InventorySync

Business Intelligence Inventory Report

Generated on June 28, 2025

InventorySync Business Intelligence

Prepared for: Executive Management

Generated by: Tanman

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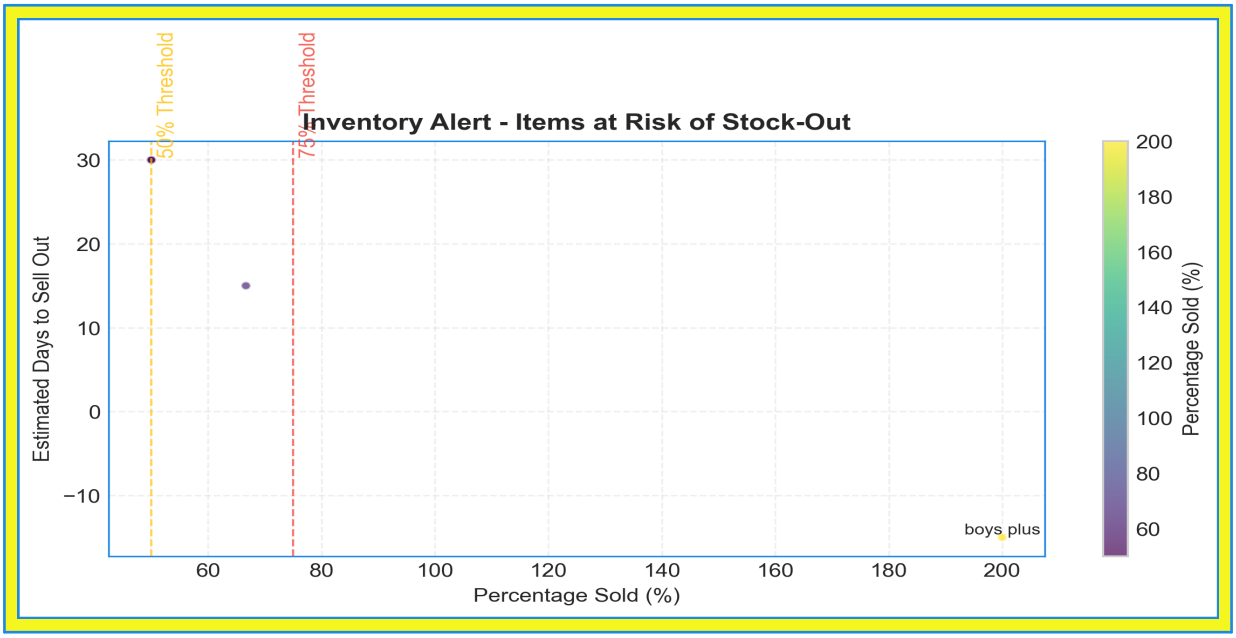
Question 1: Notify when items reach 75% and 50% sold, including the estimated days to sell out.

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



Analysis & Recommendations

Business Intelligence Analysis: Inventory Sell-Through

Executive Summary

This analysis identifies items nearing sell-out thresholds (75% and 50% sold) to optimize inventory management. The data highlights potential stock-out risks and informs replenishment strategies.

Key Insights

- **Items approaching sell-out:** Several items are approaching or have exceeded the sell-out thresholds. For example, "deo lower-jogger-hosiery" is 66.67% sold with an estimated **15 days to sell out**. Similarly, "grab suit-falalan" and "pan america shirt-full" are at 50% sold.
- **Negative sell-out estimation:** "boys plus kurta pajama" shows a concerning **200% sold** and an estimated sell-out of **-15 days**, indicating a data error (likely SalesQty > PurchaseQty) requiring investigation.
- **Varied sell-through rates:** The estimated days to sell out varies significantly between items, suggesting varied demand and potentially inefficient inventory allocation.

Business Implications

• **Stock-out risks:** Without intervention, popular items like "deo lower-jogger-hosiery" risk stock-outs, leading to lost sales and customer dissatisfaction.

• **Data accuracy concerns:** The negative sell-out estimate highlights potential data quality issues needing immediate correction.

• **Inventory optimization opportunities:** Better understanding sell-through rates allows for optimized inventory levels, minimizing holding costs and maximizing product availability.

Actionable Recommendations

• **Implement automated alerts:** Immediately set up automated alerts when items reach 75% and 50% sold. This will help react more quickly to potential stockouts. Prioritize based on high-revenue items. (Timeframe: 1 week)

• **Investigate data errors:** Immediately investigate and resolve the data inconsistency for "boys plus kurta pajama" and any other items with similar errors. Review data input processes to prevent future issues. (Timeframe: Immediate)

• **Refine forecasting models:** Analyze historical sales data and incorporate sell-through rates to improve demand forecasting and optimize inventory replenishment strategies. Focus on items with rapidly decreasing estimated sell-out times. (Timeframe: 1-2 months)

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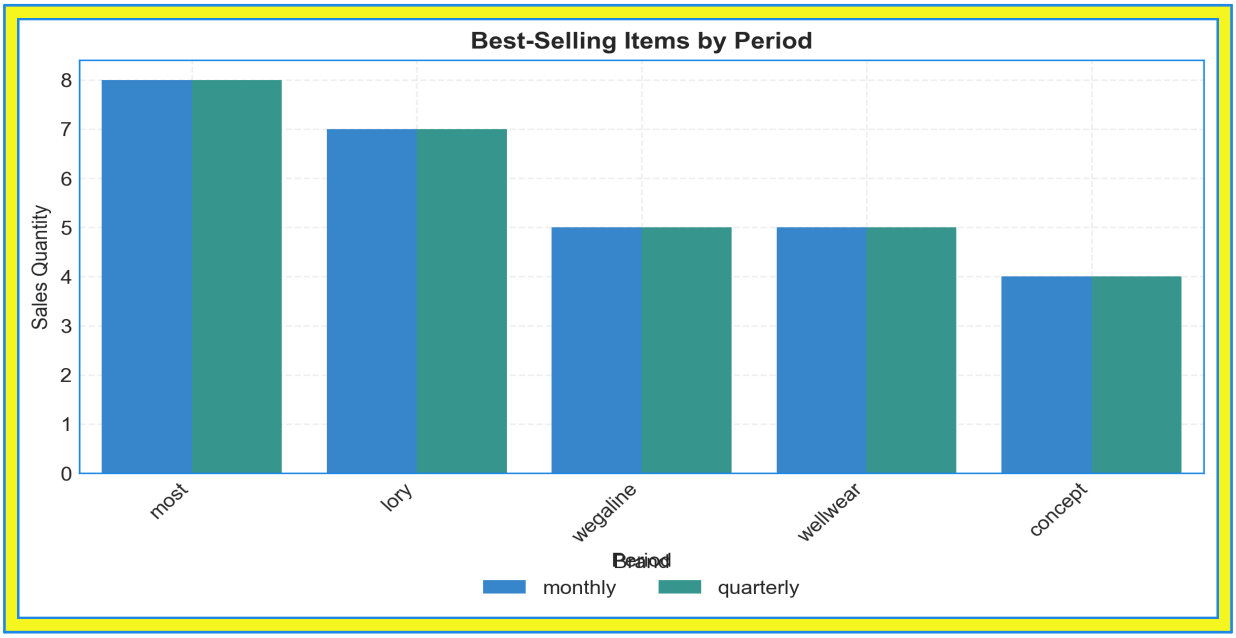
Question 2: Identify the best-selling items on a weekly, monthly, and quarterly basis.

Weekly Sales	Monthly Sales	Top Seller
0	49	N/A



Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The provided data sample highlights that **cardigans are a popular category**, particularly from the "most" and "wegaline" brands, driving significant monthly sales. Size "free" appears frequently, suggesting demand for easily fitted items.

Key Insights

- **Top Category:** Cardigans are the best-selling category within the monthly data sample. Several entries show "cardigan" with varying sales.
- **Popular Brand:** The "most" brand appears frequently and shows significant sales of 8 for "cardigan<" in the "monthly" period, indicating a popular brand.
- **Size Preference:** "Free" size is common across multiple brands and categories, potentially indicating a strategic focus on versatile sizing.

Business Implications

• **Opportunity:** Capitalize on the cardigan trend by increasing inventory of popular brands like "most" and "wegaline".

• **Inventory Management:** Optimize inventory for "free" size items to meet customer demand and reduce potential stockouts.

• **Risk:** Neglecting to stock sufficient cardigans, especially from "most," could lead to lost sales.

Actionable Recommendations

• **Increase Cardigan Inventory (Immediate):** Increase the purchase order quantity for "most" brand cardigans by **at least 20%** to meet existing demand, prioritizing "free" size.

• **Analyze Sizing Data (Within 1 Month):** Conduct a more comprehensive analysis of size data across all product categories to determine optimal inventory levels for various sizes, especially the demand for sizes outside the "free" size category. This can help ensure balanced inventory.

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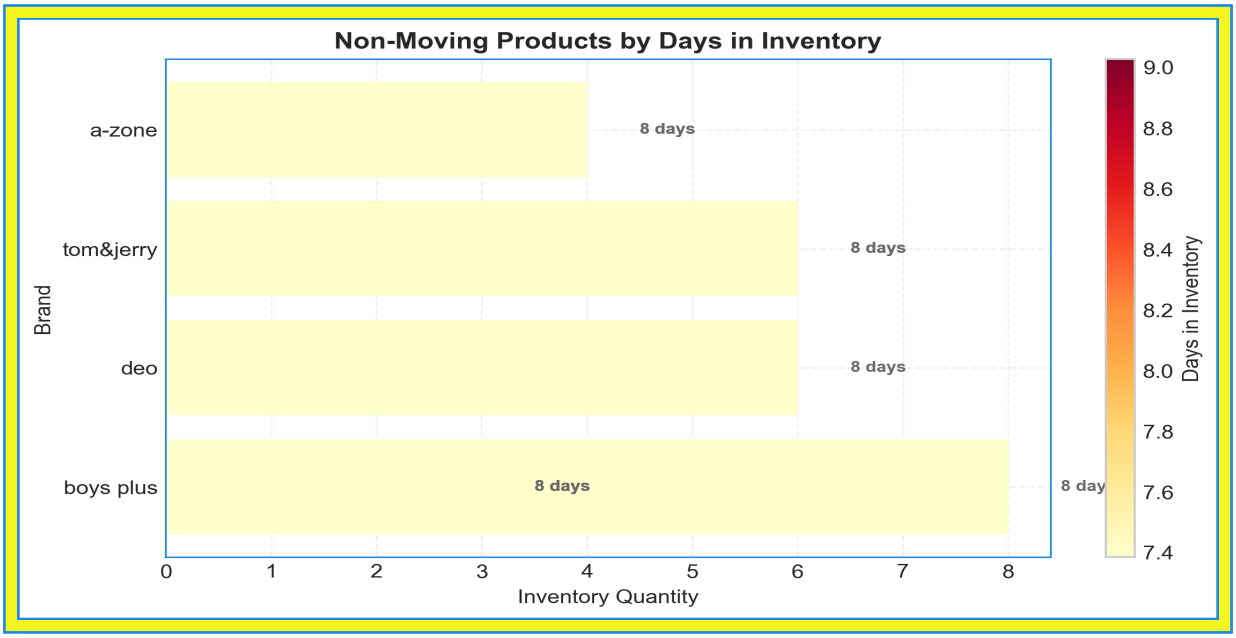
Question 3: Track non-moving products and their aging quantities.



Analysis & Recommendations

Business Intelligence Analysis: Non-Moving Inventory

Executive Summary

The data reveals a significant issue with **non-moving inventory**, as all sampled products have a **0% sales rate** after being in inventory for approximately **8 days**. This indicates potential problems with product selection, pricing, or marketing.

Key Insights

- **Zero Sales:** The most critical metric is the **0% percent_sold** across the sample.
- **Inventory Age:** Products have been sitting in inventory for around **8.2 days** without any sales. While this may seem like a short time, consistent zero sales should trigger concern.
- **Brand and Category Variety:** The issue spans across multiple brands ("boys plus", "deo", "tom&jerry;", "a-zone") and categories ("kurta pajama", "lower-jogger-hosiery", "suit-falalan", "coat suit"), suggesting a broader problem than just specific product lines.

Business Implications

- **Stagnant Capital:** Non-moving inventory ties up valuable capital that could be invested elsewhere.
- **Potential Losses:** Extended periods without sales increase the risk of markdowns, obsolescence, or disposal.

• **Ineffective Sales Strategy:** Lack of sales indicates a disconnect between product offerings and customer demand, or ineffective marketing/pricing.

Actionable Recommendations

• **Immediate Sales Promotion (1-2 weeks):** Implement targeted sales promotions (discounts, bundles) for the non-moving products to stimulate demand and reduce inventory. This could include price adjustments or highlighting these items in promotional materials.

• **Inventory Review and Analysis (Ongoing):** Conduct a comprehensive review of inventory purchasing practices and demand forecasting methods. Analyze why these products are not selling, considering factors like pricing, seasonality, and marketing.

• **Product Line Optimization (1-3 months):** Based on the inventory review, consider phasing out or reducing orders of poorly performing product lines and brands to avoid future accumulation of non-moving inventory.

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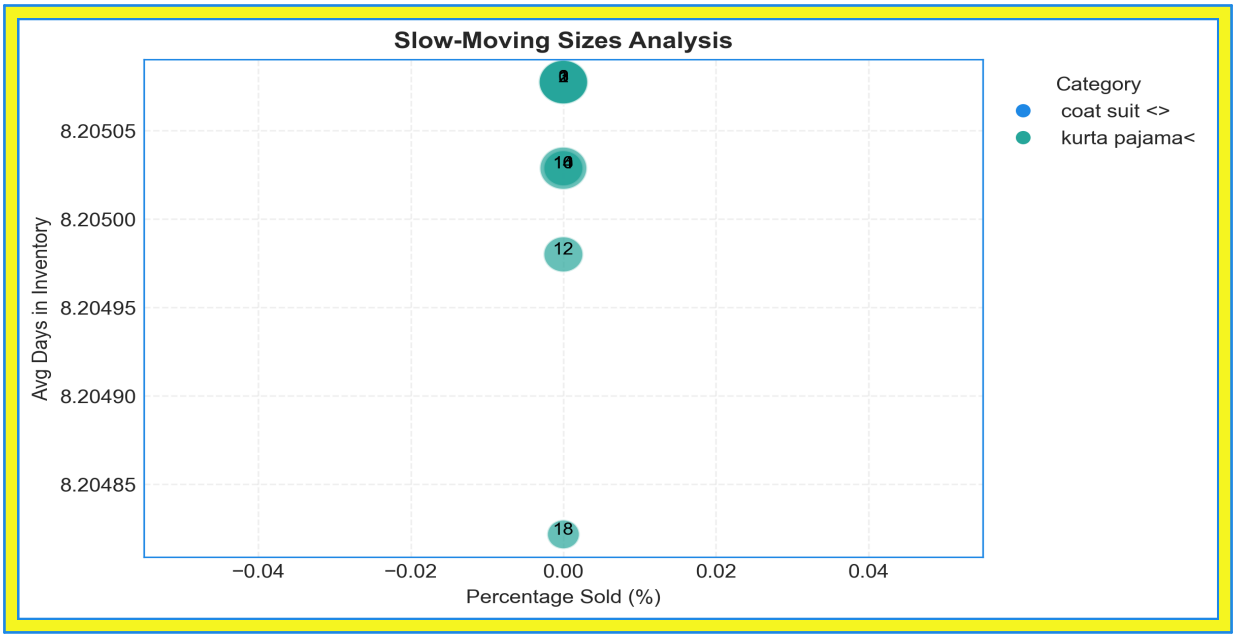
Question 4: Identify slow-moving sizes within specific categories.



Analysis & Recommendations

Business Intelligence Analysis: Slow-Moving Sizes

Executive Summary

The provided data sample indicates that a significant portion of inventory, specifically across "coat suit <>" and "kurta pajama<" categories, is slow-moving. With a **0% sell-through rate** across all sizes represented, these items are accumulating in inventory.

Key Insights

• **Zero Sales:** Across both categories and all listed sizes, the percent_sold is **0.0**, meaning no items were sold from the total_purchased. This suggests a complete lack of customer demand for these specific sizes within these categories during the observation period.

• **Low Inventory Turnover:** All sizes have an avg_days_in_inventory of approximately **8.2 days**, even with zero sales, indicating that this sample is very recent, and the products have been in inventory for a short period. The high inventory days with no sales is a concerning trend.

Business Implications

• **Capital Tie-Up:** Unsold inventory ties up capital that could be invested in faster-moving products.

• **Potential Losses:** Prolonged stagnation increases the risk of obsolescence, damage, or the need for significant markdowns to clear inventory.

• **Inaccurate Demand Forecasting:** The purchasing of these items might be based on inaccurate demand forecasts.

Actionable Recommendations

- **Immediate Sales Promotion (within 1 week):** Launch targeted sales promotions (e.g., discounts, bundled offers) specifically for these slow-moving sizes and categories to stimulate demand and reduce inventory. Track promotion effectiveness closely.
- **Inventory Reduction (within 2 weeks):** Consider returning excess inventory to suppliers (if possible) or redistributing stock to locations with potentially higher demand. Re-evaluate reorder points.

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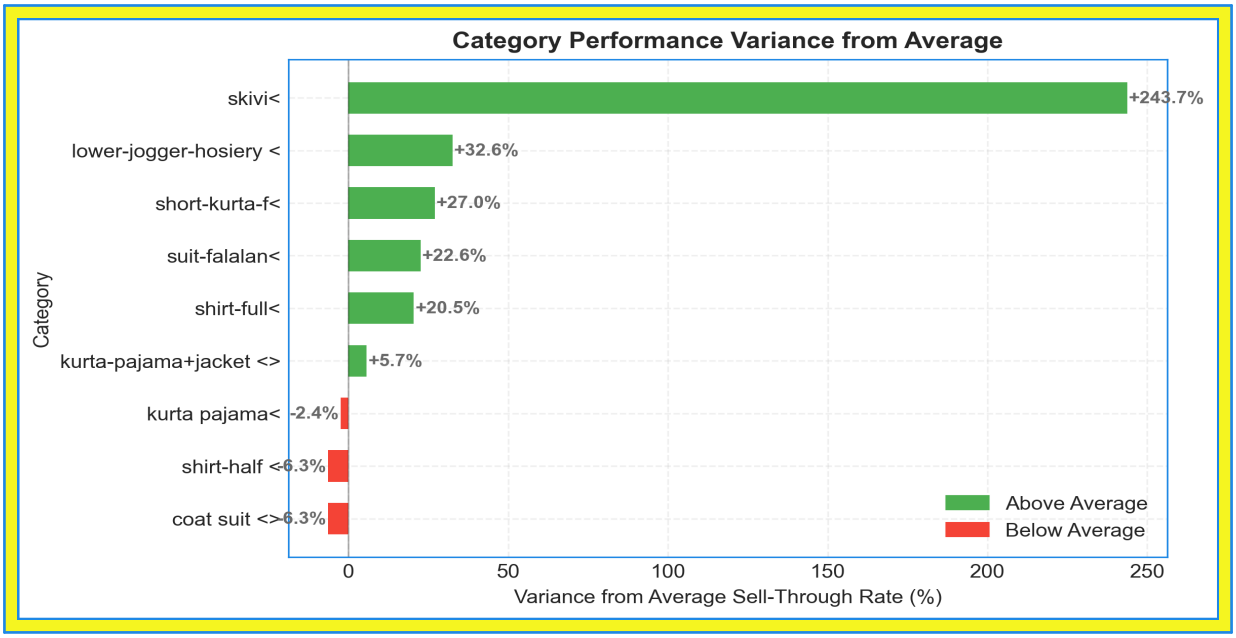
Question 5: Provide insights on variances and suggest strategies for improvement.



Analysis & Recommendations

Business Intelligence Analysis: Retail Inventory & Sales

Executive Summary

The data reveals significant variances in sell-through rates across product categories, indicating inventory management inefficiencies. Some categories have zero sales despite purchases, while others show strong sell-through, requiring immediate attention and strategy adjustments.

Key Insights

- **Sell-Through Rate Discrepancies:** A massive range in sell-through rate, from **0%** for "coat suit <>" and "shirt-half <" to 25**0%** for "skivi<". This indicates inventory imbalance.
- **High Variance Categories:** Categories like "skivi<" with a **243.7 variance from the average** demonstrate exceptional performance needing further investigation. Conversely, "coat suit <>" and "shirt-half <" show significantly underperforming, raising concerns about demand forecasting.
- **Brand Count Correlation:** There isn't a clear correlation between the number of brands per category and sell-through rate. For instance, "shirt-full<" has a high brand count (58) and a sell-through of 26.79, while "coat suit <>" (7 brands) has 0% sell-through.

Business Implications

- **Missed Revenue Opportunities:** Zero or low sell-through rates in certain categories represent significant lost revenue potential.

• **Inventory Holding Costs:** High inventory levels in slow-moving categories increase holding costs and tie up capital.

• **Ineffective Inventory Management:** Current inventory strategies are not effectively matching supply with demand.

Actionable Recommendations

• **Investigate and Optimize Top & Bottom Performers (Within 1 Week):** Analyze "skivi<" sales drivers and replicate success; discontinue or deeply discount "coat suit <>" and "shirt-half <" to clear inventory.

• **Refine Demand Forecasting (Within 1 Month):** Implement better demand forecasting models, incorporating factors beyond brand count to accurately predict consumer demand for each category. Consider external factors like seasonality and promotions.

• **Adjust Purchasing Strategy (Ongoing):** Re-allocate purchasing budget to high-performing categories and reduce purchases in underperforming categories, improving overall inventory turnover.

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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: Prioritizing Products for Online Sales

Executive Summary

Based on the provided data sample, products with higher sell-through rates and manageable stock levels should be prioritized for online sales. Specifically, focusing on items like "deo lower-jogger-hosiery" with a **66.67% sell-through rate** and remaining stock of 2 seems promising.

Key Insights

- **Sell-Through Rate:** This is a key indicator of product popularity. Items with higher sell-through rates (e.g., 66.67% for "deo") are in demand.
- **Stock Value:** High stock value (e.g., 2385.0 for "grab suit-falalan") combined with moderate sell-through (50.0%) indicates potential for tying up capital.
- **Remaining Stock:** Products like "pan america shirt-full" with a remaining stock of 1 after a 50% sell-through rate highlights the importance of ensuring stock availability for popular items online.

Business Implications

- **Missed Sales Opportunities:** Not prioritizing popular items online leads to missed sales and revenue.

• **Inefficient Inventory Management:** Focusing on slower-moving products online can tie up valuable capital and warehouse space.

• **Potential for Increased Revenue:** Shifting focus to items with strong sell-through and optimal stock levels can boost online sales and improve profitability.

Actionable Recommendations

• **Prioritize "deo lower-jogger-hosiery" for online promotions (Immediate):** Given its high sell-through and manageable stock, this product is likely to generate quick wins with online sales. Monitor sales and replenish stock as needed.

• **Analyze online sales performance for "grab suit-falalan" within the next month:** Determine if focused online promotion or discounts can improve its sell-through rate and reduce high stock value.

• **Ensure Sufficient Stock Levels for "pan america shirt-full" (Ongoing):** Monitor sell-through and remaining stock. Increase order quantities to meet demand and avoid stockouts online.

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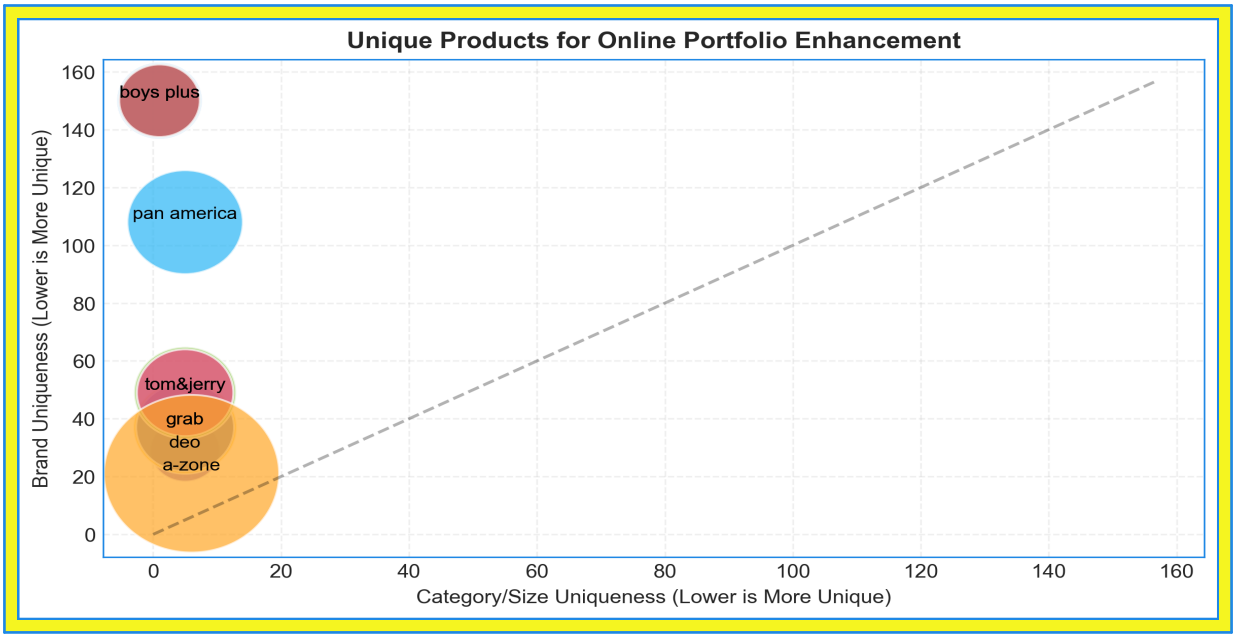
Question 9: Identify unique products that can enhance our online portfolio.



Analysis & Recommendations

Business Intelligence Analysis: Unique Product Identification

Executive Summary

The data reveals potential gaps in our online product portfolio, particularly in sizes and colors where sales are zero despite available stock. Focusing on brands with fewer offerings could provide opportunities for unique product additions.

Key Insights

• **Zero Sales with Available Stock:** Several products across different brands and categories (e.g., "boys plus" kurta pajama, "tom&jerry;" suit-falalan) show **zero SalesQty** despite having **available_stock**. This suggests a mismatch between what we have and what customers are buying online.

• **Limited Size/Color Variety:** Many entries have "unknown" color, indicating missing or incomplete data. "boys plus" in size "0" and color "unknown" across multiple categories demonstrates this pattern.

• **Brand Concentration:** The brand_count values indicate varying brand representation. Brands like "a-zone" with a smaller brand_count (21) might represent more niche products not widely available.

Business Implications

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

• **Incomplete Data Hinders Targeting:** Missing color or size data makes it difficult to effectively market products online.

• **Limited Online Selection:** Focusing on brands with smaller offerings can help expand the breadth of our online product catalogue and attract new customer segments.

Actionable Recommendations

• **Investigate Zero-Sale Products (Immediate):** Analyze why products with available stock are not selling. Improve product descriptions, add high-quality images, and offer promotions. Focus initially on items from brands with higher brand_count to see if improved marketing helps improve sales.

• **Enrich Product Data (Within 1 Month):** Complete missing size and color information. Implement data validation processes to prevent future omissions.

• **Expand Niche Brand Offerings (Within 3 Months):** Focus on increasing the online presence of brands with lower brand_count, like "a-zone." Identify their unique offerings to attract new customer segments.

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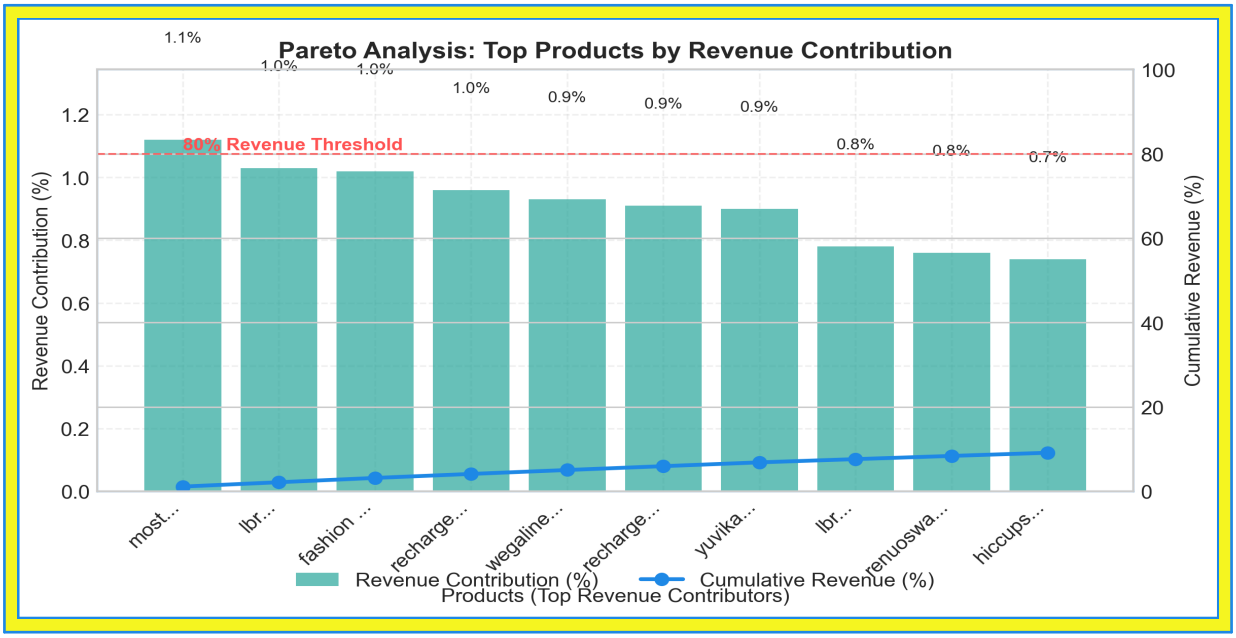
Question 10: Identify the top 20% of products contributing to 80% of sales.

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



Analysis & Recommendations

Business Intelligence Analysis: Top 20% Products Driving 80% Sales

Executive Summary

This analysis aims to identify the top-performing products driving a significant portion of our revenue, enabling a focus on optimizing inventory and sales strategies. Preliminary data suggests a concentrated revenue contribution from a relatively small subset of products.

Key Insights

- The provided sample data shows that the top product ("most" cardigan) accounts for **1.12% of total revenue**, while the top 10 products account for **9.14% of total revenue**. This initial observation suggests potential Pareto principle application.
- **Revenue varies significantly across Brands and Categories**. For instance, "most" cardigan and "lbr" jacket generate higher revenue compared to other products in the sample.
- The sample data appears to be sorted by revenue in descending order with cumulative percentages calculated.

Business Implications

• Understanding which products contribute most to revenue allows for **prioritized inventory management**, ensuring popular items are adequately stocked.

• Focusing on high-performing items can **improve marketing and promotional efforts**, driving further sales and customer loyalty.

• Ignoring the Pareto principle could lead to **inefficient resource allocation**, with resources spread across less profitable products.

Actionable Recommendations

• Conduct a comprehensive analysis of the entire product catalog to accurately identify the top 20% of products contributing to 80% of sales, aiming for completion within **1 week**. Prioritize products by revenue and calculate cumulative revenue percentages.

• Optimize inventory levels for the identified top-performing products to minimize stockouts and maximize sales, implementing changes within **2 weeks**.

• Develop targeted marketing campaigns promoting these key products to further boost sales and brand recognition. Review and refine campaigns monthly.

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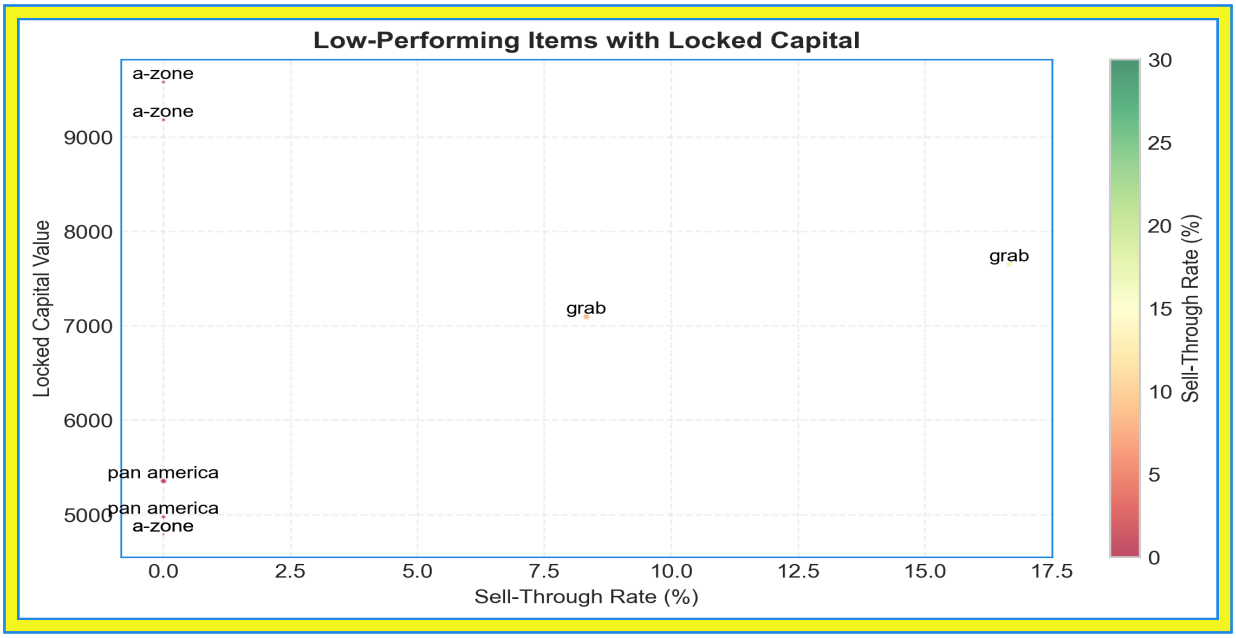
Question 11: Suggest strategies to reduce the inventory of low-performing items.



Analysis & Recommendations

Business Intelligence Analysis: Inventory Reduction Strategies

Executive Summary

The data reveals significant excess inventory and low sell-through rates for certain items, particularly within the "coat suit" category from the "a-zone" brand and some "shirt-full" and "suit-falalan" items from "pan america" and "grab." This excess ties up capital and suggests inefficiencies in inventory management.

Key Insights

- **Low Sell-Through Rates:** Several items have a **0% sell-through rate**, indicating zero sales despite being in inventory for approximately 8 days. For example, "a-zone" "coat suit" items across multiple colors and sizes have no sales despite available stock.
- **Excess Inventory:** Many items have a high "excess_inventory" compared to "SalesQty." "grab" "suit-falalan" in size 18 has an excess inventory of 10 with only 2 sales.
- **Locked Capital:** Significant capital is tied up in slow-moving inventory. The "a-zone" "coat suit" items alone account for a considerable portion of the locked capital, exceeding $40,000 across the sampled rows.

Business Implications

- **Opportunity Cost:** Capital tied up in slow-moving inventory could be used for more profitable ventures or to purchase faster-selling items.
- **Risk of Obsolescence:** Prolonged inventory holding increases the risk of fashion trends changing, leading to further markdowns or write-offs.

• **Inventory Inefficiency:** Poor inventory turnover impacts profitability and increases storage costs.

Actionable Recommendations

• **Targeted Promotions & Markdowns (Immediate):** Implement aggressive discounts or promotions (e.g., "buy one get one free") on items with **0% sell-through**, like "a-zone" "coat suit", to stimulate demand and reduce excess inventory. Monitor sales daily and adjust promotions accordingly.

• **Inventory Re-evaluation (Within 2 Weeks):** Analyze historical sales data for low-performing categories ("coat suit," "shirt-full," "suit-falalan") and brands ("a-zone," "pan america," "grab"). Reduce future purchase quantities to match actual demand to prevent further accumulation of excess inventory.

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Executive Summary

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Please review the individual analyses for insights.