



# BDM Capstone Project

## Optimizing Retail Sales and Stock Management for Sahu Cloth House

A Business Data Management Project

Presented by Deepanshi

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IIT Madras BS Degree Program

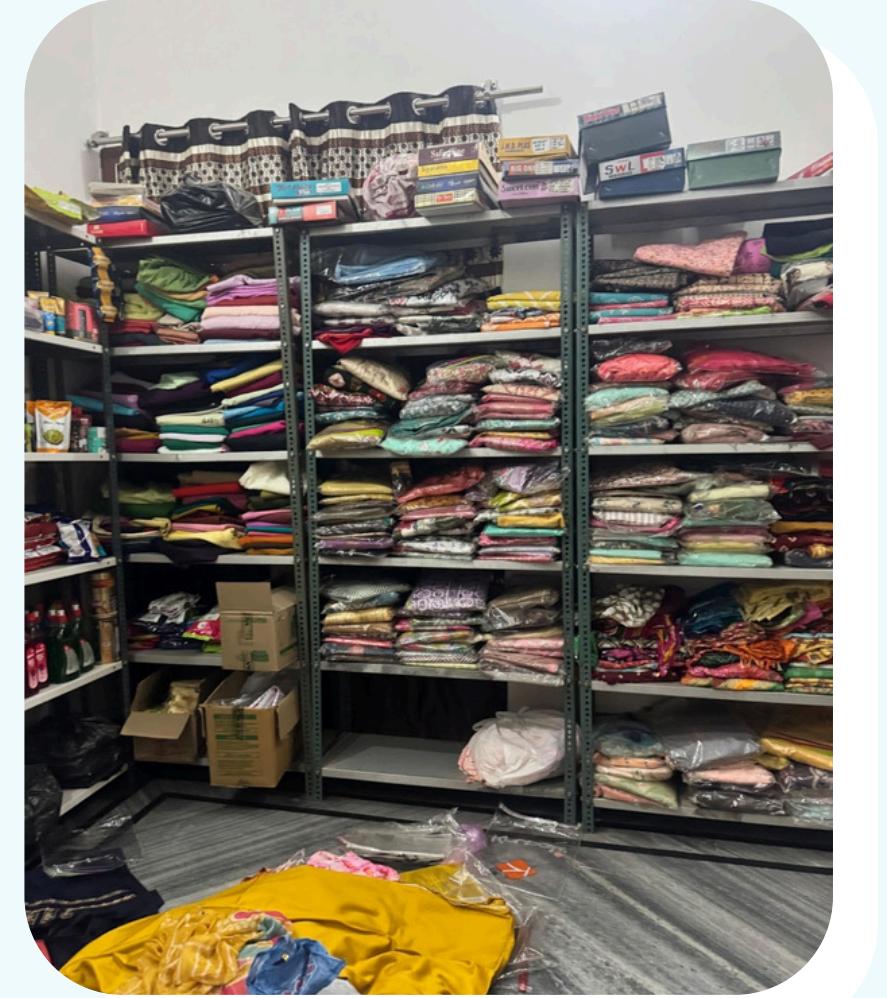
# The Overview

Meet Sahu Cloth House – Ranila, Haryana's one-stop shop for garments, groceries, and more.

Established on January 29, 2022, the store began with ladies' suits and later expanded into clothing and household essentials. It has since built a loyal local customer base.



**Managed By** Mrs. Monti Sahu



# Problem Statement

01



## Inventory headaches

Running into stockouts of popular items and overstocking slower-moving products.

02



## Profit rallies

Struggles to consistently identify and promote high-margin products

03



## Underperforming product lines

Low-selling items add little value and tie up capital.

# Dataset Used

13 May - 14 May 2025

## Sales Records

- 12 weeks continuous data
- 20+ products: garments, food, home, wellness, etc.

## Inventory Logs

- Weekly inventory levels for all products
- Stock-in/out, minimum/maximum inventory tracked

## Owner Interview

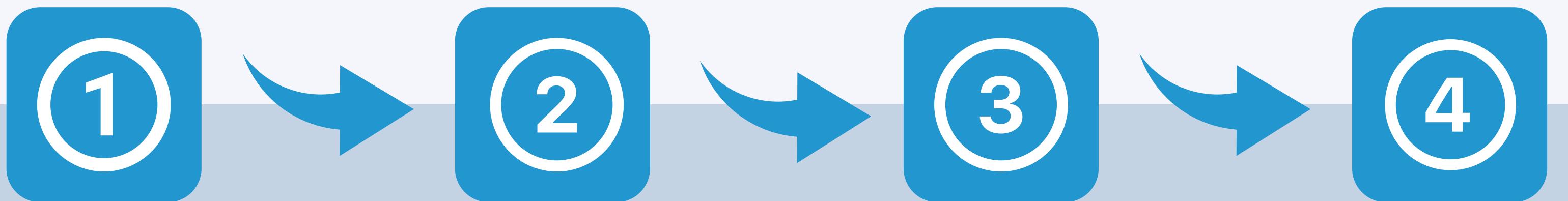
- Direct qualitative insights on stock issues, popular/slow products, cash flow problems
- Motivation for problem selection

PRODUCT NAME	Unit Rate (₹.)	# Wk1 (Feb3)	# Wk2 (Feb1)
Ladies' Suit (Pcs.)	1,800.00	5	
Men's Shirt (Pcs.)	799	0	
Ladies Slippers (Pairs)	499	8	
Dish Soap Bar (Pcs.)	60	6	
Bizz Detergent Powder (Pkt.)	460	5	
Amla Candy (200gm) (Pkt.)	160	11	
Green Tea (20 bags) (Pkt.)	260	2	
Coconut Oil (175ml) (Pcs.)	100	8	
	40	12	

PRODUCT NAME	# Opening Balance(in Rs.)	# Sale	# Sale Return
Ladies' Suit (Pcs.)			
Men's Shirt (Pcs.)			
Ladies Slippers (Pairs)			
Dish Soap Bar (Pcs.)			
Bizz Detergent Powder (Pkt.)			
Amla Candy (200gm) (Pkt.)			
Green Tea (20 bags) (Pkt.)			
Coconut Oil (175ml) (Pcs.)			
Tta Noodles (Pkt.)			



# Analysis Tools Used



## Excel

Data cleaning, aggregation, and charting to organize and visualize trends clearly; ensured accuracy across weekly and product entries.

## ABC Analysis

Categorized products by their revenue impact to identify top performers and low-value items; highlighted critical inventory priorities.

## Pareto

Applied the 80/20 rule to test if a small number of products drive most revenue; focused action planning on these key products.

## Trend & Correlation

Analyzed weekly patterns and relationships between product sales, stock movement, and revenue; uncovered demand cycles and anomalies.

# Data Collection and Methodology

- Identifying Core Problems
- Analyzing Sales & Inventory Performance
- Prioritizing Solutions & Action Plan

## STEP 1

Collected 12-week sales records & inventory logs for 20+ products (from handwritten logs to excel)

## STEP 2

Interviewed the business owner to understand operational challenges, trends, and confirm data accuracy

## STEP 3

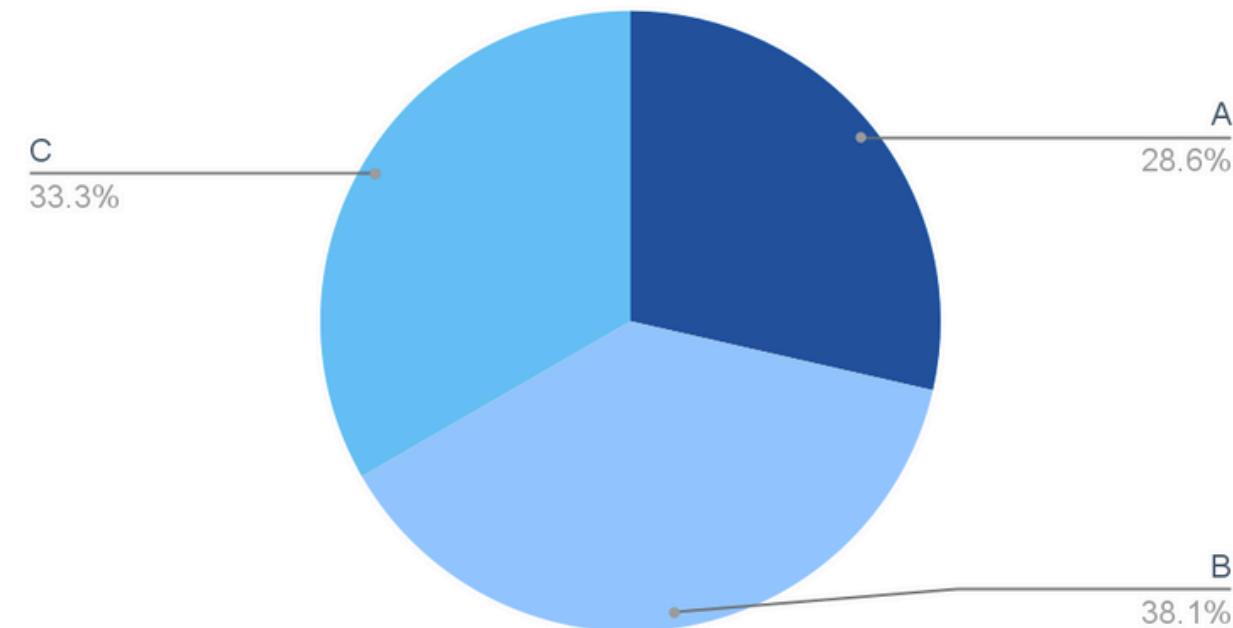
Applied ABC/Pareto, descriptive stats, and Excel charting for analysis

# Key Findings

- Category A: Focus, Category B: Moderate impact, Category C: Least impact.
- 6 products (A) = 78% total revenue.
- Informs inventory and sales priorities.
- The scatter plot of Revenue and Sales by week shows only a weak positive correlation, confirming that higher sales volume does not always translate to higher revenue, due to the impact of product pricing and mix.

## ABC Analysis

ABC Category Analysis



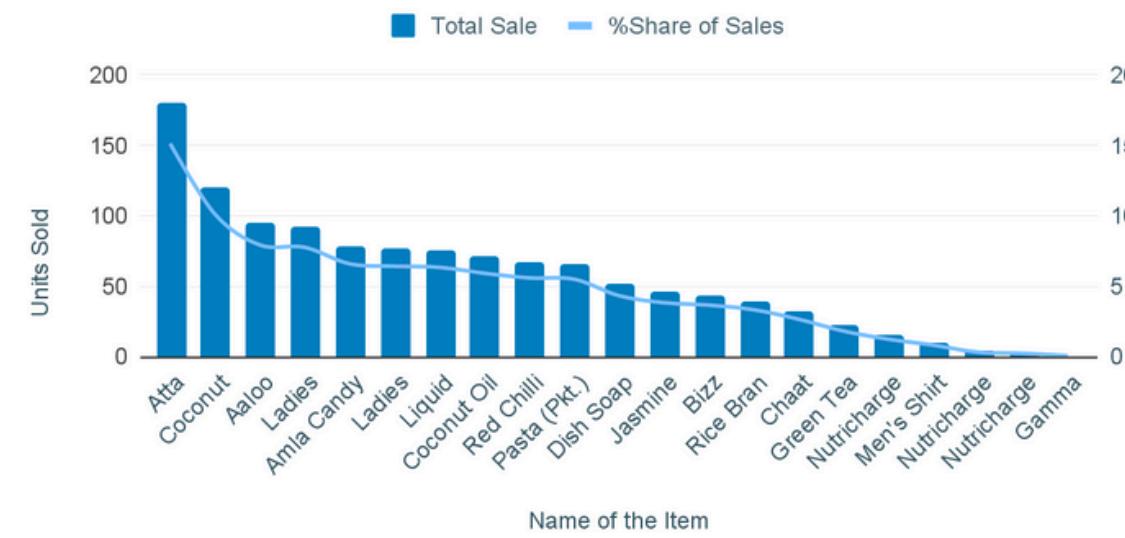
## Sales vs Revenue

Revenue and Sales

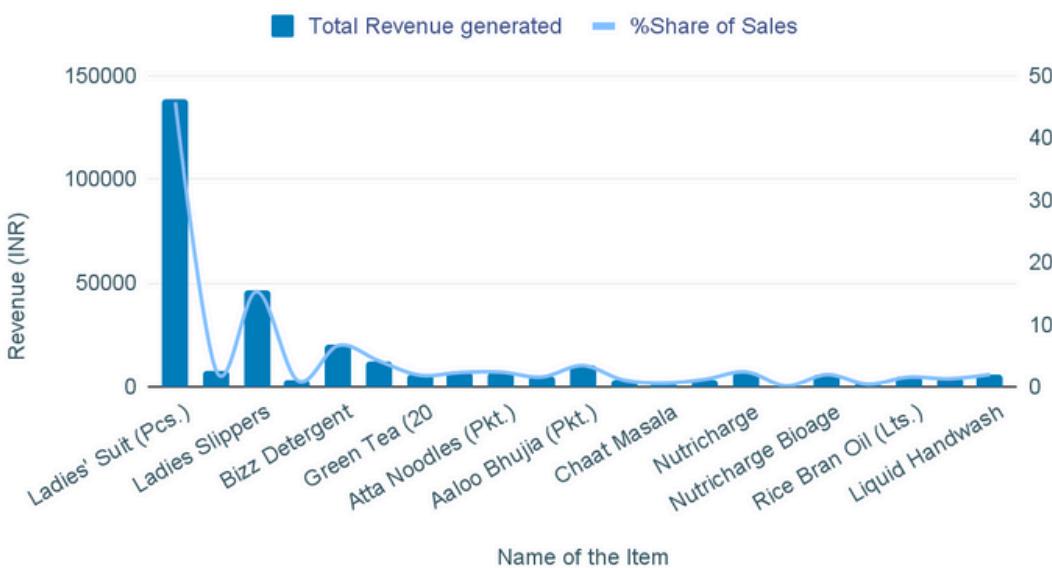


# Key Findings

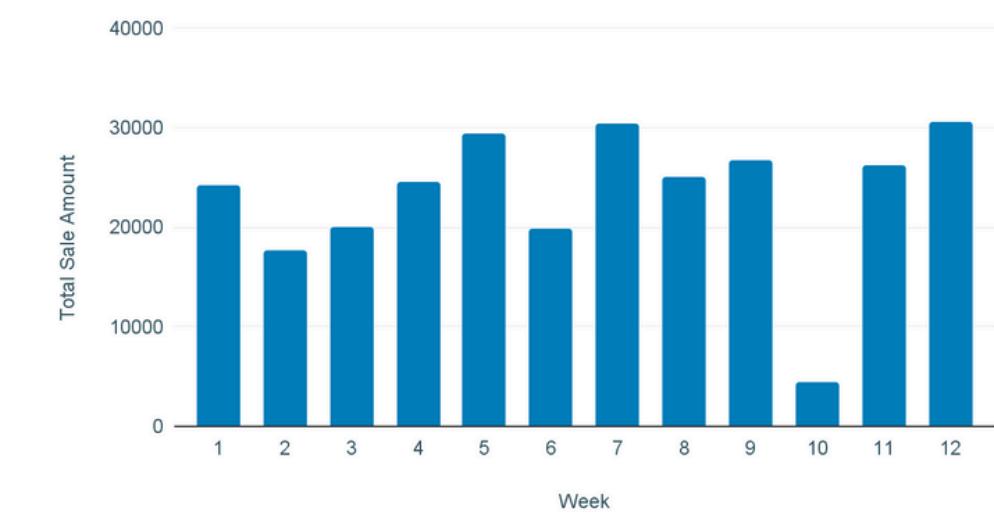
Sales Pareto



Revenue Pareto



Weekly Sale Amount



- Shows a few products contribute bulk of unit sales.
- Atta, Coconut Oil, and Ladle dominate item sales.
- Long tail:** many products have minimal sales impact.

- Revenue concentrated in top products, especially **Ladies Suit**.
- Most products generate low revenue despite unit sales.
- Core income driven by just a handful of items.

- Major fluctuations** in weekly sales amount due to restocking and local events.
- Strong sales in weeks 6–8 and week 12, dip in week 10.
- Highlights cash flow instability and planning need.

## Importance

Reveals need to manage bestsellers and review low-movers.

Vital for profit-focused decisions and marketing.

Emphasizes importance of inventory/stock sync with demand.

# Interpretation and Recommendation

## Interpretation:

- Sales and revenue are unstable; mostly depend on top 6 items.
- Some products show zero or unpredictable sales, causing inventory and cash flow issues.

## Recommendations:

- Focus stock and promotion on bestsellers, monitor weekly performance.
- Use data to improve forecasting, prevent sudden drops.
- Review and remove weak products, double down on premium and loyalty programs for stable growth.

# Conclusion and Next Steps

## Conclusions:

- Data analysis clarified sales patterns, top drivers, and inventory challenges.
- Strong need to stabilize cash flow and reduce reliance on a handful of products.

## Next Steps:

- Set up weekly sales/inventory dashboards.
- Strengthen demand forecasting and prepare for seasonal dips.
- Expand premium offerings and launch loyalty programs to build stable, repeat business.
- Regularly review and refine product mix for continuous improvement.

# Thank You for Your Attention

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