InventorySync

Business Intelligence Inventory Report

Generated on June 28, 2025

InventorySync Business Intelligence

Prepared for: Executive Management

Generated by: Tanman

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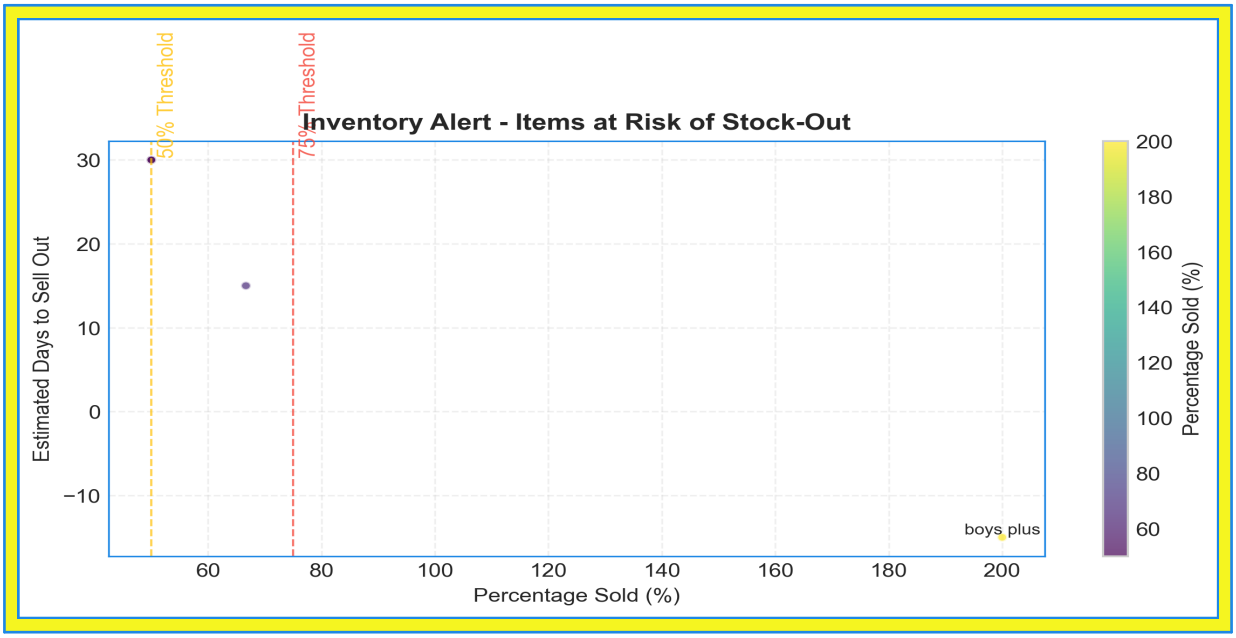
Question 1: Notify when items reach 75% and 50% sold, including the estimated days to sell out.

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



Analysis & Recommendations

Business Intelligence Analysis: Inventory Sell-Out Alerts

Executive Summary

This analysis focuses on identifying items nearing sell-out points (75% and 50% sold) and estimating their sell-out time. The goal is to proactively manage inventory and prevent stockouts or overstocking.

Key Insights

- Several items are approaching sell-out thresholds. For instance, one item ("deo lower-jogger-hosiery") has already reached **66.67% sold**, with an estimated **15 days** until complete sell-out. Other items ("grab suit-falalan" and "pan america shirt-full") are at **50% sold**, projected to sell out in **30 days**.
- The data reveals variability in sell-out rates across different brands and categories. Some items, like "boys plus kurta pajama" show a **200% sold** which might indicate errors.
- The est_days_to_sellout calculation is crucial. A negative value for "boys plus" suggests incorrect data or unusual return/restock patterns needing investigation.

Business Implications

• Approaching sell-out points present both opportunities and risks. We could capture additional revenue by boosting marketing or raising prices slightly, while risks include stockouts if the estimates are incorrect.

• Inaccurate est_days_to_sellout calculations can lead to poor inventory decisions. Correcting this data is a high priority.

• Understanding which categories sell faster enables better forecasting and purchasing strategies.

Actionable Recommendations

• **Immediate Action:** Investigate the "boys plus" data to determine the cause of the negative sell-out estimate. (Timeframe: 1 day)

• **Monitor Closely:** Actively track items reaching 75% sold for "deo lower-jogger-hosiery". Evaluate if promotion is needed to increase velocity. Order a small quantity to prevent stockouts. (Timeframe: Ongoing)

• **Improve Accuracy:** Refine the est_days_to_sellout calculation, incorporating historical sales data and seasonality. Consider adjusting the alert thresholds based on category velocity. (Timeframe: 2 weeks)

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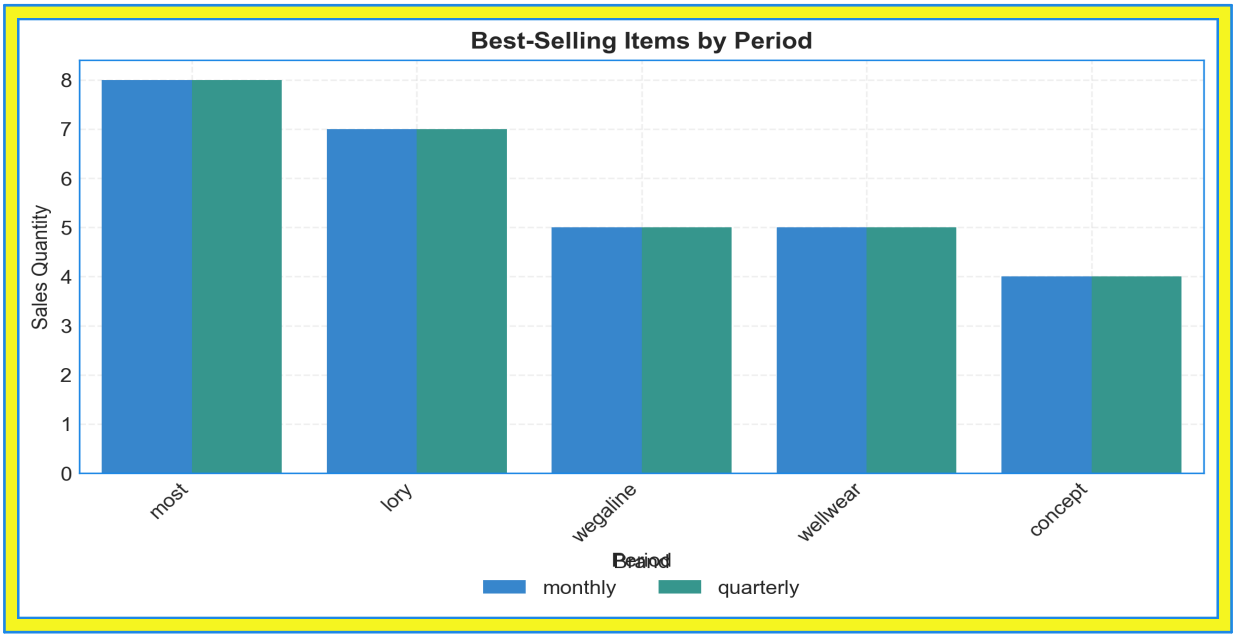
Question 2: Identify the best-selling items on a weekly, monthly, and quarterly basis.

Weekly Sales	Monthly Sales	Top Seller
0	49	N/A



Analysis & Recommendations

Business Intelligence Analysis: Best-Selling Items

Executive Summary

The preliminary data suggests **"cardigan"** styles from various brands are performing well on a monthly basis, with "most" leading in sales, but further analysis across weekly and quarterly periods is crucial. Data cleaning is required to fix inconsistent category naming.

Key Insights

- **Top Category:** "Cardigan" appears frequently with high sales numbers (e.g., "most" with **8 sales**), implying popularity.
- **Brand Variation:** Multiple brands ("most," "wellwear," "wegaline") sell "cardigan" styles, indicating broader market demand.
- **Data Quality Issue:** Category names have errors (e.g., "cardigan<", "cardigan<>"). Cleaning is necessary for reliable analysis.

Business Implications

• **Opportunity:** Capitalize on the "cardigan" trend by increasing inventory and marketing efforts for popular brands like "most".

• **Risk:** Ignoring the demand for "cardigan" could lead to lost sales to competitors.

• **Inventory Strategy:** Optimize cardigan inventory based on brand performance and color preferences once available.

Actionable Recommendations

• **Cleanse Data (Immediate):** Immediately correct inconsistencies in category names for accurate reporting. This will influence all subsequent analyses.

• **Expand Analysis (1 Week):** Analyze data across weekly and quarterly periods to understand seasonal trends and longer-term product performance.

• **Optimize Inventory (2 Weeks):** Increase inventory of best-selling "cardigan" styles, particularly from brand "most", based on complete sales data.

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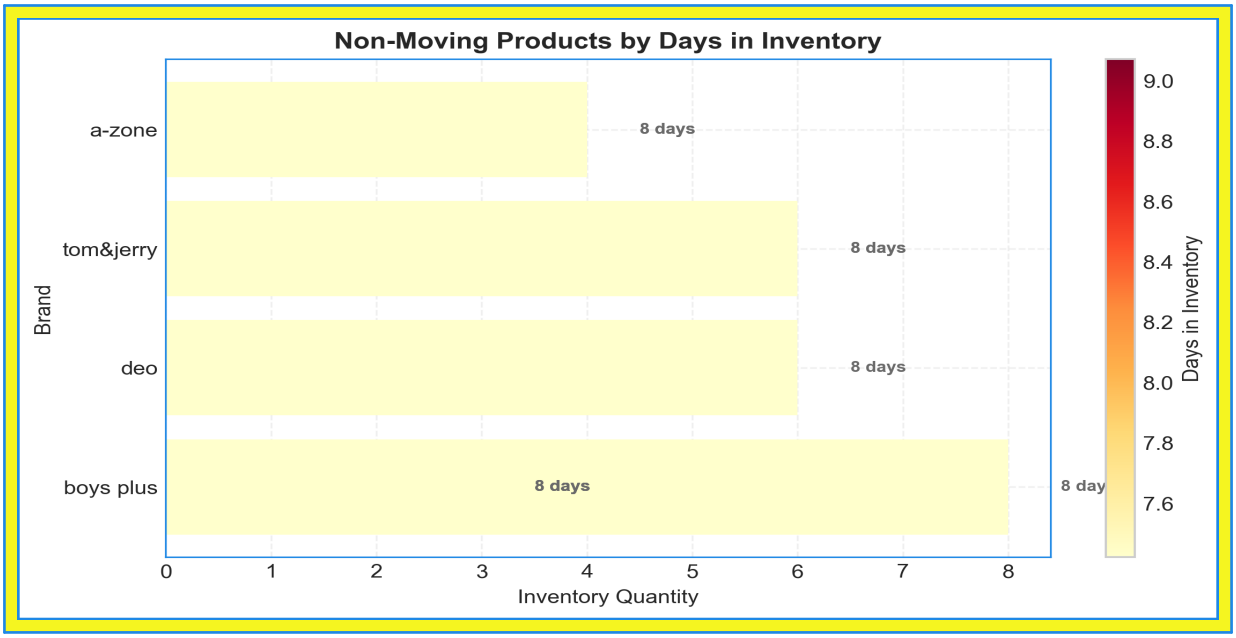
Question 3: Track non-moving products and their aging quantities.



Analysis & Recommendations

Business Intelligence Analysis: Non-Moving Inventory

Executive Summary

The data reveals a significant portion of inventory is not selling, with **zero sales** across all sample products during the observed period. This suggests potential issues with product selection, pricing, or marketing, leading to stalled inventory.

Key Insights

- **Zero Sales:** All items in the data sample show **0 SalesQty** and **0.0 percent_sold**, indicating complete lack of movement during the **8.25 days** in inventory.
- **Product Variety:** The unsold items span various brands and categories, from "boys plus" kurta pajama sets to "a-zone" coat suits, suggesting a broad issue rather than a category-specific one.
- **Consistent Inventory Days:** All items have a similar "**days_in_inventory**" value, which could imply this is recent data snapshot and further historical analysis is required.

Business Implications

- **Capital Tie-Up:** Non-moving inventory ties up significant capital, negatively impacting cash flow.
- **Potential Obsolescence:** The longer inventory remains unsold, the higher the risk of it becoming obsolete or requiring markdown, further reducing profit margins.

• **Storage Costs:** Unsold inventory incurs ongoing storage costs, adding to the financial burden.

Actionable Recommendations

• **Investigate Sales & Marketing (Immediate):** Conduct a thorough review of sales and marketing strategies for these product categories. Analyze pricing, promotions, and target audience relevance.

• **Inventory Review & Clearance (Within 1 Month):** Evaluate the age and potential obsolescence of the non-moving inventory. Implement a clearance sale or markdown strategy to recover at least a portion of the investment.

• **Refine Purchasing Strategy (Ongoing):** Based on the findings, refine the purchasing strategy to better align with customer demand. Consider reducing order quantities or testing new product categories before committing to large purchases.

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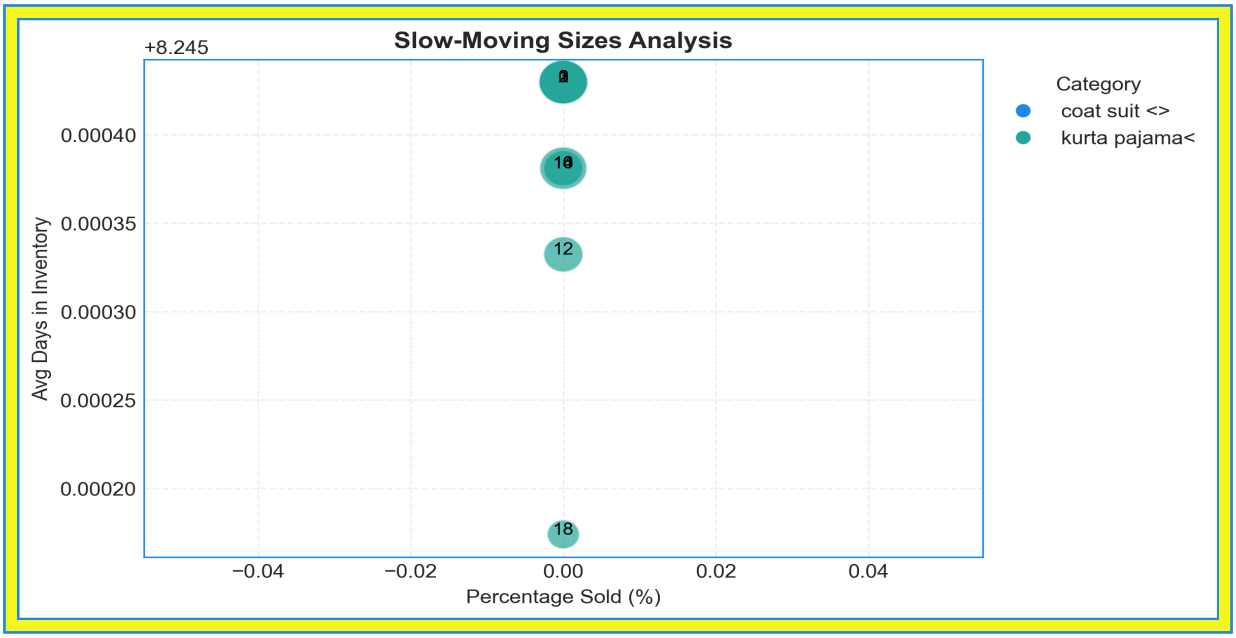
Question 4: Identify slow-moving sizes within specific categories.



Analysis & Recommendations

Business Intelligence Analysis: Slow-Moving Sizes

Executive Summary

The data indicates significant slow-moving inventory across various categories, specifically "coat suit" and "kurta pajama," with **0%** of purchased items sold. This signals potential overstocking or issues with demand forecasting.

Key Insights

- **Zero Sales:** For the displayed data, both "coat suit" and "kurta pajama" categories have a **0%** sell-through rate, regardless of size. Sizes range from **0-18** within these categories.
- **Inventory Age:** The average days in inventory is relatively consistent around **8.25 days**, suggesting this is a recent snapshot, but even in that short period, no sales occurred.
- **High Inventory Levels:** "kurta pajama" shows multiple sizes with relatively high purchased quantities (**13** items for sizes **1, 2, & 3**), but no items sold.

Business Implications

- **Capital Tied Up:** The unsold inventory represents tied-up capital that could be used for other investments.
- **Potential Obsolescence:** Holding onto inventory for too long can lead to obsolescence, especially in fashion-related categories.

• **Inefficient Inventory Management:** The data indicates a potential mismatch between demand and supply, suggesting issues with inventory planning.

Actionable Recommendations

• **Investigate Demand (Immediate):** Conduct a thorough analysis of sales data, customer preferences, and market trends for "coat suit" and "kurta pajama" to understand the root cause of the low demand. This will help refine future purchasing decisions.

• **Implement Targeted Promotions (Within 1 Week):** Launch targeted promotions, discounts, or bundle offers to stimulate demand for the existing inventory. Focus on the sizes and categories with the highest inventory levels, such as "kurta pajama" in sizes **1, 2, and 3**.

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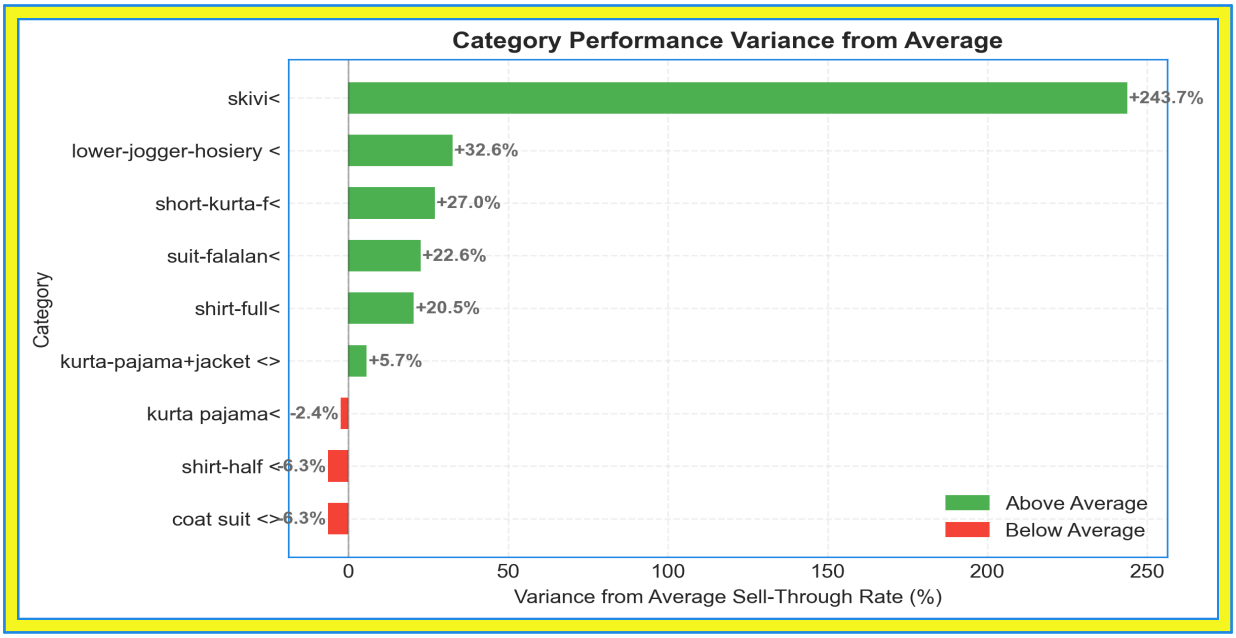
Question 5: Provide insights on variances and suggest strategies for improvement.



Analysis & Recommendations

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## Business Intelligence Analysis: Retail Inventory and Sales Data

### Executive Summary

The data reveals significant disparities in sell-through rates across different product categories, indicating potential inventory management inefficiencies. Some categories exhibit very low or zero sell-through, while others are performing exceptionally well, suggesting opportunities for optimization.

### Key Insights

- **Sell-Through Rate Variance:** Sell-through rates vary dramatically. For example, "coat suit <>" and "shirt-half <" have a **0% sell-through rate**, whereas "skivi<" has an exceptionally high rate of **250%**.
- **Brand Count Impact:** The number of brands carried within a category doesn't always correlate with higher sell-through. "shirt-full<" has **58 brands** and a **26.79% sell-through rate**, while "coat suit <>" has **7 brands** but **0% sell-through**.
- **Negative Variance:** The data shows a variance from average sell-through. The categories with 0% sell through rate, "coat suit <>" and "shirt-half <" have a large negative variance of **-6.3**.

### Business Implications
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• **Inventory Imbalance:** The low sell-through rates in certain categories suggest overstocking or demand miscalculation, leading to potential losses.

• **Missed Opportunities:** High sell-through rates in categories like "skivi<" imply potential unmet demand and lost sales due to insufficient inventory.

• **Marketing Ineffectiveness:** The brand count vs. sell-through variance suggests marketing and merchandising efforts may not be effectively promoting all brands equally.

Actionable Recommendations

• **Inventory Optimization (Immediate):** Reduce purchase quantities or discontinue categories with near-zero sell-through ("coat suit <>," "shirt-half <"). This frees up capital and warehouse space.

• **Demand Forecasting & Stock Increase (Within 1 Month):** Increase inventory levels of high sell-through products like "skivi<" to meet demand and maximize revenue. Consider promotional campaigns to further capitalize on this popularity.

• **Marketing and Merchandising Review (Within 2 Months):** Analyze brand-level sales within low sell-through categories. Identify underperforming brands and either renegotiate terms, implement targeted promotions, or discontinue them. ```

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

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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.

Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The initial product data suggests focusing on items with high sell-through rates and manageable stock values. Specifically, prioritizing the "deo" brand joggers in size 26 could yield positive returns.

Key Insights

- **Sell-Through Rate:** The "deo" joggers have a **66.67%** sell-through rate, indicating strong customer demand.
- **Stock Value:** The "deo" product has a relatively low stock value of **790.0**, indicating a manageable financial risk.
- **Category Performance:** The lower-jogger-hosiery category shows promising sales with the "deo" brand, potentially indicating wider customer interest in this category.

Business Implications

- **Opportunity:** Capitalizing on high-demand products like the "deo" joggers can drive online sales growth.
- **Risk:** Neglecting high-performing products can lead to lost revenue and customer dissatisfaction.
- **Inventory Strategy:** Focusing online sales efforts on products with high sell-through rates and moderate stock values optimizes resource allocation.

Actionable Recommendations

• **Prioritize "deo" joggers online:** Immediately promote these items on the website, highlighting their popularity. (Timeline: within 1 week)

• **Investigate and optimize "suit-falalan" sales:** Analyze why the "grab" suits have a lower sell-through rate (**50.0%**) and consider promotional strategies or inventory adjustments. (Timeline: within 1 month)

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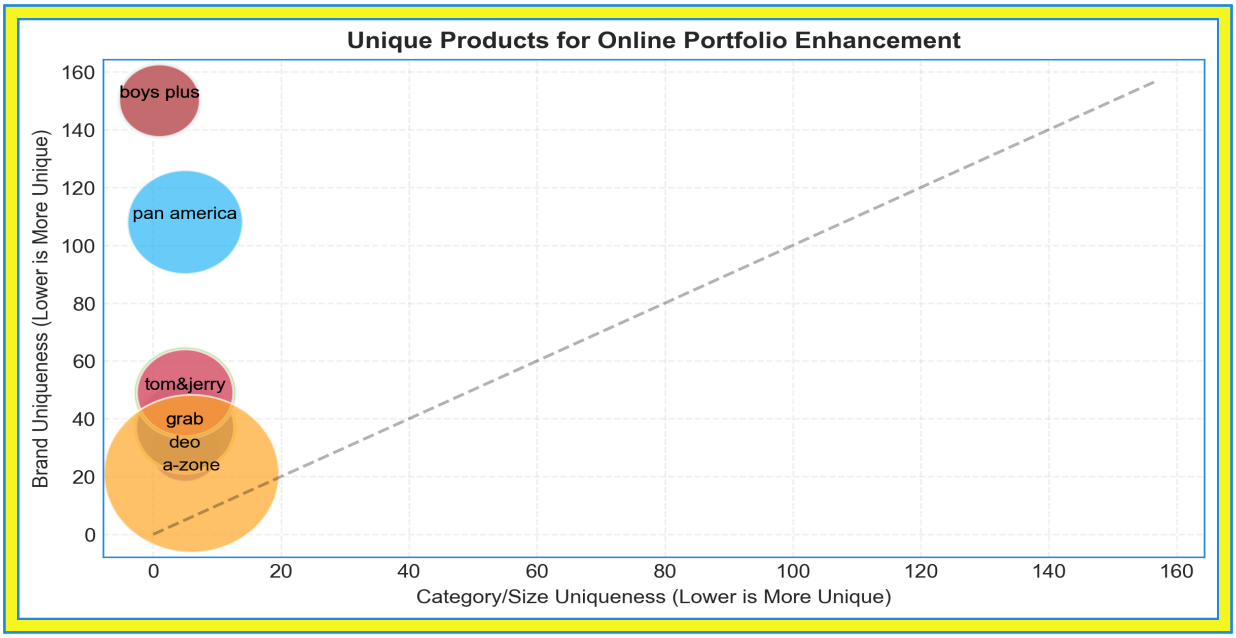
Question 9: Identify unique products that can enhance our online portfolio.



Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The data sample indicates a potential opportunity to expand the online portfolio with products that are currently not selling (SalesQty=0) despite having available stock. Brands like "boys plus," "tom&jerry," and "pan america" have products with available stock but no sales in the sampled data.

Key Insights

- **Zero Sales, Positive Stock:** Multiple products across different brands have available stock (**available_stock > 0**) but **zero sales** (**SalesQty = 0**). This is evident in various categories and brands such as "kurta pajama" from "boys plus" and "coat suit" from "a-zone".
- **Category Diversity:** The sample includes several product categories like "kurta pajama," "shirt-half," "suit-falalan," and "coat suit," indicating a diverse product range. Not all categories are performing equally, and some have no sales in the sample data.
- **Size Variations:** The data exhibits variations in size (e.g., "0," "00," "22," "26," "38") potentially catering to diverse customer segments. The color of some products is "unknown."

Business Implications

- **Missed Online Sales Opportunities:** Products with available stock and zero sales represent potential revenue loss if not actively promoted online.

• **Inventory Optimization:** Understanding why certain products aren't selling online is critical for inventory management and preventing overstocking of underperforming items.

• **Market Research Required:** Understanding the reasons behind zero sales is critical and needs a market survey. Is there a competitor offering same/better product?

Actionable Recommendations

• **Enhanced Product Visibility (Immediate):** Prioritize optimizing product listings (descriptions, images, keywords) for products with available stock but no sales, such as the "kurta pajama" from "boys plus".

• **Targeted Online Promotions (Within 1 Week):** Launch targeted online advertising campaigns or promotions for underperforming product categories and brands to stimulate sales. Start with "suit-falalan".

• **Customer Feedback Collection (Ongoing):** Implement mechanisms for gathering customer feedback on products (e.g., reviews, surveys) to understand reasons for low sales and improve offerings. Start with products that have no sales such as "kurta pajama" from "boys plus".

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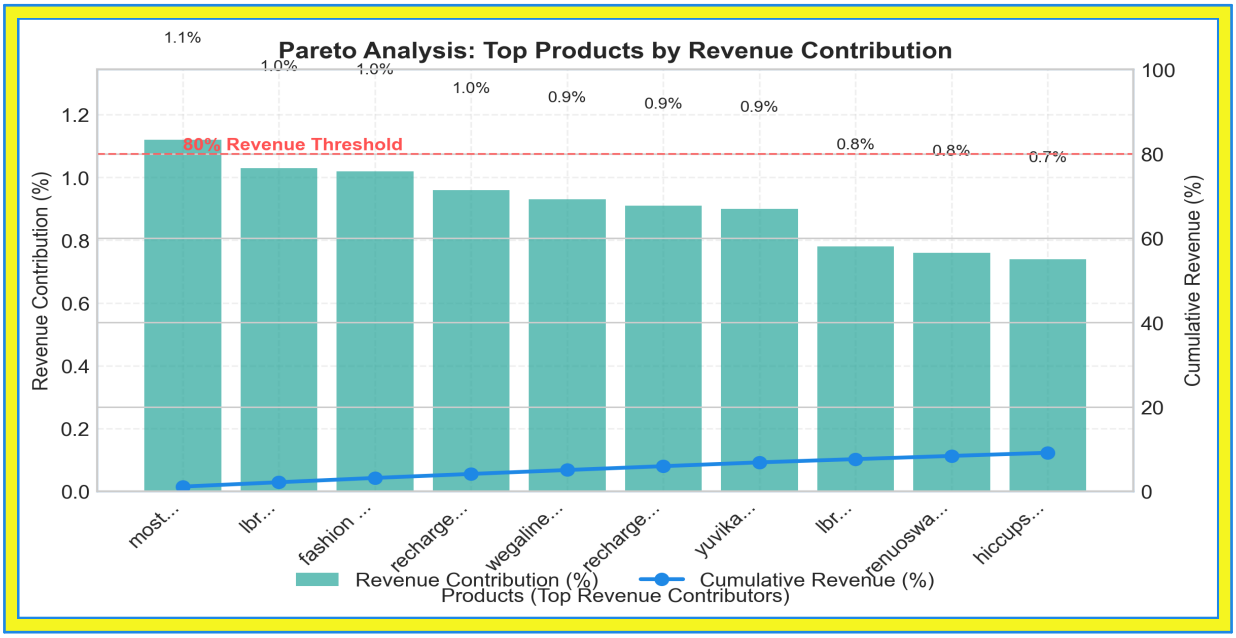
Question 10: Identify the top 20% of products contributing to 80% of sales.

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



Analysis & Recommendations

Business Intelligence Analysis: Pareto Analysis of Product Sales

Executive Summary

This analysis aims to identify the top 20% of products driving 80% of revenue to optimize inventory and sales strategies. The provided sample shows a varied product mix with varying revenue contributions, requiring a full dataset analysis to pinpoint key performers.

Key Insights

- **Pareto Principle Applicability:** The provided sample displays varying revenue contributions per product. A full dataset analysis is needed to confirm if the 80/20 rule applies and to identify the specific high-performing products.
- **Revenue Concentration:** From the sample, the top product generates **1.12%** of total revenue. The goal is to isolate the products that cumulatively reach **80%** of total revenue when sorted by revenue contribution.

• **Product Variety:** The dataset includes various brands, categories, sizes, and colors, highlighting the need to understand which combinations perform best.

Business Implications

• **Inventory Optimization:** Identifying top-performing products allows for focused inventory management, ensuring adequate stock levels to meet demand and minimize holding costs for slower-moving items.

• **Marketing Prioritization:** Understanding the top revenue drivers enables targeted marketing campaigns to boost sales of these products further.

• **Potential Risks:** Over-reliance on a few key products could create vulnerability if demand shifts or competition increases.

Actionable Recommendations

• **Pareto Analysis Implementation (Immediate):** Conduct a full Pareto analysis on the entire dataset, ranking products by revenue contribution to identify the top 20% that generate 80% of sales.

• **Demand Forecasting & Inventory Optimization (Within 1 Month):** Based on the Pareto analysis results, optimize inventory levels for top-performing products to prevent stockouts. Consider reducing inventory of slower-moving items.

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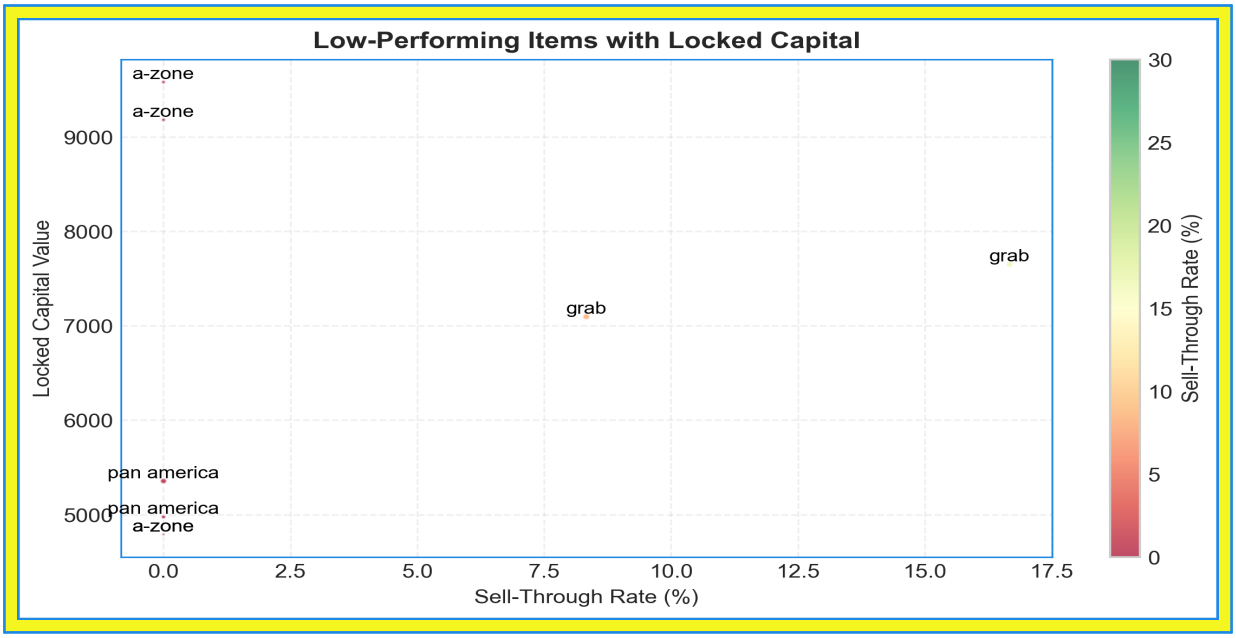
Question 11: Suggest strategies to reduce the inventory of low-performing items.



Analysis & Recommendations

Business Intelligence Analysis: Inventory Reduction Strategies

Executive Summary

The data reveals significant excess inventory, particularly in specific brands, categories, and colors, leading to locked capital and low sell-through rates. Addressing these low-performing items is crucial for improving cash flow and optimizing inventory management.

Key Insights

- **Low Sell-Through Rates:** Several items, such as "a-zone" "coat suit <>" in various colors like "wine," "l.olive," and "peacock," have a **0% sell-through rate** despite being in inventory for over 8 days. This indicates a strong mismatch between supply and demand.
- **High Locked Capital:** The excessive inventory is tying up significant capital. For example, "grab" "suit-falalan<" has a locked capital of **$7650.0** due to excess inventory.
- **Excess Inventory Across Categories:** High excess inventory is observed across multiple categories like "coat suit <>" and "shirt-full<", suggesting a need for a broader review of purchasing and merchandising strategies.

Business Implications

- **Reduced Profitability:** High levels of excess inventory directly impact profitability by tying up capital that could be used for more profitable investments.

• **Increased Storage Costs:** Holding excess inventory for extended periods increases warehousing and handling costs.

• **Potential for Markdowns:** The longer items remain unsold, the greater the likelihood of requiring significant markdowns to clear inventory, further eroding profit margins.

Actionable Recommendations

• **Implement Targeted Promotions (Immediate):** Launch promotional campaigns, offering discounts on "a-zone" "coat suit <>" items with a **0% sell-through rate**. Monitor the impact closely within 2 weeks and adjust promotions accordingly. This will reduce excess inventory quickly.

• **Reduce Future Purchases (Within 1 Month):** Significantly reduce or halt future purchases of categories and brands with consistently low sell-through rates, focusing initially on "coat suit <>" and heavily stocked "shirt-full<". Shift purchasing towards higher-performing items.

• **Analyze and Adjust Merchandising (Within 2 Months):** Review the placement and presentation of low-performing items in-store and online. Consider bundling them with popular products or relocating them to high-traffic areas. The goal is to improve visibility and drive sales.

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Executive Summary

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Please review the individual analyses for insights.