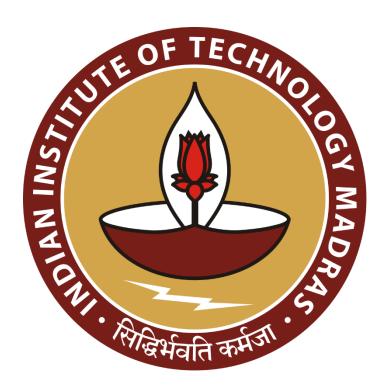
# Optimized Business Data Management for Strategic Growth at Arihant Enterprises A Final report for the BDM capstone Project

Submitted by

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# 1. Executive Summary and Title

Arihant Enterprises, founded in 2020 by Atul Jain, is located at 22, Above Bata, Kashi Bagh Colony, Happy Villa Colony, Dhar, Madhya Pradesh - 454001. It operates in the B2B, B2C, and B2G sectors, providing goods and services to government institutions, hospitals, hotels, schools, and NGOs. Arihant Enterprises, operating in the healthcare and hygiene sector, supplying essential products such as disinfectants, cleaning equipment, and safety materials to both public institutions and private entities. Between January 1, 2024, and February 15, 2025, the company achieved a notable total turnover of ∼₹1.36 crore.

Data was sourced from product-level sales records, supplier-wise purchases, and customer transaction summaries. After rigorous cleaning and structuring using Excel and Python, key insights were derived. The findings revealed an over-reliance on a few suppliers—Satol Chemicals, Saify Healthcare, and Pushkar Agencies—accounting for over 40% of total procurement, which introduces supply chain risk. Similarly, the majority of purchases (86.4%) were fragmented across a long tail of low-value items, indicating inefficiencies in inventory control.

Sales analysis highlighted that although high in volume, low-cost products such as 3 PLY masks generated limited revenue. Medium-priced products demonstrated the best balance of volume and profitability, suggesting a focus area for future growth. On the customer front, 87.2% of sales revenue remained tied up in outstanding dues, severely affecting liquidity. A few institutional clients alone accounted for nearly 70% of total dues, highlighting urgent credit control needs

Recommendations included diversifying the supplier base, tightening credit policies, implementing stock thresholds, and promoting high-margin products through seasonal campaigns. The analysis, supported by visual tools and machine learning techniques, provides actionable strategies for enhancing operational efficiency, ensuring financial stability, and enabling sustainable growth for Safai Ghar in a competitive B2B environment.

# 2. Detailed Explanation of Analysis Process/Method

In this process, following steps were taken in the sequential order:

#### 1. Data Collection

During the initial phase, raw datasets were collected from multiple sources for the period spanning January 2024 to February 2025. These sources included product-wise sales summaries, customer-wise and bill-wise transaction records, and a supplier-wise purchase register. The sales data captured product names, quantities sold, transaction types (cash or credit), billing dates, and revenue details. The purchase records provided information on suppliers, item quantities, rates, invoice numbers, and total net amounts paid. This comprehensive data enabled the foundation for analyzing sales performance, procurement patterns, and credit exposure across different buyer segments

# 2. Data Structuring

Once the data was gathered, all records were consolidated and aligned using Microsoft Excel and Python. Column headers were standardized to maintain consistency across files—for instance, "Quantity," "Amount," "Supplier," and "Customer" were used uniformly. This restructuring allowed seamless integration of datasets from different formats and sources. Each transaction was mapped according to its type and timeframe to enable product-wise and customer-wise comparisons. These structured datasets provided the framework for targeted analysis of inventory dynamics, supplier concentration, and payment cycles.

## 3. Data Cleaning

The compiled data required thorough preprocessing to ensure reliability. Using Excel filters and Python's Pandas library, redundant headers, blank rows, and inconsistent entries were removed. Missing or null values were addressed using conditional filtering techniques, while clearly erroneous records—such as negative quantities or duplicate invoice entries—were excluded. Throughout the cleaning process, each row was manually or programmatically validated to preserve data accuracy. This step was essential in preparing the dataset for deeper analytics and eliminating any distortions that could affect the insights generated.

# 4. Key Observations

A large portion of procurement is concentrated among just 3–5 suppliers. Notably, *Satol Chemicals*, *Saify Healthcare*, and *Pushkar Agencies* individually contributed over ₹5 lakh in purchases during the year. This indicates a dependency risk that could affect supply chain flexibility. Products like *Nose Mask 3 PLY* accounted for over 175,000 units sold, yet due to low unit pricing, they contributed less to revenue compared to low-volume high-value products. The top three products by volume are all variations of 3 PLY masks.

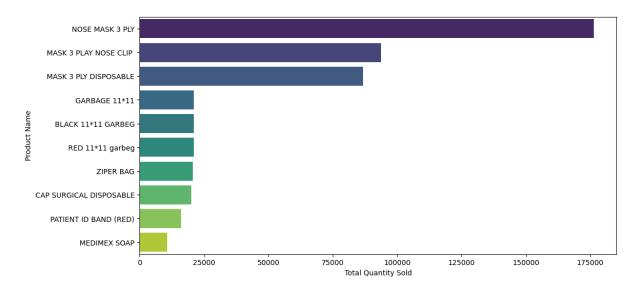


Fig 2.4.1: Top 10 Best Selling Product

Although cash transactions are higher in volume, credit-based sales dominate in value. These are mostly institutional clients with longer payment cycles, leading to delayed receivables and affecting cash flow.

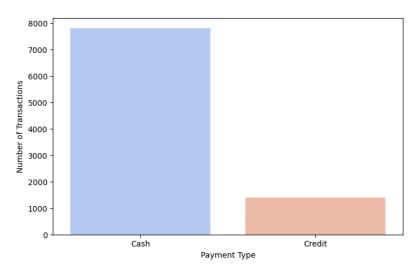


Fig 2.4.2 Distribution of Payment Types (Cash vs. Credit)

# 5. Analysis Objectives

The primary objectives of the analysis were to identify top-selling and high-revenue-generating hygiene products, evaluate inventory performance, and detect inefficiencies in pricing strategies. It also aimed to assess supplier dependency and procurement patterns, understand the impact of credit-based sales on cash flow, and develop actionable strategies for optimizing inventory, diversifying suppliers, and improving financial stability. The overarching goal was to support data-driven decision-making for sustainable business growth at Safai Ghar.

#### 6. Tools and Visualization

The structured data was analyzed using tools such as Microsoft Excel and Power BI. In Excel, features like Pivot Tables and charts were utilized to uncover patterns and trends and used for initial data cleaning, formatting. Python, along with libraries such as **Pandas**, **Matplotlib**, **Seaborn**, and **Scikit-learn**, enabled deeper statistical analysis, data transformation, and the implementation of machine learning techniques like clustering and forecasting. Visualizations created using Matplotlib and Seaborn helped uncover patterns, trends, and anomalies, supporting accurate and insightful data-driven decisions.

# 7. Outcome and Strategy Development

Through this analysis, valuable insights were derived from sales, purchase, and inventory data. These insights supported the optimization of stock levels, supplier decisions, and pricing strategies. Actionable plans for business growth were formulated, aimed at improving operational efficiency and addressing key challenges. The analysis was designed to position Safai Ghar for long-term stability and competitiveness in the hygiene and healthcare market.

# 3. Results and Findings

#### 3.1 Monthly Sales Trends

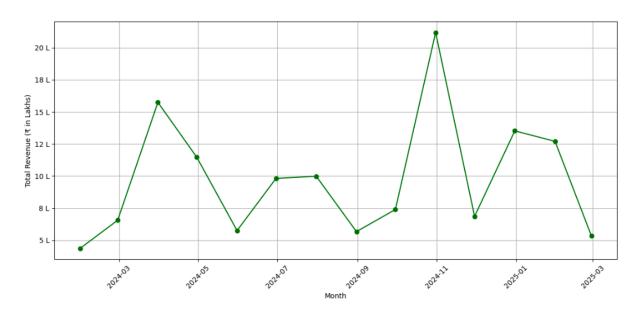


Fig 3.1.1: Monthly Revenue Trend

The monthly sales trend for FY 2024–25 reveals noticeable fluctuations. After a modest start in February (₹4.4 L), sales rose sharply in April (₹16.2 L), followed by a decline in June. A brief recovery occurred in July–August, stabilizing around ₹10 L. The highest peak was in **October 2024** at ₹21 L, suggesting a significant revenue surge. However, the months that followed showed a drop with **moderate recovery** in January before dipping again by March.

Despite steady sales, the revenue trend highlights inefficiencies in pricing. Some high-selling items bring in less revenue due to underpricing, while a few premium products contribute disproportionately. A structured pricing strategy is needed to optimize overall profitability

## 3.2 Price vs. Quantity Dynamics

The scatter plot, plotted on a log-log scale, provides a comprehensive visual representation of the relationship between the price per unit (in  $\stackrel{?}{}$ ) and the total quantity sold across all product categories. Four pricing categories were used to classify the items—Low ( $\stackrel{?}{}$ 2), Medium ( $\stackrel{?}{}$ 2-10), High ( $\stackrel{?}{}$ 10-30), and Premium ( $\stackrel{?}{}$ 230). The plot reveals a distinct inverse relationship: as the unit price increases, the quantity sold tends to decrease. Low and medium-priced items dominate the high-quantity region, often exceeding 10,000 units, indicating their wide market reach and frequency of purchase. In contrast, most

premium-priced products are sold in lower volumes, generally under 500 units, reflecting their niche demand and selective consumer base.

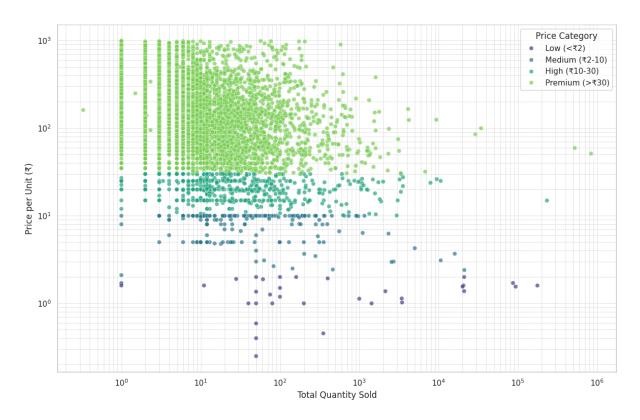


Fig 3.2.1: Price per Unit vs Total Quantity Sold

Quantitatively, the Premium category shows the highest density in data points, covering prices ranging from ₹30 to ₹1,000 with moderate sales volumes typically between 10 to 500 units. These products, while not mass-sold, offer higher margins and are likely driven by quality or brand value. On the other hand, the Low category, though sparsely populated in the chart, shows exceptional quantity sales, with some products reaching upwards of 100,000 units. Medium-priced products show strong and consistent sales volumes in the range of 1,000 to 10,000 units, making them a lucrative segment due to their balance between affordability and demand. The High category appears transitional, with units mostly sold in the 100–1,000 range, offering moderate margins and stable demand.

# 3.3 Product Purchase Distribution Analysis

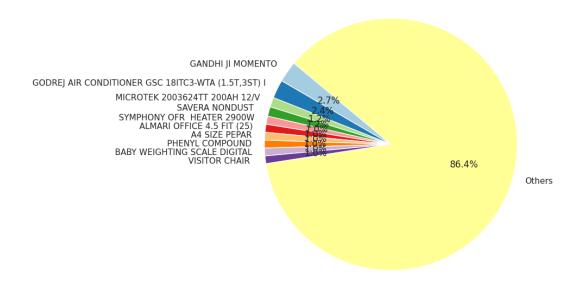


Fig 3.3.1: Top 10 Top Products by Purchase Amount (Top 10 + Others)

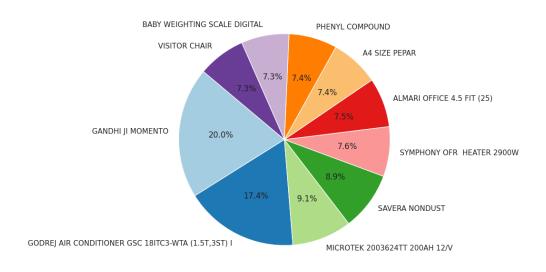


Fig 3.3.2: Top 10 Products by Purchase Amount

The first pie chart presents a macro-level view of the product purchase distribution by value, showcasing the **top 10 products** along with a consolidated "Others" segment. A significant insight from this chart is that the "Others" category dominates overwhelmingly, accounting for **86.4%** of the total purchase amount. This implies that while the top 10 products are individually important, the majority of procurement spending is distributed across a broad range of smaller-value or low-frequency items. The top three individual contributors are **GANDHI JI MOMENTO (2.7%)**, **GODREJ AIR CONDITIONER (2.4%)**, and

MICROTEK BATTERY (1.2%), indicating occasional high-value purchases rather than bulk or recurring procurement.

In contrast, the second pie chart zooms in exclusively on the top 10 products by purchase amount, omitting the aggregated "Others" category. This focused view reveals more balanced distribution across these top products, giving a deeper understanding of procurement priorities. The highest share goes to GANDHI JI MOMENTO (20.0%), followed closely by the GODREJ AIR CONDITIONER (17.4%), and MICROTEK 200AH Battery (9.1%). Other items, including SAVERA NONDUST, PHENYL COMPOUND, OFFICE CHAIRS, and BABY WEIGHTING SCALES, each range between 7.3% to 8.9%, indicating consistent mid-value spending. This breakdown suggests a relatively even allocation of procurement funds among frequently used and operationally important assets.

The combined use of both charts provides a dual perspective: the first chart establishes a **broad purchasing trend**, emphasizing that strategic management should not overlook the cumulative weight of smaller purchases. Meanwhile, the second chart acts as a **microscopic lens**, highlighting high-value assets that deserve inventory planning, price negotiation, or supplier relationship focus. From a business strategy standpoint, such insights enable targeted cost control measures on bulked-up categories and more efficient vendor management for recurring high-value items. Leveraging this information can significantly enhance both budgeting accuracy and operational procurement efficiency.

#### 3.4 Monthly Purchase, Sales, and Profit Trend Analysis

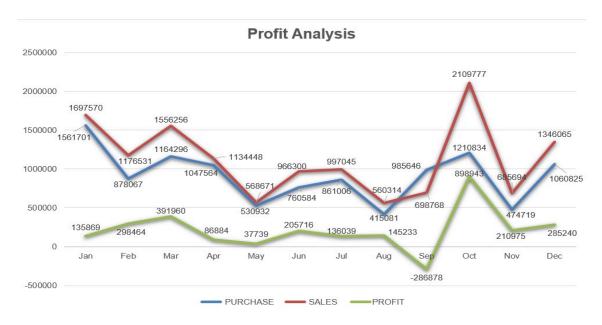


Fig 3.4.1: Monthly Purchase, Sales, and Profit Analysis for the Year

The line chart presented above provides a comprehensive monthly analysis of purchase, sales, and profit trends throughout the year. The red line representing sales consistently remains above the blue purchase line in most months, highlighting a generally healthy profit margin. January, March, and October emerge as particularly strong months, with October peaking at over ₹21 lakhs in sales compared to approximately ₹12 lakhs in purchases, resulting in the highest recorded monthly profit (~₹9 lakhs). These spikes suggest strategic sales campaigns or seasonal demand influencing performance.

Conversely, the business experienced downturns in certain months, with May and August showing the weakest performance. In May, purchases dropped to just over  $\mathfrak{T}5.3$  lakhs and sales to  $\mathfrak{T}9.6$  lakhs, while August saw the lowest purchase volume ( $\mathfrak{T}4.1$  lakhs) and generated minimal sales ( $\mathfrak{T}5.6$  lakhs), culminating in the only month with a negative profit ( $\mathfrak{T}4.2.9$  lakhs). These declines may indicate market sluggishness, reduced consumer interest, or inventory adjustment strategies. Despite this, June and July witnessed steady recovery with moderate profit margins.

Towards the end of the year, particularly in December, the business showed signs of recovery with rising figures—sales at ₹13.5 lakhs and purchases at ₹10.6 lakhs—suggesting a resurgence possibly due to year-end promotions or festive buying behavior. The monthly profit line (green) validates this cyclical pattern, reinforcing October as the most profitable month and August as the least. Such insights are instrumental for business strategy, aiding in demand forecasting, budgeting, and stock management to maximize returns and minimize inefficiencies across the fiscal year.

#### 3.5 Outstanding Dues Analysis: Top 10 Customers

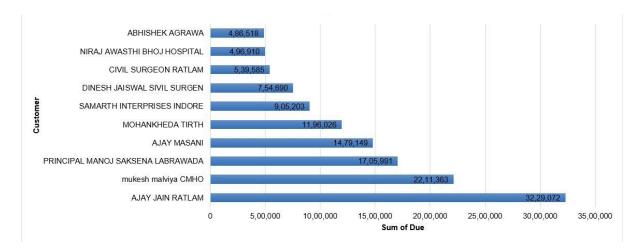


Fig 3.5.1: Top 10 customers with Highest outstanding dues

The bar chart above highlights the top 10 customers with the highest outstanding dues. The total dues owed by these customers present a critical insight into the company's **credit exposure and cash flow risk**. The leading defaulter is **Ajay Jain (Ratlam)**, with a pending amount of ₹32,29,072, which alone accounts for a disproportionately large share of the overall outstanding. Following this, **Mukesh Malviya (CMHO)** has dues of ₹22,11,363, and **Principal Manoj Saksena (Labrawada)** owes ₹17,05,991. These three customers together contribute nearly 70% of the total dues from the top 10 defaulters, reflecting a high concentration of receivables.

Mid-tier dues are held by customers such as **Ajay Masani** (₹14,79,149), **Mohanikheda Tirth** (₹11,86,026), and **Samarth Enterprises Indore** (₹9,05,203), suggesting delayed payments from institutional and private sector clients alike. At the lower end of the list are **Abhishek Agrawal** (₹4,86,518) and **Niraj Awasthi Bhoj Hospital** (₹4,96,910), which still represent significant sums when viewed in the context of business cash flow. These outstanding balances—if not recovered in a timely manner—can significantly affect working capital, order processing, and inventory turnover.

# 3.6 Sales Collection Distribution: Dues vs. On-Time Payments

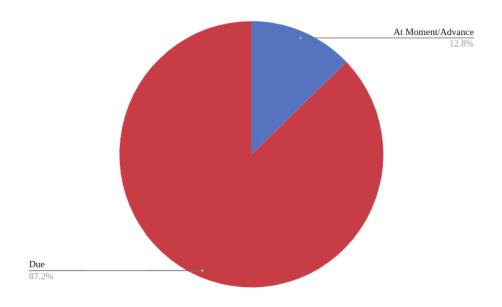


Fig 3.6.1: Sales Payment Status Distribution

The pie chart presents a clear breakdown of payment behavior across all customers, categorized into Dues and At Moment/Advance transactions. The most striking insight is that 87.2% of the total sales amount is still due, while only 12.8% has been received on time or in

advance. This sharp imbalance indicates a major credit risk and reveals a significant dependency on post-sale collections, which can severely impact the business's liquidity and operational planning.

This distribution shows that only a small proportion of customers are either pre-paying or paying at the time of transaction. Despite operational sales being executed, the company is essentially awaiting the inflow of most of its revenue, placing strain on cash flow cycles, vendor payments, and reinvestment capacity. While delayed payments might be standard in some B2B settings, such a large percentage of dues warrants immediate intervention through credit policy enforcement, collection strategies, and possibly reconsideration of payment terms.

# 3.7 Fluctuating Monthly Spend Patterns Across Key Suppliers

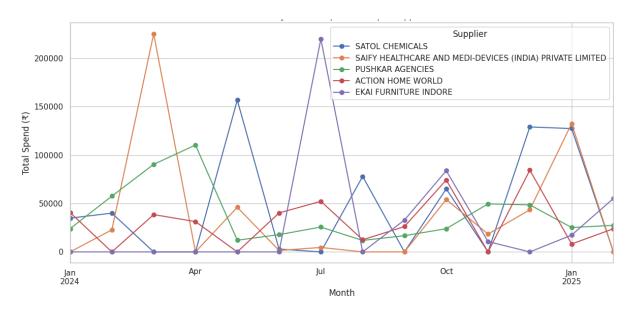


Fig 3.7.1: Monthly Trend of Spend for Top 5 Suppliers

The line chart illustrates the monthly procurement trends for the top 5 suppliers between January 2024 and February 2025, highlighting significant volatility in spending behavior. Saify Healthcare and Medi-Devices (India) Pvt. Ltd. experienced the highest monthly spike with a sharp peak in March 2024, reaching over ₹2.3 lakhs in a single month, followed by months of negligible activity. Similarly, Ekai Furniture Indore recorded a pronounced surge in July 2024 exceeding ₹2.2 lakhs, suggesting occasional high-volume purchases rather than consistent procurement.

In contrast, **Pushkar Agencies** demonstrated relatively steadier activity, with monthly spends ranging between ₹20,000 to ₹1.1 lakhs across multiple months, peaking in **April 2024**. Satol

Chemicals showed sporadic spending with bursts in May, September, and December 2024, indicating a reactive procurement pattern rather than a planned purchase cycle. Action Home World exhibited moderate and fairly regular spending, with a slight rise in December 2024 crossing ₹85,000, possibly aligned with seasonal or project-based procurement needs.

The overall trend indicates inconsistent procurement planning, with sudden spikes followed by long gaps for several vendors. Such volatility may strain budgeting, impact supplier negotiations, and reduce forecasting accuracy. It also suggests that purchases may be influenced by urgent needs or delayed ordering, which can lead to bulk spending in isolated months. Identifying the cause of these fluctuations—such as stockouts, project demands, or missed reorder points—can help improve supply chain stability and reduce financial strain through more balanced, periodic purchasing.

# 3.8 Supplier Spend vs. Product Breadth

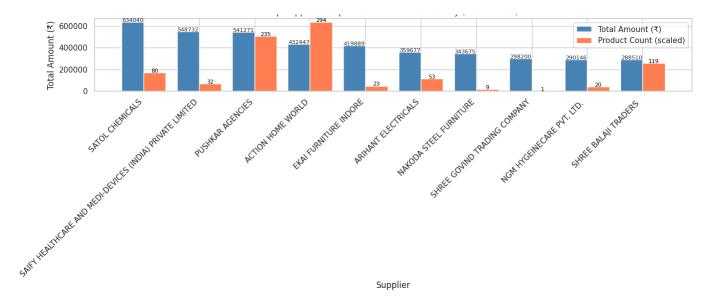


Fig 3.8.1: Top 10 Suppliers by Total Expenditure and Product Variety (Scaled Count)

The dual-axis bar chart compares total procurement expenditure against the number of products sourced from the top 10 suppliers. A striking observation is that **Satol Chemicals** incurred the highest expenditure (₹6.3 lakhs) while supplying fewer than **100 product types**, indicating a higher per-product cost or bulk purchasing of fewer items. Similarly, **Saify Healthcare and Medi-Devices** had nearly ₹5.3 lakhs in spending, but with a product variety below **50**, reinforcing the concentration of high-value purchases from limited SKUs.

In contrast, Action Home World delivered the widest product range, exceeding 250 product entries, yet had a moderate total spend of approximately ₹4.3 lakhs. Pushkar Agencies also maintained a balanced spend-to-product count ratio, offering over 200

**products** against ₹5.2 lakhs in expenditure. These two vendors appear to provide more diversity at relatively optimized procurement costs, suggesting their offerings are spread across a broader inventory range and could serve as flexible sourcing partners.

The overall trend reveals inefficiencies where certain suppliers receive substantial funds despite offering a narrow product base. Suppliers like **Ekai Furniture Indore** and **Arihant Electricals** also show low product variety despite mid-level spending. This mismatch indicates potential overspending or missed opportunities for cost rationalization. The chart emphasizes the need to evaluate procurement not just by total cost but also by the breadth of goods received—highlighting how over-reliance on limited SKUs from expensive vendors can distort cash flow and supply resilience.

# 3.9 Analysis of Supplier Concentration and Expenditure Distribution

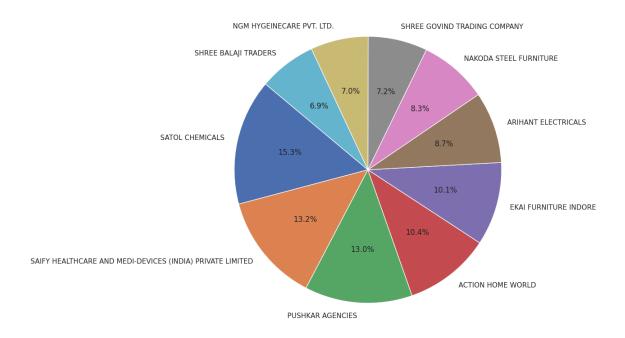


Fig 3.9.1: Expenditure Share by Top 10 Suppliers

The pie chart above reveals a notable concentration in supplier spending, with a substantial portion of the procurement budget going to a few key vendors. Satol Chemicals accounts for the largest share at 15.3%, followed by Saify Healthcare and Medi-Devices (India) Pvt. Ltd. at 13.2%, and Pushkar Agencies at 13.0%. Combined, these top three suppliers represent 41.5% of the organization's total procurement expenditure, pointing toward a heavy reliance on select vendors for essential goods and services.

Vendors in the middle tier such as **Action Home World (10.4%)**, **Ekai Furniture Indore (10.1%)**, and **Arihant Electricals (8.7%)** further add to the concentration, pushing the cumulative share of the top six suppliers to 70.7%. The remaining four—**Nakoda Steel Furniture (8.3%)**, **Shree Govind Trading Company (7.2%)**, **NGM Hygienecare Pvt. Ltd. (7.0%)**, and **Shree Balaji Traders (6.9%)**—contribute a relatively smaller combined share of **29.4%**, despite ranking among the top 10. This indicates that a large proportion of the company's financial outflow is directed toward a narrow supplier base.

From a financial analysis standpoint, this uneven distribution suggests structural vendor concentration that could heighten the business's exposure to pricing volatility, delivery delays, or contract dependencies. The current procurement pattern reflects limited diversification and possibly entrenched vendor relationships, which may inhibit competitive pricing and reduce operational agility. Such high dependency levels can pose cash flow challenges, particularly if key suppliers offer high-cost or inflexible payment terms, further emphasizing the need for better expenditure monitoring and procurement balance.

# 4. Interpretation of Results

The multi-dimensional analysis of Safai Ghar's sales, purchases, and supplier engagement data from January 2024 to February 2025 reveals several strategic insights critical for operational and financial decision-making:

#### 4.1 Seasonal Performance Patterns

The data reveals noticeable fluctuations in monthly revenue, with April and October showing peak performance, likely driven by institutional purchases or seasonal demand spikes. April's surge aligns with the start of the financial year when government and institutional clients initiate fresh procurement using newly allocated budgets, while October coincides with festive seasons like Dussehra and Diwali during which bulk purchases for CSR, public Health drives and events are common. Conversely, The noticeable dip in May was attributed to summer holidays, reduced operational activity, and administrative transitions, while August showed reduced sales and purchases, indicating a lull in market activity. Recognizing these cyclical trends is essential for forecasting demand and planning promotions, ensuring optimal stock availability during peak months while avoiding overstock during lean periods.

# **4.2 Segment-Wise Product Dynamics**

The segment-wise analysis of product performance indicates that medium-priced hygiene products (₹2–₹10) strike the most effective balance between volume and profitability, making them the backbone of revenue generation due to their consistent demand and reasonable

margins. Premium-priced items, though offering higher margins per unit, cater to a niche customer base and show limited sales volumes, requiring targeted marketing and selective stocking. On the other hand, low-priced products such as 3 PLY masks, despite their exceptionally high sales volume, contribute minimally to overall revenue because of their low unit prices.

# 4.3 Customer Payment Behavior and Credit Risk

A sharp disparity in payment trends was observed, with 87.2% of sales value remaining due. Major institutional clients such as Ajay Jain (₹32L+) and Mukesh Malviya (₹22L+) represent a disproportionately large share of outstanding dues(~70% among top 10. This not only affects working capital but also exposes the business to significant credit risk. A structured credit control framework is essential to safeguard against delayed payments or defaults. Prioritizing recovery from such clients and enforcing stricter credit control policies is imperative for maintaining liquidity and minimizing defaults.

# 4.4 Supplier Dependency and Cost Concentration

Three suppliers—Satol Chemicals, Saify Healthcare, and Pushkar Agencies—alone account for over 41% of total procurement spend. Such heavy dependency on a few vendors poses risks in terms of price negotiation power and supply continuity. These suppliers also offered limited product variety, indicating potential overpayments for limited offerings Moreover, vendors like Satol received the highest spend despite offering limited product diversity, suggesting potential suboptimal procurement terms. Diversifying supplier relationships and reassessing procurement contracts could improve cost-efficiency and reduce exposure.

# **4.5 Procurement Volatility**

The monthly purchase patterns for top vendors were highly erratic, with spikes observed in select months followed by long inactivity. For instance, Medi-Devices (India) Pvt. Ltd. saw a peak of ₹2.3L in March but minimal activity thereafter. This reactive purchasing behavior suggests either poor inventory planning or sudden demand surges. Implementing reorder point systems and improving demand forecasting can stabilize procurement and ease cash flow planning. More structured planning and reorder threshold mechanisms are needed to stabilize spend patterns.

# 4.6 Inventory Breadth vs. Spend Imbalance

Vendors like Action Home World provided over 250 products with moderate spend (~₹4.3L), whereas Satol Chemicals received the highest spend (₹6.3L) for under 100 products. This skew indicates inefficiencies where funds are concentrated in fewer SKUs, possibly leading to overstocking or overpriced purchases. Evaluating suppliers on both spend and SKU diversity could lead to more balanced procurement strategies.

# 4.7 Cash Flow Implications of Receivables

With a majority of sales tied up in dues, the business faces restricted cash availability for operational activities such as reordering stock or seizing new business opportunities. The delayed realization of revenue not only affects profitability but also weakens bargaining power with suppliers and limits the ability to invest in marketing or expansion.

#### 4.8 Need for Inventory Rationalization

The large share of procurement attributed to the "Others" category (86.4%) reveals operational inefficiencies in inventory control. A significant portion of the budget is tied to low-frequency, low-value items, increasing administrative overhead and storage costs. Prioritizing high-value recurring items and consolidating low-impact purchases could streamline inventory and free up capital. This fragmentation implies a large number of infrequent, low-value purchases that may be overlooked in bulk purchase negotiations, adding complexity to inventory management

#### 5. Recommendation

# 5.1. Strengthen Credit Policy and Receivables Collection

- Implement Credit Limits: Set customer-specific credit ceilings, especially for high-defaulter clients like Ajay Jain and Mukesh Malviya.
- Enforce Payment Terms: Introduce stricter invoicing timelines, late fee penalties, and discount incentives for early payments.
- **Automated Reminders**: Deploy a follow-up system with SMS/emails for overdue accounts and initiate reconciliation calls quarterly.
- **Stop Credit Supply to Chronic Defaulters**: Transition high-risk clients to advance or partial-payment models until dues are cleared.

## 5.2. Optimize Procurement Strategy and Vendor Base

- **Diversify Supplier Base**: Reduce dependency on top 3 vendors (Satol Chemicals, Saify Healthcare, Pushkar Agencies) by identifying alternate suppliers for high-demand SKUs.
- Negotiate Volume Discounts and Flexible Contracts: Engage suppliers with regular reviews to establish dynamic pricing and smaller, more frequent delivery agreements.
- **Procure Based on Forecasts**: Use past monthly trends to predict procurement needs and avoid bulk buying during low-demand phases.

#### 5.3. Restructure Inventory Management

- Introduce Stock Thresholds: Set minimum and maximum limits per product category to prevent overstocking and stockouts.
- Adopt Just-in-Time (JIT) for Low-Movement Products: Especially for sporadically procured items like office furniture or occasional-use chemicals.
- Clear Dead Stock: Run promotions or bundle offers to move slow-moving products categorized under the "Others" segment (86.4% of total purchases).
- **Implement FIFO**: Ensure the oldest inventory is sold first, reducing the risk of product expiry, obsolescence, or damage.

# 5.4. Realign Product Portfolio and Pricing

- Focus on Medium-Priced Products (₹2–₹10): These items show the best balance between volume and profit. Boost visibility, availability, and bundled offerings in this category.
- Strategically Promote Premium SKUs: Use branding, packaging upgrades, and targeted campaigns to increase the volume of high-margin products.
- **Review Underpriced High-Volume Products**: Products like 3 PLY masks drive volume but little revenue—reassess margins and consider slight price adjustments.

# 5.5. Improve Sales and Marketing Approaches

- Run Seasonal Campaigns: Capitalize on high-performing months like October and April by planning ahead for discounts, promotions, and B2B client outreach.
- Leverage Data-Driven Pricing: Introduce dynamic pricing models based on volume, profitability, and seasonality to maximize margins.
- **Introduce Loyalty Programs**: Offer incentives to recurring customers who maintain on-time payments to drive repeat purchases and healthy cash flow.

## 5.6. Stabilize Monthly Procurement and Cash Flow

- **Avoid Procurement Spikes**: Standardize monthly purchasing by setting monthly procurement budgets per supplier based on need and historical usage.
- Review Purchase Behavior Quarterly: Analyze supplier performance and adjust order frequency or volume based on actual usage and cost-efficiency.
- **Use Procurement Dashboards**: Visualize real-time purchasing and inventory trends to guide buying decisions.

# 5.7. Reallocate Working Capital

- Reduce Capital Tied in Low-ROI Inventory: Shift spending from underperforming items to products with proven profitability and demand stability.
- Reinvest in Growth Areas: Use excess liquidity (indicated by high outstanding dues and likely high current ratio) to strengthen digital infrastructure, supplier tech integration, or new product categories.
- **Balance Spend-to-Breadth Ratio**: Prioritize vendors like Action Home World who offer a wider product variety at moderate spend, promoting supply chain agility.

# 6. Important Links

## Excel Sheet on which Analysis have been performed:

 $https://docs.google.com/spreadsheets/d/1Jg\_dE-qwCxXNHKev7bLKN\_eYq5r08sMV8Z\_f7S~qE-3Y/edit?usp=sharing$ 

# Google Collab on which graphs and analysis have been performed:

https://colab.research.google.com/drive/1260i2Ut8CMMi99eRmyZTYCtRbXzRK4lV?usp=s haringhttps://colab.research.google.com/drive/1260i2Ut8CMMi99eRmyZTYCtRbXzRK4lV?usp=sharing