InventorySync

Business Intelligence Inventory Report

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InventorySync Business Intelligence

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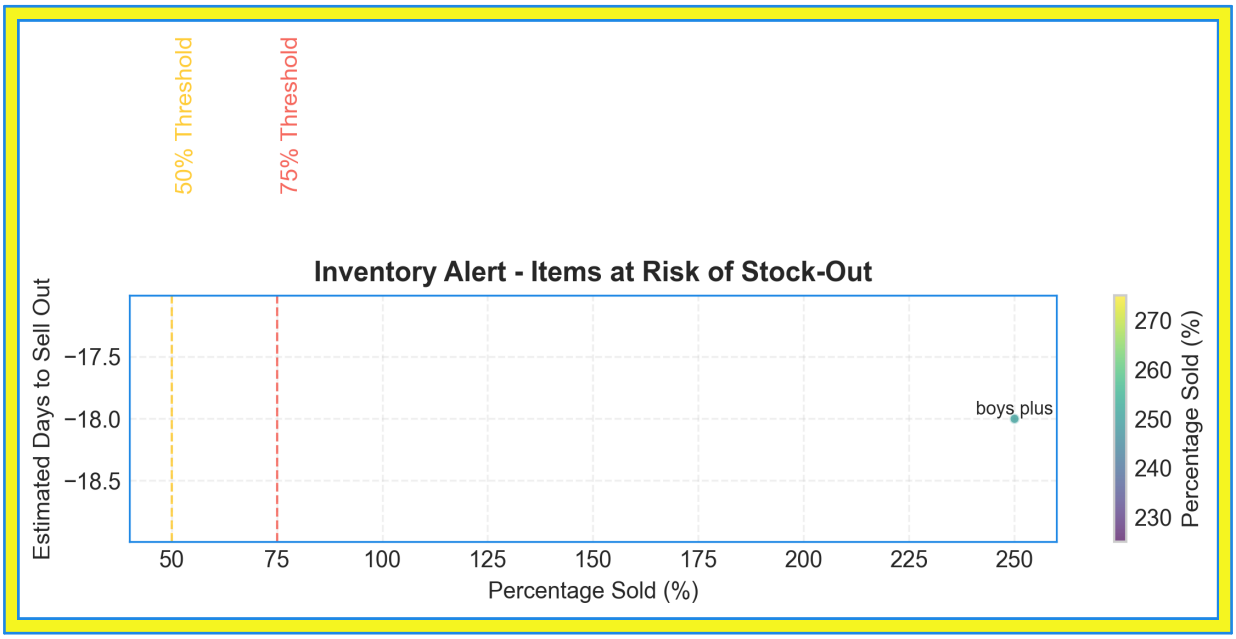
Table of Contents

1	Notify when items reach 75% and 50% sold, including the e...	3
2	Identify the best-selling items on a weekly, monthly, and...	4
3	Track non-moving products and their aging quantities.	5
4	Identify slow-moving sizes within specific categories.	6
5	Provide insights on variances and suggest strategies for ...	7
6	Analyze the turnaround time for exchanges and returns to ...	8
7	Generate reports on rejected goods and returns for vendor...	9
8	Recommend which products from our stock should be priorit...	10
9	Identify unique products that can enhance our online port...	11
10	Identify the top 20% of products contributing to 80% of s...	12
11	Suggest strategies to reduce the inventory of low-perform...	13
12	Executive Summary	14

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	0	-18



Analysis & Recommendations

Business Intelligence Analysis: Inventory Sell-Out Alerts

Executive Summary

The provided inventory data shows items are sometimes selling faster than expected, resulting in negative "est_days_to_sellout" values, indicating a need for better inventory management and sales tracking. Setting alerts at **75% and 50% sold** can help proactively manage inventory and prevent stockouts.

Key Insights

- **Negative Sell-Out Estimates:** The sample data reveals that the "boys plus kurta pajama" in size 4 and peach color has a negative estimated sell-out time of **-18 days**, due to a **percent_sold of 250%**. This suggests the product is out of stock and demand isn't being met.
- **Sales Qty vs. Purchase Qty:** A SalesQty of 5 compared to a PurchaseQty of 2 indicates high demand. Further investigation is needed to understand if this is a consistent trend across other items in the same brand and category.

Business Implications

• **Missed Sales Opportunities:** Failing to replenish popular items like the "boys plus kurta pajama" could lead to lost revenue and customer dissatisfaction.

• **Inefficient Inventory Management:** Without proper monitoring and alerts, the business risks overstocking slow-moving items while simultaneously experiencing stockouts of high-demand products.

Actionable Recommendations

• **Implement Real-Time Inventory Alerts:** Set up automated alerts that trigger when inventory levels reach **75% and 50% sold**. Include alerts for excessively high sales percentages (e.g., above 100%). *(Immediate implementation)*

• **Analyze Sales Data by Product:** Examine historical sales data across all brands, categories, sizes, and colors to identify consistent best-sellers. Use this information to inform future purchasing decisions and adjust inventory levels accordingly. *(Within 1 week)*

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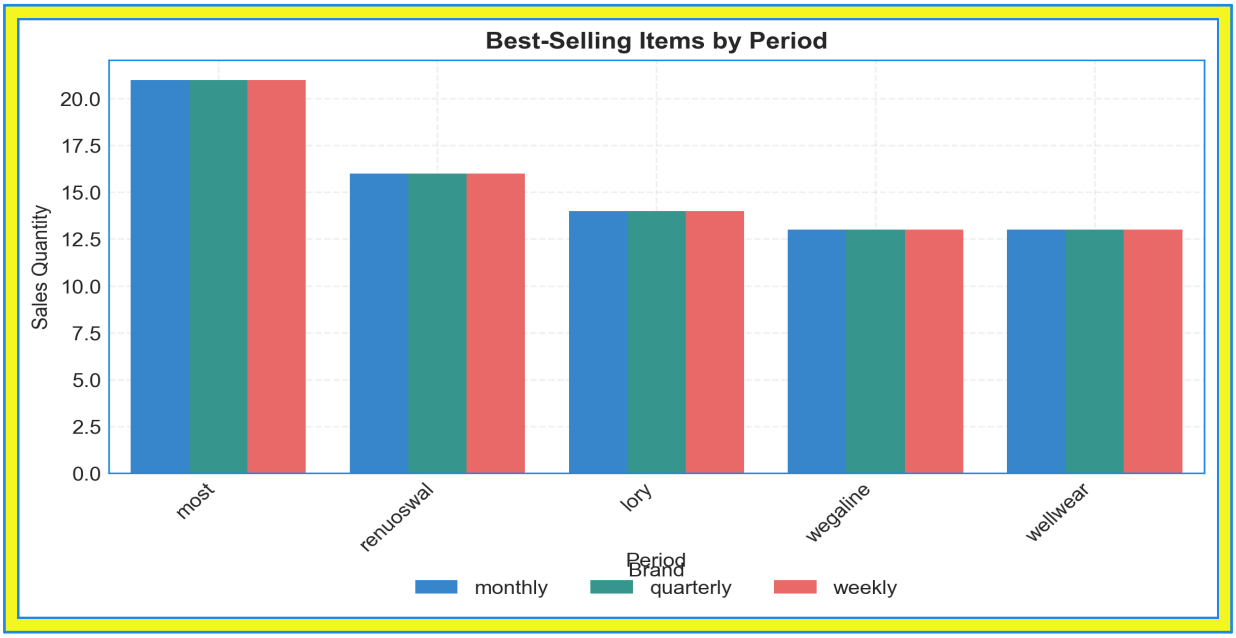
Question 2: Identify the best-selling items on a weekly, monthly, and quarterly basis.

Weekly Sales	Monthly Sales	Top Seller
137	137	N/A



Analysis & Recommendations

Business Intelligence Analysis: Best-Selling Items

Executive Summary

This data highlights that **cardigans, particularly those from the "most" brand**, are performing strongly on a monthly basis. Focusing on these high-demand items can optimize inventory and boost sales.

Key Insights

- **Dominant Category:** Cardigans account for a significant portion of the sales, with multiple brands and variations appearing in the top sellers. The "most" brand cardigans have a significant presence.
- **Monthly Trends:** The data suggests a strong monthly demand for specific categories and brands. Extending the analysis to weekly and quarterly data would allow for a more comprehensive understanding.
- **Size and Color:** The prevalence of "free" size and "unknown" color options suggests a lack of detailed inventory tracking.

Business Implications

• **Inventory Optimization:** Focusing on stocking high-demand items like "most" brand cardigans in popular sizes could improve sales.

• **Data Quality Issues:** The prevalence of "unknown" color data indicates a need to improve data capture and reporting processes.

• **Potential Missed Opportunities:** Lack of detailed size data may limit targeted promotions and inventory planning.

Actionable Recommendations

• **Prioritize Inventory of Top Sellers (Immediate):** Increase inventory levels of "most" brand cardigans, focusing on "free" size initially while gathering more precise size demand data. This will address immediate demand.

• **Improve Data Tracking (Within 1 Month):** Implement a system for accurately tracking size and color data for all products. This enables better inventory planning and targeted promotions.

• **Analyze Weekly and Quarterly Data (Ongoing):** Conduct a more thorough analysis incorporating weekly and quarterly data to identify seasonal trends and best-selling items over different periods. This informs long-term inventory strategy.

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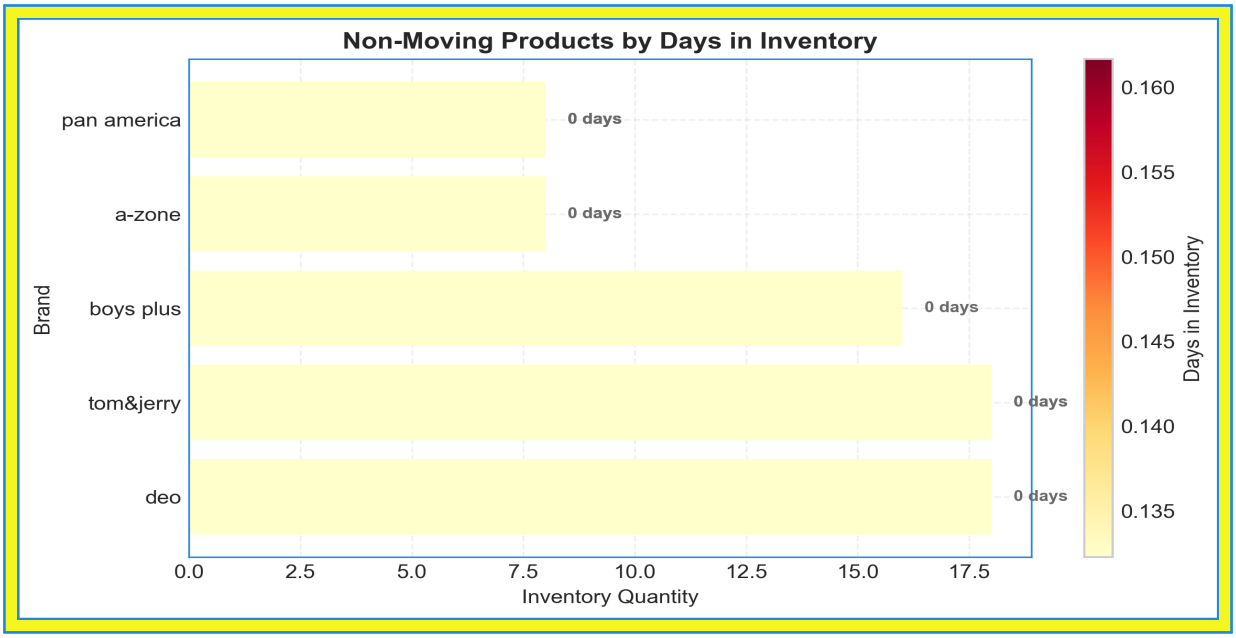
Question 3: Track non-moving products and their aging quantities.



Analysis & Recommendations

Business Intelligence Analysis: Non-Moving Inventory

Executive Summary

The provided data indicates a significant issue with non-moving inventory. All items in this sample have a **0% sell-through rate** and a very short inventory age (approx. **0.15 days**), suggesting either a very recent purchase or a persistent lack of sales.

Key Insights

- **Zero Sales:** A consistent **SalesQty** of 0 across all items in the sample, resulting in a **0% percent_sold**, is a major red flag.
- **Inventory Age:** While the **days_in_inventory** is low (0.15 days), the lack of sales is still concerning, suggesting items added recently aren't selling either. This may suggest the same products continuously being added, and never selling.
- **Brand and Category Variety:** Non-moving items span various brands (e.g., "deo," "tom&jerry;," "pan america") and categories (e.g., "lower-jogger-hosiery," "suit-falalan," "shirt-full"), indicating a widespread problem, not confined to specific product lines.

Business Implications

- **Capital Tied Up:** Non-moving inventory represents capital tied up in unsellable goods.
- **Potential Losses:** If not addressed, this could lead to markdowns or write-offs, impacting profitability.

• **Inventory Management Issues:** The problem could stem from poor product selection, ineffective marketing, or pricing issues.

Actionable Recommendations

• **Investigate Root Cause (Within 1 Week):** Analyze sales data over a longer period (e.g., past 3 months) to identify consistently non-moving items. Determine reasons for lack of sales through customer surveys or market research.

• **Implement Targeted Promotions (Within 2 Weeks):** For items with some potential, implement targeted promotions like discounts or bundled offers to stimulate demand and clear inventory.

• **Re-evaluate Purchasing Strategy (Ongoing):** Refine purchasing decisions based on sales data and customer preferences to avoid overstocking unpopular items. Consider reducing order quantities for items with consistently low sales.

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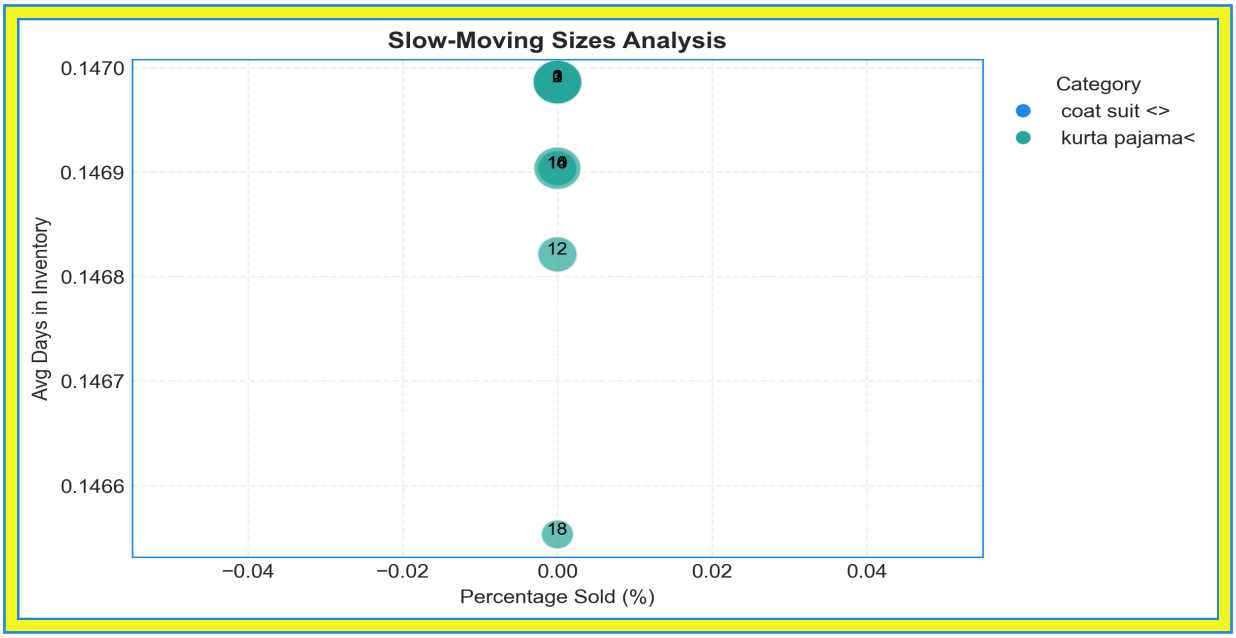
Question 4: Identify slow-moving sizes within specific categories.



Analysis & Recommendations

Business Intelligence Analysis: Slow-Moving Sizes

Executive Summary

The provided data reveals significant issues with unsold inventory across multiple categories, specifically in certain sizes. This indicates a potential mismatch between purchasing and demand, leading to inefficient capital allocation.

Key Insights

- **Zero Sales:** A prominent pattern is that multiple sizes within categories like "coat suit <>" and "kurta pajama<" show **0% percent sold**, indicating overstocking or incorrect size assortment.
- **Low Average Inventory Days:** The **average days in inventory** is consistently low (around 0.14 days). While seemingly positive, combined with zero sales, it implies that the items are not being sold before new inventory arrives, exacerbating the overstock issue.
- **Consistent Purchase Amounts:** Despite zero sales, the "total_purchased" values for many sizes are substantial (e.g., 24 for "coat suit <>", sizes 0 and 1), suggesting a recurring issue with procurement strategies.

Business Implications

- **Capital Tie-Up:** Unsold inventory ties up capital that could be invested elsewhere.
- **Potential Markdowns:** To clear out slow-moving sizes, the business may need to offer deep discounts, reducing profit margins.
- **Inventory Management Inefficiency:** The data highlights a significant weakness in demand forecasting and inventory planning.

Actionable Recommendations

• **Immediate Inventory Review (Within 2 Weeks):** Conduct a comprehensive review of current stock levels, focusing on categories with 0% sales. Reduce future purchases of slow-moving sizes.

• **Demand Forecasting Improvement (Within 1 Month):** Implement a more accurate demand forecasting model that considers size-specific sales data. Analyze historical sales trends to identify preferred sizes.

• **Promotional Campaign (Ongoing):** Launch targeted promotional campaigns (e.g., discounts, bundles) to clear out existing inventory of slow-moving sizes. Prioritize sizes with the largest quantities and zero sales.

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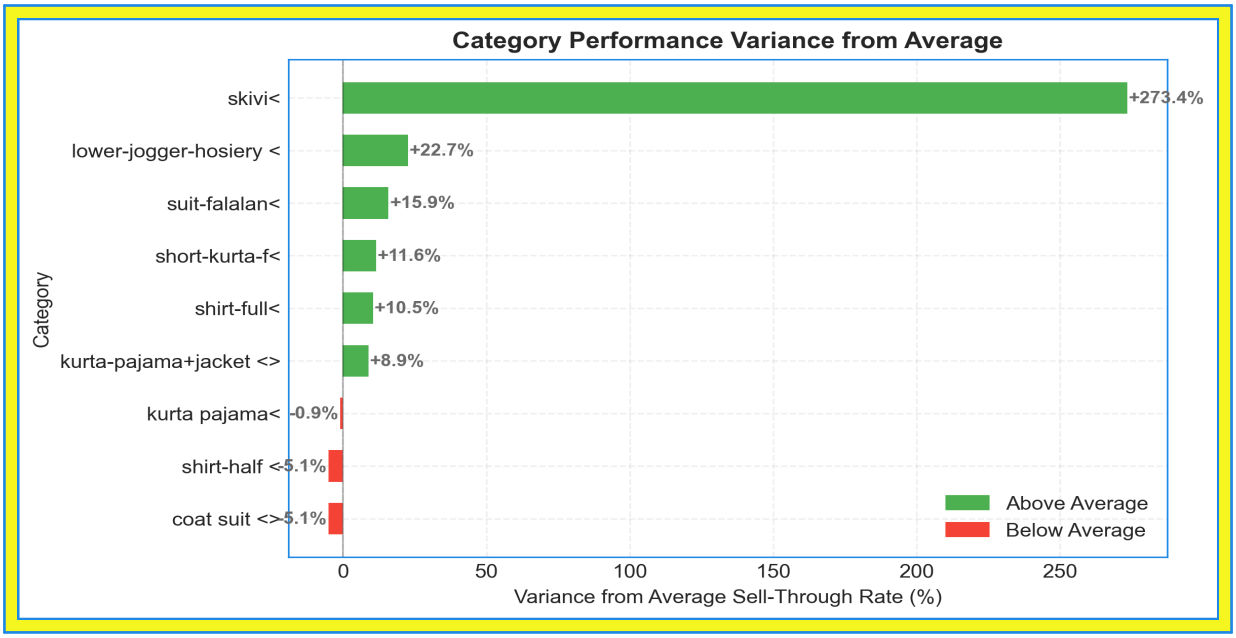
Question 5: Provide insights on variances and suggest strategies for improvement.



Analysis & Recommendations

Business Intelligence Analysis: Retail Inventory & Sales

Executive Summary

The data reveals significant variance in sell-through rates across product categories, highlighting potential inventory management inefficiencies. Some categories exhibit very low sell-through, while others significantly exceed the average.

Key Insights

- **Sell-Through Rate Variance:** A large range in sell-through rates exists, from **0.0%** for "coat suit <>" and "shirt-half <" to **278.57%** for "skivi<". This indicates overstocking in some categories and potentially understocking in others.
- **Variance from Average:** Categories like "skivi<" have a very high variance from the average (**273.45**), suggesting a strong unexpected demand or initial miscalculation of demand. Negative variances, like the **-5.12** for "coat suit <>", may show products that are not selling at all.
- **Brand Count Relationship:** High brand counts in categories like "shirt-half <" (21 brands) and "shirt-full<" (58 brands) don't necessarily correlate with high sell-through rates. More brands might not equal more sales, suggesting the need for brand portfolio optimization.

Business Implications

These findings imply lost revenue due to unsold inventory in low sell-through categories and missed sales opportunities in high sell-through categories. Inefficient inventory management directly impacts profitability and potentially ties up capital unnecessarily.

Actionable Recommendations

- **Inventory Optimization (Immediate):** Reduce the purchase of "coat suit <>" and "shirt-half <" to align with their **0.0%** sell-through rate. Simultaneously, ensure sufficient stock of "skivi<" to meet the high demand, even if it means reducing supply of poor performing categories.
- **Demand Forecasting & Marketing Focus (Within 1 Month):** Analyze reasons for the high sell-through of "skivi<" and apply those lessons to improving the marketing and placement of other clothing categories, especially the ones where the sell-through rate is low. Also, perform data analysis on the brands with the best sell-through to identify the best performing vendors.

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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

The provided data suggests that while some products are selling, there's room for improvement in online sales by prioritizing items with higher sell-through rates. Focusing on products with a good balance of remaining stock and sales momentum could drive revenue growth.

Key Insights

- **Sell-through rate** for the example "deo lower-jogger-hosiery" in size 26 is **44.44%**. This indicates moderate sales success, but there's room to improve.
- There are **10 units remaining in stock** of the example product, representing a **stock value of 3950**. This shows remaining inventory is available for further sales.
- The ratio of **Sales Quantity (8) to Purchase Quantity (18)** is under 50% , indicating potential for better sales performance.

Business Implications

- The relatively low sell-through rate suggests possible issues with online visibility, marketing, or pricing.
- A high stock value tied up in a single product line, while not explicitly alarming, could be re-allocated to better-performing product lines.

• Opportunity exists to increase revenue by focusing on selling remaining stock more efficiently.

Actionable Recommendations

• **Prioritize online marketing and promotion** for products like "deo lower-jogger-hosiery" with existing stock, aiming to increase sell-through rate. *Timeframe: Immediately.*

• **Review online pricing and placement** of products with lower sell-through rates to ensure competitiveness. *Timeframe: Within 1 week.*

• **Monitor sales trends** closely after implementing marketing changes to measure effectiveness and adjust strategy accordingly. *Timeframe: Continuous monitoring.*

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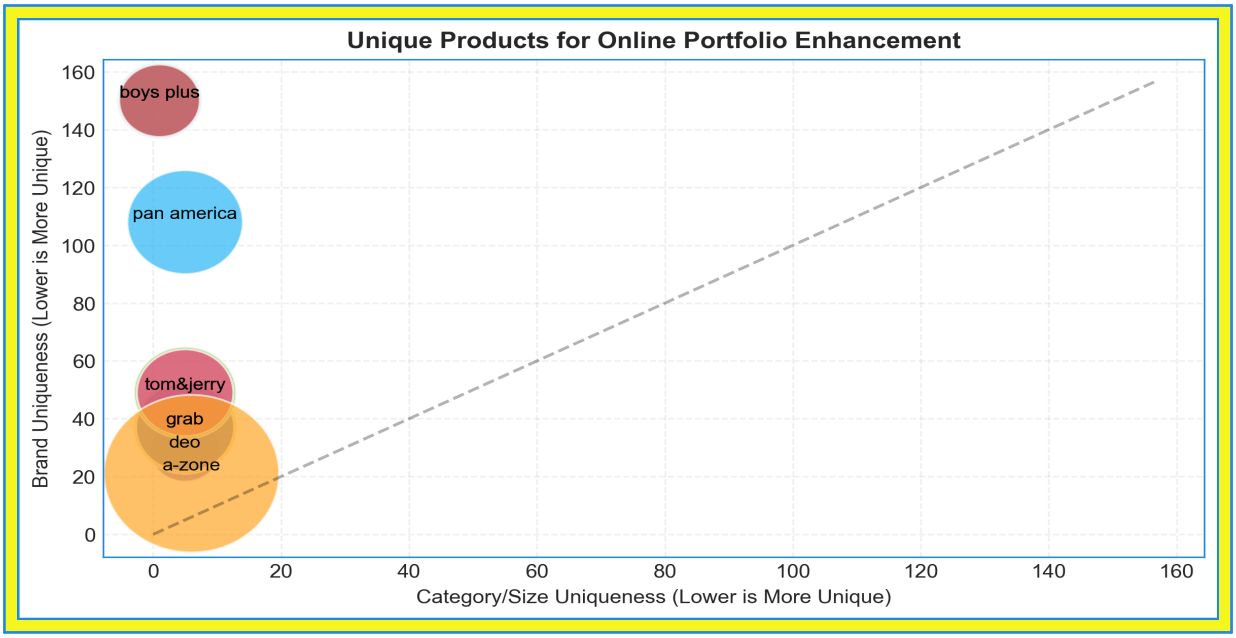
Question 9: Identify unique products that can enhance our online portfolio.



Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

The data reveals potential gaps in our online portfolio, particularly in items with high purchase quantities but **zero or low sales**. This suggests we are stocking products that aren't effectively reaching our online customers.

Key Insights

- **Low Sales with High Stock**: Several products show high available stock and purchase quantities, but have **zero sales** (e.g., "boys plus" kurta pajama, shirt-half, "tom&jerry;" suit). This indicates a lack of online demand or ineffective marketing for these items.
- **"Suit-falalan" Category Performing Well**: "grab" brand suit-falalan< in sizes 22 and 26 demonstrate sales activity (7 and 4 units respectively), suggesting potential demand in this category.
- **"Unknown" Color**: Many products have "unknown" color. This is an issue for online sales.

Business Implications

- **Missed Revenue Opportunities**: Unsold inventory represents tied-up capital and missed revenue potential. Products with zero sales are draining resources.
- **Ineffective Online Strategy**: Low or zero sales suggest poor product visibility, inadequate marketing, or pricing issues on the online platform. The "unknown" color values impact the

data's usefulness.

• **Inventory Management Issues**: Discrepancies between purchase quantities and sales highlight the need for better demand forecasting and inventory management strategies.

Actionable Recommendations

• **Prioritize Online Promotion:** (Immediate) Launch targeted marketing campaigns for high-stock, low-sale items like "boys plus" clothing to drive online sales. Track results weekly.

• **Investigate "Suit-falalan"**: (Within 1 Month) Conduct market research to understand the demand for "suit-falalan" and expand the online assortment with top-selling sizes and brands.

• **Improve Data Quality**: (Immediate) Immediately address the "unknown" color values for all products in our online data to ensure future actionable analysis. This should include adding color options for each product on our website.

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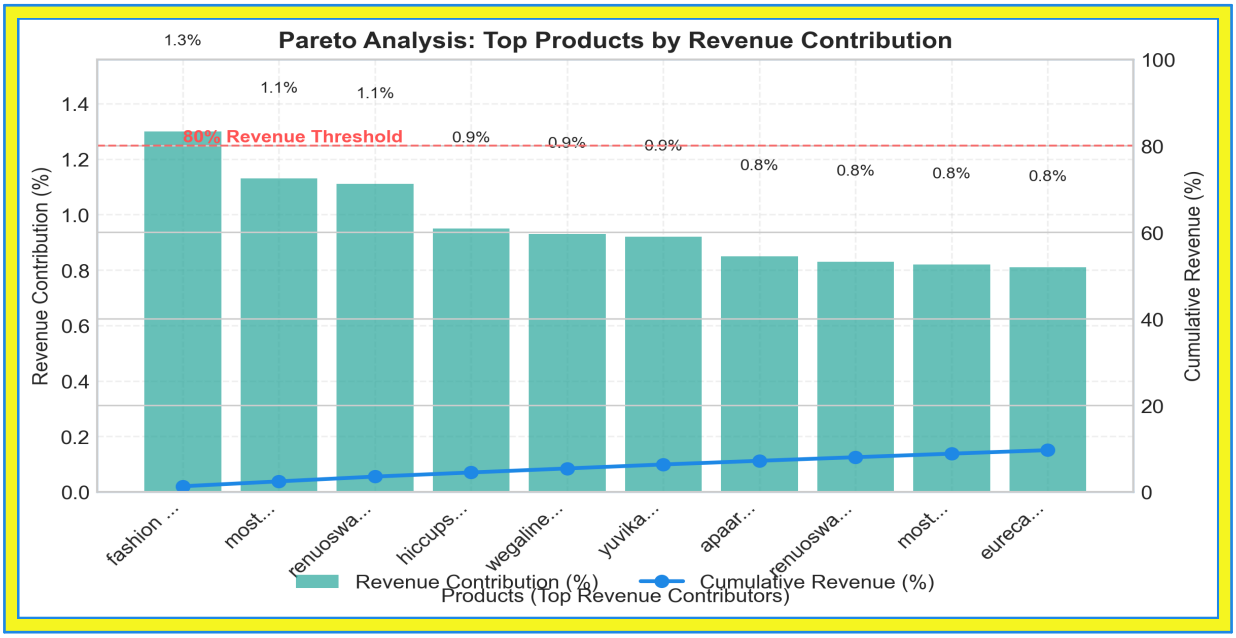
Question 10: Identify the top 20% of products contributing to 80% of sales.

Top Product Share	Products for 80%	Coverage
1.3%	10	9.7%



Analysis & Recommendations

Business Intelligence Analysis

Executive Summary

This analysis identifies the top products driving the majority of sales revenue. Focusing on these key products can optimize inventory and boost overall sales.

Key Insights

- **Revenue Concentration:** The provided sample indicates significant revenue concentration. With only 10 products in the sample, the cumulative revenue generated by those 10 products already accounts for **9.65%** of the total.
- **Brand Performance:** "fashion flo" leads in individual revenue (**21850.0**), while "most" appears twice in the top 10, suggesting a strong brand presence.
- **Category Dominance:** "cardigan" appears multiple times within the top revenue-generating items, suggesting this category has strong consumer demand.

Business Implications

• A large portion of revenue is generated by a small percentage of products, in line with the Pareto principle. This suggests that a deeper analysis of the full dataset is needed to identify the critical 20% generating 80% of sales.

• Inventory optimization can be achieved by focusing on high-performing brands and product categories.

• Underperforming product lines require review: either improvement or discontinuation.

Actionable Recommendations

• **Perform a Pareto analysis on the complete dataset:** Identify the actual top 20% of products contributing to 80% of the total revenue (within 2 weeks). This is crucial for targeted inventory management.

• **Increase inventory levels of top-selling products:** Based on full dataset Pareto analysis, ensure sufficient stock of key products like "fashion flo" and "cardigans" to meet demand and prevent lost sales (immediate action).

• **Evaluate and optimize underperforming products:** Conduct market research to understand why certain products are not performing well and implement strategies to improve their sales or consider discontinuing them (within 1 month).

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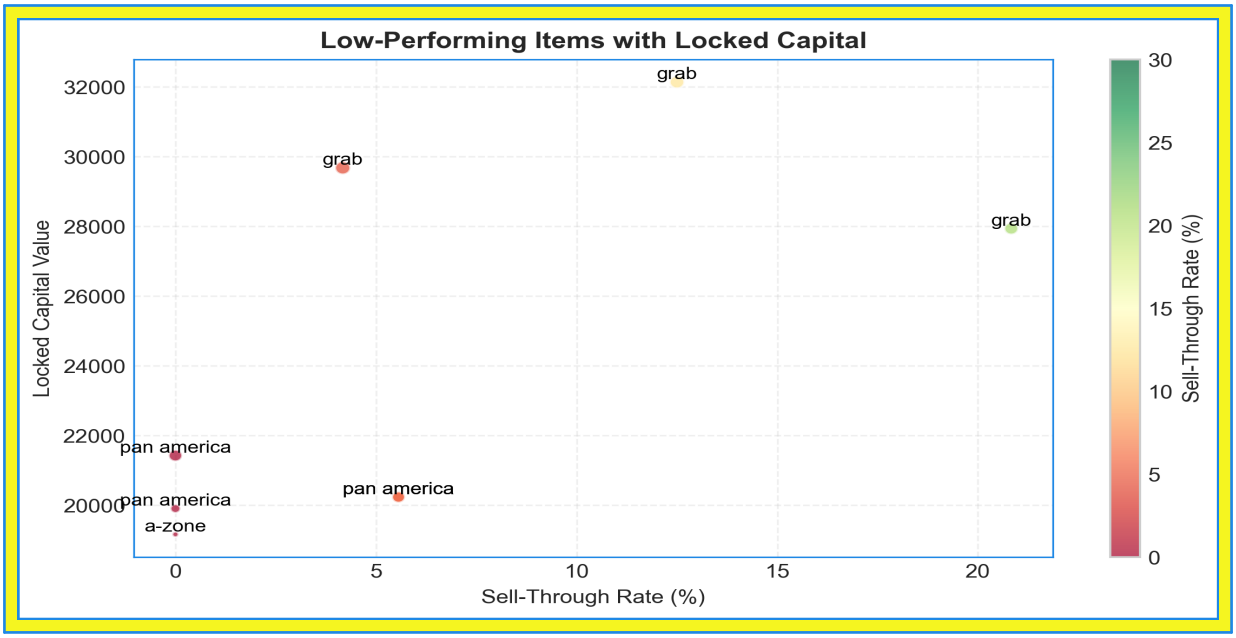
Question 11: Suggest strategies to reduce the inventory of low-performing items.



Analysis & Recommendations

Business Intelligence Analysis: Low-Performing Inventory Reduction

Executive Summary

The data reveals significant excess inventory across several brands and categories, particularly impacting locked capital. Low sell-through rates indicate items are not moving quickly, creating a need for strategic inventory reduction.

Key Insights

- **Excess Inventory & Sell-Through:** The data demonstrates high excess inventory; for example, "grab" suits have **excess inventory of 38-46 units**. This is coupled with low sell-through rates, some as low as **0%** for "pan america" shirts and "a-zone" coat suits.
- **Locked Capital:** A substantial amount of capital is tied up in slow-moving inventory. "grab" suits account for a substantial **locked capital of $27,930-$32,130**.
- **Category Performance:** The "suit-falalan<" category appears to be significantly underperforming, evident in the high excess inventory despite being in inventory for a short time (**days_in_inventory** ~0.14).

Business Implications

- **Financial Risk:** High locked capital and low sell-through rates increase the risk of obsolescence and reduced profit margins.

• **Inventory Costs:** Excess inventory drives up warehousing and handling costs, negatively impacting profitability.

• **Lost Sales Opportunities:** Capital tied up in slow-moving items restricts investment in faster-moving, profitable products.

Actionable Recommendations

• **Implement Clearance Sales (Immediate):** Run targeted promotions and discounts on the "suit-falalan<" category and other items with **0% sell-through rate** within the next two weeks to reduce inventory levels by at least **20%**.

• **Reduce Future Purchases (Next Quarter):** Significantly decrease or eliminate future purchases of low-performing SKUs like "grab" suits in specific sizes with high excess inventory to match actual sales trends. Focus on replenishing items with higher sell-through rates.

• **Analyze and Refine Product Assortment (Within 3 Months):** Conduct a comprehensive review of category and brand performance to identify consistently underperforming items. Consider discontinuing low-performing lines altogether and re-allocating shelf space to higher-demand items.

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Executive Summary

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

1. Executive Overview

Current business performance reveals a mixed landscape. While some product categories exhibit strong sales momentum, others are struggling with excess inventory and low sell-through rates. Key metrics reveal a wide variance in sell-through, ranging from **0%** to **278%**, indicating significant inventory management inefficiencies. ■ Overall inventory health is currently suboptimal, requiring immediate strategic adjustments to unlock tied-up capital and maximize revenue potential. We need to improve the average sell-through rate.

2. Key Strategic Insights

- ■■ **High inventory variance** requires immediate attention. A small set of categories drives most sales. Focus resources on understanding and supporting these top-performers.
- ■ **Capital is locked in slow-moving inventory.** "Suit-falalan<" and other low sell-through items need immediate promotional action to reduce excess stock.
- ■ **Online sales potential remains untapped.** Improve online marketing and product placement, focusing initially on "deo lower-jogger-hosiery" and similar items with existing stock but moderate sell-through.
- ■ **Data quality issues hinder analysis.** The prevalence of "unknown" color data negatively impacts decision-making. Address data gaps immediately.
- ■ **Inadequate demand forecasting**. Purchasing decisions do not meet the actual sales demand.

3. Performance Assessment

- **Overperforming:** Cardigans ("most" brand), and "skivi" products exhibit strong sales and high demand.
- **Underperforming:** "Suit-falalan," "coat suit," and "shirt-half" categories are significantly underperforming, with **0%** sell-through in some instances.
- **Inventory Efficiency:** The low **average days in inventory** (~0.14 days) for non-moving items suggests that we are continuously restocking items that aren't selling.
- **Sales Velocity:** High negative sell-out estimates (e.g., -18 days) signify stockouts and missed sales opportunities.

4. Strategic Recommendations

- **Optimize Inventory Levels:** Increase inventory of top-selling products like cardigans and "skivi" items to meet demand. Simultaneously, significantly reduce or eliminate future purchases of low-performing SKUs like "grab" suits. **(Expected Outcome: Reduced stockouts, increased revenue, improved inventory turnover)**
- **Enhance Online Presence:** Launch targeted marketing campaigns and improve online product placement for high-stock, low-sale items to drive online sales. **(Expected Outcome: Increased online sales, reduced excess inventory, improved customer reach)**
- **Implement Real-Time Alerts:** Set up automated alerts that trigger when inventory levels reach **75%** and **50% sold**, and for excessively high sales percentages. **(Expected Outcome: Proactive inventory management, reduced stockouts, optimized purchasing decisions)**

(Timeline: Immediate)

• **Refine Demand Forecasting:** Implement a more accurate demand forecasting model that considers size-specific sales data and historical trends. **(Expected Outcome: Reduced overstocking, improved inventory accuracy, optimized capital allocation)**

• **Improve Data Tracking:** Implement a system for accurately tracking size and color data for all products. **(Expected Outcome: improved and optimized analysis to improve sales results) (Timeline: Within 1 Month)**

5. Immediate Action Items

• ■ **Inventory Review:** Conduct a comprehensive review of current stock levels, focusing on categories with 0% sales, and reduce future purchases of slow-moving sizes. (Action: Inventory Management Team, Timeline: Next 7 Days)

• ■ **Clearance Sales:** Run targeted promotions and discounts on the "suit-falalan<" category and other items with **0% sell-through rate** to reduce inventory. (Action: Marketing Team, Timeline: Next 14 Days)

• ■ **Data Quality Improvement:** Immediately address the "unknown" color values for all products. (Action: Data Team, Timeline: Next 7 Days)