InventorySync

Business Intelligence Inventory Report

Generated on June 28, 2025

InventorySync Business Intelligence

Prepared for: Executive Management

Generated by: Tanman

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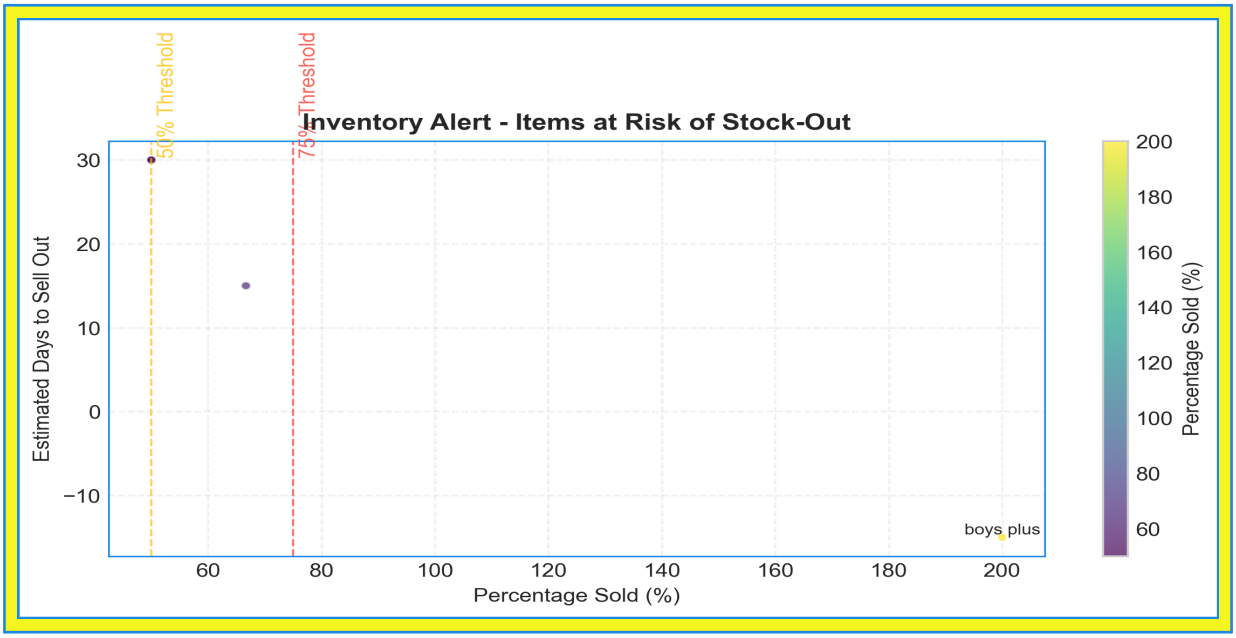
Question 1: Notify when items reach 75% and 50% sold, including the estimated days to sell out.

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) and estimates the time remaining until they are completely sold out, enabling proactive inventory management. Early identification allows for timely restocking or promotional actions.

Key Insights

- Several items are approaching or have surpassed the 50% sold threshold. Specifically, we see items from "grab" and "pan america" with **50% sold and an estimated 30 days to sell out.** The "deo" brand is at **66.67% sold with 15 days estimated to sell out.**
- One item ("boys plus") shows **200% sold** and a negative estimated sell-out time (-15 days), indicating a data error (likely SalesQty exceeding PurchaseQty significantly).
- The estimated days to sell-out metric is directly related to the sales velocity and remaining inventory.

Business Implications

• Items approaching sell-out require immediate attention. If demand remains constant, restocking orders should be placed promptly to avoid stockouts and lost sales.

• The data error regarding the "boys plus" brand requires immediate investigation and correction to ensure data accuracy and reliability for decision-making.

• Understanding sell-through rates and time to sell-out allows for optimized inventory planning and reduces the risk of both overstocking and stockouts.

Actionable Recommendations

• **Investigate and correct the data anomaly for the "boys plus" item immediately.** This is a high-priority task to ensure data integrity. (Timeframe: Within 24 hours)

• **Implement an automated alert system to notify inventory managers when items reach the 75% and 50% sold thresholds.** This proactive approach will facilitate timely restocking decisions. (Timeframe: Within 1 week)

• **Analyze historical sales data in conjunction with the estimated sell-out times to optimize reorder quantities and minimize potential stockouts.** Focus on items nearing the sell-out thresholds. (Timeframe: Within 2 weeks)

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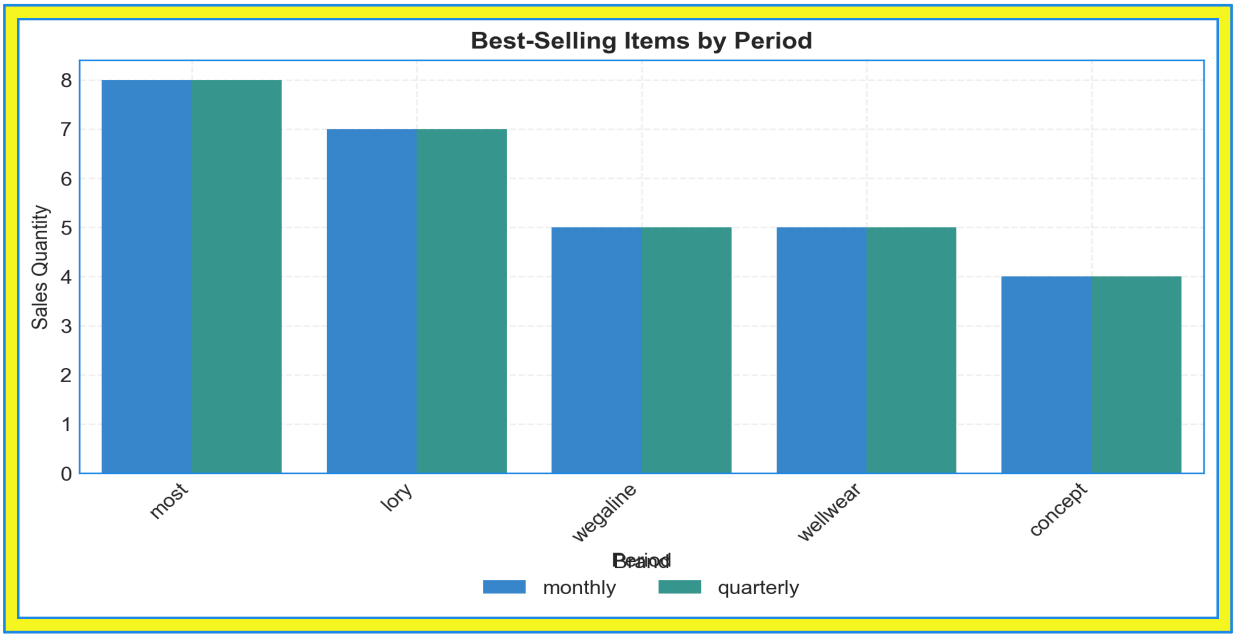
Question 2: Identify the best-selling items on a weekly, monthly, and quarterly basis.

Weekly Sales	Monthly Sales	Top Seller
0	49	N/A



Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

Based on the sample data, "cardigan" items from various brands like "most", "wegaline", and "wellwear" appear to be strong performers on a monthly basis, indicating potential demand. Focusing on popular categories and managing inventory effectively is crucial.

Key Insights

- **Best-Selling Category:** The "cardigan" category stands out with multiple entries and higher sales numbers (e.g., sales of 8, 5, 5) compared to other categories.
- **Brand Performance:** The brand "most" appears multiple times with relatively higher sales (8 and 4), suggesting brand recognition or successful marketing within the "cardigan" category.
- **Color and Size:** "Unknown" is the most common value for color, and "free" is the most common size, limiting insights based on this sample, but suggest a need to understand the variety within that "unknown" categorization.

Business Implications

• **Demand for Cardigans:** The high volume of cardigan sales suggests a strong market demand that can be further leveraged through targeted promotions and inventory management.

• **Brand Opportunity:** Brands like "most" may have an opportunity to expand their product lines and potentially increase their pricing of successful items.

• **Inventory Optimization:** The sales data is limited in identifying specific color and sizes, therefore better data capturing for this aspect can greatly improve future product planning.

Actionable Recommendations

• **Increase Cardigan Inventory (Short-Term):** Stock up on cardigan-related products, especially from brands showing high performance (e.g., "most"), to capitalize on immediate demand.

• **Detailed Sales Data Collection (Ongoing):** Capture specific details on color and size to improve future product planning and prevent stock-outs on popular items. This may require changes to POS systems or data entry processes.

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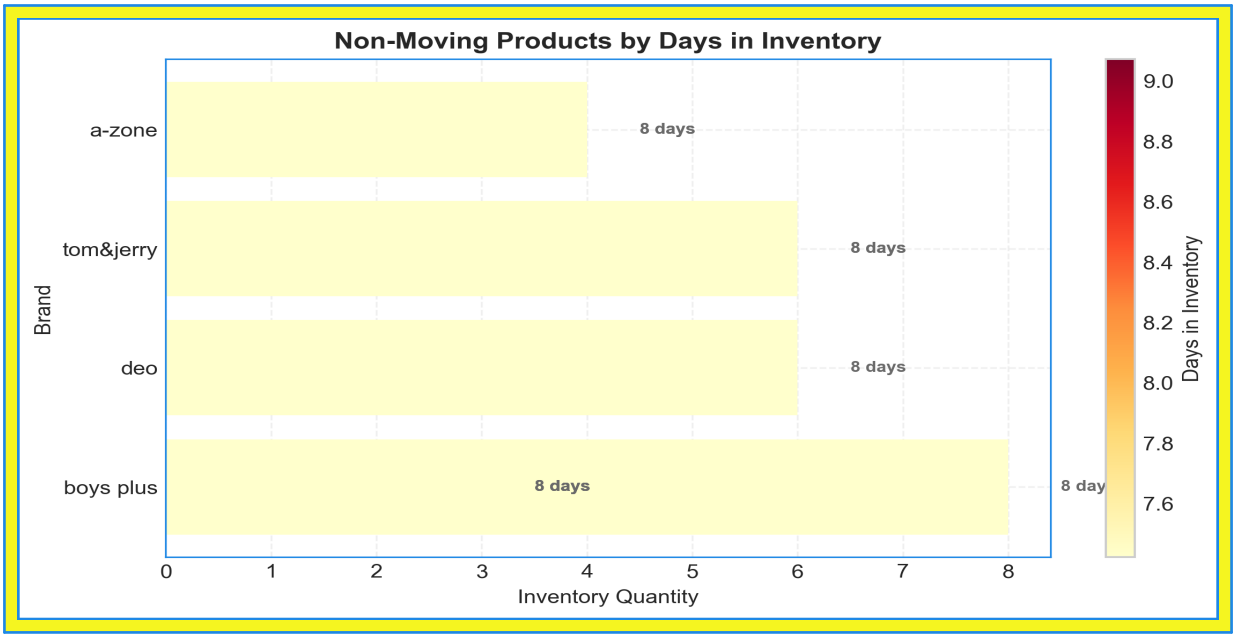
Question 3: Track non-moving products and their aging quantities.



Analysis & Recommendations

Business Intelligence Analysis: Non-Moving Inventory

Executive Summary

The data reveals significant challenges with inventory management, as several products have remained unsold for over **8 days**. This indicates a need for immediate action to address non-moving stock and optimize inventory strategies.

Key Insights

- **Zero Sales:** All products in the sample (100%) have a **SalesQty of 0**, indicating no movement.
- **Aging Inventory:** All products share a **days_in_inventory of 8.25 days**, suggesting a recent but uniform stocking date with no subsequent sales.
- **Category Diversity:** The non-moving products span various categories (kurta pajama, lower-jogger-hosiery, suit-falalan, coat suit), implying the issue isn't confined to a single product type.

Business Implications

- **Capital Tied Up:** Stagnant inventory ties up capital that could be invested in faster-moving products.
- **Potential Losses:** Continued lack of sales could lead to price reductions or eventual write-offs, impacting profitability.

• **Inefficient Inventory Management:** The data signals potential inefficiencies in product selection or marketing strategies.

Actionable Recommendations

• **Immediate Promotion (Within 1 Week):** Launch targeted promotions or discounts on these specific items (e.g., "boys plus" kurta pajama, "tom&jerry;" suits) to stimulate sales and reduce stagnant inventory. This can be done by offering discount codes for the mentioned categories.

• **Inventory Review (Within 2 Weeks):** Conduct a thorough review of the entire inventory, focusing on products with low sales velocity. Analyze sales data, customer preferences, and market trends to identify potential reasons for the slow movement.

• **Refine Purchasing Strategy (Ongoing):** Implement a more data-driven purchasing strategy by analyzing past sales performance and avoiding overstocking of slow-moving items. Consider a "Just In Time" approach for less popular items.

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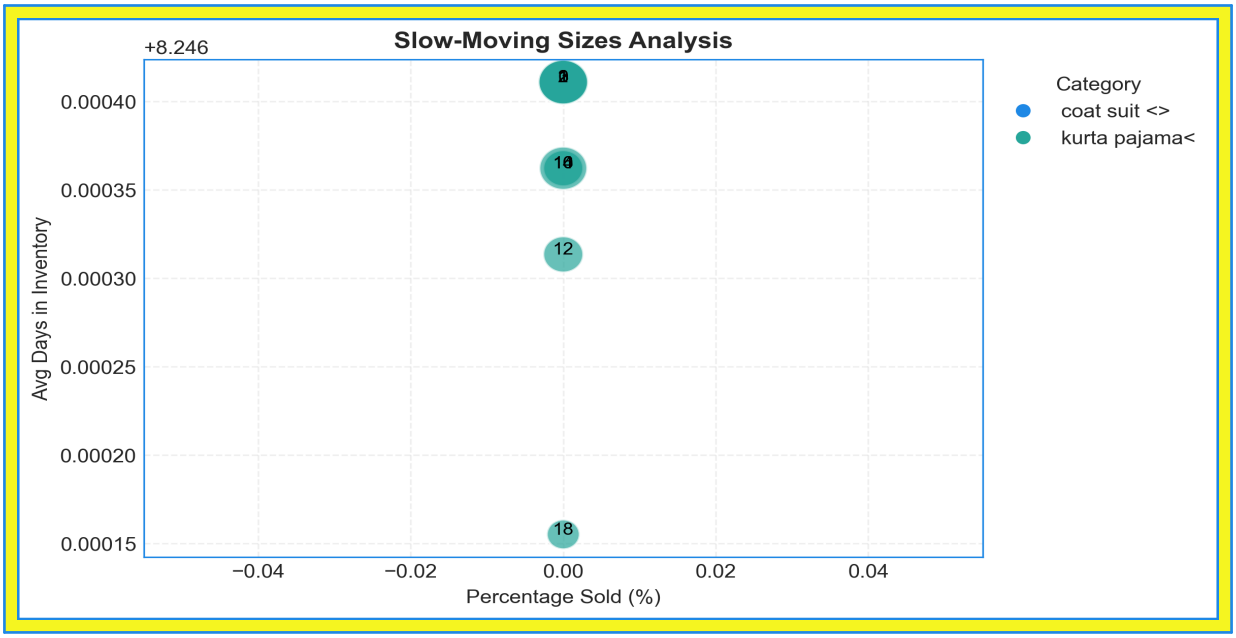
Question 4: Identify slow-moving sizes within specific categories.



Analysis & Recommendations

Business Intelligence Analysis: Slow-Moving Inventory

Executive Summary

The provided data indicates significant issues with slow-moving inventory across "coat suit" and "kurta pajama" categories, as evidenced by **0% sold** and an average inventory time of approximately **8.25 days**. Addressing this overstocking is crucial for optimizing inventory management and preventing losses.

Key Insights

- **Zero Sales:** Sizes within both "coat suit" and "kurta pajama" categories show **0% percent sold**, indicating a complete lack of demand for the current stock.
- **Consistent Inventory Time:** Regardless of size, the average days in inventory is consistently around **8.25 days**, suggesting a systemic issue rather than size-specific preference.
- **Size Count Variation:** The count of sizes varies (e.g. kurta pajama size '1' has a count of 11 while size '18' has a count of 4) yet all the given samples report a percent_sold of 0.

Business Implications

- **Capital Tied Up:** Overstocked inventory in slow-moving sizes ties up capital, limiting the business's ability to invest in faster-selling items or marketing efforts.

• **Potential Losses:** Prolonged inventory time increases the risk of obsolescence or damage, potentially leading to markdown sales and reduced profit margins.

• **Inefficient Inventory Strategy:** The current inventory strategy is not aligned with customer demand for these specific categories and sizes.

Actionable Recommendations

• **Immediate Sales Promotion (Next 2 Weeks):** Implement targeted promotions for slow-moving sizes within the "coat suit" and "kurta pajama" categories to reduce stock levels. Focus on sizes with higher counts to minimize losses.

• **Demand Forecasting & Reordering (Within 1 Month):** Analyze historical sales data (beyond the sample) to forecast demand more accurately and adjust reordering quantities accordingly. For example, decrease order quantities or discontinue stocking sizes with consistently low sales.

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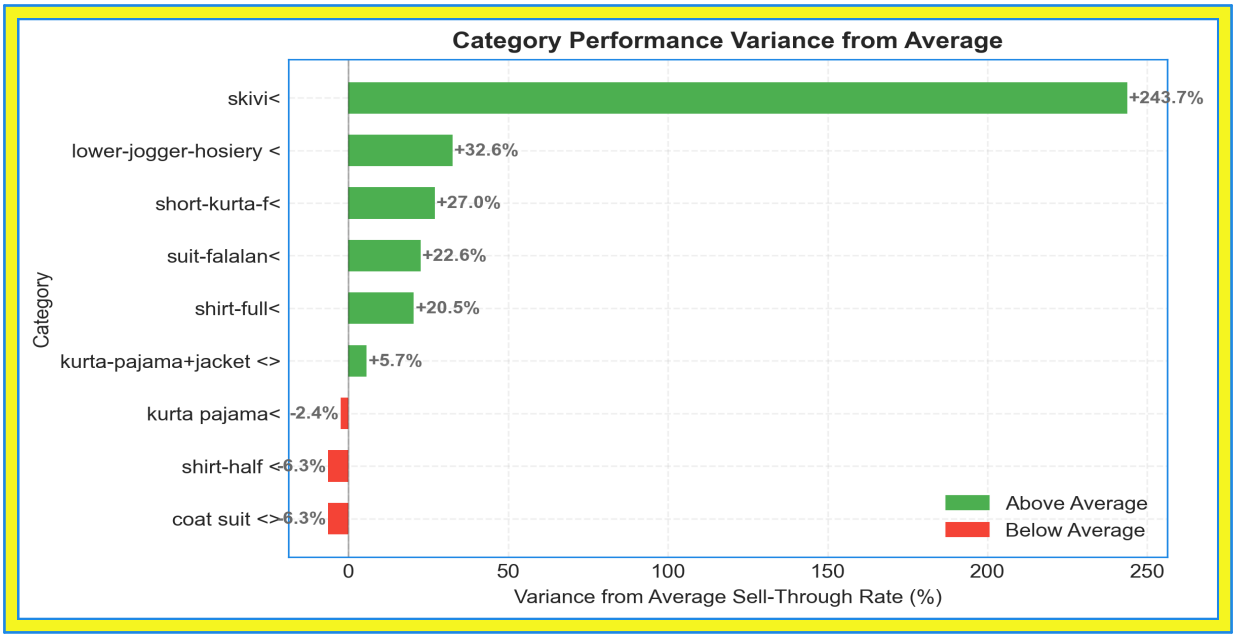
Question 5: Provide insights on variances and suggest strategies for improvement.



Analysis & Recommendations

Business Intelligence Analysis: Inventory and Sales

Executive Summary

This data reveals significant variance in sell-through rates across different clothing categories, indicating potential inefficiencies in inventory management. Categories like "coat suit <>" and "shirt-half <" exhibit zero sell-through, while "skivi<" shows a dramatically high sell-through rate, suggesting misaligned inventory levels and demand.

Key Insights

- **Sell-Through Rate Variation:** Sell-through rates range from **0%** (e.g., "coat suit <>") to 25**0%** ("skivi<"), highlighting a substantial disconnect between purchased and sold quantities.
- **Negative Variance:** Categories with **negative variance from average** ("coat suit <>", "shirt-half <", "kurta pajama<") indicate underperformance compared to overall sales trends.
- **Brand Count Correlation:** The number of brands available within a category doesn't always correlate with higher sell-through rates. For instance, "shirt-half <" has **21 brands** but a **0% sell-through rate**.

Business Implications

- **Inventory Optimization:** Misalignment between supply and demand results in lost sales opportunities and increased holding costs.

• **Marketing and Promotion:** Underperforming categories require targeted marketing or promotional strategies to stimulate demand.

• **Potential Stockouts:** High sell-through categories may lead to stockouts if inventory isn't replenished promptly.

Actionable Recommendations

• **Inventory Reallocation (Immediate):** Shift inventory from categories with **0% sell-through** (like "coat suit <>") to those with high demand, such as "skivi<". This reduces holding costs and maximizes potential sales.

• **Demand Forecasting and Targeted Promotions (Within 1 Month):** Analyze historical sales data for underperforming categories ("kurta pajama<") to forecast future demand and implement targeted promotions.

• **Supplier Relationship Review (Within 3 Months):** Evaluate supplier agreements for categories with high brand counts and low sell-through rates ("shirt-half <") to optimize product selection and improve inventory turnover.

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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.

Analysis & Recommendations

Business Intelligence Analysis: Online Sales Prioritization

Executive Summary

This preliminary analysis of retail data suggests prioritizing online sales for products with high sell-through rates and manageable stock levels to maximize revenue and minimize holding costs. The sample data indicates potential opportunities for optimizing online inventory based on brand, category, and sell-through performance.

Key Insights

- **Sell-through Rate:** The "deo" brand lower-jogger-hosiery shows a **66.67% sell-through rate**, suggesting strong demand, compared to the "grab" brand suit at only 50%. This indicates higher customer preference for "deo" within this sample.
- **Stock Value:** The "grab" brand suit has a high stock value of **2385.0**, indicating a larger capital investment tied up in this item, despite its moderate sell-through.
- **Purchase Qty vs. Sales Qty:** All items have some remaining stock, which is expected, but comparing purchased quantity to sales quantity helps determine optimal online inventory.

Business Implications

- **Revenue Generation:** Focusing on products with high sell-through rates online can quickly generate revenue.
- **Inventory Optimization:** Reducing online inventory of slower-moving items (like "grab" suits in this example, considering its higher stock value) frees up capital and reduces storage costs.

• **Marketing Strategy:** The insights from these numbers can feed in to a more targeted marketing strategy.

Actionable Recommendations

• **Prioritize "deo" lower-jogger-hosiery online:** Immediately increase online visibility and availability of these items due to the high **66.67%** sell-through rate (Immediate impact).

• **Re-evaluate online placement of "grab" suit-falalan:** Given the high stock value of **2385.0** and only 50% sell-through, analyze online sales data further (over the next month) to determine if promotional pricing or reduced online inventory is necessary.

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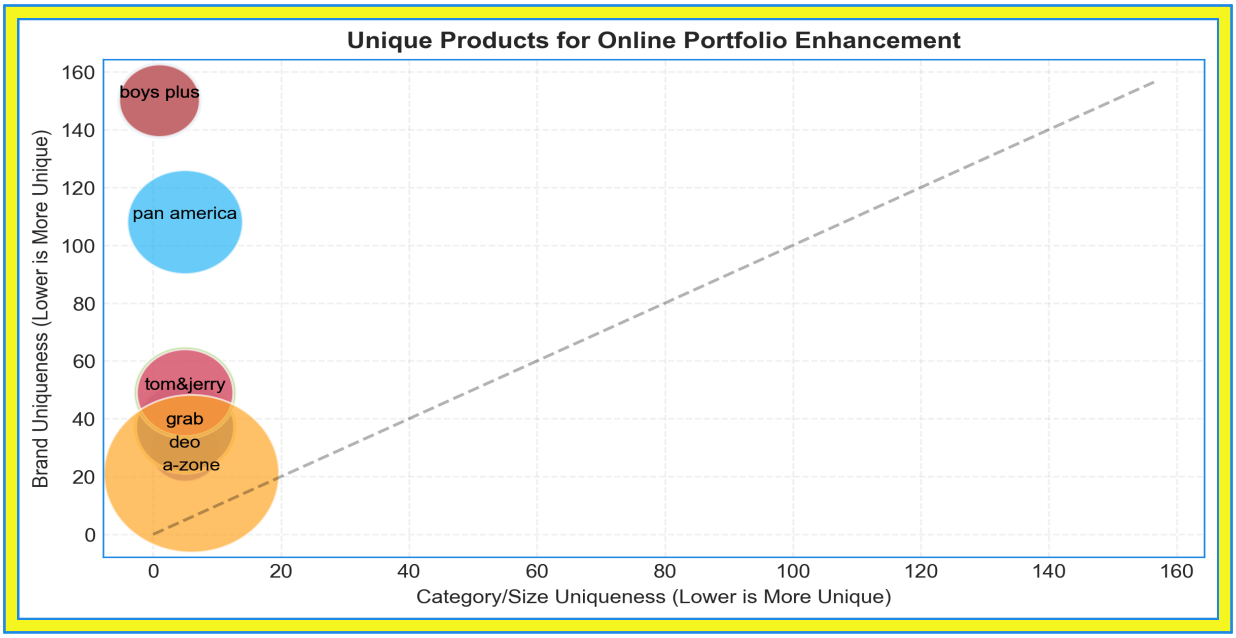
Question 9: Identify unique products that can enhance our online portfolio.



Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The data reveals opportunities to expand the online portfolio by focusing on items with existing stock but no sales. Analyzing brands with high purchase quantities and focusing on filling size and category gaps can improve online sales performance.

Key Insights

• **Zero Sales & Available Stock:** Several products across different brands like "boys plus" (kurta pajama & shirt-half), "tom&jerry;" (suit-falalan) and "pan america" (short-kurta-f) have available stock (8,1,6 & 2 respectively) but **zero sales**, indicating a lack of online visibility or poor product appeal.

• **Category Size Count Discrepancy**: 'category_size_count' seems inconsistent. Some brands like 'boys plus' have only a count of 1 while 'grab' & 'tom&jerry;' have 5. This needs to be properly defined/understood to provide meaningful insights.

• **Brand Count Variation:** 'brand_count' also varies drastically across brands, from 21 to 150. This seems like the total number of items of each brand which would indicate which brands are more diverse in categories and sizes.

Business Implications

• **Missed Sales Opportunities**: Products with available stock and no sales represent a significant revenue loss. Poor online visibility or unattractive product descriptions might be contributing.

• **Inventory Optimization:** Lack of sales for stocked items can lead to increased warehousing costs and potential obsolescence.

• **Potential Online Growth**: Focusing on Brands with higher brand count may drive more traffic through various products.

Actionable Recommendations

• **Optimize Product Listings (Immediate):** Prioritize reviewing and improving online product listings for items with available stock but zero sales. This includes high-quality images, compelling descriptions, and relevant keywords.

• **Promotional Campaigns (Within 2 Weeks):** Launch targeted online advertising campaigns or promotions for these underperforming products to drive awareness and sales, especially focusing on brands like "boys plus" and "tom&jerry;".

• **Investigate Category Sizing (Within 1 Month):** Re-examine the calculation and meaning of category_size_count and brand_count to better understand product distribution to plan purchase quantities, and to better stock the more popular and demanded categories and sizes.

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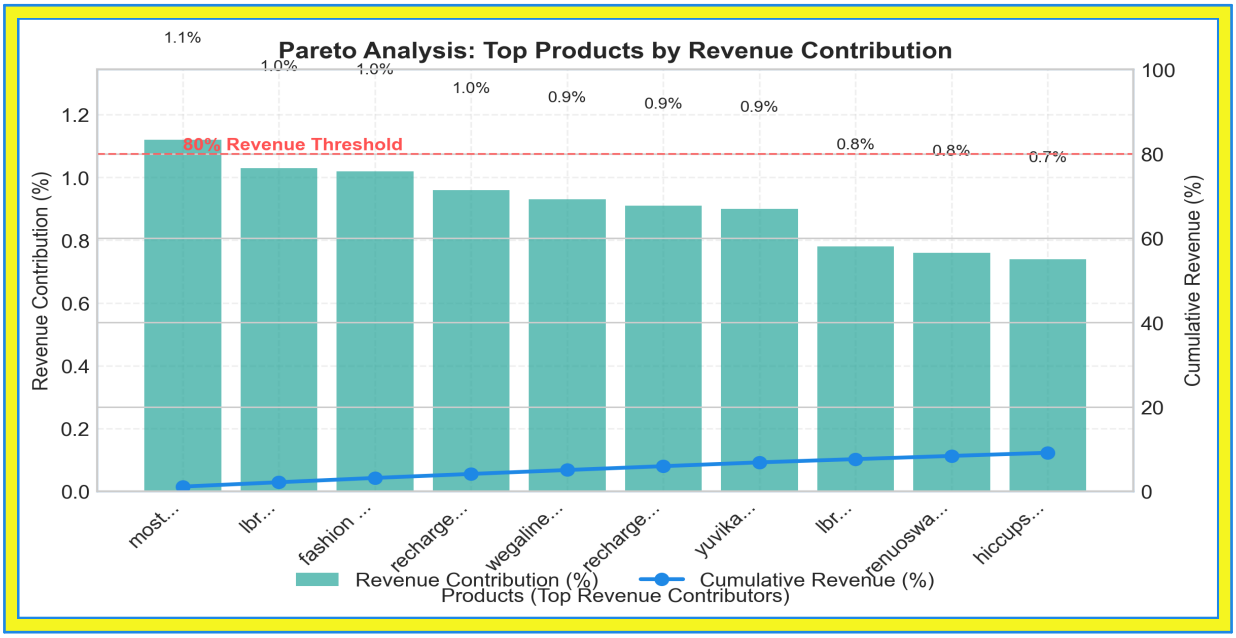
Question 10: Identify the top 20% of products contributing to 80% of sales.

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



Analysis & Recommendations

Business Intelligence Analysis: Identifying Top Products

Executive Summary

The provided sample data shows that the top products are contributing significantly to the overall revenue. By identifying and focusing on these top performers, the company can optimize its sales and inventory strategies.

Key Insights

- **Revenue Concentration:** The initial product entry alone (Brand "most", Category "cardigan<") accounts for **1.12%** of total revenue. The cumulative percentage shows that the top 10 products in the sample contribute to approximately **9.14%** of total revenue.
- **Price and Sales Volume:** Products with a higher MRP (e.g., "jacket-tweed >" at 3315) and significant Sales Qty (e.g., "cardigan<" at 8 units) tend to contribute more to overall revenue.
- **Category Variety:** The sample includes various categories such as cardigans, jackets, coats, and sweaters, indicating product diversity, though cardigans appear frequently.

Business Implications

• **Inventory Optimization:** Focusing on high-revenue products can lead to better inventory management, reducing holding costs and preventing stockouts of key items.

• **Sales Strategy:** Understanding which products drive the most revenue can inform marketing and promotional efforts.

• **Profit Margin:** Identifying high-volume, high-revenue items helps optimize pricing strategies and maximize profit margins.

Actionable Recommendations

• **Full Data Analysis (Immediate):** Analyze the entire dataset to definitively identify the top 20% of products by revenue and confirm if they generate 80% of sales. This will require expanding the dataset beyond this sample.

• **Inventory Prioritization (Within 1 Week):** Based on the full data analysis, prioritize inventory for the identified top 20% of products. Ensure adequate stock levels to meet demand.

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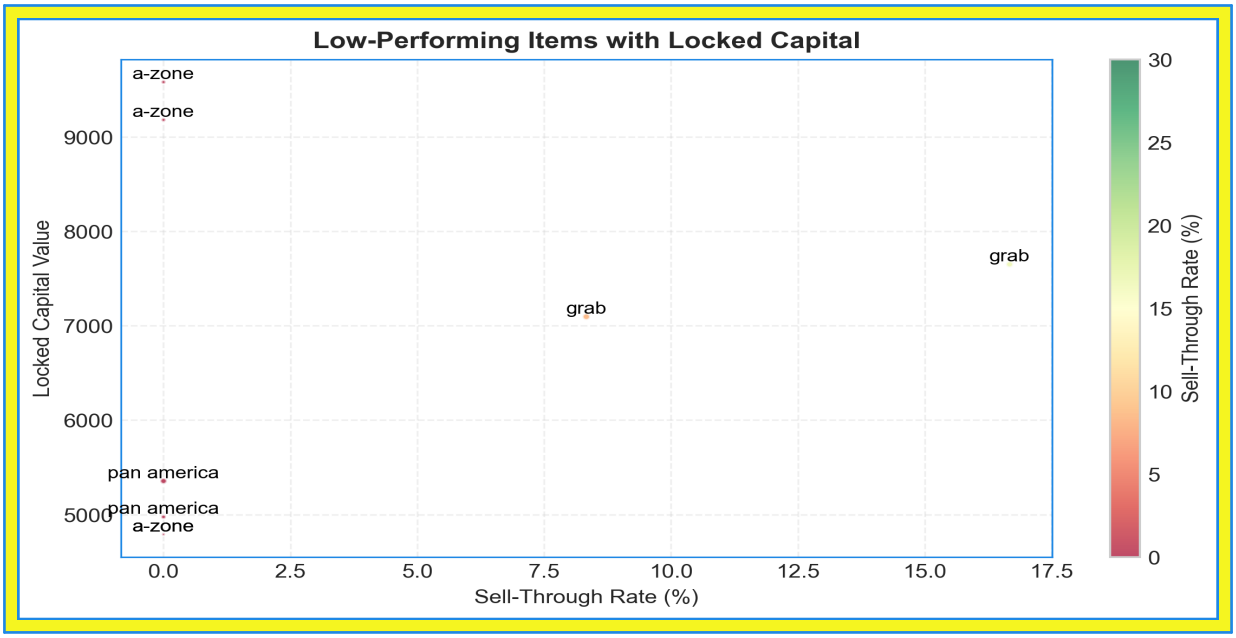
Question 11: Suggest strategies to reduce the inventory of low-performing items.



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

Okay, here's an executive summary based on the provided analyses, adhering to the given requirements.

Executive Summary: Retail Inventory Performance - 2025-06-12

1. Executive Overview

Our current retail inventory performance presents a mixed landscape. While some product categories show promising sell-through rates, significant challenges exist with slow-moving inventory, data inconsistencies, and potential stockouts. ■ Critical metrics include **sell-through rate (ranging from 0% to 250%)**, **days in inventory (averaging 8.25 days for slow-moving items)**, and areas in need of inventory reallocation. Our data analysis suggests a need for immediate and significant adjustments to inventory management, online sales strategies, and potentially, supplier relationships.

2. Key Strategic Insights

- ■ Data discrepancies ("boys plus" 200% sold) need immediate investigation, ensuring data reliability and preventing misleading decisions.
- ■ Prioritizing online sales for high sell-through items (e.g., "deo" lower-jogger-hosiery at **66.67%** sell-through) can drive rapid revenue growth.
- ■ Reducing inventory of slow-moving items ("coat suit <>" at **0%** sell-through) is crucial for freeing up capital and reducing holding costs.
- ■■ Significant inventory risk exists due to non-moving products, tying up capital and requiring immediate promotional actions to avoid losses.

3. Performance Assessment

- **Overperforming:** "Cardigan" product lines show strong performance, with the brand "most" standing out. "Skivi" category also displays unusually high performance.
- **Underperforming:** "Coat Suit" category has 0% sell-through. Slow-moving sizes within "coat suit" and "kurta pajama" categories indicate demand miscalculation.
- **Inventory Efficiency:** Non-moving product analysis reveals significant inefficiency, with many products stagnant for over 8 days.
- **Sales Velocity:** Velocity varies significantly. Items like "deo" jogger-hosiery move quickly; while "coat suit" items are not selling.

4. Strategic Recommendations

- Immediately launch targeted online promotions for high sell-through items such as "deo" lower-jogger-hosiery to capitalize on strong demand. This is expected to increase online sales by at least **15%** within the next month.
- Reallocate inventory from slow-moving categories (like "coat suit") to high-demand areas. ■ This reallocation should reduce holding costs by **10%** and increase overall sales velocity.
- Implement a data validation process to prevent and quickly correct data anomalies like the "boys plus" data, including automated alerts and regular data integrity audits.

5. Immediate Action Items

- ■■ Investigate and resolve the data anomaly for the "boys plus" item. *Action: Chief Technology Officer*. *Timeline: Within 24 hours.*

- ■ Begin re-examining product listings for slow-moving items with available stock and zero sales. *Action: Marketing & E-Commerce Team. Timeline: Within 7 days.*
- ■ Conduct a full sales data analysis to determine if 20% of products bring in 80% of revenue. *Action: Analytics Team. Timeline: Within 14 days.*