



Enhancing Business Efficiency and Reducing Operational Costs of Visista Fashions

Final report for the Business Data Management Capstone Project

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Executive Summary

“Visista Fashions” is a B2C online business based in Kolkata. The company offers a variety of women’s clothing, men’s clothing and home products. “Visista Fashions” is currently facing three major challenges that are affecting both profitability and efficiency:

1. **Product procurement issues:** orders from out-of-state suppliers often come with disputed products, and this increased product loss.
2. **Inventory overload:** Inventory overloads occur when they order products in bulk, but if these products do not sell as expected, it creates overstock and disputed products also reason for inventory overloads.
3. **Return Management:** Delays and lack of structured return tracking increase operational costs and inventory mismanagement.

The main goal of this project is to solve these challenges through comprehensive analysis of sales and inventory data. By studying purchase patterns, price changes, and product performance over the year, the analysis will identify the best- and worst-performing products, uncovering trends and opportunities for growth. This will also help to highlight key areas for improving inventory management, reducing product losses, and increasing net profit and offer suggestions on handling product returns issues, even although return data and disputed products data are not available. A key focus will be identifying gaps and areas for improvement in the current strategy.

Recommendations based on this analysis will focus on cost control, efficient inventory management, and targeted marketing strategies to boost profitability. Excel tools like pivot tables, pie charts, and line graphs will be used to provide data-driven insights and actionable steps to enhance “Visista Fashions” operational and financial performance.

Detailed Explanation of Analysis processes & methods

Data Analysis for Sales and Inventory Management:

Problem identification is the initial step in data analysis involves identifying and understanding the business problem. For “Visista Fashions” the main issues inventory overload, procurement challenges due to disputed product from the out of state suppliers, and a lack of records for disputed items, which made it difficult to analyze procurement and manage inventory effectively. To handle these issues a structured data analysis was needed to gain insights into sales patterns, inventory levels and profit margins.

Data Collection and Storage I received one years of business data (period 1st Apr 2022 to 31st March 2023) for “Visista Fashions” from Tally software in a PDF file. This file included sales, purchases, and closing balances, all in one sheet. I converted the data to Excel format for easier manipulation and organized storage, making it ready for analysis.

Data Processing is a important part for preparing data for meaningful analysis. Key preprocessing steps included:

- **Data cleaning** involved removing any incorrect data, duplicates and subtotals values that could interfere with analysis. Unifying formats (like currency formats) was also essential.
- **Data separation** I split the data into main sheet. One for sales data which focused on sales related information. Another for inventory management sheet which contained detailed records for tracking inventory and costs.

Sales Data Sheet Preparation: For the sales data sheet I structured the data into six columns

- **Product Name:** The name of each product.
- **Category:** Category under which the product falls (e.g., Men's or Women's).
- **Sales (Pcs):** Quantity of each product sold.
- **Sales Price (Rs.):** Selling price per unit.
- **Revenue (Rs.):** Calculated as Sales \times Sales Price
- **Section:** Indicating whether the product is for Men's or Women's

After data cleaning, the Sales Sheet contained 115 rows and six columns, with subtotals calculated for each item to facilitate revenue analysis. Key calculations on this sheet included:

- **Revenue per product:** Multiplying sales by sales price
- **Total revenue and Average Sales:** Aggregated from individual revenues to give a comprehensive sales picture.

Inventory Management Sheet Preparation: The Inventory Management Sheet tracked inventory data across eight columns:

- **Product Name:** Identifying each product.
- **Category:** Product category.
- **Opening Balance (Pcs):** The stock count at the start of the period.
- **Inward Quantity (Pcs):** Number of items purchased during the period.
- **Outward Quantity (Pcs):** Quantity of items sold during the period.
- **Purchased Price (Rs.):** Cost per unit of each product.
- **Expenditure (Rs.):** Total cost for purchasing items, calculated as $\text{Inward Quantity} \times \text{Purchased Price}$.
- **Closing Balance (Pcs):** Calculated by adjusting Opening Balance with Inward and Outward Quantities.

This sheet contained 130 rows, including product inflows, outflows, and remaining inventory for each item. This allowed for key calculations like:

- **Total Expenditure on Purchases:** Adding up the values in the expenditure column.
- **Final Stock Valuation:** Using closing balance to track inventory levels.

Merging Sales and Inventory Sheets to better understand the relationship between inventory movements and sales, I combined key fields from the sales and inventory management sheets. This merged dataset allowed for:

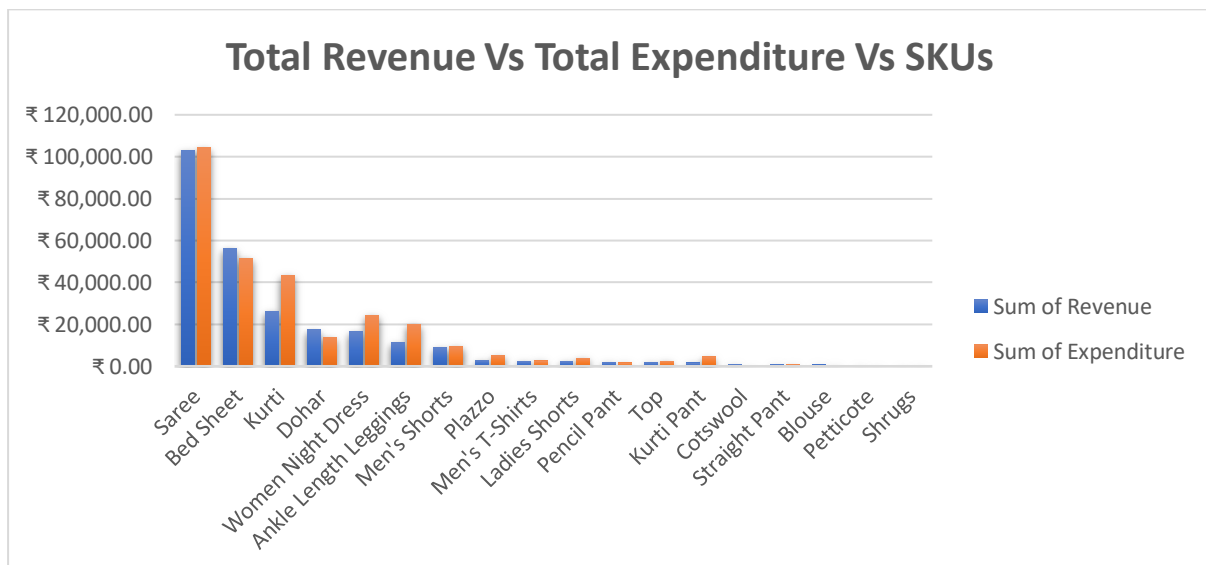
- **Turnover Rate of products:** Calculating how quickly inventory was sold and restocked.
- **Stock Replenishment Needs:** Identifying fast-moving products that needed timely restocking.

Profit Analysis To help maximizing profit, I analyzed:

- **Revenue vs. Expenditure:** Compared revenue from sales with inventory purchase costs to assess profitability.
- **Identification of High-Margin Products:** Calculated profit margins to find which products had the highest returns.
- **Suggestions for Improvement:** Provided recommendations to optimize inventory management, particularly in tracking and managing disputed products.

Result and Findings

Sales Analysis:



This **Revenue vs. Expenditure** chart shows the comparison between revenue and expenditure for different product categories.

- Saree and Bed Sheet are the highest revenue-generating categories. They also have high expenditures, almost matching their revenue, which suggests they operate with low profit margins.
- Kurti and Dohar also generate good revenue with considerable expenditure.
- Women's Night Dress, Ankle Length Leggings, and Men's Shorts show moderate revenue and expenditure. However, there is a noticeable gap between revenue and

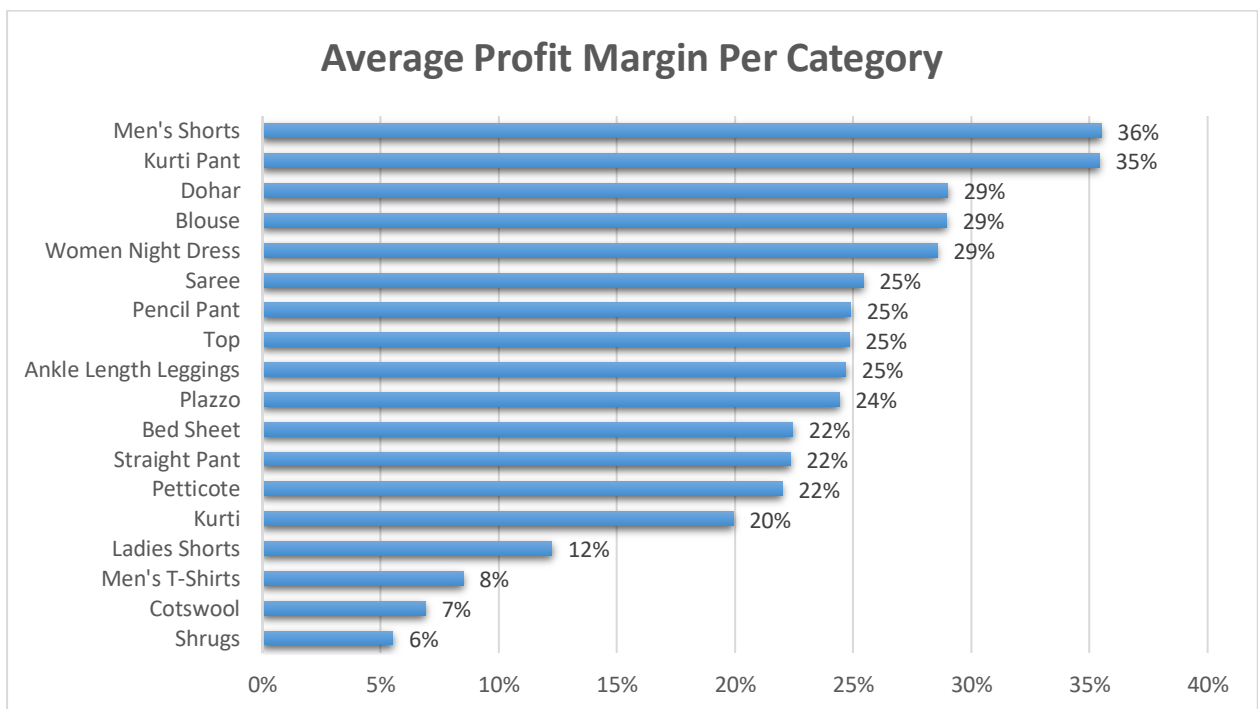
expenditure, indicating they may have a better profit margin compared to the top-selling products.

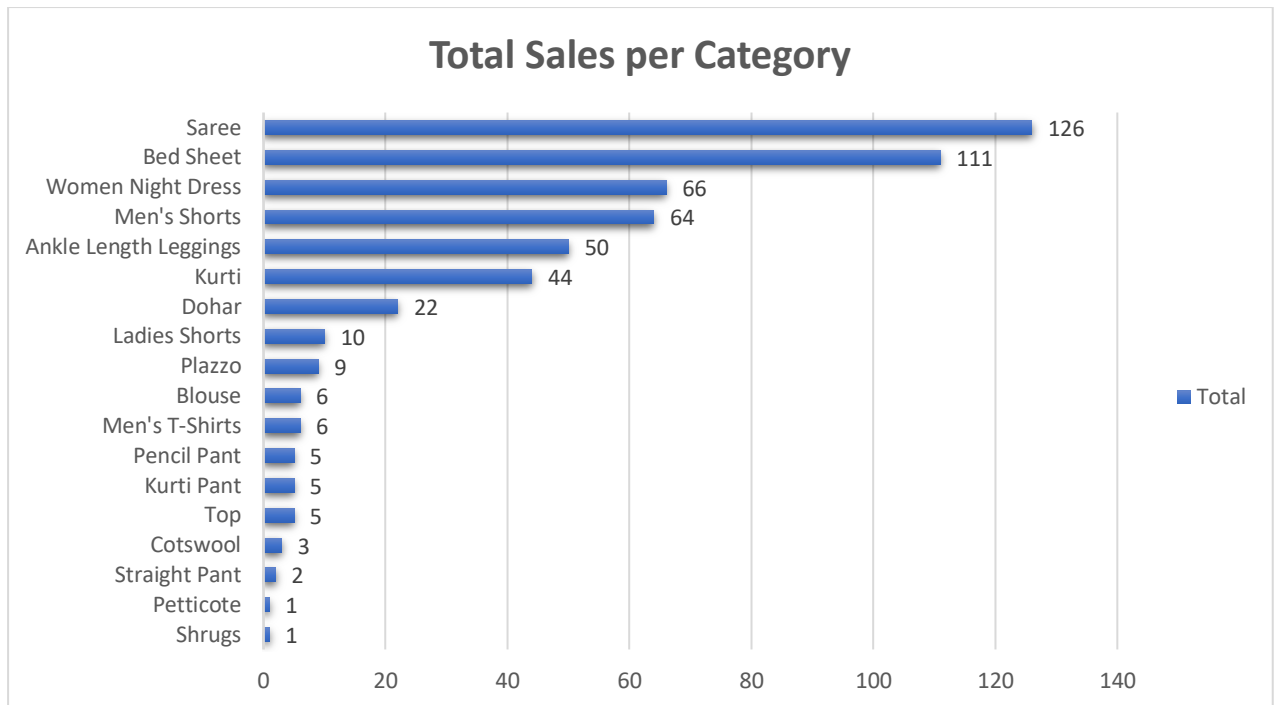
- The remaining products, such as Plazzo, Pencil Pant, Kurti Pant, and others, have relatively low revenue and expenditure. These products likely have limited sales and may not significantly contribute to the total profit.

Products with a close match between revenue and expenditure, such as Saree and Bed Sheet, could improve profitability through cost optimization. Categories like Women's Night Dress and Ankle Length Leggings, which have a larger gap between revenue and expenditure, may be good choice for expansion due to their good profit margins, as shown in the following profit margin graph.

Profit Margin Analysis

The below graphs represent the “Average profit margin per category” and “Total sales per category”

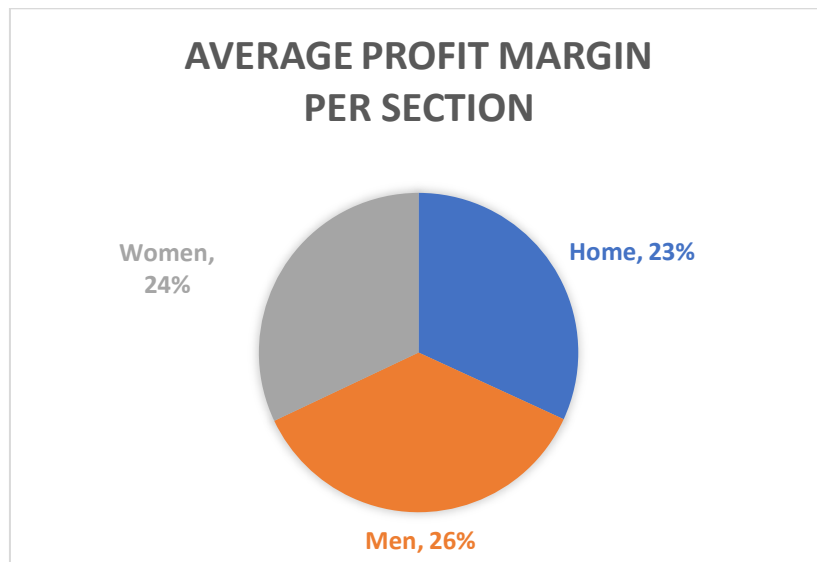




When we compare the “Average Profit Margin per Category” and “Total Sales per Category,” it gives a balanced view of profit and sales volume. Profit margin alone doesn’t give the full picture; a high-margin item might have low sales and contribute little to overall profit. Similarly, high sales of low-margin items can boost revenue but may limit profitability. By comparing both margin and sales volume, we can identify products that effectively balance profit and sales, helping us strategically focus on those that contribute the most to overall revenue and profit.

- Saree:** Highest in total sales (126 units) with a moderate profit margin (25%). Although the profit margin is average, the high sales volume drives substantial revenue. Focusing on inventory and marketing for this category could help maintain strong profitability.
- Bed Sheet:** Second highest in sales (111 units) with a lower-middle profit margin (22%). Bed Sheets generate significant revenue due to strong sales. Improving margins here could enhance overall profitability, given the high demand.
- Women Night Dress:** High sales volume (66 units) and high profit margin (29%). This category performs well in both profit and sales, making it a top performer. Expanding this category could maximize profit.
- Men’s Shorts:** Strong sales (64 units) with the highest profit margin (36%) of all categories. Men's Shorts are highly profitable due to both high margins and good sales volume.

- **Ankle Length Leggings:** Good sales volume (50 units) with a mid-range profit margin (25%). This category has decent demand. Profitability could improve with cost reduction or slightly higher pricing.
- **Dohar:** Low sales volume (22 units) but high profit margin (29%). Dohars are profitable but have low demand. Increased marketing could boost sales, leveraging the high margin to improve overall profit.
- **Low Sales & Low Profit Margin:** Categories like Petticoat, Shrugs, and Straight Pant have low sales and low margins. Discounting these items or finding ways to increase demand may be worth considering.
- **High Margin & Low Sales:** Items like Kurti Pant and Blouse are profitable but lack demand.

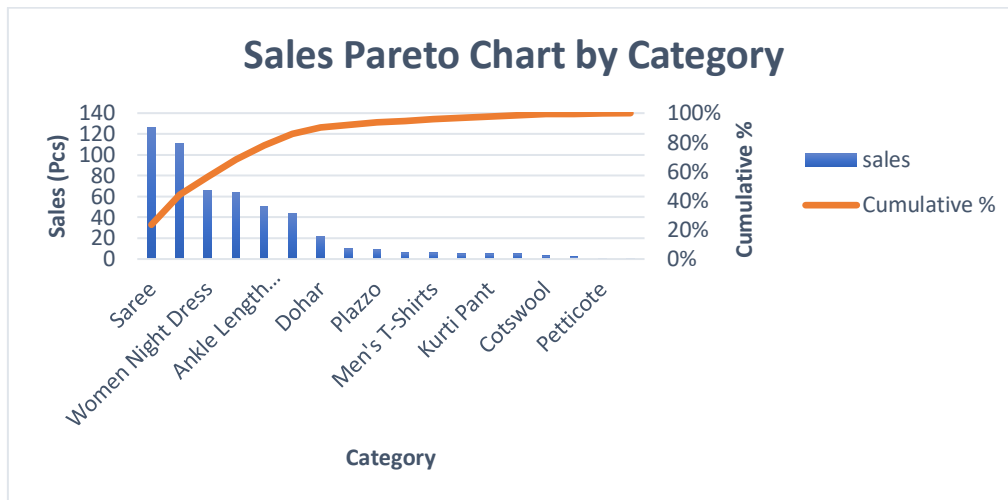


This pie chart shows “Average profit margin per section”.

- **Men’s section:** Has the highest profit margin at 26%. This suggests that products in the men's section are the most profitable.
- **Women’s Section:** Follows with a profit margin of 24%, which is slightly lower than the men’s section but still strong.
- **Home Section:** Has the lowest profit margin at 23%. This indicates that home products contribute the least in terms of profitability among the three sections.

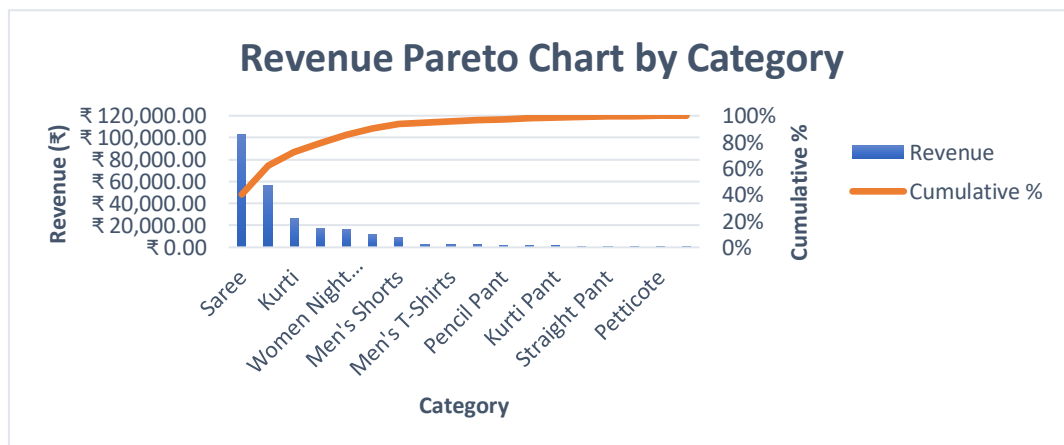
Overall, the differences in profit margin between sections are relatively small, with each section contributing similarly to overall profitability.

Inventory Analysis:



Sales Pareto Chart

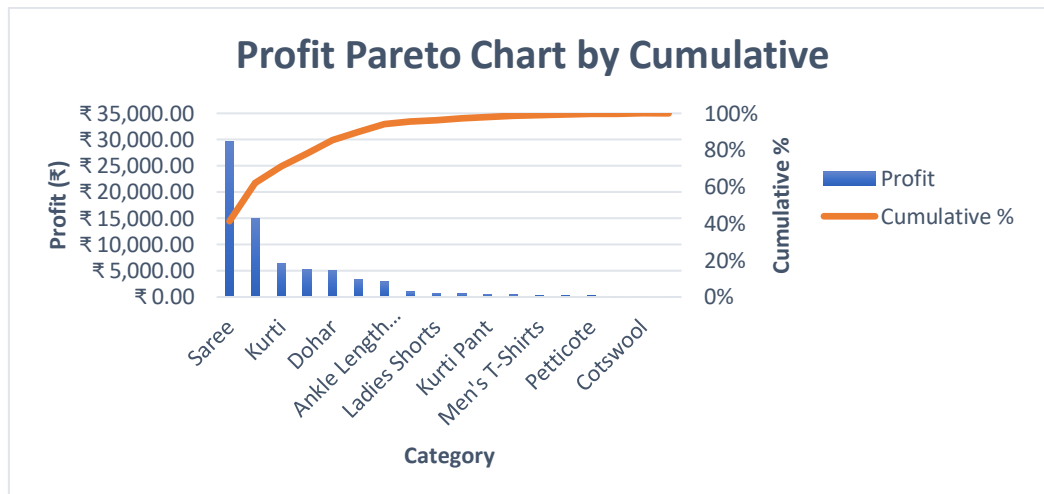
- This chart shows each category's cumulative contribution to total sales volume.
- Sarees and Bed Sheets lead in sales volume, followed by Women's Night Dress, Men's Shorts, and Ankle Length Leggings.
- These top-selling categories account for a large share of total sales, indicating strong demand. However, high sales volume does not necessarily mean high revenue or profit, as shown in the following charts.



Revenue Pareto Chart

- This chart shifts the focus from units sold to total revenue generated by each category.
- "Sarees" and "Bed Sheets" continue to lead in revenue, indicating that they are not only popular but also higher in price.

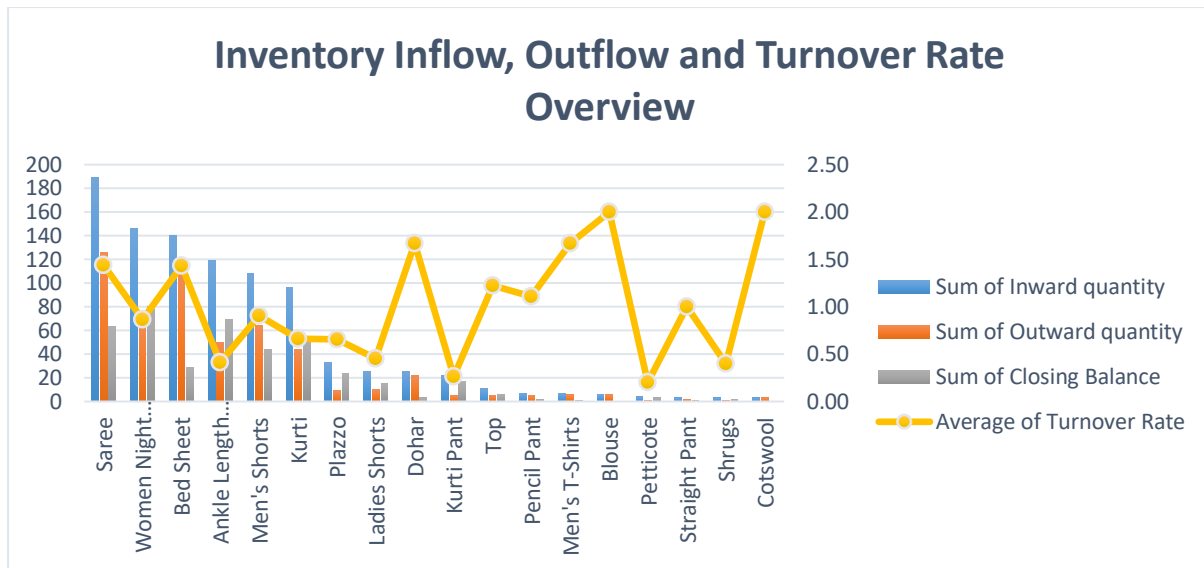
- Categories like Kurti and Women Night Dress also show good revenue contributions, suggesting they could be high-value items.
- Comparatively, categories with high sales volume but lower revenue likely have lower unit prices, indicating areas where high sales alone aren't maximizing revenue.



Profit Pareto Chart

- The profit chart reveals which categories generate the most gross profit.
- “Sarees”, “Bed Sheets”, and “Kurtis” are again leading contributors, showing that these items not only sell well and generate high revenue but are also profitable.
- "Women's Night Dress" has strong sales and revenue, and it also shows a high profit margin, as seen in the profit margin chart. Expanding this category could further boost overall profitability."
- This chart helps identify products that deliver high profitability and those where increased cost-efficiency or pricing adjustments may boost profits.

“Sarees” and “Bed sheets” are consistently top performers across all the three charts, making them key products to maintain and possibly expand. Items like “Women’s night dress” and “Men’s shorts” having strong sales and generate good revenue, but their profits could improve. Reviewing costs or adjusting pricing may help increase their profitability. Lower-sales items with decent profit margins, such as Dohar, could benefit from targeted marketing efforts to boost demand, leveraging their high profitability potential.



In this analysis, the average turnover rate was calculated using “Inward Quantity” and “Closing Balance” data, as many products had a zero-opening balance. By summing the Inward Quantity with the Closing Balance from April 1, 2022, to March 31, 2023, obtained a more accurate turnover rate that reflects actual stock movement. This approach provides meaningful insights into inventory flow and product demand throughout the period.

This chart presents an analysis of stock movement and turnover rate across various product categories.

Inward quantity (Blue Bars): Represents the quantity of each product added to inventory over a specific period (1st April 2022 – 31st March 2023). High inward quantities for products like “Saree”, “Women Night Dress”, and “Bed Sheet” suggest these items are frequently restocked, likely due to high demand or low stock levels.

Outward Quantity (Orange Bars): Shows the quantity sold from inventory for each category. Products like “Saree”, “Women Night Dress”, and “Men’s Shorts” have relatively high outward quantities, indicating they are popular or frequently sold items.

Closing Balance (Gray Bars): This shows the remaining stock at the end of the period. Low closing balances on high-demand items such as “Women’s Night Dress” and “Bed Sheets” suggest a faster turnover, meaning these products sell quickly. Items with higher closing balances like “Dohar” or “Kurti Pant”, may be slow-moving, indicating low demand or possible overstock.

Average Turnover Rate (Yellow Line with Dots): Turnover rate shows how quickly stock is sold or replaced over time. Categories like "Ankle Length Leggings," "Dohar," and

"Cotswool" have high turnover rates, indicating they are fast-moving items. Lower turnover rates in products like "Pencil Pant" and "Blouse" suggest slower movement, meaning these items staying longer in stock.

Sarees, Women's Night Dresses, and Bed Sheets show high inward and outward quantities, indicating strong demand and frequent restocking needs. "Ankle Length Leggings" and Cotswool, though lower in total quantity, have high turnover rates, meaning they sell quickly relative to stock levels. Items like Dohar have a high turnover but moderate outward quantity, suggesting steady demand even with lower sales volume, making them suitable for targeted restocking. Products with high closing balances but low turnover rates, like Shrugs and Pencil Pants, may need strategic adjustments to boost sales or reduce inventory. This chart highlights fast-moving items that need frequent restocking and slower-moving items that could benefit be for inventory optimization.

Interpretation of Results and Recommendation

Interpretation of Result

1. High-Revenue, Low-Margin Categories (Sarees and Bed Sheet):

- **Result:** These categories generate the highest revenue but also have high expenditures, leading to lower profit margins.
- **Interpretation:** They are important for overall sales volume; their profitability is limited due to high costs.
- **Recommendation:** Focus on reducing costs for these items by negotiating better rates with suppliers or finding alternative suppliers to boost profit margins without compromising quality.

2. Moderate-Revenue, Moderate-Margin Categories (Kurti and Dohar):

- **Result:** These categories provide a better revenue-to-expenditure ratio than high- revenue items but still do not contribute as much to overall profit.

- **Interpretation:** These items are moderately profitable and provide a stable income, with potential for improvement.
- **Recommendation:** Continue with current strategies for these categories but try targeted promotions to increase demand. Consider offering special discount, limited time offers or promoting these items on social media platform like Facebook or Instagram.

3. High-Margin, Moderate-Demand Categories (Women's Night Dress, Ankle Length Leggings, and Men's Shorts):

- **Result:** These categories have good profit margins and show strong demand with a noticeable gap between revenue and expenditure.
- **Interpretation:** These products have a good balance of demand and profitability, making them suitable for expansion.
- **Recommendation:** Invest in expanding these product lines and increase stock levels to reach more customers. Ensure products are restocked on period basis to avoid stockout.

4. Low-Sales, Low-Margin Categories (Petticoat, Shrugs, Straight Pant):

- **Result:** These categories have low sales and low profit margins, adding little to revenue and profit.
- **Interpretation:** Low demand and profitability may not justify keeping these items in inventory.
- **Recommendation:** Consider discounting on these items to free up space for higher-demand products. Alternatively, look for ways to reduce costs to improve their profitability.

5. High-Margin, Low-Sales Categories (Kurti Pant and Blouse):

- **Result:** These products are profitable but have low demand, which affects their contribution to overall revenue.
- **Interpretation:** If demand increases, they could be more profitable, but low sales hold them back.
- **Recommendation:** Consider bundling these products with more popular items to increase their appeal and sales volume and offer special promotions or

discounts to make the bundle more attractive, which could help drive demand and improve overall profitability.

6. Profit Margin by Section (Men's, Women's, Home):

- **Result:** The Men's section has the highest profit margin, followed by the Women's and Home sections.
- **Interpretation:** Products in the Men's section are generally more profitable, indicating that expanding this section could be beneficial to overall profitability.
- **Recommendation:** Add more products or varieties to the "Men's section" to expand choices and attract more customers. For the Home section, evaluate pricing strategies and explore different supplier options to improve profitability.

7. Inventory Turnover and Stock Movement:

- **Result:** Items like Saree, Women's Night Dress, and Bed Sheet have high inward and outward quantities, suggesting strong demand, while products like Pencil Pant and Blouse have low turnover rates, indicating slow movement.
- **Interpretation:** Popular items need to be restocked often to keep sales going, while slow-selling items might be overstocked.
- **Recommendation:** Create a restocking plan for fast-moving items and adjust stock for slow-moving ones. For items with low sales, consider eliminating inventory or offering discounts to prevent overstocking.

8. Inward vs Outward Quantities:

- **Result:** High inward and outward quantities for products like Saree and Women's Night Dress show strong demand, while high inward but low outward for some items indicates potential overstock.
- **Interpretation:** Overstocked items may lead to higher holding costs and affect profits.
- **Recommendation:** Regularly check inventory levels and adjust orders to match sales. This will help avoid excess stock and lower storage costs.

9. Turnover Rate Analysis:

- **Result:** Categories like Ankle Length Leggings and Cotswool have high turnover rates, indicating they are fast-moving items. Slow-moving items, like Shrugs and Pencil Pants, have high closing balances, suggesting potential overstock.
- **Interpretation:** High items need regular restocking, while slow-moving items need better inventory control.
- **Recommendation:** Restock fast-moving items quickly and reduce orders for slow movers. Consider discounts to clear excess stock.

Recommendations

1. Optimize High-Cost Products:

For items like Sarees and Bed Sheets, try negotiating better prices with suppliers, getting bulk discounts, or finding alternative suppliers. This can help reduce costs and improve profits without affecting revenue.

2. Expand High-Profit Categories:

Focus on expanding Women's Night Dresses and Men's Shorts, which are profitable and sell well. Consider running promotions or adding new products in these categories to boost sales.

3. Targeted Marketing for Low-Selling, High-Profit Items:

Products like Dohar have high margins but low sales. Try targeted marketing to increase awareness and boost demand for these items.

4. Inventory Management and Turnover Optimization:

Regularly check fast-moving items to keep them well-stocked and avoid stock out. For slower-moving items like Pencil Pants, offer discounts or bundle them with popular products to reduce excess stock.

5. Address Procurement Issues with Suppliers:

Create a structured method to document disputes and returns. Clearly communicate

product quality standards to suppliers and set up contractual agreements that outline dispute resolution and return policies. Consider developing relationships with additional suppliers to reduce reliance on problematic ones.

6. Develop a Returns and Dispute Management System:

Maintain a record of returned and disputed items to analyze issues and reduce future problems. Use a structured database to track and manage these records more effectively.

Conclusion

The analysis of “**Visista Fashions**” sales and inventory data revealed key insights that can drive better business decisions. High-revenue products like **Sarees** and **Bed Sheets** have substantial costs, indicating potential for cost-saving measures. Categories with good profit margins, such as **Women’s Night Dress** and **Men’s Shorts**, show strong potential for expansion. Faster-moving items require regular restocking to meet demand, while slower-moving products may benefit from strategic promotions to optimize inventory.

To address procurement and return challenges, implementing a clear process for tracking disputed products and maintaining detailed return records will strengthen inventory control and improve supplier management. Emphasizing cost optimization, targeted marketing, and streamlined inventory tracking will enhance profitability and operational efficiency for “Visista Fashions”.

Important Links

Project Data Link:

[https://docs.google.com/spreadsheets/d/1qsWFAiJMWqcyIw1AcuGNY6RL_b3mNFGMbHAzf68oU/edit?usp=sharing]