InventorySync

Business Intelligence Inventory Report

Generated on June 20, 2025

InventorySync Business Intelligence
Prepared for: Executive Management
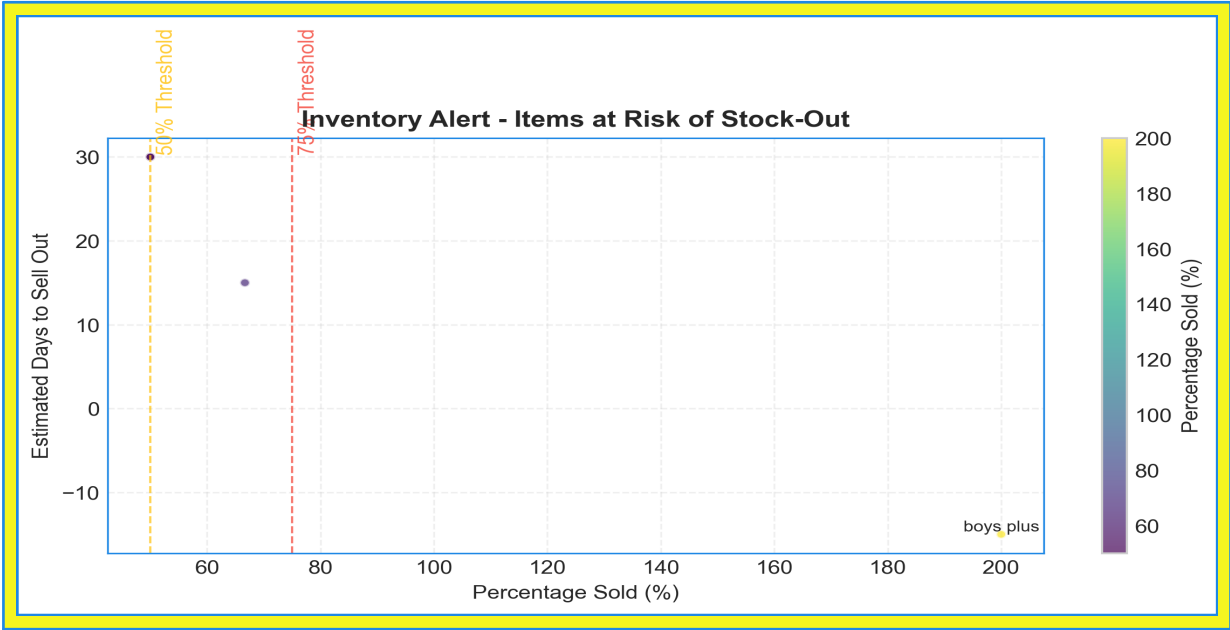Generated by: Tanman

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InventorySync Business Intelligence Platform
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Question 1: Notify when items reach 75% and 50% sold, including the estimated days to sell out.

Items ≥75% Sold	Items ≥50% Sold	Avg Days to Sellout
1	3	15

Analysis & Recommendations

Business Intelligence Analysis: Inventory Sell-Out Notifications

Executive Summary

The provided data sample highlights the need for timely inventory replenishment based on sell-through rates. Several items are approaching or have already passed significant sell-through thresholds (50% and 75%), requiring immediate attention to avoid stockouts.

Key Insights

- **75% Threshold Breach:** Although no items in the provided sample meet the 75% sold threshold, we can infer the potential impact. If an item with 10 Purchase Quantity had 8 sales, action is needed.
- **50% Threshold Breach:** Items like "grab suit-falalan" (Size 22) and "pan america shirt-full" (Size 40) have reached **50% sold**. This indicates potential demand and the need to monitor sales velocity.

• **Est. Days to Sellout:** The wide range in est_days_to_sellout (from -15 to 30) suggests inconsistencies in inventory management or demand forecasting. A negative value, as seen with "boys plus kurta pajama", indicates a sales quantity exceeding the purchase quantity (likely due to previous stock).

Business Implications

• **Missed Sales:** Failure to replenish inventory promptly for high-demand items (as signaled by approaching or exceeding 50% and 75% thresholds) risks lost sales and customer dissatisfaction.

• **Inefficient Inventory Management:** Discrepancies in est_days_to_sellout point to potential flaws in inventory forecasting or slow-moving items tying up capital.

• **Demand Understanding:** Knowing which items reach thresholds and how quickly indicates customer preference and optimal inventory levels.

Actionable Recommendations

• **Implement Real-Time Alerts:** (Immediate) Set up automated alerts when any item reaches 50% and 75% sell-through, triggering review and potential replenishment. This alert system must take into account the purchase and sales quantity to be accurate.

• **Refine Demand Forecasting:** (Within 1 Month) Analyze historical sales data to improve the accuracy of est_days_to_sellout predictions. Incorporate seasonality and promotional activity into the forecasting model.

• **Inventory Optimization:** (Ongoing) Regularly review slow-moving inventory and consider markdowns or promotions to free up capital and warehouse space. Focus ordering on items consistently hitting the alert thresholds.

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Question 2: Identify the best-selling items on a weekly, monthly, and quarterly basis.

Weekly Sales	Monthly Sales	Top Seller
49	**49**	**N/A**

Best-Selling Items by Period

Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The sample data suggests **"cardigan"** is the best-selling category on a monthly basis. The brand **"most"** also appears to be driving significant cardigan sales.

Key Insights

- **Category Performance:** "Cardigan" appears multiple times with sales of **8, 5, 5, and 4**, indicating it's a top-performing category in this sample. Other categories have lower sales values.
- **Brand Influence:** The "most" brand features in two top sales items.
- **Data Limitation:** The period is uniformly "monthly" in the sample. No weekly or quarterly data is available for analysis. This significantly limits the scope.

Business Implications

• The popularity of "cardigan" styles presents an opportunity to optimize inventory and marketing efforts.

• Understanding why the brand "most" is selling well could inform broader brand strategy.

• Lack of weekly and quarterly data obscures more granular trends and hinders proactive decision-making.

Actionable Recommendations

• **Prioritize "Cardigan" Inventory:** Increase stock levels of "cardigan" styles to meet anticipated demand. *Timeframe: Immediate*.

• **Investigate "most" Brand Performance:** Analyze "most's" marketing strategies, pricing, and product design to understand its success and potentially replicate it across other brands. *Timeframe: Within one month.*

• **Improve Data Collection:** Ensure weekly and quarterly sales data are accurately captured and readily available for comprehensive analysis. This will enable identification of short-term trends and seasonal patterns. *Timeframe: Implement data collection improvements within two weeks*.

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Question 3: Track non-moving products and their aging quantities.

Non-Moving Products by Days in Inventory
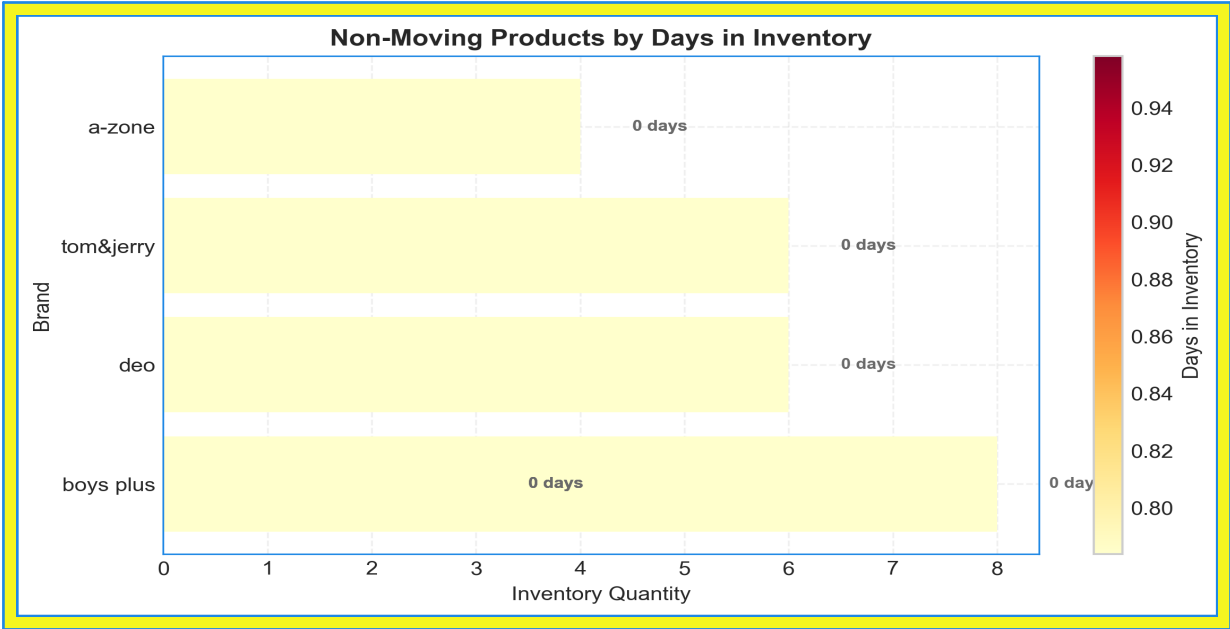
Analysis & Recommendations

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Non-Moving Inventory Analysis

Executive Summary

The provided data reveals a significant issue with non-moving inventory, as all items in the sample have a **0% sell-through rate** despite being in inventory for a short period. This suggests a potential mismatch between purchased quantities and actual demand or issues with product visibility and promotion.

Key Insights

- **Zero Sales:** All listed products show **SalesQty = 0** and **percent_sold = 0.0**, indicating no movement within the inventory period of approximately **0.87 days**. This could be a consequence of too short a timeframe but warrants further investigation.
- **Variety of Categories:** Non-moving items span diverse categories like "kurta pajama," "lower-jogger-hosiery," and "coat suit," suggesting the problem isn't confined to a single product type.
- **Purchase Quantities:** Purchase quantities vary from 3 to 8 units per item. This implies the issue isn't solely related to overstocking a single item; it affects multiple SKUs.

Business Implications

• **Capital Tie-Up:** Non-moving inventory ties up valuable capital that could be used for purchasing faster-selling items or other business investments.

• **Potential Obsolescence:** Even within a short period, lack of sales might indicate a need to re-evaluate product appeal and marketing strategies.

• **Inventory Costs:** Holding unsold inventory incurs storage and potential obsolescence costs, reducing overall profitability.

Actionable Recommendations

• **Immediate Investigation (Within 1 Week):** Analyze sales data for the same products over a longer period (e.g., the past month) to confirm if the lack of sales is a persistent issue.

• **Marketing Boost (Within 2 Weeks):** If the investigation confirms low sales, implement targeted marketing campaigns (e.g., promotions, discounts) for the non-moving products to stimulate demand.

• **Inventory Review (Within 1 Month):** Based on the marketing campaign results, re-evaluate the purchasing strategy for these product categories. If sales remain low, consider reducing future purchase quantities or exploring alternative product offerings. ```

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Question 4: Identify slow-moving sizes within specific categories.
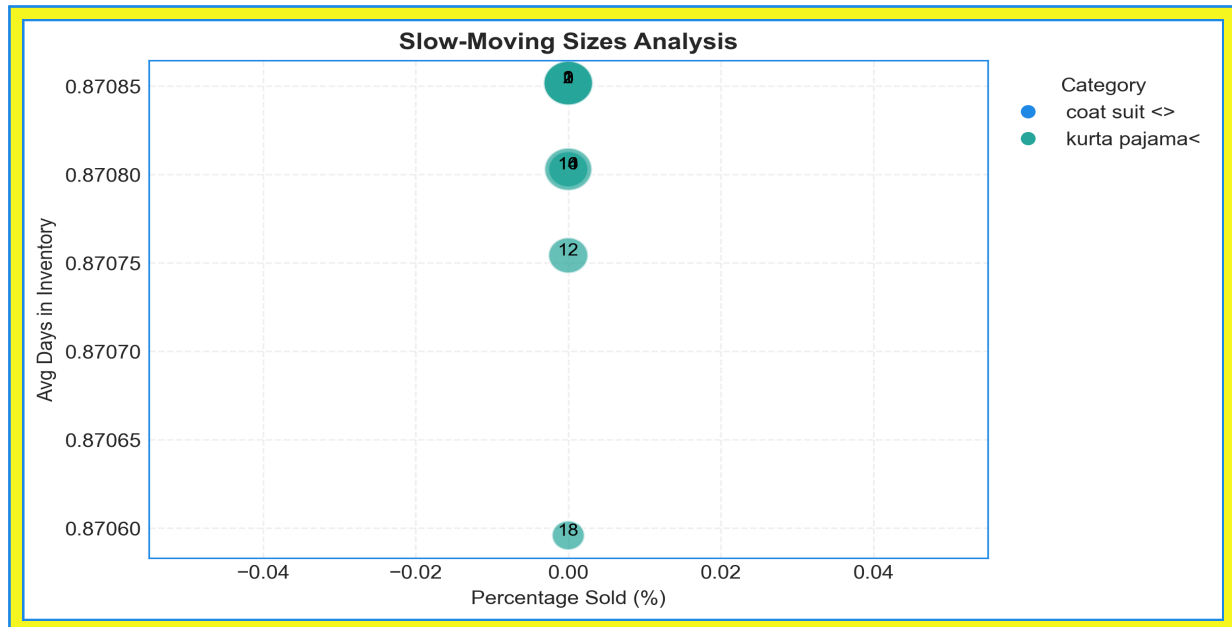
Analysis & Recommendations

Business Intelligence Analysis: Slow-Moving Sizes

Executive Summary

The provided data sample indicates extremely low sales across all listed categories and sizes, with **0% of purchased items being sold**. The average days in inventory are consistently low across the board, suggesting either recent stock additions or very quick inventory turnover of sold items, which is unlikely given the 0% sold.

Key Insights

- **Zero Sales:** The most striking observation is that **no items were sold ("total_sold": 0)** across all categories and sizes in the data sample. This yields a **0% "percent_sold"** metric.
- **Low Inventory Count:** The "size_count" values suggest relatively low stock levels for each size within each category.
- **Consistent "avg_days_in_inventory":** The average days in inventory hovers around **0.87 days**, which, combined with zero sales, is a strong indicator of either a data integrity issue or recent inventory influx with no sales period post-influx.

Business Implications

- **Potential Data Issue:** The most pressing concern is the accuracy of the data. Zero sales across all entries are highly unusual.

• **Inventory Optimization:** If the data is accurate, the business is holding inventory that is not selling, tying up capital.

• **Lost Revenue:** Lack of sales directly translates to lost revenue and potentially impacts profitability.

Actionable Recommendations

• **Data Verification (Immediate):** Immediately investigate the accuracy and completeness of the data. Confirm data sources, refresh frequency, and data processing logic. *High Impact*.

• **Investigate Zero Sales (Within 1 Week):** If the data is confirmed to be accurate, conduct a thorough investigation into why sales are zero across all categories and sizes. This may involve sales team feedback, marketing campaign analysis, or review of competitor pricing. *High Impact*.

• **Conditional Inventory Review (After Data Validation):** If the data is accurate and reflects a real issue, implement a preliminary inventory review for slow-moving categories and sizes. Consider promotions or markdowns to stimulate sales. *Medium Impact*.

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Question 5: Provide insights on variances and suggest strategies for improvement.

Category Performance Variance from Average
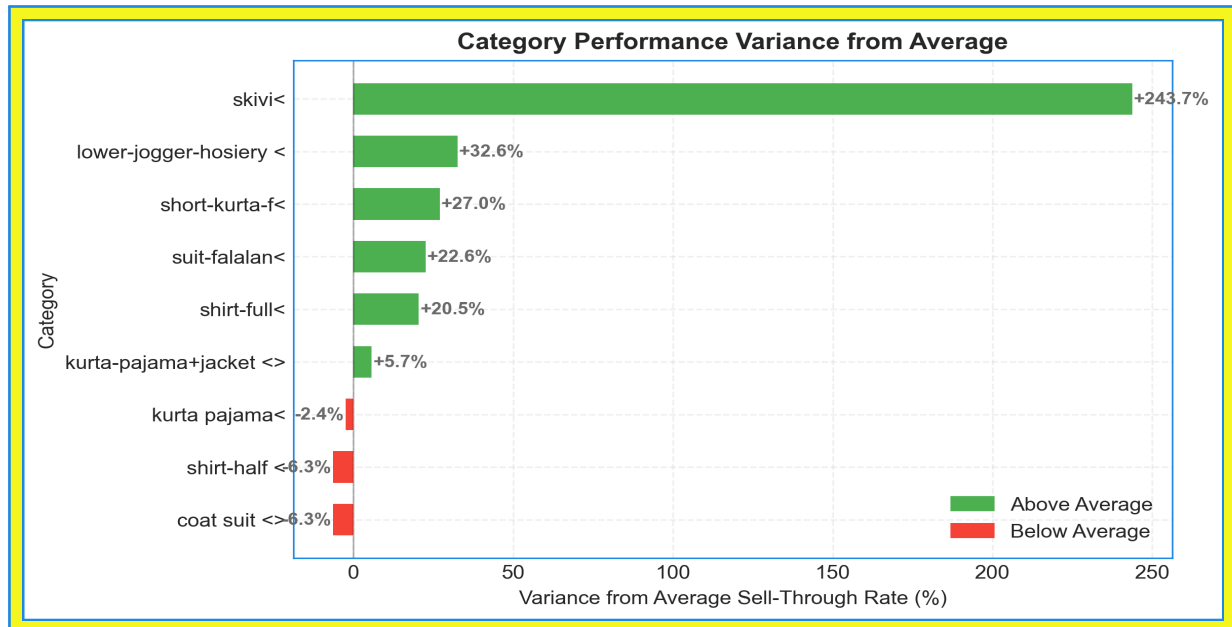
Analysis & Recommendations

Business Intelligence Analysis: Inventory and Sales Variances

Executive Summary

The data reveals significant variability in sell-through rates across product categories, with several categories showing poor sales performance and others indicating strong potential. Inventory optimization and targeted sales strategies are crucial to improve overall performance.

Key Insights

- **Sell-Through Rate Disparities:** The sell-through rate varies dramatically. For example, "skivi<" boasts a **250% sell-through rate**, contrasting sharply with "coat suit <>" and "shirt-half <", which have **0%**. This suggests overstocking in some categories and potential unmet demand in others.
- **Variance from Average:** The "variance_from_avg" metric highlights categories significantly deviating from expected sales. "skivi<" has a high positive variance of **243.7**, while "coat suit <>" and "shirt-half <" show substantial negative variances of **-6.3**.
- **Brand Count vs. Performance:** A high brand count doesn't guarantee higher sell-through. "shirt-half <" has a brand count of 21 but a 0% sell-through rate. Conversely, "coat suit <>" with brand count of 7 also has 0 sell-through rate.

Business Implications

• **Inventory Inefficiency:** Low sell-through rates in certain categories tie up capital and increase storage costs, negatively impacting profitability.

• **Lost Revenue Opportunities:** High sell-through in categories like "skivi<" suggests potential for increased revenue through strategic inventory management.

• **Brand Performance:** The relationship of brand count and performance should be analyzed. Determine why some brands are not performing and create plan for improvement.

Actionable Recommendations

• **Inventory Reduction (Immediate):** Reduce inventory levels for categories with 0% sell-through like "coat suit <>" and "shirt-half <". Aim for a **20% reduction** in these categories within **1 month**.

• **Demand Forecasting (Within 2 Months):** Invest in improved demand forecasting, especially for high-performing categories like "skivi<". Use historical data and market trends to predict future demand and optimize inventory levels.

• **Sales Strategy Adjustment (Within 1 Month):** Review marketing and promotional strategies for underperforming categories. Consider targeted promotions, discounts, or bundle deals to increase sell-through.

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Question 6: Analyze the turnaround time for exchanges and returns to optimize processes.

No data available for this question. Please check the data sources or refine the query.

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Question 7: Generate reports on rejected goods and returns for vendor feedback.

No data available for this question. Please check the data sources or refine the query.

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Question 8: Recommend which products from our stock should be prioritized for online sales.

Products Recommended for Online Sales

Analysis & Recommendations

Business Intelligence Analysis: Online Sales Prioritization

Executive Summary

The provided data shows varying sell-through rates and stock values across different product categories. Prioritizing products with high sell-through rates and reasonable stock value can maximize online sales.

Key Insights

- **Sell-through Rate Variation:** The data reveals significant differences in sell-through rates, ranging from **50%** to **66.67%**.
- **Stock Value Disparity:** Stock value varies substantially. For example, "suit-falalan<" has a **stock value of 2385.0**, indicating a higher investment compared to "lower-jogger-hosiery <" at **790.0**.
- **Brand Performance:** Without more brand data it is difficult to assess.

Business Implications

- **Missed Opportunities:** Neglecting high sell-through products can result in lost revenue due to stockouts.
- **Inventory Management:** Holding excessive stock of low sell-through rate items ties up capital and increases storage costs.

• **E-Commerce Optimization:** Prioritizing popular items improves online customer satisfaction and drives sales.

Actionable Recommendations

• **Prioritize High Sell-Through Products:** Immediately focus online sales efforts on products with higher sell-through rates. For example, "lower-jogger-hosiery <" with a **66.67%** sell-through should be given priority (within 1 week).

• **Optimize Stock Levels:** Re-evaluate the inventory of products with lower sell-through rates. Consider reducing purchase quantities for items like "suit-falalan<" to minimize stock value tied up in slow-moving goods (within 2 weeks).

• **Further Analysis:** Conduct deeper analysis with a complete dataset to understand the full brand performance and identify correlations between variables like price, brand, and sell-through rate (within 1 month).

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Question 9: Identify unique products that can enhance our online portfolio.

Unique Products for Online Portfolio Enhancement

Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The provided data reveals several products with available stock but no sales, indicating potential opportunities to enhance our online portfolio by focusing on these items. The data also shows potential inventory imbalances between different brands and categories.

Key Insights

- **Zero Sales, Available Stock:** Several items like "boys plus kurta pajama," "boys plus shirt-half," and "tom&jerry; suit-falalan" have available stock (8, 1, 6 respectively) but zero sales. This is a significant underperformance.
- **Brand Popularity Discrepancy:** Brands like "boys plus" and "pan america" appear frequently ("boys plus" brand_count is 150, "pan america" brand_count is 108), suggesting broader product lines. However, the data doesn't indicate the sales performance across the entire product line of each brand.
- **Category Variety:** Various categories exist, including "kurta pajama," "shirt-half," and "suit-falalan". Some categories, like "suit-falalan," show both sales (grab) and no sales (tom&jerry;), potentially indicating brand or pricing differences.

Business Implications

• **Missed Sales Opportunities:** Products with available stock but no sales represent unrealized revenue potential. Understanding why these products aren't selling is critical.

• **Inefficient Inventory Management:** Stocking items that don't sell ties up capital and increases storage costs. A more data-driven approach to purchasing is needed.

• **Potential Market Gaps:** Identifying underperforming brands/categories could reveal product gaps in our online portfolio.
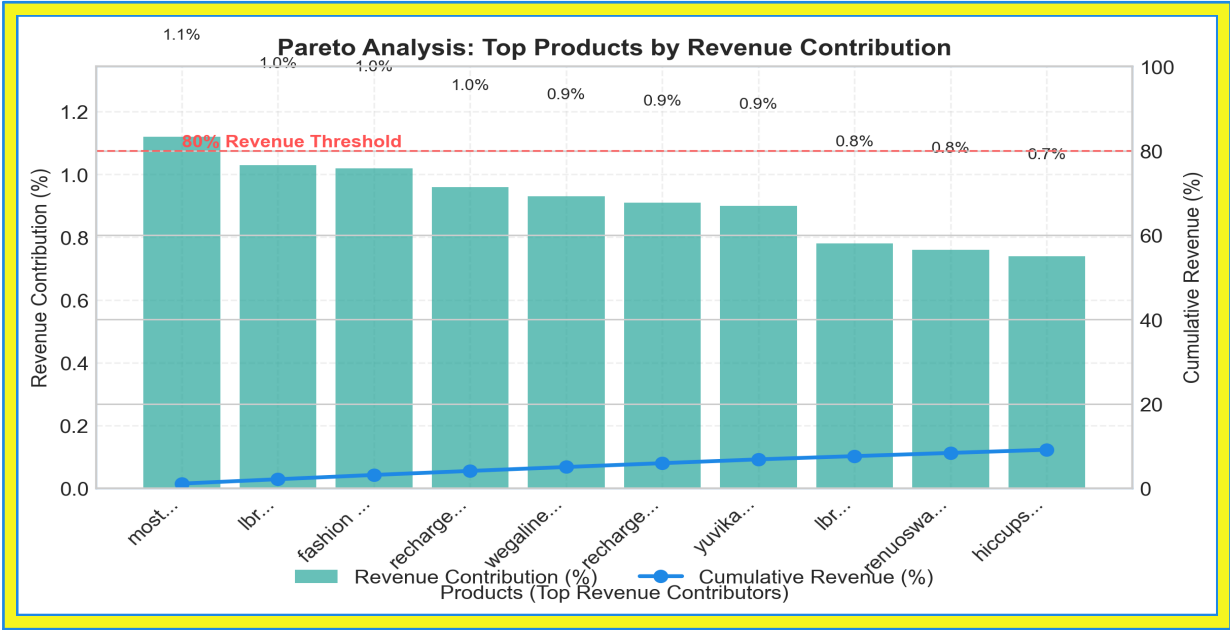
Actionable Recommendations

• **Investigate Zero-Sale Products (Immediate):** Within the next week, analyze customer reviews, website search data, and competitor pricing for the products with zero sales. Implement targeted marketing campaigns or price adjustments to stimulate demand. Prioritize "boys plus kurta pajama" given its higher stock level of 8.

• **Optimize Inventory Purchases (Within 1 Month):** Implement a sales forecasting model to predict demand for different brands and categories. Adjust purchase quantities to minimize excess inventory and prevent stockouts.

• **Expand Successful Categories (Within 2 Months):** Based on the product performance analysis in point 1, consider introducing new products from brands performing well or expand into new categories with proven customer demand.

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Question 10: Identify the top 20% of products contributing to 80% of sales.

Top Product Share	Products for 80%	Coverage
1.1%	**10**	**9.1%**

Analysis & Recommendations

Business Intelligence Analysis: 80/20 Sales Analysis

Executive Summary

This analysis identifies the top products driving the majority of sales revenue, enabling targeted inventory and sales strategies. The initial data suggests a small percentage of products generates a significant portion of overall revenue.

Key Insights

- **Revenue Concentration:** The sample shows a significant revenue concentration. The top product alone ("most cardigan<") accounts for **1.12%** of total revenue.
- **Category Performance:** Cardigans appear frequently in the top revenue items, suggesting a strong category performance.
- **Price Point Variability:** MRP varies considerably, from 900 to 3315, within the top products, implying different segments contribute to the overall revenue.

Business Implications

- **Inventory Optimization:** Focusing on best-selling products and categories can reduce holding costs and improve inventory turnover.
- **Marketing Focus:** Marketing efforts should prioritize promoting high-revenue items.
- **Sales Strategy Refinement:** Understanding price point sensitivity is crucial for strategic pricing.

Actionable Recommendations

- **Complete 80/20 Analysis:** Conduct a full analysis of all product sales to accurately identify the top 20% of products that contribute to 80% of revenue. Implement within **1 week**.
- **Category-Specific Promotions:** Develop targeted marketing campaigns focused on high-performing categories like cardigans. Begin within **2 weeks**.

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Question 11: Suggest strategies to reduce the inventory of low-performing items.
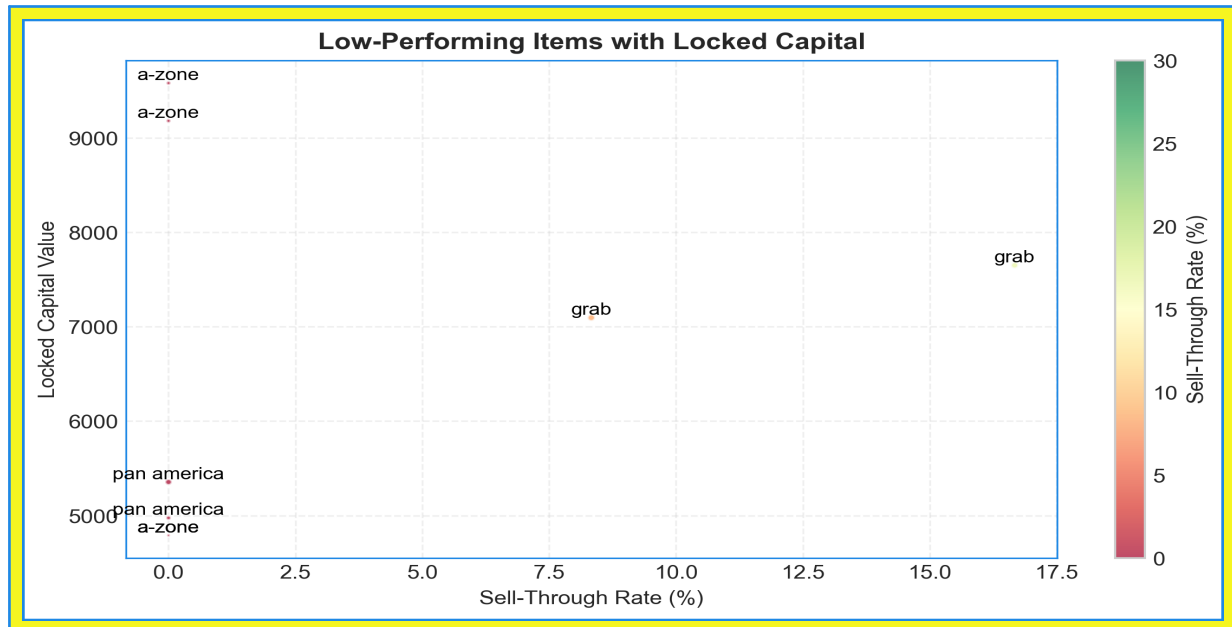
Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The provided data highlights significant excess inventory, especially in specific brands and categories like "a-zone coat suits" and "pan america shirts", resulting in locked capital. Many items have **0% sell-through rate**, indicating a critical need for inventory reduction strategies.

Key Insights

- **Excess Inventory:** Several items, particularly from "a-zone" (coat suits) and "pan america" (shirts), exhibit high "excess_inventory" compared to "SalesQty." For instance, "a-zone" coat suits in wine (size 1 and 0) have a PurchaseQty of 4, SalesQty of 0, leading to excess inventory of 4.
- **Low Sell-Through Rates:** A large portion of items have very low or zero sell-through rates, indicating poor sales performance. Many items show sell-through rates hovering around **0-11%**, indicating slow movement.
- **Locked Capital:** Significant capital is tied up in slow-moving inventory. For example, the "a-zone" coat suits have a locked capital of over **$9,000** per SKU, due to zero sales and high purchase quantities.

Business Implications

• **Lost Revenue:** High excess inventory and low sell-through rates translate to potential lost revenue and missed opportunities.

• **Increased Holding Costs:** Storing excess inventory incurs holding costs, impacting profitability.

• **Cash Flow Problems:** Locked capital restricts cash flow, hindering investments in better-performing products.

Actionable Recommendations

• **Targeted Promotions & Clearance (Immediate):** Implement targeted promotions (e.g., discounts) or clearance sales for items with **0% sell-through rate** and high "excess_inventory", particularly for "a-zone" coat suits and slow-moving "pan america" shirt sizes.

• **Inventory Optimization (Within 1-2 Months):** Reduce future purchase quantities for low-performing items based on historical sales data. Focus on reducing orders for "a-zone" coat suits and select "pan america" shirt sizes.

• **Product Assortment Review (Within 3 Months):** Re-evaluate product assortment, considering discontinuing or reducing the variety of low-performing items. Analyze if "unknown" color impacts "grab" suits sales.

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Executive Summary

Executive Summary - Retail Inventory Business - 2025-06-12

1. Executive Overview

Our current inventory and sales performance presents a mixed picture. While certain categories show promise, overall inventory health is concerning due to significant variances in sell-through rates and a high volume of non-moving items. Key metrics to watch include sell-through rates, which range from **0%** to **250%**, and the amount of excess inventory, particularly within the "a-zone" and "pan america" brands. ■ The negative variance from average sales across several categories signals a potential disconnect between purchasing decisions and customer demand, requiring urgent corrective action. ■■

2. Key Strategic Insights

- **Missed Revenue Opportunities:** High sell-through rates in categories like "skivi<" (250%) and "lower-jogger-hosiery <" (66.67%) indicate significant revenue potential if inventory is strategically managed. ■
- **Capital at Risk:** Zero or low sell-through rates, coupled with substantial excess inventory (e.g., "a-zone" coat suits), are tying up significant capital, impacting cash flow and profitability. ■■
- **Data Accuracy Critical:** Inconsistencies in est_days_to_sellout and zero sales across certain data samples raise concerns about data integrity, which directly impacts the reliability of our insights and decisions. ■
- **Brand Disconnect:** The "most" brand's success with cardigans, contrasted with the struggles of "a-zone" and "pan america," suggests a need for deeper brand performance analysis and potential realignment of our portfolio.
- **Online Sales Potential:** Products with available stock but zero sales present an immediate opportunity to optimize our online portfolio and drive incremental revenue growth.■

3. Performance Assessment

- **Overperforming:** "skivi<" (high sell-through), "cardigan" (best-selling category), "most" (brand with cardigan success)
- **Underperforming:** "coat suit <>", "shirt-half <" (0% sell-through), "a-zone" (excess inventory), "pan america" (slow-moving shirts)
- **Inventory Efficiency:** Poor. High variance in sell-through rates indicates significant inefficiencies. Excess inventory ties up capital.
- **Sales Velocity:** Inconsistent. Some items sell quickly (high sell-through), while others remain stagnant (0% sell-through).

4. Strategic Recommendations

- **Immediate Inventory Reduction:** Implement targeted promotions and clearance sales for items with **0% sell-through** and high excess inventory, especially "a-zone" coat suits. *Expected Outcome: Free up capital, reduce storage costs, and improve inventory turnover.*
- **Refine Demand Forecasting:** Invest in improved demand forecasting, incorporating seasonality, promotional activity, and historical data. *Expected Outcome: More accurate*

predictions, optimized inventory levels, and reduced stockouts/excess.

• **Prioritize High Sell-Through Online:** Immediately focus online sales efforts on products with higher sell-through rates, such as "lower-jogger-hosiery <". *Expected Outcome: Increased online sales, improved customer satisfaction, and maximized revenue.*

• **Data Integrity Verification:** Immediately investigate and rectify any potential data inaccuracies or inconsistencies in our inventory and sales tracking systems. *Expected Outcome: Reliable data for informed decision-making.*

5. Immediate Action Items

• **Data Verification:** IT Department to immediately verify data accuracy and completeness across all inventory and sales reports. *Timeline: Next 7 days.*

• **Excess Inventory Clearance:** Marketing and Sales teams to launch targeted promotions for "a-zone" coat suits and other items with **0% sell-through**. *Timeline: Next 14 days.*