



OPTIMIZING PROFITS: A DATA-DRIVEN APPROACH FOR HAR-HITH GROCERY STORE'S INVENTORY MANAGEMENT

About Har-Hith Grocery Store

Franchisee Details

Har-Hith Grocery Store is a rural franchisee under Haryana Agro Industries Corporation Limited (HAICL), providing essential products in Bhattu Mandi, Fatehabad district, Haryana.

Establish in June 2022

Store Features

The store offers an organized layout, efficient facilities including a POS machine, and a robust infrastructure, distinguishing it from typical rural kirana shops.

Investment and Support

The store's initial investment was approximately 5 lakhs, backed by IT, marketing, advertising, and logistics support from HAICL as a franchisee.



About the problem



Inventory Issues Impacting Performance

The store's disorganized inventory affects net profit despite its well-equipped facilities.



Seasonal Sales Variation

Identifying seasonal sales drivers can optimize marketing strategies and product mix to increase sales.



Enhancing Customer Loyalty

Challenges and opportunities to enhance customer loyalty for increased customer lifetime value.



Data Overview And Solution Approach

1

Data Consolidation and Cleaning

The information collected over a year was merged into a unified spreadsheet. Thorough examination ensured cleanliness, addressing missing values and identifying outliers for effective analysis. Total 1057 SKU categorized under 21 category

2

Sales Data Analysis

Time-series analysis was performed to identify trends and anomalies. Category-wise analysis and Pareto analysis were used to understand sales performance and the significance of key elements.

3

Inventory Analysis and P/L Analysis

Key metrics inventory turnover ratio and FSN analysis taken to understand inventory efficiency.

Profit/Loss analysis - Calculated gross profit, gross profit margin, and other financial ratios, used visualizations to present insights.

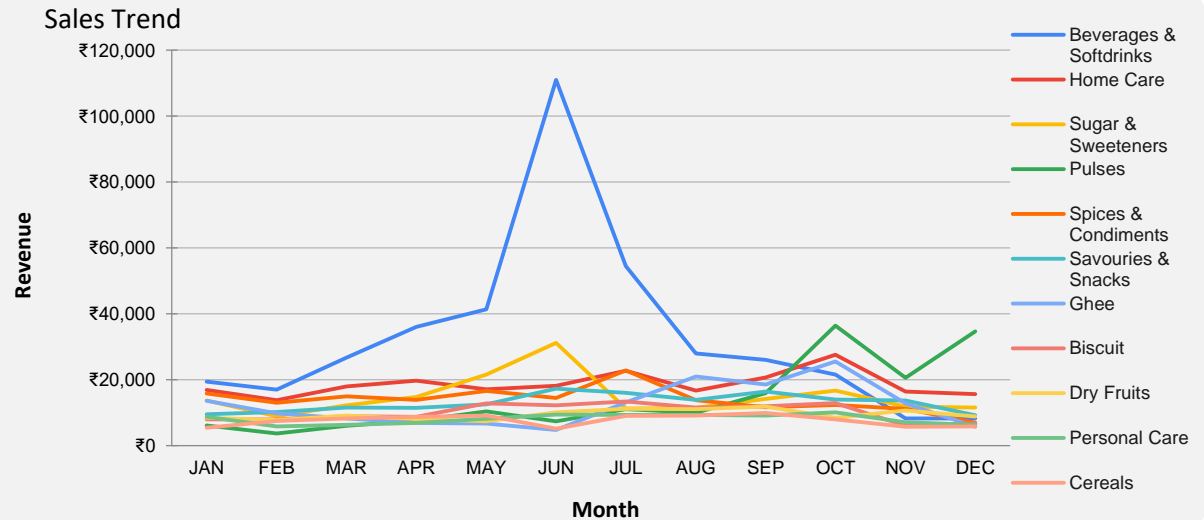


Sales Analysis: Time Series & Categorized Data

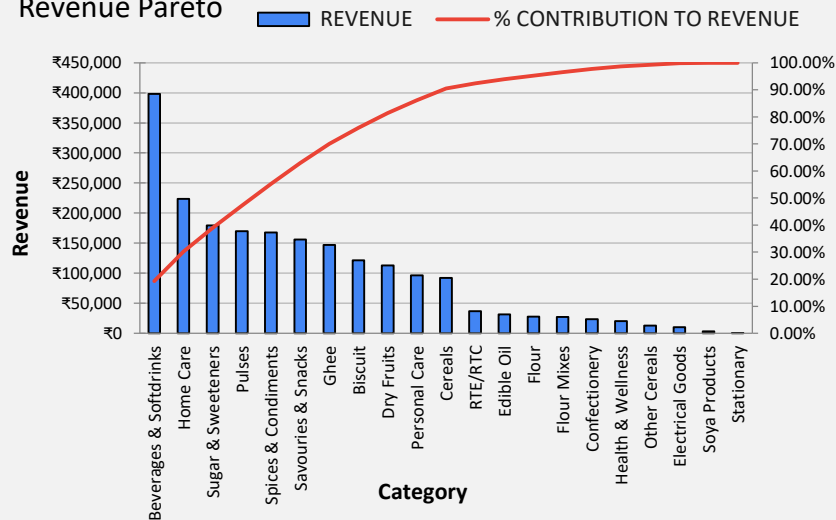
Sales Trend:

Sales trend of various categories depicts high sale in month of May, June, July

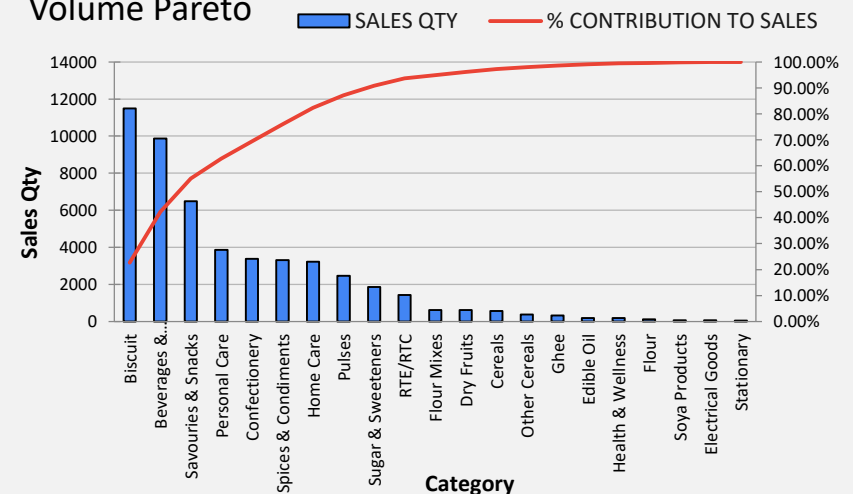
Pareto chart comparison:
Revenue and Volume
Pareto chart comparison.



Revenue Pareto



Volume Pareto

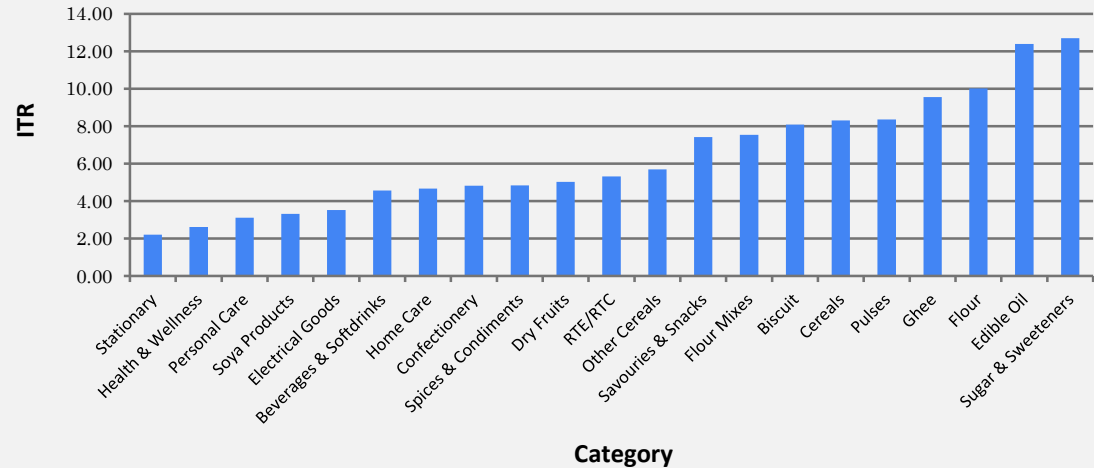


Inventory Analysis

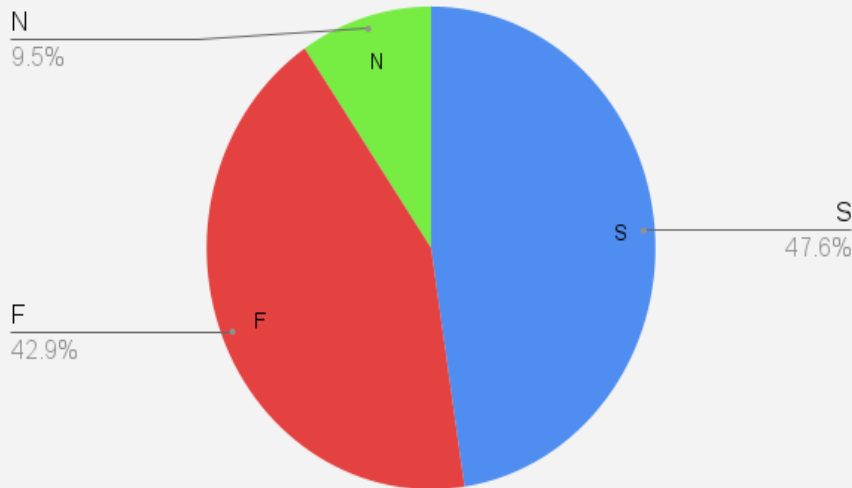
Inventory Turnover Ratio:

The report delves into a comprehensive analysis of the store's inventory management, calculating key metrics such as inventory turnover ratio.

INVENTORY TURNOVER RATIO



FSN ANALYSIS



FSN Analysis:

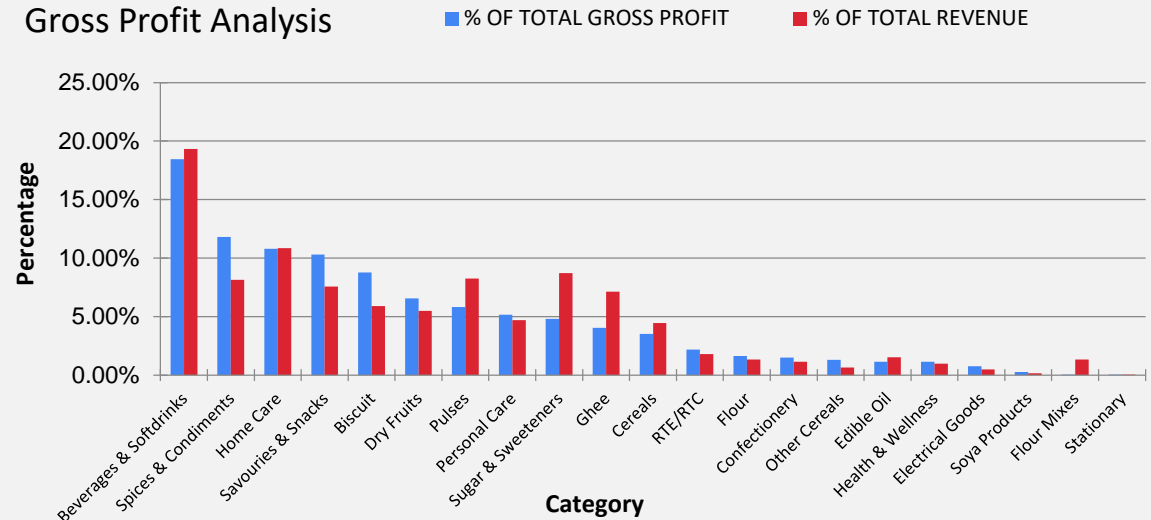
The inventory analysis also includes an FSN (Fast, Slow, and Non-moving) classification, which categorizes products based on their sales velocity.

Profit & Loss Analysis

GROSS PROFIT ANALYSIS:

Spices-Condiments, Savouries-Snacks, and Biscuits exhibit high profit generating capacity relative to their revenue proportion. On the other hand, categories like RTE/RTC, Flour, Confectionery, and Other Cereals have the potential to increase net profit.

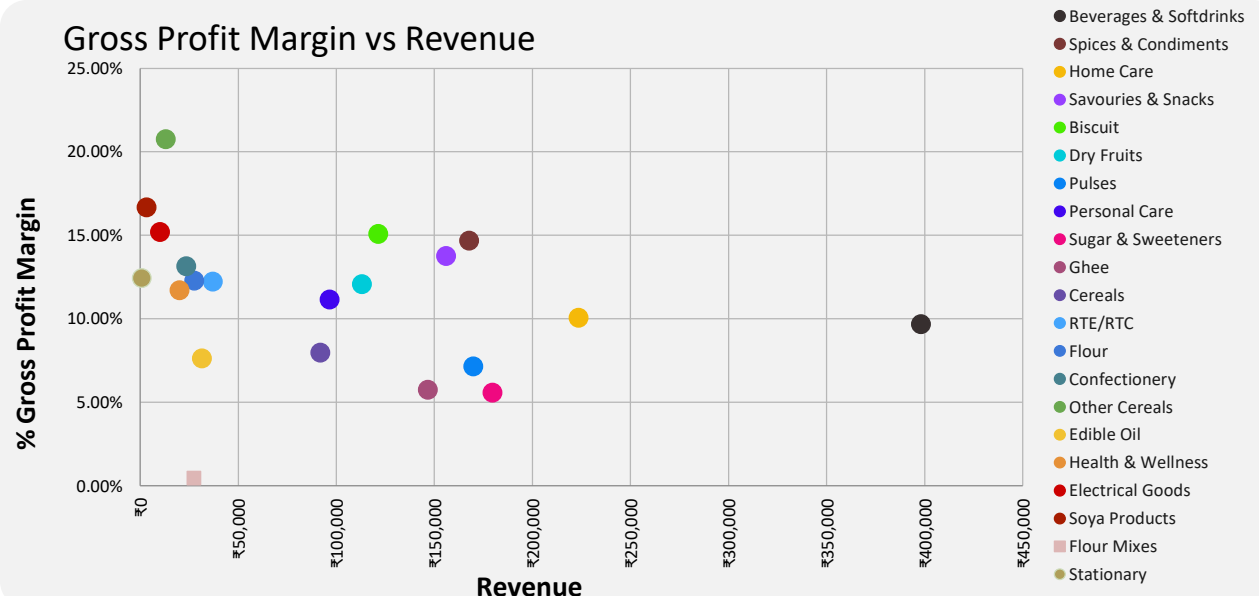
Gross Profit Analysis



GROSS PROFIT MARGIN:

Gross Profit Margin comparison with revenue of categories. 7-8 categories shows high margin but very low revenue.

Gross Profit Margin vs Revenue



Results & Key Findings

1

Top-Selling Categories

The second quarter shows the highest revenue due to demand for beverages. Top revenue-generating categories: Home Care, Sugar & Sweeteners, Pulses, Spices & Condiments.

2

Seasonal Demand Fluctuations

In the 4th quarter, Pulses category contributes significantly to sales. Categories with high sales volume but low revenue need special attention, such as biscuit.

3

Inventory Evaluation & Opportunities

Categories like Sugar, Edible oil, Flour, Ghee, and Pulses exhibit high ITR, whereas Stationery, Health & Wellness, Personal Care display low ITR. Roughly 10% of categories are obsolete, occupying storage space without significant revenue. Moderately important categories constitute 47.6%, while the most valuable, driving significant sales or usage, make up 42.9%, adhering to the pareto chart

4

Profit Optimization

Assess Pulses, Sugar & Sweeteners, Ghee, and Cereals for profit optimization, despite their high sales. Focus on enhancing revenue in high gross profit margin categories like RTE/RTC, Flour, Confectionery, and Other Cereals to improve overall net profit.



A stylized illustration of a man with grey hair and glasses, wearing a dark blue suit and tie, sitting at a desk and working on a laptop. He is in a grocery store aisle, with shelves of various products visible in the background. The illustration is in a blue-toned, graphic style.

Recommendations for Improvement

1

Scheduled Restocking

The report recommends implementing a scheduled restocking strategy, where the store proactively identifies and purchases items at predetermined intervals, rather than relying solely on demand-driven purchasing. This approach helps mitigate the risks associated with last-minute decisions and ensures consistent availability of frequently required household items.

2


Inventory Optimization

The analysis suggests creating a comprehensive strategy for optimizing inventory, focusing on slow-moving and non-moving items. This may involve exploring options such as promotions, bundling, or cross-selling to boost sales of these items and minimize the risk of excess inventory accumulation.

3

Revenue Enhancement Strategies

The report identifies opportunities to increase the sales of high-profit items by offering larger quantities at discounted prices, incentivizing customers to buy in bulk and thereby increasing sales volume. Additionally, the store is encouraged to explore collaborative arrangements for responsibly disposing of near-expiry items at lower prices to mitigate financial losses.

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Limitations and Opportunities

Limitations

- As a franchisee, the store is limited to sourcing products exclusively from the Haryana Agro Industries Corporation Limited (HAICL), which can sometimes result in stock-outs of certain products.
- The store currently offers pre-packaged products with barcodes, whereas some customers prefer to purchase certain items, such as sugar, flour, and rice, in loose quantities.

Opportunities

- The store can explore collaborative arrangements with HAICL to address stock-out issues and ensure a more reliable and diverse product selection for its customers.
- The store can investigate the feasibility of offering a wider range of loose products, catering to the preferences of its customer base and potentially increasing sales and customer satisfaction.

