InventorySync

Business Intelligence Inventory Report

Generated on June 28, 2025

InventorySync Business Intelligence

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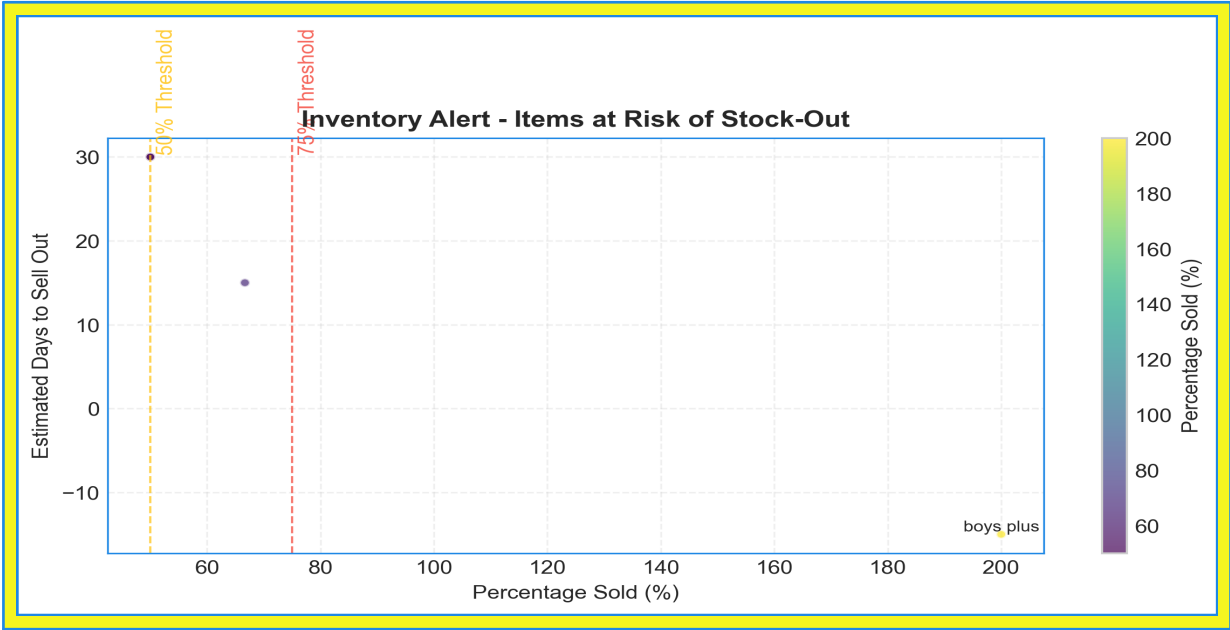
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InventorySync Business Intelligence Platform
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Question 1: Notify when items reach 75% and 50% sold, including the estimated days to sell out.

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

Inventory Alert - Items at Risk of Stock-Out

Analysis & Recommendations

Business Intelligence Analysis: Inventory Sell-Through

Executive Summary

The data highlights items nearing critical sell-through thresholds, with some already exceeding inventory levels. Proactive alerts at **75% and 50% sold** are crucial to manage inventory and prevent stockouts.

Key Insights

• Several items are approaching or have exceeded critical sell-through thresholds. For example, "deo lower-jogger-hosiery" is **66.67% sold** with an estimated **15 days** until sell-out. "grab suit-falalan" and "pan america shirt-full" are both at **50% sold**.

• The "boys plus kurta pajama" shows a **200% sold** metric and **-15 estimated days to sellout**, indicating a data error (SalesQty > PurchaseQty). This highlights potential inventory tracking issues.

• Estimated days to sell-out varies widely, providing an opportunity for more accurate demand forecasting and inventory planning.

Business Implications

- Approaching sell-out thresholds present a risk of stockouts, potentially leading to lost sales and customer dissatisfaction. Conversely, overstocked items tie up capital and increase storage costs.
- Inaccurate "percent_sold" and "est_days_to_sellout" metrics require immediate investigation to ensure data integrity.
- Optimizing inventory levels based on predicted sell-out rates can significantly improve profitability.

Actionable Recommendations

- **Implement real-time alerts for items reaching 75% and 50% sold (High Impact, Immediate):** Prioritize items with short sell-out timelines. This allows for timely replenishment or promotional strategies.
- **Investigate and rectify data discrepancies (High Impact, Immediate):** Address the negative sell-out time and >100% sell through reported for "boys plus kurta pajama" by auditing inventory and sales tracking processes.
- **Refine the "est_days_to_sellout" calculation (Medium Impact, Within 1 Month):** Incorporate historical sales data, seasonality, and promotional calendars to enhance prediction accuracy and inform purchasing decisions.

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

Weekly Sales	Monthly Sales	Top Seller
0	**49**	**N/A**

Best-Selling Items by Period
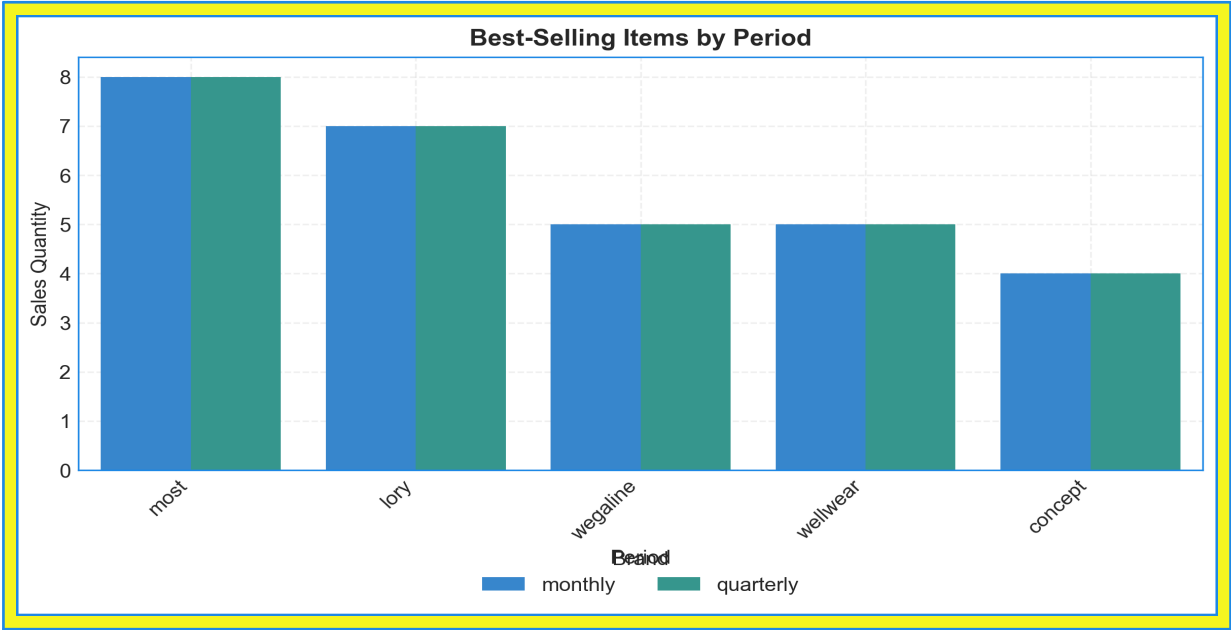
Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The provided data suggests **cardigans** are a popular item within the "monthly" timeframe, particularly from the "most" brand. However, the limited sample size restricts comprehensive conclusions on best-selling items across weekly and quarterly periods.

Key Insights

- **Top Category:** "Cardigan" appears frequently in the monthly data with brands like "most," "wegaline," and "wellwear" demonstrating consistent sales.
- **Dominant Brand:** "Most" brand seems to perform well based on the provided sample since most cardigan purchases originate from "most."
- **Limited Temporal Context:** The exclusive focus on "monthly" data obscures insights into weekly or quarterly trends, limiting comprehensive best-seller identification.

Business Implications

• **Potential Opportunity:** Capitalize on the popularity of "cardigans" by optimizing inventory levels and marketing efforts targeting customers already showing a preference for such items.

• **Data Limitations:** The current data doesn't allow for a fully informed inventory or sales strategy across all timeframes (weekly/quarterly).

• **Risk:** Without broader temporal data, the business risks overstocking cardigans if demand is seasonal or fluctuates on a weekly basis.

Actionable Recommendations

• **Expand Data Collection (Immediate):** Gather sales data across weekly and quarterly periods to build a more comprehensive understanding of sales trends. This allows for identifying top sellers per timeframe.

• **Optimize Cardigan Inventory (Within 1 Week):** Based on existing monthly data, ensure adequate inventory of popular cardigan brands, especially those from "most," to meet anticipated demand.

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

Non-Moving Products by Days in Inventory
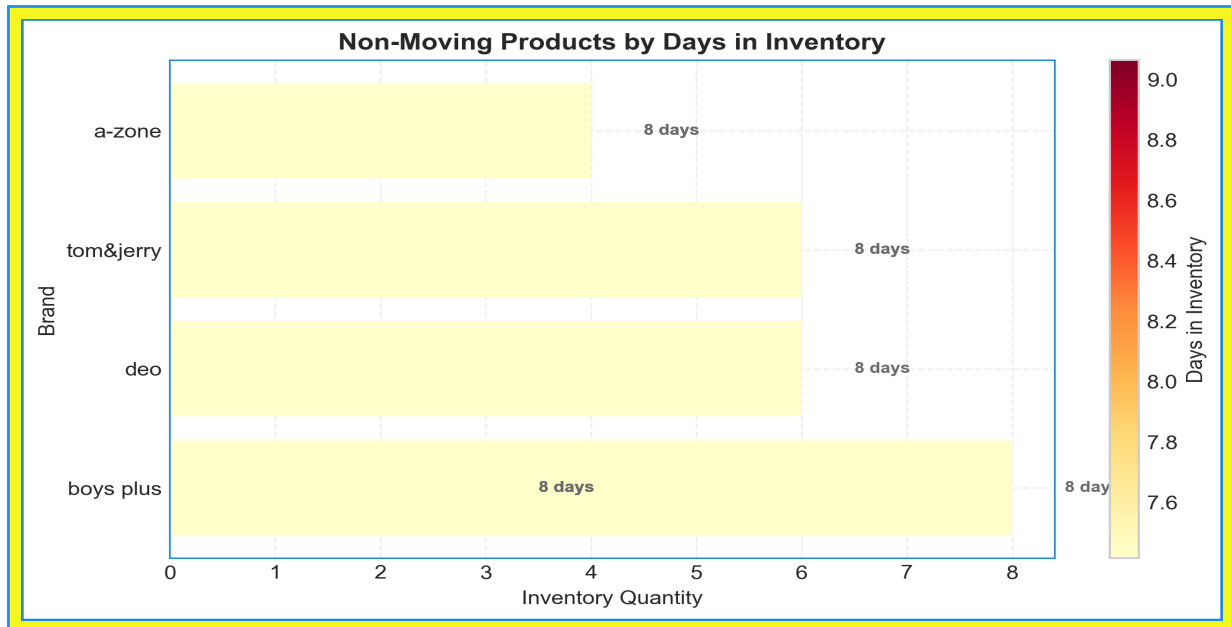
Analysis & Recommendations

Business Intelligence Analysis: Non-Moving Inventory

Executive Summary

The data reveals several products haven't sold despite being in inventory for over 8 days. Focus on slow-moving items across multiple brands to optimize inventory and potentially improve sales strategies.

Key Insights

• **Zero Sales:** All products in the sample have a **SalesQty of 0** and a **percent_sold of 0.0**, indicating zero movement during their time in inventory.

• **Inventory Age:** All items have been in inventory for approximately **8.24 days**. This is a short period but potentially concerning if sales velocity is typically higher.

• **Brand Concentration:** Multiple brands (boys plus, tom&jerry;, a-zone, deo) have non-moving products, suggesting a broader issue than isolated product failures.

Business Implications

• **Capital Tie-Up:** Non-moving inventory ties up capital that could be used for faster-selling products.

• **Potential for Markdown:** Items sitting idle for extended periods may require markdowns to clear, impacting profit margins.

• **Inventory Management Issues:** This suggests potential inaccuracies in forecasting demand or problems with product placement/marketing.

Actionable Recommendations

• **Immediate Action (Within 1 Week):** Investigate the reasons for zero sales for the listed products. Possible issues: incorrect listing, lack of promotion, pricing issues. Implement targeted promotional campaigns or price adjustments to stimulate sales.

• **Medium-Term Action (Within 1 Month):** Analyze historical sales data for these brands and categories to determine if this is a recurring issue. Refine forecasting models to improve inventory purchasing decisions and prevent future accumulation of slow-moving stock.

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

Slow-Moving Sizes Analysis

Category
- coat suit <>
- kurta pajama<
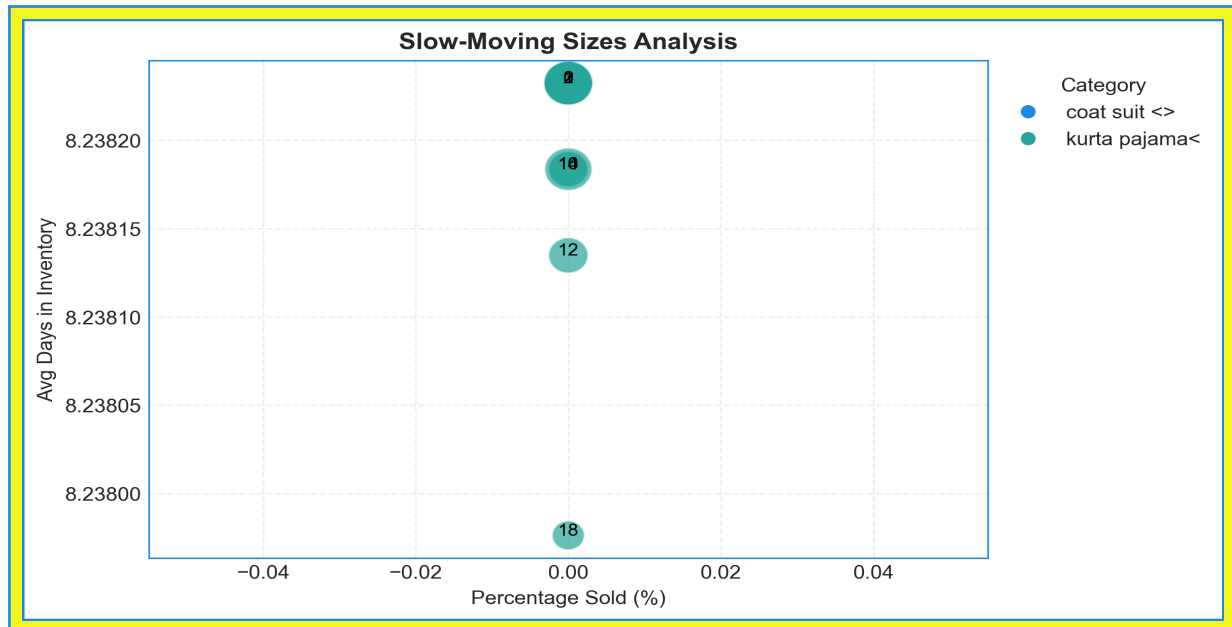
Analysis & Recommendations

Business Intelligence Analysis: Identifying Slow-Moving Sizes

Executive Summary

The initial data snapshot reveals a significant issue with unsold inventory across multiple categories, notably "coat suit <>" and "kurta pajama<". Sizes in these categories exhibit **0% sales**, indicating potential overstocking or lack of demand.

Key Insights

- **Zero Sales:** The "percent_sold" is **0%** for all listed sizes across both categories ("coat suit <>" and "kurta pajama<"), despite purchases having been made (**total_purchased > 0**). This suggests an inability to move the current inventory of these sizes.
- **Inventory Age:** The "**avg_days_in_inventory**" is roughly **8.24 days**, indicating items are spending a non-negligible amount of time in the warehouse, accumulating carrying costs.
- **Size Count Consistency:** The 'size_count' appears relatively uniform within each category, with multiple size options available, but all experiencing zero sales.

Business Implications

- **Capital Tie-Up:** Unsold inventory represents a significant tie-up of capital that could be used for more profitable purposes.
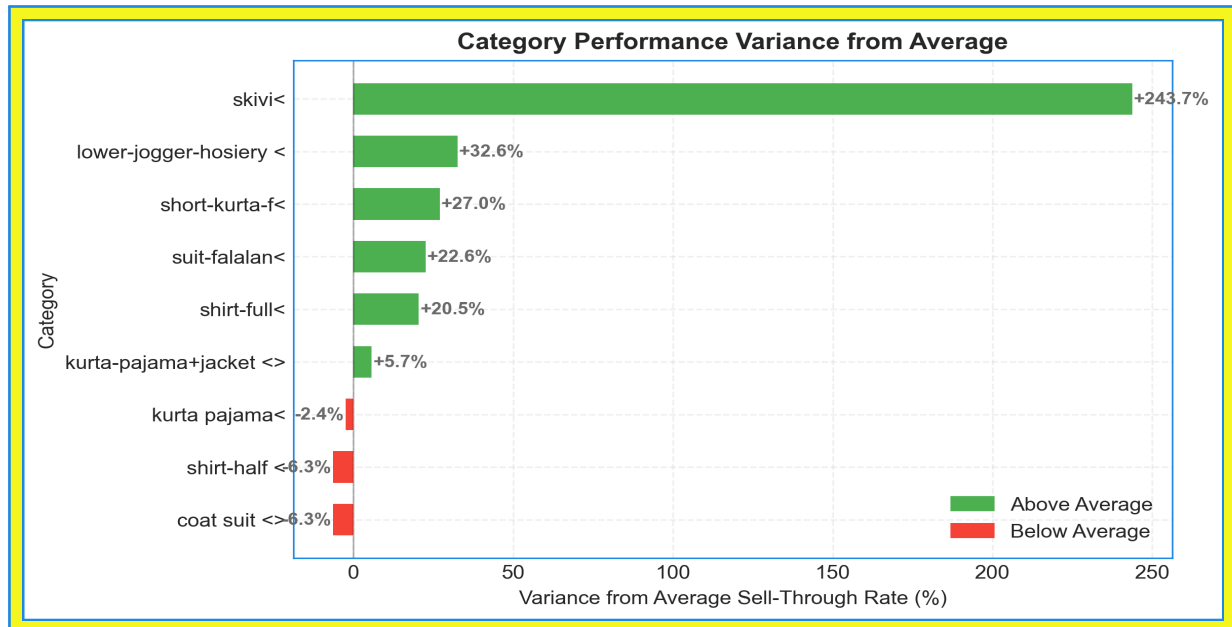
• **Storage Costs:** Holding unsold inventory increases storage costs and the risk of obsolescence, especially for fashion-related items.

• **Missed Sales Opportunities:** Focusing on slow-moving items distracts from potentially more profitable SKUs and sales opportunities.

Actionable Recommendations

• **Conduct a Detailed Demand Analysis (Immediate):** Within the next week, investigate the market demand for specific sizes within the "coat suit <>" and "kurta pajama<" categories. Determine if sizing is accurate, if there are style/design issues, or if marketing efforts are misaligned.

• **Implement Clearance Sales (Within 2 Weeks):** Initiate targeted clearance sales or promotional campaigns for these slow-moving sizes to reduce inventory levels and free up warehouse space. Track the impact closely to inform future purchasing decisions. Consider bundling these items with faster-moving products.

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

Category Performance Variance from Average

Category	Variance
skivi<	+243.7%
lower-jogger-hosiery <	+32.6%
short-kurta-f<	+27.0%
suit-falalan<	+22.6%
shirt-full<	+20.5%
kurta-pajama+jacket <>	+5.7%
kurta pajama<	-2.4%
shirt-half <	-6.3%
coat suit <>	-6.3%

Legend: Green = Above Average, Red = Below Average

X-axis: Variance from Average Sell-Through Rate (%), scale 0 to 250

Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

This data reveals significant variance in sell-through rates across product categories, indicating potential inefficiencies in inventory management and sales strategies. Some categories show strong sell-through, while others are lagging, presenting opportunities to optimize inventory and pricing.

Key Insights

- **Sell-Through Rate Discrepancies:** The sell-through rates range from **0%** for "coat suit <>" and "shirt-half <" to 25**0%** for "skivi<". This wide range suggests a mismatch between inventory levels and customer demand for specific categories.
- **Variance from Average Correlation:** A high variance from the average sell-through rate positively correlates with higher sell-through. Categories like "skivi<" (**243.7%** variance) show very high sell-through rates, indicating missed opportunities for increased inventory.
- **Brand Count and Sell-Through:** High brand count doesn't guarantee high sell-through. For instance, "shirt-half <" has a brand count of **21** but a sell-through rate of **0%**, suggesting potential issues with brand selection or market saturation.

Business Implications

• **Missed Revenue Opportunities:** Zero or low sell-through rates mean capital is tied up in unsold inventory, while high variance and sell-through suggest potential revenue is being lost due to insufficient stock.

• **Inefficient Inventory Management:** The discrepancy in sell-through rates suggests that the current inventory management system is not accurately predicting or responding to consumer demand.

• **Marketing Focus:** Categories with high sell-through rates could indicate opportunities for further marketing and promotion to drive additional sales.

Actionable Recommendations

• **Inventory Optimization (Immediate):** Reduce inventory levels for categories with **0%** sell-through like "coat suit <>" and "shirt-half <" to free up capital. Increase inventory for "skivi<" to capitalize on its high demand.

• **Demand Forecasting Refinement (Next 3 Months):** Review and refine demand forecasting models by incorporating brand performance and promotional impact to better anticipate customer preferences and manage inventory.

• **Strategic Brand Partnerships (Ongoing):** Re-evaluate brand partnerships for categories with low sell-through despite high brand count. Focus on brands that resonate better with the target audience, or negotiate better terms.

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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: Prioritizing Products for Online Sales

Executive Summary

The data suggests that products with a high sell-through rate should be prioritized for online sales. While the sample size is small, we can see that "deo" lower-jogger-hosiery has a high sell-through rate and should be considered.

Key Insights

- **Sell-through Rate:** The "deo" lower-jogger-hosiery exhibits a **66.67%** sell-through rate, indicating strong customer demand.
- **Stock Value:** "grab" suit-falalan has a significantly higher stock value of **2385.0** compared to the other two items, implying a higher capital investment tied to this product.
- **Sales Quantity vs. Remaining Stock:** A balanced sales quantity relative to remaining stock (e.g., deo) indicates effective inventory management for that specific product.

Business Implications

- High sell-through rates suggest popular products, indicating potential for increased online sales and revenue.
- High stock value tied to slower-moving items represents a risk of capital stagnation and potential markdowns.

• Understanding the relationship between sales quantity and remaining stock is crucial for optimizing inventory levels and minimizing holding costs.

Actionable Recommendations

• **Prioritize "deo" lower-jogger-hosiery for online promotions and increased visibility.** This leverages its high sell-through rate to drive sales (Immediate).

• **Evaluate the online sales performance of "grab" suit-falalan.** If sales remain low, consider targeted promotions or discounts to reduce the high stock value (Within 1 Month).

• **Analyze a larger dataset to identify other products with similar sell-through rate and stock value characteristics.** This will provide a more comprehensive picture and better inform online sales strategy (Within 2 Weeks).

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

Analysis & Recommendations

Business Intelligence Analysis: Expanding the Online Portfolio

Executive Summary

This initial data snapshot reveals several product lines with available stock that have not registered any online sales, suggesting potential opportunities for expanding our online portfolio. We also observe data quality issues in the category names that need addressing.

Key Insights

- **Zero Sales with Available Stock:** Multiple products, such as "boys plus" kurta pajama (8 in stock), "boys plus" shirt-half (1 in stock), and "tom&jerry;" suit-falalan (6 in stock), have available stock but zero reported sales. This indicates a lack of online visibility or demand for these items in their current presentation.
- **Category Data Inconsistencies:** Category names contain formatting issues (e.g., "kurta pajama<", "shirt-half <", "suit-falalan<"), indicating a need for data cleaning and standardization to improve categorization and searchability on the online platform.
- **Brand Presence:** Brands like "boys plus" have a high brand count (150), suggesting a significant presence in our overall inventory, but their online performance seems lacking based on the lack of sales for the products highlighted above.

Business Implications

• **Missed Revenue Opportunities:** Products with available stock and zero sales represent unrealized revenue potential.

• **Suboptimal Online Merchandising:** The lack of sales for specific products and brands suggests issues with online visibility, product presentation (e.g., imagery, descriptions), or pricing competitiveness.

• **Data Quality Impacts Online Experience:** Inconsistent category names negatively impact search functionality and product discoverability, potentially driving customers away.

Actionable Recommendations

• **Prioritize Product Listing Optimization (Immediate):** Focus on the "boys plus" kurta pajama and "tom&jerry;" suit-falalan as high-potential products. Enhance online listings with compelling product descriptions, high-quality images, and competitive pricing. Run targeted promotions to drive initial sales and gauge customer response.

• **Implement Data Cleaning and Standardization (Within 1 Week):** Standardize category names and product attributes across the entire inventory database. This will improve search functionality and product discoverability on the online platform.

• **Conduct Brand Performance Analysis (Within 2 Weeks):** Analyze the overall online performance of brands with a significant presence in our inventory (e.g., "boys plus"). Identify potential issues related to brand recognition, pricing, or product assortment and develop targeted marketing strategies to improve sales.

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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%**
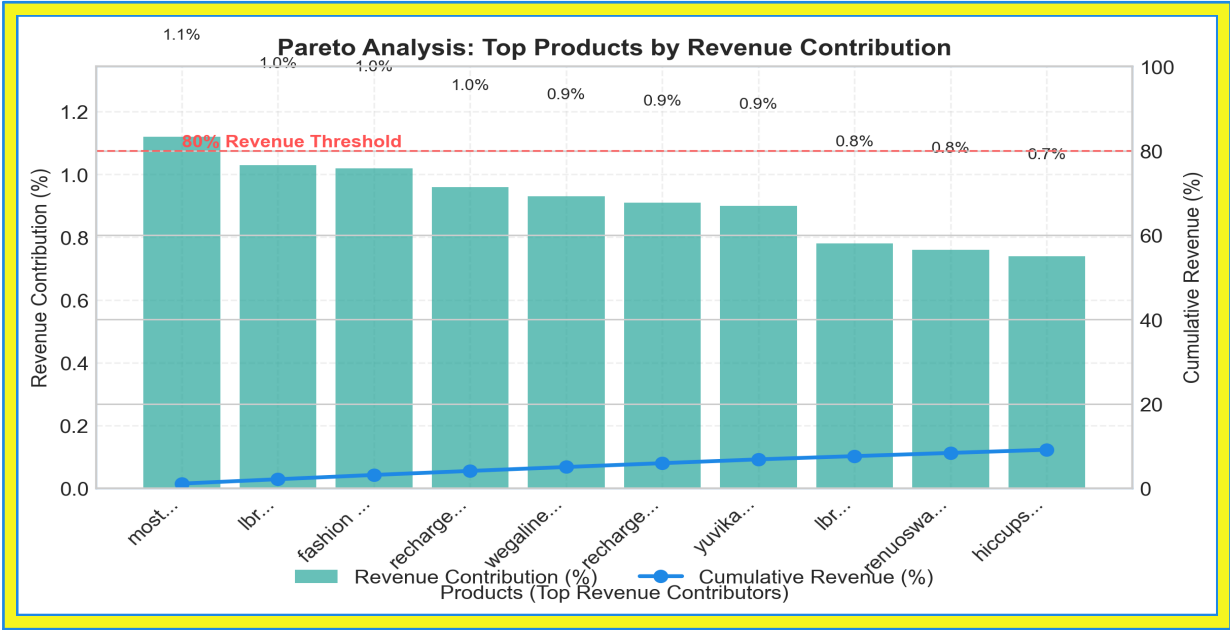
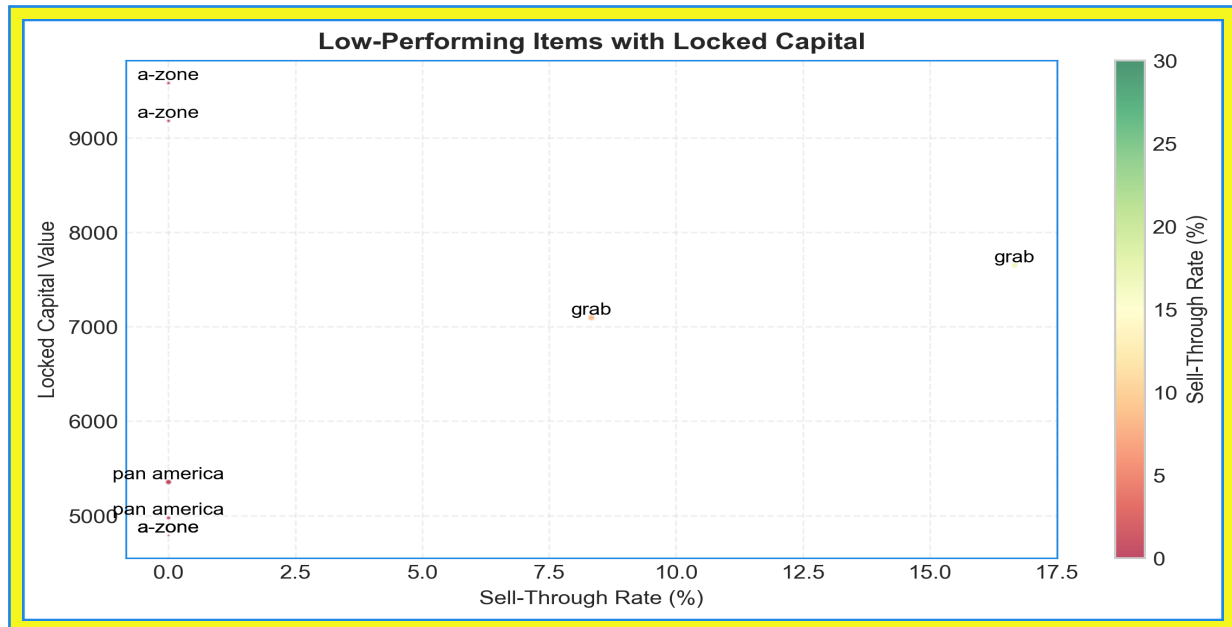Pareto Analysis: Top Products by Revenue Contribution

Analysis & Recommendations

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The data shows 10 records with columns: Brand, Category, Size, Color, SalesQty, MRP, revenue, percent_of_total, cumulative_percent.

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

Low-Performing Items with Locked Capital

Analysis & Recommendations

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The data shows 10 records with columns: Brand, Category, Size, Color, MRP, SalesQty, PurchaseQty, excess_inventory, sell_through_rate, locked_capital, days_in_inventory.

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Executive Summary

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Please review the individual analyses for insights.