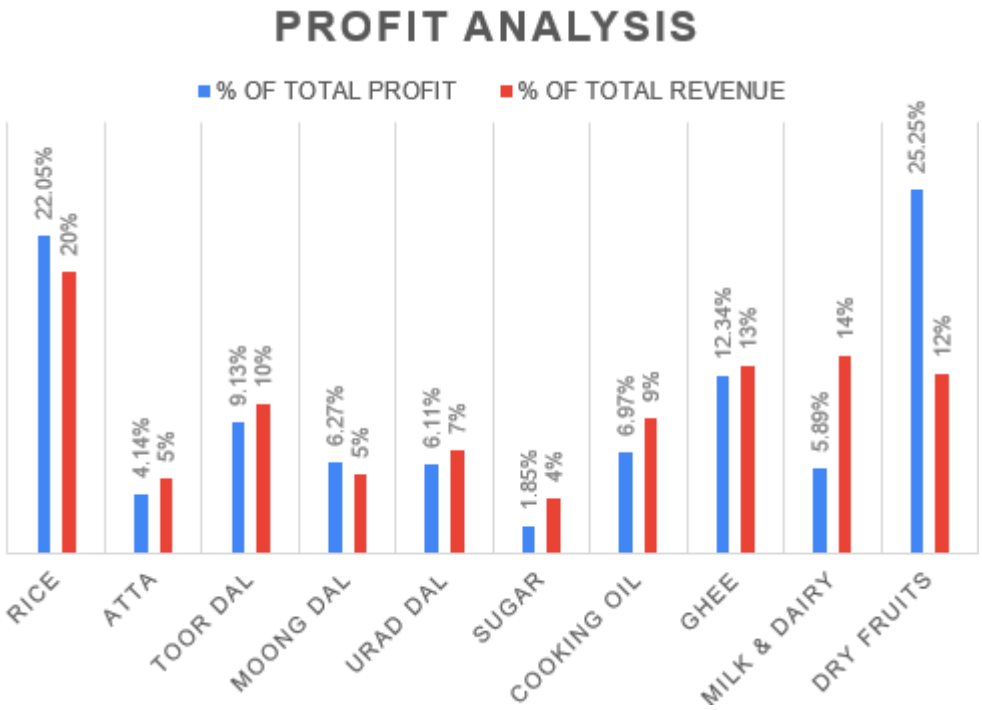

Fig. 19 Profit Analysis

The above analysis validated our previous analysis about Dry fruits. It also concludes that although the shop is prosperous in Milk & Dairy, Cooking oil sales but their contribution to the overall profit remains significantly lower to that of others hence lower net profit which can be due to the fact of wrong purchase decision (shown above).

To validate our above finding, the below pareto chart for total profit is plotted.

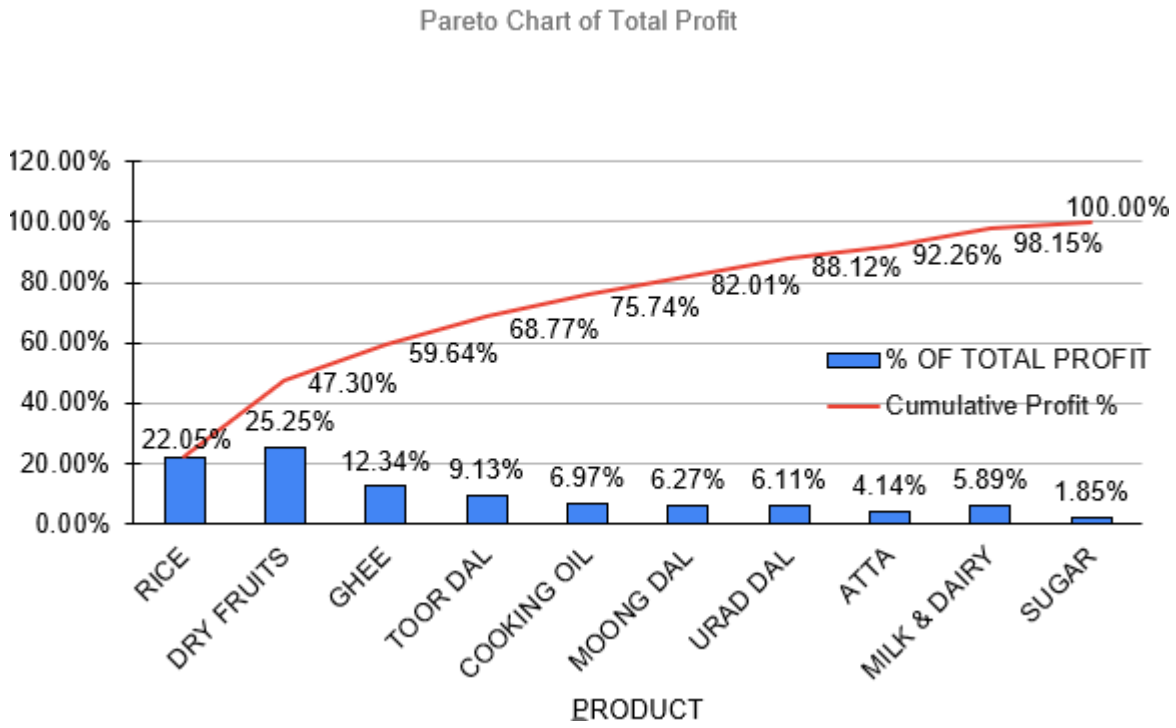

Fig. 20 Pareto Chart of Total Profit

Furthermore, the below is generated to analyze the gross profit/loss over the period of month.

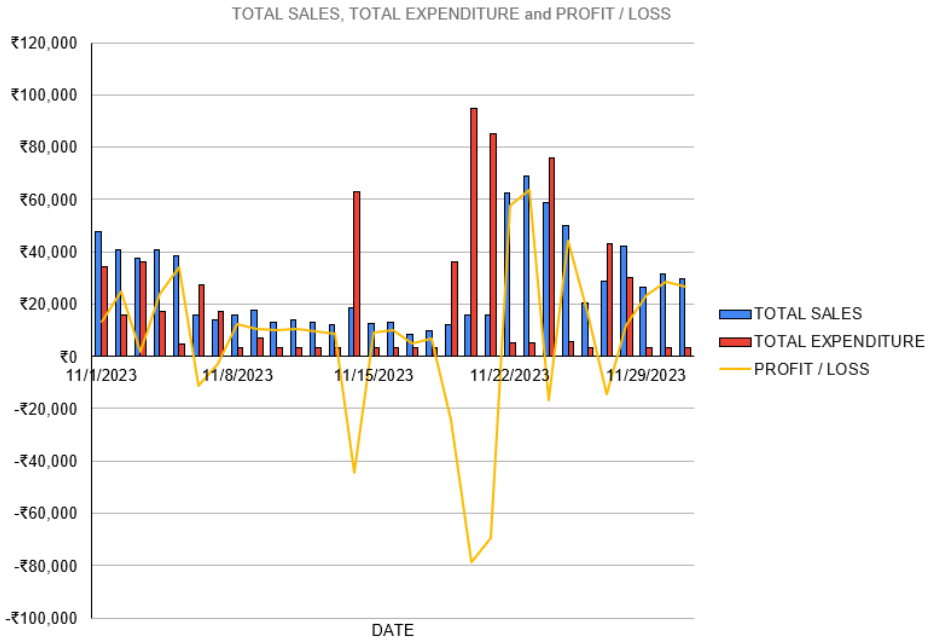

Fig. 21 Total Sales, Total Expenditure and Profit/Loss

From the above graph our analysis about the golden period for the shop (i.e. 22th - 28th) validates as well as it can be concluded that the wrong decision made by the owner in purchase of cooking oil and Urad Dal (shown above) caused very high loss for the shop resulting in lower net profit.

4.3 Inventory Analysis

To start with inventory analysis, below graph represents the average stock in bags/carton for every item. Comparing the above avg stock graph with avg sales of each item in exception to Milk & Dairy we can see that there are no abnormalities.

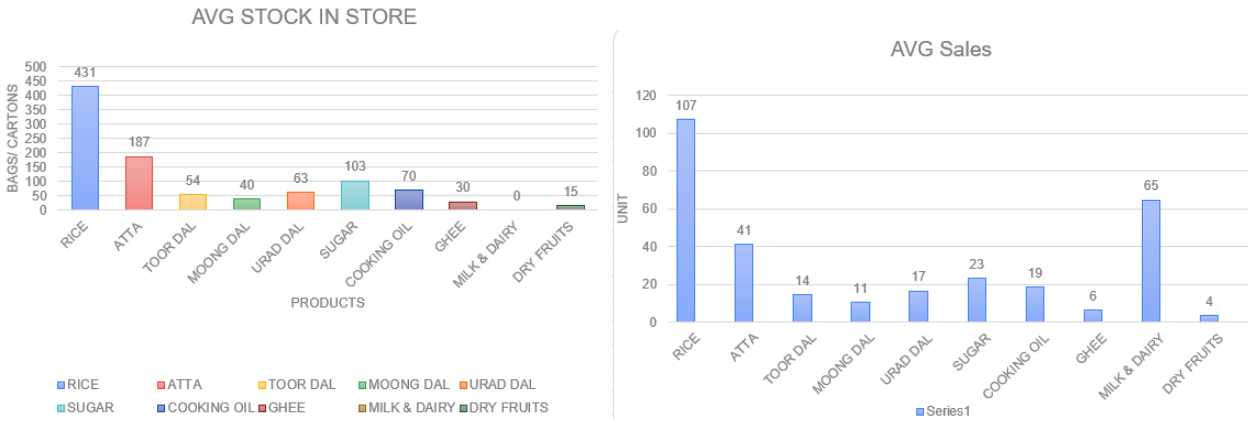

Fig. 22 AVG STOCK IN STORE AND AVG Sales

As per owner claim of inefficient inventory management, the below graph is plotted to analyze inventory fluctuation over the period of month.

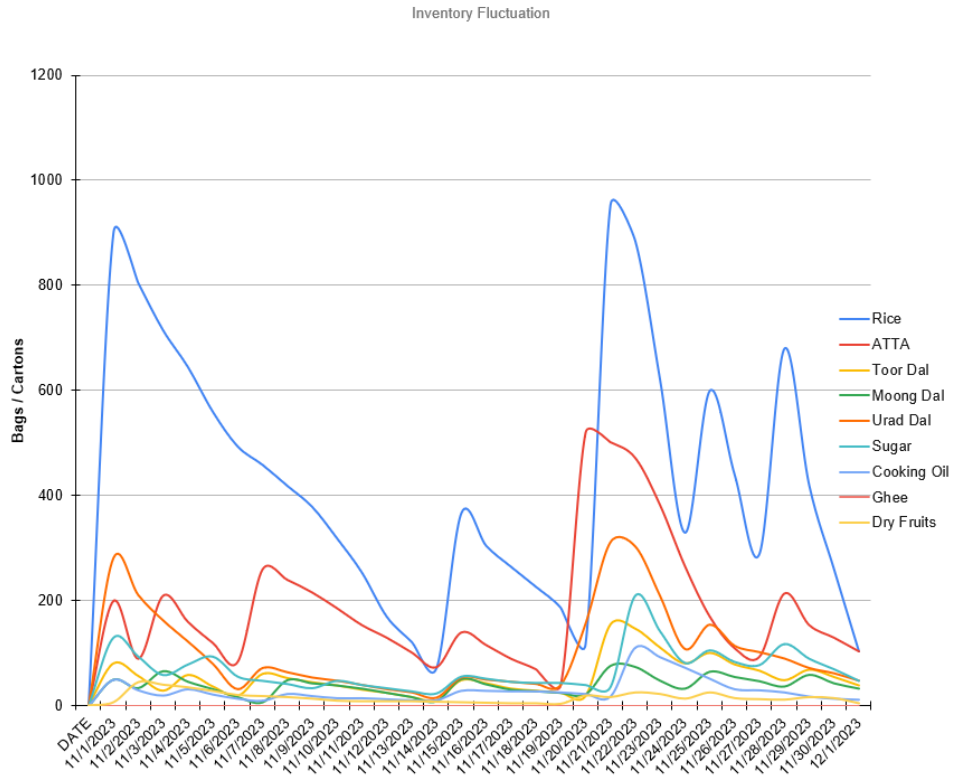

Fig. 23 Inventory Fluctuation

- From the above graph it can be clearly seen that although there are no abnormalities in avg stock as per sales but there is high fluctuation / variance in stock present in the inventory for every SKU around the golden period (i.e. 22th - 28th) when sales are high which clearly indicated poor planning and validates owner claim.

- Secondly it can be observed that shop tend to refill its stock in relation to demand or when stock is limited in inventory which can be referred to as a good practice but is backfiring in this particular case (given all months follow the same trend.)

4.4 PL and Insights

Further to analyze the net profit firstly fixed cost is calculated using the data given by the owner,

	FIXED COST ANALYSIS		
	COST	RATE OF DEPRICIATION	DEPRICIATION
FURNITURE	200000	1%	₹2,000
FREEZER	40000	2%	₹800
CONTAINERS	20000	1%	₹200
DELIVERY VEHICLES	130000	2%	₹2,600
PETROL/TRANSPORT	3000	100%	₹3,000
RENT	15000	100%	₹15,000
ELECTRICITY	1000	100%	₹1,000
CARRY BAGS	2000	100%	₹2,000
EMI	10000	100%	₹10,000
TOTAL FIXED COST	₹421,000	FIXED COST	₹36,600

Fig. 24 Table of Fixed Cost Analysis

- The above table provides us with fixed cost analysis along with depreciation rate (approx. given by the owner).
- Items in above table can be majorly divided into two segments: fixed assets and monthly expenses.
- Majority of the loan amount was used by the seller to purchase fixed assets. Also, as it can be seen that the rate of depreciation for them is very low (1-2%), which is an indication of a good investment.
- The amortized monthly cost of the fixed assets if only ₹56,000, is very low compared to the returns he gets from them indicating good investment.
  From the above table following things can also be calculated:
  - Total fixed cost: ₹421,000
  - Total Normalized Fixed cost: ₹36,600, which can be used to calculate net profit using formula: ($Net\ profit$ = $Gross\ Profit$ – $Total\ Normalised\ Fixed\ Cost$)
  - Net profit: ₹65,360

5 Interpretation of Results and Recommendation

4.1 Recommendation 1: Boosting Sales of High-Profit Items (e.g., Dry Fruits & Ghee)

After a thorough analysis, it is evident that Dry Fruits and Ghee offer significantly higher profit margins compared to other items. To capitalize on this opportunity, the shop owner can implement the following strategies to increase the sales of these high-profit margin items:

- Seasonal Promotions: Given the seasonal demand for Dry Fruits during winter, the shop can organize sales promotions during this period to capitalize on heightened demand and drive sales.
- B2B Platforms and Partnerships: Exploring opportunities on Business-to-Business (B2B) platforms or establishing partnerships with other businesses can allow the shop to offer Dry Fruits and Ghee at competitive rates to businesses, increasing overall sales volume and, subsequently, net profits.
- Bulk Sales and Discounts: Instead of selling small quantities, offering discounted prices on larger quantities of Dry Fruits can attract customers and businesses alike. This strategy encourages bulk purchases, contributing to increased sales volume.

4.2 Recommendation 2: Enhancing Milk Sales

Aligned with the first recommendation, addressing items like Milk that may face challenges in meeting sales expectations due to various factors is crucial. To optimize inventory and increase sales of Milk, the following strategies can be implemented:

- Morning-Focused Milk Sales: Concentrating on morning sales by ensuring adequate stock during that period can be an effective strategy. Encouraging customers to make additional purchases along with milk or offering free house delivery can further optimize assets and increase overall sales.
- Introducing Delivery Charges: Following the initial phase of free house delivery for milk, gradually introducing nominal delivery charges can help cover the service costs and generate additional profits for the shop.

4.3 Recommendation 3: Strategic Inventory Restocking

Considering past poor decisions in purchasing items like Cooking Oil and Urad Dal, strategic inventory restocking can mitigate losses. The following recommendations aim to optimize inventory management:

- Time-Based Restocking: Instead of reacting solely to demand, implementing a fixed-interval restocking approach, categorizing items as perishable and non-perishable, can help in making informed decisions and reducing last-minute risks.
- Timing Restock with High Sales Periods: Analysing sales data indicates a peak from the 22nd to the 28th of each month. Recommending restocking slightly earlier than the 22nd ensures sufficient inventory without unnecessary risks during peak sales.

4.4 Recommendation 4: Improving Current Ratio

The analysis identifies a low current ratio, indicating potential liquidity issues. To address this, the shop can focus on increasing current assets or decreasing liabilities. Given constraints, the emphasis should be on increasing sales to improve the current ratio.

4.5 Recommendation 5: Additional Steps

4.5.1 Effective Pricing Strategies:

- Bundle Pricing: Introduce bundled offers, such as combining related products like dry fruits and ghee, at a discounted price to encourage multiple-item purchases and enhance transaction value.
- Promotional Pricing: Periodically offer special promotions, discounts, buy-one-get-one-free offers, or limited-time promotions to create urgency and attract customers during specific periods.

4.5.2 Enhance Store Display and Visual Merchandising:

- Eye-Catching Displays: Strategically position high-profit items, such as dry fruits and ghee, in visually appealing displays to attract customer attention and encourage exploration.
- Sample Stations: Set up sample stations, especially for less familiar products like dry fruits, allowing customers to experience product quality and flavour, increasing the likelihood of purchase.

Implementing these recommendations collectively will empower New Joy Maa Kali Bhandar to not only enhance profitability and optimize inventory management but also create a more appealing shopping environment, resulting in increased sales and sustained business success. Regular monitoring and adjustments are advised to ensure the long-term effectiveness of these strategies.

5 Conclusion

In summary, the comprehensive analysis of New Joy Maa Kali Shop sales and expenditure data has yielded insightful recommendations aimed at enhancing the shop's profitability and optimizing inventory management.

The examination revealed that specific items, such as Dry Fruits and Ghee, possess high-profit margins, presenting substantial opportunities for increased sales. To leverage these high-profit items, the implementation of targeted marketing strategies—such as seasonal promotions and collaborations with other businesses—can unlock their full potential. Additionally, offering bulk sales and discounts may incentivize customers to make larger purchases, thereby increasing sales volume and overall profitability.

The findings underscored the importance of refining inventory management practices. Early restocking during peak sales periods, coupled with improved planning and forecasting, can ensure adequate stock availability while avoiding excess inventory or shortages. This approach not only preserves customer satisfaction but also reduces carrying costs and enhances overall operational efficiency.

Furthermore, the analysis emphasized the necessity of making informed purchase decisions. Close monitoring of price fluctuations and market trends is crucial to prevent acquiring items at inflated prices, as observed with Cooking Oil and Urad Dal. Proactive purchasing can mitigate losses and contribute to increased profitability.

The examination of fixed costs identified specific areas, such as electricity and containers, where expenditure optimization is needed. Continuous evaluation and optimization of these costs will improve overall cost efficiency and maximize profit margins.

Additionally, recommendations to enhance store display and implement effective pricing strategies can positively impact customer attraction and sales. Employing eye-catching displays, sample stations, and promotional pricing creates a favourable shopping experience, encouraging customers to make additional purchases and ultimately driving higher revenue and profitability.

Implementation of these recommendations holds the potential to elevate New Joy Maa Kali Shop’s financial performance, increase profitability, and fortify its market position. The shop owner should maintain a vigilant stance, continually monitoring and evaluating the effectiveness of these strategies, making necessary adjustments to ensure sustained long-term growth and viability.

6 Important Links

Spreadsheet: Excel File

Presentation: Presentation File